

Compendium of the Lichens and Associated Fungi of Alaska

Toby Spribille, Alan M. Fryday, Celia J. Hampton-
Miller, Teuvo Ahti, Karen Dillman, Göran Thor,
Tor Tønsberg and David Schirokauer



J. Cramer



Bibliotheca Lichenologica

Volume 112

This volume 112 of Bibliotheca Lichenologica is available as Open Access publication ([CC-BY-NC license](#))



DOI: [10.1127/bibl_lich/2023/112](https://doi.org/10.1127/bibl_lich/2023/112)

For all our journals and series

(see <http://www.borntraeeger-cramer.de/series>)

Open Access publishing is available.

It is also possible to purchase Open Access licenses for already published works.

Please [contact us](#) for Open Access license quotes for our series or long, monographic like publications.



J. Cramer in Borntraeeger Science Publishers

Johannesstrasse 3A, 70176 Stuttgart, Germany phone ++49-711-351456-0 FAX: ++49-711-351456-99
Distributor: E. Schweizerbart'sche Verlagsbuchhandlung (Nägele u. Obermiller), Johannesstr. 3A,
70176 Stuttgart, Germany order@schweizerbart.de www.borntraeeger-cramer.de

Bibliotheca Lichenologica

Volume 112

Compendium of the Lichens and Associated Fungi of Alaska

Toby Spribille, Alan M. Fryday, Celia J. Hampton-
Miller, Teuvo Ahti, Karen Dillman, Göran Thor,
Tor Tønsberg and David Schirokauer

J. CRAMER
in Borntraeger Science Publishers • Stuttgart • 2023



This volume's scientific editor:

Robert Lücking, Berlin

Cover image: *Masonhalea richardsonii* in the Brooks Range, 2011.
Photo courtesy of Donald Hampton

We would be pleased to receive your comments on the content of this book:
editors@schweizerbart.de

DOI: 10.1127/bibl_lich/2023/112
ISBN 978-3-443-58093-3 (print)
ISBN 978-3-443-58092-6 (e-book)
ISSN 1436-1698 (Bibliotheca Lichenologica)

Information on this title: **www.borntraeger-cramer.de/9783443580933**

© 2023 The authors

Publisher: Gebr. Borntraeger Verlagsbuchhandlung
Johannesstr. 3A
70176 Stuttgart, Germany
mail@borntraeger-cramer.de
www.borntraeger-cramer.de

Abstract

Publications on the lichens of Alaska go back 182 years, but a modern, comprehensive review of literature on the diversity of Alaskan lichens has been lacking. We present a compendium of 2126 accepted taxa fully referenced with published reports from Alaska and their localities. Of these taxa, 1827 are lichen fungi, 277 are lichen-associated fungi and 22 are putatively saprotrophic fungi usually treated in lichenological studies. Nearly half of all species have been first reported since 1997. A total of 1594 names are treated as synonyms or misapplications, and 140 further taxa are excluded as erroneous or doubtful.

Addresses of the authors

Toby Spribille

Department of Biological Sciences
CW405
University of Alberta
Edmonton T6G 2R3 Alberta
Canada
e-mail: toby.spribille@ualberta.ca

Alan M. Fryday

Herbarium, Department of Plant
Biology
Michigan State University
East Lansing, MI 48824
U.S.A.
e-mail: fryday@msu.edu

Celia J. Hampton-Miller

Department of Natural Resources &
Environment
University of Alaska Fairbanks
2150 Koyukuk Dr.
Fairbanks, AK 99775
U.S.A.
e-mail: cjmillier3@alaska.edu

Teuvo Ahti

Botanical Museum
Finnish Museum of Natural History
P.O. Box 7
FI-00014 University of Helsinki
Finland
e-mail: teuvo.ahti@helsinki.fi

Karen Dillman

USDA Forest Service
123 Scow Bay Loop Rd.
P.O. Box 309
Petersburg, AK 99833
U.S.A.
e-mail: karen.dillman@usda.gov

Göran Thor

Department of Ecology
Swedish University of Agricultural
Sciences
P. O. Box 7044
SE-750 07 Uppsala
Sweden
e-mail: goran.thor@slu.se

Tor Tønsberg

Museum of Natural History
University of Bergen
Allégaten 41
P. O. Box 7800
N-5020 Bergen
Norway
e-mail: tor.tonsberg@uib.no

David Schirokauer

Denali National Park and Preserve
P.O. Box 9
Denali Park AK 99755
U.S.A.
e-mail: dave_schirokauer@nps.gov

Land acknowledgment

The northwest corner of North America, today known as Alaska, is the current and ancestral homeland of many different Alaska Native Peoples including the Alaskan Athabaskans, Ahtna, Deg Hit'an, Dena'ina, Eyak, Gwich'in, Haida, Hän, Holikachuk, Koyukon, Lower Tanana, Tanacross, Upper Tanana, Upper Kuskokwim, (Kolchan), Tlingit, Tsimshian, Iñupiat, Yup'ik, Siberian Yup'ik, Cup'ik, Nunivak Cup'ig, Sugpiaq ~ Alutiiq, Chugach Sugpiaq, Koniag Alutiiq, and Aleut (Unangan).

Let us work to acknowledge and undo the historical and present harms caused by racist and colonialist policies and actions and celebrate the rich cultures and traditions of Alaska's Indigenous and First Nations peoples. Thank you for generations of Indigenous stewardship. Alaska's First People know these lichens and their habitats well. The authors of this compendium appreciate the opportunity to humbly document and discuss Alaska's lichens for the benefit of current and future generations of the world's citizens.

Table of Contents

Introduction	5
Alaskan geography and recent history	5
A brief history of lichenological studies in Alaska	6
Major Alaskan lichen collectors and the herbaria where their collections reside	13
Diversity of Alaskan lichens and associated fungi	20
Current names in use, described from Alaska	22
Taxonomy and nomenclature	26
Synonyms and misapplied names	28
How literature records were screened and treated	29
Conventions, symbols, explanations, abbreviations	30
Acknowledgments	31
Catalog of accepted taxa and their synonyms	33
Appendix A. Excluded and doubtful taxa	454
Appendix B. Nomenclatural notes	468
References	472

Introduction

Alaska possesses one of the world's truly spectacular lichen biotas. Lichens are as prominent a part of the terrestrial vegetation of Alaska as any group of plants or fungi. Collectively they constitute a substantial part of all terrestrial biomass of Alaska and, directly or indirectly, are an integral part of the lives of many of its animal inhabitants. Indeed, as we show in this compendium, with 2126 taxa, lichens and their associated fungi are also currently among the most species-rich of inventoried organismal groups in Alaska.

It has been more than 100 years since Clara Cummings assembled the first catalog of Alaskan lichens. Her work was based on the collections of the Harriman Expedition of 1899 but also summarized the results of earlier expeditions and reported a total of 462 species-level and infraspecific taxa (CUMMINGS 1904). Subsequently, landmark publications such as THOMSON'S 1979 book *Lichens of the Alaskan Arctic Slope* and the two volumes of his *American Arctic Lichens* (macrolichens: THOMSON 1984; microlichens: THOMSON 1997) have made the Alaskan lichen biota accessible to visiting scientists and spurred further studies. The number of species of lichen and lichen-associated fungal species known for Alaska has grown by nearly 50% since Thomson's second volume in 1997, which means there is an urgent need for a new baseline synthesis. We hope this compendium will go some distance to address this need.

Alaskan geography and recent history

The name Alaska derives from the same root as the Aleut word *Alyeska*, meaning "Great Land". Historically, the territory of what is now called Alaska was settled by more than ten different First Peoples, including large areas of Aleut, Dene and Tlingit domination. After European contact Alaska was the subject of competing claims from Russia and Spain, the latter establishing a fort in present-day British Columbia and giving names to places such as Revillagigedo Island and Valdez that are used to the present day. Russia succeeded in dominating, however, and built a capital called Novo-Arkhangel'sk (from 1808), later renamed Sitka, on Baranof Island, and maintained important trading posts in towns such as Unalaska (permanently established in 1774) and Kotzebue (since the early 19th century).

Alaska was acquired by the United States through purchase from Russia, ratified by treaty, on October 18, 1867. Alaska is now the largest state in the United States and encompasses an area of 1,717,856 km² (663,268 mi²), with a latitudinal spread from 51°20'N to 71°50'N, and a longitudinal spread from 130°W to 172°E. It is nearly three times larger than France and two and a half times larger than Texas, the next largest U.S. state, and includes the highest point in North America, Denali ("Mt. McKinley"), at 6194 m elevation. The climate varies from temperate to arctic, which results in a wide spectrum of different vegetation types, including coastal temperate rainforest, temperate hyperoceanic grasslands and heaths on the Aleutian Islands,

and Arctic tundra, steppe and desert, altogether nearly 900 different described plant community types (VIERECK et al. 1992).

Although the United States recognized little immediate economic use for Alaska, it soon became a valuable acquisition with the discovery of gold in the Klondike region of the Yukon in 1896. European settlement of the oceanic fjord land of southeastern Alaska spiked in the following years and outposts were established in 1901 at Fairbanks on the Tanana River in central Alaska, and in 1914 at Anchorage in Cook Inlet. As of the 2020 US census, Alaska had 733,391 inhabitants for a population density of ca. 0.49 persons/km², the lowest of any U.S. state.

A brief history of lichenological studies in Alaska

Lichens have been omnipresent in the lives of people in Alaska since the land was first settled by humans, which various lines of evidence suggest may have happened more than 12,000 years BP. Numerous major Indigenous groups occupy the land circumscribed within the borders of the U.S. state, including the Aleut, on the Aleutian Islands; the Yup'ik in western Alaska; Athabascan First Nations in the interior; the Iñupiat in the north; and the Alutiiq, Eyak and Tlingit in the southern and southeastern coastal regions, with the southernmost islands bordering on the territories of the Haida. Lichens constitute part of the traditional Indigenous medicine, and numerous species are distinguished. OSWALT (1957) recorded the Yup'ik names aouk' and ningyu'yuk for *Cetraria islandica* and *Flavocetraria cucullata*, respectively. Kus'koak, *Nephroma arcticum*, is used for food and medicine by the Yup'ik. *Cladonia* species such as *C. rangiferina* are known as caribou food, tuntuntu'kaik, in Yup'ik, kinadam aiyukax in Aleut, and k'udyi in Athabascan. Specific species such as *Cladonia bellidiflora*, with its bright red apothecia, are used to treat eye inflammations by the Tlingit, and are called ch'atshu' or ch'atshyuú in Athabascan, while *Peltigera* spp., k'udyika'a in Dena'ina, are used to treat burns (GARIBALDI 1999; CRAWFORD 2015). *Umbilicaria* species, called qalnigi jegha or 'rock ears' by the Dena'ina, are used to stanch bleeding (CRAWFORD 2015). These are but a few examples from the daily lives of cultures that have lived on the Alaskan landscape for thousands of years, and are likely only a small window into a traditional ecological knowledge about lichens that has been almost completely disregarded by settler colonialists.

The first observations of lichens in the context of western science in what is now called Alaska were associated with Russian colonialism. The earliest specimen collecting activities were probably those of Georg Steller, a member of the Bering Expedition funded by Empress Anna of Russia. Steller set foot on what is now called Kayak Island in the Gulf of Alaska for only a few hours in 1741, before Bering's ship pulled anchor and returned in the direction of Kamchatka. Steller's botanical observations were never published and most collections were lost during the winter of 1741–1742, but his observations were recorded in a manuscript, preserved in St. Petersburg, entitled *Catalogus plantarum intra sex horas in parte Americae septentrionalis iuxta promontorium Eliae observatorum anno 1741 die*

21 Julii, sub gradu latitudinis 59 (Catalog of plants observed in six hours in a part of North America near the mountain Elias on 21 July 1741, below latitude 59 degrees). SAVICZ & ELENKIN (1950), who saw this manuscript, quoted Steller as making only one reference to lichens, “Lichen arboreus sive Pulmonaria arborea officinarum. Frequentissima erat secus ac in Sibiria”, probably a reference to the abundant occurrence of *Lobaria pulmonaria* in the coastal rainforests of this area.

The earliest collections of lichens in the territory of what is now Alaska that have been preserved to the present day are likely those of Archibald Menzies, who collected in the Alexander Archipelago during the voyage of *H.M.S. Discovery* in 1793 and 1794; most of the specimens from this expedition are preserved in E, BM or LINN-SM (GALLOWAY 1995) but the lichens are mainly labeled in vague terms such that it is not possible to distinguish which specimens were collected in Alaska or in what is now British Columbia. However, as listed by HULTÉN (1940) and OLSON & THILENIUS (1993), Menzies collected in numerous places in Alaska, and it is possible that some of the original collections of species described by ACHARIUS (1803), such as *Cetraria lacunosa* (*Platismatia lacunosa*), were collected in what is now called the Alexander Archipelago of Alaska. Adalbert von Chamisso collected lichens at Unalaska in what was then claimed as “Russian America” in September of 1816 as part of the Kotzebue expedition, and his collections are preserved in St. Petersburg (LE). One of the main remaining botanical contributions of this era are the collections of the Russian-Finnish governor of Sitka, Admiral Arvid Adolf Etholén, from the year 1834. These collections are preserved in the herbarium in Helsinki (H), and Etolin Island, a major island south of Wrangell in southeastern Alaska, still bears his name (Etolin being an orthographic variant of Etholén). Scattered collections made by other botanists in the Russian era are also preserved in St. Petersburg. We are not aware of any published reports on these collections.

In the early 19th century Alaska was still thought of by Europeans as a remote, inhospitable land surrounded by rough seas. Indeed, one of the first expeditions to return with samples from the Alaskan Arctic was that of *H.M.S. Herald*, dispatching in the hopes of locating the ill-fated Franklin Expedition. Berthold Seemann, the naturalist on board the *Herald*, collected from what is now called the Seward Peninsula north to Icy Cape, as far north as the ice pack (Figure 1). An excellent example of the early European colonial attitudes towards Alaska is provided in the botanical summary of ROTHROCK (1868), who, one year after the acquisition of Alaska by the United States from Russia, summarized the available botanical knowledge of the territory, often cast in terms of potential for agriculture and forestry.



Fig. 1. “The ice cliffs in Kotzebue Sound”: frontispiece to Seemann (1852), one of the first published accounts of Alaskan botany, with a lichenological contribution by Churchill Babington.

Not long after the acquisition of Alaska by the United States in 1867, exploratory voyages and expeditions were dispatched to the remote territory. The first list of lichens after the purchase of Alaska was provided as an appendix to Rothrock’s paper by the young Horace Mann Jr. (1844–1868), who died the same year. One of the most important of these expeditions from the lichenological standpoint was however not an American endeavor but in fact a Swedish expedition to chart a Northeast Passage over the northern coasts of Siberia to east Asia. The expedition was undertaken in 1878–1879 aboard the ship *Vega* under the leadership of Adolf Erik Nordenskiöld (originally from Finland) and counted among its scientific crew the preeminent Swedish lichenologist Ernst Almquist (Figure 2). The outstanding lichenological collections of Almquist, including many obscure terricolous and saxicolous crusts, formed the basis of a detailed taxonomic analysis by William Nylander (summarized in NYLANDER 1887) and together with Siberian material from the same expedition form a significant cornerstone in the nomenclature of Arctic lichens generally. A total of 213 lichen species were first reported from two important Alaskan localities on this voyage, mainly at Port Clarence on the Seward Peninsula ($65^{\circ}15'43''\text{N}$, $166^{\circ}50'45''\text{W}$) and St. Lawrence Island. The collections of Almquist are preserved today in the Swedish Museum of Natural History (Naturhistoriska riksmuseet) in Stockholm (S). High resolution images of the type specimens can be viewed online through the museum’s database (<http://herbarium.nrm.se/search/specimens/>). Duplicates of most lichen specimens are also in the Nylander collection at the Finnish Museum of Natural History at the University of Helsinki (H-NYL). Almquist’s contribution and the voyage are

commemorated in names such as *Allantoparmelia almquistii*, *Ramalina almquistii* and the later-named *Pilophorus vegae* that are all in use today. NYLANDER'S 1887 publication came to be one of the "highest impact" and most cited papers published on Alaskan lichens and the basis for early biogeographical comparisons in the Arctic (e.g., LYNGE 1932). Most of the species found on this expedition were first records from Alaska (Figure 3) and 14 taxa described as new from this study are still recognized as the earliest valid names for those species (species from Port Clarence and St. Lawrence Island).



Fig. 2. Two key figures in early Alaskan lichen work were Ernst Almquist (1852–1946), who collected in NW Alaska during the 1878–1879 Vega Expedition, and Clara Eaton Cummings (1855–1906), who identified and published the material of the Harriman Expedition and produced the first catalog of Alaskan lichens. E. Almquist photo courtesy of the iconoteque at the Bergius Botanic Garden, Stockholm, Sweden; C. Cummings photo from FINK (1907a).

10 Introduction

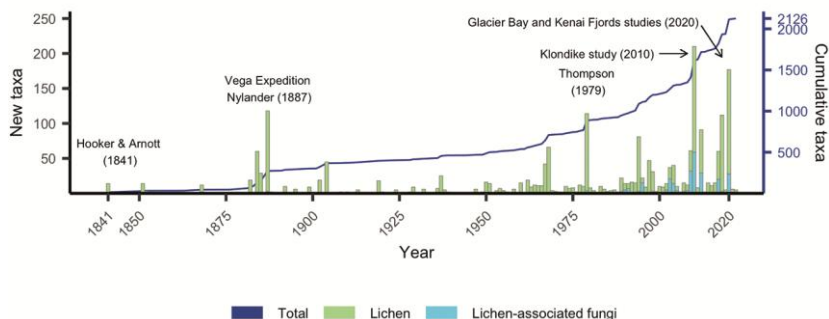


Fig. 3. Numbers of first-time reports of lichen taxa for Alaska by year from the first published reports to the present (based on synonymized list), plotted with the cumulative number of taxa over time (blue line).

The knowledge of Alaska's lichens was given another boost soon after Nylander's work by the large collection made on the Harriman Alaska Expedition of 1899. Most collections were made by William Trelease and are today deposited at the Smithsonian Institution in Washington, D.C. (US) and the New York Botanical Garden (NY) with other collections (possibly duplicates) scattered through other North American herbaria. The lichens from this excursion were identified by Clara Eaton Cummings of Wellesley College (Figure 2) and published in the Expedition report (CUMMINGS 1904).

The period from 1904 until 1960 saw little activity in Alaskan lichenology (Figure 3), although the first Japanese biologist to collect lichens in Alaska, Yoshio Kobayashi, collected lichens on Atka Island in 1931. Eric Hultén, a leading figure in Alaskan vascular plant research, also collected lichens to some extent, and Gunnar Degelius (1937) published an important paper on his collections. The completion of the Alcan Highway in 1942, the end of the Second World War, the establishment of commercial airline connections and the opening of the Alaskan bush with light aircraft, allowed many American collectors to visit Alaska. Major contributions to documenting the biota of remote parts of Alaska were made in the 1950s by George Llano on a grant from the U.S. Office of Naval Research, as well as by John W. Thomson of the University of Wisconsin (Figure 4), who made his first research trip to Alaska in 1958. Thomson's long-term commitment to Arctic lichen research in Alaska bore much fruit, including his milestone 1979 book *Lichens of the Alaskan Arctic Slope*. He later compiled the collected knowledge on North American Arctic lichens, both Alaskan and Canadian, in the two volumes of his *American Arctic Lichens* (THOMSON 1984, 1997).

Like elsewhere in North America, lichenology in Alaska has been advanced by the productive collaboration of North American and European researchers. This

was especially true starting in the 1960s when parallel to Thomson's work the Norwegian lichenologist Hildur Krog (Figure 4) began a major effort to characterize the macrolichen biota of Alaska. Krog was one of the first lichenologists to work in Arctic and western Alaska as well as in the coastal rainforests of the southeast. Her contribution to the Alaskan lichen biota was capped by her book *The Macrolichens of Alaska* (KROG 1968).



Fig. 4. Major 20th century figures in Alaskan lichenology include, clockwise from top left, Hildur Krog of Oslo University (photo courtesy Roland Moberg); John W. Thomson of University of Wisconsin (pictured here at a stop on the landmark 1967 survey of the Alaska (or Alcan) Highway; T. Ahti); Stephen Talbot of the U.S. Fish and Wildlife Survey, Anchorage (photo courtesy of Sandra Talbot), and Barbara Murray, of Fairbanks (photo courtesy of Dale H. Vitt).

The decades since Krog's *Macrolichens* and Thomson's active lichen research in Alaska have seen a marked increase in lichenological activity. Thomson himself remained active well into his eighties in detailed lichen inventories of various

islands in the Aleutian chain and several National Wildlife Refuges with the Anchorage-based geobotanists Stephen Talbot (Figure 4) and Sandra Looman Talbot (TALBOT et al. 1990, 1992, 1997, 2000, 2001, 2002, 2007). The discovery of the oil fields at Prudhoe Bay and the construction of the Trans-Alaska oil pipeline and the parallel Haul Road (now the Dalton Highway), which was begun in 1974 instigated a renewed interest in the investigation of the Alaskan arctic lichen biota. These industrial developments required environmental impact statements and inventories for compliance with the regulations of the recently enacted National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA) making botanical surveys necessary (MURRAY & MURRAY 1975a, 1975b, 1978, MURRAY et al. 1980, WEBBER et al. 1978). Several expeditions sponsored by such agencies as the US Fish and Wildlife Service, US National Park Service, and US Army Corps of Engineers, Cold Regions Research and Engineering Laboratory, were arranged to document the biota of the region. These expeditions included the Fairbanks-based bryologist and lichenologist Barbara Murray (Figure 4) who began to inventory the Brooks Range as early as the mid-1970s (MURRAY 1974) and published a series of floristic studies from the Arctic in parallel with phanerogamic treatments by David Murray (MURRAY & MURRAY 1975a, 1975b, 1978, MURRAY 1985, 1997, THOMSON & MURRAY 1988). Murray collected lichens at numerous Alaskan localities – from the Arctic National Wildlife Refuge in the east to the Ogotoruk Creek area in the west – often visiting several sites in a single day, most of which had not been previously visited by a lichenologist. During this time, Murray made several thousand lichen collections. These have been accessioned into the herbarium of the Museum of the North (ALA) in Fairbanks, but most await detailed investigation (FRYDAY 2017).

Other lichenologists resident in Alaska, including Chiska Derr, Karen Dillman, and the late Leslie A. Viereck (and visiting lichenologists such as Linda Geiser), made major contributions in the form of collections, technical reports and publications, especially in the course of their work with the U.S. Forest Service. The lichen-associated parasitic fungi of Alaska, first sampled by Almquist in 1879 and long neglected, received renewed attention from the Russian specialist Mikhail Zhurbenko in the 2000s. As a result of this and other research, Alaska's known lichen inventory has doubled since 1990. Almost 46% of all species known for Alaska were first reported for the state since Thomson published the second volume of his *American Arctic Lichens* in 1997. The species-effort curve for Alaska (Figure 3) is in fact far from leveling off, and new species for Alaska, and indeed for science, continue to be discovered on a regular basis.

The present project was initiated in 2008 by the first author with the goal of providing an up-to-date and comprehensive baseline for assessing what lichen species have been documented to occur in Alaska. The project built up momentum over a series of milestones: acquisition of initial U.S. National Park Service and U.S. Forest Service support to begin databasing the literature references (2008); an extended research stay in Graz for CHM in 2009 to deal with rare and obscure literature; an intense 10-day work session in Uppsala, Sweden in 2011 for TS, CHM, TA and GT; an 18-day work session in Uppsala in April 2012 by TS and TA; and a four-day work session in Uppsala in February 2015 by TS and TA. Seven more

years passed during which more major studies were published on the lichens and associated fungi of Katmai, Lake Clark, Kenai Fjords and Glacier Bay National Parks and/or Preserves. In recent years, the compendium has been maintained and updated by AMF, and the final version was prepared at the end of 2022 by AMF, CHM and TS. Altogether, many more than 1000 published papers were combed for references to Alaskan lichens, and over 900 are cited here. More than 12,000 individual data entries were recorded as the basis for this review. Finally, all the authors have conducted field work in Alaska, collected lichen specimens there, and studied Alaskan lichens in various herbaria.

We make no pretense that the present inventory of Alaskan lichens and lichen-associated fungi is complete. Even as of this writing, we know of thousands of specimens of unidentified material and scores of species that are not accounted for in the present compendium, but which must await detailed analysis as time and financial support allows. Alaska harbours an extraordinarily deep and species-rich lichen biota that may count as one of the richest on the planet. This compendium is intended to provide an updated baseline and literature summary of everything known about the lichens and lichen-associated fungi of this region as of 2023, and to further stimulate and facilitate lichen biodiversity research in Alaska and other high latitude regions.

Major Alaskan lichen collectors and the herbaria where their collections reside

Lichen collections from Alaska are dispersed in many herbaria. The largest collections of lichens and associated fungi are deposited in the following herbaria: ALA, ASU, BG, CANL, COLO, FH, GZU, H, H-NYL, LE, MICH, MSC, O, OSC, S, UBC, UPS, US, WIS and WTU. The herbarium “KLGO”, which is not currently listed in Index Herbariorum, is the herbarium of the Klondike Gold Rush National Historical Park in Skagway, Alaska, which contains several thousand collections from that national park.

Many people have been involved in collecting and documenting the lichens of Alaska. We compiled a list of collectors (Table 1) from specimens seen in various herbaria, collections cited in published papers or communications by lichenologists in different countries and supplemented by querying the Consortium of Lichen Herbaria (<https://lichenportal.org/portal/>) database. The early collectors, mostly vascular plant botanists, with their collection localities are more completely listed by HULTÉN (1940); see also the chapter on the lichenological exploration in Alaska by KROG (1968). The present list can be expected to contain a number of omissions and inconsistencies, but should provide a reasonable overview of collecting activity and where specimens are deposited for future research.

Table 1. Collectors of Alaskan lichens and years and region known to us, if applicable, where they collected. Herbarium codes follow Index Herbariorum (<https://sweetgum.nybg.org/science/ih/>).

- Afonina, Olga:** 2001 — ALA, LE
Ahti, Teuvo: 1967, 2004, 2011 — Anchorage, Chugach Mts (Blueberry L, Thompson Pass), Talkeetna Mts (Sheep Mtn), Alaska Range (Fielding Lake), Steese Hwy (Twelvemile Summit, Eagle Summit), Mt. Fairplay, Fairbanks, Moon L, Haines, Noatak NPr, Cold Bay, Unimak Isl — ALA, H, OSC, WIS
Almqvist, Ernst: 1879 — St. Lawrence Isl, Port Clarence — H-NYL, S
Andreev, Mikhail P: 1992–93 — Seward Pen. — ALA, LE, S
Anliot, Fred: 1965 — Central Pacific Coast District — DUKE
Arnold, A. Elizabeth ('Betsy'): 2008, 2009, 2011 — Eagle Summit — DUKE
Atwood, N Duane: 1993 — Klondike Gold Rush NHP, SE Alaska — BRY, KLGO
Baker, F: 1956 — Ketchikan — WTU
Batten, Alan R: 1998 — Bering Strait District, Mt. Michelson Quad — ALA
Batten, Carolyn: 1974–75 — Bering Strait District, Mt. Michelson Quad — ALA, COLO, WIS
Battenfield, VE: 1966 — Hagemeister Isl — WIS
Battrum, MW: 1971 — Point Barrow — PMAE
Bauer: 1960 — WIS
Baxter, DV: 1939 — Bartlett Glacier — MICH
Bean, Tarleton Hoffman: 1880 — Baranof Isl, Icy Cape, Port Clarence, St. Matthew Isl, Unalaska, Cook Inlet — F, H-NYL, US
Beck, KA: WRST (now in ALA)
Bednarczyk, Jerry: 2006 — SE and SC FIA sites — OSC (formerly USFS)
Bee, JW: 1951–52 — Brooks Range, Umiat — BYU, COLO
Benninghoff, WS: 1948, 1955 — Yukon Flats, Fort Greely/ Donnelly Dome — LD, MICH
Berg, E: 2003 — Homer — UBC
Bormann, FH: 1953 — Arctic Slope — MSC
Boucher, Tina: 2004 — SE and Kenai FIA sites — OSC (formerly USFS)
Brodo, Irwin M: 1982, 1988, 2018 — Juneau, Anchorage — CANL
Brune, J: 1993 — Anchorage — ASU
Buck, William R: 1983 — Fairbanks — Prudhoe Bay — NY
Bucknell, A: 1960 — Bering Strait District — ALA, COLO
Bunten, Will: 2005–7 — SE and SC FIA sites — OSC (formerly USFS)
Cahalane, VH: 1953–54 — Katmai MPPr — US, WTU
Cantlon, John E: 1953, 1956–58 — Arctic Alaska — MSC, ASU, MIN, LD, S, US
Carson, C: 1958 — Barrow — DUKE, S
Češka, O: 1982 — Skagway — UNBC, V
Chamisso, Adalbert von: 1816 — Unalaska, Sitka — LE, GOET?
Christian, WJ: 1946–47 — Adak Isl — PH
Clark, OD: 1911 — Tanana — WTU
Collier, A: 1826–27 — Kotzebue Sound — BM
Collier, AJ: 1900, 1904 — incl. Matthew Isl, Seward Pen, Cape Nome, Unalaska — US
Cook, Mary Beth: 1987, 1989–90, 1992 — WRST (now in ALA)
Cooley, Grace E: 1891 — Juneau — BM, FH, NY, US
Cooper, David J: 1976, 1978–80 — Gates of the Arctic NPPr (Endicott Mountains) — WIS, BRY
Croasdale, Hannah T: 1951 — Denali NPPr, Bettles, Wiseman — US, US-Evans, WTU
Culbertson, JD: 1905 — Windham Bay (Juneau) — FH
Dall, WH: 1871–74 — Yakutat — FH, US
Daniëls, Fred JA: 1996 — Aleutian Isls, Shumagin Isls, Alaska Peninsula — MSUN
Derr, Chiska: 1989–present — SE Alaska, Bering Strait District — ALA, H, OSC, SRP, TNFS (now in ALA), US, WIS, WTU
Dillman, Karen L: 1989–present — Kodiak NWR, Seward Peninsula, SC and SE Alaska — ALA, BG, G, H, Herb. Scheidegger, IDS, KLGO, MSC, OSC, TNFS (now in ALA or UAAH), UAAH, UBC, US, WIS
Duffy, Michael: 1992, 1995 — Fairbanks, Bering Strait District — ALA
Dunbar, J: 1953–1954 — Nome — COLO, FH, LD, MSC, S, US, WIS
Emers, Michael: 1996 — ANWR — ALA
Enander, Sven Johan: 1913 — Juneau — S
Erdman, JA: 1967–68 — incl. Amchitka Isl — BRY, COLO

- Erickson, Donald R:** 1969 — Hains, Denali NPPr — ID
- Erickson, J:** 1965 — Adak Isl — UBC
- Esslinger, Theodor L:** 2011 — Kenai Peninsula, along highways in southern Alaska — F, herb. Esslinger, KANU
- Etholén (Etolin), Arvid Adolf:** 1834 — Sitka — H
- Eyderdam, Walter J:** 1931–32, 1936–40, 1945, 1947–48 — Aleutian Isls, Kodiak Isl, SE Alaska — ASU, F, FH, MIN, SBBG, TROM (also MICH, US, S, ALA, BPI, COLO, G, LAM, LD, NY, S, UC, UPS, WIS, WTU)
- Fehlmann, A:** 1952 — Barrow, Teshekpuk Lake — COLO
- Fernow, Bernhard Eduard:** 1899 — St Lawrence Is, Kodiak Isl, White Pass — CUP
- Figgs, MG:** 1984 — Bering Strait District, Philip Smith Mountains Quadrangle — ALA
- Flagg, W:** 1948 — North Slope — MIN, US
- Flock, JoAnn W:** 1978–80 — Barrow, Seward Pen, — ALA, BRY, COLO, GZU, LD, SBBG
- Foster, AS:** 1913 — SE Alaska, Wrangell Mtns — CINC, F, FH, O, S, WTU
- Fryday, Alan M:** 2001, 2011–12, 2014–15 — Barrow, Atkasuk, Glacier Bay NP, Mitkof Isl, Baird Glacier — MSC
- Frye, Theodore Christian:** 1913 — SE Alaska — F, WTU
- Geiser, Linda:** 1989–2009 — SE Alaska — ALA, CANL, MSC, OR, TNFS (now in ALA or UAAH), UAAH
- Geist, Otto W von:** 1931–33 — Aleutian Isls, Kodiak Isl, St. Lawrence Isl — ALA, S, LD, UPS, US
- Gillis, WT:** 1956–57 — Arctic Alaska — MSC, MIN
- Gjærevoll, Olav:** 1953, 1957–1959, 1968 — Alaska Peninsula, valley near Mt. Juneau and Mt. Roberts, Mt. Harper, Eagle Summit, Porcupine Dome, King Salmon, E of Teklanika — O, TRH
- Glenn, L:** 1965 — Adak Isl — UBC, WIS
- Goff, Matt:** 2015–present — Sitka — herb. Goff
- Goldman, Doug H:** 2005 — FH
- Gough, Larry P:** 1979–82 — Bering Strait District, Denali NPPr — ALA, BYU, WIS
- Goward, Trevor:** 1982 — Skagway — UBC
- Grauvogel, C:** 1971 — Little Diomedé Isl — ALA
- Gueidan, Cécile:** 2005 — White Mtns — DUKE
- Hadwen, IS:** 1920–1921 — Bering Strait District — US
- Hafellner, Josef:** 2010 — Alaska Range, Anchorage Borough, Brooks Range, Kenai Peninsula, Matanuska-Susitna Borough, Yukon-Koyukuk Census Area — GZU
- Halfert, E:** 1953 — Valdez area — MICH
- Haller, B:** 1987 — WRST, now ALA
- Hampton-Miller, Celia:** 2008–present — Yukon-Charley Rivers NPr, Wrangell-St. Elias NPPr — ALA
- Hanson, Herbert C:** 1950, 1957 — Brooks Range Denali Highway, Nome — COLO, US
- Hanson, Wayne C:** 1964, 1969 — Brooks range, Kanuti/Pah River drainage — BYU, O, MSC
- Hardy, Robert M:** 1945 — Attu Isl — COLO, S, WTU
- Hasselbach, Linda:** 1993, 1996–97 — Bering Strait District, Gates of the Arctic NPPr — ALA, OSU
- Hatch, Martha A:** 1977 — Semidi Isls, Bering Strait District — ALA
- Hayes, C Willard:** 1891 — SE Alaska — FH
- Heath, Harold:** 1903, 1910 — Aleutian Isls, St Paul's Isl — CAS, F, UC, US
- Heitz, Brian:** 2010 — Wrangell-St Elias — ALA
- Hermann, Fred:** 1967 — Sagway/Juneau, Central Yukon River District — US, WIS
- Hess, Frank L:** 1903–07, 1911 — Skagway, Seward Peninsula — CAS, F
- Heusser, Calvin J:** 1950, 1952, 1955 — Juneau area — COLO, WIS
- Hildebrand, Henry H:** 1949 — Sitka, SE Alaska — F, UC, WIS
- Hill, Grace A:** 1915 — Nome — WTU
- Hoare, Janet:** 1979–80 — Tikchik Lakes — SFSU, WIS
- Hodkinson, Brendan:** 2008–09, 2011 — Eagle Summit, Nome — DUKE
- Holt, Emily:** 2001–05 — Noatak NPr, Nome, Bering Land Bridge NPr — ALA, COLO, OSC
- Hooper, CL:** 1881
- Howard, Grace E:** 1942–43, 1949, 1953, 1959 — Alaska Peninsula Denali NPPr, SE Alaska — WTU
- Howard, H:** 1945 — Aleutian Isls — US
- Hultén, Eric:** 1932, 1960–62, 1964 — Attu, Unalaska, St. Paul., Kodiak Isls, Juneau, Seward — S, O, UPS
- Hutten, Martin:** 2012 — Kenai Fjords NP — ALA
- Imshaug, Henry A:** 1953 — Juneau (incl. ice field) — MSC, S
- Inoue, H:** 1973 — Cape Thompson — TNS

- Johansen, Frits:** 1913–14, 1916 — Arctic Alaska — CANL, FH
- Johanson, WI:** 1909 — Aleutians — LE
- Johnson, Albert W:** 1956, 1959, 1962 — Bering Straits, Aleutians, Fairbanks, Barrow, Cape Thompson — ALA, COLO, CANL, DUKE, O, US, WIS
- Johnston, EC:** 1920 — US
- Johnston, HW:** 1920 — Unalakleet — FH, US
- Jones, Joyce H:** 1940 — S
- Jones, Keith:** 1962 — Alaska Range District (Dry Creek), Bering Strait District (vicinity of the Kukpuk R) — ALA, COLO, O, US
- Jordal, Louis H:** 1949–50 — Aleutian Isls, Brooks range — COLO, F, MICH
- Jorgenson, M Torre:** 1984, 2004 — Brooks Range — ALA, LE
- Jovan, Sarah:** 2006–2007, 2011–12 — SE Alaska, Eagle Summit, Caribou-Poker Cr Research Watershed — KLGO, OSU, SRP
- Kallio, Paavo:** 1967, 1971 — Barrow — TUR, UPS
- Kärnefelt, Ingvar:** 1973 — Seward Pen, St. Lawrence Isl — LD
- Kashiwadani, Hiroyuki:** 1965 — Denali Highway — TNS
- Kastalsky, G:** 1828 — Sitka, Unalaska — LE
- Kauff, Frank:** 2005 — White Mtns — DUKE
- Kauhl, JA:** 1923 — S
- Kaye, David:** 1932 — Denali NPPr — S, UC
- Kearney, Thomas H:** 1899 — Port Clarence, St Matthew Isl, Glacier Bay, SE Alaska — US, S
- Kellas, MacCarthy:** 1943 — Aleutian Isls — CANL, UBC
- Kellogg, Albert:** 1867, 1880 — St Michael — CAS, FH, PH, US
- Kessel, Brina:** 1956 — Sheenjek River Area, vicinity of the Kukpuk River — ALA
- Kincaid, Trevor CD:** 1897, 1899 — Popof Isl, Sitka, St. Paul Isl, Glacier Bay — WTU, US, F, FH, MICH, MU, UPS, S
- Klett, Hugh C:** 1960 — Denali NPPr — Macoun US, WTU)
- Kobayashi, Yoshio:** 1931, 1967 — Aleutian Isl, Brooks Range, Peters L, Cape Beaufort — TNS, SAP, DUKE
- Kol, Elisabeth:** 1936 — BP
- Koranda, John J:** 1952–53, 1956–1958, 1968 — Arctic Alaska, Denali NPPr, Aleutian Isls — DUKE, FH, MSC, O, S, TENN, UPS, US, WIS
- Krause, Arthur:** 1881–1882 — Chilkat — BREM, S
- Krog, Hildur:** 1950–57 — Eastern Pacific Coast District (Juneau, Sitka, and Ketchikan areas); Central Pacific Coast District (Prince William Sound, Richardson Highway, Kenai Peninsula, Northern Cook Inlet area, Talkeetna Mountains); Alaska Range District (Denali Highway, Denali NP, Richardson Highway); Central Yukon River District (Alaska Highway, Steese Highway, White Mountains); Bering Sea District (Nunivak Isl), Bering Strait District (Seward Peninsula, Baldwin Peninsula) — ALA, FH, O
- Kurokawa, Syo:** 1975 — Hyder — TNS
- Kurtz, F:** — BREM, UPS
- LaBounty, Kitty:** 2010–present — Sitka — ALA
- Laursen, Gary:** 1971–2004 — Arctic Slope, Barrow, Aleutian Isls, Denali NPPr, Fairbanks/Interior Alaska, Seward Pen, SE Alaska — ALA, WTU
- Lay, George Tradescant:** 1826–27 — Kotzebue Sound — BM
- Lepage, Ernest:** 1948–51 — Alaska Peninsula, Chugach Mountains, Denali NPPr, Alaska Peninsula — QFA, UC, MICH
- Lewis, BE:** 1994 — LE
- Lewis, Marko:** 1974–75 — Mentasta Mts, Mauneluk River — WIS
- Lipkin, Rob:** 1992, 1998 — Kukpuk River — ALA
- Llano, George A:** 1948–49 — Brooks Range, Aleutian Isls, Wainwright — MIN, US, ASU, LD, LSU, S
- Løng, Odd:** 1961 — Bering Strait District, Arctic Coast District — O
- Lutz, HJ:** 1949–52, 1957 — Kenai Pen, Nome, Valdez Cordova — WIS, COLO, UC, WTU, YU
- Lutzoni, François:** 2005, 2008, 2009, 2011, 2022 — northern Alaska — DUKE
- Macoun, James Melville:** 1891–1842, 1896–1899, 1902, 1914 — Aleutian Isls, Pribilof Isl, St Paul Isl, Skagway — CANL, FH, NY, PH, C, S, US
- Maher, WJ:** 1958 — Kaolak R, south of Wainright — US, COLO, SFSU, UPS, WIS
- Malcolm, WM:** 1958 — Arctic Alaska — MSC
- Markon, Carl JH:** 2004 — Anchorage
- Marr, John:** 1962 — Alaska Range District (Gulkana Glacier) — COLO
- Mårtensson, Olle:** 1960–61 — Atkasuk — TRH, UPS

- McCann, John A:** 1962 — Amchitka Isl, Bering Strait District — ALA, F, H, OULU, WIS, US
- McCarthy:** Kiska — CANL
- McCullough, Herbert A:** 1963 — Juneau (Mendenhall Glacier), Fairbanks (McLaren Pass), Valdez (Thomson Pass) — MB, MIL, NY, H
- McCune, Bruce:** 2002, 2010–16 — Bering Land Bridge NPr, Gates of the Arctic NPPr, Noatak NPr, Tongass NF, Caribou-Poker Cr Research Watershed, Katmai, Lake Clark & Kenai Fjords NPPrs — ALA, OSC
- McKay, CL:** 1881 — Nushagak — US
- McKechnie, Fred B:** 1911–12 — Aleutian Isls, Pribilof Isls, Nome, Ketchikan — FH, US
- McLaughlin, G:** 1981 — US
- Melchior, Herbert:** 1954, 1964 — Ogotoruk Creek Drainage, Kukpuk River Region — ALA, O, US, WIS
- Menzies, Archibald:** 1793–94 — Observatory Inlet, Cook Inlet, Chichagof Isl, Baranof Isl — E, LINN-SM, BM
- Mertens, Carl H:** 1826–29 — Unalaska — LE
- Mexia, Ynés Enriqueta Julietta:** 1928 — Denali NPPr — CAS, MICH, MIN, PH, UC, UPS, US, WTU
- Miǎdlikowska, Jolanta:** 2005, 2008, 2009, 2011, 2022 — northern Alaska — DUKE
- Miller, Amy E:** 2005 — Aleutian Isls, Kenai Pen, Yukon-Charley Rivers NPr, Wrangell-St. Elias NPPr — ALA
- Miller, Harvey Alfred:** 1949–50 — Aleutian Isls — MICH, US
- Miller, KA:** 1987 — Attu Isl — UC
- Miller, Norton G:** 1964 — Juneau (incl icefield — MSC
- Miller, WB:** 1925 — Yukon-Koyukuk County (Kokrines) — FH
- Millman, L:** 2009 — Denali NPPr — FH
- Mitchell, James K:** 1966, 1970 — Chugach NF — ASU, BYU, MIN
- Moser, Thomas J:** 1976–77 — Brooks Range — ALA, ASU, ID, LSU, MIN
- Mueller, Brendt:** 2006–07 — Southeast, Kenai Peninsula, PWS — OSC
- Muggia, Lucia:** 2010, 2013 — Kenai Peninsula, Matanuska-Susitna Borough, Katmai NP — ALA, TSB
- Muller, Ernest H:** 1951, 1953 — SW Alaska (incl Hagemeister Isl.) — US, WTU
- Murie, Adolf:** 1948 — Denali NPPr — ALA, WTU
- Murie, Olaus J:** 1920–25, 1937 — vicinity of Fairbanks — C, FH, US, WIS
- Murphy, Eric:** 2006 — Southeast FIA sites — OSC (formerly USFS)
- Murray, Barbara M:** 1965–66, 1968–98 — Arctic Alaska — ALA, COLO, FH, O, US, WIS, herb. B. Murray
- Myers, J:** 2011 — Aleutian Isls — ALA, H, OSU, UBC): Unimak Isl
- Nakanishi, S:** 1968 — Denali NP — TNS
- Nash III, Thomas H:** 1976–77, 2003 — Brooks Range, Glacier Bay NP, Skagway, Mitkof Isl, St. Paul Isl — ASU, LD, MIN, PH, S, UPS
- Neher, Clarita:** 1976 — Chugach NF, Kodiak Isl, St Paul Isl, Semidi Isl, Shumagin Isls, Glacier Bay — UC, WIS
- Neiland, Bonita:** 1961–65 — SE Alaska — ALA, LE, O, WTU, WIS
- Neitlich, Peter N:** 1995–97, 2000–02, 2004, 2006–07, 2011 — Gates of the Arctic NP, vicinity of the Kukpuk River, Bering Land Bridge NPr, Monument Rock, Noatak NPr, Cape Krusenstern, Great Kobuk Sand Dunes, Eagle Summit — ALA, COLO, OSC, SERP, WTU
- Nelson, Peter:** 2007–10, 2012–2013 — Denali NPPr, Katmai NPPr, Lake Clark NP, Gates of the Arctic NPPr — ALA, herb. P. Nelson, OSC, SERP, US
- Norberg, Ingvar L:** 1932, 1936–37, 1939–40 — Prince William Sound — FH, MICH, S, TROM, UC, US, UPS, WIS, WTU
- Nybakken, BH:** 1963 — Kodiak Isl. — WIS, US, BM
- O'Clair, Rita:** 1980 — SE Alaska (Juneau, Sitka) — ALA, CANL, US, UBC
- Ogasawara, K:** 1998 — Katmai NP — TNS
- Olafsen, A:** 1981 — Brooks Range (Anaktuvuk Pass) — ASU, BG, M, LD, LSU, PH, S, UC, UCR, US, WIS
- Palmer, LJ:** 1920–24, 1926 — NW Arctic Alaska, Diomedede Isl., Unalakleet, Nunivak Isl., Nome — US, FH, WIS, B, S
- Palmer, William** 1890 — St Paul Isl., Unalaska — US
- Parker, Carolyn L:** 1966, 1983, 1985, 1990, 1992, 1998, 2001 — Kukpuk River, Bering Land Bridge NP — FH, ALA, LE
- Parker, GH:** 1914 — St George Isl. — FH
- Pegau, Robert:** 1965–66, 1968–70 — Upper Selawik River, Nome, Darby Mountains, Alaska Peninsula — ALA, O, WIS
- Pérez Ortega, Sergio:** 2008, 2012 — Klondike Gold Rush NHP, Glacier Bay NP — herb. Pérez-Ortega, KLGO

- Pilgrim, Mariette:** 1953 — Denali NPPr — WTU
- Porsild, Alf Erling:** 1926 — Alaska Range, Little Diomed Isl — ASU, BG, CANL, COLO, MICH, MIN, WIS
- Potter, Loren D:** 1967 — Gates of the Arctic NPPr — BYU, UNM, US
- Potter, Louise:** 1962 — WIS
- Price, Henry S:** 1942–43 — Alaska Peninsula — WTU
- Printzen, Christian:** 1999, 2008 — Baranof Isl, Denali NP, Denali State Park, Juneau, Skagway, White Mountains (Twelvemile Summit) — FR, herb. Printzen
- Racine, Charles H:** 1973 — Kukpuk River, Seward Peninsula — ALA, COLO
- Rawson, George W:** 1952 — Umiat — WTU, US
- Rebuck, AM:** 1953 — MSC
- Rector, Claudia:** 1994 — KLGO
- Reich, Robert J:** 1962 — Amchitka Isl — ALA, CAS, F, H, MIL, MIN, OULU, UC, US, WIS
- Reitz, Beverly E:** 1992, 1997 — Arctic Wildlife Refuge — ALA, herb. Janet Jorgensen
- Resl, Philipp:** 2010 — herb. Resl, GZU
- Reuleaux, Robert:** 1894 — Sitka — ZT
- Reynolds, MK:** 1995 — ALA
- Richardson, John:** 1826 — BM
- Rome, Krista:** 2001 — KLGO
- Root, Heather:** 2009 — SE and SC FIA plots — OSC (formerly USFS)
- Rosentreter, Roger:** 2004, 2011, 2013–2015 — Noatak NPr, Katmai, Lake Clark & Kenai Fjords NPPrs — ALA, herb. Rosentreter, OSC
- Roth, J:** 2002 — LE
- Rothrock, JT:** 1865–68 — US
- Russell, IC:** 1889 — St Michaels, Yukon R — US, S
- Sanders, AC:** 2004 — Haines, Juneau — UCR
- Sanders, Debbie:** 1993 — KLGO
- Saunders, De Alton:** 1899 — Alaska Pen, Baranof Isl, Glacier Bay, Kodiak Isl, Prince William Sound, St Lawrence Isl, St Matthew Isl, St Paul Isl, Yakutat Bay — US
- Savić, Sanja:** 2010 — UPS
- Schaler, GB:** WIS
- Schindler, Herbert:** 1983, 1987 — Anchorage, Denali NPPr, Katmai NPPr — KR, UPS, BG, S, H, LD
- Schofield, Edmund A:** 1972 — Barrow, Prudhoe Bay — OS, ALA
- Schofield, Wilfred:** 1968, 1982–2001 — Alaska Pen, SE Alaska, Izembek NWR, Kukpuk River, Selawik NWR, Aleutians, Attu Isl, Simeonof Isl, St Paul Isl — ALA, UBC, WIS
- Scholander, PF:** 1940, 1947–48 — Arctic Coast, Barrow, Umiat, Gates of the Arctic NPPr, Lake Schrader — US, MIN, O, UC
- Schultz, Matthias:** 2015 — Kenai Fjords NPPr — ALA, HBG
- Schumo, SL:** 1898 — Sitka — PH
- Seemann, Berthold Carl:** 1849 — Kotzebue Sound — ALA, BM
- Seio, Joe:** 2009 — SE and SC FIA plots — OSC (formerly USFS)
- Setchell, WA:** 1899 — Cape Nome, St. Michael, Sitka, Unalaska — FH, NY, UC, US
- Shacklette, Hansford T:** 1958, 1960, 1965–67 — Amchitka Isl, Alaska Range, Glacier Bay, Shemya Isl — COLO, O
- Sharnoff, Stephen:** 1990–94 — Valdez-Cordova, Skagway, Eagle Summit, Kenai Peninsula — CANL, US
- Sharnoff, Sylvia Duran:** 1990–94 — Valdez-Cordoba, Skagway, Eagle Summit, Kenai Peninsula — CANL, ASU, US
- Sharp, Aaron J:** 1958, 1967–68 — Mancha Cr and Firth R, Barrow, Anchorage, Kenai Pen, Amchitka Isl, Kodiak Isl, Sitka — ALA, BRY, LD, O, S, TENN, WIS, WTU, UPS
- Sherman, HL:** 1958 — Barrow — LD, S
- Shetler, Stanley:** 1956–57, 1963, 1967 — Noatak Valley, Kobuk River, Redstone Lake — ALA, COLO, US
- Shushan, Sam:** 1952–52, 1954, 1958 — Wainwright, Kukpuk River, Barrow, Okpilak L, Umiat, Franklin Bluffs — ALA, BG, BRY, COLO, DUKE, FH, H, MIN, MSC, NEB, O, OS, PSS, S, UAC, UC, US, WIS
- Sigafoos, Robert S:** 1948–49 — Seward Peninsula — MICH, US
- Sjörs, Hugo:** 1981 — UPS
- Skahra, Shannon:** 2022 — Dalton Hwy — DUKE
- Smith, Galen:** 1953–54 — Kukpuk River, Fairbanks, Valdez, Umiat, Tatalina, Katchikan — ALA, COLO, DUKE, FH, OS, S, UC, US, WIS
- Smith, Hendrik, Granville:** 1976 — St Lawrence Isl — OS
- Söchting, Ulrik:** 1996 — Bettles, Dalton Hwy, Denali Park, Fairbanks, Fairbanks North Star Borough, Livengood, Prudhoe Bay, Steese National Conservation Area — C
- Sowl, LeRoy W:** 1968–70 — Amchitka Isl — WIS

- Spetzman, Lloyd A:** 1946, 1948, 1951 — Romanzoff Mtns, Sagavanirktok R, Sadlerochit R — US, MICH, MIN, O
- Spribille, Toby:** 2007–12, 2014 — Brooks Range, Denali NP, Seward Peninsula, Klondike-Gold Rush NHP, Glacier Bay NP, Mitkof Isl — ALA, ALTA, BG, CANL, GZU, KLGO, MSC, NY, UBC, UPS
- Stair, Leslie Dalrymple:** 1945 — Yakutat Bay — PH
- Stehn, Sarah:** 2006–present — Denali NPPr, Yukon-Charley NPr, Wrangell St. Elias NPPr — ALA
- Stenson, T:** 1949 — Wainwright — MICH
- Stensvold (née Muller), Mary C:** 1981–present — SE Alaska — ALA, TNFS (now in ALA), WTU
- Stephens, K:** 1907 — Glacier Bay, Admiralty Isl — UC, F
- Stevenson, D:** 1920, 1922 — Aleutian Isls — US
- Stewart, Jeannette:** 1946 — Alaska Peninsula, Aleutian Isls — COLO, WTU
- Stoker, Sam:** 1969 — Little Diomed Isl, Kukpuk River — ALA, WIS
- Svensson, Måns:** 2012 — Glacier Bay NP, Gustavus — UPS
- Svihla, Ruth D:** 1954 — Fairbanks, Valdez — WTU
- Swanson, J David:** 1949 — Nunivak Isl, Seward Peninsula — WIS
- Swanson, Mary Ann:** 1947 — Chandler Lake — ALA, ASU, FLAS, ID, SFSU
- Talbot, Sandra Looman:** 1997–2015 — Aleutian Isls, St. Paul Isl, St. Matthew Isl (UBC, H, WIS)
- Talbot, Stephen:** 1980–84, 1987–2015 — numerous Aleutian Isls, Shumagin Isls, Alaska Peninsula, St. Matthew Isl, St. Paul Isl, Chisik Isl, Yukon Flats NWR, Arctic NWR, Selawik NWR and other parts of Alaska — ALA, H, UBC, UPS, US, WIS
- Tatewaki, Misao:** 1929 — SAP
- Thomas, JH:** 1950, 1956 — Barrow, Middleton Isl — UBC, US
- Thomas, Rhoda:** 1948, 1950, 1952, 1954–55, 1962 — Newhalen, Kasigluk, Anaktuvuk — COLO, MIN, US, WTU
- Thomas, WE** 1954–55 — WTU
- Thompson, Dan Q:** 1951 — Barrow — WIS
- Thompson, Paul:** 1933 — Copper Center — WTU
- Thomson, John Walter:** 1958, 1967 — numerous localities — mostly in arctic Alaska — WIS, ALA, BRY, CANL, COLO, DUKE, FH, H, LD, MICH, MIN, MSC, NEB, O, OS, S, TENN, UC, US, UPS, WTU
- Thor, Göran:** 1989 — Kodiak, Brooks Range, Wrangell-St. Elias — S, UPS
- Thornton, CW:** 1916–17, 1919–21, 1933 — Nome — FH, US
- Tilesius, Wilhelm Gottlieb:** 1816 — Unalaska — H-ACH, UPS
- Tiling, HST:** 1866–68 — Sitka — LE
- Tinker, Paul:** 1956 — Kasigluk — WTU
- Tonsberg, Tor:** 1991, 1999, 2001, 2003, 2008, 2012–15 — Kodiak Isl, Tongass NF, Klondike Gold Rush NHP, Glacier Bay, Katmai, Lake Clark & Kenai Fjords NPs, Coronation Isl Wilderness, Kuiv Wilderness, Juneau, Cordova, Yakutat, SE Alaska incl. Sitka, Ketchikan — ALA, BG, KLGO, MSC, WTU
- Trelease, William:** 1899 — Aleutian Isls, Kodiak Is, St Lawrence Isl, St Mathew Isl, St Paul Is, Port Clarence, SE Alaska — US, NY, DUKE, S, MSC
- Trimble, Steven T:** 2006–08 — SE and Kenai FIA sites — OSC (formerly USFS)
- Turner, J Henry:** 1891 — Porcupine R — F, UC
- Turner, Lucien M:** 1874–77 — St. Michaels — US, FH
- Ugolini, FC:** 1960 — Anaktuvuk Pass — S
- U'Ren, Jana:** 2011 — Eagle Summit — DUKE
- Vacca, Shelli:** 1983 — St. Matthew Isl — WIS
- Van Dyke, EC:** 1907 — Aleutian Isls — FH, WIS
- Van Schaack, GB:** 1944–45 — Attu Isl — US, DUKE
- Viereck, Leslie A:** 1952, 1954, 1956–69, 1971, 1973, 1975–78, 1980–82, 1994 — Fairbanks, Kukpuk R, Juneau/Skagway, Denali NPPr, Gulkana Glacier, Prince William Sound, Ogotoruk Cr drainage, Point Hope, Alaska Range — ASU, ALA, BRY, COLO, DUKE, FH, GB, MIN, MSC, O, UC, UBC, UPS, US, WIS, WTU
- Viereck, Teri:** 1957 — ALA
- Wacker, HJ:** 1961 — Thetis Isl — S
- Walker, Donald A ('Skip'):** 1974–76, 1984–85, 2000 — Prudhoe Bay, Philip Smith Mountains — ALA, LE, COLO, WIS
- Walton, James:** 2001–present — Denali, Katmai, Lake Clark, Kenai Fjords NPs — ALA
- Ward, Maurice:** 1982 — St. Matthew Isl — WIS, US
- Waynick, Dean:** 1913 — S, WTU
- Weber, N:** 1949 — Brooks Range — ?US

- Weber, William A:** 1952–53, 1956 — Denali NPPr — COLO, ALA, FH, MIN, MSC, O, S, US, WIS
- Wetmore, Clifford M:** 1962, 1991 — Juneau — MIN
- Wheeler, Tim:** 2012, 2015 — Brooks Range, Gates of the Arctic, SE Alaska — herb. Wheeler
- Wilder, E:** 1991 — SE Alaska — TNFS (now in ALA)
- Williams, Jeri:** 1987 — Denali NPPr — SRP
- Williams, Jon:** 2006–08 — SE Alaska, Kodiak Isl, Chugach NF, Kenai Peninsula (FIA plots) — OSC
- Williams, Michael E:** 1972–73 — Barrow, Prudhoe Bay — OS
- Williams, Robert Statham:** 1898–99 — Dawson, Skagway — NY, FH
- Yatskov, Mikhael ('Misha'):** 2005–2008 — SE and SC FIA plots — OSC (formerly USFS)
- Zhurbenko, Mikhail P:** 2000–01, 2004 — Brooks Range, Caribou-Poker Crs Watershed, Denali National Park and Preserve, Denali National Park Wilderness, Kenai Peninsula, Kobuk Valley Wilderness, Northern Slope of Alaska (Toolik Lake Region), Prince of Wales Isl, Seward Peninsula (Nome) — LE, US, BG, H, M, herb. Diederich, herb. Etayo

Diversity of Alaskan lichens and associated fungi

Lichens have long been the object of fascination by naturalists and the target of biodiversity surveys. Lichens are a symbiosis of multiple organismal players, in decreasing order of cellular abundance and biomass typically consisting of fungus, alga or cyanobacterium, various non-cyanobacterial bacteria, and fungal yeasts. The International Code of Nomenclature for Algae, Fungi and Plants (ICNafp) recognizes that “for nomenclatural purposes, names given to lichens apply to their fungal component” (Article F.1.1, introduced in 1950). Now that we know that multiple fungi can occur in the lichen, this has been interpreted to mean the fungus with the greatest cellular abundance and/or biomass. An unforeseen and unfortunate consequence of Article F.1.1 is that some morphologically, chemically or ecologically distinct lichen symbioses possess the same dominant fungus. In the present treatment, we follow the ICNafp and recognize fungal species involved in lichens, except where we think the case has not been adequately made in the taxonomic literature that a fungus really encompasses multiple lichen symbioses. We do not track lichen algae or cyanobacteria in this compendium, and few have been identified to species from Alaskan material.

Associated fungi (denoted in the main list with the symbol #) are any fungi found in or on lichens but not considered to be the structurally dominant fungal symbiont. All records of such fungi cited in this list are based on recognizable fruiting structures, either sexual or asexual; however, the extent of these fungi in lichen thalli, including in lichen thalli in which no fruiting structures are produced, has until recently been considered virtually unknowable. These fungi are usually called lichenicolous fungi, but this term implies that we know *a priori* that they are extrinsic to the specific lichen symbiosis in question. In reality, every lichen symbiosis probably carries with it an intrinsic suite of symbionts that are required to maintain metabolic balance and lead to the characteristic morphological outcome of the lichen.

Broadly speaking, lichen-associated fungi represent a range of lifestyles, and some may even switch lifestyles in the course of their own life cycles. Currently we have evidence to suggest four main types of lifestyles:

- 1) Constitutively present in healthy lichens, mostly as yeasts. The records in this list underrepresent such fungi as researchers who study ‘lichenicolous’ fungi have until recently only surveyed for fruiting structures. For example, in *Alectoria*, *Bryoria*, *Hypogymnia* and *Letharia* symbioses surveyed to date, 100% of all visibly healthy lichen thalli surveyed have either *Cyphobasidium* and *Tremella* species, occurring as yeasts (SPRIBILLE et al. 2016, TUOVINEN et al. 2019), but these fungi produce basidiomata only infrequently. They have been detected in about two-thirds of all lichens surveyed and are the most common lichen-associated fungi worldwide (TAGIRDZHANOVA et al. 2023).
- 2) Commonly present, but without obvious change to lichen morphology. The records in this list likely also underrepresent this group. This group may include what have commonly been called ‘endolichenic fungi’, though few surveys exist of the frequency of these fungi in thalli of named lichen symbioses, and they may ultimately be revealed to belong mostly in groups #1 and #3.
- 3) Biotrophic parasites, which keep the host alive. This category may account for a large number of associated fungal species.
- 4) Necrotrophic parasites, which kill the host. Examples include members of the *Nectriaceae*.

The current compendium does not include records of lichen-associated fungi derived from microbiological or metagenomic studies, but we note that such studies do exist based on or including Alaskan lichens (e.g., U’REN et al. 2012, SPRIBILLE et al. 2016).

In total, we recognize 2126 taxa. This includes, for lichen fungi, 1802 species, 32 subspecies and 34 varieties, with 1827 taxa total (not additive because 41 infraspecific taxa double as records for their species). For lichen-associated fungi, we recognize 276 species plus two varieties (one of which doubles as a record for its species), for a total of 277 taxa; and for saprotrophs usually treated by lichenologists, we recognize 22 species. We also treat 1594 synonyms and misapplied names.

Current names in use, described from Alaska

We identified all species described from Alaskan material and flagged them as being of special interest. The original localities or publications in which a new species described from Alaska appear are noted with the bolded word **type**. Altogether 124 currently accepted species and infra-specific taxa have been described from Alaska (Table 2). It is important to note that, although these taxa were described from Alaska, nearly all have since been found outside the state.

Table 2. Lichens and lichen-associated fungi in current use that were described from Alaskan types. # indicates lichen-associated fungi.

Current name	Basionym, if different than current name	Type locality	Year published
<i>Acarospora toensbergii</i>		Kenai Fjords NPPr	2017
<i>Asahinea scholanderi</i>	<i>Cetraria scholanderi</i>	L Schrader	1951
<i>Aspicilia concinna</i>	<i>Lecanora concinna</i>	Franklin Bluffs on the Sagavanirktok R	1972
<i>Atla alaskana</i>		Brooks Range, Sukakpak Mtn.	2015
<i>Atrophysma cyanomelanos</i>		Glacier Bay NP	2020
<i>Bacidina circumpulla</i>		Glacier Bay NP	2020
<i>Biatora alaskana</i>		Auke Bay, near Juneau	2000
<i>Biatora kodiakensis</i>		Kodiak Isl	2004
<i>Biatora montis-marmorei</i>	<i>Biatora marmorea</i>	Glacier Bay NP	2023(2020)
<i>Biatora oligocarpa</i>		Mendenhall Glacier	2004
<i>Bryoria alaskana</i>		Kuiu Isl	2016
<i>Bryoria cervinula</i>		Sitka, Harbour Mtn	1977
<i>Bryoria kockiana</i>		“Fairbanks-North Star Borough”	2013
<i>Caloplaca alaskensis</i>		Valley of Mancha Cr with Firth R	2004
# <i>Capronia thamnoliae</i>		Great Kobuk Sand Dunes	2012
<i>Carneothele sphagnicola</i>		Mitkof Isl	2020
<i>Cetrelia alaskana</i>	<i>Cetraria alaskana</i>	Cape Sabine	1968
# <i>Cirrenalia lichenicola</i>		Mitkof Isl	2020
<i>Cladonia alaskana</i>		Cantwell	1947
<i>Cladonia gracilis</i> subsp. <i>vulnerata</i>		Chugach Mts, Blueberry L CG	1980
<i>Cladonia stellaris</i> var. <i>aberrans</i>	<i>Cladonia alpestris</i> f. <i>aberrans</i>	St. Paul Isl	1939
<i>Cladonia thomsonii</i>		Chugach Mtns., Thompson Pass	1978
<i>Coccotrema hahriae</i>		Chilkoot Trail	2010
<i>Coccotrema minutum</i>	<i>Perforaria minuta</i>	Kodiak Isl	1938
<i>Coccotrema pocillarium</i>	<i>Pertusaria pocillaria</i>	Farragut Bay	1904

<i>#Corticifraga chugachiana</i>		Near Seward	2007
<i>#Corticifraga nephromatis</i>		Glacier Bay NP	2020
<i>#Corticifraga scrobiculatae</i>		Chilkoot Trail	2010
<i>#Crittendenia lopadii</i>		Kodiak Isl	2022
<i>#Cryptodiscus epicladonia</i>		Aleutian Islands, Unimak Isl	2017
<i>Evernia perfragilis</i>		Anaktuvuk Pass	1951
<i>Frigidopyrenia bryospila</i>	<i>Verrucaria bryospila</i>	Port Clarence	1864
<i>Fuscidea aleutica</i>	<i>Lecidea aleutica</i>	Unalaska	1938
<i>Fuscidea muskeg</i>		Gustavus	2020
<i>Fuscopannaria alaskana</i>		S of Seward, W of Lowell Pt, Spruce Cr	2000
<i>Fuscopannaria convexa</i>		Cordova, Long Isl	2005
<i>Fuscopannaria dillmaniae</i>		Gustavus	2020
<i>Fuscopannaria ramulina</i>		Mendenhall L	2000
<i>Fuscopannaria viridescens</i>		Middle Kobuk R, Kobuk Valley Wilderness	2002
<i>Gyalidea lecideopsis</i> var. <i>convarians</i>	<i>Gyalidea convarians</i>	Port Clarence	1885
<i>Halecania athallina</i>		Glacier Bay NP	2020
<i>Herteliana alaskensis</i>	<i>Lecidea alaskensis</i>	“Alaska”	1887
<i>Hydropunctaria alaskana</i>		Glacier Bay NP	2020
<i>Hypogymnia beringiana</i>	<i>Hypogymnia lugubris</i> subsp. <i>beringiana</i>	St. Paul Isl	1968
<i>Hypogymnia castanea</i>		Seward Peninsula, N of Nome, Teller Rd	2008
<i>Hypogymnia fistulosa</i>		Bering Strait District, King Isl	2008
<i>Hypogymnia hultenii</i>	<i>Cavernularia hultenii</i>	Kodiak	1937
<i>Hypogymnia inactiva</i>	<i>Hypogymnia imshaugii</i> var. <i>inactiva</i>	Juneau, Montana Cr	1968
<i>Hypogymnia salsa</i>		Lower Gerstle R (near Delta Junction)	2012
<i>Immersaria carbonioidea</i>	<i>Lecidea carbonioidea</i>	Pitmegea R, 15 mi upstream from Cape Sabine	1972
<i>Jamesiella dacryoidea</i>		Mitkof Isl	2021
<i>Lambiella aliphatica</i>		Glacier Bay NP	2020
<i>Lecania hydrophobica</i>		Glacier Bay NP	2020
<i>Lecanora alaskensis</i>		Wrangell	1932
<i>Lecanora aleutica</i>		Atka Island	1936
<i>Lecanora quadruplans</i>		Port Clarence	1885
<i>Lecanora viridipruinosa</i>		Glacier Bay NP	2020
<i>Lecidea denotata</i>		Port Clarence	1885
<i>Lecidea griseomarginata</i>		Glacier Bay NP	2020

24 Introduction

<i>Lecidea insperabilis</i>		Port Clarence	1885
<i>Lecidea streveleri</i>		Glacier Bay NP	2020
<i>Lepra borealis</i>	<i>Pertusaria borealis</i>	Kodiak Isl	1938
<i>Lepra subdactylina</i>	<i>Pertusaria subdactylina</i>	Port Clarence	1885
<i>Lepra subvelata</i>	<i>Pertusaria subvelata</i>	Skagway	1908
<i>Lepraria torii</i>		Chilkoot Trail	2009
<i>Leptogium compactum</i>		Lake Clark NP	2016
<i>#Llimoniella cinnabarinae</i>		Chilkoot Trail	2011
<i>Melanohalea beringiana</i>		Fielding L	2016
<i>Melanohalea olivaceoides</i>	<i>Parmelia olivaceoides</i>	Circle Hot Springs	1968
<i>Miriquidica gyrizans</i>		Glacier Bay NP	2020
<i>#Niesslia peltigerae</i>		Glacier Bay NP	2020
<i>Ochrolechia alaskana</i>	<i>Ochrolechia frigida</i> f. <i>alaskana</i>	Atka Isl	1958
<i>Ochrolechia cooperi</i>		Glacier Bay NP	2020
<i>Ochrolechia elisabethae-kolae</i>		Atka Isl	1958
<i>Ochrolechia gyalectina</i>	<i>Lecanora gyalectina</i>	Port Clarence	1885
<i>Ochrolechia inaequatula</i>	<i>Lecanora inaequatula</i>	Port Clarence	1885
<i>Ochrolechia subplicans</i> subsp. <i>subplicans</i>	<i>Pertusaria subplicans</i>	St. Lawrence Isl	1885
<i>Ochrolechia subplicans</i> subsp. <i>hultenii</i>	<i>Pertusaria hultenii</i>	Unalaska Isl	1938
<i>Peltigera behringiana</i>		St Paul Isl	1928
<i>Peltigera tartarea</i>	<i>Peltigera venosa</i> f. <i>tartarea</i>	Lake Schrader	1951
<i>Pertusaria alaskensis</i>		Unalaska Isl	1938
<i>Pertusaria bryophaga</i>		Unalaska	1938
<i>Pertusaria mccroryae</i>		Chilkoot Trail	2010
<i>Pilophorus vegae</i>		Nunivak Isl	1968
<i>Placynthium glaciale</i>		Glacier Bay NP	2020
<i>Polyblastia cucurbitula</i>		confluence of the Alatna and Nahtuk Rivers	1988
<i>Polyblastia exalbida</i>	<i>Verrucaria exalbida</i>	Port Clarence	1885
<i>Polyblastia fulva</i>		Port Wells, PWS	1921(1904)
<i>#Polycoccum laursenii</i>		Kobuk Valley Wilderness	2004
<i>Porina sublectissima</i>	<i>Verrucaria sublectissima</i>	St. Lawrence Isl	1885
<i>Porpidia grisea</i>		Valley of the Okpilak R	1989
<i>Porpidia seakensis</i>		Glacier Bay NP	2020
<i>#Pronectria dillmaniae</i>		Kobuk R	2005
<i>#Pronectria tibellii</i>		Seward Peninsula, Newton Pk	2004
<i>Psoroma spinuliferum</i>		Yakutat	2018

<i>Rhizocarpon alaxense</i>		Franklin Bluffs on the Sagavanirktok R	1967
<i>Ricasolia amplissima</i> subsp. <i>sheiyi</i>		Frederick Sound	2017
<i>Rinodina pallidescens</i>		Naknek L, Katmai NP	2014
<i>Rinodina sheardii</i>		Cowee Cr, NW of Juneau	1992
<i>Sagiolechia bairdensis</i>		Baird Glacier	2021
<i>Sagiolechia phaeospora</i>		Glacier Bay NP	2020
# <i>Sclerococcum ahtii</i>	<i>Dactylospora ahtii</i>	Kodiak Archipelago, Chirikof Island	2017
# <i>Sclerococcum</i> <i>crassitunicatum</i>		Fairbanks area, Skyline Ridge	2017
# <i>Sclerococcum fissurinae</i>		Glacier Bay NP	2020
<i>Scytinium parculum</i>	<i>Leptogium parculum</i>	Port Clarence	1885
<i>Siphula dactyliza</i>		St. Lawrence Isl	1885
# <i>Sphaerellothecium</i> <i>thamniae</i> var. <i>thamniae</i>		Kobuk Valley Wilderness	2012
<i>Spilonema maritimum</i>		Douglas Isl	2020
<i>Staurothele discedens</i>	<i>Verrucaria</i> <i>discedens</i>	Port Clarence	1885
<i>Steineropsis alaskana</i>		White Pass	2010
<i>Stereocaulon klondikense</i>		White Pass	2010
<i>Sticta arctica</i>		Unalaska Isl, Captains Harbor	1938
<i>Sticta torii</i>		Coronation Isl	2018
# <i>Stigmidium beringicum</i>		Portage Glacier area, near Bayron Glacier	2008
# <i>Stigmidium lobariae</i>		Kenai Peninsula, rd to Exit Glacier	2012
<i>Thelocarpon immersum</i>		Glacier Bay NP	2020
<i>Toensbergia blastidiata</i>		Glacier Bay NP	2020
<i>Umbilicaria mammulata</i> var. <i>magnaeva</i>		Diomedea Isl	1950
<i>Umbilicaria multistrata</i>		Lake Clark NP	2018
<i>Vahliella globigera</i>	<i>Fuscopannaria</i> <i>globigera</i>	Barrow	2004
<i>Xanthoria alaskana</i>		Chisik Isl	1992
# <i>Xenonectriella nephromatis</i>		Glacier Bay NP	2020
<i>Xylographa opegraphella</i>		Cook Inlet	1858
<i>Xylographa schofieldii</i>		Falls Creek near Gustavus	2014

Taxonomy and nomenclature

Our list of accepted names and synonyms of Alaskan lichens represents an original assessment of available names and the current literature, and does not follow any other assessment *per se*. Works such as the *Cumulative Checklist for the Lichen-forming, Lichenicolous and Allied Fungi of the Continental United States and Canada* (ESSLINGER et al. 2021), *Santesson's Checklist of Fennoscandian Lichen-Forming and Lichenicolous Fungi* (WESTBERG et al. 2021) and Index Fungorum (<http://www.indexfungorum.org>) are major reference works for modern lichenology, but many names used in Alaskan lichenology over the past 182 years are missing from one or more of these works. In order to derive a list of accepted names from the ca. 3700 names we recovered in our survey of the literature, we consulted all relevant taxonomic revisions and generated *de novo* synonym lists, taking into consideration the various underlying reasons synonymies arise. We also undertook verification of authorities for hundreds of taxa by consulting protologues and other historical reference works.

In order to have a single list of accepted names, we also were compelled to choose between diverging taxonomic and nomenclatural solutions for sets of taxa currently being debated in the lichenological community. This has not always been easy. Rather than expounding here on the rationale behind specific decisions, we will note two broad phenomena that appear to be driving name changes in lichenology, and our approach to each:

1) *Generic recircumscriptions using molecular data*. A large percentage of all name changes in recent years can be attributed to the recircumscription of genera based on molecular data. Molecular data has revolutionized fungal-based lichen classification and disentangled relationships that were difficult or impossible to resolve with morphological data alone. Many of the accompanying name changes are necessary if a genus is to unite closely related species. For this reason, we have accepted the well-reasoned phylogenetic studies of *Teloschistaceae* and *Collemataceae* by ARUP et al. (2013) and OTÁLORA et al. (2014), respectively. We also recognize and understand that even the most exhaustive studies may not be able to assess all taxa in a genus, and thus leave taxonomic 'orphans' in a regional biota like Alaska's. This problem is not unique to molecular revisions: we still have numerous orphans from the decades-long morphological reassessment of the genus *Lecidea*.

We do not accept generic changes based on molecular data when phylogenetic studies have produced unresolved or unsupported topologies, sample too few taxa to test alternate hypotheses, or where the underlying data have not demonstrably come from reliably identified specimens or are not deposited in public databases. We do not accept large-scale name changes when an alternative and less disruptive solution is available. The genera *Neofuscelia* and *Xanthoparmelia* are an example of such a case. Both genera are strongly supported in their classical circumscription by the BLANCO et al. (2004) phylogenetic study, with the only required change being a redistribution of the morphologically aberrant *X. mougeotii* group. Similarly, we also

do not recognize the need for generic circumscriptions to be temporally comparable at evolutionary timescales; see LÜCKING (2019) and SPRIBILLE et al. (2020).

A special case is the genus *Polyozosia* A. Massal. We accept *Polyozosia* as the correct name for the group of species previously included under the name *Myriolecis* Clem. We agree with KONDRATYUK et al. (2019) that *Lecanora poliophaea* (basionym *Parmelia poliophaea* Wahlenb.) belongs in this group. Because this species was selected as the lectotype of *Polyozosia* A. Massal. by HAFELLNER (1984), and *Polyozosia* (1855) predates *Myriolecis* (1909), the former name must be adopted for the group.

2) *Species delimitation assisted by molecular data.* Similar to the above, molecular data have revolutionized our understanding of evolutionary relationships and revealed hidden patterns of speciation in lichen fungal symbionts. That being said, study designs vary greatly in the completeness of sampling of available specimens and coverage of overall geographic range of a given taxon. In cases where sampling of material relevant for Alaska is limited, we accept evidence of presence but not assertions of absence. Thus, for studies such as those of VONDRÁK et al. (2011) in *Xanthocarpia*, GASPARYAN et al. (2017) in *Ramalina*, FRISCH et al. (2022a) in *Arthrorhaphis*, and VELMALA et al. (2014) in *Bryoria*, we do not exclude previously reported taxa from our list only because they were not recovered as occurring in North America in the corresponding phylogenies. This also applies to morphology-based studies that did not include Alaskan material (e.g., for *Candelariella*, WESTBERG 2007c). We also do not accept species-level changes when the molecular data consist of only one gene locus, and/or when the presented data are insufficient to reject alternative topologies.

A final case unrelated to either of the above two discussed trends in lichen taxonomy concerns the growing divergence between molecular-based fungal species circumscription, on the one hand, and the morphological species concepts of long-accepted lichen species on the other. In some cases, these divergences have been studied with robust assessments of multilocus gene sequence or even genome-scale data, and we accept the outcome and synonyms based on the International Code of Nomenclature for Algae, Plants and Fungi. Some cases, however, currently have no easy solution. This is especially true of the genus *Bryoria*, where several of the existing studies are based on few, arguably uninformative gene loci, and can be interpreted in different ways (see, for instance, the diverging interpretation of the results of VELMALA et al. 2014 by MCCUNE et al. 2020). In such cases we adopt a conservative approach of continuing to accept species rooted in morphological (including chemical) traits pending further studies (see also SPRIBILLE et al. 2020).

Synonyms and misapplied names

Synonyms are provided based on our own assessment of the relevant lichenological literature. We have compared both synonymy and the authorship of all names against major references, including WESTBERG et al. (2021), ESSLINGER (2021) and databases such as Index Fungorum and Mycobank, and provide rationale and citations where our synonymies or authorships differ from these sources.

We recognize two types of synonyms:

- 1) Homotypic synonyms. These are nomenclatural synonyms; the type specimen of the synonym is the same as that of the accepted name. We provide these synonyms before heterotypic synonyms (below) in alphabetical order by full taxon name.
- 2) Heterotypic synonyms. These are taxonomic synonyms; names based on other types that have been shown to be conspecific with the accepted name in the published literature. These are provided in alphabetical order by basionym, and within each basionym in alphabetical order by full taxon name.

Misapplied names are names that are validly described and in use for another taxon, but which have been incorrectly applied, according to present taxonomic concepts, to the taxon in question. This is a common occurrence as taxonomic concepts have shifted over time, and we have indicated such cases with ‘auct., non’ (in the sense of authors, not the original author of the taxon). These are provided in alphabetical order by basionym, and within basionym in alphabetical order by full taxon name. To be counted as a misapplied name in the catalog, a name has to have been used more than once for the taxon in question; otherwise it is treated as a misidentification. Misidentifications are one-time misapplications of a name for a validly taxon recognized elsewhere. These are treated in the list of excluded taxa (Appendix A).

A question mark is added prior to the equal sign of some synonyms to indicate that we suspect the taxon in question is a synonym or misapplied name but were unable to establish this with certainty from published literature.

We provide names with authors without quotation marks if we are confident that the taxon can be cited with correct authorship. We use quotation marks to indicate that we have reproduced the authors as provided in the original publication, and did not verify whether the authorities given are correct for the taxon.

Author abbreviations follow the International Plant Names Index (<https://www.ipni.org>).

How literature records were screened and treated

More than 1000 publications were manually searched for assembling this compendium. Records are reproduced in chronological order from the oldest to the most recent, and within the same year are given in alphabetical order by name of the first author. We included all published records for each species, regardless of how much redundancy this led to for individual species. However, we made exceptions for several publications: secondary records repeated in the first catalog of Alaska lichens (CUMMINGS 1904), recent regional treatments (GEISER et al. 1994b, GOWARD et al. 1994, GOWARD 1999, MCCUNE & GEISER 2009) and the Panarctic Lichen Checklist (KRISTINSSON et al. 2010), which repeat hundreds of records without providing any new information. We screened each of these publications for new records and instead of reporting each individual lichen species listed in those references, we provide only those that provide new information. This was particularly true of KRISTINSSON et al. (2010), in which a handful of species are reported for Alaska for the first time. We also used primary reports of macrolichens from the plots of NEITLICH & HASSELBACH (1998) but did not repeat their inclusion of secondary literature reports of crustose lichens (NEITLICH & HASSELBACH: Table 7).

For most of the islands of the Aleutians, the Bering Sea and the smaller islands of the Alexander Archipelago, we omitted locality details beyond the name of the island; specific localities can be found in the relevant publications.

We have tried to keep the original spelling of place names. For instance, Kodiak Island is spelled “Kadiak” in old publications and numerous orthographic variants of “Bering” exist; we try to maintain this verbatim. We have mostly corrected erroneous spellings, however, and abbreviated commonly used words such as “mountain” or “island” and the names of national parks and wildlife refuges (see below). One exception to this is that all records from Denali National Park are reproduced as Denali NP even if they were originally reported from Mount McKinley; in these cases the original locality description is not preserved verbatim.

Localities are generally given as the general area, region or unit from which the species was reported, followed by a more precise locality, and concluded by the reference in parentheses (e.g., “Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018)”), with individual localities from the same publication separated by a semi-colon. An exception to this format is the records from Glacier Bay NP. In the published paper, SPRIBILLE et al. (2020) divided the park into six sectors (Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus and West Arm) and these were given in the paper, along with the waypoint of each individual collection. As many species were collected from more than one sector, to avoid repeating “Glacier Bay NP”, this is given only once followed by a colon and then the sectors from which a species was collected separated by a comma (e.g., Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay (SPRIBILLE et al. 2020)). Note that there is also a separate locality “Gustavus” that is used for collections from outside the National Park (e.g. “Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus; Gustavus (SPRIBILLE et al. 2020)”).

Conventions, symbols, explanations, abbreviations

Taxon name in bold letters – taxon

accepted for Alaska

Taxon name in italics – synonym or not accepted taxon

lichen-associated fungus

+ saprobic, non-lichenized fungus

? doubtful record

Abbreviations and acronyms

ANWR – Arctic National Wildlife
Refuge

CG – Campground

Cr – Creek

Crs – Creeks

FIA – U.S. Forest Service Forest
Inventory and Analysis Program

Fk – Fork

Ft – Fort

Hwy – Highway

Isl – Island

Isls – Islands

L – Lake

mi – Mile(s)

Mt – Mount

Mtn – Mountain

NF – National Forest

NM – National Monument

NP – National Park

NPPr – National Park and Preserve

NPr – National Preserve

NPS – National Park Service

NWR – National Wildlife Refuge

Pk – Peak

Pt – Point

PWS – Prince William Sound

Quad – Quadrangle (map sheet)

R – River

Rd – Road

Latin terms and abbreviations

aff. – affinis, closely related to but not identical to.

auct. – auctorum, in the sense of past authors

auct. amer. – auctorum
americanorum, in the sense of North American authors

cf. – from Latin *confer*, a common abbreviation to suggest uncertainty (i.e., that an identification should be checked against the given name)

et al. – et alia (and others)

ex – (e.g. Nyl. ex Stizenb.) means Nylander first published the name but it was first validly published by Stizenberger

in – (e.g. Nyl. in Stizenb.) means Nylander validly published the species description within Stizenberger's publication.

non – not

nom. illeg. – nomen illegitimum, a name validly published but which contravenes botanical conventions

nom. inval. – nomen invalidum, a name invalidly published

nom. rej. – nomen rejiciendum (or rejectum), a name to be rejected in favor of a conserved name

s. lat. – sensu lato (in the broad sense)

s. str. – sensu stricto (in the strict sense)

sensu – in the sense of

Acknowledgments

Funding for this project came from the USDI National Park Service and the USDA Forest Service, Tongass National Forest. Additional financial or in-kind support came from: the Institute of Botany at the Karl Franzens University of Graz, which hosted CHM for an extended work visit in 2010; the Swedish University of Agricultural Sciences (SLU), Uppsala, which hosted several of the authors for work visits in 2011 and 2012; and support from the Canada Research Chairs program to TS to see this through to completion.

People who helped clarify nomenclatural issues for this project include all the authors of DILLMAN et al. (2012) and Linda in Arcadia. Assistance was also provided by Barbara Murray, David Murray, Stephen Talbot, and Steffi Ickert-Bond during T. Ahti's visit to Alaska in 2011. Fred Daniëls and Bruce McCune provided useful background data on their collections in Alaska. Taxonomic experts commented on groups on which they specialize, and we thank Brian Coppins, Stefan Ekman, Trevor Goward, Josef Hafellner, Kerry Knudsen, Helmut Mayrhofer, Bruce McCune, Lucia Muggia, Peter Nelson, Walter Obermayer, Christoph Scheidegger, John Sheard, Antoine Simon, Måns Svensson, Martin Westberg and Tim Wheeler for their comments and improvements on earlier versions of parts of the manuscript. Roland Moberg and Dale Vitt are thanked for photographs used in the introduction. TS thanks Viktoria Wagner for her infinite patience throughout the 15-year duration of this project. We are indebted to Einar Timdal, Josef Hafellner and Robert Lücking who provided detailed peer review and editorial comments on earlier versions of this work. Any mistakes or omissions which persisted into print are solely our own.

Catalog of accepted taxa and their synonyms

– A –

- #**Abrothallus parmeliarum** (Sommerf.) Arnold – On corticolous and saxicolous *Parmelia* and *Platismatia* spp. and once on *Parmeliopsis hyperopta*. – Moon L CG (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Kodiak Isl E, American R (DIEDERICH 2003); Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Dalton Hwy, mi 180.2, N Marion Cr (SUIJA 2006); Interior Alaska (LAURSEN & SEPPELT 2009); Chilkoot Trail; Skagway area, Yakutania (SPRIBILLE et al. 2010); Panorama Mtn (HAFELLNER 2013); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay (SPRIBILLE et al. 2020).
- #**Abrothallus peyritschii** (Stein) I. Kotte – On *Vulpicida pinastri*. – Chena R (DILLMAN et al. 2012).
- #**Abrothallus prodiens** (Harm.) Diederich & Hafellner – On *Hypogymnia* spp. – Chilkoot Trail (SPRIBILLE et al. 2010, as cf.); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- #**Abrothallus secedens** Wedin & R. Sant. – On *Parmostictina mallota*. – Chilkoot Trail (SPRIBILLE et al. 2010, SUIJA et al. 2015a).
- #**Abrothallus welwitschii** Tul. – On *Sticta limbata*. – Tongass NF, Prince of Wales Isl E, SW of Thorne Bay, Salt Chuck (DIEDERICH 2003); Chilkoot Trail (SPRIBILLE et al. 2010); Klondike Gold Rush National Historical Park; Chilkoot Trail; Yakutania (SUIJA et al. 2015a); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).
- Absconditella rosea** Kalb & Aptroot – On bryophytes in meadows in the uppermost beach zone. – Glacier Bay NP, trail to Pt Gustavus (RESL et al. 2015, supplementary material, as *Absconditella* sp. Spribille 39168); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- Absconditella sphagnorum** Vězda & Poelt – Muscicolous on *Sphagnum* on hummock in cold muskeg. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
- Acarospora americana** H. Magn. – Saxicolous.
= *Acarospora superfusa* H. Magn. – Sheep Mtn (THOMSON & AHTI 1994); Katmai NPPr, Naknek L (McCUNE et al. 2018).
- Acarospora badiofusca** (Nyl.) Th. Fr. – Saxicolous on trickle surfaces of rock. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979, 1997: map); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Acarospora cervina** A. Massal. – Saxicolous. KNUDSEN & KOCOURKOVÁ (2020) report that North American records they have seen are misidentifications of *Sarcogyne canadensis* or *S. wheeleri* (see *Acarospora glaucocarpa*) and that the Glacier Bay specimen, which they saw, was ‘depauperate’ and probably belonged in one of those two species. However, a thorough revision of Alaskan material has not been conducted and they concede that *A. cervina* may yet be confirmed in North America. – Confluence of Alatna and Nahtuk; Elliot Hwy, mi 40 (FRYDAY 2017); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= "*Lecanora cervina* (Pers.) Nyl." – Eschscholtz Bay (ROTHROCK 1884; specimen revised to "*Lecanora smaragdula* (Wahlb.)" by NYLANDER 1887: 87); Eschscholtz Bay (MACOUN 1902).

Acarospora chlorophana → **Pleopsidium chlorophanum**

Acarospora discreta → **Appendix A**

Acarospora fuscata (Schrad.) Th. Fr. – Saxicolous on acidic rocks, also reported from old wood. – Colville R near Umiat; Okpilak R near Okpilak L and Mt Michelson; Wainwright (THOMSON 1979); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Lake Clark NPP, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Lecanora fuscata* (Schrad.) Nyl. – Lawrence Isl (NYLANDER 1887).

Acarospora glaucocarpa (Ach.) Körb. s. lat. – Saxicolous on calcareous rocks. We adopt a broad view of the monophyletic species as shown in the phylogeny of KNUDSEN et al. (2020) and retain it in *Acarospora* pending a fully resolved phylogenetic genus-level treatment of Acarosporaceae. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Firth R at Mancha Cr (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001).
= *Acarospora glaucocarpa* var. *glaucocarpa* – Glacier Bay NP: N end of Seidmore Bay (SPRIBILLE et al. 2020).

= *Acarospora glaucocarpa* var. *sarcogynoides* H. Magn. – Saxicolous on soft argillite, alpine slope. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Sarcogyne canadensis* (H. Magn.) K. Knudsen et al. – Kenai Peninsula, Iceberg L (KNUDSEN et al. 2020).

= *Sarcogyne wheeleri* K. Knudsen et al. – Gates of the Arctic, Kurupa L; S of Kaolak R (KNUDSEN et al. 2020).

Acarospora heppii → **Caeruleum heppii**

Acarospora molybdina (Wahlenb.) A. Massal. – Saxicolous. – Bernard Harbour, Camden Bay (MAGNUSSON 1929: map); Alaska (GOLUBKOVA 1988).

Acarospora peliscypha → ***Acarospora squamulosa***

Acarospora privigna (Ach.) A. Schneid. – Saxicolous on siliceous rocks. Taxonomy after KNUDSEN et al. (2017).

= "*Lecanora privigna revertens* Tuck." – Kodiak (CUMMINGS 1904).

= *Polysporina simplex* (Davies) Vězda – Port Clarence; Attu Isl (THOMSON 1997: map).

Acarospora rugulosa Körb. – Saxicolous on siliceous rocks. – Wrangell-St. Elias NPP, Bonanza copper mine (DILLMAN et al. 2012).

Acarospora scabrida → ***Myriospora scabrida***

Acarospora schleicheri (Ach.) A. Massal. – Terricolous on calcareous mineral soil in cold steppe. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Arrigetch Cr valley (COOPER 1986b); Alaska (THOMSON 1997: map); Tetlin Junction (TALBOT et al. 2007); Alaska (MCMULLIN 2018: map).

Acarospora sinopica (Wahlenb.) Körb. – Saxicolous on acidic rocks rich in iron. – Alaska (THOMSON 1997); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPP, Tuxedni Bay (MCCUNE et al. 2018); Glacier Bay NP: East Arm, West Arm, Gustavus (SPRIBILLE et al. 2020); Petersburg Borough, DeBoer L (FRYDAY

- & DILLMAN 2021a); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021a & b).
- Acarospora smaragdula* → **Myriospora smaragdula**
- Acarospora squamulosa*** (Schräd.) Trevis. – Saxicolous.
= *Acarospora peliocypha* Th. Fr. – Adak Isl (TALBOT et al. 1997, as ‘*peliocypha*’).
- Acarospora superfusa* → ***Acarospora americana***
- Acarospora toensbergii*** K. Knudsen & Kocourk. – Saxicolous on siliceous rocks. – Kenai Fjords NP, Exit Glacier CG (**type** – KNUDSEN & KOCOURKOVÁ 2017); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).
- Acarospora urceolata*** (Anzi) Jatta – Saxicolous on soft argillite on alpine ridge.
= *Polysporina urceolata* (Anzi) Brodo – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Acarospora veronensis*** A. Massal. – Saxicolous on calcareous rocks and bird perches. – S of Wainwright, Kaolak R; Colville R near Umiat (THOMSON 1979); Alaska (THOMSON 1997: map); Willow L, near Alaska Hwy (TALBOT et al. 2007).
- Acolium inquinans*** (Sm.) A. Massal. – Corticolous and lignicolous.
= *Cyphelium inquinans* (Sm.) Trevis. – Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1997: map); Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018).
- #*Acremonium strictum*** W. Gams – On *Lobaria pulmonaria*. – Chilkoot Trail (SPRIBILLE et al. 2010).
- Acrocordia gemmata*** (Ach.) A. Massal. – Corticolous on shrubs. – SE Alaska (MCCUNE 2017b).
= *Pyrenula gemmata* (Ach.) Nägeli & Hepp – Disenchantment Bay (CUMMINGS 1904).
- Acroscyphus sphaerophoroides*** Lév. – Saxicolous on bird rocks above timberline. – Admiralty Isl (ANDERSON 2012).
- #*Adelococcus alpestris*** (Zopf) Theiss. & P. Syd. – On *Acarospora glaucocarpa*. – Brooks Range, Sukakpak Mtn (DILLMAN et al. 2012).
- Adelolecia kolaënsis*** (Nyl.) Hertel & Rambold – Saxicolous on metamorphic (hornblende augen gneiss) to sedimentary rocks from the supralittoral zone to the alpine zone. – Glacier Bay NP: Dundas Bay (Taylor Bay), Excursion Ridge (SPRIBILLE et al. 2020).
- Adelolecia pilati*** (Hepp) Hertel & Hafellner – Saxicolous on talus slopes, underhangs and pebbles. – Thompson Pass (THOMSON & AHTI 1994); Ogotoruk Cr drainage (HERTEL & RAMBOLD 1995); Alaska (THOMSON 1997: map); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Lecidea pilati* (Hepp) Körb. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Ogotoruk Cr drainage (HERTEL 1977a); Ogotoruk Cr (MURRAY 1985); Tikchik L (THOMSON & DOELL 1989).
- Agonimia allobata*** (Stizenb.) P. James – Corticolous. – Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Agonimia gelatinosa (Ach.) Brand & Diederich – Terricolous and growing over bryophytes on limestone and granite outcrops. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Polyblastia gelatinosa* (Ach.) Th. Fr. – Barrow (MURRAY & MURRAY 1978); 6 mi SSW of Barrow, Imiksonn L (THOMSON 1979); Innavait Cr (WALKER & WALKER 1996); Alaska (THOMSON 1997: map).

= *Verrucaria nigrata* Nyl. – Port Clarence (NYLANDER 1887). Synonymy after SWINSCOW (1971).

Agonimia tristicula (Nyl.) Zahlbr. – Terricolous on shallow soil over rock and muscicolous. – Prince of Wales Isl; El Capitan Pk; Balls L (ZHURBENKO et al. 2005); Noatak NPr (ZHURBENKO 2009b); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Glacier Bay, N Sandy Cove (SPRIBILLE et al. 2020).

+***Agryium rufum*** (Pers.) Fr. – Lignicolous. – Lake Clark NPPr, Chinitna Bay (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Gustavus (SPRIBILLE et al. 2020).

Ahtiana aurescens → [Appendix A](#)

Ahtiana pallidula (Tuck. ex Riddle) Goward & A. Thell – Corticolous on conifers at low to mid elevations. See also entry under *Ahtiana aurescens* in [Appendix A](#). – Alaska (BRODO et al. 2001); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).

Alectoria divergens → [Bryocaulon divergens](#)

Alectoria fallacina → [Appendix A](#)

Alectoria gowardii → [Gowardia arctica](#)

Alectoria imshaugii Brodo & D. Hawksw. – On conifer bark and fence posts. – S Alaska (ROOT et al. 2014).

Alectoria jubata → [Appendix A](#)

Alectoria lata → [Appendix A](#)

Alectoria nigricans → [Gowardia nigricans](#)

Alectoria ochroleuca (Hoffm.) A. Massal. – Terricolous in tundra and heath. – Kotzebue Sound (MANN 1868; TURNER 1886, citing author as “Fries”); Port Clarence (ALMQUIST 1887); Bering Isl (ALMQUIST 1887); Lawrence Isl; Port Clarence (NYLANDER 1887); Beringsstrasse (STIZENBERGER 1892); Unalaska (CUMMINGS 1904); Unalaska; PWS; Kodiak Isl; St Michaels (HOWE 1911a); Eagle (HERRE 1920); Alaska (HADWEN & PALMER 1922; RÄSÄNEN 1933); Unalaska Isl, Unalaska; Adak Isl, Chapel Cove; Rat Isl (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Juneau icefield nunatak (HEUSSER 1954); Port Heiden; Attu Isl, Siddens Valley, Engineers Canyon; Stampede; Kasigluk (HOWARD 1958); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Meade R Village; Ogotoruk Cr; St Matthew Isl; Mt Harper; Porcupine Dome; Denali Hwy, mi 36 (KROG 1962); Alaska (MOTYKA 1964); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Amchitka Isl; Amlia Isl; Attu Isl; Kiska Isl; Unalaska (BRODO & HAWKSWORTH 1977: map); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Barrow; Prudhoe Bay (MURRAY & MURRAY 1978); E bluff of the Johns R, Anaktuvuk Pass (MOSER & NASH 1978); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the

Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Anaktuvuk Pass (MOSER et al. 1979); Arey Cr; Okpilak Valley; Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Denali NP, slope N of Station Primrose; Mt Fairplay at the Taylor Hwy (SCHINDLER 1987); Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Imnavait Cr (WALKER et al. 1989); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHITI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr; Katmai NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Alectoria ochroleuca* var. *ochroleuca* – Juneau area, Mt Roberts; Talkeetna Mts, Independence Mine; Turnagain Arm, Bird Cr Ridge; Richardson Hwy, mi 24; Denali Hwy, mi 0F37; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, lower Fossil Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Nunivak Isl, Robert's Mtn; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Eagle Summit (MURRAY & MURRAY 1978).

= "*Cornicularia ochroleuca* Ach." – Kotzebue's Sound (HOOKER & ARNOTT 1841).

= "*Evernia ochroleuca* Fries" – Kotzebue's Sound (BABINGTON 1851); Kotzebue Sound (BABINGTON 1852).

= *Alectoria ochroleuca* var. *rigida* (Schaer.) Th. Fr. – PWS (CUMMINGS 1892b); Orca; Kodiak (CUMMINGS 1904); Seward Peninsula (HERRE 1920).

= "*Alectoria ochroleuca* var. *sulphurea* Räs." – White Mts, lower Fossil Cr (KROG 1968).

= "*Alectoria ochroleuca* var. *tenuior* Cromb." – Sitka area, Harbor Mtn; Talkeetna Mts, Mabel Mine; Eagle R Valley; Anchorage, Rabbit Cr Rd; Denali

Hwy, mi 0–37; mi 70; Denali NP, Polychrome Pass; Denali NP, Wonder L; White Mts, headwaters of Sheep Cr (KROG 1968).

- Alectoria sarmentosa* (Ach.) Ach., subspecies not indicated, but probably mostly subsp. *sarmentosa*.** – Sitka (STIZENBERGER 1895a, 1895b); Port Etches (MACCOUN 1902); Sheep Camp, near Chilcoot Pass (HOWE 1911b); Dall Isl, Augustine Bay; Nichols Bay; Saltery Cove; Brownson Bay; Prince of Wales Isl; Coronation Isl (HERRE 1919); Brownson Bay (MAGNUSSON 1932); Juneau; Adak Isl, Chapel Cove (DEGELIUS 1937); Yakutat Bay (STAIR 1947); Aleutian Isls (AHLNER 1948); PWS, Thum Bay (EYERDAM 1949); Kenai Peninsula, Summit L; Juneau, Lemon Cr (KROG 1962); Mendenhall Glacier (MCCULLOUGH 1965); Amchitka Isl, from Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989); SE Alaska (GEISER et al. 1994a: map); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Izembek Refuge, Cold Bay (TALBOT et al. 2000); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); SE Alaska (DERR et al. 2007); Alaska (HALONEN et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Hogg Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Katmai NPP, Brooks Camp, SW of Malone L; Katmai NPP, Coville L; Lake Clark NPP, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPP (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
= “*Alectoria ochroleuca sarmentosa*” – Alaska (MANN 1868; TURNER 1886); near Juneau, Salmon Cr; near Juneau, Sheep Cr (CUMMINGS 1892a); PWS (CUMMINGS 1892b); New Metlakatla, Annette Isl; Wrangell; Yakutat (CUMMINGS 1904).
= “*Alectoria ochroleuca* var. *sarmentosa* Nyl.” – Old Sitka (ROTHROCK 1884).
- Alectoria sarmentosa* subsp. *sarmentosa*** – Corticolous, mainly on conifers. – Atka Isl; Amchitka Isl; Salteny Cove; Juneau, Auke L; Evans Isl (BRODO & HAWKSWORTH 1977: map); SE Alaska (GEISER et al. 1998).
= *Alectoria sarmentosa* var. *sarmentosa* – Juneau area, Loop Rd; W of Seward, Marathon Mtn; PWS, Pigot Bay (KROG 1968).
= *Alectoria sarmentosa* var. *typica* Du Rietz – Kuiu Isl, Washington Bay (THOMSON 1950a).
= *Alectoria sarmentosa* var. *alaskana* Motyka – Juneau area, Loop Rd; Mendenhall L; Juneau area, Montana Cr; Juneau area, Douglas Ski Bowl; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Ketchikan area, Saxman Village; Kenai Peninsula, Salamatof; Richardson Hwy, mi 9; PWS, Fish Bay (KROG 1968).
= *Alectoria sarmentosa* var. *brevior* Motyka, nom. inval. – Juneau area, Loop Rd; Juneau area, Shrine of St Therese; Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn (KROG 1968).
= *Alectoria sarmentosa* var. *gigantea* Räsänen – Alaska (MOTYKA 1964); PWS, Pigot Bay (KROG 1968).
= *Alectoria sarmentosa* var. *macra* Motyka, nom. inval. – Juneau area, Loop Rd; Mendenhall Glacier Trail; Kenai Peninsula, Ingram Cr; Seward; Richardson Hwy, mi 9 (KROG 1968).
= *Alectoria stigmata* Bystr. – Kenai Peninsula (BYSTREK 1974).

Alectoria sarmentosa* subsp. *vexillifera (Nyl.) D. Hawksw. – Terricolous in the subalpine and alpine. – Amchitka Isl; Attu Isl; Umak Isl; Kodiak Isl; Sitka, Harbor Mtn (BRODO & HAWKSWORTH 1977: map); Auke L area (GEISER et al. 1994a; GEISER et al. 1998).

= *Alectoria vexillifera* (Nyl.) Stizenb. – Amchitka Isl, Infantry Rd NW of Banjo Pt (KROG 1968); Alaska (THOMSON 1984: map).

= “*Alectoria ochroleuca circinata* (Fr.) Tuck.” – Unalaska (CUMMINGS 1904).

= *Alectoria ochroleuca* var. *cinninata* (Fr.) Nyl. – Unalaska; Cape Nome (HOWE 1911a); Unalaska Isl, Chernofski (HOWE 1913a).

Allantoparmelia almquistii (Vain.) Essl. – Saxicolous on acidic rock. –

Chikuminuk L (THOMSON & DOELL 1989); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998);

Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020).

= *Parmelia almquistii* Vain. – Talkeetna Mts; Denali Hwy, mi 28, mi 37; Denali NP, Savage R; White Mts, Lion Pk; Cleary Summit; Twelvemile Summit; Eagle Summit; Seward Peninsula, King Mtn and Rainbow Cr (KROG 1963: map); Talkeetna Mts, Mabel Mine; Denali Hwy, mi 0–37; Denali NP, Savage R; base of Rainbow Mts, E of Richardson Hwy; White Mts, Lion Pk; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Steese Hwy, Eagle Summit; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr (KROG 1968); Alaska (ESSLINGER 1977: map); Anaktuvuk Pass (MOSER et al. 1979); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, Savage R (SCHINDLER 1990).

Allantoparmelia alpicola (Th. Fr.) Essl. – Saxicolous on acidic rock. – Chikuminuk

L (THOMSON & DOELL 1989); Mt Roberts near Juneau (GEISER et al. 1994a); Eagle Summit; Mt Fairplay; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NP (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

= *Parmelia alpicola* Th. Fr. – Juneau icefield nunatak (HEUSSER 1954); Ogotoruk Cr drainage, Cape Lewis; Porcupine Dome; Steese Hwy, Eagle Summit (KROG 1962); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Anchorage area, headwaters of Rabbit Cr; Denali Hwy, mi 28–37; Denali NP, Polychrome Pass; White Mts, Lion Pk; Steese Hwy, Twelvemile Summit; Steese Hwy, Eagle Summit; Seward Peninsula, King Mtn,

Rainbow Cr (KROG 1968); Amchitka Isl (WEBER et al. 1969); Alaska (ESSLINGER 1977: map); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Denali NP, N of Station Primrose (SCHINDLER 1987).

Allantoparmelia sibirica (Zahlbr.) Essl. – Saxicolous on acidic rock. – Dalton Hwy, Finger Mtn (SPRIBILLE et al. 2011b). Previously reported by GEISER et al. (1994a: map) but that specimen “misidentified” according to ESSLINGER (1997).

Allocladium adaequatum (Nyl.) M. Prieto & Wedin – Corticolous on *Alnus* in beach fringe. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
= *Calicium adaequatum* Nyl. – Beach at Mallard Slough, Stikine R (GEISER et al. 1998); Alaska (MCCUNE 2017b).

Alloctraria madreporiformis (Ach.) Kärnefelt & A. Thell – Terricolous on calcareous soil. – Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Gates of the Arctic NPPr (NELSON et al. 2015b); Brooks Range, Atigun Pass (KASANKE 2019).

= *Cetraria madreporiformis* (With.) Müll. Arg. – Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

= *Dactylina madreporiformis* (Ach.) Tuck. – Little Kiska Isl (HOWE 1913a); Noluck Mtn; Teller Mission (KROG 1970, ‘locality in need of further verification’); Teller Mission, near Nome; Brooks Range, Noluck Mtn (THOMSON & BIRD 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Pt Barrow; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998).

Alyxoria culmigena (Libert) Ertz – Lignicolous on hard driftwood and dry wood under overhanging vegetation. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

= *Opegrapha herbarum* Mont. – Cleveland Peninsula, L McDonald (DILLMAN et al. 2012); Alaska (MCCUNE 2017b).

Alyxoria ochrocheila (Nyl.) Ertz & Tehler – Corticolous on *Populus*. – SE Alaska (MCCUNE 2017b).

= *Opegrapha ochrocheila* Nyl. – Chilkoot Trail (SPRIBILLE et al. 2010).

Alyxoria varia (Pers.) Ertz & Tehler – Corticolous on *Populus* and also reported from conifers. – SE Alaska (MCCUNE 2017b); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

= *Opegrapha varia* Pers. – Port Wells; Orca (CUMMINGS 1904); Chilkoot Trail (SPRIBILLE et al. 2010).

#*Amandinea adjuncta* (Th. Fr.) Hafellner – On *Lecanora straminea*.

= *Buellia adjuncta* Th. Fr. – Unalaska (ESSLINGER & EGAN 1995).

Amandinea cacuminum (Th. Fr.) H. Mayrhofer & Sheard – Saxicolous on siliceous rocks. – Okpilak L (MAYRHOFFER & SHEARD 2002: map). Previously reported as *Rinodina milvina*, see that species; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

= *Rinodina cacuminum* (Th. Fr.) Malme – Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1997). The material upon which the

report is based is an unidentified *Buellia* of the Sect. *Melanaspicilia* (MAYRHOFFER & SHEARD 2002).

Amandinea coniops (Wahlenb.) Scheid. & H. Mayrhofer – Saxicolous on coastal rocks, ornithocoprophilous. – Alaskan panhandle (SHEARD & MAY 1997); NW of Haines (GEISER et al. 1998); Alaska (BRODO et al. 2001); Alaska (MAYRHOFFER & MOBERG 2002).

= *Buellia coniops* (Wahlenb.) Th. Fr. – Unalaska Isl, Kashega; Umnak Isl, Nikolski (DEGELIUS 1937); Amchitka Isl; Amchitka Isl, St Makarius Pt; Amchitka Isl, from Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989); Chisik Isl (TALBOT et al. 1992); Haines Hwy, mi 33 (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Katmai NPPr, Mirror L (MCCUNE et al. 2018); Kenai Fjords NPPr, Crater Bay off of Harris Bay; Kenai Fjords NPPr, E side of Harris Bay; Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Amandinea lignicola → [Appendix A](#)

Amandinea polyspora (Willey) E. Lay & P. May – Corticolous or on wood.

= *Buellia polyspora* (Willey) Vain. – Alaska (THOMSON 1997: map).

= *Buellia punctata* var. *polyspora* (Willey) Fink – Colville R near Umiat; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979).

Amandinea punctata (Hoffm.) Coppins & Scheid. – Corticolous on hardwood shrubs and trees; a report from beach boulders (WEBER et al. 1969) probably applies to *A. coniops*. – W Baranof Isl, Big Bay (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1240 (TALBOT et al. 2007).

= *Buellia punctata* (Hoffm.) A. Massal. – Wonder L (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Barrow (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); Barter Isl (COPPINS 1981); Amchitka Isl, from Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989); Kenai Peninsula, Kasilof (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33; Deadman L CG; Moon L CG; Richardson Hwy, mi 10; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Buellia punctata* var. *punctata* – Kodiak Isl; Collinson Pt (IMSHAUG 1951); Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979).

= “*Buellia myriocarpa chloropolia* (Fr.) Th. Fr.” – Kodiak (CUMMINGS 1904).

= *Buellia myriocarpa* (DC.) Mudd – Port Clarence (ROTHROCK 1884); Port Clarence (MACOUN 1902); Port Clarence (CUMMINGS 1904); Collinson Pt; Alaskan Arctic coast, Spy Isl (MERRILL 1924b).

= “*Lecidea myriocarpa* Nyl.” – Alaska (HUE 1891, but Hue probably misinterpreted the note in NYLANDER 1887, p. 88 as having come from Alaska; the specimen in fact appears to have come from Plover Bay in Chukotka).

Ameliella andreaeicola Fryday & Coppins – Overgrowing *Andraea*. – Katmai NPPr, N of Mirror L; Tongass NF, Mitkof Isl, Crystal Mtn; Kenai Fjords NP, ridge above Exit Glacier (FRYDAY & TØNSBERG 2015); coastal Alaska (MCCUNE 2017b); Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay; Kenai

Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).

Amundsenia approximata (Lynge) Søchting et al. – Saxicolous – Denali NP and three other unspecified localities (SØCHTING et al. 2014: map).

= *Caloplaca approximata* (Lynge) H. Magn. – Saxicolous. – Lake Clark NP, Tuxedni R (DILLMAN 2003).

Amygdalaria consentiens (Nyl.) Hertel et al. – Saxicolous on acidic rock in oceanic areas. – Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1994a: map); Kupreanof Isl, Sheridan Pk; [SE Alaska] mainland, Cosmos Range, Elbow Mtn and Thunder Mtn (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); White Pass (SPRIBILLE et al. 2010); Aleutian Isls to SE Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L camp; Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, alpine lake system on Harris Peninsula (MCCUNE et al. 2020, stictic acid chemotype); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020, stictic acid chemotype); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020, acid-deficient chemotype); Petersburg Borough, Oasis Glacier; Petersburg Borough, Patterson Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

Amygdalaria continua Brodo & Hertel – Saxicolous on moist or wet rock. – [SE Alaska] mainland, Falls L (GEISER et al. 1998); White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L (MCCUNE et al. 2018); Kenai Fjords NPPr, E side of Harris Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Amygdalaria elegantior (H. Magn.) Hertel & Brodo – Saxicolous on acidic rocks. – Denali NP, Mt Eielson (BRODO & HERTEL 1987); Anaktuvuk Pass; Denali NP (GOWAN 1989); Nishlik L (THOMSON & DOELL 1989); SE Alaska (GEISER et al. 1994a: map); Blueberry L CG; Thompson Pass (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); [SE Alaska] mainland, LeConte Bay; Mitkof Isl, Crystal Mtn (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DERR 2010); coastal SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, Bear Glacier nunatak; Kenai Fjords NPPr, Harding Icefield Trail (MCCUNE et al. 2020).

= *Lecideia elegantior* H. Magn. – Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl, above Chitka Cove (WEBER et al. 1969); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979).

Amygdalaria haidensis Brodo & Hertel – Saxicolous. – SE Alaska (GEISER et al. 1994a: map); Swan L (GEISER et al. 1998); coastal SE Alaska (MCCUNE 2017b); Kenai Fjords NPPr, East side of Harris Bay (MCCUNE et al. 2020).

Amygdalaria panaeola (Ach.) Hertel & Brodo – Saxicolous on siliceous rock, especially in areas with heavy winter snow cover. – Cape Dyer; North Slope Borough (GOWAN 1989); Nishlik L (THOMSON & DOELL 1989); SE Alaska (GEISER et al. 1994a: map); Blueberry L CG; Thompson Pass (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Kuiu Isl, Rowan Mtn; [SE Alaska] mainland, LeConte Bay (GEISER et al. 1998); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN

et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Harding Icefield Trail; Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= *Huilia panaeola* (Ach.) Hertel – Anaktuvuk Pass (MOSER et al. 1979); Juneau icefield nunatak at 1300 m (HERTEL 1981).

= *Lecidea panaeola* (Ach.) Fr. – Unalashka Isl, Chernofski Bay (ROTHROCK 1884); White Pass; Cape Nome; St Michael (CUMMINGS 1904); Eagle (HERRE 1920); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

Amygdalaria pelobotryon (Wahlenb.) Norman – On pebbles and small rocks, from uplifted beach ridges (c. 20 yr old) to alpine tundra. – Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Blueberry L CG; Thompson Pass (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Kupreanof Isl, Sheridan Pk (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Chilkoot Pass (SPRIBILLE et al. 2010) Denali NPPr, S of the AK Range (STEHN et al. 2015); Aleutian Isls to SE Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= *Aspicilia pelobotrya* (Wahlenb.) Th. Fr. – Mt Eielson; Ogotoruk Cr drainage (WEBER & VIERECK 1967).

= *Lecanora pelobotrya* (Wahlenb.) Sommerf. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Ogotoruk Cr (MURRAY 1985).

Amygdalaria subdissentiens (Nyl.) M. Inoue & Brodo – Saxicolous. – SE Alaska (GEISER et al. 1994a); Thompson Pass (THOMSON & AHTI 1994); Kupreanof Isl, Bear Claw Mtn (GEISER et al. 1998); Chugach NF (DERR 2010); Alaska peninsula to SE Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, alpine lake system on Harris Peninsula (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (as aff.), Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Anamylopsora pulcherrima (Vain.) Timdal – Saxicolous on calcareous rocks. – Kantishna, border of Denali NP; NW shore of Wonder L; Colville R; Eagle Bluffs (TIMDAL 1991a: map); Ft Wainwright (RACINE et al. 1997); North Slope, Toolik L; North Slope, Brooks Range, Atigun Canyon by the Dalton Hwy (ZHURBENKO 2009b); Alaska (MCCUNE 2017a).

Anaptychia bryorum Poelt – Terricolous and muscicolous in tundra and over rock outcrops. See also records of *A. palmulata* in Appendix A. – Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Barrow (FRYDAY 2004a); Mt Eielson; Alaska Peninsula, across bay from Port Moller (ESSLINGER 2007); North Slope, Barter Isl near Kaktovik; North Slope, Toolik L; North Slope, Brooks Range, upper stream of Atigun R (ZHURBENKO 2009b); Gates of the Arctic NPPr (NELSON et al. 2015b);

44 *Anaptychia crinalis*

Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

Anaptychia ciliaris → **Anaptychia crinalis**

Anaptychia crinalis (Schleich. ex Schaer.) Vězda – Published Alaskan records are from rock, but in adjacent Canadian provinces the species is primarily an epiphyte on *Picea* branches. – Alaska (NOWAK 1993; ESSLINGER 2007). Neither author cited any specimens specifically but ESSLINGER (2007) indicated that *A. crinalis* embraces material reported in the North American literature as *A. ciliaris*, *A. kaspica* and *A. setifera*.

= *Anaptychia ciliaris* auct. amer., non (L.) Körb. – Quigley Hill (HOWARD 1963).

= *Anaptychia kaspica* auct. amer., non Gyeln. – Richardson Hwy, Darling Cr (KROG 1968); Alaska (THOMSON 1984: map).

= *Anaptychia setifera* auct. amer., non Räsänen – Alaska (MCCUNE et al. 1997); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007).

Anaptychia kaspica → **Anaptychia crinalis**

Anaptychia palmulata → **Appendix A**

Anaptychia setifera → **Anaptychia crinalis**

Anaptychia ulotrichoides (Vain.) Vain. – Saxicolous on calcareous rock in alpine tundra. – Gates of the Arctic NPPr: Survey Pass Quad, PK 4376 and flanks down to Otkurak Cr N of Pingo L on Noatak R (NEITLICH & HASSELBACH 1998, det. Esslinger).

Anisomeridium polypori (Ellis & Everh.) M. E. Barr – Corticolous on *Populus balsamifera*. – Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

#**Anzina carneonivea** (Anzi) Scheid. **variety not specified** – Overgrowing *Cladonia rangiferina*. See also record under *Lettauia cladoniicola* in **Appendix A**. – Noatak NPr (MCCUNE et al. 2009, erroneous based on checking of the specimen in H [TA]); Alaska (MCCUNE 2017a & b, based on MCCUNE et al. 2009 record?); Denali NP, headwaters of Hinnes Cr (ZHURBENKO & PINO-BODAS 2017).

Anzina carneonivea var. **tetraspora** Scheid. – Corticolous in heath and krummholz, also muscicolous. – White Pass (SPRIBILLE et al. 2010).

Aquacidia trachona → **Appendix A**

Arctocetraria andrejevii (Oxner) Kärnefelt & A. Thell – Terricolous in heaths. – Ogotoruk Cr drainage (HORAKOVA & ALSTRUP 1994); St Matthew Isl (TALBOT et al. 2001); Seward Peninsula, 7 km NE of Nome, Newton Pk (OBERMAYER 2002).

= *Cetraria andrejevii* Oxner – Ogotoruk Cr drainage, E side of the valley (KROG 1962); Nunivak Isl, Nash Harbor; Robert's Mt; the lake where the geese don't fly; Seward Peninsula, Rainbow Cr (KROG 1968); Barrow (WEBBER 1978); Barrow; Dillingham Quad; Diomedes Isl; Goodnews Bay; King Isl; Kukpuk R region; Meade R; Nome; Ogotoruk Cr drainage; Pt Barrow; Pt Hope; Pt Clarence; Sadlerochit R; Sigripak Ridge; St Lawrence Isl; St Paul Isl; Teller; Teller Rd, W Feather R bridge; Wainwright (KÄRNEFELT 1979: map); Anaktuvuk Pass (MOSER et al. 1979); Pt Barrow; Anaktuvuk Pass (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Nishlik L (THOMSON & DOELL 1989); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl

(TALBOT et al. 1992); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Hagemeister Isl (WALSH & GOWARD 2021).

= *Nephromopsis andrejevii* (Oxner) Divakar et al. – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Cetraria simmonsii* Krog var. *intermedia* Krog – St Lawrence Isl; St Paul Isl; Port Clarence (KROG 1968). Synonymy and discussion in KÄRNEFELT (1979).

= *Cetraria simmonsii* var. *simmonsii* – Pt Barrow (KROG 1968); Barrow (MURRAY & MURRAY 1978); Barrow (WEBBER 1978).

Arctocetraria nigricascens (Nyl.) Kärnefelt & A. Thell – Terricolous on rocky soil and corticolous on twigs of *Betula*, or saxicolous. – St Paul Isl (TALBOT et al. 2001).

= *Cetraria nigricascens* (Nyl.) Elenkin – Circular Marsh near Barrow (THOMSON 1960); Ogotoruk Cr (KROG 1962); Alaska Range, Dry Cr (VIERECK 1967); Ogotoruk Cr drainage; Snowbank Cr; Umiat Airstrip, Coville R Valley; Umiat R; Sadlerochit R, L Fork (KÄRNEFELT 1979: map); Alaska (ANDREEV & MAKAROVA 1982); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Amchitka Isl (THOMSON & SOWL 1989); Thompson Pass (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998).

? = “*Cetraria nigrescens*” – Chitistone-Skolai region (SCOTT 1974).

= *Cetraria elenkinii* Krog – Ogotoruk Cr (**type** – KROG 1968: map). Synonymy after KÄRNEFELT (1979).

= *Cetraria sibirica* H. Magn. – Umiat (LLANO 1951; MURRAY 1974); Ogotoruk Cr drainage (KROG 1962); Ogotoruk Cr drainage (JOHNSON et al. 1966); Ogotoruk Cr drainage (KROG 1968); Colville R near Umiat (THOMSON 1979).

Arctomia delicatula Th. Fr. – Unspecific in substratum association: most often corticolous on *Alnus* and *Populus balsamifera*, but also on *Picea sitchensis* twigs, once over *Physcia* spp., once muscicolous in glacial outwash plain, and once terricolous in the alpine zone. – SE Alaska (GEISER et al. 1994a: map); Bold Isl S of Ketchikan; [SE Alaska] mainland, Waterfall Pk (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP, West Arm, Russell Isl (RESL et al. 2015, supplementary material); Alaska (MCCUNE 2017b); Kenai Fjords NP (TØNSBERG & PRINTZEN 2018); Alaska (MAGAIN et al. 2020); Glacier Bay NP: East Arm, Excursion Ridge Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Arctomia delicatula var. **acutior** (Nyl.) Henssen – Corticolous and muscicolous.

The taxonomic status of this variety and distinction from the typical variety are based on rather subtle differences in thallus colour, ascospore size, and substrate preference (HENSSEN 1969). – Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd, Kenai Fjords NPPr, N of Exit Glacier Visitor Center; Kenai Fjords NPPr, W shore of Beauty Bay; Kenai Fjords NPPr, Verdant Cove, N side at shoreline (MCCUNE et al. 2020).

Arctomia interfixa (Nyl.) Vain. – Terricolous on moist tundra. – White Pass (SPRIBILLE et al. 2010); Katmai NPPr, ridgetop W of Contact Cr (MCCUNE et al. 2018).

***Arctoparmelia centrifuga* (L.) Hale** – Saxicolous on acidic rock. – Eagle Summit; Mt Fairplay (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

= *Parmelia centrifuga* (L.) Ach. – Seward Peninsula (HERRE 1920); 50 mi inland from Camden Bay (MERRILL 1924b); Chandler L (SCHOLANDER et al. 1952); Alaska (HASSELROT 1953); Juneau icefield nunatak (HEUSSER 1954); Port Heiden; Katmai NM (HOWARD 1958); Ogotoruk Cr; S slope of Cape Dyer; Steese Hwy, Eagle R (KROG 1962); road to Kantishna (HOWARD 1963); Wiseman (HOWARD 1963; MURRAY 1974); Juneau Icefield (MCCULLOUGH 1965); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Granite Basin; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Turnagain Arm, Bird Cr Ridge; mtn ridge, Eagle R Valley; Kenai Peninsula, S of Hidden L; Richardson Hwy, mi 32–37; Denali Hwy, mi 28–37; Denali NP, Savage R; White Mts, headwaters of Sheep Cr; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); central Alaska Range (REGER & PÉWÉ 1969); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Ogotoruk Cr (MURRAY 1985).

= *Xanthoparmelia centrifuga* (L.) Hale – Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Denali NP, slope N of Station Primrose; Denali NP, Morino Loop Trail (SCHINDLER 1987); Chikuminuk L (THOMSON & DOELL 1989); Imnavait Cr (WALKER et al. 1989); Lake Clark NP, Tuxedni R (DILLMAN 2003).

***Arctoparmelia incurva* (Pers.) Hale** – Saxicolous on acidic rock. – SE Alaska (GEISER et al. 1994a); Eagle Summit; Mt Fairplay; Thompson Pass (THOMSON & AHTI 1994); W of N Fk of Bradfield R (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, SW of Malone L; Katmai NPPr, NE of Cucumber L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020).

= *Parmelia incurva* (Pers.) Fr. – 50 mi inland from Camden Bay (MERRILL 1924b); Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Anchorage area, headwaters of Rabbit Cr; Richardson Hwy, mi 24; Denali Hwy, mi 32–37; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit (KROG 1968); Anaktuvuk Pass (MOSER et al.

1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

= *Xanthoparmelia incurva* (Pers.) Hale – Alaska (THOMSON 1984: map); Chikuminuk L (THOMSON & DOELL 1989).

Arctoparmelia separata (Th. Fr.) Hale – Saxicolous on acidic rocks, sometimes muscicolous. – Alaska (HALE 1986); Denali NP, Savage R (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Woewodksi Isl; [SE Alaska] mainland, Spurt L, (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Tetlin Junction; Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Hammersly L; Lake Clark NPPr (MCCUNE et al. 2018).

= *Parmelia separata* Th. Fr. – Anaktuvuk Pass (KROG 1962; MURRAY 1974); Brooks Range, L Peters; Ogotoruk Cr; Cape Dyer, drainage of Kipaloq and Angoqlik Crs; vicinity of the Kukpuk R; Porcupine Dome; White Mts, the limestone ridge (KROG 1962); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Talkeetna Mts, Bald Mtn Ridge; Independence Mine, Talkeetna Mts; Eagle R Valley; Anchorage area, headwaters of Rabbit Cr; Kenai Peninsula, Skilak L; Richardson Hwy, mi 24; Denali Hwy, mi 0–37; Denali Hwy, mi 70; Denali NP, Savage R; Denali NP, Wonder L; White Mts, headwaters of Sheep Cr; Steese Hwy, Eagle Summit; Circle Hot Springs; N of Nome, Anvil Pk; Seward Peninsula, Rainbow Cr (KROG 1968); Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Okpilak Valley (COPPINS 1981); Ogotoruk Cr (MURRAY 1985).

= *Xanthoparmelia separata* (Th. Fr.) Hale – Alaska (THOMSON 1984: map); Denali NP, Savage R (SCHINDLER 1987).

= *Parmelia birulae* Elenkin – Alaska (LLANO 1951). Synonymy after HALE (1986).

= *Parmelia birulae* var. *grumosa* Llano – Anaktuvuk Pass (type – LLANO 1951; MURRAY 1974). Synonymy after HALE (1990).

Arctoparmelia subcentrifuga (Oxner) Hale – Saxicolous. – Gates of the Arctic NPPr (NELSON et al. 2015b); Lake Clark NPPr, Camel's Hump (MCCUNE et al. 2018).

= *Xanthoparmelia subcentrifuga* (Oxner) Hale – Alaska (HALE 1986).

Arthonia apatetica (A. Massal.) Th. Fr. – Corticolous on *Salix*. – White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).

Arthonia arthonioides (Ach.) A. L. Sm. – Corticolous on *Cupressus nootkatensis*, *Picea sitchensis* and *Tsuga heterophylla*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Glacier Bay NP; Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

- #***Arthonia biatoricola*** Ihlen & Owe-Larss. – On *Biatora efflorescens* and *Micarea* sp. – Kodiak Isl, Ft Abercrombie State Historical Park, at Gertrude L; Kodiak Isl, SW bank of Buskin R at Chiniak Hwy bridge (IHLEN et al. 2004b); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
- #***Arthonia clemens*** (Tul.) Th. Fr. – On *Rhizoplaca* spp. – Interior Alaska (LAURSEN & SEPPELT 2009).
- #***Arthonia coronata*** Etayo – On *Cladonia* spp. – Goldstream Valley; Kenai Peninsula, Chugach NF (ZHURBENKO & PINO-BODAS 2017).
- Arthonia didyma*** Körb. – Lignicolous on snag and corticolous on *Picea sitchensis*. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020, as aff.).
- #***Arthonia digitatae*** Hafellner – On *Cladonia* spp. – Howe Isl; Toolik L; Brooks Range, Atigun Canyon; Kotzebue; Denali Hwy; Denali NPPr, Rock Cr; Seward Peninsula, Mauze Cr; Aleutian Isls, Amlia Isl (ZHURBENKO & PINO-BODAS 2017); Glacier Bay NP: Dundas Bay, West Arm (SPRIBILLE et al. 2020).
- Arthonia dispersa*** (Schrad.) Nyl. – Corticolous on *Alnus*, *Betula* and *Tsuga*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).
- #***Arthonia epicladonia*** (Nyl.) Alstrup & Zhurb. – On *Cladonia*. – 140 km E of Kotzebue, Kobuk Valley Wilderness (ZHURBENKO & ALSTRUP 2004).
- #***Arthonia epimela*** (Almq.) I. M. Lamb – On *Biatora vernalis*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003, as cf.).
- #***Arthonia excentrica*** Th.Fr. – On *Lepraria neglecta* aggr. – Brooks Range, Atigun Pass; Alaska Range, Panorama Mtn (DILLMAN et al. 2012).
- Arthonia fusca*** (A. Massal.) Hepp – Saxicolous. See notes on nomenclature in Appendix B.
= *Arthonia lapidicola* auct., non (Taylor) Branth & Rostr. – Atkasuk (FRYDAY 2004a); Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020).
- #***Arthonia fuscopurpurea*** (Tul.) R. Sant. – On *Peltigera* sp. – Chilkoot Trail (SPRIBILLE et al. 2010).
- #***Arthonia gelidae*** R. Sant. – On *Placopsis lambii*. – White Pass (SPRIBILLE et al. 2010).
- Arthonia glebosa*** Tuck. – “On rocks on mountain slope amongst moss-lichen-dwarf shrub tundra, on sandy soil with moss remnants.” – North Slope, Toolik L (ZHURBENKO 2009b).
- Arthonia ilicina*** Taylor – Corticolous on *Alnus* and *Malus*. – Warren Isl (DILLMAN et al. 2012); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).
- #***Arthonia intexta*** Almq. – In apothecia of *Lecidella* spp. – Valley of the Okpilak R at Okpilak L, near Mt Michelson; Pitmegea R, 15 mi upstream from Cape Sabine (TRIEBEL 1989); Okpilak R; Pitmegea R (THOMSON 1997).
- Arthonia lapidicola* → ***Arthonia fusca*** and ***Bryostigma lapidicola***
- #***Arthonia lepidophila*** (Anzi) Clauzade et al. (nom. inval., Art. 41.1 ICNafp) – On *Cladonia squamosa*. – Prince of Wales Isl, Salt Chuck mine (ZHURBENKO & PINO-BODAS 2017, as cf.); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Arthonia leucopellaea* → ***Felipes leucopellaeus***
- Arthonia ligniaria*** Hellb. – Lignicolous on snag. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

- Arthonia ligniariella** Coppins – Corticolous on trunk of *Alnus incana*. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (Klondike) (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Arthonia mediella** Nyl. – On *Alnus* ('alnicola'). – Port Clarence (NYLANDER 1887; HUE 1891); Port Clarence (THOMSON 1997).
- #**Arthonia molendoi** (Heufl. ex Frauenf.) R. Sant. – On *Rusavskia elegans*. – Brooks Range, hill S of Atigun R (DILLMAN et al. 2012).
- #**Arthonia nephromiaria** (Nyl.) Nyl. ex H. Olivier – On *Nephroma expallidum*. – Barter Isl (ZHURBENKO et al. 1995, as cf.).
- #**Arthonia peltigerina** (Almq.) H. Olivier – On terricolous *Peltigera* spp. and *Solorina crocea*. – Barrow (ZHURBENKO et al. 1995); Philip Smith Mtns; Yukon R; Prudhoe Bay; ca. 2 km S Atigun Pass (ALSTRUP 2004); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Arthonia phaeobaea** (Norman) Norman – Saxicolous on intertidal rocks. – SE Alaska (O'CLAIR et al. 1996); Rowan Bay; Kuiu Isl; Sitka, Starrigavan Bay (GEISER et al. 1998); Kenai Fjords NPPr, North arm of spit across James Lagoon. (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
? = *Arthonia cinereofusca* Merrill ex Herre – "On rocks touched by ocean waves". – Zarembo Isl, St John's Harbor (**type** – HERRE 1919, as '*cinereofusca*'). The voucher for this record is in F (only scan seen by us) and notes on ascospores and habitat suggest it is a synonym *A. phaeobaea*.
- #**Arthonia phaeophysciae** Grube & Matzer – On *Phaeophyscia* sp. – Brooks Range, Midnight Dome (DILLMAN et al. 2012).
- Arthonia pruinata** (Pers.) A. L. Sm. – Corticolous on *Picea sitchensis* trunk. – DeLong Isl (DILLMAN et al. 2012).
- Arthonia punctiformis** Ach. – Corticolous on *Alnus*. – Sitka (CUMMINGS 1904); Dall Isl, Augustine Bay (HERRE 1919); SE Alaska (GEISER et al. 1994a); Dall Isl, Augustine Bay (GEISER et al. 1998).
- Arthonia radiata** (Pers.) Ach. – Corticolous on *Alnus* and *Sorbus*. – Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); L Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020, as aff.).
- Arthonia ruana** A. Massal. – Corticolous on *Alnus*. – Coastal Alaska (MCCUNE 2017b); Kenai Fjords NPPr, North of Harris Bay, near opening to Northwestern Lagoon; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020).
- #**Arthonia stereocaulina** (Ohlert) R. Sant. – On *Stereocaulon* spp. – Interior Alaska (LAURSEN & SEPPELT 2009); Great Kobuk Sand Dunes; Wrangell-Saint Elias Park and Preserve, Mt George (ZHURBENKO 2010); Glacier Bay NP: Dundas Bay, East Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).
- #**Arthonia thelotrematis** Coppins – On *Thelotrema lepadinum*, corticolous on *Alnus*. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
- #**Arthonia triebeliae** Zhurb. – On *Dactylina arctica*. – 9 km ESE of Toolik L; Dalton Hwy, mi 290 (ZHURBENKO 2002).

- Arthonia vinosa** Leight. – Corticolous on *Picea*. – Coastal SC Alaska (McCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station (McCUNE et al. 2018); Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
- #**Arthrophacopsis parmeliarum** Hafellner – On *Parmelia* spp. – Cordova, Copper R delta, along Copper R Hwy, SE of airport (DIEDERICH 2003); Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Wrangell-Saint Elias Park and Preserve, Yakutat, Lucia Cr (ZHURBENKO 2009b); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Dundas Bay, West Arm (SPRIBILLE et al. 2020).
- Arthopyrenia analepta** (Ach.) A. Massal. – Corticolous on *Alnus* and *Salix* bark. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Alaska (McCUNE 2017b); Lake Clark NPPr, shore of Chinitna Bay (McCUNE et al. 2018); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).
= *Verrucaria fallax* Nyl. – Lawrence Isl; Port Clarence (NYLANDER 1887, ‘super ramulos dejectos’).
- +**Arthopyrenia plumbaria** (Stizenb.) R. C. Harris – Corticolous on *Alnus*. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
- Arthopyrenia subcerasi** (Vain.) Zahlbr. – Corticolous on *Betula papyrifera*. – Chilkoot Trail (SPRIBILLE et al. 2010).
- Arthothelium macounii** (G. Merr.) W. J. Noble – Corticolous on *Cupressus nootkatensis* branch. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
- Arthothelium norvegicum** Coppins & Tønsberg – Corticolous on *Picea sitchensis* branch. – Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).
- #**Arthrorhaphis aeruginosa** R. Sant. & Tønsberg – On basal squamules of *Cladonia* spp. – Yakutat (ZHURBENKO & DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (McCUNE 2017b); Revillagigedo Isl, Carrol Inlet (ZHURBENKO & PINO-BODAS 2017); Kenai Fjords NPPr, NE end of Harris Bay (McCUNE et al. 2020).
- Arthrorhaphis alpina** (Schaer.) R. Sant. – Terricolous and in rock crevices, mainly alpine. The species is polyphyletic (FRISCH et al. 2022a), but Alaskan material has not been systematically revised. – Chisik Isl (TALBOT et al. 1992); Eagle Summit; Blueberry L CG; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (McCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr, ridgetop W of Contact Cr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b); Alaska (FRISCH et al. 2022a, as *A. alpina* but under “the preliminary name ‘Arthrorhaphis septentrionalis’”).
= *Bacidia alpina* (Schaer.) Vain. – Mt Eielson (WEBER & VIERECK 1967); Pitmegea R, 15 mi upstream from Cape Sabine; Circular Marsh near Barrow; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).
- Arthrorhaphis citrinella** (Ach.) Poelt – Terricolous on soil or over mosses, often in the presence of light seepage. Some or all of these records may be referable to *A. vulgaris* (see FRISCH et al. 2022a), but no systematic revision of Alaskan material has been undertaken. – Barrow; Eagle Summit (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); SE Alaska (GEISER et al. 1994a);

Mt Fairplay (THOMSON & AHTI 1994); Juneau Icefield (GEISER et al. 1998); Chilkoot Trail; White Pass; N of tunnel at Glacier Gorge (SPRIBILLE et al. 2010); Katmai NPPr, ridgetop W of Contact Cr; Lake Clark NPPr, S end Pickerel L (McCUNE et al. 2018); Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (sterile) (McCUNE et al. 2020).

= *Bacidia flavovirescens* (Dicks.) Anzi – Juneau icefield nunatak (HEUSSER 1954).

#Arthrorhaphis muddii Obermayer – On *Dibaeis baeomyces*, seepy soil. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020); Alaska (FRISCH et al. 2022b).

Arthrorhaphis vulgaris (Schaer.) Frisch et al. – On soil. – Kenai Peninsula, Lost L trail (FRISCH et al. 2022a).

Asahinea chrysantha (Tuck.) W. L. Culb. & C. F. Culb – Terricolous or loosely saxicolous in tundra. – Aleutians, Adak Isl, Chapel Cove; St Lawrence Isl; Denali NP, Mt Eielson; Nome; Pt Barrow; Okpilak L; E of Okpilak L; Pitmegea R, 15 mi upstream from Cape Sabine; Delta Dome, Delta R; Steese Hwy, Eagle Pass; Sheenjek R; Franklin Bluffs, Sagavanirtoq R (CULBERSON & CULBERSON 1965: map); Alaska (HAKULINEN & ULVINEN 1966: map); Mt Eielson (WEBER & VIERECK 1967); Talkeetna Mts, Bald Mtn Ridge; mtn ridge Eagle R Valley; Anchorage area, headwaters of Rabbit Cr; Richardson Hwy, mi 24; Denali Hwy, mi 0–28; Denali NP, Savage R; Denali NP, Polychrome Pass; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, Fossil Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Kotzebue (KROG 1968); Alaska (THOMSON 1972a: map); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Barrow; Eagle Summit; Prudhoe Bay (MURRAY & MURRAY 1978); Pitmegea R, 15 mi upstream from Cape Sabine; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirtoq R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Anaktuvuk Pass (MOSER et al. 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Denali NP, slope N of Station Primrose; Denali NP, near Savage R (SCHINDLER 1987); Innavait Cr (WALKER et al. 1989); Denali NP, Savage R (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); SE Alaska (GEISER et al. 1994a); Eagle Summit; Mt Fairplay; Thompson Pass (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Innavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Mendenhall Valley (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; McCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr

(NELSON et al. 2013; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cetraria chrysanthra* Tuck. – Kotzebue’s Sound (TUCKERMAN 1858; CULBERSON & CULBERSON 1965 lectotypified an Asian specimen); Kotzebue’s Sound; Isls of Behring’s Strait (TUCKERMAN 1882); Kotzebue Sound; Isls of Behring Strait (MACOUN 1902); Port Clarence (DU RIETZ 1924: 61); 50 mi inland from Camden Bay; between Port Clarence and Teller (MERRILL 1924b); Alaska (RÄSÄNEN 1933); Adak Isl, Chapel Cove (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Chandler L (SCHOLANDER et al. 1952); Chandler L (WIGGINS & MACVICAR 1958); Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1960); Umiat; Anaktuvuk Pass (KROG 1962; MURRAY 1974); Brooks Range, L Peters; Bianca Pk; flanks of Contact Cr Mtn; Ogotoruk Cr drainage; Cape Dyer, drainage of Kipaloq and Angowlik Crs; Mt Harper; White Mts, the limestone ridge; Porcupine Dome (KROG 1962); Mendenhall Glacier (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966).

= *Platysma septentrionale* Nyl. – ad Fretum Kotzebue Sound (**type** – NYLANDER 1860); Kotzebue Sound (MANN 1868; TURNER 1886); Port Clarence (NYLANDER 1887); Port Clarence et freto Kotzebue Sound (HUE 1890).

= *Cetraria glauca* var. *substraminea* C. Bab. – Kotzebue Sound (**type** – BABINGTON 1852b). Mentioned as a synonym already by TUCKERMAN (1858).

Asahinea scholanderi (Llano) W. L. Culb. & C. F. Culb. – Terricolous or loosely saxicolous, often in talus. – L Schrader; Ogotoruk Cr drainage; Cape Dyer, drainage of Kipaloq and Angowlik Crs; Brooks Range, Anaktuvuk Pass; L Peters; Denali Hwy, mi 0–28; Steese Hwy, Cleary Summit; Mt Harper (CULBERSON & CULBERSON 1965: map); Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; mtn ridge, Eagle R Valley; headwaters Rabbit Cr; Seward; Richardson Hwy, mi 24; Denali Hwy, mi 0–37; Denali Hwy, mi 70; Denali NP, Savage R; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Seward Peninsula, King Mtn (KROG 1968); Alaska (THOMSON 1972a: map); Anaktuvuk Pass (NASH 1977); Eagle Summit (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; L Peters; Cape Dyer; Ogotoruk Cr near the Bering Straits (THOMSON 1979); Arey Cr; Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Eagle Summit; Mt Fairplay; Thompson Pass (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); Brooks Range, below Atigun Pass (OBERMAYER 2015); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Cetraria scholanderi* Llano – Anaktuvuk Pass (LLANO 1951; MURRAY 1974); L Schraeder (type – LLANO 1951); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Brooks Range, L Peters; Ogotoruk Cr drainage, above Slate Cr; Cape Dyer, drainage of Kipaloq and Angowlik Crs; Mt Harper; Porcupine Dome (KROG 1962); Ogotoruk Cr drainage (JOHNSON et al. 1966).

Aspicilia alboradiata (H. Magn.) Oxner – Saxicolous. – Alaska (THOMSON 1997: map).

Aspicilia aliena (Zahlbr.) Oxner – Saxicolous on siliceous rocks. – Denali NP, Rock Cr Trail (SCHINDLER 1990); Alaska (THOMSON 1997: map).

Aspicilia alphoplaca → ***Lobothallia alphoplaca***

Aspicilia alpina → ***Bellemerea alpina***

Aspicilia annulata (Lynge) J. W. Thomson – Saxicolous. – Alaska (THOMSON 1997).

= *Lecanora annulata* Lynge – S of Wainwright, Kaolak R (THOMSON 1979: map).

Aspicilia anseris (Lynge) J. W. Thomson – Saxicolous “on calcareous and acidic rock”. – Alaska (THOMSON 1997: map).

= *Lecanora anseris* Lynge – Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

Aspicilia aquatica Körb. – Saxicolous in creeks or seepy areas. – Anaktuvuk Pass (MOSER et al. 1979); Nuyakuk L; Chauekuktuli L (THOMSON & DOELL 1989); Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Adak Isl (TALBOT et al. 1997); St Matthew Isl (TALBOT et al. 2001); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, Crater Bay off of Harris Bay; Kenai Fjords NPPr, Harding Icefield Trail (MCCUNE et al. 2020, as s. lat.).

= *Lecanora aquatica* (Körb.) Hepp – Anaktuvuk Pass (THOMSON 1979).

Aspicilia arctica (Lynge) Oxner – Saxicolous. – Riverside Lodge Airstrip; Willow L, near Alaska Hwy; Mt Fairplay (TALBOT et al. 2007).

Aspicilia berntii A. Nordin et al. – Saxicolous. – Alaska, Kenai Fjords NP (MCCUNE 2017b); Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay (MCCUNE et al. 2020); Alaska (MCCUNE & DI MEGLIO 2021).

Aspicilia bicensis F. Anderson & Lendemer – Saxicolous on noncalcareous rock. – Katmai NPPr, Naknek L (MCCUNE et al. 2018); Alaska (MCCUNE & DI MEGLIO 2021).

Aspicilia caesiocinerea → ***Circinaria caesiocinerea***

Aspicilia caesiopruinosa (H. Magn.) J. W. Thomson – Saxicolous. – Noatak NPr (MCCUNE et al. 2009).

Aspicilia candida (Anzi) Hue – Saxicolous on calcareous rocks. – Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009).

= *Lecanora candida* (Anzi) Nyl. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979).

= “*Lecanora laevata* * *candida* Anzi” – Port Clarence (NYLANDER 1887; HUE 1891, as f.).

Aspicilia cinerea (L.) Körb. – Saxicolous on siliceous rocks. – Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Nuyakuk L (THOMSON

& DOELL 1989); Denali NP, Rock Cr Trail; Denali NP, slope by Eielson Visitor Center (SCHINDLER 1990); Mt Fairplay (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1270, Ten Mile Cr; Willow L, near Alaska Hwy; 15 km WNW of Tanacross Village (TALBOT et al. 2007); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, NE end of Harris Bay (sterile); Katmai NPPr, shore of Naknek L on peninsula NE of Brooks Camp; Lake Clark NPPr: shore of L Clark, stop 2, W of Hatchet Pt (MCCUNE et al. 2020, as s. lat.); Alaska (MCCUNE & DI MEGLIO 2021).

= *Lecanora cinerea* (L.) Sommerf. – Port Clarence; Icy Cape; Cape Lisborne (ROTHROCK 1884); Port Clarence; Icy Cape; Cape Lisburne (MACOUN 1902); Summit of White Pass; Kadiak; Port Clarence; Icy Cape; Cape Lisburne (CUMMINGS 1904); 50 mi inland from Camden Bay (MERRILL 1924b); road to Kantishna (HOWARD 1963); Ogotoruk Cr drainage (JOHNSON et al. 1966); S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Ogotoruk Cr (MURRAY 1985).

Aspicilia cingulata (Zahlbr.) Oxner – Saxicolous on acidic rocks. – Chauekuktuli L (THOMSON & DOELL 1989); Alaska (THOMSON 1997: map).

= *Lecanora cingulata* Zahlbr. – Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

Aspicilia composita (Lynge) J. W. Thomson, nom. illeg., non *Aspicilia composita* C. W. Dodge (1969). – Saxicolous on acidic rocks. – THOMSON (1997) says its range is uncertain and includes no records from Alaska on his map.

= *Lecanora composita* Lynge – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

Aspicilia concinna (J. W. Thomson) J. W. Thomson – Saxicolous on siliceous boulders. – Franklin Bluffs, Sagavanirktok R (THOMSON 1997, as “*concinnum*”).

= *Lecanora concinna* J. W. Thomson (“*concinnum*”) – Franklin Bluffs on the Sagavanirktok R (**type** – THOMSON 1960); Sagavanirktok R (THOMSON 1972b); Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

Aspicilia confusa Owe-Larss. & A. Nordin – Saxicolous on noncalcareous rock. – Katmai NPPr, Naknek L (MCCUNE et al. 2018).

Aspicilia contigua (Lynge) J. W. Thomson – Saxicolous on acidic rocks. – Alaska (THOMSON 1997: map).

Aspicilia contorta → ***Circinaria contorta***

Aspicilia cyanescens Owe-Larss. & A. Nordin – Saxicolous. – Lake Clark NPPr, Portage L; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018, as cf.).

Aspicilia disserpens (Zahlbr.) Räsänen – Saxicolous on frost-boil pebbles. – Wonder L (WEBER & VIERECK 1967); Alaska (THOMSON 1997: map).

= *Lecanora disserpens* (Zahlbr.) H. Magn. – Franklin Bluffs on the Sagavanirktok R; Firth R at Mancha Cr (THOMSON 1979).

Aspicilia dudinensis (H. Magn.) Oxner – Saxicolous. – N of Exit Glacier Visitor Center (MCCUNE et al. 2020); Alaska (MCCUNE & DI MEGLIO 2021).

Aspicilia elevata (Lynge) J. W. Thomson – Saxicolous. – Alaska (THOMSON 1997: map); Katmai NPPr, Naknek L (MCCUNE et al. 2018).

= *Lecanora elevata* Lynge – Anaktuvuk Pass (MOSER et al. 1979, as cf.); Anaktuvuk Pass (THOMSON 1979).

- Aspicilia epiglypta** (Norrl. ex Nyl.) Hue – Saxicolous. – “in ins. Lawrence” (HUE 1910).
 = *Lecanora epiglypta* Norrl. ex Nyl. – Lawrence-Insula (NYLANDER 1887); St Lawrence Isl (MAGNUSSON 1930); Alaska (MCCUNE & DI MEGLIO 2021, as cf.).
- Aspicilia fimbriata** (H. Magn.) Clauzade & Rondon – Saxicolous. – Alaska (THOMSON 1997).
 = *Lecanora fimbriata* H. Magn. – Franklin Bluffs on the Sagavanirktok R (THOMSON 1960); Franklin Bluffs on the Sagavanirktok R (THOMSON 1979: map).
- Aspicilia fumosa** Owe-Larss. & A. Nordin – Saxicolous. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020, as ‘cf.’).
- Aspicilia gibbosa* → **Circinaria gibbosa**
- Aspicilia grisea* → **Appendix A**
- Aspicilia heteroplaca** (Zahlbr.) Oxner – Saxicolous on calcareous rocks. – Alaska (THOMSON 1997: map).
 = *Lecanora heteroplaca* Zahlbr. – S of Wainwright, Kaolak R (THOMSON 1979).
- Aspicilia indissimilis** (H. Magn.) Räsänen – Saxicolous on beach rocks and argillite in the alpine zone. – Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018 as aff.); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, N of Exit Glacier Visitor Center (MCCUNE et al. 2020, as aff.); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020 as aff.).
- Aspicilia intermutans* → **Aspiciliella intermutans**
- Aspicilia karelica** (H. Magn.) Oxner – Saxicolous. – Portage Glacier (THOMSON & AHTI 1994); Chugach NF (DERR 2010).
- Aspicilia laevata** (Ach.) Arnold – Saxicolous on granite. – Kenai Fjords NPPr, Crater Bay off of Harris Bay (MCCUNE et al. 2020).
- Aspicilia lesleyana** Darb. – Saxicolous on calcareous rocks. – Alaska (THOMSON 1997).
 = *Lecanora lesleyana* (Darb.) Pauls. – Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979: map).
- Aspicilia melanaspis* → **Lobothallia melanaspis**
- Aspicilia myrinii* → **Aspilidea myrinii**
- Aspicilia mashiginensis* → **Oxneriaria mashiginensis**
- Aspicilia mastrucata** (Wahlenb.) Ach. – Saxicolous.
 = *Sagedia mastrucata* (Wahlenb.) A. Nordin et al. – Katmai NPPr, Malone L (MCCUNE et al. 2018).
- Aspicilia nikrapensis* → **Oxneriaria nikrapensis**
- Aspicilia olivaceobrunnea** Owe-Larss. & A. Nordin – Saxicolous in alpine heath with rock outcrops; on alkaline argillite. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020, as aff.).
- Aspicilia pergibbosa** (H. Magn.) Räsänen – Saxicolous. – Alaska (THOMSON 1997: map).
 = *Lecanora pergibbosa* H. Magn. – S of Wainwright, Kaolak R (THOMSON 1979).
- Aspicilia permutata** (Zahlbr.) Clauzade & Rondon – Saxicolous on siliceous cobbles on uplifted beaches and over limestone bedrock.

= *Oxneriaria permutata* (Zahlbr.) S. Y. Kondr. & Lőkös – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020, as aff.); Alaska (FRYDAY et al. 2021).

Aspicilia perradiata (Nyl.) Hue – Saxicolous on acidic rocks in the open. – Alaska (THOMSON 1997: map).

= *Lecanora perradiata* Nyl. – Franklin Bluffs on the Sagavanirktok R; Sahlgvig Ridge, Kukpuk R (THOMSON 1979).

Aspicilia plicigera (Zahlbr.) Räsänen – Saxicolous on acidic rocks. – Anaktuvuk Pass (MOSER et al. 1979, citing author as ‘[Zahlbr.] J. W. Thomson’); Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map).

= *Lecanora plicigera* Zahlbr. – Anaktuvuk Pass (THOMSON 1979).

Aspicilia polychroma Anzi – Saxicolous on calcareous rock.

= *Lecanora polychroma* (Anzi) Nyl. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979).

Aspicilia quartzitica W. A. Weber – Saxicolous. – Thompson Pass (THOMSON & AHTI 1994).

Aspicilia rosulata Körb. – Saxicolous on acidic rock. – Chikuminuk L (THOMSON & DOELL 1989: but determination uncertain); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map).

= *Lecanora rosulata* (Körb.) Stizenb. – Port Clarence; Icy Cape E (MAGNUSSON 1939); Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

= *Lecanora proserpens* Nyl. – “supra lapillos siliceos in Alaska ad Port Clarence et Icy Cape” (type – NYLANDER 1887: 86; HUE 1891). Synonymy according to MAGNUSSON (1939).

Aspicilia ryrkaipiae (H. Magn.) Oxner – Saxicolous on calcareous rocks. – Alaska (THOMSON 1997: map).

= *Lecanora ryrkaipiae* H. Magn. – Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat (THOMSON 1979).

Aspicilia simoënsis → ***Sagedia simoënsis***

Aspicilia sipeana (H. Magn.) Owe-Larss. & A. Nordin – Saxicolous. – Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018).

Aspicilia sublapponica (Zahlbr.) Oxner – Saxicolous on granite in periodically flooded streambed. – Anaktuvuk Pass (MOSER et al. 1979).

= *Lecanora sublapponica* Zahlbr. – Anaktuvuk Pass (THOMSON 1979).

Aspicilia subradicans (Nyl.) Hue – Saxicolous on argillite and granitic rocks. – Alaska (THOMSON 1997: map); Willow L, near Alaska Hwy (TALBOT et al. 2007); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020, as aff.).

= *Lecanora subradicans* Nyl. – Lawrence-Insula (NYLANDER 1887).

= *Lecanora stygioplaca* Nyl. – Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

Aspicilia supertegens → ***Oxneriaria supertegens***

Aspiciliella intermutans (Nyl.) M. Choisy – Saxicolous.

= *Aspicilia intermutans* (Nyl.) Hue – Katmai NPPr, ridge W of Contact Cr (MCCUNE et al. 2018 as cf.); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020, as aff.).

Aspilidea myrinii (Fr.) Hafellner – Saxicolous on acidic rocks. Many of these records probably refer to an undescribed species of *Aspilidea* that is known from Alaska and Newfoundland. – Noatak NPr (MCCUNE et al. 2009, with ?); Brooks

Range (MCCUNE 2017b); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord (MCCUNE et al. 2020).

= *Aspicilia myrinii* (Fr.) Stein – Denali NP, Rock Cr Trail (SCHINDLER 1990); Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997, as cf.); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Mt Fairplay (TALBOT et al. 2007).

Athallia holocarpa (Hoffm.) Arup et al. – Saxicolous on soft argillite in the alpine zone, at least once associated with a bird perch, also on underhang in dripzone of large boulder in talus. The vast majority of corticolous and lignicolous records of this species can be referred to *Athallina pyracea* (see that species). *Athallina holocarpa* is a mainly saxicolous species (ARUP 2009). – Glacier Bay NP (VONDRÁK et al. 2016a); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, NE end of Harris Bay (MCCUNE et al. 2020).

= *Caloplaca holocarpa* (Hoffm.) A. E. Wade – Chilkoot Trail (SPRIBILLE et al. 2010 as cf.); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Caloplaca alcarum* Poelt – According to HANSEN et al. (1987) *C. alcarum* often starts out as a parasite on *Lecanora contractula*. – Insula St Lawrence in freto Bering (ARUP 1995a). Synonymy after VONDRÁK et al. (2016a).

= *Caloplaca vitellinula* (Nyl.) H. Olivier – Lake Clark NPPr, Camel's Hump (MCCUNE et al. 2018). Synonymy after VONDRÁK et al. (2016a).

Athallia pyracea (Ach.) Arup et al. – Corticolous on *Alnus crispa*, *Betula papyrifera*, on twigs of *Picea sitchensis*, *Populus balsamifera*, *P. tremuloides* and *Salix alaxensis* and lignicolous on old wood. This species accounts for most corticolous records of “*Caloplaca holocarpa*” – Kenai Fjords NPPr, NE end of Harris Bay (MCCUNE et al. 2020).

= “*Lecanora pyracea* (Ach.)” – Port Clarence (NYLANDER 1887).

= “*Placodium cerinum* var. *pyracea* Nyl.” – Arctic Ocean, Icy Cape (MACOUN 1902).

= *Pyrenodesmia pyracea* (Ach.) E. D. Rudolph – Farragut Bay (RUDOLPH 1955).

= *Caloplaca holocarpa* auct., non (Hoffm. ex Ach.) A. E. Wade (epiphytic records) – McKinley Bar (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Firth R at Mancha Cr (THOMSON 1979); Hagemester Isl (TALBOT et al. 1990); Moon L CG (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Lynn Canal near Skagway (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska Hwy, near Canadian border; Alaska Hwy, mi 1240; Beaver Cr (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Teck Isl (DILLMAN 2010).

? = *Caloplaca lithophila* auct. – St Matthew Isl (TALBOT et al. 2001, a record from wood). See ARUP (2009) for a discussion of nomenclature.

Athallia scopularis (Nyl.) Arup et al. – Saxicolous on seashore rock. Records from western North America are in need of verification.

= *Caloplaca scopularis* (Nyl.) Lettau – Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).

Atla alaskana S. Tibell & Tibell – Saxicolous on seeping calcareous rock. – Brooks Range, Sukakpak Mtn (type – TIBELL & TIBELL 2015).

Atla recondita Savić & Tibell – Saxicolous on semi-inundated slightly basic rock. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Atrophysma cyanomelanos T. Sprib. – Saxicolous, most frequently on weakly calcareous rock in subalpine and alpine habitats. – Klondike Gold Rush National Historical Park, White Pass; Glacier Bay NP: Excursion Ridge (**type**); Gates of the Arctic NP, Summit L (SPRIBILLE et al. 2020).

Atrozythia klamathica → [Appendix A](#)

– B –

#*Bachmanniomyces punctum* (A. Massal.) Diederich & Pino-Bodas – On squamules of *Cladonia* spp. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Phaeopyxis punctum* (A. Massal.) Rambold, Triebel & Coppins – Kobuk Valley Wilderness (ZHURBENKO 2009a); White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Great Kobuk Sand Dunes; Goldstream Valley; Denali NPPr, Rock Cr; Kenai Peninsula, Chugach NF (ZHURBENKO & PINO-BODAS 2017).

#*Bachmanniomyces uncialicola* (Zopf) D. Hawksw. – On basal squamules of terricolous *Cladonia* spp. – 140 km E of Kotzebue, Kobuk Valley Wilderness; Franklin Bluffs (ZHURBENKO & ALSTRUP 2004); Brooks Range, Endicott Mtns, Midnight Dome (DILLMAN et al. 2012; HAFELLNER 2013); Kotzebue; Great Kobuk Sand Dunes; Seward Peninsula, Guy Rowe Cr; Ophir Cr; Adak Isl, Mt Reed (ZHURBENKO & PINO-BODAS 2017); Kodiak Isl (PINO-BODAS et al. 2017a); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Bacidia alaskensis → [Herteliana alaskensis](#)

Bacidia arceutina (Ach.) Arnold – Corticolous on *Picea*. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Bacidia arnoldiana → [Bacidina modesta](#)

Bacidia auerswaldii → [Scutula effusa](#)

Bacidia bagliettoana → [Toniniopsis bagliettoana](#)

Bacidia beckhausii → [Biatora beckhausii](#)

Bacidia circumspecta (Nyl. ex Vain.) Malme – Corticolous on *Populus*. – Katmai NPPr, Naknek L (MCCUNE et al. 2018); Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Bacidia coprodes → [Toniniopsis coprodes](#) in [Appendix A](#)

Bacidia friesiana (Hepp) Körb. – Corticolous on *Sambucus* in beach meadow. – Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Lake Clark NPPr, Pickerel (as Pickerel) L (SPRIBILLE et al. 2020, referring to the record published by MCCUNE et al. [2018] as “*Bacidina circumpulla* Ekman & Spribille ined.”).

Bacidia herbarum (Stizenb.) Arnold – Terricolous. – Fielding L (THOMSON & AHTI 1994).

Bacidia idahoensis H. Magn. – Corticolous on *Tsuga*.

= *Bacidia laurocerasi* subsp. *idahoensis* (H. Magn.) S. Ekman – Chilkoot Trail (SPRIBILLE et al. 2010); coastal Alaska (MCCUNE 2017b).

- Bacidia igniarii** (Nyl.) Oxner – Substrate unknown for Alaskan record. – North Slope (KRISTINSSON et al. 2010).
- Bacidia laurocerasi** (Delise ex Duby) Zahlbr. – Corticolous on *Picea*.
= *Bacidia laurocerasi* subsp. *laurocerasi* – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Klondike Gold Rush National Historical Park, Chilkoot Trail (SPRIBILLE et al. 2020).
- Bacidia laurocerasi* subsp. *idahoensis* → **Bacidia idahoensis**
- Bacidia microcarpa* → **Bilimbia microcarpa**
- Bacidia muscorum* → **Toniniopsis bagliettoana**
- Bacidia nivalis* → **Stereocaulon nivale**
- Bacidia phacodes* → *Bacidina phacodes* in [Appendix A](#)
- Bacidia reagens** Malme – Corticolous on *Alnus* and *Picea*. – Chena R (DILLMAN et al. 2012).
- Bacidia rosellizans** S. Ekman – Corticolous on *Picea* branches. – Chena R (DILLMAN et al. 2012); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- Bacidia rubella** (Hoffm.) A. Massal. – Corticolous on *Populus*. – Alaska (THOMSON 1997: map); along the Taiya R, Chilkoot Trail (SPRIBILLE et al. 2010); coastal Alaska (MCCUNE 2017b).
- Bacidia scopulicola** (Nyl.) A. L. Sm. – Saxicolous on steep, shaded, noncalcareous metasedimentary rock. – Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020).
- Bacidia trachona* → *Aquacidia trachona* in [Appendix A](#)
- Bacidia sibiriensis* → **Bacidina subfuscula**
- Bacidia sphaeroides* → **Mycobilimbia carneoalbida**
- Bacidia subincompta* → **Toniniopsis subincompta**
- Bacidina arnoldiana* → **Bacidina modesta**
- Bacidina brandii** (Coppins & van den Boom) M. Hauck & V. Wirth – On organic accumulations on gravelly high beaches and in *Plantago maritima* zone. – Glacier Bay NP: East Arm, Glacier Bay (SPRIBILLE et al. 2020).
- Bacidina circumpulla** S. Ekman – Corticolous on *Alnus viridis* and lignicolous on rotting driftwood log. The record published as “ined” from Lake Clark NPPr is based on *Bacidia friesiana* (SPRIBILLE et al. 2020). – Glacier Bay NP: West Arm (type – SPRIBILLE et al. 2020, EKMAN 2023).
- Bacidina egenula** (Nyl.) Vězda – Saxicolous on gneiss rocks beside creek. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
- Bacidina inundata** (Fr.) Vězda – Saxicolous on creekside rock. – Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020).
- Bacidina modesta** (Zwackh ex Vain.) S. Ekman – Corticolous on *Alnus* and *Ribes lacustre* and once over *Lobaria*.
= *Bacidina arnoldiana* auct., non (Körb.) V. Wirth & Vězda – Chilkoot Trail (SPRIBILLE et al. 2010); coastal SE Alaska (MCCUNE 2017b). A misapplied name (CZARNOTA & GUZOW-KRZEMIŃSKA 2012).
= *Bacidina sulphurella* (Samp.) M. Hauck & V. Wirth – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020). Synonymy after EKMAN et al. (2019).
- Bacidina phacodes* → [Appendix A](#)
- Bacidina saxenii** (Erichsen) M. Hauck & V. Wirth – Saxicolous on vertical shale rock face at sea level and side of large roadside boulder. – Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

Bacidina subfuscula (Nyl.) S. Ekman – Muscicolous, terricolous and on bone.

= *Bacidia subfuscula* (Nyl.) Th. Fr. – Alaska (AHTI et al. 1973, referencing NYLANDER 1887); Alaska (THOMSON 1997: map).

= *Lecania subfuscula* (Nyl.) S. Ekman – Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

= *Lecidea subfuscula* Nyl. – Port Clarence (NYLANDER 1887; HUE 1891).

= *Lecidea pallidella* Nyl. – Lawrence Isl (NYLANDER 1885a; not citing locality specifically; NYLANDER 1887 makes the locality clear); Lawrence insula (HUE 1891, incorrectly placing it in Asia). Synonymy after DILLMAN et al. (2012; but see EKMAN 2023).

= *Bacidia sibiriensis* (Willey) Zahlbr. – (THOMSON 1997: map, as “*siberiensis*”); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000, as “*siberiensis*”); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007, as “*siberiensis*”). Synonymy after EKMAN (1996, as “*siberiensis*”) and DILLMAN et al. (2012; but see EKMAN 2023).

Bacidina sulphurella → ***Bacidina modesta***

Bactrospora cascadenis Ponzetti & McCune – Corticolous on *Picea* and *Tsuga*.

See also entry under *B. patellarioides*. – Kenai Peninsula, Tonsina Cr (MCCUNE & PONZETTI 2011); Chilkoot Trail (DILLMAN et al. 2012); coastal Alaska, N at least to the Kenai Pen (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Bactrospora patellarioides (Nyl.) Vain. – Corticolous on *Tsuga* bark. Specimens

may be *B. cascadenis*. – PWS, Schrader Isl, Chugach NF (DERR 2010: 232);

Chilkoot Trail (SPRIBILLE et al. 2010, this specimen is referable to *B.*

cascadenis: DILLMAN et al. 2012); coastal SE Alaska (MCCUNE 2017b).

Baeomyces carneus Flörke – Terricolous on clayey soil, especially arctic frost

boils. – Umiat (THOMSON 1967; MURRAY 1974); Richardson Hwy, mi 254

(THOMSON 1967); Colville R near Umiat (THOMSON 1979); Okpilak Valley

(COPPINS 1981); Alaska (THOMSON 1984: map); Chisik Isl (TALBOT et al. 1992);

Eagle Summit; Mt Fairplay; Fielding L; Sheep Mtn (THOMSON & AHTI 1994);

Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH &

HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000);

Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr

(MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Alaska

(MCCUNE 2017a); Katmai NPPr, ridgetop W of Contact Cr; Lake Clark NPPr,

Turquoise L; Lake Clark NPPr, trail to Tanalian Falls; Tuxedni, Chisik Isl

(MCCUNE et al. 2018).

Baeomyces placophyllus Ach. – Terricolous on humus, sand and over moss. –

Alaska (SANDSTEDE 1932: map); Unalaska Isl, Unalaska (DEGELIUS 1937);

Unalaska (SANDSTEDE 1938); Denali NP; Wonder L; Franklin Bluffs on the

Sagavanirktok R; Wainwright, Kaolak R (THOMSON 1967); Mt Eielson;

McKinley Bar (WEBER & VIERECK 1967); Amchitka Isl, above Constantine

Harbor (WEBER et al. 1969); Eagle Summit (MURRAY & MURRAY 1978); S of

Wainwright, Kaolak R; Franklin Bluffs on the Sagavanirktok R (THOMSON

1979); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map);

Eagle Summit; Sheep Mtn (THOMSON & AHTI 1994); Adak Isl (TALBOT et al.

1997); unnamed alpine peak W of Elbow Mtn near the BC border (GEISER et al.

1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek

Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1240; Tanacross Village (TALBOT et al. 2007); Noatak NPr (McCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); Gates of the Arctic NPr (NELSON et al. 2015b); Denali NPr (STEHN et al. 2015); Mendenhall L (SCHNEIDER et al. 2016); Denali NPr (ROLAND et al. 2017); Katmai NPr; Lake Clark NPr (McCUNE et al. 2018).

Baeomyces roseus → **Dibaeis baeomyces**

Baeomyces rufus (Huds.) Rebent. – Terricolous on soil and also over rock. – (SANDSTEDE 1932: map); Mendenhall Glacier (McCULLOUGH 1965); Amchitka; Denali NP (THOMSON 1967); Stony Pass (WEBER & VIERECK 1967); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd 1 mi from hwy; Moon L CG; Blueberry L CG; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (McCUNE et al. 2009); Chugach NF (DERR 2010); Hogg Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPr (NELSON et al. 2015b); Glacier Bay NP, Shag Cove (RESL et al. 2015, supplementary material); Denali NPr (STEHN et al. 2015); Glacier Bay NP, Shag Cove; Mitkof Isl (SCHNEIDER et al. 2016); Denali NPr (ROLAND et al. 2017); Katmai NPr; Lake Clark NPr (McCUNE et al. 2018); Kenai Fjords NPr (McCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

Bagliettoa calciseda (DC.) Gueidan & Cl. Roux – Saxicolous on limestone. = *Verrucaria calciseda* DC. – Anaktuvuk Pass (MOSER et al. 1979).

Bellemerea alpina (Sommerf.) Clauzade & Cl. Roux – Saxicolous on acidic rocks. – Mt Fairplay; Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); White Pass (SPRIBILLE et al. 2010); Denali NPr, S of the AK Range (STEHN et al. 2015); Lake Clark NPr, Turquoise L; Lake Clark NPr, Slope Mtn (McCUNE et al. 2018); Kenai Fjords NPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPr, near Harding Icefield Trail, ridge above Exit Glacier (McCUNE et al. 2020). = *Aspicilia alpina* (Sommerf.) Arnold – Mt Eielson (WEBER & VIERECK 1967).

Bellemerea cinereorufescens (Ach.) Clauzade & Cl. Roux – Saxicolous on acidic rock. – Chikuminuk L (THOMSON & DOELL 1989); SE Alaska (GEISER et al. 1994a: map); Alaska (THOMSON 1997: map); Kupreanof Isl (GEISER et al. 1998); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPr, N of Mirror L camp; Lake Clark NPr, Tuxedni Bay; Lake Clark NPr, Slope Mtn (McCUNE et al. 2018); Kenai Fjords NPr, Skilak nunatak within Harding Icefield; Lake Clark NPr, shoulder of mountain overlooking Tuxedni Bay (McCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020). = *Lecanora cinereorufescens* (Ach.) Hepp – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979).

Bellemerea diamarta (Ach.) Hafellner & Cl. Roux – Saxicolous. – Katmai NPr, Mirror L camp (McCUNE et al. 2018); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021a & b).

- Bellemerea subsorediza*** (Lynge) R. Sant. – Saxicolous on acidic rocks. – Attu Isl (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); White Pass (SPRIBILLE et al. 2010; OBERMAYER 2011); Lake Clark NPPr, Portage L; Lake Clark NPPr, Johnson R; Lake Clark NPPr, Tuxedni Bay (McCUNE et al. 2018); Kenai Fjords NPPr, Bear Glacier nunatak; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (McCUNE et al. 2020); Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020).
- Belonia incarnata*** Th. Fr. & Graewe – Terricolous in alpine sod. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Belonia russula*** Körb. ex Nyl. – Saxicolous. It is possible that Thomson & Sowl saw two different species, but the names they used are synonyms. – Amchitka Isl (THOMSON & SOWL 1989); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Belonia fennica* Vain. – Amchitka Isl (THOMSON & SOWL 1989).
- Biatora aegrefaciens*** Printzen – Corticolous on *Alnus* and *Picea sitchensis*. – Mitkof Isl (PRINTZEN et al. 2002, PRINTZEN 2014); Alaska (McCUNE 2017b); Katmai NPPr, Naknek L; Lake Clark NPPr, Tanalian Falls (McCUNE et al. 2018); Glacier Bay NP: Dundas (SPRIBILLE et al. 2020).
- Biatora alaskana*** Printzen & Tønsberg – Corticolous on *Alnus*, *Betula*, *Picea* and *Tsuga*. – Auke Bay, E of Pt Louisa (**type**); Starrigavan R; Juneau; Revillagigedo Isl (PRINTZEN & TØNSBERG 1999); trail from Juneau to Gastineau Pk along Gold Cr, N of Mt Maria; Mendenhall Glacier, E Glacier Trail, ca. 0.5 km E of Visitor Center; Mendenhall Glacier, E Glacier Trail, ca. 1 km NE of Visitor Center; Mendenhall Glacier, E Glacier Trail, on W shore of Mendenhall L; pack trail N of Herbert R to Herbert Glacier; Baranof Isl, S Baranof Wilderness, E end of Redoubt L (PRINTZEN & TØNSBERG 2004); Chilkoot Trail (SPRIBILLE et al. 2010); Borough of Sitka (PRINTZEN 2014); lowlands of coastal SW Alaska (McCUNE 2017b); Kenai Fjords NPPr, W shore of Beauty Bay; Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
- Biatora albidula*** Willey – Corticolous on *Alnus* and *Salix*.
= *Myrionora albidula* (Willey) R. C. Harris – Chilkoot Trail (SPRIBILLE et al. 2010); Kodiak Isl; Chilkoot Trail (PALICE et al. 2013); SE Alaska (McCUNE 2017 a & b); Katmai NPPr, Malone L (McCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd, floodplain of Resurrection R; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (McCUNE et al. 2020).
- Biatora albohyalina*** (Nyl.) Bagl. & Carestia – Corticolous on *Alnus*, *Betula*, *Picea*, *Populus*, *Ribes* and *Salix*, sometimes lignicolous or fungicolous on old fungi. – Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Katmai NPPr, near Brooks Camp; Katmai NPPr, Hammersly L; Lake Clark NPPr, Tanalian Falls; Tuxedni, Chisik Isl (McCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, N of Exit Glacier Visitor Center (McCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecidea albohyalina* Nyl. – Port Clarence (NYLANDER 1887). Chisik Isl (TALBOT et al. 1992); Portage Glacier (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Beaver Cr; Tanacross Village (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).

Biatora alnetorum S. Ekman & Tønsberg – Corticolous on *Alnus*. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Biatora artyta → [Appendix A](#)

Biatora aureolepra T. Sprib. & Tønsberg – Corticolous on *Picea sitchensis* branch. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Biatora beckhausii (Körb.) Tuck. – Corticolous on bark of *Alnus* and other hardwoods, also reported as lignicolous and on bone. – Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Bacidia beckhausii* Körb. – Barrow (MURRAY & MURRAY 1978); Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L (THOMSON 1979); Haines Hwy, mi 33 (THOMSON & AHTI 1994); Barrow (THOMSON 1997: map); NW of Haines (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010).

Biatora chrysantha (Zahlbr.) Printzen – Corticolous on *Alnus*, *Cupressus nootkatensis* and *Picea*. – Mendenhall Glacier; Frederick Sound, Sukoi Islets (DILLMAN et al. 2012); Glacier Bay NP: Dundas Bay, East Arm, West Arm (SPRIBILLE et al. 2020; all specimens are sterile and treated as ‘*aff. chrysantha*’ here because it is not possible to distinguish *B. chrysantha* and *B. chrysanthoides* in the sterile state).

Biatora cuprea (Sommerf.) Fr. – Terricolous in the alpine, also on moss and detritus over rock. – Isls in Behring Strait (MACOUN 1902); Seward Peninsula, Cape Prince of Wales, Cape Mtn facing Bering Strait; upper valley of the Swift Fk of the E Fk of the Kuskokwim R (PRINTZEN 1995); Gastineau Pk (GEISER et al. 1998); Haines Hwy, mi 86; E Fk of Kuskokwim R; Cape Mtn facing Bering Strait; Juneau, Mt Roberts (PRINTZEN & TØNSBERG 1999); coastal Alaska (MCCUNE 2017b); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecidea cuprea* Sommerf. – Firth R at Mancha Cr (THOMSON 1979); Deadman L CG; Blueberry L CG; Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map).

Biatora efflorescens (Hedl.) Räsänen – Corticolous on *Alnus*, *Picea*, *Populus*, *Salix* and *Tsuga*. – Adak Isl (TALBOT et al. 1997); N of Dotsons Landing; Douglas Isl; Revillagigedo Isl; Kodiak Isl E, along rd to Buskin L; Kodiak Isl E, Chiniak Hwy bridge; Starrigavan R; Yakutat (PRINTZEN & TØNSBERG 1999); Teck Isl (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); coastal Alaska (MCCUNE 2017a & b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay (SPRIBILLE et al. 2020).

= *Lecidea efflorescens* (Hedl.) Erichsen – Kodiak Isl, Buskin R; Yakutat; Juneau, Herbert R; Old Sitka, Starrigavan R (TØNSBERG 1993a); N of Juneau, Herbert R; Yakutat (GEISER et al. 1998).

Biatora ementiens (Nyl.) Printzen – Muscicolous and terricolous over exposed boulder. See also record under *Ramboldia elabens* in [Appendix A](#). – Kenai Fjords NPPr, Skilak nunatak (MCCUNE et al. 2020).
= *Lecidea ementiens* Nyl. – Adak Isl (TALBOT et al. 1997); St Lawrence Isl (THOMSON 1997: map).

Biatora flavopunctata (Tønsberg) Hinter. & Printzen – Corticolous on *Shepherdia canadensis* and stalks of *Ericaceae*. – SW of Turnagain Pass (PRINTZEN & TØNSBERG 1999); Kenai Peninsula, along Seward Hwy, 0.2 mi SW of Lyon Cr, between the rd and Granite Cr (PRINTZEN 1995); Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).
= *Lecanora flavopunctata* Tønsberg – SW of Turnagain Pass (TØNSBERG 1993a).

Biatora globulosa (Flörke) Fr. – Corticolous. – Nagai Isl, Shumagin Group (MACCOUN 1902).

Biatora helvola Körb. ex Hellb. – Corticolous on *Sorbus* and *Tsuga*, and lignicolous on hard stick. – Chilkoot Trail (SPRIBILLE et al. 2010); trail from Juneau to Gastineau Pk (DILLMAN et al. 2012); coastal SE Alaska (MCCUNE 2017b).

Biatora hemipolia → [Appendix A](#)

Biatora hypophaea Printzen & Tønsberg – Corticolous on a wide range of conifer and angiosperm substrates. – Cordova; Yakutat (PRINTZEN & TØNSBERG 1999); Chilkoot Trail (SPRIBILLE et al. 2010); coastal SE Alaska (MCCUNE 2017b); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, N of Exit Glacier Visitor Center (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Biatora kodiakensis Printzen & Tønsberg – Corticolous on conifers, *Alnus*, *Oplopanax horridus* and *Viburnum edule*. – Mitkof Isl, along the E side, NE of Hill L; NW of Juneau City, Lena Beach; along trail from Juneau to Mt Robert; NW of Haines, N of Klehini R, along and S of Haines Hwy, just E of the international border; Kodiak Isl E, N of Kodiak Airport, S of and near Buskin R (**type**); SW bank of Buskin R at Chiniak Hwy bridge; along rd to Buskin L; along rd to Anton Larsen Bay; bank of Red Cloud R; Anton Larsen Bay SW; S of town of Kodiak; S of Kalsin Bay, bank of Myrtle Cr; along Cape Chiniak Rd, W of Chiniak L, Chiniak Pt; SW of Chiniak Pt, S of Cape Chiniak Rd (PRINTZEN & TØNSBERG 2004); Hogg Isl (DILLMAN 2010); Kodiak Isl Borough (PRINTZEN 2014); coastal Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Alaska (TØNSBERG & PRINTZEN 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Biatora ligni-mollis T. Sprib. & Printzen – Lignicolous on conifer and soft wood. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Gustavus, Tower Rd (SPRIBILLE et al. 2020).

Biatora meiocarpa (Nyl.) Arnold var. ***meiocarpa*** – Corticolous on *Alnus*, *Oplopanax horridus*, *Salix* and *Shepherdia canadensis*. – Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: East Arm, West Arm, Gustavus (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Lecidea meiocarpa* Nyl. – Port Clarence (NYLANDER 1887; HUE 1891).

Biatora meiocarpa (Nyl.) Arnold var. ***tacomensis*** (Printzen & Tønsberg) Printzen & Tønsberg – Corticolous on *Alnus* bark and *Vaccinium* stalks. – S of Seward, W of Lowell Pt, Spruce Cr ravine, W of the Rd from Seward to Lowell Pt (PRINTZEN & TØNSBERG 2004); Lake Clark NPPr, Horn Cr; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Biatora montis-marmorei T. Sprib. – Corticolous on *Oplopanax horridus* and *Alnus*. For nomenclature see [Appendix B](#).

= *Biatora marmorea* T. Sprib., non (Scop.) Steud. & Hochst., nom. illeg. (Art. 53.1) – Glacier Bay NP: Glacier Bay (**type** – SPRIBILLE et al. 2020).

Biatora nobilis Printzen & Tønsberg – Corticolous on *Picea* twig. – Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020).

Biatora oligocarpa Printzen & Tønsberg – Corticolous on *Alnus* and *Populus*. – Mendenhall Glacier, E Glacier Trail, W shore of Mendenhall L, ca. 1 km from Mendenhall Glacier (**type**); Cordova, N of Copper R Hwy, along Saddlebag Glacier Trail, near trailhead; Kodiak Isl Borough, Kodiak Isl E, S of town Kodiak, N of Buskin R; along Anton Larsen Bay Rd; N of Kodiak Airport, S of and near Buskin R; Kalsin Bay E, just W of Cape Chiniak Rd, at Myrtle Cr; along Cape Chiniak Rd, W of Chiniak L, Chiniak Pt (PRINTZEN & TØNSBERG 2004); Chilkoot Trail (SPRIBILLE et al. 2010); Kodiak Isl Borough (PRINTZEN 2014); S and SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Glacier Bay NP: Gustavus, West Arm (SPRIBILLE et al. 2020).

Biatora pallens (Kullh.) Printzen – Corticolous on *Abies* near treeline. – White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Katmai NPPr, N of Brooks Camp; Lake Clark NPPr, Tanalian Falls; Lake Clark NPPr, Pickerel (as Pickeral) L (MCCUNE et al. 2018); Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020).

Biatora rufidula (Graewe) S. Ekman & Printzen – Corticolous on *Picea* and *Tsuga*. – Kodiak Isl E, along rd to Buskin L; Yakutat; Revillagigedo Isl SW (PRINTZEN & TØNSBERG 2004); Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Katmai NPPr, Brooks Camp; Katmai NPPr, N of Brooks Camp; Katmai NPPr, Malone L; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Biatora sphaeroidiza (Vain.) Printzen & Holien – Corticolous on *Alnus*, *Oplopanax horridus*, *Picea sitchensis*, *Salix*, *Sambucus racemosa*, *Tsuga* and *Viburnum edule* in SE Alaska. – Douglas Isl; [SE Alaska] mainland, Bridget Cove (DILLMAN et al. 2012); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Biatora subduplex (Nyl.) Räsänen ex Printzen – Muscicolous, terricolous and corticolous on conifers and hardwoods. – “insula St. Lawrence in freto Behring”; Port Clarence; Revillagigedo Isl; Kodiak Isl E, rd to Buskin L; near Fielding L Campsite; Yakutat (PRINTZEN & TØNSBERG 1999); Seward Peninsula, Cape Prince of Wales, along shoreline of Bering Strait, village of Wales; Seward

Peninsula, Cape Prince of Wales, slope below rocky cliffs of Neeluk, sea level to 700 m (PRINTZEN 1995); White Pass (SPRIBILLE et al. 2010); coastal Alaska (MCCUNE 2017b); Katmai NPPr, N of Mirror L Camp; Lake Clark NPPr, Johnson R (MCCUNE et al. 2018); Kenai Fjords NPPr, N arm of spit across James Lagoon; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Lecidea subduplex* Nyl. – Lawrence Isl (NYLANDER 1887; HUE 1891); Adak Isl (TALBOT et al. 1997); St Lawrence Isl (THOMSON 1997: map).

= “*Biatora apochroeiza* (Nyl.)” – Hall Isl (CUMMINGS 1904).

= *Lecidea apochroeiza* Nyl. – Lawrence-Insula (**type** – NYLANDER 1887; HUE 1891, incorrectly attributing it to Asia). Synonymy after PRINTZEN & TØNSBERG (1999).

= *Lecidea internectens* Nyl. – “supra ramulos dejectos” – Port Clarence (**type** – NYLANDER 1885b; NYLANDER 1887; HUE 1891). Synonymy after PRINTZEN & TØNSBERG (1999).

Biatora toensbergii Holien & Printzen – Corticolous on *Alnus*, *Picea* and *Tsuga*. – Lowell Pt; Sitka; Yakutat (PRINTZEN & TØNSBERG 1999); Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); Alaska (TØNSBERG & PRINTZEN 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Biatora troendelagica Holien & Printzen – Lignicolous in maritime habitats. – Kenai Fjords NP, North Arm Nuka Bay; Kenai Fjords NP, Verdant Cove; Kenai Fjords NP, peninsula into Three Hole Bay off Aialik Bay (TØNSBERG & PRINTZEN 2018); Kenai Fjords NP (TØNSBERG & PRINTZEN 2018); Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik; Kenai Fjords NPPr, Verdant Cove, N side at shoreline (MCCUNE et al. 2020).

Biatora turgidula → ***Lecidea turgidula***

Biatora vacciniicola (Tønsberg) Printzen – Corticolous on *Alnus*, *Salix* and *Vaccinium* stalks. – Kenai Peninsula, along Seward Hwy, 0.2 mi SW of Lyon Cr, between the rd and Granite Cr (PRINTZEN 1995); SW of Turnagain Pass (PRINTZEN & TØNSBERG 1999); Chilkoot Trail (SPRIBILLE et al. 2010); Juneau (PRINTZEN 2014); coastal SE Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Lecidea vacciniicola* Tønsberg – SW of Turnagain Pass (TØNSBERG 1993a).

Biatora vernalis (L.) Fr. – Muscicolous and terricolous on detritus, also reported as corticolous on *Picea* (DEGELIUS 1937); corticolous records prior to PRINTZEN & TØNSBERG’S (1999) publication may refer to *B. subduplex* or other species. – Corticolous records: Disenchantment Bay; Orca (CUMMINGS 1904); Chisik Isl (TALBOT et al. 1992, *B. oligocarpa* per MCCUNE et al. 2018); Mt Alyeska; Richardson Hwy, mi 10; Fielding L (THOMSON & AHTI 1994, mostly corticolous records); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge,

West Arm (SPRIBILLE et al. 2020). *Muscicolous and terricolous records*: Alaska (BRODO et al. 2001); Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003, on *Peltigera aphthosa* thallus); Noatak NPr (MCCUNE et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010, including a corticolous record); Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay (MCCUNE et al. 2020).

= *Lecidea vernalis* (L.) Ach. – Port Clarence (NYLANDER 1887; HUE 1891); Kodiak Isl, Kodiak (DEGELIUS 1937); Amchitka Isl (WEBER et al. 1969); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R (THOMSON 1979); Prudhoe Bay region (WALKER 1985); Prudhoe Bay region (WALKER & EVERETT 1991); Alaska (THOMSON 1997: map).

Biatorella campestris → **Sarcosagium campestre**

Biatorella conspurcans Norman – Corticolous on *Alnus*. – Dalton Hwy, Sukakpak Mtn (DILLMAN et al. 2012).

Biatorella contigua N. S. Golubk. & Piin – Terricolous on frost boils. – North Slope, Sagwon (ZHURBENKO et al. 2005); Ogotoruk Cr (FRYDAY 2017).

Biatorella hemisphaerica Anzi – Muscicolous over calcareous soil. – Alaska (THOMSON 1997: map).

= *Biatorella fossarum* auct. amer., non (Duf.) Th. Fr. – S of Wainwright, Kaolak R (THOMSON 1979).

Biatoridium delitescens (Arnold) Hafellner – Corticolous on *Populus*. – Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

#Biatoropsis usnearum Räsänen – On “*Usnea filipendula*” and *Usnea longissima*. – Dog Isl, S of Ketchikan, Dog Cove (GEISER et al. 1998); Glacier Bay NP: Dundas Bay (Taylor Bay) (SPRIBILLE et al. 2020 as ‘s. lat.’).

#Biazrovia stereocaulicola Zhurb. & Etayo – On *Cladonia pyxidata*. – Denali NPPr (ZHURBENKO & PINO-BODAS 2017).

Bilimbia accedens Arnold – Muscicolous over *Populus balsamifera*. Specific status after VELDkamp (2004). – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).

Bilimbia lobulata (Sommerf.) Hafellner & Coppins – Terricolous on calcareous soil or detritus, or muscicolous. See also entry under *Stereocaulon cumulatum* in Appendix A.

= “*Lecanora lobulata* (Smrf.)” – Lawrence Isl (NYLANDER 1887).

= *Mycobilimbia lobulata* (Sommerf.) Hafellner – Howe Isl; Franklin Bluffs (WALKER et al. 2004).

= *Toninia lobulata* (Sommerf.) Lynge – Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Alaska (THOMSON 1997: map).

= *Catillaria subnegans* (Nyl.) Boistel – Port Clarence (THOMSON 1997: map).

= *Lecidea subnegans* Nyl. – Port Clarence (NYLANDER 1887; HUE 1891).

Lecidea subnegans has been lectotypified by both BRICAUD & ROUX (1990) and

TIMDAL (1991b) on the Almquist collection from the Vega expedition, which is a specimen of *Bilimbia lobulata*. It is probable that the Alaskan collections are also referable to this species.

? = "*Lecidea syncomista* Flk." – Port Clarence (NYLANDER 1887; HUE 1891).

Bilimbia microcarpa (Th. Fr.) Th. Fr. – Muscicolous, or on caribou bones or detritus. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

= *Bacidia microcarpa* (Th. Fr.) Lettau – Barrow (MURRAY & MURRAY 1978); 6 mi SSW of Barrow, Imiksonn L; Anaktuvuk Pass (THOMSON 1979); Anaktuvuk Pass (MOSER et al. 1979); Barrow (THOMSON 1997: map).

= "*Lecidea meiobola* Nyl." – Port Clarence (NYLANDER 1887; HUE 1891).

Bilimbia sabuletorum (Schreb.) Arnold – Corticolous, terricolous and muscicolous.

= "*Lecidea sabuletorum* Flk." – Port Clarence (NYLANDER 1887; HUE 1891).

= *Mycobilimbia sabuletorum* (Schreb.) Hafellner – Alaska (THOMSON 1997: map).

= *Biatora hypnophila* (Turner ex Ach.) Tuck. – Yakutat; St Michael; Unalaska (CUMMINGS 1904). Synonymy after WESTBERG et al. (2021).

Blastenia ammiospila (Wahlenb.) Arup et al. – Terricolous, muscicolous and lignicolous (old board), often on nutrient-enriched substrates, also reported (as corticolous) on *Alnus* and *Salix*. – Katmai NPP; Lake Clark NPP (McCUNE et al. 2018).

= *Caloplaca ammiospila* (Wahlenb.) H. Olivier – Alaska (THOMSON 1997: map); Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Noatak NPP (McCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010, as s. lat.); Alaska (McCUNE 2017b); Glacier Bay NP: Dundas Bay, Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

= *Caloplaca cinnamomea* (Th. Fr.) H. Olivier – St Lawrence Isl (MAGNUSSON 1944); Barrow; Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Amchitka Isl, Magazine Rd (THOMSON & SOWL 1989).

Blastenia ferruginea (Huds.) Körb. – Corticolous or lignicolous on conifers and deciduous plants, also reported from a snowbed (TALBOT et al. 1992). VONDRÁK et al. (2020) showed that, in Europe, *Blastenia ferruginea* is a southern species and is replaced in southern Scandinavia by *Blastenia relictata*. The Alaskan collections should be reassessed. – Spy Isl; Collinson Pt (MERRILL 1924b).

= *Caloplaca ferruginea* (Huds.) Th. Fr. – Juneau Icefield (McCULLOUGH 1965); Denali NP, Wonder L (WEBER & VIERECK 1967); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Chisik Isl (TALBOT et al. 1992); Mendenhall Valley (GEISER et al. 1994a; GEISER et al. 1998); Tuxedni: Chisik Isl (McCUNE et al. 2018).

= *Placodium ferrugineum* (Huds.) Hepp – Port Clarence, Alaska, and elsewhere (ROTHROCK 1884; specimen revised to "*Lecanora caesiorufa* [Ach.]" by NYLANDER 1887); St Paul Isl; Unalaska Isl; Port Clarence (MACOUN 1902); Sitka; Yakutat; Farragut Bay; St Lawrence Isl (CUMMINGS 1904).

= *Pyrenodesmia ferruginea* (Huds.) E. D. Rudolph – St Lawrence Isl (RUDOLPH 1955).

- Blennothallia crispa** (Huds.) Otálora et al. – Terricolous in *Picea* forest, also reported as muscicolous. – Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).
= *Collema crispum* (Huds.) F. H. Wigg. – 30 mi inland from Camden Bay (MERRILL 1924b, author as ‘Ach.’); Alaska (THOMSON 1984: map); Eagle Summit (THOMSON & AHTI 1994).
- Blennothallia fecunda** (Degel.) Otálora et al. – Saxicolous on beach boulders. – Glacier Bay NP: West Arm (Ptarmigan Cr) (SPRIBILLE et al. 2020).
= *Collema fecundum* Degel. – SE Alaska (O’CLAIR et al. 1996; GEISER et al. 1998); Teck Isl (DILLMAN 2010); Kenai Fjords NPPr, E side of Harris Bay; Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020).
- Botryolepraria lesdainii** (Hue) Canals et al. – Terricolous in crevices under overhangs. – Prince of Wales Isl, near Sarkar Rapids (TØNSBERG 2002b; HOPKINS & TØNSBERG 2006); Chilkoot Trail (SPRIBILLE et al. 2010); Prince of Wales Isl, Coronation Isl, Skagway area (MCCUNE 2017b).
- #Brackelia lunkei** Zhurb. – On *Cladonia coccifera*. – Great Kobuk Sand Dunes (ZHURBENKO & PINO-BODAS 2017).
- Brianaria bauschiana** (Körb.) S. Ekman & M. Svenss. – Saxicolous on boulders in deep shade of oldgrowth forest and *Alnus* thickets. – Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
- Brianaria sylvicola** (Flotow) S. Ekman. & M. Svenss. – Saxicolous. – Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- Brianaria tuberculata** (Sommerf.) S. Ekman & M. Svenss. – Saxicolous on siliceous rock. – SE Alaska (MCCUNE 2017b).
= *Micarea tuberculata* (Sommerf.) R. A. Anderson – White Pass (SPRIBILLE et al. 2010).
? = *Lecidea paraphanella* Nyl. – There is a small fragment packet in H-NYL from Lawrence Isl with this name, a coloured drawing of an apothecial section and the note “2 apothecia”, but it is empty. A richer specimen from Konyam Bay, Russia collected on the same expedition and named by Nylander around the same time has been annotated by P. Czarnota as *Micarea tuberculata*. – Insula Laurentii Freti Behringii... Graniticola (**type** – NYLANDER 1882: 457); Lawrence-Insula (NYLANDER 1885a; NYLANDER 1887).
- Brigantiaea fuscolutea** (Dicks.) R. Sant. – Terricolous on tundra soil and reportedly corticolous on *Picea*; corticolous records should be compared with *B. praetermissa*. – Haines Hwy, mi 33; Thompson Pass (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Alaska (HAFELLNER 1997); Adak Isl (TALBOT et al. 1997); Aleutian Isls (THOMSON 1997: map); [SE Alaska] mainland Swan L; Juneau, Gastineau Pk; NW of Haines (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Afognak Isl, Blue Fox Bay (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010; GAYA et al. 2012: Supplementary Table 1); coastal Alaska (MCCUNE 2017a); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

- = *Heterothecium fuscoluteum* Dicks. – “On rocks on earth.” – Unalaska Isl (MACOUN 1902).
- = “*Lecanora fuscolutea* (Dicks.)” – Lawrence Isl (NYLANDER 1887).
- = “*Lecidea fuscolutea*” – Lawrence ins. (HUE 1891).
- = *Lopadium fuscoluteum* (Dicks.) Mudd – Unalaska Isl, Unalaska (DEGELIUS 1937).

Brigantiaea praetermissa Hafellner & St. Clair – Corticolous on *Cupressus nootkatensis*. – Glacier Bay NP: Dundas Bay (Taylor Bay) (SPRIBILLE et al. 2020).

Brodoa oroarctica (Krog) Goward – On acidic rocks and over mosses in tundra. – SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Sheep Mtn (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Kuiu Isl, Rowan Mtn (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

= *Hypogymnia oroarctica* Krog – Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Denali NP, slope N of Station Primrose (SCHINDLER 1987).

= *Hypogymnia intestiniformis* auct. amer., non (Vill.) Räsänen – Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; northern Cook Inlet, Eagle R; northern Cook Inlet, headwaters of Rabbit Cr; Turnagain Arm, Bird Cr Ridge; Denali Hwy, mi 28–37; Denali Hwy, mi 70; Denali NP, Savage R; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Twelvemile Summit; Steese Hwy, Eagle Summit; Seward Peninsula, Rainbow Cr (KROG 1968).

= *Parmelia intestiniformis* auct. amer., non (Vill.) Ach. – Steese Hwy, Eagle Summit (KROG 1962).

Bryobilimbia ahlesii (Körb.) Fryday et al. var. **ahlesii** – Saxicolous on shaded, siliceous rock in a *Tsuga-Picea* forest. – Petersburg Borough, Mitkof Isl (FRYDAY & DILLMAN 2021a).

Bryobilimbia diapensiae (Th. Fr.) Fryday et al. – Detriticolous on dead *Diapensia lapponica* tufts. – Katmai NPPr, Hammersly L (MCCUNE et al. 2018).

= *Lecidea diapensiae* Th. Fr. – Mt Eielson (WEBER & VIERECK 1967); Eagle Summit (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Seward Peninsula, 7 km NE of Nome, Newton Pk; North Slope, Toolik L (ZHURBENKO 2009b); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

Bryobilimbia hypnorum (Lib.) Fryday et al. – Terricolous on organic accumulations over bases of trees and over rocks, as well as directly on bryophytes, from beaches to alpine ridges. – Kenai Fjords NPPr, Near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Lecidea hypnorum* Lib. – Alaska (THOMSON 1997: map); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).

= *Mycobilimbia hypnorum* (Lib.) Kalb & Hafellner – Fielding L (THOMSON & AHTI 1994); Noatak NPr (MCCUNE et al. 2009).

? = *Lecidea fusca* (Schaer.) Th. Fr. – Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979). The type of *Lecidea sphaeroides* ζ *fusca* Schaer. is a mixture of different species (PRINTZEN 1995) and it is impossible to interpret the Alaska reports without rechecking the specimens.

Bryobilimbia sanguineoatra (Wulfen) Fryday et al. – On plant detritus. Alaska specimens are all historical and may refer to what is now called *B. hypnorum*.

= “*Biatora sanguineoatra* Fr.” – Old Sitka (ROTHROCK 1884); Old Sitka (MACOUN 1902 citing author as (Fr.) Tuckerm.)

= “*Lecidea sanguineoatra* (Fr.)” – Lawrence-Insula (NYLANDER 1887).

Bryocaulon divergens (Ach.) Kärnefelt – Terricolous, typically in tundra. –

(KÄRNEFELT 1986: map); Denali NP, slope N of Station Primrose; Mt Fairplay (SCHINDLER 1987); Amchitka Isl (THOMSON & SOWL 1989); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a); Eagle Summit; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002, including a separate entry under *Cornicularia divergens*!); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Alaska (MYLLYS et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Brooks Range, Atigun Pass (KASANKE 2019); Alaska (GOWARD & MYLLYS 2020); Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Alectoria divergens* (Ach.) Nyl. – Alaska, ‘various localities’ (MANN 1868; TURNER 1886); islands of Behring’s Strait (TUCKERMAN 1882); Pt Barrow (GRAY 1885); Port Clarence (ALMQUIST 1887); Lawrence-Insula; Port Clarence (NYLANDER 1887); Port Clarence (HUE 1890); Kotzebuesund; Beringstrasse (STIZENBERGER 1892); St Paul Isl (MACOUN 1899); Kodiak; St Michael; Agattu Isl; Hall Isl; St Matthew Isl; Port Clarence; Cape Nome; Seward Peninsula (CUMMINGS 1904); Pt Barrow; St Michael’s; Seward Peninsula; Cape Nome; Hall Isl; Kodiak Isl; Bering St (HOWE 1911a); Unalaska Isl (HEDRICK 1936); Port Clarence (SAVICZ & ELENKIN 1950); Imnavait Cr (WALKER & WALKER 1996); Ft Wainwright (RACINE et al. 1997); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Alaska (MYLLYS et al. 2016); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Alaska (GOWARD & MYLLYS 2020).

- = “*Bryopogon divergens* (Ach.) Schwend” – Kotzebue Sound; islands of Behring Strait (MACOUN 1902).
- = *Coelocaulon divergens* (Ach.) R. Howe – Little Kiska Isl (HOWE 1913a).
- = *Cornicularia divergens* Ach. – Kotzebue’s Sound (HOOKER & ARNOTT 1841); Unalaska Isl, Unalaska; Semichi Isls (DEGELIUS 1937); Barrow (SCHOLANDER et al. 1952); Kasigluk, Port Heiden; Hagemeister Isl (HOWARD 1958; Kasigluk specimen collected by Tinker, who says “abundant in this area, often eaten by the older Eskimos when cooked with fish or other meat”); 6 mi SSW of Barrow Base, vicinity of Imikson L (THOMSON 1960); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Pt Barrow; Meade R Village; Brooks Range, L Peters; Ogotoruk Cr; Ukinyik Cr drainage; Cape Dyer, drainage of Kipaloq and Angowlik Crs; Ogotoruk Cr drainage; coastal area from Cape Dyer to Ukinyik Cr; St Matthew Isl; Hooper Bay; Porcupine Dome; Steese Hwy, Eagle Summit (KROG 1962); W of Savage R Bridge (HOWARD 1963); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Ketchikan area, Ward L; Talkeetna Mts, Independence Mine; Talkeetna Mts, Mabel Mine; Turnagain Arm, Bird Cr Ridge; Eagle R Valley; Anchorage, Rabbit Cr Rd; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Denali Hwy, mi 0–37; Denali Hwy, mi 70; Denali NP, Savage R; Denali NP, Wonder L; Richardson Hwy, base of Rainbow Mts; White Mts, junction of Beaver Cr and Fossil Cr; White Mts, headwaters of Sheep Cr; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; White Mts, Lion Pk; Nunivak Isl, Nash Harbour; Mekoryuk Village; Robert’s Mtn; Seward Peninsula, King Mtn; Seward Peninsula, Anvil Pk, Seward Peninsula, Rainbow Cr; Kotzebue (KROG 1968); Amchitka Isl (WEBER et al. 1969); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Prudhoe Bay (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Haul Rd, Finger Mtn Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Firth R at Mancha Cr (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Nishlik L (THOMSON & DOELL 1989); Imnavait Cr (WALKER et al. 1989); Prudhoe Bay region (WALKER & EVERETT 1991); Central Arctic coastal plain (WALKER et al. 1991); Chugach NF (DEVELICE et al. 1999); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).
- = “*Evernia divergens* Ach.” – Norton Sound; Kotzebue’s Sound (BABINGTON 1851); Norton Sound; Kotzebue Sound (BABINGTON 1852).
- = *Cornicularia divergens* f. *gracilis* Degel. – Alaid (**type** – DEGELIUS 1937; KÄRNEFELT 1986); “Pike Knob” (HOWARD 1958). We (TA and TS) have seen the type (UPS-L-83019!) and it can be accommodated within the current concept of *Bryocaulon divergens*.

Bryocaulon pseudosatoanum (Asahina) Kärnefelt – Corticolous on *Picea*, *Pinus* and *Tsuga* in coastal rainforest and peatlands. – Ketchikan area, Ward L (KÄRNEFELT 1986); SE Alaska (GEISER et al. 1994a: map); SE Alaska (GEISER et al. 1998); SE Alaska (DILLMAN 2004; DERR et al. 2007); S Alaska (ROOT et al. 2014); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Bryodina rhypariza → **Bryonora rhypariza**

Bryonora castanea (Hepp) Poelt – Terricolous and muscicolous. – Alaska (POELT 1983: map); Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr, Johnson R (MCCUNE et al. 2018).

= *Lecanora castanea* (Hepp) Th. Fr. – Amaknak Isl (HOWE 1913a); Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; 6.5 mi SSW of Barrow Base, near Loon L; Anaktuvuk Pass; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979).

Bryonora curvescens (Mudd) Poelt – Terricolous on humus and muscicolous on *Andreea* and *Grimmia* spp. – Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); arctic to SE Alaska (MCCUNE 2017b); Katmai NPPr, W of Contact Cr; Lake Clark NPPr, Portage L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Bryonora rhypariza (Nyl.) Poelt – Muscicolous over top of rock, alpine zone. = *Bryodina rhypariza* (Nyl.) Hafellner & Türk – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Bryophagus gloeocapsa → **Cryptodiscus gloeocapsa**

Bryoplaca jungermanniae (Vahl) Søchting et al. – Terricolous and muscicolous on calcareous humus and moss and once corticolous on *Salix*.

= *Caloplaca jungermanniae* (Vahl) Th. Fr. – Camp Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Blueberry L CG; Fielding L (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

= *Placodium jungermanniae* (Vahl) Tuck. – Unalaska Isl; islands of Behring Strait (MACOUN 1902); Unalaska; St Matthew Isl; St Michael (CUMMINGS 1904).

Bryoplaca sinapisperma (Lam.) Søchting et al. – Muscicolous and terricolous. – Lake Clark NPPr, Johnson R (MCCUNE et al. 2018).

= *Caloplaca sinapisperma* (Lam. & DC.) Maheu & A. Gillet – Eagle Summit; Fielding L (THOMSON & AHTI 1994); Alaska Hwy, near Canadian border (TALBOT et al. 2007); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Placodium sinapispermum* (Lam. & DC.) Hepp – Isls of Behring's Strait (TUCKERMAN 1882); isls in Behring Strait (MACOUN 1902).

Bryoplaca tetraspora (Nyl.) Søchting et al. – Muscicolous and terricolous on mosses and frost terraces and below snowbanks. – Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

= *Caloplaca tetraspora* (Nyl.) H. Olivier – Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020). = *Lecanora tetraspora* Nyl. – Port Clarence (NYLANDER 1887; HUE 1891).

Bryoria alaskana Myllys & Goward – Corticolous on conifers and hardwoods in hypermaritime localities. – Alexander Archipelago, Kuiu Isl, Tebenkof Bay (type – MYLLYS et al. 2016); Prince of Wales Isl, S Prince of Wales Wilderness; Stikine/LeConte Wilderness, Gut Isl; Kuiu Isl (MYLLYS et al. 2016).

Bryoria americana (Motyka) Holien – Corticolous on conifers, also reported once from rock (TALBOT et al. 1997) and lignicolous on a fence (DERR 2010). – Alaska [PWS, Unakwik Inlet, Little Olsen Isl] (MYLLYS et al. 2016); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Alectoria americana* Motyka – Juneau area, Loop Rd; Mendenhall Glacier Trail; Juneau area, Mt Roberts; Juneau area, Montana Cr; Juneau area, Shrine of St Therese; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; W of Seward, Marathon Mtn; Richardson Hwy, mi 9; PWS, Fish Bay; PWS, Pigot Bay (KROG 1968).

= *Bryoria trichodes* subsp. *americana* (Motyka) Brodo & D. Hawksw. – Mt Alyeska Rd; Juneau; Darby Mtns (BRODO & HAWKSWORTH 1977: map); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map; “about 85% of the USFS specimens were subsp. *americana*. The remainder were subsp. *trichodes* or intergrades between the two”); Mt Fairplay; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001: photo); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010: 118, 176, 202); Afognak Isl, Blue Fox Bay; Kodiak Isl, Buskin R (DILLMAN 2010); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015).

= *Alectoria sepiacea* Motyka, nom. inval. – Juneau area, Montana Cr; Juneau area, Shrine of St Therese; Sitka NM; Kenai Peninsula, Skilak L; Seward; W of Seward, Marathon Mtn; Richardson Hwy, mi 9; PWS, Pigot Bay (KROG 1968).

Bryoria bicolor (Ehrh.) Brodo & D. Hawksw. – Corticolous on branches of *Picea*, *Pinus* and *Tsuga* in coastal rainforests. – Pigot Bay; Sitka (BRODO & HAWKSWORTH 1977: map); SE Alaska (GEISER et al. 1994a: map); Yakutat Forelands (SHEPHARD 1995); SE Alaska (GEISER et al. 1998); Chugach NF (DEVELICE et al. 1999); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014); Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Kenai Fjords NP (TØNSBERG & PRINTZEN 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020); Hagemester Isl (WALSH & GOWARD 2021).

= *Alectoria bicolor* (Ehrh.) Nyl. – St Paul Isl; Yakutat Bay [as ‘Kakutat’, specimen images in NY and US !TS]; Baranoff Isl (HOWE 1911a); Eagle (HERRE 1920); Alaska (MOTYKA 1964); Juneau area, Mt Roberts; Juneau area, Montana Cr; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Sitka NM; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; PWS, Pigot Bay (KROG 1968); Copper R Delta (BOGGS 2000).

= “*Alectoria jubata bicolor* (Ehrh.) Tuck.” – Sitka; Yakutat (CUMMINGS 1904).

Bryoria capillaris (Ach.) Brodo & D. Hawksw. – Corticolous on trees and shrubs. – Seward; Auke L (BRODO & HAWKSWORTH 1977: map); Alaska (THOMSON 1984: map); Kenai Peninsula, CG Kenai; Kenai Peninsula, near the Wildlife Refuge

Headquarters (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002, 'on boulder'); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, Chitsia Mtn; Denali NPPr, Coffee R Valley (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018). = *Alectoria setacea* auct. – Mendenhall Glacier Trail; Juneau area, Shrine of St Therese (KROG 1968). The Krog collections were examined by BRODO & HAWKSWORTH (1977: 152) and renamed *B. capillaris*.

Bryoria carlottae Brodo & D. Hawksw. – Corticolous on *Pinus* and *Tsuga* in low elevation rainforests. – SE Alaska (GEISER et al. 1994a: map); Yakutat Forelands (SHEPARD 1995); SE Alaska (GEISER et al. 1998); SE Alaska (DILLMAN 2004); S Alaska (ROOT et al. 2014); PWS, Unakwik Inlet, Olsen Isls (MYLLYS et al. 2016, as cf.); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Bryoria cervinula Brodo & D. Hawksw. – Corticolous on open-grown *Pinus* and *Tsuga* in rainforests. – Sitka, Harbour Mtn (**type**); Cordova; Juneau; Baranoff Isl; Kuiu Isl, Washington Bay; 60 mi NW of Golovin (BRODO & HAWKSWORTH 1977); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); SE Alaska (DILLMAN 2004); S Alaska (ROOT et al. 2014); Kenai Fjords NPPr, Bear Cove; Kenai Fjords NPPr, Crater Bay North (MCCUNE et al. 2020). = *Alectoria cervinula* Motyka, nom. inval. – Sitka (MOTYKA 1964). = *Alectoria cervinula* var. *cervinula*, nom. inval. – Juneau area, Loop Rd; Juneau area, Shrine of St Therese; Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn; Ketchikan area, Saxman Village (KROG 1968).

Bryoria chalybeiformis → **Bryoria fuscescens**

Bryoria fremontii (Tuck.) Brodo & D. Hawksw. – Corticolous on conifer bark and on snags. – North Kuiu Isl (GEISER et al. 1994a: map, but omitted from GEISER et al. 1998!); Skagway area, Lower Dewey (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NP (STEHN et al. 2015). = *Alectoria fremontii* Tuck. – Near Juneau, Salmon Cr (CUMMINGS 1892a); “collected by Dr. Cooley at Sitka and at Salmon Cr, near Juneau” (CUMMINGS 1904, note under *A. divergens*); Alaska (DU RIETZ 1926); southern Alaska (AHLNER 1948); Wonder L Lodge (HOWARD 1963, but this is a misidentification of *Bryoria nadvornikiana*, see WEBER & VIERECK, 1967); Wiseman (HOWARD 1963; MURRAY 1974, but possible misidentification of *Bryoria nadvornikiana*, see WEBER & VIERECK, 1967); W of Seward, Marathon Mtn (KROG 1968).

Bryoria friabilis Brodo & D. Hawksw. – Corticolous on conifers and *Betula*. – Kenai, Portage CG (SCHINDLER 1990); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010: 128); Chilkoot Trail, Sainly Hill; Dyea (SPRIBILLE et al. 2010); Alaska, herbarium KLGO [Klondike Gold Rush National Historical Park] (VELMALA et al. 2014); S Alaska (ROOT et al. 2014); Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Bryoria furcellata (Fr.) Brodo & D. Hawksw. – Corticolous on conifers. – Denali NP (BRODO & HAWKSWORTH 1977: map); Alaska (BRODO et al. 2001).

Bryoria fuscescens (Gyeln.) Brodo & D. Hawksw. – Corticolous and lignicolous on conifers and hardwoods, lignicolous on driftwood, and saxicolous (the latter form often called *B. chalybeiformis*). – Alaska (BRODO & HAWKSWORTH 1977: map; THOMSON 1984: map); S of Talkeetna, Montana L (SCHINDLER 1987); Girdwood (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Alaska (MYLLYS et al. 2014); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018, including *B. chalybeiformis* and *B. lanestris* types); Kenai Fjords NPPr, FIA plot, Square Bay North; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020). = *Bryoria fuscescens* var. *fuscescens* – White Mts (BRODO & HAWKSWORTH 1977).

= *Alectoria chalybeiformis* (L.) Gray – Unalaska (HOWE 1911a); Denali Hwy, mi 28 (KROG 1968); Barrow (MURRAY & MURRAY 1978).

= “*Alectoria jubata chalybeiformis* (L.) Ach.” – Sitka (CUMMINGS 1904).

= “*Alectoria jubata* var. *chalybeiformis* Ach.” – St Paul Isl (MACOUN 1899).

= “*Bryopogon jubata* var. *chalybeiformis* (Ach.)” – St Paul Isl (MACOUN 1902).

= *Bryoria chalybeiformis* (L.) Brodo & D. Hawksw. – Amchitka Isl; Unalaska; Colville R at Umiat (BRODO & HAWKSWORTH 1977: map); Colville R near Umiat; Pt Barrow (THOMSON 1979); Alaska (THOMSON 1984: map); St Paul Isl, S coast; Kenai Peninsula, Ninilchik (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Eagle Summit (THOMSON & AHTI 1994); Chief Shakes Isl, Wrangell (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Bering Land Bridge NPr (HOLT et al. 2007); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b).

= *Bryoria intricans* auct., non (Vain.) Brodo & D. Hawksw. – Alaska collection identified by Motyka (KROG 1968: 141) was assigned to *B. chalybeiformis* by BRODO & HAWKSWORTH (1977).

= *Bryoria fuscescens* var. *positiva* (Gyeln.) Brodo & D. Hawksw. – St Paul Isl; King Isl (BRODO & HAWKSWORTH 1977).

= “*Alectoria prolixa* (Ach.) Nyl.” – Sitka (STIZENBERGER 1895a, 1895b).

= *Alectoria jubata* auct. var. *prolixa* Ach. – Juneau; Unalaska Isl, Unalaska (DEGELIUS 1937).

= “*Bryopogon jubata* var. *prolixa* (Ach.) Th. Fr.” – Unalaska Isl, Behring Sea (MACOUN 1902).

Bryoria glabra (Motyka) Brodo & D. Hawksw. – Corticolous on conifers and *Betula*, also lignicolous on snags. – Juneau, Mt Roberts; White Mts, Lion Pk; Indian Village (BRODO & HAWKSWORTH 1977: map); Alaska (THOMSON 1984:

map); Kenai Peninsula, Seward, Moose Pass Street; Kenai Peninsula, Exit Glacier (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy; Richardson Hwy, mi 10; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

= *Alectoria glabra* Motyka – Nenana R, Colorado Cr (MOTYKA 1964); Mendenhall Glacier (MCCULLOUGH 1965); Juneau area, Mt Roberts; Ketchikan area, Deer Mtn; Eagle R Valley; Anchorage, Eastchester Swamp; Anchorage, O'Malley Rd; Kenai Peninsula, Skilak L; W of Seward, Marathon Mtn; Kenai Peninsula, Ninilchik; Homer; PWS, Pigot Bay; White Mts, Beaver Cr E of Sheep Cr; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, lower Fossil Cr (KROG 1968); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020, 'alectorialic acid chemotype').

- Bryoria implexa** (Hoffm.) Brodo & D. Hawksw. – Corticolous on conifers. – Fairbanks; Cantwell; Chena Ridge (BRODO & HAWKSWORTH 1977: map); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Alaska (LINDGREN et al. 2014); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr, King Salmon; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018).
 ? = *Alectoria implexa* auct. – Skagway (MERRILL 1911; HERRE 1920).
 ? = *Alectoria jubata* var. *implexa* auct. – Skagway (MERRILL 1908c).
 ? = “*Bryopogon jubata* var. *implexa* Fr.” – St Paul Isl (MACOUN 1902).

- Bryoria inactiva** Goward et al. – Corticolous on branches of conifers. – Alaska, locality not specified (VELMALA et al. 2014); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

- Bryoria irwinii** Goward & Myllys – Corticolous on branches of conifers in southeastern Alaska, Alexander Archipelago. – Kuiu Isl, Kuiu Wilderness, Malmsbury L; Tracy Arm/Fords Terror Wilderness, Holkum Bay; Maurelle Isls Wilderness, N Anguilla Isl (MYLLYS et al. 2016).

- Bryoria kockiana** Velmala et al. – Corticolous on branches of conifers. – Fairbanks-North Star Borough, locality not specified (**type** – VELMALA et al. 2014); Alaska (MYLLYS et al. 2016).

- Bryoria lanestris** (Ach.) Brodo & D. Hawksw. – Corticolous on conifers and *Betula*. – Fairbanks; Wonder L; Firth R (BRODO & HAWKSWORTH 1977: map); Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, by camp; Denali NP, Horseshoe L; Tok Junction, by campsite on the Tanana R (SCHINDLER 1987); Denali NP, Rock Cr Trail (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy; Richardson Hwy, mi 10; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Beaver Cr; Tanacross

Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; McCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= *Alectoria tenerima* Motyka – Juneau area, Montana Cr; Sitka area, Indian R Trail; Ketchikan area, Ward L; Eagle R Valley; Anchorage, Rabbit Cr Rd; Seward; Richardson Hwy, mi 170; Alaska Hwy, mi 1450 (KROG 1968).

Synonymy after BRODO & HAWKSWORTH (1977).

Bryoria nadvornikiana (Gyeln.) Brodo & D. Hawksw. – Corticolous on conifers and *Betula*. – Juneau (BRODO & HAWKSWORTH 1977: map); Alaska (THOMSON 1984: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Dog Isl in the far S; Gut Isl in the Stikine R flats; the Myriad Isls W of Chichagof (GEISER et al. 1994a: map; GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b).

= *Alectoria nadvornikiana* Gyeln. – Ogotoruk Cr (KROG 1962, though this was a misidentification fide KROG [1968] and MURRAY [1985]); Mendenhall Glacier (McCULLOUGH 1965); Denali NP, Wonder L (KROG 1968); Kodiak Isl, 29 km NW of Olga Bay Cannery, “Amara Lake” (KROG 1969).

Bryoria nitidula (Th. Fr.) Brodo & D. Hawksw. – Terricolous or saxicolous, mainly in the alpine or in heath. – Amchitka Isl; Attu Isl; Franklin Bluffs (BRODO & HAWKSWORTH 1977: map); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Denali NP, slope N of Station Primrose (SCHINDLER 1987); Amchitka Isl, S of Constantine Harbor (THOMSON & SOWL 1989); Eagle Summit; Mt Fairplay; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1994a: map); NW of Skagway and Thunder Mtn vicinity (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001: photo); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; McCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Alectoria nitidula* (Th. Fr.) Vain. – Fish Cr drilling site (LAWSON et al. 1978).

= *Alectoria irvingii* Llano – Anaktuvuk Pass (**type** – LLANO 1951; KROG 1962; MOTYKA 1964; MURRAY 1974); Amchitka Isl, N of Buoy Pt (WEBER et al. 1969, as cf.). Synonymy discussed by BRODO & HAWKSWORTH (1977) and MOSER et al. (1979).

= *Alectoria lanea* auct., non (Ehrh.) Vain. – Anaktuvuk Pass (KROG 1962, MURRAY 1974); Porcupine Dome (KROG 1962); Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mt Ridge; Eagle R Valley; Denali Hwy, mi 0–28; Denali Hwy, mi 70; Denali NP, Savage R; Denali NP, Polychrome Pass; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Steese Hwy, Eagle Summit; Nunivak Isl, Roberts Mtn; N of Nome, Anvil Pk; Kotzebue (KROG 1968); Eagle Summit (MURRAY & MURRAY 1978).

Bryoria oregana → **Nodobryoria oregana**

Bryoria pikei Brodo & D. Hawksw. – Corticolous on branches of *Picea*, *Tsuga* and orchard trees. – SE Alaska (DILLMAN 2004); Sitka (DILLMAN et al. 2012); Alaska (VELMALA et al. 2014); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Bryoria pseudofuscescens (Gyeln.) Brodo & D. Hawksw. – Corticolous on conifers. – Anchorage; Cantwell; Juneau, Mendenhall Glacier Trail; Dillingham area, Wood R Lakes (BRODO & HAWKSWORTH 1977: map); Alaska (THOMSON 1984: map); Tok Junction, Robertson R (SCHINDLER 1987); Kenai Peninsula, Chugach NF, by Cooper Lodge; Kenai Peninsula, near the Wildlife Refuge Headquarters (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a); Sheep Mtn (THOMSON & AHTI 1994); at Mallard Slough, Stikine R; near Mendenhall L, Juneau; near Skagway (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Alaska (VELMALA et al. 2014); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020, alectorialic acid chemotype, referable to *B. capillaris* or *B. pikei*); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

= *Alectoria norstictica* Motyka, nom. inval. – Alaska (MOTYKA 1964).

= *Alectoria subtilis* Motyka, nom. inval. – Alaska (MOTYKA 1964); Mendenhall L; Anchorage, Eastchester Swamp; Anchorage, Eagle R Valley; O'Malley Rd; Kenai Peninsula, Skilak L; Windy Pt, Turnagain Arm; Kenai Peninsula, Ingram Cr; Homer; W of Seward, Marathon Mtn; Seward (KROG 1968).

Bryoria simplicior (Vain.) Brodo & D. Hawksw. – Corticolous on conifers and *Betula*. – Dry Cr (BRODO & HAWKSWORTH 1977: map); Alaska (THOMSON 1984: map); Denali NP, Horseshoe L; Cantwell (SCHINDLER 1987); Kenai Peninsula, Kenai CG; Denali NP, Rock Cr Trail (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Moon L CG; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); SE Alaska (DILLMAN 2004); Alaska Hwy, near Canadian border; Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten

Mile Cr; Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Skagway area; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Alectoria nana* Motyka, nom. inval. – Alaska (MOTYKA 1964); Denali NP, Wonder L; White Mts, headwaters of Sheep Cr (KROG 1968).

Bryoria subcana (Nyl. ex Stizenb.) Brodo & D. Hawksw. – Corticolous on conifers. – Knight Isl; Kuiu Isl, Washington Bay (BRODO & HAWKSWORTH 1977: map); SE Alaska (GEISER et al. 1994a: map); NW of Sheridan Pk (GEISER et al. 1998); S Alaska (ROOT et al. 2014).

= *Alectoria haynaldiae* Gyeln. – Alaska (MOTYKA 1964); Juneau area, Mt Roberts; Juneau area, Shrine of St Therese; Sitka area, Indian R Trail; Sitka NM; W of Seward, Marathon Mtn; Seward; Richardson Hwy, mi 9; PWS, Fish Bay (KROG 1968).

Bryoria tenuis (E. Dahl) Brodo & D. Hawksw. – Corticolous and lignicolous on conifers, also reported as muscicolous and in rock crevices in heath. – Cape Sabine; Pigot Bay; Sitka (BRODO & HAWKSWORTH 1977: map); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); SE Alaska (GEISER et al. 1994a: map); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Alaska (MYLLYS et al. 2016); Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Alectoria tenuis* E. Dahl – Alaska (MOTYKA 1964); Ogotoruk Cr drainage (JOHNSON et al. 1966); Juneau area, Loop Rd; Juneau area, Montana Cr; Juneau area, Mt Roberts; Juneau area, Douglas Ski Bowl; Juneau area, Shrine of St Therese; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Richardson Hwy, mi 9; PWS, Fish Bay; PWS, Pigot Bay (KROG 1968).

= *Alectoria bicolor* var. *subbicolor* Motyka, nom. inval. – Alaska (MOTYKA 1964).

Bryoria trichodes (Michx.) Brodo & D. Hawksw. – Corticolous on conifers, low elevation to subalpine. The records from Noatak should be re-examined as they are far out of range for this species of coastal rainforests. – Ketchikan; Marathon Mtn (BRODO & HAWKSWORTH 1977: map, as “*subsp. trichodes*”); Alaska (THOMSON 1984: map); Yakutat Forelands (SHEPHARD 1995); SE Alaska (GEISER et al. 1998; DILLMAN 2004, as “*subsp. trichodes*”); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010: 118, 150, 204, 208, 216, as “*subsp. trichodes*”); Afognak Isl, Blue Fox Bay (DILLMAN 2010, as “*subsp. trichodes*”); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Kenai Fjords NPPr, Bear Cove (MCCUNE et al. 2020).

= *Alectoria trichodes* (Michaux) D. Hawksw. – Juneau, Mendenhall Glacier Trail; Kenai Peninsula (HAWKSWORTH 1972).

= *Alectoria canadensis* Motyka, nom. inval. – Juneau area, Shrine of St Therese; PWS, Fish Bay; PWS, Pigot Bay (KROG 1968).

= *Alectoria cervinula* var. *eciliata* Motyka, nom. inval. – Juneau area, Loop Rd; Sitka NM; Richardson Hwy, mi 9 (KROG 1968).

= *Alectoria delicata* Motyka, nom. inval. – Alaska (MOTYKA 1964); Sitka NM (KROG 1968).

Bryostigma lapidicola (Taylor) S. Y. Kondr. & Hur – Saxicolous, foliicolous and corticolous on *Abies* and *Picea*. See Appendix B for a discussion of the correct application of this name. The name *Arthonia lapidicola* has been misapplied to *Arthonia fusca* (q.v.).

= *Arthonia muscigena* Fr. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Klondike area of SE Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

Buellia adjuncta → **Amandinea adjuncta**

Buellia abstracta (Nyl.) H. Olivier – Saxicolous. – Katmai NPPr, Naknek L (MCCUNE et al. 2018).

Buellia aethalea (Ach.) Th. Fr. – Saxicolous on acidic rocks. – Alaska (THOMSON 1997: map); Katmai NPPr, Hammersly L; Katmai NPPr, Mirror L camp; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).

= *Buellia malmei* Lyngbe – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979).

Synonymy after THOMSON & SCOTTER (1983).

Buellia alboatra → **Diplotomma alboatrum**

Buellia badia (Fr.) A. Massal. – Saxicolous on basalt.

= *Buellia turgescens* Tuck. – PWS, Chugach NF (DERR 2010: 217).

Buellia chloroleuca → **Tetramelas chloroleucus**

Buellia coniops → **Amandinea coniops**

Buellia disciformis (Fr.) Mudd – Corticolous on *Alnus*, *Betula*, *Salix* and *Sorbus*. – Colville R near Umiat; Firth R at Mancha Cr (THOMSON 1979); Chisik Isl (TALBOT et al. 1992); Moon L CG (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001: photo); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

? = *Buellia parasema* var. *albocincta* Th. Fr. – Isls in Behring Strait (MACOUN 1902).

= *Buellia parasema* (Ach.) De Not. – Port Clarence (ROTHROCK 1884; specimen revised to *Lecidea disciformis* Nyl., by NYLANDER 1887: 88); Port Clarence (MACOUN 1902); Disenchantment Bay; Yakutat; Farragut Bay; Alaska Peninsula, Kukak Bay; St Michael (CUMMINGS 1904); PWS (CUMMINGS 1892b).

= *Buellia parasema* var. *parasema* – Popoff Isl; Kulak Bay (IMSHAUG 1951).

Buellia elegans Poelt – Terricolous on calcareous soil. – Valley of the Okpilak R at Okpilak L, near Mt Michelson (IMSHAUG 1951, citing authors as Poelt & Sulzer); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979;

THOMSON 1997: map, “North American reports of *Buellia epigaea* represent this species”); Tetlin Junction (TALBOT et al. 2007).

= *Buellia epigaea* auct. – Alaska (THOMSON 1972a: map).

Buellia erubescens Arnold – Corticolous on *Alnus*. – Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Alaska (THOMSON 1997: map); Mallard Slough, N arm Stikine R (GEISER et al. 1998); Tanacross Village (TALBOT et al. 2007); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); SE Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Buellia geophila → ***Tetramelas geophilus***

Buellia griseovirens (Turner & Borrer ex Sm.) Almb. – Corticolous on *Alnus*, *Betula*, *Picea sitchensis*, *Salix* and *Shepherdia canadensis*, also lignicolous on beach logs. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Juneau, NW of city, along Glacier Hwy, bank of Cowee Cr; Douglas Isl N, N of Douglas Hwy at Fish Cr; Kodiak Isl E, Kalsin Bay S; Chena R near Granite Tors trailhead; along Alaska Hwy 1, 4.5 km NE of Gakona; Mile Marker 1338 Alaska Hwy, W of Tok (DILLMAN et al. 2012); Alaska (MCCUNE 2017b); Katmai NPPr, Naknek L; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd, Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

Buellia immersa Lyngbe – Saxicolous. – Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

Buellia insignis → ***Tetramelas insignis***

Buellia nivalis → ***Diplotomma nivale***

Buellia notabilis Lyngbe – Saxicolous on calcareous rock. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Adak Isl (TALBOT et al. 1997); Okpilak R (THOMSON 1997); Noatak NPr (MCCUNE et al. 2009).

Buellia papillata → ***Tetramelas papillatus***

Buellia polyspora → ***Amandinea polyspora***

Buellia pulverulenta → ***Tetramelas pulverulentus***

Buellia punctata → ***Amandinea punctata***

Buellia schaereri De Not. – On wood, *Picea* branches. – Katmai NPPr, Malone L (MCCUNE et al. 2018).

Buellia sequax (Nyl.) Zahlbr. – Saxicolous on alpine ridgetop. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020 as ‘cf.’).

Buellia spuria (Schaer.) Anzi – Saxicolous on beach rocks. – 30 mi inland from Camden Bay (MERRILL 1924b); SE Alaska (GEISER et al. 1994a: map); Kuiu Isl, Rowan Bay (GEISER et al. 1998).

Buellia stigmattea Körb. – Saxicolous on coastal cliffs. This species has been included as a synonym of *Amandinea punctata* but the type has a brown, epilithic thallus and shorter conidia than those of the current concept of that species (F. Bungartz, pers. comm.). – Barrow (THOMSON 1997: map); St Matthew Isl (TALBOT et al. 2001).

Buellia stillingiana J. Steiner – Corticolous and lignicolous. – Farragut Bay; Kulak Bay (IMSHAUG 1951); Alaska (BRODO et al. 2001).

Buellia triphragmioides → **Tetramelas triphragmioides**

Buellia triseptata A. Nordin – Corticolous on fine twigs of *Picea sitchensis* and *Tsuga heterophylla*. – Alaska (McCUNE 2017b); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

Buellia turgescens → **Buellia badia**

Buellia vilis Th. Fr. – Saxicolous. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1997: map).

= *Lecidea enteroleuroides* Nyl. – Cape Lisburne (NYLANDER 1887: 88).

Synonymy according to NIMIS et al. (2018).

Bunodophoron melanocarpum (Sw.) Wedin – Corticolous on *Tsuga*. – Dall Isl (GEISER et al. 1998); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010). = *Sphaerophorus melanocarpus* (Sw.) DC. – Augustine Bay (MAGNUSSON 1932); Mendenhall Glacier (MCCULLOUGH 1965); Ketchikan area, Ward L; Ketchikan area, Saxman Village (KROG 1968); Russian America (collected by Kellogg in 1867, in FH-Tuck., FH-Sprague and US) (OHLSSON 1974: with sphaerophorin); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); S Alaska (ROOT et al. 2014); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin (McCUNE et al. 2020).

Byssoloma marginatum (Arnold) Sérus. – Corticolous on fine twigs of *Tsuga* and lignicolous on snag. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (McCUNE 2017b).

– C –

Caeruleum heppii (Nägeli ex Körb.) K. Knudsen & Arcadia – Saxicolous on calcareous rocks and pebbles. For nomenclature see ARCADIA & KNUDSEN (2012).

= *Acarospora heppii* (Nägeli) Nägeli – Port Clarence (MAGNUSSON 1929); Alaska (THOMSON 1997: map).

= “*Lecanora belonioides* Nyl.” – Port Clarence (NYLANDER 1887; HUE 1891). The specimen (as *Lecanora belonioides* f. *pallidior*) was identified by MAGNUSSON (1929) as *Acarospora heppii*.

Calicium abietinum Pers. – Lignicolous, wood of log cabin and *Picea sitchensis*. – Alaska (THOMSON 1997); Deadman L CG (THOMSON & AHTI 1994); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= *Calicium curtum* Turner & Borrer ex Sm. – Howkan Bay (HERRE 1919).

Calicium adaequatum → **Alloclacium adaequatum**

Calicium glaucellum Ach. – Lignicolous on snags and exposed dead wood of otherwise still living *Pinus contorta* trees. – Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, Pickerel Lake (McCUNE et al. 2018); Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, W shore of Beauty Bay (McCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

- Calicium lenticulare** Ach. – Lignicolous on *Tsuga* trunks and on snags. – [SE Alaska] mainland, near Ess L (GEISER et al. 1998); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018).
- Calicium parvum** Tibell – Corticolous. – Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).
- Calicium pinicola** (Tibell) M. Prieto & Wedin – On decorticated *Picea* branches or snags.
= *Cyphelium pinicola* Tibell – 44 km W of Glennallen on Glenn Hwy (DILLMAN et al. 2012); Katmai NPPr; Lake Clark NPPr, Portage L (MCCUNE et al. 2018).
- Calicium salicinum** Pers. – Lignicolous on *Picea sitchensis* and *Salix*. – Afognak Isl, Blue Fox Bay (DILLMAN 2010); Katmai NPPr, Naknek L (MCCUNE et al. 2018).
- Calicium tigillare** (Ach.) Pers. – Lignicolous on weathered wood.
= *Cyphelium tigillare* (Ach.) Ach. – Firth R at Mancha Cr (THOMSON 1979); Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).
- Calicium trabinellum** (Ach.) Ach. – Lignicolous. – Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, Pickerel L; Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018).
- Calicium viride** Pers. – Corticolous and lignicolous on conifers. – Alaska (THOMSON 1997); Zarembo Isl (GEISER et al. 1994a; GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr, Malone L; Lake Clark NPPr, Portage L; Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
= *Calicium hyperellum* (Ach.) Ach. – Zarembo Isl (HERRE 1919).
- Callome multipartita** (Sm.) Otálora et al. – Saxicolous on calcareous rocks. – Gates of the Arctic NPPr (NELSON et al. 2015b).
= *Collema multipartitum* Sm. – White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Anaktuvuk Pass (THOMSON 1984: map).
- Calloposma etesia* → **Caloplaca etesia**
- Calogaya alaskensis* → **Calogaya bryochryson**
- Calogaya arnoldii** (Wedd.) Arup et al. – Saxicolous. – Lake Clark NPPr, Camel's Hump (MCCUNE et al. 2018).
- Calogaya bryochryson** (Poelt) Vondrák – Corticolous, and lignicolous on driftwood. – Mancha Cr (VONDRAK et al. 2016b).
= *Calogaya alaskensis* (Wetmore) Arup et al. – Mancha Cr (ARUP et al. 2013).
= *Caloplaca alaskensis* Wetmore – Valley of Mancha Cr with Firth R (**type**); S of Wainwright, along Kaolak R (WETMORE 2004: map).
- Calogaya decipiens** (Arnold) Arup et al. – Saxicolous on calcareous rocks.
= *Caloplaca decipiens* (Arnold) Blomb. & Forssell – Umiat (WETMORE & KÄRNEFELT 1998); Chugach NF (DERR 2010).

- Calogaya saxicola** (Hoffm.) Vondrák – Saxicolous on calcareous rocks. The taxonomy of this group in Alaska needs work. It is unlikely that *C. saxicola* s. str. occurs in Alaska.
- = *Caloplaca saxicola* (Hoffm.) Nordin – Alaska (THOMSON 1997: map); Alaska (SØCHTING & LUTZONI 2003); Tetlin Junction (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009).
- ? = “*Caloplaca miniatum* (Hoffm.)” – 30 mi inland from Camden Bay; sand spit of Hulahula R; Alaskan arctic coast, Icy Reef (MERRILL 1924b).
- ? = “*Placodium murorum* Tuck. var. *miniaturum*” – Baranof Isl, Sitka (ROTHROCK 1884; revised to “*Placodium murorum* var. *tenu*e (Whlnb.)” by NYLANDER 1887).
- = *Caloplaca murorum* (Ach.) Th. Fr. – Wiseman Cr (HOWARD 1963; MURRAY 1974); Quigley Hill; Wiseman Cr; Polychrome Pass (HOWARD 1963, but these are misidentifications of *Rusavskia elegans* fide WEBER & VIERECK [1967]); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979). Synonymy after GAYA (2009).
- = “*Gasparrinia murorum* (Hoffm.) Tornab.” – Kodiak; Virgin Bay (RUDOLPH 1955).
- = “*Placodium murorum* (Hoffm.) DC.” – PWS, Virgin Bay; Kodiak (CUMMINGS 1904).
- ? = “*Placodium murorum* var. *tenu*e (Whlnb.)” – [Sitka] (NYLANDER 1887).
- Caloplaca ahtii** Søchting – Corticolous on *Alnus* and *Populus*. – Brooks Range, 50–300 m N of Marion Cr (SØCHTING 1994); N Alaska (MCCUNE 2017b); Katmai NPr, Headwaters Cr; Lake Clark NPr, W of Hatchet Pt (MCCUNE et al. 2018).
- Caloplaca alaskensis* → **Calogaya bryochryson**
- Caloplaca alcarum* → **Athallia holocarpa**
- Caloplaca allochroa* → **Gyalolechia allochroa**
- Caloplaca ammiospila* → **Blastenia ammiospila**
- Caloplaca approximata* → **Amundsenia approximata**
- Caloplaca aractina* → *Sanguineodiscus aractinus* in Appendix A
- Caloplaca arenaria* → **Rufoplaca arenaria**
- Caloplaca arnoldii* → **Calogaya arnoldii**
- Caloplaca atrocyaneascens** (Th. Fr.) H. Olivier – Saxicolous in alpine stream. – White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).
- Caloplaca atosanguinea** (G. Merr.) I. M. Lamb – Corticolous on *Alnus*, *Populus* and *Salix*. – Haines Hwy, mi 33 (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).
- Caloplaca aurantia* → Appendix A
- Caloplaca borealis** (Vain.) Poelt – Corticolous on *Betula papyrifera* and *Salix*. – Port Clarence by Bering Strait (AHTI et al. 1973); Fielding L (THOMSON & AHTI 1994); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Lake Clark NPr, Turquoise L; Lake Clark NPr, Pickerel (as Pickeral) L (MCCUNE et al. 2018); Kenai Fjords NPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020); Hagemester Isl (WALSH & GOWARD 2021).

Caloplaca callopisma → *Variospora aurantia* in [Appendix A](#)

Caloplaca caesiorufella (Nyl.) Zahlbr. – On thick branch, on smooth bark and on moss, also corticolous on *Salix* in beach fringe. – St Lawrence Isl; Port Clarence (MAGNUSSON 1944); Port Clarence by Bering Strait (AHTI et al. 1973); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Lecanora caesiorufella* Nyl. – Port Clarence (NYLANDER 1887; HUE 1892).

Type from nearby Bering Isl, in Russia.

= *Caloplaca phaeocarpella* sensu Thomson – Alaska (THOMSON 1997: the mapped localities refer exclusively to specimens of *C. caesiorufella*).

Caloplaca celata Th. Fr. – Terricolous on frost boil tundra, all specimens on plant remnants, mostly on dead *Saxifraga*. – North Slope, Franklin Bluffs (ZHURBENKO 2009b).

Caloplaca cerina (Hedw.) Th. Fr. – Corticolous on various deciduous trees and shrubs, lignicolous on wood, and occasionally over calcareous rocks. – Alaskan arctic coast, Icy Reef (MERRILL 1924b); McKinley Bar (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Chisik Isl (TALBOT et al. 1992); Deadman L CG (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001; WETMORE 2007); Elliott Hwy (GAYA et al. 2012: Supplementary Table 1).

= “*Placodium cerinum* (Ehrh.) Naeg. & Hepp” – Arctic Ocean, Icy Cape (ROTHROCK 1884); Kukak Bay; Kodiak (CUMMINGS 1904).

Caloplaca cerina var. *chloroleuca* → **Caloplaca stillicidiorum**

Caloplaca cerina var. *stillicidiorum* → **Caloplaca stillicidiorum**

Caloplaca cinnamomea → **Blastenia ammiospila**

Caloplaca cirrochroa → **Leproplaca cirrochroa**

Caloplaca citrina → **Flavoplaca citrina**

Caloplaca coralloides → *Polycauliona coralloides* in [Appendix A](#)

Caloplaca crenularia → *Blastenia crenularia* in [Appendix A](#)

Caloplaca crenulatella → **Xanthocarpia crenulatella**

Caloplaca decipiens → **Calogaya decipiens**

Caloplaca discolor → **Gyalolechia xanthostigmoidea**

#Caloplaca epithallina Lynge – On *Rhizoplaca chrysoleuca*. – North Slope, Toolik L (ZHURBENKO 2009b); Katmai NPPr, Naknek L (MCCUNE et al. 2018).

Caloplaca erichanseni → **Xanthocarpia erichanseni**

Caloplaca etesiae (Nyl.) Zahlbr. – Saxicolous on coastal rocks. ZAHLBRUCKNER (1931) and KHODOSOVTSSEV et al. (2004) attribute this combination to Du Rietz, but this is a technical error; in fact Du Rietz used *Callopisma*. However, Zahlbruckner cites the original protologue and thus validated the combination in *Caloplaca*. – Alaska (KHODOSOVTSSEV et al. 2004).

= *Callopisma etesiae* (Nyl.) Du Rietz – Alaska and St Matthews Isl (1880, *leg. Bean*); “widely distributed along the coasts of the Behring Sea” (DU RIETZ 1929).

= “*Xanthoria etesiae*” – According to THOMSON (1984), “reports of *X. etesiae* in the American Arctic are based upon small specimens of *X. elegans*”.

- Caloplaca exsecuta** (Nyl.) Dalla Torre & Sarnth. – Saxicolous in alpine or beach rocks, or on small moss fragments, in stream. – Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1994a: map, but omitted in GEISER et al. 1998); Afognak Isl, Blue Fox Bay (DILLMAN 2010, as ‘*execulta*’); Chilkoot Trail (SPRIBILLE et al. 2010, but incorrectly reported; collections actually come from White Pass, see DILLMAN et al. 2012); SE Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L; Katmai NPPr, Naknek L (MCCUNE et al. 2018); Alaska; ‘Klondike GRN National Historical Park’ (VONDRÁK et al. 2019); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).
= *Blastenia exsecuta* (Nyl.) Serv. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979).
- Caloplaca ferruginea* → **Blastenia ferruginea**
- Caloplaca ferrugineofusca** (Vain.) H. Magn. – Corticolous on *Salix*. – Adak Isl (TALBOT et al. 1997).
- Caloplaca festiva* → *Blastenia crenularia* in Appendix A
- Caloplaca flavocitrina* → **Flavoplaca flavocitrina**
- Caloplaca flavogranulosa* → **Polycauliona flavogranulosa**
- Caloplaca flavorubescens* → *Gyalolechia flavorubescens* in Appendix A
- Caloplaca flavovirescens* → **Gyalolechia flavovirescens**
- Caloplaca fraudans** (Th. Fr.) H. Olivier – Saxicolous and on bones. – Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1997: map); Lake Clark NPPr, Tuxedni R (DILLMAN 2003; MCCUNE et al. 2018); Alaska Hwy, near Canadian border (TALBOT et al. 2007).
- Caloplaca fulvolutea** (Arnold) Jatta – Saxicolous on exposed outcrops. – Wrangell-St. Elias NPPr, Bonanza copper mine (DILLMAN et al. 2012); Alaska (MCCUNE 2017b).
- Caloplaca fusciorufa** H. Magn. – Saxicolous. – Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Caloplaca holocarpa* → **Athallia holocarpa**
- #*Caloplaca invadens* → **Pachypeltis invadens**
- Caloplaca jungermanniae* → **Bryoplaca jungermanniae**
- Caloplaca kamezatica** Savicz – Corticolous on *Alnus*, *Picea sitchensis* and *Tsuga heterophylla*, beaches or headlands. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020, as ‘*kamtczatica*’).
= *Caloplaca vicaria* H. Magn. – Alaska (ARUP 1995b). Synonymy after SØCHTING (2004).
- Caloplaca litoricola** Brodo – Saxicolous on coastal rocks and boulders. – SE Alaska (GEISER et al. 1994a: map); Umnak Isl; Hawkins Isl; Juneau, Aaron Isl; 10 mi W of Auke Bay; Kodiak Isl, Nybakken; Starrigavan Bay (ARUP 1995a: map); Alaska (ARUP 1995b); Aleutian Isls, Adak Isl, Gannet Cove; Amchitka Isl; Kuiu Isl, Tongass NF, Rowan Bay (WETMORE 1996: map); SE Alaska (O’CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); Sitka (GEISER et al. 1998); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka

Bay; Kenai Fjords NPPr, Verdant Cove, N side (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (Taylor Bay) (SPRIBILLE et al. 2020).

Caloplaca livida (Hepp) Jatta – Terricolous on old tundra polygons. – Circular Marsh near Barrow (THOMSON 1960).

= *Pyrenodesmia livida* (Hepp) E. D. Rudolph – 2 mi E of Barrow Village (RUDOLPH 1955).

Caloplaca marina → **Flavoplaca marina**

Caloplaca nivalis (Körb.) Th. Fr. – Muscicolous in the alpine zone and on a vertical seepy rock face. – Chilkoot Trail (SPRIBILLE et al. 2010); NE Cordova, top of Mt Eyak; Brooks Range, Atigun Pass (DILLMAN et al. 2012); Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L camp; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); ‘Klondike GRN National Historical Park’ (VONDRÁK et al. 2019); Kenai Fjords NPPr, Harding Icefield Trail, lower slope (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020); Petersburg Borough, Oasis Glacier (FRYDAY & DILLMAN 2021b).

= *Placodium nivale* Körb. – “Alaska and the adjacent region”, “Locality not given” (ROTHROCK 1884).

Caloplaca obliterans → **Leproplaca obliterans**

Caloplaca persimilis → **Gyalolechia persimilis**

Caloplaca phaeocarpella (Nyl.) Zahlbr. – Lignicolous on wood, or corticolous on bark, also on bone. See also entry under *Caloplaca pollinii* in **Appendix A**. – Alaska (THOMSON 1997: map, but the mapped localities are *C. caesiorufella* [see entry under that species]); Noatak NPr (MCCUNE et al. 2009); SE Alaska (MCCUNE 2017b).

Caloplaca pinicola H. Magn. – Terricolous on humus and lignicolous on decorticated *Picea* and *Salix*. – Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979: but these are all misidentifications of *C. tornöensis* fide THOMSON 1997); Endicott Mts, Anaktuvuk Pass (WETMORE 2004: map); Alaska (WETMORE 2007); Brooks Range (MCCUNE 2017b).

Caloplaca pollinii → **Appendix A**

Caloplaca pyracea → **Athallia pyracea**

Caloplaca saxicola → **Calogaya saxicola**

Caloplaca scopularia → **Athallia scopularis**

Caloplaca scotoplaca → **Rufoplaca scotoplaca** in **Appendix A**

Caloplaca sinapisperma → **Bryoplaca sinapisperma**

Caloplaca sorocarpa (Vain.) Zahlbr. – Corticolous on smooth bark of shrubs, *Alnus* and *Salix*. – SW of Turnagain Pass (TØNSBERG 1993a; WETMORE 2004: map); White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, S of Exit Glacier Visitor Center; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).

Caloplaca spitsbergensis H. Magn. – Lignicolous on old fence post. – Barrow (FRYDAY 2004a).

Caloplaca stillicidiorum (Vahl) Lynge – Terricolous on humus, soil and old organic materials, muscicolous on moss, also on old bones and lignicolous on decorticated *Picea*. – Camp Eielson (WEBER & VIERECK 1967); Barrow; Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Fish Cr drilling site (LAWSON et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Yukon R; Tanana R; Copper R (MURRAY et al. 1983); Ogotoruk Cr (MURRAY 1985); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Alaska (ŠOUN et al. 2011, as s. lat.); Atqasuk (VONDRÁK et al. 2012); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).
= “*Lecanora stillicidiorum* (Oed.)” – Lawrence-Insula; Port Clarence (NYLANDER 1887; HUE 1891).
= “*Lecanora stillicidiorum* f. *chloroleuca* (Sm.)” – Port Clarence (NYLANDER 1887; HUE 1891).

Caloplaca tetraspora → **Bryoplaca tetraspora**

Caloplaca tirolensis → **Parvoplaca tirolensis**

Caloplaca tominii → **Xanthocarpia tominii**

Caloplaca tornoënsis H. Magn. – Muscicolous over rock, saxicolous, also terricolous on detritus and lignicolous on old wood. – St Paul Isl, S coast (SCHINDLER 1990); Alaska (THOMSON 1997); White Pass (SPRIBILLE et al. 2010); Katmai NPPr (FRYDAY & TØNSBERG 2015); SE Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L camp (MCCUNE et al. 2018); “Klondike GRN National Historical Park” (VONDRÁK et al. 2019); Kenai Fjords NPPr, Harding Icefield Trail (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Caloplaca turkuensis (Vain.) Zahlbr. – Corticolous and lignicolous on *Salix*. – Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Caloplaca variabilis → **Pyrenodesmia variabilis** in Appendix A

Caloplaca verruculifera → **Polycauliona verruculifera**

Caloplaca vitellinula → **Athallia holocarpa**

Caloplaca xanthostigmoidea → **Gyalolechia xanthostigmoidea**

Calvitimela aglaea (Sommerf.) Hafellner – Saxicolous on rocks in arctic and alpine tundra. – Minnie Cr headwaters; Solomon Quad, Council Rd, mi 54 (HERTEL & ANDREEV 2003); Denali NP; White Pass; Glacier Bay NP: Excursion Ridge (BENDIKSBY et al. 2015); Katmai NPPr, Malone L; Katmai NPPr, Hammersly L; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Slope Mtn; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecidea aglaea* Sommerf. – Sitka (MAGNUSSON 1930); Ogotoruk Cr drainage (JOHNSON et al. 1966); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Ogotoruk Cr (MURRAY 1985).

= *Tephromela aglaea* (Sommerf.) Hertel & Rambold – St Paul Isl (SCHINDLER 1990); W Kodiak Isl (HERTEL 1991); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); near Sitka (GEISER et al. 1998).

= *Lecidea aglaeida* Nyl. – Valley of the Okpilak R at Okpilak L, near Mt Michelson (HAUGAN & TIMDAL 1994). Synonymy after HERTEL & ANDREEV (2003).

= *Lecidea shushanii* J. W. Thomson – Okpilak R (**type** – THOMSON 1972b; HERTEL & RAMBOLD 1988, WONG 1993); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); SE Alaska (GEISER et al. 1994a: map); Thompson Pass (THOMSON & AHTI 1994). Synonymy after HAUGAN & TIMDAL (1994).

Calvitimela armeniaca (DC.) Hafellner – Saxicolous on acidic rocks. – Dalton Hwy, Finger Mtn (SPRIBILLE et al. 2011b); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

= *Lecidea armeniaca* (DC.) Fr. – Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl, above Chitka Cove (WEBER et al. 1969); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

= *Tephromela armeniaca* (DC. in Lam. & DC.) Hertel & Rambold – Eagle Summit; Mt Fairplay; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001).

Calvitimela melaleuca (Sommerf.) R. Sant. – Saxicolous on acidic rock. – Alaska Range, Mt Healy; White Pass (SPRIBILLE et al. 2011b); SE Alaska (MCCUNE 2017b); Klondike Gold Rush NHP (DILLMAN et al. 2012); Katmai NPPr, Mirror L (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

Calvitimela perlata (Haugan & Timdal) R. Sant. – Saxicolous on alpine rocks. – Chilkoot Pass (BENDIKSBY et al. 2015); SE Alaska (MCCUNE 2017b); Glacier Bay NP; Dundas Bay (SPRIBILLE et al. 2020).

Candelaria concolor (Dicks.) Stein – Corticolous on twigs of *Picea sitchensis*, *Picea glauca* and *Tsuga heterophylla*, also reported from cliff face (TALBOT et al. 1997). All records should be compared with *C. pacifica*. – Adak Isl (TALBOT et al. 1997); on beach at Kadin Isl, mouth of Stikine R (GEISER et al. 1998); SE Alaska (DILLMAN 2004); S Alaska (ROOT et al. 2014, ‘includes *pacifica*’); Lake Clark NPPr, Portage L; Lake Clark NPPr, Telaquana L (MCCUNE et al. 2018). = *Lecanora laciniosa* (Duf.) Nyl. – Sitka (STIZENBERGER 1895a; 1895b, who also provided the Tuckerman synonym “*Theloschistes concolor*”).

Candelaria pacifica M. Westb. & Arup – Corticolous on hardwoods. – Alaska (WESTBERG & ARUP 2011; though not stated the specimen is from Fielding L N of Glenallen); 5 km NNE of McCarthy (DILLMAN et al. 2012); Lake Clark NPPr, mouth of Horn Cr; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Candelariella aggregata M. Westb. – Muscicolous and terricolous on plant debris, often on tufts of *Selaginella*. – Alaska (WESTBERG 2007a); Lake Clark NPPr, Portage L (MCCUNE et al. 2018).

Candelariella arctica (Körb.) R. Sant. – Saxicolous, especially on bird-perch rocks. – Diomedea Isl (THOMSON 1973); Alaska (THOMSON 1997: map); Chikuminuk L (THOMSON & DOELL 1989); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Glacier Bay NP; Dundas Bay (SPRIBILLE et al. 2020).

= “*Lecanora crenata* Nyl.” – Lawrence-Insula (NYLANDER 1887). The Almquist specimen upon which this was based (S!) appears to be *Candelariella arctica*.

= *Placodium crenulatum* (Wahlenb.) Tuck. – Sitka, Baranof Isl (ROTHROCK 1884); Sitka (MACOUN 1902); Baranof Isl, Hot Springs (CUMMINGS 1904).

Synonymy based on WESTBERG et al. (2021).

Candelariella athallina (Wedd.) Du Rietz – Saxicolous in fissures and holes in acidic rocks. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1997: map).

Candelariella aurella (Hoffm.) Zahlbr. – Saxicolous on rocks, on old bones, overgrowing *Placynthium* spp., and reported once on bark (TALBOT et al. 1992). – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Copper R (MURRAY et al. 1983); Chisik Isl (TALBOT et al. 1992); Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Heceta Isl (GEISER et al. 1994a; GEISER et al. 1998).

= “*Candelariella cerinella* (Falk.) A. Zahlbr.” – Heceta Isl (HERRE 1919).

= *Candelariella dispersa* (Räsänen) Hakul. – Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997); North Slope (KRISTINSSON et al. 2010).

Candelariella borealis M. Westb. – Terricolous, growing among bryophytes and cyanobacteria. – Lake Kaniksrak; 40 mi E of Cape Lisburne (WESTBERG 2007b); Alaska (MCCUNE 2017b).

Candelariella canadensis H. Magn. – Terricolous, often on more or less bare soil. – Juneau Icefield (MCCULLOUGH 1965); Mendenhall Valley near Juneau (GEISER et al. 1994a; GEISER et al. 1998); ca. 230 km SSW Fairbanks (WESTBERG 2010); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).

Candelariella citrina B. de Lesd. – Terricolous on soil and humus. “Collections made in the Arctic or alpine regions, identified as *C. terrigena*, usually belong to *C. aggregata*, *C. cf. canadensis* H. Magn. or sterile samples of *C. placodizans* (Nyl.) H. Magn. or *C. borealis* M. Westb.” (WESTBERG 2007c). However, most Alaskan material has not been revised and we provisionally maintain the species here. – Denali NPPr (ROLAND et al. 2017).

= *Candelariella terrigena* Räsänen – Alaska (THOMSON 1973); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979); Ogoruk Cr (MURRAY 1985, as cf.); Eagle Summit; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); Alaska (THOMSON 1997: map; BRODO et al. 2001); Gates of the Arctic NPPr (NELSON et al. 2015b). Synonymy after WESTBERG (2007c).

Candelariella coralliza (Nyl.) H. Magn. – Saxicolous on rocks. – Alaska (MCCUNE 2017b); Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Candelariella dispersa → **Candelariella aurella**

Candelariella efflorescens R. C. Harris & W. R. Buck – Corticolous, mainly on *Alnus*, *Picea sitchensis* and *Populus*, once lignicolous on fencepost. – Chisik Isl (LENDEMER & WESTBERG 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Baranof Isl, Old Sitka; Juneau, Mendenhall L SE; Douglas Isl NW; Yakutat; Kodiak Isl; Kalsin Bay SW, bank of Dead Man Cr; along Anton Larsen Bay Rd; Prince of

Wales Isl, El Capitan area (DILLMAN et al. 2012); Tuxedni, Chisik Isl (McCUNE et al. 2018); Glacier Bay NP: East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Candelariella lutella (Vain.) Räsänen – Corticolous on *Alnus* and lignicolous on decorticated *Picea*. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Deadman L CG (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (WESTBERG 2007b); Alaska (MCMULLIN 2018: map).

Candelariella placodizans (Nyl.) H. Magn. – Terricolous on soil and humus. – Anaktuvuk Pass (THOMSON 1979); Arrigetch Cr valley (COOPER 1986b, Table 25, as ‘*Candelaria placodizans*’); Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Lake Clark NPPr, Turquoise L (McCUNE et al. 2018).

Candelariella terrigena → ***Candelariella citrina***

Candelariella vitellina (Hoffm.) Müll. Arg. – Saxicolous on bird-perch rocks, lignicolous on old log cabin and decorticated *Picea*, in athalline form on *Pyrenopsis pulvinata* (WEBER & VIERECK 1967) and *Tingiopsisidium elaeinum* (SPRIBILLE et al. 2010). – Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979); Mt Fairplay; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

= “*Lecanora vitellina* Ach.” – Lawrence-Insula (NYLANDER 1887).

= “*Placodium vitellinum* (Ehrh.) Nägeli & Hepp” – Behring’s Strait (TUCKERMAN 1882); Port Clarence (ROTHROCK 1884); Behring Strait; Port Clarence (MACOUN 1902); Baranof Isl, Hot Springs (CUMMINGS 1904).

= *Candelariella vitellina* var. *assericola* Räsänen – Mt Eielson (WEBER & VIERECK 1967).

Candelariella xanthostigma (Ach.) Lettau – Corticolous, occasionally lignicolous. – Alaska (THOMSON 1973); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1997: map).

#*Capronia peltigerae* (Fuckel) D. Hawksw. – On *Peltigera* spp. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

#*Capronia thamnoliae* Zhurb. – On *Thamnolia*. – Great Kobuk Sand Dunes (type – ZHURBENKO 2012); Juneau Icefield, summit of mountain above Taku Glacier (ZHURBENKO & OHMURA 2018).

#*Carbonea aggregantula* (Müll. Arg.) Diederich & Triebel – On *Lecanora polytropa* aggr. near glacier terminus. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

#*Carbonea intrudens* (H. Magn.) Hafellner – On thallus of *Rhizocarpon geographicum* aggr. – Brooks Range, Philip Smith Mtns, Atigun Pass (DILLMAN et al. 2012); Alaska (McCUNE 2017b).

#*Carbonea supersparsa* (Nyl.) Hertel – On species of the *Lecanora polytropa* aggr. – Klondike Gold Rush National Historical Park, White Pass (DILLMAN et al. 2012).

#**Carbonea vitellinaria** (Nyl.) Hertel – On *Candelariella vitellina*. – Alaska (THOMSON 1997: map).

= *Lecidea vitellinaria* Nyl. – SE Wrangell Mtns, Chitistone Pass (THOMSON 1973).

Carbonea vorticosa (Flörke) Hertel – Saxicolous on acidic rocks. – Portage Glacier; Mt Fairplay; Blueberry L CG; Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Juneau, near Visitor's Center, Mendenhall Glacier (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Chugach NF (DERR 2010); Katmai NPPr, Hammersly L; Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

= *Lecidea vorticosa* (Flörke) Körb. – Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

Carbonicola anthracophila (Nyl.) Bendiksby & Timdal – Lignicolous on conifers. – Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018).

Carneothele sphagnicola Fryday et al. – Over moribund *Sphagnum* hummocks in muskeg. – Mitkof Isl (**type**); Glacier Bay NP: Excursion Ridge (Yellowlegs Savanna muskeg) (SPRIBILLE et al. 2020).

Catapyrenium cinereum (Pers.) Körb. – Terricolous on organic accumulations and open ground from supralittoral sea stacks to the alpine zone. – Fielding L (THOMSON & AHTI 1994); 141 km E of Kotzebue, middle Kobuk R; 140 km E of Kotzebue, middle Kobuk R (ZHURBENKO et al. 2005); Noatak NPr (MCCUNE et al. 2009); Chugach NF, Kenai Peninsula, near Hope (DERR 2010: 234); Lake Clark NPPr, headwaters on Johnson R; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

= *Dermatocarpon cinereum* (Pers.) Th. Fr. – Mt Eielson (WEBER & VIERECK 1967); Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map).

= *Endocarpon cinereum* Pers. – St Paul's Isl (ROTHROCK 1884); St Paul Isl (MACOUN 1902).

Catapyrenium daedaleum (Kremp.) Stein – Terricolous and muscicolous from beach to alpine. – Teck Isl (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Hammersly L; Lake Clark NPPr, trail to Tanalian Falls; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020).

Catapyrenium lachneum → **Placidium lachneum**

Catapyrenium norvegicum → **Placidium norvegicum**

Catillaria chalybeia (Borrer) A. Massal. – Saxicolous on acidic rock. – Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1997: map); Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (Taylor Bay) (SPRIBILLE et al. 2020).

Catillaria contristans → **Gilbertaria contristans**

Catillaria erysiboides (Nyl.) Th. Fr. – Corticolous on *Betula*. – Chilkoot Trail (SPRIBILLE et al. 2010).

Catillaria jemtlandica → **Megalaria jemtlandica**

#**Catillaria lobariicola** (Alstrup) Coppins & Aptroot – On *Lobaria hallii*, *Lobaria anomala* and *Lobarina scrobiculata*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).

Catillaria muscicola Lynge – Muscicolous and terricolous. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979; THOMSON 1997: map).

#**Catillaria stereocaulorum** (Th. Fr.) H. Olivier – On alpine *Stereocaulon* spp. – White Pass (SPRIBILLE et al. 2010); Seward Peninsula, 7 km NE of Nome, Newton Pk; Great Kobuk Sand Dunes; Wrangell-Saint Elias Park and Preserve, Chititu Ridge; Wrangell-Saint Elias Park and Preserve, Yakutat (ZHURBENKO 2010); Glacier Bay NP: East Arm (Muir Inlet) (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Catillaria subnegans → **Bilimbium lobulata**

Catinaria atropurpurea (Schaer.) Vězda & Poelt – On moisture-retaining substrates, including old polypores and moribund bark of conifers and hardwoods. – Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr, Hammersly L; Katmai NPPr, Naknek L, N of Brooks Camp (MCCUNE et al. 2018); Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Catinaria neuschildii (Körb.) P. James – Lignicolous on *Alnus viridis*. – Lake Clark NPPr, Pickrel Lake (MCCUNE et al. 2018).

Catolechia wahlenbergii (Ach.) Körb. – Terricolous or on thin soil over rock. – Chisik Isl (TALBOT et al. 1992); Alaska (THOMSON 1997: map); Chugach NF (DERR 2010: 194); Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Cavernularia hultenii → **Hypogymnia hultenii**

Cavernularia lophyrea → **Hypogymnia lophyrea**

#**Cecidonia umbonella** (Nyl.) Triebel & Rambold – On thallus of *Lecidea lapicida*. – Vicinity of Juneau, Mt Roberts Trail (HERTEL 1991); Nome Quad, Glacial L (HERTEL & ANDREEV 2003); SE Alaska (MCCUNE 2017b).

#**Cecidonia xenophana** (Körb.) Triebel & Rambold – On *Porpidia* spp. and other crustose *Lecideaceae*. – Alaska (MCCUNE 2017b); Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

#**Cercidospora cecidiiformans** Grube & Hafellner – On *Rhizocarpon geographicum*. – White Pass (SPRIBILLE et al. 2010).

#**Cercidospora cephalodiorum** Triebel & Grube – On the cephalodia of *Pilophorus* cf. *dovrensis*. – Brooks Range, Atigun Pass (ZHURBENKO & TRIEBEL 2005).

#**Cercidospora decolorella** (Nyl.) O. E. Erikss. & J. Z. Yue – On algal crust. – Barrow (ZHURBENKO et al. 1995).

#**Cercidospora epipolytropia** (Mudd) Arnold – On *Lecanora* spp., usually *L. polytropia*. – White Pass (SPRIBILLE et al. 2010); Brooks Range, Atigun Pass (DILLMAN et al. 2012); Katmai NPPr, Hammersly L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

- #Cercidospora exiguella** (Nyl.) Arnold – On *Rinodina cinnamomea*. – White Pass (SPRIBILLE et al. 2010).
- #Cercidospora parva** Hafellner & Ihlen – On *Baeomyces placophyllus*. – Kobuk Valley Wilderness (ZHURBENKO 2020).
- #Cercidospora stereocaulorum** (Arnold) Hafellner – On *Stereocaulon vesuvianum*. – Interior Alaska (LAURSEN & SEPPELT 2009); Prudhoe Bay (ZHURBENKO 2010).
- Cetraria aculeata** (Schreb.) Fr. – Terricolous in the alpine zone and in water pools in muskeg near sea level, and once (SPRIBILLE et al. 2020) recorded on wood and fertile. See also entry for *C. muricata* in [Appendix A](#). – Port Clarence (NYLANDER 1887; HUE 1890); St Paul Isl (MACOUN 1899, 1902); Nichols Bay (HERRE 1919); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010); Kasatochi Isl (TALBOT et al. 2010a); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).
- = *Coelocaulon aculeatum* (Schreb.) Link – 55 specimens (KÄRNEFELT 1986, ~14 localities on map); Amchitka Isl (THOMSON & SOWL 1989); SE Alaska (GEISER et al. 1994a); Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009).
- = *Cornicularia aculeata* (Schreb.) Ach. – Brooks Range, L Peters; Pt Barrow; Ogotoruk Cr drainage; Cape Dyer, drainage of Kipaloq and Angowlik Crs; Hooper Bay (KROG 1962); Mendenhall Glacier; Juneau Icefield (MCCULLOUGH 1965); Mt Eielson; Camp Eielson; Anderson Pass Glacier moraine (WEBER & VIERECK 1967); Ketchikan area, Deer Mtn (KROG 1968); central Alaska Range (REGER & PEWE 1969); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, b, 1978); Anaktuvuk Pass (MOSER et al. 1979); Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Tanana R (MURRAY et al. 1983); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Central Arctic coastal plain (WALKER et al. 1991).
- = *Cornicularia tenuissima* (L.) Zahlbr. – Quigley Hill, near summit (HOWARD 1963). Synonymy after KÄRNEFELT (1986).
- Cetraria agnata* → **Melanelia agnata**
- Cetraria andrejevii* → **Arctocetraria andrejevii**
- Cetraria californica* → **Kaernefeltia californica**
- Cetraria chlorophylla* → **Tuckermannopsis chlorophylla**
- Cetraria commixta* → **Melanelia commixta**
- Cetraria cucullata* → **Flavocetraria cucullata**
- Cetraria delisei* → **Cetrariella delisei**

Cetraria elenkinii → **Arctocetraria nigricascens**

***Cetraria ericetorum* Opiz subspecies not specified** – Terricolous in heaths, tundra and open woodland. – Alaska Range, Dry Cr (VIERECK 1967); Mt Eielson; Glacier Cr-Thorofare R; Muldrow moraine (WEBER & VIERECK 1967); Mendenhall Glacier Trail; Juneau area, Mt Roberts; Denali Hwy, mi 32–37; Steese Hwy, Eagle Summit (KROG 1968); Amchitka Isl, above Chitka Cove (WEBER et al. 1969); Barrow; Eagle Summit (MURRAY & MURRAY 1978); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Anaktuvuk Pass (NASH 1989); Amchitka Isl (THOMSON & SOWL 1989); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; terminal moraine of Valdez Glacier (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996, as cf.); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Isl; (DANIËLS et al. 1998); [SE Alaska] mainland, Thunder Mtn; Mitkof Isl, Crystal Mtn; ridge on SW Etolin Isl (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, near Canadian border; Seaton Roadhouse; Hidden Lake Trail, Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten Mile Cr; Mentasta Mtns; Wellesley Hills (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Brooks Range, Atigun Pass (KASANKE 2019); Hagemeister Isl (WALSH & GOWARD 2021).

***Cetraria ericetorum* subsp. *reticulata* (Räsänen) Kärnefelt** – Terricolous on thin soil to humus, from forest to alpine habitats, sometimes also lignicolous. – (KÄRNEFELT 1979: map); Arrigetch Cr valley (COOPER 1986b, as ‘*Cetraria ericetorum reticulata*’); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018, ‘primarily subsp. *reticulata*’); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, Coleman Bay; Kenai Fjords NPPr, northwest Lagoon Beach (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020). = *Cetraria tenuifolia* (Retz.) R. Howe – Alaska (RÄSÄNEN 1933); Kasigluk (HOWARD 1958).

Cetraria fastigiata → ***Cetrariella fastigiata***

Cetraria halei → ***Tuckermannopsis americana***

Cetraria hepatizon → ***Melanelia hepatizon***

***Cetraria islandica* (L.) Ach., subspecies not specified** – Terricolous in tundra, heath and forest. – Kotzebue’s Sound (HOOKER & ARNOTT 1841); Norton Sound; Kotzebue’s Sound (BABINGTON 1851); Norton Sound; Kotzebue Sound (BABINGTON 1852); Alaska, “common” (MANN 1868; TURNER 1886); Port Clarence (ALMQUIST 1887); Lawrence-Insula; Port Clarence (NYLANDER 1887);

Port Clarence (HUE 1890); Taku (CUMMINGS 1892b); Port Clarence (HUE 1899); Pribilof Isls (MACOUN 1899); St Paul Isl; Cape Vancouver (MACOUN 1902); summit of White Pass; Kodiak; Unalaska; Hall Isl; St Matthew Isl; Port Clarence; St Michael; Cape Nome (CUMMINGS 1904); Seward Peninsula; Eagle (HERRE 1920); Alaska (HADWEN & PALMER 1922); Collinson Pt (MERRILL 1924b); Unalaska Isl; Atka Isl (HEDRICK 1936); Alaska (PALMER & ROUSE 1945); Kotzebue; Mt McKinley NP (HANSON 1950); Raspberry Isl, Port Vita (THOMSON 1950a); Barrow (SCHOLANDER et al. 1952); Nome (HANSON 1953); Juneau icefield nunatak (HEUSSER 1954); near Juneau, Taku Glacier valley (HEUSSER et al. 1954); Tanana; Port Heiden; Volcano Veniamin; Kasigluk (HOWARD 1958); Anaktuvuk Pass; Bettles (KROG 1962; MURRAY 1974); Ogoruk Cr; St Matthew Isl; Steese Hwy, Eagle Summit (KROG 1962); Quigley Hill; East Stony Flats; hill E of rd to Kantishna; near a lake on Hammond R Rd (HOWARD 1963); mtn due W of Wiseman (HOWARD 1963; MURRAY 1974); Mendenhall Glacier Juneau Icefield (McCULLOUGH 1965); Ogoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Alaska Range, Dry Cr (VIERECK 1967); Mt Eielson; McKinley Bar; Muldrow Moraine (WEBER & VIERECK 1967); Juneau area, Granite Basin; Ketchikan area, Deer Mtn; W of Seward, Marathon Mtn; Nunivak Isl, Robert's Mtn (KROG 1968, without fumarprotocetraric acid); 6 mi NW of Nome, Snake R (PEGAU 1968); Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Anchorage area, headwaters of Rabbit Cr; Turnagain Arm, Bird Cr Ridge; Richardson Hwy, mi 24; Richardson Hwy, mi 37; Denali Hwy, mi 0–37; Denali NP, Wonder L; Richardson Hwy, mi 170; White Mts, Beaver Cr E of Sheep Cr; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Circle Hot Springs; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbour; Nunivak Isl, Roberts Mtn; Nunivak Isl, Lake where the geese don't fly; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr; Kotzebue (KROG 1968, 'fumarprotocetraric acid strain'); central Alaska Range (REGER & PÉWÉ 1969); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Fish Cr drilling site (LAWSON et al. 1978); E bluff of the Johns R, Anaktuvuk Pass (MOSER & NASH 1978); Barrow; Eagle Summit; Prudhoe Bay (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Haul Rd, Toolik Upland Rd Site; Haul Rd, Coastal Site (WEBBER et al. 1978); Barrow (WILLIAMS et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Barter Isl; Beaufort Lagoon, Nuvagak Pt; Firth R at Mancha Cr (THOMSON 1979); thaw lake plain near Barrow (BILLINGS & PETERSON 1980); Barter Isl; Okpilak Valley (COPPINS 1981); Seward Peninsula, Nimrod Hill (RACINE 1981); Alaska (THOMSON 1984: map); Ogoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Prudhoe Bay region (WALKER & EVERETT 1991); SE Alaska (GEISER et al. 1994a: map); Attu Isl (TALBOT & TALBOT 1994); Yakutat Forelands (SHEPARD 1995); Imnavait Cr (HAHN et al. 1996); Gates of the Arctic NPP, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al.

1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); AK Range (BIEBER et al. 1999); Chugach NF (DEVELICE et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Franklin Bluffs; Happy Valley (WALKER et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Seward Peninsula (HOLT et al. 2008); Ulukluk Cr (JANDT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Kasatochi Isl (TALBOT et al. 2010a); Dalton Hwy (LANG et al. 2012); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Hagemeister Isl (WALSH & GOWARD 2021).

Cetraria islandica* subsp. *islandica – Terricolous in tundra and forest. – Alaska Range, Gulkane R N of Summit L; Kuskokwim R; Attu Isl; Arctic Slope, Bettles; Brooks Range, Anaktuvuk Pass; Brooks Range, above Wiseman; Wood R Lakes; Denali Hwy, mi 56; Near Fairbanks; Fishhook Pass, 50 mi from Palmer; Girdwood Mine; Jago R, S of Jago L; Kodiak Isl; Kiana, Kobula R; L Peters; Denali NP, Mt Eielson; Ketchikan area; Mt Hayes Quad; Okpilak L; Pt Barrow; Portage Valley along Portage Cr; Pitmegea [sic] R, Cape Lisburne; Seward Peninsula, Nome area; St Lawrence Isl, W of Savoonga; St Matthew Isl; St Paul; Steese Hwy, Cleary Summit; St George Isl; Sitka area, Talkeetna Mts; Wainwright; White Mts (KÄRNEFELT 1979); Denali NP, slope N of Station Primrose (SCHINDLER 1987); Denali NP, E of Savage R (SCHINDLER 1990); Central Arctic coastal plain (WALKER et al. 1991); Chisik Isl (TALBOT et al. 1992); Eagle Summit; Deadman L CG; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Lake Clark NPPr, headwaters of Johnson R; Cabin Bay Porcupine Isl, Iliamna L (MCCUNE et al. 2018); Kenai Fjords NPPr, Alpine lake system on Harris Peninsula; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

= “*Cetraria islandica platyna* (Ach.) Th. Fr.” – Hall Isl; St Lawrence Isl (CUMMINGS 1904); Alaska (PALMER & ROUSE 1945).

= “*Cetraria islandica* var. *robusta* (Branth)” – St Paul Isl (MACOUN 1902).

Cetraria islandica* subsp. *crispiformis (Räsänen) Kärnefelt – Terricolous in tundra and heath. – Denali Hwy, mi 36; Upper Cr, Lichen Mtn; Attu Isl; Amchitka Isl; Adak Isl; Juneau Quad; Northern Cook Inlet; vicinity of Juneau; Girdwood Mine; Kenai Peninsula; Below Kiana; Nunivak Isl; Portage Valley along Portage Cr; Richardson Hwy, mi 24; Seward Peninsula, Rainbow Cr; St Lawrence Isl (KÄRNEFELT 1979); Katmai NP, Hammersly L; Denali NP, slope above Eielson Visitor Center (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a); Thompson Pass; Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Toolik L (GOUGH et al. 2008); Chugach NF (DERR 2010); Chilkoot Trail; White Pass

(SPRIBILLE et al. 2010); Unalaska Isl (TALBOT et al. 2010b); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= "*Cetraria islandica* var. *subtubulosa* Fries" – Attu Isl, Siddens Valley (HOWARD 1958).

Cetraria islandica subsp. **orientalis** (Asahina) Kärnefelt – Terricolous in heaths and peatlands. – Patterson R; Mendenhall Glacier moraine; Ward Cr, near Ketchikan (GEISER et al. 1998); Chugach NF (DERR 2010); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Cetraria kamezatica Savicz – Terricolous in tundra on bare soil or among mosses. – St Matthew Isl; mi 26 from Cantwell (KROG 1962); Alaska Range, Dry Cr (VIERECK 1967); Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Barrow (MURRAY & MURRAY 1978); Attu Isl; Barrow; Bering Sea, King Isl; Brooks Range, Anaktuvuk; Cantwell; Pitmegea R; Seward Peninsula, Nome area, NW of Snake R Bridge; Nome area, Salmon L Rd, mi 5; *ibid.*, mi 33; Nome area, Teller Rd, foothills W of Feather R bridge; Nome area, Rainbow Cr; Nome area, Tin City; Nome area, Meade R; St Lawrence Isl, S of Savoonga (KÄRNEFELT 1979); Circular Marsh near Barrow (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Chauekuktuli L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Alaska (KÄRNEFELT et al. 1992); Chisik Isl (TALBOT et al. 1992); Mt Alyeska Rd, 1 mi from hwy (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Seward Peninsula, 7 km NE of Nome, Newton Pk (OBERMAYER 2003); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Noatak NPr (THELL et al. 2009); Chugach NF (DERR 2010); Alaska (NELSEN et al. 2011); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Hagemester Isl (WALSH & GOWARD 2021).

Cetraria laevigata Rass. – Terricolous in arctic and alpine tundra and heaths, also descending into the forest belt. – Anaktuvuk Pass; Bettles (KROG 1962; MURRAY 1974); flanks of Contact Cr Mtn; Ogotruk Cr; St Matthew Isl; Hooper Bay; Steese Hwy, Eagle Summit; White Mts, headwaters of Sheep Cr (KROG 1962); Talkeetna Mts, Mabel Mine; mtn ridge Eagle R Valley; Richardson Hwy, mi 37; Denali Hwy, mi 0–28; Denali Hwy, mi 100; Richardson Hwy, base of Rainbow Mts; White Mts, Beaver Cr E of Sheep Cr; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, lower Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr; Kotzebue (KROG 1968); Barrow; Eagle Summit (MURRAY & MURRAY 1978); Alaska Range, Dry Cr; Attu Isl; Bristol Bay, Hagemester Isl; Cape Lisburne; Deadman L; Denali Hwy, mi 100; Etchepuk R; Forty Mile Rd, 14 mi from Chicken; W side Jago R, S of Jago L; King Salmon

R; Kotzebue, Baldwin Peninsula; Firth R; 6 mi W of Nome, Sedge Flat; Okpilak R at Okpilar L; Ogotoruk R drainage; Pt Barrow; Port Clarence; Richardson Hwy, base of Rainbow Mtn; Romanzoff Mts; Sadlerochit R; St Lawrence Isl, Savoonga area; St Paul Isl; Steese Hwy, Cleary Summit; Teshepuk L; vicinity of Umiat; Wainwright; Wood R (KÄRNEFELT 1979); Pt Barrow (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Denali NP, Horseshoe L; Denali NP, Station Primrose (SCHINDLER 1987); Amchitka Isl (THOMSON & SOWL 1989); Katmai NP, Hammersly L; Denali NP, Rock Cr Trail (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a); Mt Alyeska Rd, 1 mi from hwy; Eagle Summit; Mt Fairplay; Deadman L CG; Blueberry L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Lagoon (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Toolik L (GOUGH et al. 2008); Seward Peninsula (HOLT et al. 2008); Kotzebue (MOROZOVA & POPOV 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Glacier Bay NP; Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

Cetraria muricata → [Appendix A](#)

Cetraria nigricans Nyl. – Terricolous, often on thin soil over rocks or boulders, or apparently saxicolous. – Lawrence-Insula; Port Clarence (NYLANDER 1887); Port Clarence (HUE 1890); Juneau icefield nunatak (HEUSSER 1954); St Matthew Isl; Mt Harper; Denali Hwy, mi 43 from Cantwell (KROG 1962); Mendenhall Glacier; Juneau Icefield (MCCULLOUGH 1965); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Bald Mt Ridge; Anchorage area, headwaters of Rabbit Cr; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Denali Hwy, mi 0–37; Denali Hwy, mi 100; Denali NP, Savage R; White Mts, Cache Mtn; White Mts, Lion Pk; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr (KROG 1968); Amchitka Isl (WEBER et al. 1969); Eagle Summit (MURRAY & MURRAY 1978); Alaska Range, Upper Dry Cr; Amchitka Isl; Juneau; Kiana, Koluk R; Little Diomedé Isl; Mt Eielson; Ogotoruk Cr drainage; Okpilak L Nome area, NW of Snake R bridge; Nome area, Salmon L Rd, mi 5; St Lawrence Isl, Boxer Bay; St Lawrence Isl, S of Savoonga; Ukinyik Cr drainage; Valdez Quad (KÄRNEFELT 1979); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); Gates of

the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Kupreanof Isl, Hall Pk; [SE Alaska] mainland Thunder Mtn (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Juneau Icefield, névé of Taku Glacier (WETMORE 2005); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Kenai Fjords NPPr (MCCUNE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cetraria nigricans* var. *pallida* Räsänen – Alaska (RÄSÄNEN 1933).

Cetraria nigricascens → **Arctocetraria nigricascens**

Cetraria nivalis → **Flavocetraria nivalis**

Cetraria odontella (Ach.) Ach. – Terricolous on thin soil over rocks. – Denali Hwy, mi 28; Denali Hwy, mi 36; Denali NP, Wonder L; Denali NP, Savage R; White Mts, Sheep Cr; White Mts, limestone ridge; White Mts, Steese Hwy, Cleary Summit; White Mts, Eagle Summit; Talkeetna Mts (KÄRNEFELT 1986); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998, with “?”); Gates of the Arctic NPPr (NELSON et al. 2015b).

= *Cornicularia odontella* (Ach.) Westend. – Kenai Peninsula, Skilak L; Richardson Hwy, mi 24; Denali Hwy, mi 28; Denali NP, Savage R; Denali NP, Wonder L; White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; Steese Hwy, Eagle Summit (KROG 1968); Talkeetna Mts, Independence Mine; Denali Hwy, mi 28; Steese Hwy, Cleary Summit (KROG 1968, “included in *odontella* with some doubt”).

Cetraria orbata → **Tuckermannopsis orbata**

Cetraria pallidula → **Ahtiana pallidula**

Cetraria pinastri → **Vulpicida pinastri**

Cetraria platyphylla → **Tuckermannopsis platyphylla**

Cetraria sepincola (Ehrh.) Ach. – Corticolous, mostly on twigs of *Betula* spp., sometimes on *Ledum*, *Rhododendron*, *Salix* or *Vaccinium* and on treeline *Abies lasiocarpa* in SE Alaska. – S of Wainwright, Kaolak R; Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1960); Wonder L (WEBER & VIERECK 1967); Anchorage, Eastchester Swamp; Denali Hwy, mi 0–28; Denali NP, Wonder L; Steese Hwy, Cleary Summit; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Alaska (ESSLINGER 1973); Fish Cr drilling site (LAWSON et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1984: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b).

= “*Platysma saepincola* Hoffm.” – Port Clarence (HUE 1890).

= *Tuckermannopsis sepincola* (Ehrh.) Hale – Chisik Isl (TALBOT et al. 1992); Deadman L CG; Sheep Mtn (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Tetlin Junction (TALBOT et al. 2007); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

= “*Platysma saepincola* Hffm. f. *minuta*” – Port Clarence (NYLANDER 1887).

Cetraria sibirica → **Arctocetraria nigrascens**

Cetraria subalpina Imshaug – Corticolous on branches of small shrubs, also terricolous in heath. – Pt Barrow (IMSHAUG 1950); Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn; Talkeetna Mts, Bald Mtn Ridge (KROG 1968); Pt Barrow (KROG 1968: “the species was known from Oregon to Pt Barrow... The Pt Barrow specimen, a Lehnert collection, was kept in MICH according to Imshaug, but I have not been able to locate it there”); Alaska (ESSLINGER 1973); Barrow (MURRAY & MURRAY 1978); Ketchikan Deer Mtn; Talkeetna Mts; Sterling Hwy, mi 37 (KÄRNEFELT 1979); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Noatak NPr (MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010).

= *Tuckermannopsis subalpina* (Imshaug) Kärnefelt – SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014); Alaska (MCMULLIN 2021: map).

Cetraria tilesii → **Vulpicida juniperinus**

Cetrariella commixta → **Melanelia commixta**

Cetrariella delisei (Schaer.) Kärnefelt & A. Thell – Terricolous in tundra, with a marked preference for wet depressions. – Ft Richardson (MURRAY 1997); Mt Roberts, Juneau (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Alaska (BRODO et al. 2001); Noatak (THELL et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Brooks Range, Atigun Pass (KASANKE 2019).

= *Cetraria delisei* (Schaer.) Nyl. – Lawrence-Insula (NYLANDER 1887; HUE 1890); Eagle (HERRE 1920 as ‘*delisaei*’, with ?); Pt Barrow; Franklin Bluffs on the Sagavanirktok R (THOMSON 1960); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Pt Barrow; St Matthew Isl (KROG 1962); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson; Wonder L (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Denali Hwy, mi 0–28; Denali Hwy, mi 28; Denali Hwy, mi 32–37; White Mts, Cache Mtn; Nunivak Isl, Nash Harbour; N of Nome, Anvil Pk; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Kotzebue (KROG 1968); Prudhoe Bay (MURRAY & MURRAY 1975a); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Barrow; Prudhoe Bay (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Barrow (WILLIAMS et al. 1978); Alaska Range, Upper Dry Cr; Big Delta 6 A; Demarcation Pt Quad, Beaufort Lagoon; Franklin bluffs on the Sagavanirktok R; Middleton Isl; Denali NP, S of Wonder L; 50 mi N of Nome, Pilgrim R; Pt Barrow; Richardson Hwy, Fielding L Campsite; St Lawrence Isl, E

of Savoonga; Steese Hwy (KÄRNEFELT 1979: map); Anaktuvuk Pass (MOSER et al. 1979); 6 mi SSW of Barrow, Imiksonn L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Alaska (THOMSON 1984: map); Prudhoe Bay region (WALKER 1985); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Anaktuvuk Pass (NASH 1992); Mt Roberts near Juneau (GEISER et al. 1994a); Thompson Pass; Fielding L (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998, as '*delisii*'); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Toolik L (GOUGH et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Unalaska Isl (TALBOT et al. 2010b); Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield; Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= "*Cetraria islandica delisei* (Bory) Schaer." – Hall Isl; St Matthew Isl; St Lawrence Isl; Cape Nome (CUMMINGS 1904).

= "*Cetraria islandica* var. *delisaei* Bor." – Pt Barrow (GRAY 1885); St Paul Isl (MACOUN 1899, as var. '*delisoei*').

= *Cetraria hiascens* (Fr.) Th. Fr. – Port Clarence (ALMQUIST 1887).

= *Cetraria hiascens* var. *macrophylla* G. Merr. – St. Paul Isl (**type** – MERRILL 1910).

= *Cetraria delisei* var. *submedia* Nyl. – Port Clarence (NYLANDER 1887; HUE 1890).

Cetrariella fastigiata (Nyl.) Kärnefelt & A. Thell – Terricolous in tundra and bogs. – Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); St Matthew Isl (TALBOT et al. 2001).

= *Cetraria fastigiata* (Nyl.) Kärnefelt – Alaska (KÄRNEFELT 1977a); Imuruk Basin foothills; Alaska Peninsula; King Salmon R; Nunivak Isl; Okpilak L, E side; Port Clarence; Pt Barrow; Seward Peninsula, Nome area; Seward Peninsula, E Cape Nome; St Lawrence Isl, W of Savoonga; St Lawrence, S of Savoonga; Unalakleet; Wainwright; 2 mi E of Wainwright (KÄRNEFELT 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Thompson Pass (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Hagemeister Isl (WALSH & GOWARD 2021).

Cetrelia alaskana (C. F. Culb. & W. L. Culb.) W. L. Culb. & C. F. Culb. –

Terricolous in moist tundra, mainly western arctic; a report of a corticolous find on *Alnus* in SE Alaska (GEISER et al. 1994a, 1998) likely refers to *C.*

cetrarioides. – Pitmegea R, 15 mi upstream from Cape Sabine; Ogotoruk Cr drainage; 40 mi E of Cape Lisburne; Kuskakwin [sic], Goodnews Bay; Lower Telephone Cr (CULBERSON & CULBERSON 1968: map); Seward Peninsula, King Mtn (KROG 1968); Alaska (THOMSON 1972a: map); Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R; Ogotoruk Cr area; 40 mi E of Cape Lisburne; Kuskakwim; near Nome (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Pitmegea R (WONG 1993); Mt Fairplay (THOMSON & AHTI 1994); along the Stikine R (GEISER et al.

1994a: map; GEISER et al. 1998); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Kodiak Isl, Halibut Bay and S of Halibut Lagoon (DILLMAN 2010); Lake Clark NPPr (MCCUNE et al. 2018); Alaska (MARK et al. 2019); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cetraria alaskana* C. F. Culb. & W. L. Culb. – Cape Sabine (**type**); Pitmegea R; Ogotoruk Cr; Goodnews Bay; Lower Telephone Cr; Peace R (CULBERSON & CULBERSON 1966; WONG 1993).

? = *Cetraria collata* auct. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1960).

Cetrelia cetrarioides (Duby) W. L. Culb. & C. F. Culb. – Corticolous on conifers and angiosperms in SE rainforests. All Alaskan material seen so far represents the perlatolic acid chemotype (*C. cetrarioides* s. str.). – Juneau area, Loop Rd (KROG 1968); Juneau (VITT et al. 1973: perlatolic acid strain); Juneau (CULBERSON & CULBERSON 1978); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); S Alaska (ROOT et al. 2014); Glacier Bay NP: East Arm, Glacier Bay (S Sandy Cove) (SPRIBILLE et al. 2020).

= *Parmelia cetrarioides* (Duby) Nyl. – Ogotoruk Cr drainage (KROG 1962; however, this record refers to *Cetrelia alaskana* according to KROG 1968).

Chaenotheca brachypoda (Ach.) Tibell – Corticolous on deeply fissured *Populus* bark. – Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2017b); Katmai NPPr, Naknek L (MCCUNE et al. 2018).

Chaenotheca brunneola (Ach.) Müll. Arg. – Corticolous and lignicolous on *Picea sitchensis* and on snags and stumps. – Sitka, along Indian R Trail (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Chaenotheca chrysocephala (Turner ex Ach.) Th. Fr. – Corticolous on *Picea sitchensis*, *Pinus contorta* and *Taxus brevifolia*. – SE Alaska (GEISER et al. 1994a: map); Uplifted beach at Cape Fanshaw; Dog Isl S of Ketchikan (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

Chaenotheca cinerea (Pers.) Tibell – Corticolous and lignicolous on *Populus balsamifera*. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b).

Chaenotheca ferruginea (Turner ex Sm.) Mig. – Corticolous on rain-shaded parts of large *Picea* or *Tsuga* trunks, or lignicolous. – Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Chaenotheca furfuracea (L.) Tibell – Terricolous on soil of upturned stumps and corticolous on *Populus* and *Tsuga*, lignicolous on *Populus* and muscicolous on siliceous rock underhangs. – Alaska (BRODO et al. 2001); Chilkoot Trail (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, Crater Bay South (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

- = *Coniocybe furfuracea* (L.) Ach. – PWS, Thum Bay (EYERDAM 1949); Alaska (THOMSON 1997: map).
- Chaenotheca gracilenta** (Ach.) J. Mattsson & Middelb. – Corticolous on sheltered *Populus balsamifera* bark. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b).
- = *Cybebe gracilenta* (Ach.) Tibell – Lake Clark NPPr, near mouth of Horn Cr (MCCUNE et al. 2018).
- Chaenotheca gracillima** (Vain.) Tibell – Lignicolous on snags, or fungicolous on polypore (*Trichaptum abietinum*) on *Tsuga* bark, and lignicolous on snag. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
- Chaenotheca laevigata** Nádv. – Corticolous on *Picea sitchensis* bark. – Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr, S of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2017b).
- Chaenotheca phaeocephala** (Turner) Th. Fr. – Corticolous on *Picea glauca*. – Lake Clark NPPr, Portage L; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018).
- Chaenotheca stemonea** (Ach.) Müll. Arg. – Corticolous. – Mitkof Isl (GEISER et al. 1994a: map; GEISER et al. 1998); Ft Wainwright (RACINE et al. 1997); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr, S of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2017b); Lake Clark NPPr, Portage L; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018).
- Chaenotheca trichialis** (Ach.) Th. Fr. – Lignicolous on snags. – Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr, S of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Chaenotheca xyloxena** Nádv. – Lignicolous on old wood. – Sheep Mtn (THOMSON & AHTI 1994); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- +**Chaenothecopsis aeruginosa** Goward & E. B. Peterson – Corticolous on *Tsuga*. – Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).
- #**Chaenothecopsis arthoniae** Tibell – On apothecia and thallus of *Arthonia arthonioides*, corticolous on *Malus fusca* and *Tsuga heterophylla*. – Chilkoot Trail (DILLMAN et al. 2012); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
- #**Chaenothecopsis consociata** (Nádv.) A. F. W. Schmidt – On *Chaenotheca* sp. over *Tsuga* bark. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- +**Chaenothecopsis debilis** (Turner & Borrer ex Sm.) Tibell – Corticolous on *Picea* branch. – Kenai Fjords NPPr, Crater Bay North (MCCUNE et al. 2020).
- #**Chaenothecopsis epithallina** Tibell – On *Chaenotheca trichialis* (B. McCune, pers. comm. 2023). – Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018).
- #**Chaenothecopsis lecanactidis** Tibell – On *Lecanactis megaspora* on sheltered trunk of *Tsuga*. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- +**Chaenothecopsis nana** Tibell – Corticolous on *Populus balsamifera* bark, and *Picea* and *Tsuga* twigs. – Chilkoot Trail (SPRIBILLE et al. 2010, as cf.); Denali, Summit L, Parks Hwy (DILLMAN et al. 2012); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

- #**Chaenothecopsis ochroleuca** (Körb.) Tibell & K. Ryman – Parasite or commensalist on an undescribed leprose species of *Cliostomum*. – Denali, below mouth of Tok Glacier (DILLMAN et al. 2012).
- +**Chaenothecopsis pusilla** (Ach.) A. F. W. Schmidt – Lignicolous on snag and corticolous on *Tsuga* bark. – Indian R Trail, Sitka (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010).
- +**Chaenothecopsis pusiola** (Ach.) Vain. – Saprophytic or growing on *Chaenotheca* spp., in Alaska over *Tsuga* bark or lignicolous on snag. – NE Cordova (DILLMAN et al. 2012); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- +**Chaenothecopsis savonica** (Räsänen) Tibell – Corticolous on *Tsuga* bark or lignicolous on small snag. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- +**Chaenothecopsis tasmanica** Tibell – Corticolous on *Picea sitchensis*. Specimens determined as this species in Fennoscandia have been redetermined as *Chaenothecopsis nigra* Tibell; the Alaskan collections should be checked. – Sukoi Isl (DILLMAN et al. 2012); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- +**Chaenothecopsis viridialba** (Kremp.) A. F. W. Schmidt – Corticolous on *Tsuga* bark. – Chilkoot Trail (SPRIBILLE et al. 2010).
- +**Chaenothecopsis viridireagens** (Nádv.) A. F. W. Schmidt – Lignicolous on small snag. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- #**Chalara lobariae** Etayo – On *Lobaria linita*. – Coronation Isl, Egg Harbor (ZHURBENKO & DILLMAN 2010).
- Cheiromycina flabelliformis** B. Sutton – Corticolous on bark of *Acer glabrum*, *Alnus crispa*, *A. rubra*, *Betula* sp., *Menziesia ferruginea* and *Thuja plicata*. – Alyeska; Juneau; Mitkof Isl (TØNSBERG 2002a); Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).
- Cheiromycina petri** D. Hawskw. & Poelt – Corticolous on *Alnus*. – Katmai NPPr; Mirror L camp (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).
- Chromatochlamys muscorum* → **Thelenella muscorum**
- Chrysothrix candelaris** (L.) J. R. Laundon – Corticolous, one record saxicolous (Camel's Hump). – Cape Fanshaw (GEISER et al. 1998, "in vertical swaths on the trunks of *Picea sitchensis* along uplifted beach"); Alaska (BRODO et al. 2001); Lake Clark NPPr, L Clark, Camel's Hump; Lake Clark NPPr, L Clark, W of Hatchet Pt; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018). = *Chrysothrix chlorina* auct., non (Ach.) J. R. Laundon, pro parte – The name has been misapplied by Alaskan authors to epiphytic material from rainforests and may apply in part also to *C. granulosa*. – SE Alaska (GEISER et al. 1994a: map; "in vertical stripes on the trunks of *Picea* along marine beach"); Chugach NF, PWS, Schrader Isl (DERR 2010: 232, from "conifer base" at "beach fringe").
- Chrysothrix chlorina** (Ach.) J. R. Laundon – Saxicolous. – Lake Clark NP, Tuxedni R (DILLMAN 2003; MCCUNE et al. 2018); Chilkoot Trail (SPRIBILLE et al. 2010); Dalton Hwy at mi 98.2; Alaska Peninsula, Tuxedni R (DILLMAN et al. 2012); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).
- Chrysothrix chrysophthalma** (P. James) P. James & J. R. Laundon – Corticolous on *Betula*, *Picea sitchensis* and *Thuja plicata*. – Kodiak Isl; Prince of Wales Isl (TØNSBERG 2002a); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE

- 2017a & b); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, W shore of Beauty Bay (McCUNE et al. 2020).
- Chrysothrix granulosa** G. Thor – Terricolous on soil and lignicolous on wood at base of snag. See also note under *C. candelaris*. – Afognak Isl, Blue Fox Bay (DILLMAN 2010).
- Circinaria caesiocinerea** (Nyl. ex Malbr.) A. Nordin et al. – Katmai NPPr, Malone L (McCUNE et al. 2018).
 = *Aspicilia caesiocinerea* (Nyl. ex Malbr.) Arnold – Saxicolous on siliceous rock. – Anaktuvuk Pass (MOSER et al. 1979, citing author as [Nyl.] Hue); Tikchik L (THOMSON & DOELL 1989); Chisik Isl (TALBOT et al. 1992); Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Katmai NPPr, Naknek L (McCUNE et al. 2018).
 = *Lecanora caesiocinerea* Nyl. ex Malbr. – Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass (THOMSON 1979).
- Circinaria contorta** (Hoffm.) A. Nordin et al. – Lake Clark NPPr, W of Hatchet Pt (McCUNE et al. 2018); Petersburg Borough, Oasis Glacier (FRYDAY & DILLMAN 2021b).
 = *Aspicilia contorta* (Hoffm.) Kremp. – Saxicolous on calcareous rocks. – Sukakpak Mtn (DILLMAN et al. 2012).
- Circinaria gibbosa** (Ach.) A. Nordin et al. – Saxicolous.
 = *Aspicilia gibbosa* (Ach.) Körb. – Alaska (HUE 1910); Glacier Bay (GEISER et al. 1994a; GEISER et al. 1998); Kenai Fjords NPPr, Near Harding Icefield Trail en route to high cliffs (McCUNE et al. 2020).
 = *Lecanora gibbosa* (Ach.) Nyl. – Alaska (MACOUN 1902); Summit of White Pass; Kadiak; Muir Glacier, Glacier Bay Cape Nome (CUMMINGS 1904); 50 mi inland from Camden Bay (MERRILL 1924b).
 = “*Lecanora cinerea* var. *gibbosa* Nyl.” – “Alaska and the adjacent region”, no locality given (ROTHROCK 1884).
- #Cirrenalia lichenicola** Pérez-Ort. – On an unidentified whitish sorediate crustose lichen. – Glacier Bay NP: Gustavus (**type** – SPRIBILLE et al. 2020).
- Cladidium bolanderi* → **Appendix A**
- Cladina arbuscula* → **Cladonia arbuscula**
- Cladina arbuscula* subsp. *beringiana* → **Cladonia arbuscula**
- Cladina ciliata* → **Cladonia ciliata**
- Cladina mitis* → **Cladonia mitis**
- Cladina portentosa* → **Cladonia portentosa** subsp. **pacifica**
- Cladina pseudoevansii* → **Cladonia pseudoevansii**
- Cladina rangiferina* → **Cladonia rangiferina**
- Cladina stellaris* → **Cladonia stellaris**
- Cladina stygia* → **Cladonia stygia**
- Cladonia acuminata** (Ach.) Norrl. – Terricolous, on soil rich in humus. – Port Clarence (NYLANDER 1887; HUE 1890; MERRILL 1929); Alaska (THOMSON 1968a); Talkeetna Mts, Independence Mine; Denali Hwy, mi 0–28; Denali NP, Toklat; Denali NP, Wonder L; White Mts, headwaters of Sheep Cr; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Kotzebue (KROG 1968, as ‘chemical strain I’ – norstictic and atranorin); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Alaska (THOMSON 1984: map); Deadman L CG; Moon L CG; Richardson Hwy, mi 10; Thompson Pass; Fielding L (THOMSON & AHTI

1994); Ft Richardson (MURRAY 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009; PINO-BODAS 2012); Alaska (PINO-BODAS et al. 2012a: Table 1, corresponding Ahti specimen illustrated in Fig. 3!); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

= *Cladonia acuminata* var. *acuminata* – Denali NP, rd E of Savage R; Denali NP, Rock Cr Trail (SCHINDLER 1990).

= *Cladonia norrlinii* Vain. – Port Clarence (SANDSTEDE 1938: map); Alaska (THOMSON 1968a); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map).

= *Cladonia acuminata* var. *norrlinii* (Vain.) H. Magn. – Chemical Strain II (psoromic acid and atranorin = *Cladonia acuminans* R. C. Harris) – Koyukuk R, middle Fk (KROG 1962); Bettles (KROG 1962; MURRAY 1974, “corresponding to var. *norrlinii* (Vain.) Dahl”); Talkeetna Mts, Puritan Cr; Circle Hot Springs (KROG 1968); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998).

Cladonia alaskana A. Evans – Terricolous or over rock, from forest to alpine tundra. – Cantwell (**type**); Kiana, Kobuk R; Wood R (EVANS 1947); Wood R; L Peters; L Schrader (EVANS 1955); Anaktuvuk Pass (EVANS 1955; MURRAY 1974); northern Alaska (THOMSON 1968a); Denali Hwy, mi 0–28; Denali NP, Wonder L; White Mts, headwaters of Sheep Cr (KROG 1968); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Mt Fairplay (SCHINDLER 1987); Cantwell (AHTI 1993); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay; Thompson Pass (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Mitkof Isl, Crystal Mtn; Horn Cliffs; [SE Alaska] mainland, unnamed peak E of Thunder Mtn (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Lagoon (TALBOT et al. 2000); Alaska (AHTI & ZHURBENKO 1994: map); Alaska (LITTERSKI & AHTI 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Alaska (STENROOS et al. 2019); Hagemeister Isl (WALSH & GOWARD 2021).

Cladonia albonigra Brodo & Ahti – Terricolous or on mosses or logs. – SE Alaska (GEISER et al. 1994a: map); Tongass NF; Juneau area; Prince of Wales Isl; Chatham area, Berner's Bay Peninsula; Yakutat (BRODO & AHTI 1996, listing three chemotypes); (BRODO & AHTI 1996); SE Alaska (GEISER et al. 1998); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); Unalaska Isl (TALBOT et al. 2010b); Chugach NF (DERR 2010: 156, 200); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr, Mt Katmai quad; Katmai NPPr, Malone L (MCCUNE et al. 2018); Kenai Fjords NPPr, FIA plot Square Bay South; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020, “presumably with the cryptochlorophaeic acid group”). Denali NPPr (ROLAND et al. 2017); Hagemeister Isl (WALSH & GOWARD 2021).

Cladonia alpicornis → [Appendix A](#)

Cladonia alinii Trass – Terricolous. – White Mts, Sheep Cr (AHTI 1980); Chugach NF, PWS, Port Valdez Oil Terminal (DERR 2010: 240).

Cladonia alpestris → **Cladonia stellaris**

Cladonia alpicola → **Cladonia macrophylla**

Cladonia alpina (Asahina) Yoshim. – Muscicolous on rotten wood. – Chugach NF (DERR 2010); Alaska (AHTI & STENROOS 2013).

Cladonia amaurocraea (Flörke) Schaer. – Terricolous from forest to arctic tundra habitats across Alaska. – Port Clarence (ALMQUIST 1887); Port-Clarence (HUE 1890); St Michael Isl; St Lawrence Isl; Ft Cosmos; Cape Nome (CUMMINGS 1904); Alaska (HADWEN & PALMER 1922); Etchepuk R; Box Cr; Kobuk R; Nome, Dexter Cr (MERRILL 1929, ‘infertile material without doubt belonging with the var. *celotea*’); St Michael Isl, St Lawrence Isl; Ft Cosmos; Port Clarence; Cape Nome (MERRILL 1929); St Lawrence Isl, Alaska (SANDSTEDE 1932: map); Unalaska Isl; Atka Isl (HEDRICK 1936); Alaska (PALMER & ROUSE 1945); Mt McKinley NP, Wonder L (HANSON 1950); “Aleuterna” (HASSELROT 1953); Juneau icefield nunatak (HEUSSER 1954); Pt Barrow (THOMSON 1960); St Matthew Isl; Hooper Bay; Bettles; near Anchorage, Talkeetna Mts; Glenn Hwy, mi 185; 4 mi S of mi 143, Glenn Hwy; Ukinyik Cr drainage; Ogotoruk Cr drainage (KROG 1962); across the Koyukuk R from Wiseman (HOWARD 1963; MURRAY 1974); Mendenhall Glacier (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson; McKinley Bar (WEBER & VIERECK 1967); Mendenhall Glacier Trail; Juneau area, Mt Roberts; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Puritan Cr; Richardson Hwy, mi 24; Richardson Hwy, mi 37, mi 170; Denali Hwy, mi 0–37, mi 70, mi 100; Denali NP, Savage R; Denali NP, Wonder L; base of Rainbow Mts; White Mts, Beaver Cr E of Sheep Cr; headwaters of Sheep Cr; lower Fossil Cr; Cache Mt; Steese Hwy, Cleary Summit; Eagle Summit; Circle Hot Springs; Nunivak Isl, Roberts Mtn; Seward Peninsula, King Mtn; Rainbow Cr; Kotzebue (KROG 1968); 6 mi NW of Nome, Snake R (PEGAU 1968); Alaska (THOMSON 1968a); central Alaska Range (REGAR & PÉWÉ 1969); Amchitka Isl (WEBER et al. 1969); Chena R (VIERECK 1970); Prudhoe Bay (MURRAY & MURRAY 1975a); Barrow; Eagle Summit; Prudhoe Bay (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Barrow (WILLIAMS et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Circular Marsh near Barrow; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapak Pt; Firth R at Mancha Cr (THOMSON 1979); Barter Isl (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Anchorage, by Portage; Cantwell; Denali NP, Station Primrose; Denali NP, Rock Cr Trail near the train station; Denali NP, Morino Loop Trail; Tok Junction, by the Tanana (SCHINDLER 1987); Chikuminuk L (THOMSON & DOELL 1989); Amchitka Isl, Pumphouse L (THOMSON & SOWL 1989); Imnavait Cr (WALKER et al. 1989); Katmai NP, Hammersly L; Denali NP, Rock Cr Trail; Denali NP, E of Savage R (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Deadman L CG; Moon L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPP, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER

1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Isl; (DANIËLS et al. 1998); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Aleutian Isl; Alaska (LITTERSKI & AHTI 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, near Canadian border; Seaton Roadhouse; Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten Mile Cr; Riverside Lodge Airstrip; Willow L, near Alaska Hwy; Alaska Hwy, mi 1294; 5 km WSW of Tanacross Village along Tanana R; Mt Fairplay (TALBOT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Dalton Hwy (LANG et al. 2012); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Alaska (STENROOS et al. 2019); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Crater Bay South; Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, northwest Lagoon Beach; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Alaska (PINO-BODAS & STENROOS 2021 – Suppl. Inform. ESM1); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= “*Cladina amaurocraea* (Flk.)” – Lawrence-Insula; Port Clarence (NYLANDER 1887).

= “*Cladonia amaurocraea celotea* Ach.” – Peace R; Etchepuk R; First Chance Cr; Lower Telegraph Cr, Death Valley; Upper Telephone Cr; Nome, Dexter Cr; Box Cr; Teller; Kobuk R; McDonald Mtn; Upper South R; Tanana Crossing; Tin City; Ober Cr (MERRILL 1929); Alaska (PALMER & ROUSE 1945); Ft Richardson (MURRAY 1997); Chugach NF (DERR 2010, no author given).

= “*Cladonia amaurocraea f. celotea* (Flörke) Schaer.” – Bettles, 10 mi above mouth of John R (HOWARD 1963, MURRAY 1974); DNP, hill E of rd to Kantishna (HOWARD 1963).

= “*Cladonia amaurocraea f. celotea* (Ach.) Wainio” – Attu Isl, Siddens Valley, Engineers Canyon; Akokpak; Stampede (HOWARD 1958); Stuyahok Camp L (HOWARD 1958).

= “*Cladonia amaurocraea crasipedia* (Ach.) Schaer.” – First Chance Cr; Peace R (MERRILL 1929).

= “*Cladonia amaurocraea f. fasciculata* Kernst.” – Allakaket, Lake Trail S of village, 1 mi. from Koyukuk R; Bettles, N of Bettles 10 mi above mouth of the John R (HOWARD 1963).

= “*Cladonia amaurocraea oxyceras* (Ach.) Oliv.” – Lower Telephone Cr; Teller; Kobuk R; Sledge Isl; Nunivak Isl; Tin City; Nome (MERRILL 1929); Alaska (PALMER & ROUSE 1945).

= “*Cladonia amaurocraea f. oxyceras* (Ach.) Wainio” – Fox; Kasigluk, near the school (HOWARD 1958).

Cladonia arbuscula (Wallr.) Flot. – Terricolous in tundra, muskeg and forest habitats. – Anaktuvuk Pass (KROG 1962; MURRAY 1974); Brooks Range, Cape Dyer, drainage of Kipaloq and Angowlik Crs; St Matthew Isl; Hooper; Steese Hwy, Eagle Summit (KROG 1962); Alaska Range, Dry Cr (VIERECK 1967); E bluff of the Johns R, Anaktuvuk Pass (MOSER & NASH 1978); Haul Rd, Ray R Site; Haul Rd, Finger Mtn Site; Haul Rd, Sukakpak Mtn Site; Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Arrigetch Pks (COOPER 1986a); Imnavait Cr (HAHN et al. 1996); Alaska Hwy, near Canadian border; Alaska Hwy, mi 1240; Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Dalton Hwy (LANG et al. 2012); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Aleutian Isls (STENROOS et al. 2015); Alaska (ATHUKORALA et al. 2016); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020).

= *Cladina arbuscula* (Wallr.) Hale & W. L. Culb. – Eagle Summit (MURRAY & MURRAY 1978); Chisik Isl (TALBOT et al. 1992); Mt Alyeska; Deadman L CG; Moon L CG (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Is; (DANIËLS et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010); Unalaska Isl (TALBOT et al. 2010b); Yukon-Kuskokwim Delta (FROST et al. 2020, as '*arbuscula/mitis*'); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cladina arbuscula* subsp. *beringiana* (Ahti) Golubk. – Anchorage, by Portage; Denali NP, on the road to Horseshoe L; Denali NP, on Morino Loop Trail (SCHINDLER 1987); Katmai NP, Hammersly L (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); SE Alaska (GEISER et al. 1998); Selawik; Unalaska Isl; Tigalda Isl; Unalga Isl; Kagamil Isl; Adak Isl (PIERCEY-NORMORE et al. 2010).

= *Cladonia arbuscula* subsp. *beringiana* Ahti – Alaska (AHTI 1961: map); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Loop Rd; Juneau area, Mt Roberts; Juneau area, Granite Basin; Sitka area, Indian R Trail; base of Ketchikan area, Deer Mtn; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Eagle R Valley; Anchorage area, Rabbit Cr; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Windy Pt; Skilak L; S of Hidden L; Richardson Hwy, mi 24; Richardson Hwy, mi 37; Denali Hwy, mi 0–37; mi 70; Denali NP, Savage R; Denali NP, Wonder L; Richardson Hwy, mi 170; base of Rainbow Mts, Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, the limestone ridge; Steese Hwy,

Cleary Summit; Steese Hwy, Eagle Summit; Circle Hot Springs; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Seward Peninsula, Rainbow Cr; Kotzebue (KROG 1968); Amchitka Isl, above Cyril Cove (WEBER et al. 1969); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= *Cladonia arbuscula* subsp. *squarrosa* (Wallr.) Ruoss – Alaska (RUOSS 1987).

= “*Cladina sylvatica* (Hffm.)” – Port Clarence (NYLANDER 1887).

= “*Cladina rangiferina* * *sylvatica*” – Lawrence-Insula (NYLANDER 1887).

= *Cladonia sylvatica* auct. – Kotzebue Sound (LINDSAY 1868); all Russian America (MANN 1868; TURNER 1886); St George Isl; near Juneau, Salmon Cr; near Juneau, Sheep Cr (MACOUN 1902); Lawrence ins. (HUE 1890); Little Kiska; Atka (HOWE 1913a); Nichols Bay (HERRE 1919); Alaska (HADWEN & PALMER 1922); Sitka (DES ABBAYES 1939); Alaska (PALMER & ROUSE 1945); PWS, Thum Bay (EYERDAM 1949); Barrow (SCHOLANDER et al. 1952); Mt McKinley NP (HANSON 1950); Nome (HANSON 1953); Port Heiden; Stampede (HOWARD 1958); Bettles, 10 mi above the mouth of John R (HOWARD 1963; MURRAY 1974); Quigley Hill; Denali NP Headquarters (HOWARD 1963); Muldrow Glacier (VIERECK 1966); Alaska (THOMSON 1968a); 7 mi N of Nome, Dexter Cr; near Koyuk; 6 mi NW of Nome, Snake R (PEGAU 1968).

= *Cladonia rangiferina* var. *sylvatica* auct. – Norton Sound (BABINGTON 1851); near Juneau, Salmon Cr; near Juneau, Sheep Cr (CUMMINGS 1892a); St George Isl (MACOUN 1899).

= “*Cladonia sylvatica sylvestris*” – New Metlakatla; Juneau; Sitka; White Pass; Port Wells; Orca; Virgin Bay; Kodiak Isl, Sturgeon R Bay; Akun Isl; Attu Isl; Atka Isl; Hall Isl; Pastoliak R; Seward Peninsula (CUMMINGS 1904); Alaska (HADWEN & PALMER 1922); First Chance Cr; Etchepuk R; Upper Telephone Cr; head of the Bonanza R; Nome, Dexter Cr; Lower Telephone Cr; Death Valley; Peace R; Box Cr; Teller; Nunivak Isl; Kobuk R; Unalakleet R; Upper South R; Quetheluk R; New Metlakatla, Juneau; Sitka; summit of White Pass; Port Wells; Orca; Virgin Bay; Kodiak Isl, Sturgeon R Bay; Akun Isl; Attu Isl; Atka Isl; Seward Peninsula; Hall Isl; Pastoliak R; Port Clarence (MERRILL 1929); Alaska (PALMER & ROUSE 1945).

Cladonia arbuscula subsp. *beringiana* → ***Cladonia arbuscula***

Cladonia asahinae J. W. Thomson – Terricolous on thick humus, and muscicolous on trunk of *Alnus* and moss-covered *Picea sitchensis* branches. – Cold Bay, Alaskan Peninsula; Big Koniui Isl in Shumagin Isls (THOMSON 1977); Tongass NF, Yakutat (BRODO & AHTI 1996); SE Alaska (GEISER et al. 1994a: map); Yakutat lowlands (GEISER et al. 1998); Chugach NF (DERR 2010: 196); Denali NPPr (ROLAND et al. 2017); Tuxedni, Chisik Isl (MCCUNE et al. 2018); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020); Alaska (MCMULLIN 2021: map). = “*Cladonia pyxidata* (L.) Hoffm. subsp. *chlorophaea* (Flörke) Spreng., rangiformic acid strain” – Kenai Peninsula, Ingram Cr; Seward (KROG 1968).

Cladonia bacillaris → ***Cladonia macilenta***

Cladonia bacilliformis (Nyl.) Sarnth. – Lignicolous on rotting wood and terricolous on detritus. – Hooper Bay (KROG 1962); Bettles (KROG 1962; MURRAY 1974); Alaska (THOMSON 1968a); Denali NP, Wonder L; White Mts, Beaver Cr (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R;

Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Kenai Peninsula, near the Wildlife Refuge Headquarters (SCHINDLER 1990); Kuiu Isl (GEISER et al. 1994a: map); Portage Glacier (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Kuiu Isl, forested coast of Tebenkoff Bay (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (LITTERSKI & AHTI 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seaton Roadhouse; Alaska Hwy, mi 1240 (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Malone L (MCCUNE et al. 2018).

Cladonia bellidiflora (Ach.) Schaer. – Terricolous in forest, heath and tundra, lignicolous on logs, rarely also epiphytic in rainforest habitats. See also note under *C. graciliformis* in Appendix A. – Lawrence-Isula (NYLANDER 1887); PWS (CUMMINGS 1892b); Sitka (STIZENBERGER 1895a, 1895b); Pribilof Isls (MACOUN 1899); St George Isl; St Paul Isl; Middleton Isl; Port Etches; Sitka (MACOUN 1902); Wrangell; New Metlakatla; Yakutat; Sitka; Baranof Isl, Hot Springs; White Pass; Orca; Port Wells; Virgin Bay; Attu Isl; St Matthew Isl; St Lawrence Isl; Cape Nome (CUMMINGS 1904); Alaska (FINK 1908); Coronation Isl, Egg Harbor; Kuiu Isl; Ratz Harbor; Dall Isl, Augustine Bay; Nichols Bay; Brownson Bay; Zarembo Isl, St John's Harbor; Prince of Wales Isl (HERRE 1919); Alaska (HADWEN & PALMER 1922); Collinson Pt (MERRILL 1924b); Frazer Reach; Wrangell; New Metlakatla; Yakutat; Sitka; Hot Springs, Baranoff Isl; White Pass; Port Wells; Virgin Bay; Attu Isl; St Matthew Isl; St Lawrence Isl; Cape Nome; First Chance Cr; Diomedes Isl (MERRILL 1929); Bronson Bay (MAGNUSSON 1932); Sitka; Kotzebue Sound (SANDSTEDTE 1932); Attu Isl; Atka Isl (SANDSTEDTE 1938); Alaska (PALMER & ROUSE 1945); Orca; PWS, Thum Bay (EYERDAM 1949); Kuiu Isl, Washington Bay; Raspberry Isl, Port Vita (THOMSON 1950a); "Alaska med Aleuterna och Pribiloföarna, St Lawrenceön" (HASSELROT 1953); Juneau icefield nunatak (HEUSSER 1954); near Juneau, Taku Glacier valley (HEUSSER et al. 1954); Tanana; Attu Isl, Siddens Valley, Engineers Canyon (HOWARD 1958); Anaktuvuk Pass (KROG 1962, MURRAY 1974); Pt Barrow; St Matthew Isl; Denali Hwy, mi 28, mi 36; Denali Hwy, mi 26 from Cantwell; near Anchorage, Talkeetna Mts (KROG 1962); Mendenhall Glacier; Juneau Icefield (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mendenhall Glacier Trail; Juneau area, Mt Roberts; Juneau area, Granite Basin; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Portage Glacier; Kenai Peninsula, Granite Cr Ridge; W of Seward, Marathon Mtn; PWS, Fish Bay; PWS, Pigot Bay; Denali Hwy, mi 0–37; Denali Hwy, mi 70; Steese Hwy, Eagle Summit; Steese Hwy, Twelvemile Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Nunivak Isl, Robert's Mtn; W Nunivak Isl, Lake where the geese don't fly; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Amchitka Isl (WEBER et al. 1969); Barrow; Eagle Summit (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Pitmegea R, 15 mi upstream from Cape Sabine; Circular Marsh near Barrow; 6.5

mi SSW of Barrow Base, near Loon L (THOMSON 1979); Barter Isl (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Anchorage, by Portage Glacier (SCHINDLER 1987); Nishlik L (THOMSON & DOELL 1989); Amchitka Isl, St Makarius Pt (THOMSON & SOWL 1989); Katmai NP, Hammersly L (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier; Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Copper R Delta (BOGGS 2000); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); SE Alaska (DILLMAN 2004); Aleutian Isl; Alaska (LITTERSKI & AHTI 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Interior Alaska (LAURSEN & SEPPELT 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2013); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020); Kenai Fjords NPPr (MCCUNE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= "*Cladonia bellidiflora* var. *coccocephala* (Ach.) Vain." – White Pass; Virgin Bay (CUMMINGS 1904); Collinson Pt (MERRILL 1924b); Tin City; Nome; Sledge Isl; Juneau; White Pass; Virgin Bay (MERRILL 1929).

= "*Cladonia bellidiflora gracilentia* (Ach.) Flk." – St Lawrence Isl (MERRILL 1929).

= "*Cladonia bellidiflora* f. *gracilentia* (Ach.)" – Lawrence-Insula (NYLANDER 1887).

= "*Cladonia bellidiflora hookeri* (Tuck.) Nyl." – Wrangell; Baranof Isl, Hot Springs (CUMMINGS 1904); Broughton Strait; Wrangell; Hot Springs; Sitka; St Paul Isl (MERRILL 1929); Attu Isl; Atka Isl (DEGELIUS 1937).

= "*Cladonia bellidiflora* var. *hookeri* (Tuck.) Nyl." – Alaska (FINK 1908).

= "*Cladonia bellidiflora ramulosa* Wainio" – Hall Isl; St Lawrence Isl; Cape Nome (CUMMINGS 1904).

= "*Cladonia bellidiflora* var. *ramulosa* Vain." – Alaska (FINK 1908).

= "*Cladonia bellidiflora subuliformis* Rabenh." – Teller; Hooper Bay (MERRILL 1929).

= "*Cladonia bellidiflora* f. *subuliformis* (Wahl.) Vainio" – Alaska Peninsula; Atka Isl (HEDRICK 1936); Atka Isl (THOMSON 1950a).

Cladonia borealis S. Stenroos – Terricolous on humus, boulders, and gravel. – Alaska (STENROOS 1989a: map); SE Alaska (GEISER et al. 1994a); Mt Alyeska; Portage Glacier; Eagle Summit; Mt Fairplay; Moon L CG; Deadman L CG; Thompson Pass (THOMSON & AHTI 1994); Tongass NF, Juneau area, mouth of

Herbert Glacier (BRODO & AHTI 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, near Canadian border; Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten Mile Cr; Riverside Lodge Airstrip; Willow L, near Alaska Hwy; 15 km WNW of Tanacross Village; Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Gustavus (SPRIBILLE et al. 2020).

Cladonia botrytes (K. G. Hagen) Willd. – Lignicolous on stumps and rotten logs, less commonly on bare mineral soil. – Nome, Dexter Cr (MERRILL 1929); Bettles (KROG 1962; MURRAY 1974); across the Koyukuk from Bettles, trail E to slough (HOWARD 1963; MURRAY 1974); Anchorage area, Rabbit Cr Rd; Denali Hwy, mi 28; Denali Hwy, mi 32–37; Denali NP, Wonder L; Richardson Hwy, Darling Cr; White Mts, Beaver Cr; Circle Hot Springs; Seward Peninsula, King Mtn (KROG 1968); Alaska (THOMSON 1984: map); Denali NP, Rock Cr Trail (SCHINDLER 1987); Mt Fairplay; Deadman L CG (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Bering Land Bridge NPr (HOLT et al. 2007); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska (LITTERSKI & AHTI 2004: map); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2013); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr (MCCUNE et al. 2018).

Cladonia cariosa (Lilj.) Spreng. – Terricolous on bare and humus-rich soil. – Eagle (HERRE 1920); Anaktuvuk Pass (KROG 1962, MURRAY 1974); Mt Eielson; Camp Eielson; McKinley R (WEBER & VIERECK 1967); Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Eagle R Valley; Kenai Peninsula, Skilak L; Windy Pt, Turnagain Arm; Richardson Hwy, mi 45; Richardson Hwy, Darling Cr; White Mts, the limestone ridge; White Mts, lower Fossil Cr; Circle Hot Springs; Seward Peninsula, King Mtn; Anvil Pk; Kotzebue (KROG 1968); Chitistone-Skolai region (SCOTT 1974); Denali NP, Wonder L; Denali NP, rd to Horseshoe L; Denali NP, Station Primrose; Tetlin Junction (SCHINDLER 1987); Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, rd E of Savage R (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Deadman L CG; Moon L CG; terminal moraine of Valdez Glacier; Fielding L (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Riverside Lodge Airstrip; Tanacross Village; Mt Fairplay (TALBOT et

al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Alaska (OSYCZKA & SKUBALA 2011: chemical race 3); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Malone L (MCCUNE et al. 2018); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Cladonia carneola (Fr.) Fr. – Terricolous on humus or lignicolous on rotting wood. – Sitka (CUMMINGS 1904); Collinson Pt (MERRILL 1924b); Collinson Pt; Sitka (MERRILL 1929); Sitka; Attu Isl (DEGELIUS 1937); Attu Isl; Sitka (SANDSTEDE 1939); Kuiu Isl, Washington Bay (THOMSON 1950a); Juneau icefield nunatak (HEUSSER 1954); St Matthew Isl; Hooper Bay; St Matthew Isl (KROG 1962); Alaska (THOMSON 1968a); Sitka area, Harbor Mtn; Talkeetna Mts, Bald Mtn Ridge; Anchorage area, Rabbit Cr Rd; Kenai Peninsula, Ingram Cr; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; W of Seward, Marathon Mtn; Richardson Hwy, mi 45; Denali Hwy, mi 0–28; Denali NP, Wonder L; Nunivak Isl, Mekoryuk Village; Nash Harbour; Seward Peninsula, King Mtn (KROG 1968); Barrow (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Pt Barrow; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Alaska (THOMSON 1984: map); Amchitka Isl (THOMSON & SOWL 1989); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier; Eagle Summit; Deadman L CG; Moon L CG (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Toolik L (GOUGH et al. 2008); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Glacier Bay NP: Gustavus, West Arm (SPRIBILLE et al. 2020, usnic, isousnic acids, zeorin chemotype); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020, isousnic/usnic acid, barbatic acid, zeorin chemotype); Hagemeister Isl (WALSH & GOWARD 2021).

Cladonia caroliniana → [Appendix A](#)

Cladonia cenotea (Ach.) Schaer. – Terricolous and lignicolous on humus-rich soil and rotten logs, also in heaths and epiphytic on conifer branches in rainforest localities. – Isl in Cross Sound (ROTHROCK 1884: “...from Cook’s Inlet and Sitka forms which Mr. Willey doubtfully refers here”); Port Clarence (NYLANDER 1887; HUE 1890); Lower Telephone Cr; Cape Nome; Port Clarence; Cross Sound; Cook Inlet; Sitka (MERRILL 1929); Alaska (SANDSTEDE 1938); Fox (HOWARD 1958); McKinley Bar (WEBER & VIERECK 1967); Alaska (THOMSON 1968a); Mendenhall L; Anchorage, Rabbit Cr Rd; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Homer; Kenai Peninsula, Granite Cr Ridge; Richardson Hwy, mi 9; Richardson Hwy, mi 37; Richardson Hwy, mi 45; Denali

Hwy, mi 32–37; mi 70; mi 100; Richardson Hwy, Darling Cr; White Mts, Beaver Cr E of Sheep Cr; Seward Peninsula, King Mtn (KROG 1968); Barrow (WEBBER 1978); Colville R near Umiat (THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Kenai Peninsula, Skilak L; Denali NP, Rock Cr Trail (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Deadman L CG; Moon L CG (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); near Skagway (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seaton Roadhouse; Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Skagway area; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Gustavus (State Dock) (SPRIBILLE et al. 2020).

= “*Cladonia cenotea* f. *crossota* (Ach.)” – Raspberry Isl, Port Vita (THOMSON 1950a).

= “*Cladonia cenotea* var. *exaltata* Nyl.” – Alaska (MERRILL 1924a); Kotzebue (SANDSTEDE 1938).

Cladonia cervicornis (Ach.) Flot. – Terricolous on soil in talus and alpine tundra at low to mid elevations. Many of these records are doubtful and may represent *C. pseudalcicornis*. – Ft Richardson (MURRAY 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).

= *Cladonia cervicornis* subsp. *cervicornis* – Denali NPPr (ROLAND et al. 2017).

= *Cladonia verticillata* var. *cervicornis* (Ach.) Flörke – Mendenhall L; Ketchikan area, Deer Mtn; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Denali Hwy, mi 0–37; White Mts, Beaver Cr; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Circle Hot Springs; Alaska Hwy, mi 1450; Nunivak Isl, Robert’s Mtn; Seward Peninsula, King Mtn (KROG 1968); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

Cladonia cervicornis subsp. *verticillata* → **Cladonia verticillata**

Cladonia chlorophaea (Flörke ex Sommerf.) Spreng. – Terricolous on soil, lignicolous, also corticolous or muscicolous on the branches of rainforest trees. – Aleutian Isls (SANDSTEDE 1939); Juneau icefield nunatak (HEUSSER 1954); Attu Isl, Siddens Valley; Stampede; Kasigluk, near the school (HOWARD 1958); Quigley Hill (HOWARD 1963); Mendenhall Glacier (MCCULLOUGH 1965); Quigley Hill, Kantishna (WEBER & VIERECK 1967); Alaska (BOWLER 1972); Fish Cr drilling site (LAWSON et al. 1978); Barrow (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, on the rd to Horseshoe L; Denali NP, Station Primrose

(SCHINDLER 1987); Imnavait Cr (WALKER et al. 1989); Katmai NP, Brooks Lodge, near Brooks Falls (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier; Eagle Summit; Mt Fairplay; Richardson Hwy, mi 10; Thompson Pass (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996, as s. lat.); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004, as s. lat.); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014: ‘includes *C. grayi*, *C. asahinae* and *C. merochlorophaea*’); Denali NPPr (NELSON et al. 2015a); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015: ‘sensu latu group’); Adak Isl (PINO-BODAS et al. 2017a); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Alaska (STENROOS et al. 2019); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, West Arm (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021, as s. lat.).

= “*Cladonia pyxidata* (L.) Hoffm. subsp. *chlorophaea* (Flörke) Spreng.” – “fumarprotocetraric acid strain” – Mendenhall L; Juneau area, Mt Roberts; Juneau area, Granite Basin; Juneau area, Shrine of St Therese; Juneau area, Douglas Ski Bowl; Ketchikan area, Deer Mtn; Talkeetna Mts, Mabel Mine; Turnagain Arm, Bird Cr Ridge; W of Seward, Marathon Mtn; Richardson Hwy, mi 45; Denali Hwy, mi 0–36; DNP, Savage R; Richardson Hwy, Darling Cr; White Mts, headwaters of Sheep Cr; Steese Hwy, Cleary Summit; Nunivak Isl, Mekroyuk Village; Nash Harbour; Seward Peninsula, King Mtn; Anvil Pk; Rainbow Cr; Kotzebue (KROG 1968).

= “*Cladonia pyxidata* (L.) Hoffm. var. *chlorophaea* Flk.” – Cape Nome; Choris Peninsula; Kobuk R (MERRILL 1929); Seward, Kenai Peninsula; Kodiak Isl, Kodiak; Unalaska Isl, Unalaska; St Paul Isl (DEGELIUS 1937).

= “*Cladonia chlorophaea* f. *costata* (Flörke) Sandst.” – Kodiak Isl (HEDRICK 1936).

= “*Cladonia chlorophaea* f. *costata* Flörke” – Kodiak Isl, Kodiak Village (THOMSON 1950a).

= “*Cladonia chlorophaea* f. *simplex* (Hoffm.) Am.” – Eureka Cr; Quigley Hill; Denali NP, Carlo, 1 mi W of station; hill E of rd to Kantishna (HOWARD 1963); Wiseman Cr (HOWARD 1963; MURRAY 1974).

Cladonia ciliata* Stirt. f. *ciliata – Terricolous in heaths.

= *Cladonia ciliata* Stirt. var. *ciliata* – Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

***Cladonia ciliata* f. *flavicans* (Flörke) Ahti & DePriest** – Terricolous in heaths. – Denali NPPr, N of the AK Range (STEHN et al. 2015).

= *Cladina ciliata* (Stirt.) Trass – Chugach NF (DERR 2010: 156). This will be f. *flavicans*.

= “*Cladonia ciliata* Stirt.” – Aleutian Isls; Alaska (LITTERSKI & AHTI 2004); Bering Land Bridge NPr (HOLT et al. 2007); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017). The authors meant f. *flavicans* for Alaska.

= *Cladina ciliata* f. *tenuis* (Flörke) Ahti – SE Alaska (GEISER et al. 1994a: map).

= *Cladina ciliata* var. *tenuis* (Flörke) Ahti & M. J. Lai – SE Alaska (GEISER et al. 1998); Kenai Fjords NPPr, alpine lake system on Harris Peninsula (MCCUNE et al. 2020).

= *Cladonia tenuis* (Flörke) Harm. – Sitka area, Indian R Trail (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (JØRGENSEN 1983: map).

= *Cladonia tenuis* var. *tenuis* – PWS, Crab Bay; Knight Isl, Thum Bay; near Tunnel, Bartlett Glacier; Chicagof Isl (AHTI 1961: map).

Cladonia coccifera (L.) Willd. – Terricolous on bare mineral soil and in mossy heaths. Many records before 1989 refer to *C. borealis* (and *C. pleurota*), as this common species was not differentiated before then. See also entry for *C. cornucopioides* in Appendix A. – Wrangell; Sitka; White Pass; White Pass; Pt Gustavus, Glacier Bay; Popof Isl; Hall Isl; St Paul Isl; St Matthew Isl; Port Clarence; St Michael; Cape Nome (CUMMINGS 1904); Alaska (FINK 1907d); Nome (HOWE 1913a); White Pass; Tanana (HERRE 1920); Alaska (HADWEN & PALMER 1922); Demarcation Pt (MERRILL 1924b); Broughton Strait; Wrangell Isl; Sitka; White Pass; Glacier Bay; St Matthew Isl; Port Clarence; St Michael; Cape Nome; Kotzebue Sound; St Lawrence Isl; Port Althop (MERRILL 1929); Unalaska Isl; Atka Isl (HEDRICK 1936); Juneau; Unalaska Isl, Unalaska; Attu Isl (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); PWS, Thum Bay (EYERDAM 1949); Unalaska Isl (THOMSON 1950a); Juneau icefield nunatak (HEUSSER 1954); near Juneau, Taku Glacier valley (HEUSSER et al. 1954); Sinuk; Port Heiden; Attu Isl, Siddens Valley; Stampede; Thompson Pass (HOWARD 1958); N of Trading Post at Bettles; N bank of Wiseman Cr (HOWARD 1963; MURRAY 1974); Mendenhall Glacier; Juneau Icefield (MCCULLOUGH 1965); McKinley Bar; Wonder L (WEBER & VIERECK 1967); central Alaska Range (REGER & PÉWÉ 1969); Amchitka Isl (WEBER et al. 1969); Barrow (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvaqapuk Pt (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Denali NP, Rock Cr Trail; Tok Junction, at the Tanana R (SCHINDLER 1987); Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); Alaska (STENROOS 1989a: map); Amchitka Isl (THOMSON & SOWL 1989); Denali NP, Savage R (SCHINDLER 1990); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH &

HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1240; Willow L, near Alaska Hwy (TALBOT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Tuxedni (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Crater Bay South; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020).
 = *Cladonia coccifera* var. *coccifera* – Mendenhall Glacier Trail; Talkeetna Mts, Puritan Cr; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Skilak L; S of Kenai Peninsula, Hidden L; Richardson Hwy, mi 45; Denali Hwy, mi 0–37; Denali Hwy, mi 70; Denali Hwy, mi 100; Denali NP, Savage R; Denali NP, Wonder L; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, junction of Beaver Cr and Fossil Cr; White Mts, the limestone ridge; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr (KROG 1968); Eagle Summit (MURRAY & MURRAY 1978).
 = “*Cladonia coccifera* f. *ochrocarpia*” – Denali NP, Savage R (SCHINDLER 1990).

= *Cladonia coccifera* var. *stematina* Ach. – Alaska (HADWEN & PALMER 1922, unranked); Stuart Isl (MERRILL 1929); Anaktuvuk Pass; Bettles (KROG 1962; MURRAY 1974); Pt Barrow; St Matthew Isl; White Mts, the limestone ridge; 4 mi N of Eureka; Lake Louise Rd, mi 1; Denali Hwy, mi 36 (KROG 1962); Barrow (MURRAY & MURRAY 1978).

Cladonia concinna Ahti & Goward – Terricolous on sandy soil of Gustavus outwash plain, also over a boulder in snow bed. – Glacier Bay NP: Gustavus, West Arm (SPRIBILLE et al. 2020).

Cladonia coniocraea (Flörke) Spreng. – Terricolous and lignicolous on logs of conifers, rarely deciduous trees and shrubs. Some records may be confused with *C. ochrochlora*. – Kodiak Isl, Kodiak (DEGELIUS 1937); Yakutat Bay (STAIR 1947); Kuiu Isl, Washington Bay (THOMSON 1950a); Alaska (THOMSON 1968a); Juneau area, Loop Rd; Mendenhall Glacier Trail; Juneau area, Granite Basin; Juneau area, Shrine of St Therese; Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Anchorage, Rabbit Cr Rd, headwaters of Rabbit Cr; Anchorage, Eastchester Swamp; Anchorage, O'Malley Rd; Kenai Peninsula, S of Hidden L; Homer; Portage Glacier; Seward; Marathon Mtn, W of Seward; PWS, Fish Bay; Denali NP, CG near Mt McKinley Park Hotel; Denali NP, Wonder L; Richardson Hwy, Darling Cr; White Mts, Beaver Cr (KROG 1968); Chena R (VIERECK 1970); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Alaska (THOMSON 1984: map); Big Delta, at the Tanana R (SCHINDLER 1987); Katmai NP, Brooks Lodge area, CG (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT

1998); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Beaver Cr; Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2013; Supplementary Table S1); S Alaska (ROOT et al. 2014; ‘includes *C. ochrochlora*’); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020, including *C. ochrochlora* morphotypes); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020). = *Cladonia fimbriata* var. *coniocraea* (Flörke) Schaer. – Kodiak Isl (HEDRICK 1936).

= *Cladonia coniocraea* f. *ceratodes* (Flörke) Dalla Torre & Sarnth. – rd to Kantishna (HOWARD 1963); across Koyukuk from Bettles, trail E to slough (HOWARD 1963; MURRAY 1974).

Cladonia conista (Nyl.) Robbins – Terricolous on soil and earthen banks. – Alaska (AHTI 1966b; THOMSON 1968a; THOMSON 1984: map; PINO-BODAS et al. 2012b: map); Gustavus (State Dock) (SPRIBILLE et al. 2020).

= *Cladonia humilis* auct., non (With.) J. R. Laundon – Chisik Isl (TALBOT et al. 1992); Tongass NF (GEISER et al. 1994b); Juneau vicinity; N Kuiu Isl (GEISER et al. 1998); Denali NPPr (ROLAND et al. 2017).

Cladonia cornucopoides → **Appendix A**

Cladonia cornuta (L.) Baumg. **without specifying subspecies** – Terricolous on humus or detritus and over mosses, lignicolous on logs and corticolous on conifer trunks. – Alaska (CUMMINGS 1904); Atka (HOWE 1913a); PWS, Thum Bay (EYERDAM 1949); Raspberry Isl, Port Vita (THOMSON 1950a); Juneau icefield nunatak (HEUSSER 1954); St Matthew Isl (KROG 1962); Bettles (KROG 1962; MURRAY 1974); Mendenhall Glacier (MCCULLOUGH 1965); Alaska (THOMSON 1968a); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Nishlik L (THOMSON & DOELL 1989); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1240 (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Noatak NPr (HOLT et al. 2009); Denali NPPr (STEHN et al. 2013; Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr, FIA plot, North Arm Nuka Bay; Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP:

East Arm, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Cladonia cornuta* subsp. *cornuta – Terricolous. – Mendenhall Glacier Trail; Talkeetna Mts, Bald Mtn Ridge; Turnagain Arm, Bird Cr Ridge; Anchorage, O'Malley Rd; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Windy Pt, Turnagain Arm; Portage Glacier; Richardson Hwy, mi 37; Richardson Hwy, mi 45; Denali Hwy, mi 0–28; Denali Hwy, mi 32–37; Denali Hwy, mi 100; Richardson Hwy, Darling Cr; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; Steese Hwy, Cleary Summit; Alaska Hwy, mi 1450; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Kotzebue (KROG 1968); Denali NP, on the rd to Horseshoe L (SCHINDLER 1987); Denali NP, Rock Cr Trail; Katmai NP, Brooks Lodge area, CG; Katmai NP, Valley of the Ten Thousand Smokes, Three Folks Lookout; Kenai Peninsula, Seward, by Exit Glacier (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map of whole species); Mt Alyeska Rd, 1 mi from hwy; Mt Alyeska; Mt Fairplay; Deadman L CG; Moon L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Hagemeister Isl (WALSH & GOWARD 2021).
= “*Cladonia cornuta* f. *cylindrica* (Schaer.) Vain.” – Nome (HANSON 1953); Nolan Cr Rd (HOWARD 1963; MURRAY 1974).

Cladonia cornuta* subsp. *groenlandica (E. Dahl) Ahti – Terricolous, also on stumps and logs and over bases of trees. – Alaska (AHTI & LAI 1979); St Lawrence Isl (AHTI 1980); SE Alaska (GEISER et al. 1994a: map of whole species); Portage Glacier; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Alaska (PINO-BODAS et al. 2011); Denali NPPr (STEHN et al. 2015); Katmai NPPr, Hammersly L; Lake Clark NPPr (MCCUNE et al. 2018); Hagemeister Isl (WALSH & GOWARD 2021).
= *Cladonia groenlandica* (E. Dahl) Trass – Alaska (STENROOS et al. 2002); Aleutian Isls (PINO-BODAS & STENROOS 2021 – Suppl. Inform. ESM1).
= *Cladonia cornuta* var. *groenlandica* E. Dahl – Mendenhall Glacier (MCCULLOUGH 1965); Juneau area, Loop Rd; Mendenhall Glacier Trail; Juneau area, Mt Roberts; Juneau area, Granite Basin; Juneau area, Shrine of St Therese; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Talkeetna Mts, Bald Mtn Ridge; northern Cook Inlet area, Rabbit Cr Rd; Kenai Peninsula, Hidden L; Portage Glacier; Ingram Cr CG; Marathon Mtn; Homer; Richardson Hwy, mi 9; mi 37; PWS, Pigot Bay; Fish Bay; Denali Hwy, mi 70; Denali NP, Wonder L; White Mts, Beaver Cr E of Sheep Cr; Alaska Hwy, mi 1450; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbour; Nunivak Isl, Robert's Mtn; Nunivak Isl, Lake where the geese don't fly; Seward Peninsula, King Mtn; Anvil Pk; Kotzebue (KROG 1968).

Cladonia crispata (Ach.) Flot., **variety not specified** – Terricolous in tundra and forest, also lignicolous and on thin soil over rocks. – Port Clarence (NYLANDER 1887; HUE 1890); Wrangell; Virgin Bay (CUMMINGS 1904); Eagle (HERRE

1920); Wrangell; Virgin Bay; Port Clarence (MERRILL 1929); Alaska (PALMER & ROUSE 1945); Mendenhall Glacier (MCCULLOUGH 1965); Alaska (THOMSON 1968a); Mt Eielson; McKinley Bar (WEBER & VIERECK 1967); Juneau area, Loop Rd; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Puritan Cr; Kenai Peninsula, Skilak L; Richardson Hwy, mi 37; Denali Hwy, mi 0–28, 32–37, 70, 100; Denali NP, Wonder L; Richardson Hwy, mi 170; White Mts, Beaver Cr E of Sheep Cr; headwaters of Sheep Cr; Steese Hwy, Cleary Summit; Nunivak Isl, Mekoryuk Village; Seward Peninsula, King Mtn; Anvil Pk; Kotzebue (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Denali NP, Station Primrose (SCHINDLER 1987); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Wainwright (RACINE et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, near Canadian border; Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, N of the AK Range (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b).

- Cladonia crispata** var. **crispata** – Most specimens studied contain squamatic acid, but a thamnolic acid strain (*C. japonica*) is also common on the coast. Terricolous on ground or thin soil over rock, also lignicolous. – Denali NP, Rock Cr Trail (SCHINDLER 1990); Mt Alyeska; Portage Glacier; Eagle Summit; Mt Fairplay; Deadman L CG (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, N end of Harris Bay; Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, northwest Lagoon Beach (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
 = “*Cladonia crispata divulsa* (Del.) Arn.” – Port Clarence (MERRILL 1929).
 = “*Cladonia crispata infundibulifera* (Schaer.) Wain.” – Etchepuk R; Lower Telephone Cr; Kobuk R (MERRILL 1929).
 = *Cladonia japonica* Vain. f. *japonica* – Ketchikan area, Deer Mtn (KROG 1968, as cf.).
 = *Cladonia japonica* f. *tatrana* Vain. – Ketchikan area, Deer Mtn (KROG 1968, as cf.).
 = “*Cladonia crispata virgata* (Ach.) Wain.” – Lower Telephone Cr (MERRILL 1929).

Cladonia crispata var. **cetrariiformis** (Delise) Vain. – Terricolous in tundra soils and near glaciers. – Kobuk R; Port Clarence (MERRILL 1929, as ‘*cetrariaeformis*’); Juneau area, Gastineau Pk (BRODO & AHTI 1996); Portage

Glacier; Thompson Pass (THOMSON & AHTI 1994); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Katmai NPPr, between Hammersly L and American Cr (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= "*Cladonia crispata* * *cetrariaeformis* Del." – Port Clarence (NYLANDER 1887).

= "*Cladonia crispata* var. *gracilescens* (Rabenh.) Vainio" – PWS, Thum Bay (EYERDAM 1949).

Cladonia cryptochlorophaea Asahina – Terricolous on humus and lignicolous or corticolous around bases of trees. – Alaska (BOWLER 1972; THOMSON 1984: map); Barrow (WEBBER 1978); SE Alaska (GEISER et al. 1994a: map); Gut Isl, mouth of Stikine R; Thimbleberry L trail, Sitka; trail to Harlequin L, Yakutat (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Katmai NPPr, Mirror L; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018).

= "*Cladonia pyxidata* (L.) Hoffm. subsp. *chlorophaea* (Flörke) Spreng., cryptochlorophaeic acid strain" – Cleary Summit, Steese Hwy (KROG 1968).

Cladonia cyanipes (Sommerf.) Nyl. – Terricolous on humus or muscicolous over mossy boulders, also over rotten wood. – Port Clarence (NYLANDER 1887; HUE 1890); Cape Nome; Ober Cr (MERRILL 1929); Port Clarence (SANDSTEDE 1939); "Port Clarence och andra punkter i Alaska" (HASSELROT 1953); Mendenhall Glacier Trail; Portage Glacier; Kenai Peninsula, Salamatof; Richardson Hwy, mi 24; Denali Hwy, mi 0–28; base of Rainbow Mts, E of Richardson Hwy; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, Rock Cr Trail (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Mt Fairplay; Deadman L CG; Fielding L (THOMSON & AHTI 1994); terminus of Herbert Glacier, N of Juneau (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1270, Ten Mile Cr; Midway L; Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Hagemeister Isl (WALSH & GOWARD 2021).
= "*Cladonia cyanipes* var. *despreauxii* (Bor.) Th. Fr." – Nome, Dexter Cr (MERRILL 1929).

Cladonia decorticata (Flörke) Spreng. – Terricolous in heaths, or on mosses over boulders, also reported once as lignicolous (TALBOT et al. 1997). Most records are doubtful and probably refer to *Cladonia macrophylla*; *C. decorticata* itself is very rare. – St Paul Isl (MACOUN 1899); Unalaska Isl; Kadiak Isl; St Paul Isl (MACOUN 1902); Alaska (FINK 1907b); Atka (HOWE 1913a); Lower Telephone

Cr; Nunivak Isl; Kobuk R; St Paul Isl (MERRILL 1929); Alaska (PALMER & ROUSE 1945); Kodiak Isl; Unalaska Isl; Nunivak Isl; Kobuk R (KROG 1968: “records need verification”); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Alaska (THOMSON 1984: map); Amchitka Isl (THOMSON & SOWL 1989); Chisik Isl (TALBOT et al. 1992, revised to *Cladonia singularis* by MCCUNE et al. 2018); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier; Eagle Summit (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Morzhovi Bay; Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Alaska (STENROOS et al. 2019); Noatak NPr, tributary of Kukururok R (PINO-BODAS & STENROOS 2021, Suppl. Inform. ESM1).

Cladonia deformis (L.) Hoffm. – Terricolous in heath or lignicolous on rotting wood; many early reports may refer to *Cladonia sulphurina*. – Kotzebue’s Sound (BABINGTON 1851); Kotzebue Sound (BABINGTON 1852); Kotzebue Sound (LINDSAY 1868); Kotzebue Sound (LEIGHTON 1866); Kotzebue Sound (MANN 1868; TURNER 1886; MACOUN 1902); Port Clarence (NYLANDER 1887; HUE 1890); Taku (CUMMINGS 1892b); Wrangell; White Pass; St Michael; Keystone Pass (CUMMINGS 1904); Eagle (HERRE 1920); McDonald Mtn, Quethluk R; and Hooper Bay; Wrangell; St Michael; Keystone Pass; Kotzebue Sound; Port Clarence (MERRILL 1929); Kotzebue Sound (SANDSTEDE 1932); Seldovia (HEDRICK 1936); PWS, Thum Bay (EYERDAM 1949); Raspberry Isl, Port Vita (THOMSON 1950a); Juneau icefield nunatak (HEUSSER 1954); Tanana; Stampede; Kasigluk (HOWARD 1958); Anaktuvuk Pass; Bettles (KROG 1962; MURRAY 1974); Hooper Bay (KROG 1962); hill E of rd to Kantishna (HOWARD 1963); Mt Eielson; Wonder L (WEBER & VIERECK 1967); central Alaska Range (REGER & PÉWÉ 1969); Haul Rd, Ray R Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagak Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, Rock Cr Trail (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Eagle Summit; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Seaton Roadhouse; Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten Mile Cr; Tetlin Junction; Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Interior Alaska (LAURSEN & SEPPELT 2009); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2013; Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a; STEHN et al. 2015); Gates of the

Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

= *Cladonia deformis* var. *deformis* – Anchorage, Rabbit Cr Rd; White Mts, lower Fossil Cr (KROG 1968).

= “*Cladonia deformis* f. *crenulata* Ach.” – Fox (HOWARD 1958).

? = “*Cladonia deformis extensa*” – Alaska (HADWEN & PALMER 1922).

***Cladonia digitata* (L.) Baumg.** – Lignicolous or corticolous on tree bases; reports from tundra are to be doubted. – Kotzebue’s Sound (BABINGTON 1851, with ? “seems to be *C. bellidiflora*, Schaer., rather than *C. digitata*, Hoffm., to which I had previously referred it with a mark of doubt, judging from a less perfect specimen” [BABINGTON 1852]); Old Sitka (ROTHROCK 1884); Port Clarence (NYLANDER 1887; HUE 1890); Old Sitka (MACOUN 1902); Sitka; Port Clarence (MERRILL 1929); Kotzebue Sound; Sitka (SANDSTEDE 1932); Raspberry Isl, Port Vita (THOMSON 1950a); Alaska (THOMSON 1968a); Kenai Peninsula, Ingram Cr; Homer; Richardson Hwy, mi 9; White Mts, Beaver Cr (KROG 1968); Alaska (THOMSON 1984: map); Katmai NP, Brooks Lodge area, Brooks Falls; Kenai Peninsula, Chugach NF, Ptarmigan L Trail (SCHINDLER 1990); Portage Glacier (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska (LITTERSKI & AHTI 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015).

***Cladonia ecmocyna* Leight., subspecies not indicated.** – Terricolous in heaths, especially in snow-rich districts. – Juneau icefield nunatak (HEUSSER 1954); St Matthew Isl (KROG 1962); Juneau area, Loop Rd; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Turnagain Arm, Bird Cr Ridge; Portage Glacier; Kenai Peninsula, Granite Cr ridge; W of Seward, Marathon Mtn; Richardson Hwy, mi 24, mi 37, mi 45, mi 170; Denali Hwy, mi 0–28, mi 32–37, mi 70; base of Rainbow Mts, E of Richardson Hwy; Seward Peninsula, Roberts Mtn (KROG 1968); Chitistone-Skolai region (SCOTT 1974); Barrow (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Chisik Isl (TALBOT et al. 1992); Mt Alyeska; Portage Glacier; Eagle Summit; Blueberry L CG; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Toolik L (GOUGH et al. 2008); Noatak NPr (HOLT et al. 2009); Kasatochi Isl (TALBOT et al. 2010a); Dalton Hwy (LANG et al. 2012); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Brooks Range, Atigun Pass (KASANKE 2019); Kenai

Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, NE of Coleman Bay (McCUNE et al. 2020); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

= “*Cenomyce ecmocyna* Ach.” – Kotzebue's Sound (HOOKER & ARNOTT 1841).

= “*Cladonia gracilis ecmocyna*” – Alaska (PALMER & ROUSE 1945).

Cladonia ecmocyna subsp. **ecmocyna** – Terricolous in heaths and forests. – “most of the records from KROG, 1968 probably belong to this species”, meaning subspecies *ecmocyna* (AHTI 1980); Anchorage, by Portage (SCHINDLER 1987); SE Alaska (GEISER et al. 1994a: map for whole species); Ft Richardson (MURRAY 1997); Izembek Refuge, near Frosty Pk; Izembek Lagoon (TALBOT et al. 2000); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2015).

Cladonia ecmocyna subsp. **intermedia** (Robbins) Ahti – Terricolous in heath, tundra, peatlands and forest, and on soil over rock. – Juneau area (AHTI 1980); SE Alaska (GEISER et al. 1994a: map for whole species); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska Hwy, near Canadian border; Alaska Hwy, mi 1240 (TALBOT et al. 2007); Noatak NPr (McCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015).

Cladonia ecmocyna subsp. **occidentalis** Ahti – Terricolous, alpine. – Chilkoot Trail (SPRIBILLE et al. 2010); Unalaska Isl (TALBOT et al. 2010b).

Cladonia farinacea (Vain.) A. Evans – Terricolous on mossy soil in forest. – Kotzebue (KROG 1968); Gates of the Arctic NPPr, NW side of Walker L (DILLMAN et al. 2012); Glacier Bay NP: Dundas Bay (Taylor Bay) (SPRIBILLE et al. 2020).

Cladonia fimbriata (L.) Fr. – Terricolous, lignicolous, corticolous and loosely saxicolous or muscicolous, in a wide range of habitats. – Loring; near Juneau, Sheep Cr (CUMMINGS 1892a); PWS (CUMMINGS 1892b); St Paul Isl (MACOUN 1899); Prince of Wales Isl; Zarembo Isl (HERRE 1919); Skagway (HERRE 1920); Kodiak Isl, Kodiak; Unalaska Isl, Unalaska (DEGELIUS 1937); Annette Isl (THOMSON 1950a); across the Koyukuk from Bettles, trail E to slough (HOWARD 1963; MURRAY 1974); Umiat (KROG 1962; MURRAY 1974); Mendenhall Glacier (McCULLOUGH 1965); Alaska (THOMSON 1968a); Camp Eielson (WEBER & VIERECK 1967); Juneau area, Loop Rd; Juneau area, Granite Basin; Talkeetna Mts, Puritan Cr; Anchorage, Rabbit Cr Rd; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Ninilchik; Windy Pt, Turnagain Arm; Portage Glacier; Kenai Peninsula, Ingram Cr CG; W of Seward, Marathon Mtn; Richardson Hwy, mi 9, mi 24; Denali NP, CG near hotel; Denali NP, Wonder L; White Mts, Beaver Cr; Kotzebue (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Okpilak Valley (COPPIN 1981); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Eagle Summit; Deadman L CG; Richardson Hwy, mi 10; Fielding L (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995, as ‘group’); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER

& WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, near Canadian border; Alaska Hwy, mi 1240, mi 1270; Ten Mile Cr; Willow L, near Alaska Hwy; Tanacross Village (TALBOT et al. 2007); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Dalton Hwy (LANG et al. 2012, as cf.); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Kenai Fjords NPPr (MCCUNE et al. 2020).

= *Cladonia major* (K. G. Hagen) Sandst. – Alaska (THOMSON 1968a); Barrow (MURRAY & MURRAY 1978); Colville R near Umiat; Pt Barrow (THOMSON 1979); Alaska (THOMSON 1984: map).

= “*Cladonia fimbriata simplex* (Weis) Flot.” – New Metlakatla; Sitka; Pt Gustavus, Glacier Bay; Hidden Glacier, Russel Fiord; Yakutat; Farragut Bay (CUMMINGS 1904); New Metlakatla; Sitka; Glacier Bay; Russell fiord; Yakutat near Juneau; Farragut; Cape Nome (MERRILL 1929).

= “*Cladonia fimbriata* f. *tubaeformis* (Hffm.) Nyl.” – Sitka (STIZENBERGER 1895a, b).

= “*Cladonia fimbriata* var. *tubaeformis* Fr.” – near Juneau, Sheep Cr (CUMMINGS 1892a).

= “*Cladonia pyxidata* var. *tubaeformis* Fr.” – Port Etches; Juneau, Sheep Cr (MACOUN 1902).

Cladonia foliaceae → [Appendix A](#)

Cladonia furcata (Huds.) Baumg. – Terricolous in forests and tundra. – St Paul Isl (MACOUN 1899); Coronation Isl, Egg Harbor; Kuiu Isl; Brownson Bay; Heceta Isl; Kosciusko Isl, Shipley Bay (HERRE 1919); Alaska (HADWEN & PALMER 1922); Unalakleet R; St Paul Isl (MERRILL 1929); Alaska (PALMER & ROUSE 1945); Bettles (KROG 1962; MURRAY 1974); woods along Hines Cr (HOWARD 1963); Ketchikan area, Deer Mtn; Denali NP, Wonder L; Richardson Hwy, mi 9; White Mts, Beaver Cr; Alaska Hwy, mi 1450 (KROG 1968); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Deadman L CG; Moon L CG; Fielding L (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Kodiak Isl (PINO-BODAS 2012); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr

(ROLAND et al. 2017); Katmai NPPr (MCCUNE et al. 2018); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).
 = “*Cladonia palamoea* (Ach.) Fink” – Mendenhall Glacier (MCCULLOUGH 1965).
 = “*Cladonia furcata palamoea* (Ach.) Nyl.” – Orca; Kodiak Isl, Sturgeon R Bay; St Matthew Isl (CUMMINGS 1904); Orca; Kodiak Isl; St Matthew Isl (MERRILL 1929).
 = “*Cladonia furcata* var. *pinnata* (Flörke) Vainio” – PWS, Thum Bay (EYERDAM 1949); Mendenhall Glacier (MCCULLOUGH 1965).
 = *Cladonia furcata racemosa* (Hoffm.) Flörke – Pribilof Isls (MACOUN 1899); Alaska (CUMMINGS 1904).
 = “*Cladonia furcata* var. *subulata* Flörke” – Pribilof Isls (MACOUN 1899); St Paul Isl; St George Isl (MACOUN 1902).

Cladonia glauca → [Appendix A](#)

Cladonia graciliformis → [Appendix A](#)

Cladonia gracilis (L.) Willd., **subspecies not specified** – Terricolous in forests to tundra. – Alaska (HOOPER 1884); Port Clarence (ALMQUIST 1887); Alaska (FINK 1905); Prince of Wales Isl; Coronation Isl, Egg Harbor (HERRE 1919); White Pass (HERRE 1920); Juneau; Unalaska Isl, Unalaska (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Kuiu Isl, Washington Bay (THOMSON 1950a); Juneau icefield nunatak (HEUSSER 1954); Bettles (KROG 1962; MURRAY 1974); St Matthew Isl; Lake Louise Rd, mi 1; Denali Hwy, mi 26 from Cantwell; Denali Hwy, mi 28; Ogotoruk Cr drainage; Cape Dyer, drainage of Kipaloq and Angowlik Crs; Ukinyik Cr drainage (KROG 1962); Denali NP, Rock Cr Trail (HOWARD 1963); Juneau Icefield (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson; McKinley R (WEBER & VIERECK 1967); 6 mi NW of Nome, Snake R (PEGAU 1968); central Alaska Range (REGGER & PÉWÉ 1969); Amchitka Isl (WEBER et al. 1969); Chena R (VIERECK 1970); E bluff of the Johns R, Anaktuvuk Pass (MOSER & NASH 1978); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Seward Peninsula, Nimrod Hill (RACINE 1981); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Imnavait Cr (WALKER et al. 1989); Yakutat Forelands (SHEPHARD 1995); Imnavait Cr (HAHN et al. 1996); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Wainwright (RACINE et al. 1997); Chugach NF (DEVELICE et al. 1999); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Toolik L (GOUGH et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Kasatochi Isl (TALBOT et al. 2010a); S Alaska (ROOT et al. 2014: ‘includes ssp. *turbinata*’); Dalton Hwy (LANG et al. 2012); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Kotzebue (PINO-BODAS et al. 2017a); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, N end of Harris Bay; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).
 = “*Cladonia gracilis* Hoffm.” – Kotzebue Sound (LINDSAY 1868); Sitka; Kotzebue Sound (MANN 1868; TURNER 1886).

= *Cladonia gracilis* subsp. *gracilis* auct. – *C. gracilis* subsp. *gracilis* is not found in western North America. Most records must refer either to subsp. *elongata* or subsp. *vulnerata*, but there are also taxonomic problems to resolve. – Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Chisik Isl (TALBOT et al. 1992); Mt Alyeska; Eagle Summit; Mt Fairplay; Blueberry L CG; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998, includes *C. gracilis* var. *dilatata* reported from Arrigetch Valley); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk; Cold Bay (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska Hwy, near Canadian border; Seaton Roadhouse; Alaska Hwy, mi. 1270, Ten Mile Cr; Riverside Lodge Airstrip (TALBOT et al. 2007); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2015).

= *Cladonia gracilis* var. *gracilis* auct. – See note for previous entry. – Juneau area, Loop Rd; Mendenhall Glacier Trail; Juneau area, Mt Roberts; Little Nelchina, by Glenn Hwy; Turnagain Arm, Bird Cr Ridge; Anchorage, Rabbit Cr Rd; Richardson Hwy, mi 24, mi 37, mi 170; Denali Hwy, mi 0–28; mi 32–37; mi 70; Denali NP, Savage R; Denali NP, Polychrome Pass; Denali NP, Wonder L (KROG 1968); Barrow; Eagle Summit (MURRAY & MURRAY 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; Okpilak R near Okpilak L and Mt Michelson; Barter Isl (THOMSON 1979); Alaska (THOMSON 1984: map).

= “*Cladonia gracilis* f. *aspera* Flk.” – Juneau icefield nunatak (HEUSSER 1954).

= “*Cladonia gracilis* var. *aspera* Flörke” – Orca; PWS, Thum Bay (EYERDAM 1949).

= “*Cladonia gracilis* f. *amaura* Flk.” – Pt Barrow (THOMSON 1960); Barrow (MURRAY & MURRAY 1978).

= “*Cladonia gracilis* f. *dilacerata* Flk.” – Stampede (HOWARD 1958).

= “*Cladonia gracilis* f. *chordalis* (Ach.)” – Lawrence-Insula (NYLANDER 1887).

= “*Cladonia gracilis* subsp. *chordalis* (Flörke) Schaer.” – Adak Isl (TALBOT et al. 1997); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Kasatochi Isl (TALBOT et al. 2010a).

= “*Cladonia gracilis* var. *chordalis* (Flörke) Schaer.” – Juneau; Wrangell; White Pass; Port Wells; Unalaska; St Lawrence Isl; Keystone Pass (CUMMINGS 1904); Alaska (FINK 1905); Box Cr; Lower Telephone Cr; Peace R; Etchepuk R; Juneau; White Pass; Wrangell; Port Wells; Unalaska; Hall Isl; St Lawrence Isl; Keystone Pass (MERRILL 1929, as “*gracialis chordalis* (Flrk.) Schaer.”); Unalaska Isl; Unimak Isl (HEDRICK 1936); PWS, Thum Bay (EYERDAM 1949); False Pass, Unimak Isl (THOMSON 1950a); Juneau icefield nunatak (HEUSSER 1954); near Juneau, Taku Glacier valley (HEUSSER et al. 1954); Attu Isl, Siddens Valley, Engineers Canyon (HOWARD 1958); mtn W of Wiseman (HOWARD 1963; MURRAY 1974); Mendenhall Glacier (MCCULLOUGH 1965); Alaska Range, Dry Cr (VIERECK 1967); Mt Eielson (WEBER & VIERECK 1967).

= “*Cladonia gracilis* β *hybrida* Schaer.” – Kotzebue's Sound (BABINGTON 1851); Kotzebue Sound (BABINGTON 1852); Kotzebue Sound (LINDSAY 1868, author as ‘Ach.’).

= “*Cladonia gracilis elongata subdilacerata* Wain.” – Alaska (MERRILL 1924a); Cape Nome (MERRILL 1929).

Cladonia gracilis subsp. **elongata** (Jacq.) Ahti – Terricolous in forest, tundra and heath. – SE Alaska (GEISER et al. 1994a: map for whole species); Juneau area, Gastineau Pk (BRODO & AHTI 1996); Portage Glacier; Mt Fairplay; Blueberry L CG; Fielding L (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Kodiak Isl (PINO-BODAS et al. 2017a); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP; Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cladonia elongata* (Jacq.) Hoffm. – Alaska (RÄSÄNEN 1933); Attu Isl (DEGELIUS 1937); PWS, Ellamar; Atka Isl (THOMSON 1950a); Fish Cr drilling site (LAWSON et al. 1978).

= “*Cladonia gracilis elongata*” – Alaska (HADWEN & PALMER 1922).

= “*Cladonia gracilis* f. *elongata* (Ach.)” – Lawrence-Insula; Port Clarence (NYLANDER 1887; HUE 1890).

= “*Cladonia gracilis* var. *elongata* (Jacq.) Flörke” – Many of these records are doubtful. – White Pass; St Matthew Isl; St Lawrence Isl; Port Clarence; Cape Nome; St Michael; Seward Peninsula (CUMMINGS 1904); Alaska (FINK 1905); Etchepuk R; McDonald Mtn; Dexter Cr; Peace R; Diomed Isl; Kobuk R; Nunivak Isl; Unalakleet R; White Pass; Port Clarence; St Michael; Seward Peninsula; Sitka; Kotzebue Sound (MERRILL 1929); Atka Isl (HEDRICK 1936); Attu Isl; Port Clarence; Sitka (SANDSTEDE 1938); Alaska (PALMER & ROUSE 1945); PWS, Thum Bay (EYERDAM 1949); Attu Isl, Siddens Valley, Engineers Canyon; Stampede (HOWARD 1958); Mendenhall Glacier (MCCULLOUGH 1965); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Little Nelchina, by Glenn Hwy; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Denali Hwy, mi 0–28, mi 32–37; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Nunivak Isl, Nash Harbor; Nunivak Isl, Lake where the geese don't fly; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Kotzebue (KROG 1968); S of Wainwright, Kaolak R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

= “*Cladonia gracilis* (L.) Nyl. var. *elongata* Fr.” – St Paul Isl (MACOUN 1899, 1902).

= *Cladonia gracilis* subsp. *nigripes* (Nyl.) Ahti – Alaska (AHTI 1980); Denali NP, rd E of Savage R; slope above Eielson Visitor Center (SCHINDLER 1990).

= *Cladonia ecmocyna* var. *nigripes* (Nyl.) A. Evans – Etchepuk R; Peace R; upper Buckland R; First Chance Cr; Cantwell; between Palmer and Willow; Umiat; Kodiak Isl; Kenai Mts (EVANS 1952).

Cladonia gracilis subsp. **turbinata** (Ach.) Ahti – Terricolous, mainly in forests, sparse in tundra, lignicolous on rotting wood, loosely saxicolous over boulders, widespread. – “Throughout boreal Alaska” (AHTI 1980); Alaska (THOMSON

1984: map); Denali NP, on the rd to Horseshoe L; Denali NP, Station Primrose; Denali NP, Rock Cr Trail; Big Delta, at the Tanana (SCHINDLER 1987); Amchitka Isl, Clevenger L oil seep (THOMSON & SOWL 1989); Katmai NP, Brooks Lodge area, Margot Falls; Kenai Peninsula, Skilak L; Denali NP, Rock Cr Trail; Denali NP, Lynx Cr CG (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map for whole species); Deadman L CG; Moon L CG; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Morzhzovi Bay (TALBOT et al. 2000); Bering Land Bridge NPr (HOLT et al. 2007, Pino BODAS 2012); Alaska Hwy, near Canadian border (TALBOT et al. 2007); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Seward Hwy, Resurrection Trail Rd; Turnagain Arm, Twenty Mile Rd (Pino BODAS 2012); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (McCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

= *Cladonia gracilis* var. *dilatata* auct., non (Hoffm.) Vain. – Glacier Cascade (CUMMINGS 1904); Alaska (FINK 1905); Lower Telephone Cr; Kobuk R; Nome, Dexter Cr; Unalakleet R; Glacier cascade; Kotzebue Sound (MERRILL 1929, as ‘*gracialis dilatata*’); Alaska (PALMER & ROUSE 1945); Kantishna Airstrip; Denali NP, Carlo; hill E of rd to Kantishna; Riley Cr Trail (HOWARD 1963); Wiseman Cr (HOWARD 1963; MURRAY 1974); Mt Eielson; Wonder L (WEBER & VIERECK 1967); Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; northern Cook Inlet area, Rabbit Cr Rd, headwaters of Rabbit Cr; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Skilak L; Windy Pt, Turnagain Arm; W of Seward, Marathon Mtn; Denali Hwy, mi 32–37, mi 100; Denali NP, Wonder L; Richardson Hwy, mi 170; Richardson Hwy, Darling Cr; base of Rainbow Mts, E of Richardson Hwy; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; Circle Hot Springs; Alaska Hwy, mi 1450; Seward Peninsula, King Mtn; Anvil Pk; Kotzebue (KROG 1968); Firth R at Mancha Cr (THOMSON 1979).

= “*Cladonia gracilis* (L.) Willd. var. *dilatata* (Hoffm.) Vain. f. *anthocephala* Flk.” – Juneau icefield nunatak (HEUSSER 1954).

Cladonia gracilis* subsp. *vulnerata Ahti – Terricolous from forest to tundra. – Chugach Mts, Blueberry L CG (**type** – AHTI 1980); Richardson Hwy, mi 23; Port Clarence; Kotzebue; Kiana, Kobuk R; Anvil Pk; Imuruk L; 9 mi N of Nome; Nelson Isl, Tanunak; Naknek; Umiat; White Mts, Beaver Cr; Steese Hwy, Cleary Summit (AHTI 1980; WONG 1993); Anchorage, by Portage (SCHINDLER 1987); Chugach Mts, Blueberry L, Richardson Hwy, mi 23 (AHTI 1993); SE Alaska (GEISER et al. 1994a: map for whole species); Alaska (BRODO & AHTI 1996); Ft Richardson (MURRAY 1997); Blueberry L CG (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); North Slope, Sagwon; North Slope, Happy Valley (ZHURBENKO 2009b); Chugach NF (DERR 2010: 144, 214, 230); Afognak

Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Unalaska Isl (TALBOT et al. 2010b); Alaska (PINO-BODAS et al. 2011); PWS, Knight Isl; Harriman Fiord; Kodiak Isl; Unalaska Isl, Usof Bay; Richardson Hwy mi. 23, Blueberry L (PINO-BODAS 2012); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Kodiak Archipelago, Chirikof Isl (PINO-BODAS et al. 2017a); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Alaska (STENROOS et al. 2019, one voucher as subsp. *vulnerata* in Fig. 2 but as subsp. *gracilis* in Table S1); Kenai Fjords NPPr, FIA plot at Fire Cove; Kenai Fjords NPPr, northwest Lagoon Beach (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020); Aleutian Isls, Unimak Isl, False Pass (PINO-BODAS & STENROOS 2021 – Suppl. Inform. ESM1); Hagemeister Isl (WALSH & GOWARD 2021).

Cladonia granulans Vain. – Terricolous. – Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Ketchikan area, Saxman Village; Talkeetna Mts, Bald Mtn Ridge; Nunivak Isl, Nash Harbour; Nunivak Isl, Lake where the geese don't fly (KROG 1968); Alaska (THOMSON 1984: map); Alaska (STENROOS 1989a: map); SE Alaska (GEISER et al. 1994a); Douglas Isl, Harbor Mtn near Sitka, and Saxon Village near Ketchikan (GEISER et al. 1998); Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018); Hagemeister Isl (WALSH & GOWARD 2021).

Cladonia grayi G. Merr. ex Sandst. – Terricolous and muscicolous or lignicolous. – Alaska (BOWLER 1972); Alaska (THOMSON 1984: map); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay; Deadman L CG (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Tuxedni, Chisik Isl (MCCUNE et al. 2018). = “*Cladonia pyxidata* (L.) Hoffm. subsp. *chlorophaea* (Flörke) Spreng., grayaninic acid strain” – Denali Hwy, mi 28; Kotzebue (KROG 1968).

Cladonia groenlandica → **Cladonia cornuta** subsp. **groenlandica**

Cladonia homosekikaica Nuno – Terricolous on moss-covered rock. – SE Alaska (GEISER et al. 1994a: map); Tongass NF, mouth of Herbert Glacier (BRODO & AHTI 1996, as cf.); terminus of Herbert Glacier, N of Juneau (GEISER et al. 1998, “cf.” from earlier report had been dropped); Denali NPPr (ROLAND et al. 2017).

Cladonia humilis → **Cladonia conista**

Cladonia islandica Kristinsson & Ahti – Terricolous. – Alaska (AHTI & STENROOS 2013); Cold Bay; Amlia Isl, W side of Sviechnikof Harbor; North-Central Amlia Isl; Kiska Isl; Unalga Isl (PINO-BODAS et al. 2014); Alaska (STENROOS et al. 2019); Aleutian Isls, Amlia Isl (PINO-BODAS & STENROOS 2021 – Suppl. Inform. ESM1).

Cladonia jacutica Ahti – Terricolous. – Noatak NPr (MCCUNE et al. 2009); Seward Peninsula, Quartz Cr camp; Survey Pass Quad, Upper Read R, 7 km S of Angiak Pass (DILLMAN et al. 2012).

Cladonia kanewskii Oxner – Terricolous in tundra and heath, especially in wet depressions. See also note under *C. nipponica*. – Attu Isl; Unalaska; PWS, Crab Bay; Knight Isl, Thum Bay; Evans Isl; Anchorage; Kenai Peninsula, Marathon Mtn; Talkeetna Mts, Bald Mtn Ridge; Mt Alyeska; Thompson Pass; Juneau, Mt

Roberts; Montana Cr Rd; Juneau Icefield; Sitka, Harbour Mtn; Nunivak Isl, Robert's Mtn; Denali Hwy, mi 32; Denali Hwy, mi 28; 35 mi W of Paxson; Nome; Cape Nome; Dexter Cr; Teller; Seward Peninsula, Rainbow Cr; Ogoturuk Cr; White Mts, Lion Pk; Eagle Summit (AHTI 1973); Eagle Summit (MURRAY & MURRAY 1978); Alaska (JØRGENSEN 1983: map); Alaska (THOMSON 1984: map); Chugach Mts: Thompson Pass (HUOVINEN & AHTI 1986); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Juneau vicinity (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Aleutian Isls (LITTERSKI & AHTI 2004); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Alaska (STENROOS et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Alaska (STENROOS et al. 2019); Kenai Fjords NPPr, Harris Peninsula; Kenai Fjords NPPr, near Harding Icefield Trail; Kenai Fjords NPPr, near Harding Icefield Trail; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, NE of Coleman Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020); Valdez-Cordova Census Area, Thompson Pass, N of Valdez, along Hwy. 4 (Richardson Hwy.); Alaska (MCMULLIN 2021: map); Hagemester Isl (WALSH & GOWARD 2021). = *Cladonia nipponica* var. *aculeata* Asahina – Mendenhall L; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Denali Hwy, mi 28–37; White Mts, Lion Pk; Steese Hwy, Eagle Summit; Seward Peninsula, King Mtn (KROG 1968). = *Cladonia nipponica* var. *sachalinensis* Asahina – Denali Hwy, mi 28; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Kotzebue (KROG 1968).

Cladonia lepidota → **Cladonia trassii**

Cladonia libifera Savicz – Terricolous. – Noatak NPr; Bering Land Bridge NPr (HOLT et al. 2009; MCCUNE et al. 2009); Bering Land Bridge Preserve; Noatak NPr; Fielding L; Portage Glacier CGs off Sterling Hwy, mi 49 (HANSEN & AHTI 2011).

Cladonia luteoalba → **Appendix A**

Cladonia macilenta Hoffm. – Lignicolous on logs and corticolous on conifers, also occasionally over rocks. – Loring (CUMMINGS 1892a; MACOUN 1902); Wrangell (CUMMINGS 1904); Kuiu Isl, Washington Bay (THOMSON 1950a); Alaska (THOMSON 1968a); Juneau area, Loop Rd; Ketchikan area, Ward L; Sitka area, Indian R Trail (KROG 1968); Chena R (VIERECK 1970); SE Alaska (GEISER et al. 1994a); Deadman L CG (THOMSON & AHTI 1994); along Loop Rd in Juneau; Ward L near Ketchikan; the Indian R Trail near Sitka (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014: 'includes *C. macilenta* var. *bacillaris*'); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr (MCCUNE et al. 2018). = *Cladonia bacillaris* (Ach.) Genth – hill E of rd to Kantishna (HOWARD 1963); Sitka area, Indian R Trail; Seward Peninsula, King Mtn (KROG 1968); Alaska (THOMSON 1968a); Chena R (VIERECK 1970); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998);

Noatak NPr (HOLT et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Kenai Fjords NPPr, S of Exit Glacier Visitor Center (MCCUNE et al. 2020).

= *Cladonia macilenta* var. *bacillaris* (Ach.) Schaer. – Indian R Trail near Sitka; N Kuiu Isl (GEISER et al. 1998); Chugach NF (DERR 2010).

= *Cladonia macilenta* f. *granulosa* Aigret – Kuiu Isl, Washington Bay (THOMSON 1950a).

= “*Cladonia macilenta squamigera* Vain.” – Nome (HANSON 1953).

Cladonia macroceras (Delise) Hav. – Terricolous in tundra. – Kotzebue (AHTI 1980); Thompson Pass (THOMSON & AHTI 1994); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= “*Cladonia ecmocyna* var. *macroceras* (Floerke) Ach.” – Etchepuk R (EVANS 1952, who states that this is = Merrill's *C. gracilis elongata*).

= “*Cladonia gracilis* (L.) Nyl. var. *elongata* Fr. f. *macroceras*” – Allokuaigik R (KNOWLTON 1885); Pribilof Isls (MACOUN 1899).

Cladonia macrophylla (Schaer.) Stenh. – Terricolous on thin soil over rocks or in heaths, less frequently on forest floors or beach logs. – Alaska (THOMSON 1968a); Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Richardson Hwy, mi 9; Richardson Hwy, mi 37; Richardson Hwy, mi 45; Denali Hwy, mi 0–28; Denali Hwy, mi 32–37; Denali Hwy, mi 70; Denali Hwy, mi 100; Denali NP, Wonder L; White Mts, headwaters of Sheep Cr; White Mts, Cache Mtn; Steese Hwy, Twelvemile Summit; Steese Hwy, Eagle Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr; Kotzebue (KROG 1968); Barrow; Eagle Summit (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Circular Marsh near Barrow; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Adak Isl (TALBOT et al. 1997); N Baranof Isl, Goose Cove; Mitkof Isl, Crystal Mtn; Shakes Slough, Stikine R (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Alaska (LITTERSKI & AHTI 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cladonia alpicola* (Flot.) Vain. – Alaska (MERRILL 1924a); Nome; Dexter Cr; Kobuk R (MERRILL 1929); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Denali Hwy, mi 26 from Cantwell (KROG 1962); 6 mi W of McKinley Park Hotel (WEBER & VIERECK 1967).

= “*Cladonia alpicola* f. *alaskana*” – included in Alaska material cited under species (MERRILL 1929).

= “*Cladonia alpicola* f. *ehrhartiana*” – included in Alaska material cited under species (MERRILL 1929).

= “*Cladonia alpicola* f. *foliolosa*” – included in Alaska material cited under species (MERRILL 1929).

Cladonia macrophyllodes Nyl. – Terricolous on mineral soil and over rocks. – Juneau icefield nunatak (HEUSSER 1954); Alaska (THOMSON 1968a); Mendenhall L; Juneau area, Mt Roberts; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Granite Cr Ridge; W of Seward, Marathon Mtn; Richardson Hwy, mi 37, mi 45; Denali Hwy, mi 28, mi 70; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); Thunder Mtn; Elbow Mtn (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010, but these records are incorrect and refer to *C. pseudalcicornis*: DILLMAN et al. 2012); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Katmai Bay Cr; Lake Clark NPPr, headwaters of Johnson R; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, Harding Icefield Trail (MCCUNE et al. 2020).

Cladonia maxima (Asahina) Ahti – Terricolous in forests and moist heaths; many records are doubtful and may refer to *Cladonia gracilis* subsp. *vulnerata*. – Port Clarence; Attu Isl; Tatalina (Smith 1697, H); Richardson Hwy, mi 24; Sitka (AHTI 1980); Chikuminuk L (THOMSON & DOELL 1989); Alaska (THOMSON 1984: map); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Blueberry L CG; Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994); Attu Isl (TALBOT & TALBOT 1994); Yakutat Forelands (SHEPHARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); SE Alaska (GEISER et al. 1998, who suggest their specimens may be = *C. gracilis* subsp. *vulnerata*); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Is; (DANIËLS et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk; Izembek Lagoon (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Aleutian Isls (LITTERSKI & AHTI 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPPr, Crater Bay North; Kenai Fjords NPPr, Crater Bay South; Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020); Glacier Bay NP; Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Cladonia merochlorophaea Asahina – Terricolous in alpine tundra and dwarf *Tsuga mertensiana* forest. – Yakutat Bay (STAIR 1947); Alaska (BOWLER 1972); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Mt Fairplay (THOMSON & AHTI 1994); subalpine SW Etolin Isl;

Harlequin L trail, Yakutat lowlands (GEISER et al. 1998); Bering Land Bridge NPr (HOLT et al. 2007); Chugach NF (DERR 2010: 166); Chilkoot Trail (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

= “*Cladonia pyxidata* (L.) Hoffm. subsp. *chlorophaea* (Flörke) Spreng., merochlorophaeic acid strain” – Mendenhall L; Ketchikan area, Deer Mtn (KROG 1968).

Cladonia metacorallifera → **Cladonia straminea**

Cladonia mitis Sandst. – Terricolous in tundra, heath and forests. Most records from the Aleutian Isls refer to *Cladonia portentosa* subsp. *pacifica*, as Thomson confused the two species (TA). – Alaska (SANDSTEDE 1932); PWS, Crab Bay; Unalaska Isl, Unalaska; Atka Isl; Adak Isl, Chapel Cove; Kiska Isl, N side (DEGELIUS 1937); Alaska (SANDSTEDE & VAINO 1938); Aleutians (SANDSTEDE 1938); Yakutat Bay (STAIR 1947); Adak Isl (STAIR 1948); Raspberry Isl, Port Vita (THOMSON 1950a); Juneau icefield nunatak (HEUSSER 1954); near Juneau, Taku Glacier valley (HEUSSER et al. 1954); Attu Isl, Siddens Valley, Engineers Canyon (HOWARD 1958); “apparently very common throughout most of the country” (AHTI 1961: map); Wild L (KROG 1962; MURRAY 1974); N of Bettles Trading Post; Wiseman Cr (HOWARD 1963; MURRAY 1974); 10 mi above the mouth of John R; Denali NP, Carlo, just W of station; hill E of rd to Kantishna (HOWARD 1963); Mendenhall Glacier; Juneau Icefield (MCCULLOUGH 1965); Muldrow Glacier (VIERECK 1966); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Loop Rd; Mendenhall Glacier Trail; Juneau area, Mt Roberts; Talkeetna Mts, Independence Mine; Kenai Peninsula, Skilak L; W of Seward, Marathon Mtn; Denali Hwy, mi 0–37; Circle Hot Springs; Nunivak Isl, Roberts Mtn; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Kodiak Isl, mtn top 6 km NNW of “Amara Lake” (KROG 1969); E bluff of the Johns R, Anaktuvuk Pass (MOSER & NASH 1978); Barrow (WEBBER 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Alaska Hwy, near Canadian border; Seaton Roadhouse; Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten Mile Cr; Willow L, near Alaska Hwy; Tanacross Village; Mt Fairplay (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Noatak NPr (MCCUNE et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Aleutian Isls, Unimak Isl, False Pass, 3 km SW of airstrip (PINO-BODAS et al. 2017a); Denali NPPr (ROLAND et al. 2017); Katmai NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge; Gustavus (SPRIBILLE et al. 2020).

= *Cladina mitis* (Sandst.) Mong. – Barrow; Eagle Summit (MURRAY & MURRAY 1978); Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Katmai NP, Hammersly L (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Attu Isl (TALBOT & TALBOT 1994); Portage Glacier; Eagle Summit; terminal moraine of Valdez Glacier; Thompson Pass; Fielding L (THOMSON &

AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); in glacial outwash of Mendenhall Glacier terminal moraine; near Skagway (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk; Izembek Lagoon; Cold Bay (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Ulukluk Cr (JANDT et al. 2008, not distinguished from *C. arbuscula*); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010); Nulato Hills (JOLY et al. 2010, not distinguished from *C. arbuscula*); Kasatochi Isl (TALBOT et al. 2010a); Yukon-Kuskokwim Delta (FROST et al. 2020, as '*arbuscula/mitis*'); Hagemester Isl (WALSH & GOWARD 2021).

Cladonia mitrula → **Appendix A**

Cladonia multiformis G. Merr. – Terricolous in forests. – Alaska (THOMSON 1968a); White Mts, Beaver Cr; Circle Hot Springs (KROG 1968); Alaska (THOMSON 1984: map); Tetlin Junction (SCHINDLER 1987); SE Alaska (GEISER et al. 1994a: map); Moon L CG (THOMSON & AHTI 1994); Alaska (BRODO et al. 2001); Alaska Hwy, near Canadian border (TALBOT et al. 2007); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014); Denali NPPr, N of the AK Range (STEHN et al. 2015); Alaska (PINO-BODAS et al. 2015); Denali NPPr (ROLAND et al. 2017); Brooks Range, Atigun Pass (KASANKE 2019).

Cladonia norrlinii → ***Cladonia acuminata***

Cladonia nipponica Asahina – Terricolous in the alpine. – Anchorage; Attu Isl (EVANS 1955); Attu Isl; Anchorage (THOMSON 1968a; but these records are = *C. kanewskii*, see THOMSON 1984); Alaska (YOSHIMURA 1968: map); Kobuk R, Kiana; 6 mi NW of Nome, Snake R; St Lawrence Isl; 15 mi S of Mt McKinley Station; Ketchikan area, Deer Mtn (AHTI 1973: map); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a); Eagle Summit (THOMSON & AHTI 1994); near Mendenhall L (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (STENROOS et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Kodiak Isl (STENROOS et al. 2015, DNA voucher); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Alaska (STENROOS et al. 2019); Kodiak Isl (PINO-BODAS & STENROOS 2021 – Suppl. Inform. ESM1); Hagemester Isl (WALSH & GOWARD 2021).
= *Cladonia boryi* auct., non Tuck., pro parte – St Lawrence Isl (MERRILL 1929); PWS, Thum Bay (EYERDAM 1949); Kobuk R (THOMSON 1968a); Ketchikan area, Deer Mtn; Talkeetna Mts, Bald Mtn Ridge; Denali Hwy, mi 32–37; Nunivak Isl, Roberts Mtn; Seward Peninsula, King Mtn (KROG 1968); SE Alaska (GEISER et al. 1994a: map). Most records apply to *C. nipponica*, others to *C. kanewskii*.

= *Cladina lacunosa* auct. – Lawrence-Insula (NYLANDER 1887; HUE 1890).
Specimen at S revised by T. Ahti, 1975!

= *Cladonia reticulata* auct., non (J. L. Russell) Vain. – St Lawrence Isl (SANDSTEDE 1932); PWS, Crab Bay (DEGELIUS 1937); Crab Bay (SANDSTEDE 1938); PWS, Thum Bay (EYERDAM 1949).

Cladonia nitens Ahti – Terricolous in subarctic woodland and arctic tundra. – Bering Land Bridge NPr (AHTI 2007a); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010: 178); Seward Peninsula: King Mtn, SW of Lava L, Lost Jim Lava Flow; Fielding L; Anaktuvuk Pass (DILLMAN et al. 2012); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

Cladonia norvegica Tønsberg & Holien – Lignicolous on conifer stumps, corticolous on *Tsuga*, also muscicolous over *Tsuga*; confirmed so far only from SE Alaska. – SE of Anchorage, Portage Valley, 3 km W of Portage L, just S of the rd; Kenai Peninsula, 4 km S of Kenai L, W of Seward Hwy; NW of Juneau City, bank of Cowee Cr, N of the rd; Baranof Isl, Sitka, along Indian R (TØNSBERG & GOWARD 1992); SE Alaska (GEISER et al. 1994a: map); Juneau area, Auke Bay; Prince of Wales Isl (BRODO & AHTI 1996); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996, as cf.); Prince of Wales Isl, Tom's L; Juneau vicinity; the Indian R Trail near Sitka (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998, as cf.); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPPr, N end of Harris Bay (MCCUNE et al. 2020); Gustavus (SPRIBILLE et al. 2020).

Cladonia novochlorophaea (Sipman) Brodo & Ahti – Terricolous in *Empetrum* heath. – Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020, as “cf.”).

= *Cladonia merochlorophaea* var. *novochlorophaea* Sipman – Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).

Cladonia ochrochlora Flörke – Lignicolous and corticolous on logs and a variety of conifers and angiosperms, at forested elevations. Many reports of *Cladonia coniocraea* will be referable here. – Kenai Peninsula, Seward; Unalaska Isl, Unalaska (DEGELIUS 1937); Seward; Unalaska Isl, Unalaska (KROG 1968); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010: 128, 246); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Cladonia peziziformis → [Appendix A](#)

Cladonia phyllophora Hoffm. – Terricolous on mineral soil, soil over rock, or humus-rich soil, from forests to alpine localities. – Mendenhall Glacier (MCCULLOUGH 1965); Alaska (THOMSON 1968a); Chitistone-Skolai region (SCOTT 1974); Barrow (MURRAY & MURRAY 1978); Pt Barrow (THOMSON 1979); Alaska (THOMSON 1984: map); Prudhoe Bay region (WALKER 1985); Anchorage, by Portage; Denali NP, on the rd to Horseshoe L; Denali NP, Rock Cr Trail; Denali NP, Station Primrose; Denali NP, Savage R (SCHINDLER 1987);

Katmai NP, Brooks Lodge area, Brooks Falls; Denali NP, rd E of Savage R (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Mt Fairplay; Deadman L CG; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994: “many of the specimens represent a tall slender morph with narrow or no cups at all; it may represent a distinct taxon” = *C. stricta*, see AHTI 1998); Juneau, near Mendenhall Glacier, East Glacier Trail (BRODO & AHTI 1996, as s. lat.); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Mendenhall Glacier terminal moraine; [SE Alaska] mainland, Patterson R; Juneau, Brotherhood Park (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPPr (HOLT et al. 2007); Beaver Cr; Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, northwest Lagoon Beach (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= *Cladonia degenerans* (Flörke) Spreng. – Terricolous in tundra and *Eriophorum* tussocks. – Port Clarence (ALMQUIST 1887); St Paul Isl (MACOUN 1899, 1902); New Metlakatla; Wrangell; Juneau; Baranof Isl, Hot Springs; St Lawrence Isl; St Michael; Cape Nome; St Paul Isl (CUMMINGS 1904); “Port Clarence” (FINK 1907b); Juneau (DEGELIUS 1937, as f. *euphorea* (Ach.) Flörke); Alaska (PALMER & ROUSE 1945); Anaktuvuk Pass; Ogotoruk Cr drainage; St Matthew Isl; 4 mi N of Eureka (KROG 1962); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Juneau area, Loop Rd; Mendenhall L; Mendenhall Glacier Trail; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; Kenai Peninsula, Granite Cr Ridge; Richardson Hwy, mi 9, mi 24, mi 37, mi 45, mi 170; Denali Hwy, mi 0–28, mi 32–37, mi 70; Denali NP, Savage R; Circle Hot Springs; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; Kotzebue (KROG 1968; record refers to *Cladonia phyllophora* according to MOSER et al. 1979); Amchitka Isl (WEBER et al. 1969); Ogotoruk Cr (MURRAY 1985).

= “*Cladonia degenerans euphorea* (Ach.) Flk.” – McDonald Mtn and Upper South R; Chena R; Delta R (MERRILL 1929).

= “*Cladonia degenerans* f. *trachyna* (Ach.)” – Port Clarence (NYLANDER 1887).

= “*Cladonia degenerans* var. *trachyna* Ach.” – Port-Clarence (HUE 1890).

= “*Cladonia degenerans euphorea* f. *trachyma* Ach.” – Port Clarence (MERRILL 1929).

Cladonia pleurota (Flörke) Schaer. – Terricolous on ground or thin soil over boulders, also rarely lignicolous. – Lawrence Isl (NYLANDER 1887; HUE 1890); Yakutat Bay (STAIR 1947); Nome (HANSON 1953); Tanana (HOWARD 1958); Quigley Hill; hill E of rd to Kantishna (HOWARD 1963); Mendenhall Glacier; Juneau Icefield (MCCULLOUGH 1965); Fish Cr drilling site (LAWSON et al. 1978); Barrow (MURRAY & MURRAY 1978); Barrow (WEBBER 1978);

Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Denali NP, Wonder L (SCHINDLER 1987); Alaska (STENROOS 1989a: map); Katmai NP, Brooks Lodge area, Margot Falls (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996, as cf.); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Stikine R (GEISER et al. 1998 Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cladonia coccifera* var. *pleurota* (Flörke) Vain. – Virgin Bay; Seward Peninsula (CUMMINGS 1904); Alaska (FINK 1907d); White Pass (HERRE 1920); Alaska (HADWEN & PALMER 1922, unranked); Collinson Pt (MERRILL 1924b); Lower Telephone Cr; Stuart Isl; Collinson Pt; Virgin Bay; Seward Peninsula; St Lawrence Isl; Port Clarence (MERRILL 1929); Atka Isl (HEDRICK 1936); PWS, Thum Bay (EYERDAM 1949); Bettles (KROG 1962; MURRAY 1974); Brooks Range, L Peters; Pt Barrow; Ogotoruk Cr drainage; St Matthew Isl; Denali Hwy, mi 28; Denali Hwy, mi 26 from Cantwell (KROG 1962); Juneau area, Loop Rd; Talkeetna Mts, Bald Mtn Ridge; Little Nelchina; Kenai Peninsula, Granite Cr Ridge; Homer; Richardson Hwy, mi 37; Denali Hwy, mi 0–28, mi 32–37; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, the limestone ridge; Steese Hwy, Cleary Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn (KROG 1968).

= “*Cladonia coccifera pleurota* f. *frondescens* (Flörke) Schaer.” – Lower Telephone Cr (MERRILL 1929).

= “*Cladonia coccifera pleurota* f. *grandis* (Flörke) Schaer.” – Teller Cr; Dexter Cr (MERRILL 1929).

Cladonia pocillum (Ach.) Grognot – Terricolous on calcareous soils, especially in dry regions, once reported from muskeg (HOWARD 1958). – Umnak Isl, Nikolski; Kanaga Isl, NW side (DEGELIUS 1937); Umiat; Anaktuvuk Pass (KROG 1962; MURRAY 1974); flanks of Contact Cr Mtn; White Mts, the limestone ridge; Steese Hwy, Eagle R (KROG 1962); Denali NP, Toklat; White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr (KROG 1968); Prudhoe Bay (MURRAY & MURRAY 1975a); Fish Cr drilling site (LAWSON et al. 1978); Barrow; Eagle Summit; Prudhoe Bay (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R,

15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Barter Isl; Beaufort Lagoon, Nuvagapak Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Chauekuktuli L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Denali NP, rd E of Savage R (SCHINDLER 1990); Prudhoe Bay region (WALKER & EVERETT 1991); Central Arctic coastal plain (WALKER et al. 1991); Deadman L CG; Moon L CG (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); [SE Alaska] mainland, Windham Bay (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Franklin Bluffs (WALKER et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Teck Isl (DILLMAN 2010); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020 – Worley UBC).

= “*Cladonia pyxidata* var. *pocillum* (Ach.) Flot.” – Isls of Behring’s Strait (TUCKERMAN 1882); Port Clarence (NYLANDER 1887); Port Clarence (HUE 1890); isls in Behring Strait; Cape Vancouver; Unalaska Isl (MACOUN 1902); Demarcation Pt (MERRILL 1924b); Timber Cr; Demarkation Pt; islands of Bering Strait; Port Clarence (MERRILL 1929); Thompson Pass (HOWARD 1958).

Cladonia polydactyla → [Appendix A](#)

Cladonia portentosa (Dufour) Coem. subsp. ***pacifica*** (Ahti) Ahti – Terricolous, especially in lowland coastal heaths and muskegs. – Alaska (SCHIEFELBEIN 2006: map including four dots for Alaska, from Kodiak Isl and Aleutians); Alaska (ATHUKORALA et al. 2016); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020); Aleutian Isls, Unimak; Alaska (PINO-BODAS & STENROOS 2021 – Suppl. Inform. ESM1).

= *Cladina pacifica* (Ahti) Hale & W. L. Culb. – Shumagin Isls, Simeonof Is; (DANIËLS et al. 1998); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004).

= *Cladina portentosa* subsp. *pacifica* (Ahti) Ahti – Alaska (AHTI 1984); Jamboree Bay, W Baranof Isl (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).

= *Cladina portentosa* subsp. *pacifica* f. *pacifica* (Ahti) Ahti – Alaska (BRODO & AHTI 1996).

= *Cladonia pacifica* Ahti – Adak Isl, Chapel Cove; Kodiak Isl; Akhiok; Baranoff Isl, Port Armstrong; Sitka; Ketchikan (AHTI 1961: map); Juneau area, Mendenhall L; Ketchikan area, Deer Mtn (KROG 1968: usnic acid strain); Adak Isl, Chapel Cove; Atka Isl; Kodiak Isl; Baranoff Isl, Port Armstrong; Sitka; Amchitka Isl, Ketchikan (WEBER et al. 1969).

= “*Cladonia impexa* f. *condensata* (Flörke) Sandst.” as applied by Evans. – Attu Isl (EVANS 1955).

= *Cladonia impexa* auct., non Harm. – Atka Isl (DES ABBAYES 1939); Alaska (but not in the extreme north) (THOMSON 1968a); Anaktuvuk Pass (MOSER et al. 1979).

= “*Cladonia impexa* f. *laxiuscula* (Del.) Sandst.” as applied by Evans. – Atka Isl; Attu Isl (EVANS 1955).

= *Cladina portentosa* (Dufour) Follmann – SE Alaska (GEISER et al. 1998, “most collections not identified to subspecies”); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014); Hagemeister Isl (WALSH & GOWARD 2021). These will be = subsp. *pacifica*.

= “*Cladonia portentosa*” – Gates of the Arctic NPPr (NELSON et al. 2015b); Alaska (STENROOS et al. 2019: Fig. 2 [phylogenetic tree]). = subsp. *pacifica*.

Cladonia portentosa subsp. **pacifica** f. **decolorans** Ahti – Terricolous in lowland heaths and bogs. – Alaska (AHTI 1978a).

= *Cladina portentosa* subsp. *pacifica* f. *decolorans* (Ahti) Ahti – Ketchikan, Deer Mtn (AHTI 1984); Alaska (BRODO & AHTI 1996); SE Alaska (GEISER et al. 1994a).

= “*Cladina portentosa* (Dufour) Follman f. *grisea*” – SE Alaska (GEISER et al. 1994a).

= “*Cladonia pacifica* Ahti, acid-deficient strain” – Ketchikan area, Deer Mtn (KROG 1968).

Cladonia pseudalcicornis Asahina – Terricolous in glacial floodplains and up to the alpine. See also notes under *C. alcicornis* and *C. foliacea* in Appendix A. – Chugach NF, Glacier Ranger District, Turnagain Arm; PWS, Disk Isl (AHTI 2007); Chugach NF (DERR 2010: 156, 184); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Kodiak Isl Archipelago, Afognak Isl, Blue Fox Bay; White Pass (DILLMAN et al. 2012); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cladonia schofieldii* Ahti & Brodo – PWS, Knight Isl (BRODO & AHTI 1996, fumarprotocetraric and protocetraric acids); Tongass NF, Petersburg Ranger District, Thunder Mtn E of summit; [SE Alaska] mainland, Thunder Mtn (GEISER et al. 1998, fumarprotocetraric acid and atranorin); Chugach NF (DERR 2010: 242; also reported under *C. pseudalcicornis* in the same publication).

Cladonia pseudoevansii Asahina (*‘pseudevansii’*) – Terricolous in maritime heaths and tundra. – Attu Isl; PWS, Virgin Bay; Knight Isl, Thum Bay; Evans Isl, Port San Juan (AHTI 1960); Aleutian Isl, no location; Kishka; PWS, Evans Isl, Sawmill Bay; Crab Bay; Nichols Bay (= Nichols Pass, close to Ketchikan?) (AHTI 1961: maps); Aleutian Isl; coastal Alaska (THOMSON 1968a); Nichols Bay; PWS, Evans Isl; PWS, Knight Isl; Kishka; Attu Isl, East Canyon (KROG 1968); Alaska (YOSHIMURA 1968: map); Chugach NF (DERR 2010: 120, 144, 225, 242); Attu Isl; Chugach NF, PWS, W side of Disk Isl; small islet off Knight Isl (DILLMAN et al. 2012: perlatolic acid only chemotype); Alaska (ATHUKORALA et al. 2016); Glacier Bay NP: Dundas Bay (Taylor Bay) (SPRIBILLE et al. 2020). = *Cladina pseudoevansii* (Asahina) Hale & W. L. Culb. – Nichols Bay (GEISER et al. 1994a, 1998).

Cladonia pseudorangiformis → **Cladonia wainioi**

Cladonia pyxidata (L.) Hoffm. – Terricolous on soil and detritus, in forest, heaths and tundra, occasionally also epiphytic, widespread. – Kotzebue Sound (MANN 1868; TURNER 1886); Chamisso Isl; Eschscholtz Bay, Elephant Pt; Aliaska

Peninsula (ROTHROCK 1884); Port Clarence (NYLANDER 1887; HUE 1890); Pribilof Isls (MACOUN 1899); St Paul Isl; Chamisso Isl; Eschscholtz Bay; Elephant Pt; Aliaska Peninsula; Kotzebue Sound (MACOUN 1902); New Metlakatla; Juneau; Egg Isl, Disenchantment Bay; Hidden Glacier Inlet; Pt Gustavus, Glacier Bay; Yakutat; Indian Camp, Yakutat Bay; Unalaska; Hall Isl; St Paul Isl; St Lawrence Isl; Port Clarence; St Michael (CUMMINGS 1904); Alaska (FINK 1907c); Heceta Isl (HERRE 1919); White Pass (HERRE 1920); New Metlakatla; Juneau; Disenchantment Bay; Hidden Glacier Inlet; Glacier Bay; Yakutat; Unalaska; Hall Isl; St Paul Isl; St Lawrence Isl; Port Clarence; St Michael; Chamisso Isl; Eschscholtz Bay and Kotzebue Sound (MERRILL 1929); Atka Isl (HEDRICK 1936); Kotzebue Sound (SANDSTEDE 1939); PWS, Knight Isl, Thum Bay; Valdez (EYERDAM 1949); Mendenhall Glacier (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Mt Eielson; Muldrow lateral moraine (WEBER & VIERECK 1967); Kodiak Isl, 29 km NW of Olga Bay Cannery, “Amara Lake” (KROG 1969); Chitstone-Skolai region (SCOTT 1974); Chena R (VIERECK 1970); Barrow (WEBBER 1978); Haul Rd, Ray R Site; Haul Rd, Sukapak Mtn Site; Haul Rd, Toolik Upland Rd Site; Haul Rd, Franklin Buffs Site; Haul Rd, Coastal Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Anaktuvuk Pass; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Okpilak Valley (COPPINS 1981); Yukon R; Tanana R (MURRAY et al. 1983, including *C. pocillum*); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Denali NP, on the rd to Horseshoe L (SCHINDLER 1987); Amchitka Isl, Pumphouse L (THOMSON & SOWL 1989); Denali NP, Savage R (SCHINDLER 1990); Mt Fairplay; Thompson Pass; Fielding L (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk; N coast of Izembek Refuge (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Riverside Lodge Airstrip; Tetlin Junction (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010); cape of Hogg Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, FIA plot on Three Hole Bay; Kenai Fjords NPPr, near Harding Icefield Trail; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP; Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= “*Cenomyce pyxidata* Ach.” – Kotzebue’s Sound (HOOKER & ARNOTT 1841).

= *Cladonia pyxidata* subsp. *pyxidata* – Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Kenai Peninsula, Skilak L; Windy Pt, Turnagain Arm; Kenai Peninsula, Granite Cr Ridge;

Richardson Hwy, mi 24; Richardson Hwy, mi 37; Richardson Hwy, mi 45; Denali Hwy, mi 0–37; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; Steese Hwy, Eagle Summit; Circle Hot Springs; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Robert's Mtn; Kotzebue (KROG 1968); Eagle Summit (MURRAY & MURRAY 1978).

? = *Cladonia pyxidata* f. *cervina* Nyl. – Port Clarence (NYLANDER 1887).

= “*Cladonia pyxidata* subsp. *neglecta* (Flörke) A. Massal.” – Terricolous on rocky soils and in *Dryas* mats. – Timber Cr; Lower Telephone Cr; Jarvis Cr; Choris Peninsula (MERRILL 1929); Umiat; Bettles (KROG 1962; MURRAY 1974); Meade R Village; Ogotoruk Cr drainage; Ogotoruk Cr drainage; Ukinyik Cr drainage; White Mts, the limestone ridge (KROG 1962).

= “*Cladonia pyxidata* var. *neglecta*” – Mt Eielson (WEBER & VIERECK 1967).

Cladonia ramulosa → Appendix A

Cladonia rangiferina (L.) F. H. Wigg. – Terricolous in forests, tundra and heath, widespread. Many old records probably refer to *C. stygia*. – Kotzebue's Sound (BABINGTON 1851); Norton Sound; Kotzebue Sound (BABINGTON 1852); Kotzebue Sound (LINDSAY 1868); all Russian America (MANN 1868; TURNER 1886); Alaska (HOOPER 1884); “common, though collected sparingly and at few points” (ROTHROCK 1884); Port Clarence (ALMQUIST 1887); near Juneau, Salmon Cr; near Juneau, Sheep Cr (CUMMINGS 1892a); Pribilof Isls (MACOUN 1899); St George Isl; St Paul Isl; near Juneau, Salmon Cr; near Juneau, Sheep Cr (MACOUN 1902); Wrangell; White Pass; Orca; Hall Isl; St Lawrence Isl; Ft Cosmos; St Michael; Cape Nome (CUMMINGS 1904); Little Kiska; Atka (HOWE 1913a); Kuiu Bay; Baker Isl, Port San Antonio; near Wrangell (HERRE 1919); Alaska (HADWEN & PALMER 1922); Nome, Dexter Cr; Peace R; Kobuk R; Unalakleet R; Wrangell; White Pass, Orca; Hall Isl; St Lawrence Isl; Ft Cosmos; St Michael; Port Clarence; near Juneau; St Paul Isl; Kotzebue Sound (MERRILL 1929); Alaska (RÄSÄNEN 1933); Sitka; Metlakatla; Akutan whaling station; Atka Isl; Adak Isl, Chapel Cove; Attu Isl (DEGELIUS 1937); Kotzebue (DES ABBAYES 1939); Alaska (PALMER & ROUSE 1945); Yakutat Bay (STAIR 1947, citing author as only ‘Web.’); PWS, Thum Bay (EYERDAM 1949); Kotzebue; Mt McKinley NP (HANSON 1950); Atka Isl; Raspberry Isl, Port Vita (THOMSON 1950a); Nome (HANSON 1953); Juneau icefield nunatak (HEUSSER 1954); Volcano Veniamin; Stampede; Fox (HOWARD 1958); Colville R (THOMSON 1960); Anaktuvuk Pass; Bettles; S slope, Wild L (KROG 1962; MURRAY 1974); Ogotoruk Cr drainage; St Matthew Isl; Hooper Bay; Steese Hwy, Eagle Summit (KROG 1962); Bettles, 10 mi above the mouth of John R; mtn across Koyukuk R from Wiseman (HOWARD 1963; MURRAY 1974); hill E of rd to Kantishna (HOWARD 1963); Mendenhall Glacier (McCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Mt Hayes, Tanana R near Gerstle R; Cantwell (THOMSON 1968a); Mt Eielson; Wonder L; McKinley Bar (WEBER & VIERECK 1967); 7 mi N of Nome, Dexter Cr; near Koyuk; 6 mi NW of Nome, Snake R (PEGAU 1968); Amchitka Isl, small valley above Chitka Cove (WEBER et al. 1969); Chitistone-Skolai region (SCOTT 1974); Anaktuvuk Pass (NASH 1977); E bluff of the Johns R, Anaktuvuk Pass (MOSER & NASH 1978); Haul Rd, Ray R Site; Haul Rd, Finger Mtn Site; Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi

upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; 6.5 mi SSW of Barrow Base, near Loon L; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Okpilak Valley (COPPINS 1981); Seward Peninsula, Nimrod Hill (RACINE 1981); Porcupine R drainage (YARIE 1983); Alaska (THOMSON 1984: map); Arrigetch Pks (COOPER 1986a); Arrigetch Cr valley (COOPER 1986b); Tongass NF, Stikine Area (GEISER et al. 1994a); Alaska Hwy, mi 1240 (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Ulukluk Cr (JANDT et al. 2008); Interior Alaska (LAURSEN & SEPPELT 2009); Noatak NPr (McCUNE et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Innoko Flats NWR (STOY et al. 2012); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Alaska (ATHUKORALA et al. 2016); Seward Peninsula, 7 km ESE of Nome (PINO-BODAS et al. 2017a); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Fortymile caribou herd range (MACANDER et al. 2020); Kenai Fjords NPPr (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= "*Cenomyce rangiferina* Ach." – Kotzebue's Sound (HOOKER & ARNOTT 1841).

= *Cladina rangiferina* (L.) Nyl. – Lawrence-Insula; Port Clarence (NYLANDER 1887); Sitka (STIZENBERGER 1895a, 1895b); Prudhoe Bay (MURRAY & MURRAY 1975b); Barrow; Eagle Summit (MURRAY & MURRAY 1978); Ogotoruk Cr (MURRAY 1985); Anchorage, by Portage (SCHINDLER 1987); Nishlik L (THOMSON & DOELL 1989); Katmai NP, Brooks Lodge, on the way to the Valley of Ten Thousand Smokes; Katmai NP, on the edge of Hammersly L (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); Attu Isl (TALBOT & TALBOT 1994); Mt Alyeska; Portage Glacier; Eagle Summit; Deadman L CG; Blueberry L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Isl; (DANIËLS et al. 1998); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); SE Alaska (DERR et al. 2007); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010); Nulato Hills (JOLY et al. 2010); Unalaska Isl (TALBOT et al. 2010b); Brooks Range, Atigun Pass (KASANKE 2019); Hagemester Isl (WALSH & GOWARD 2021).

= *Cladina rangiferina* subsp. *rangiferina* – SE Alaska (GEISER et al. 1994a: map).

= *Cladonia rangiferina* subsp. *rangiferina* – Juneau area, Loop Rd, Mendenhall Glacier Trail; Juneau area, Mt Roberts; Juneau area, Montana Cr; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Ketchikan area, Saxman Village; Talkeetna Mts, Mabel Mine;

Independence Mine; Puritan Cr; northern Cook Inlet area, Eagle R Valley; Rabbit Cr; Kenai Peninsula, Skilak L; Marathon Mtn; Richardson Hwy, mi 170; White Mts, Beaver Cr E of Sheep Cr; headwaters of Sheep Cr; junction of Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Eagle Summit; Circle Hot Springs; Nunivak Isl, Mekoryuk Village; Nash Harbour; Robert's Mtn; Seward Peninsula, King Mtn, Anvil Pk; Rainbow Cr; Kotzebue (KROG 1968).

= *Cladonia rangiferina* subsp. *rangiferina* var. *rangiferina* – “Common throughout the state” (AHTI 1961: map).

= “*Cladonia rangiferina* subsp. *grisea* Ahti” – Sitka area, Indian R Trail (KROG 1968).

Cladonia rangiformis → [Appendix A](#)

Cladonia rei Schaer. – Terricolous on road bank in *Picea sitchensis* forest, on beach ridges and old gravels. – SE Alaska (GEISER et al. 1994a); Portage Glacier; terminal moraine of Valdez Glacier; Richardson Hwy, mi 10, near Valdez (THOMSON & AHTI 1994); Juneau, Mendenhall L vicinity (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Cladonia nemoxya* (Ach.) Arnold – Mendenhall L; Portage Glacier (KROG 1968).

Cladonia scabriuscula (Delise) Nyl. – Terricolous on soil and mossy rock, in forest, mostly in coastal lowlands, also reported (as corticolous or in moss mats?) on *Betula kenaica* (TALBOT 1998) and *Tsuga heterophylla* (DILLMAN 2004). – Juneau; Kodiak Isl, Kodiak; Unalaska Isl, Unalaska; St Paul Isl (DEGELIUS 1937); Unalaska; St Paul Isl; Ketchikan; Juneau; Kodiak (SANDSTEDE 1938: also map); Hooper Bay (KROG 1962); Alaska (THOMSON 1968a); Juneau area, Loop Rd; Mendenhall L; Juneau area, Granite Basin; Juneau area, Shrine of St Therese; Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Talkeetna Mts, Mabel Mine; Independence Mine; Kenai Peninsula, Marathon Mtn; White Mts, Beaver Cr E of Sheep Cr; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; Anvil Pk; Kotzebue (KROG 1968); Amchitka Isl (WEBER et al. 1969); S of Wainwright, Kaolak R; Colville R near Umiat (THOMSON 1979); Alaska (THOMSON 1984: map); Cantwell (SCHINDLER 1987); Katmai NP, Brooks Lodge area, Brooks Falls (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Copper R Delta (BOGGS 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Unalaska Isl (TALBOT et al. 2010b); Seward Peninsula, Glacier Cr; Mauze Cr; Tigalda Isl (PINO-BODAS 2012); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Alaska (PINO-BODAS et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, W of

Resurrection R and N of Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021). = “*Cladonia scabriuscula* f. *conspersa* Vainio” – Unalaska Isl (HEDRICK 1936). = *Cladonia macroptera* auct., non Räsänen – Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map). Records refer to *C. scabriuscula*. = “*Cladonia scabriuscula* f. *surrecta* (Flörke) Leight.” – Yakutat Bay (STAIR 1947); Kodiak Isl (THOMSON 1950a).

Cladonia scotteri Ahti & E. S. Hansen – Terricolous on calcareous to acidic soil. – Noatak NPr, Kukururok R (HANSEN & AHTI 2011); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

Cladonia singularis S. Hammer – Terricolous in heath and krummholz, also in talus at lower elevations. Some old alpine records of *Cladonia squamosa* from southern coastal Alaska may be referable here. – Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Chugach NF (DERR 2010: 120, 140, 156); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr, Primrose Ridge; Denali NPPr, Polychrome Pass; Denali NPPr, Nika Ridge; Denali NPPr, Bearpaw Ridge; Denali NPPr, Kakone Pk (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Tuxedni (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020).

Cladonia squamosa Hoffm. – Terricolous on sod and over shallow soil over rock, and lignicolous on rotten logs, sometimes also muscicolous in moss mats on conifer branches in rainforests. – Sitka, at Warm Springs (ROTHROCK 1884); Port Clarence (NYLANDER 1887; HUE 1890); near Juneau, Sheep Cr (CUMMINGS 1892a, but “Sheep Cr form doubtful”); Attu Isl; at Warm Springs, Sitka; Juneau, Sheep Cr (MACOUN 1902); Alaska (CUMMINGS 1904); Kosciusko Isl, Shipley Bay (HERRE 1919); Port Clarence; Sitka; Sheep Cr; Juneau (MERRILL 1929); Kodiak Isl (HEDRICK 1936); Kenai Peninsula, Seward; Kodiak Isl, Kodiak (DEGELIUS 1937); Yakutat Bay (STAIR 1947); PWS, Thum Bay (EYERDAM 1949); Stampede (HOWARD 1958); Denali Hwy, mi 28 (KROG 1962); hill E of rd to Kantishna (HOWARD 1963); Mendenhall Glacier (MCCULLOUGH 1965); Juneau area, Loop Rd; Mendenhall Glacier Trail; Juneau area, Mt Roberts; Juneau area, Granite Basin; Juneau area, Montana Cr; Juneau area, Shrine of St Therese; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Sitka area, Indian R trail; Ketchikan area, Deer Mtn; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Kenai Peninsula, Skilak L; Kenai Peninsula, Portage Glacier Rd; Kenai Peninsula, Ingram Cr CG; W of Seward, Marathon Mtn; Richardson Hwy, mi 37; PWS, Pigot Bay; Denali Hwy, mi 0–28, mi 32–37, mi 100; Denali NP, Savage R; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbour; Roberts Mtn, Nunivak Isl; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr; Kotzebue (KROG 1968, squamatic acid strain); Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Ketchikan area, Saxman Village (KROG 1968, thamnolic acid chemotype); Alaska (THOMSON 1968a); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Alaska (THOMSON 1984: map); Anchorage, by Portage (SCHINDLER 1987); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier; Mt Fairplay;

Thompson Pass (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Chugach NF (DEVELICE et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1240 (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Hogg Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP; Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020); Hagemester Isl (WALSH & GOWARD 2021).

= *Cladonia squamosa* var. *squamosa* – Ft Richardson (MURRAY 1997); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b).

= “*Cladonia squamosa* f. *denticollis* (Hoffm.) Flk.” – Schipley Bay (MAGNUSSON 1932).

= “*Cladonia squamosa multibrachiata* Flk.” – Cape Nome (MERRILL 1929).

= “*Cladonia squamosa* f. *muricella* (Del.) Vain.” – Brownson Bay (MAGNUSSON 1932); Kuiu Isl, Washington Bay (THOMSON 1950a).

= “*Cladonia squamosa* var. *muricella* (Del.) Wain.” – New Metlakatla, Annette Isl; Sitka; Cape Nome (CUMMINGS 1904); Nunivak Isl; New Metlakatla; Annette Isl; Sitka; Cape Nome (MERRILL 1929); Alaska (PALMER & ROUSE 1945); PWS, Thum Bay (EYERDAM 1949).

= “*Cladonia squamosa pityrea* Arn.” – Lower Telephone Cr (MERRILL 1929).

= “*Cladonia subsquamosa* (Nyl.) Vain.” – Port Clarence (NYLANDER 1887; HUE 1890); Unalakleet R; Port Clarence (MERRILL 1929); Kuiu Isl, Washington Bay (THOMSON 1950a); Denali NP Rock Cr Trail (HOWARD 1963); SE Alaska (GEISER et al. 1994a).

= *Cladonia squamosa* var. *subsquamosa* (Nyl. ex Leight.) Vain. – (GEISER et al. 1998); S Alaska (ROOT et al. 2014); Denali NPPr (STEHN et al. 2015).

= “*Cladonia squamosa subtrachynella* Wain.” – Kobuk R (MERRILL 1929).

= “*Cladonia squamosa turfacea* (Rehm) Wain.” – Cape Nome (MERRILL 1929).

Cladonia stellaris (Opiz) Pouzar & Vězda – Terricolous in dwarf shrub heaths and tundra down into forested elevations and latitudes, widespread throughout Alaska. – Anaktuvuk Pass (NASH 1977); Alaska (AHTI 1977: map); E bluff of the Johns R, Anaktuvuk Pass (MOSER & NASH 1978); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Pks (COOPER 1986a); Arrigetch Cr valley (COOPER 1986b); Aleutian Isls (LITTERSKI & AHTI 2004); Alaska Hwy, mi 1240; Mt Fairplay (TALBOT et al. 2007); Interior Alaska (LAURSEN & SEPPELT 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE

2019); Fortymile caribou herd range (MACANDER et al. 2020); Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Cladonia stellaris* (Opiz) Brodo – Ogotoruk Cr (MURRAY 1985); Amchitka Isl, Kirilof Pt (THOMSON & SOWL 1989); Nishlik L (THOMSON & DOELL 1989); Katmai NP, Hammersly L (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Attu Isl (TALBOT & TALBOT 1994); SE Alaska (GEISER et al. 1994a: map); Alaska (BRODO & AHTI 1996, “chemotype 2”); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Innavaik Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Isl; (DANIËLS et al. 1998); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010); Hagemeister Isl (WALSH & GOWARD 2021).
= *Cladonia stellaris* var. *stellaris* – Denali NP, on the rd to Horseshoe L; Tetlin Junction (SCHINDLER 1987); Mt Alyeska; Deadman L CG; Moon L CG; Fielding L (THOMSON & AHTI 1994); Noatak NPr (MCCUNE et al. 2009); Denali NPPr (STEHN et al. 2015).

= *Cladonia alpestris* (L.) Rabenh. – Lawrence ins. (HUE 1890); White Pass; Orca; Virgin Bay; PWS, Columbia Fiord; Kodiak; Hall Isl; St Matthew Isl; St Michael Isl; St Lawrence Isl; Port Clarence; Cape Nome; Seward Peninsula (CUMMINGS 1904); Nichols Bay; near Wrangell (HERRE 1919); Eagle (HERRE 1920); Alaska (HADWEN & PALMER 1922); Clarosky R; Cape Nome; White Pass; Orca; Virgin Bay; Columbia fiord; Kadiak; Hall Isl; St Matthew Isl; St Lawrence Isl; Port Clarence (MERRILL 1929); PWS, Crab Bay; Attu Isl (DEGELIUS 1937); St Paul, St Lawrence Isl, Mt McKinley NP, Port Clarence (DES ABBAYES 1939); PWS, Thum Bay (EYERDAM 1949); Kotzebue (HANSON 1950); Port Heiden; Attu Isl, Siddens Valley, East Canyon (HOWARD 1958); Alaska (AHTI 1961: map, chemical strain I (PD–)); Anaktuvuk Pass; Bettles (KROG 1962; MURRAY 1974, chemical strain I (PD–)); Quigley Hill (HOWARD 1963); Wiseman Cr (HOWARD 1963; MURRAY 1974); Alaska Range District, Dry Cr (WEBER 1963); Mendenhall Glacier (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Mt Eielson (WEBER & VIERECK 1967); Turnagain Arm, Bird Cr Ridge; Denali Hwy, mi 100; Denali NP, Savage R; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Kotzebue (KROG 1968, chemical strain I (PD–)); 7 mi N of Nome, Dexter Cr; near Koyuk; 6 mi NW of Nome, Snake R (PEGAU 1968); Alaska (THOMSON 1968a); “Pinguicula Lake”, 23 km SE of Karluk, Kodiak Isl (KROG 1969); Amchitka Isl (WEBER et al. 1969); Haul Rd, Finger Mtn Site (WEBBER et al. 1978); Tongass NF, Lower Dewey L Trail, near Stargill's Landing (NASH et al. 2006).

- = “*Cladina rangiferina* ** *alpestris*” – Lawrence Isl (NYLANDER 1887).
- = “*Cladonia rangiferina* var. *alpestris* L.” – Pribilof Isls (MACOUN 1899).
- = “*Cladonia sylvatica* var. *alpestris* L.” – St Paul Isl (MACOUN 1902).
- = “*Cladonia alpestris inturgescens* Arn.” – Quethluk R (MERRILL 1929).

Cladonia stellaris var. **aberrans** (Abbeyes) Ahti – St Paul Isl (AHTI et al. 1987; AHTI 1993); Thompson Pass (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Noatak NPr (MCCUNE et al. 2009); Alaska (ATHUKORALA et al. 2016); Lake Clark NPPr, Saddle Mtn; Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018).

= *Cladina aberrans* (Abbeyes) Hale & W. L. Culb. – Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997).

= “*Cladina stellaris* (Abbeyes) Ahti var. *aberrans*” – SE Alaska (GEISER et al. 1994a); Pike Lakes, Yakutat (GEISER et al. 1998); Chugach NF (DERR 2010).

= *Cladonia aberrans* (Abbeyes) Stuckenb. – Alaska (STUCKENBERG 1956: map); Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996).

= *Cladonia alpestris* f. *aberrans* Abbeyes – L’île Saint-Paul (**type** – DES ABBAYES 1939; WONG 1993 [“St. Paul Isl”]); White House Pass (EVANS 1943); Port Heiden; St Lawrence Isl; Stampede; Fox; Kasigluk, near school; Takotna (HOWARD 1958).

= “*Cladonia alpestris* chemical strain II (psoromic acid strain, PD +)” – Sitka (AHTI 1961: map); St Matthew Isl; near Anchorage, Talkeetna Mts; Bettles (KROG 1962); Juneau area, Loop Rd; Sitka area, Indian R Trail; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Eagle R Valley; Eagle R, mtn area; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; W of Seward, Marathon Mtn; Richardson Hwy, mi 24, mi 37; mi 170; Denali Hwy, mi 0–37; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbour; Nunivak Isl, Roberts Mtn; Seward Peninsula, King Mtn (KROG 1968).

Cladonia straminea (Sommerf.) Flörke – Terricolous or on thin soil over boulders, and lignicolous on wooden stick in muskeg. – Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, NE end of Harris Bay (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cladonia metacoralifera* Asahina – Pt Barrow (EVANS 1955); Anaktuvuk Pass (EVANS 1955; MURRAY 1974); northern Alaska (THOMSON 1968a); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Loop Rd; Mendenhall L; White Mts, between Beaver Cr and Fossil Cr; Nunivak Isl, Robert’s Mtn (KROG 1968); Alaska (YOSHIMURA 1968: map); Alaska (TØNSBERG 1975); Barrow (MURRAY & MURRAY 1978); Pt Barrow; Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Nishlik L (THOMSON & DOELL 1989); Alaska (STENROOS 1989b: map); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Alaska (BRODO & AHTI 1996); Eagle Summit (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH &

HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2013); Gates of the Arctic NPPr (NELSON et al. 2015b).

***Cladonia stricta* (Nyl.) Nyl.** – Terricolous and muscicolous, especially in boulder beds; many records are doubtful and may refer to *C. trassii*. – Alaska (THOMSON 1984: map); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a); Mt Alyeska; Portage Glacier; Eagle Summit; Deadman L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Pt Barrow; Mt Fairplay (AHTI 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr, Malone L; Lake Clark NPPr, Two Lakes; Lake Clark NPPr, S end of Pickerel L; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Telaquana L (MCCUNE et al. 2018); Alaska (STENROOS et al. 2019); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

***Cladonia stygia* (Fr.) Ruoss** – Terricolous in forest and tundra, especially in peaty soils. Many old records of *C. rangiferina* are probably referable here. – Seaton Roadhouse (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Dalton Hwy (LANG et al. 2012); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Alaska (ATHUKORALA et al. 2016); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= *Cladina stygia* (Fr.) Ahti – Kodiak Isl; Afognak Isl; several other localities on map (AHTI & HYVÖNEN 1985); Katmai NP, Hammersly L (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); SE Alaska (GEISER et al. 1994a); Mt Fairplay; Thompson Pass (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Izembek Refuge, Cold Bay (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010: 182, 204); Unalaska Isl (TALBOT et al. 2010b); Denali NPPr (NELSON et al. 2015a); Brooks Range, Atigun Pass (KASANKE 2019); Yukon-Kuskokwim Delta (FROST et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= “*Cladonia rangiferina stygia* Fr.” – 10 mi above the mouth of John R (HOWARD 1963; MURRAY 1974).

Cladonia subcervicornis → [Appendix A](#)

***Cladonia subfurcata* (Nyl.) Arnold** – Terricolous in humus-rich soils, in heaths, in fens and in talus slopes and tundra, low elevations to (more commonly?) alpine. – Alaska (THOMSON 1968a); Juneau area, Mt Roberts; Mendenhall L; Sitka area, Harbor Mtn; Talkeetna Mts, Bald Mtn Ridge; Richardson Hwy, mi 24, mi 37, mi

45; Denali Hwy, mi 32–37; Denali NP, Wonder L; Nunivak Isl, Roberts Mtn; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr (KROG 1968); Prudhoe Bay (MURRAY & MURRAY 1975a); Barrow; Eagle Summit; Prudhoe Bay (MURRAY & MURRAY 1978); Pt Barrow; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Pistol Range (THOMSON & SOWL 1989); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk; Izembek Lagoon; Cold Bay (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, kilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= “*Cladonia delesserti* (Nyl.) Vainio” – Etchepuk R; Lower Telephone Cr; Kobuk R; Cape Nome; Nunivak Isl; Quethluk R (MERRILL 1929); St Paul Isl (DEGELIUS 1937); St Paul Isl (SANDSTEDE 1938); Alaska (PALMER & ROUSE 1945); PWS, Thum Bay (EYERDAM 1949); Nome (HANSON 1953); “Alaska med Pribiloföarna, St Lawrenceön” (HASSELROT 1953); Mendenhall Glacier (MCCULLOUGH 1965); Mt Eielson (WEBER & VIERECK 1967).

Cladonia subsubulata → [Appendix A](#)

Cladonia subulata (L.) F. H. Wigg. – Terricolous on forest floor and on moraines and road cuts. – Alaska (THOMSON 1968a); Anderson Pass Glacier moraine (WEBER & VIERECK 1967); Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Skilak L; Portage Glacier; White Mts, headwaters of Sheep Cr; Seward Peninsula, King Mtn; N of Nome, Anvil Pk (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, Station Primrose (SCHINDLER 1987); Katmai NP, Brooks Lodge area, Brooks Falls (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Deadman L CG; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1240 (TALBOT et al. 2007); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Brooks Falls; Katmai NPPr, Malone L; Katmai NPPr, Hammersly L (MCCUNE et al. 2018); Glacier Bay NP: Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

= “*Cladonia cornutoradiata* (Coem.) Sandst.” – Stampede; Kasigluk, near the school (HOWARD 1958); Bettles (KROG 1962).

= *Cladonia fimbriata* var. *cornutoradiata* (Leight.) Vain. – Kotzebue (SANDSTEDE 1939).

? = “*Cladonia fimbriata simplex* f. *furcellata* (Hoffm.) Wain.” – Cape Nome (MERRILL 1929).

= “*Cenomyce radiata* Ach.” – Kotzebue's Sound (HOOKER & ARNOTT 1841).

= “*Cladonia cornutoradiata* f. *radiata* (Schreb.) Sandst.” – Kuiu Isl, Washington Bay (THOMSON 1950a).

= “*Cladonia fimbriata radiata*” – Kotzebue Sound (MERRILL 1929).

= “*Cladonia fimbriata simplex* f. *radiata* (Schreb.) Coem.” – Cape Nome (MERRILL 1929).

= “*Cladonia fimbriata simplex* f. *subulata* (L.) Wain.” – Cape Nome (MERRILL 1929).

Cladonia sulphurina (Michx.) Fr. – Terricolous or muscicolous, or lignicolous on well-rotted wood, also reported as corticolous on *Alnus*. – Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Denali NP, on the rd to Horseshoe L; Denali NP, Station Primrose (SCHINDLER 1987); Chauekuktuli L (THOMSON & DOELL 1989); Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Kenai Peninsula, Chugach NF, Ptarmigan L Trail; Denali NP, Rock Cr Trail (SCHINDLER 1990); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, N end of Harris Bay; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).
= *Cladonia gonecha* (Ach.) Asahina – Nome (HANSON 1953); Hill E of rd to Kantishna (HOWARD 1963); Alaska (THOMSON 1968a); Eagle Summit (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).
= *Cladonia deformis* var. *gonecha* (Ach.) Arnold – Juneau area, Granite Basin; Talkeetna Mts, Independence Mine; Kenai Peninsula, Granite Cr Ridge; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Seward; Richardson Hwy, mi 9, mi 170; Denali Hwy, mi 28, mi 70, mi 100; Denali NP, Wonder L; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; Steese Hwy, Eagle Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash

Harbour; Nunivak Isl, Roberts Mtn; Seward Peninsula, King Mtn; Kotzebue (KROG 1968).

Cladonia symphycarpa (Flörke) Fr. – Terricolous on mineral soil. – Cook's Inlet, Ft Alexander (MACOUN 1902); Cooks Inlet (MERRILL 1929); Juneau area, Mt Roberts; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Denali Hwy, mi 28 (KROG 1968, as *C. symphycarpia*); Alaska (BRODO 1984a); Denali NP (SCHINDLER 1987); Alaska (THOMSON 1984: map); Richardson Hwy, mi 24 (CULBERSON et al. 1993); SE Alaska (GEISER et al. 1994a: map); Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998, as cf.); Alaska (BRODO et al. 2001); Noatak NPr (HOLT et al. 2009, listed as both '*symphycarpa*' and '*symphycarpia*'!); MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010: atranorin/norstictic chemotype); Crow Pass, Turnagain Arm (PINO-BODAS 2012); Gates of the Arctic NPPr (NELSON et al. 2015b); Glacier Bay NP: Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Cladonia pyxidata* var. *symphycarpa* Fr. – Cook's Inlet at Ft Alexander (ROTHROCK 1884).

= "*Cladonia cariosa corticata* Wainio" – Alaska (CUMMINGS 1904).

= *Cladonia dahliana* Kristinsson – [SE Alaska] mainland, E of Horn Mtn (GEISER et al. 1998, as cf.).

Cladonia thomsonii Ahti – Terricolous in tundra. – Chugach Mts, Thompson Pass (**type**); Pt Barrow; Elson Lagoon; Naval Arctic Research Lab; N of Nome, Dexter; Cantwell (AHTI 1978b); Anaktuvuk Pass (MOSER et al. 1979); Pt Barrow; Anaktuvuk Pass (THOMSON 1979); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a); Thompson Pass (THOMSON & AHTI 1994, Pino BODAS 2012); Barrow (ZHURBENKO et al. 1995, PINO-BODAS 2012); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Noatak NPr (MCCUNE et al. 2009).

Cladonia transcendens (Vain.) Vain. – Lignicolous on rotten logs and corticolous at bases of conifers; some old records may apply to *C. umbricola*. The Barrow record is likely misidentified. – Alaska (THOMSON 1968a); Juneau area, Loop Rd; Juneau area, Shrine of St Therese; Juneau area, Douglas Ski Bowl; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; PWS, Fish Bay (KROG 1968); Barrow (MURRAY & MURRAY 1978); SE Alaska (GEISER et al. 1994a: map); Alaska (BRODO & AHTI 1996); Chugach NF (DERR 2010); Denali NPPr (NELSON et al. 2013); S Alaska (ROOT et al. 2014); Denali NPPr (ROLAND et al. 2017). = *Cladonia transcendens* f. *squamulosa* A. Evans – Sitka (EVANS 1951).

Cladonia trassii Ahti – Terricolous in arctic and alpine tundra and on sandy soil. Many old records under the name *C. lepidota* are probably incorrectly identified, but some records of *C. stricta* are probably referable here. – Thompson Pass (AHTI 1998); Alaska (BRODO et al. 2001); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cladonia cerasphora* Vain. – Unalaska (SANDSTEDE 1938).

= “*Cladonia lepidota* f. *cerasphora* Lynge” – Unalaska Isl (HEDRICK 1936).

= “*Cladonia lepidota* var. *cerasphora* Lynge” – Unalaska Isl, Captain's Harbor (THOMSON 1950a).

= *Cladonia lepidota* auct., non Nyl. – Lawrence-Insula (NYLANDER 1887);

Lawrence ins. (HUE 1890); St Lawrence Isl (MERRILL 1929, “probably a state of

Cl. degenerans”); Juneau icefield nunatak (HEUSSER 1954); Pt Barrow

(THOMSON 1960); Ogotoruk Cr drainage (KROG 1962); Wonder L Lodge

(HOWARD 1963); Alaska (THOMSON 1968a); McKinley Bar (WEBER & VIERECK

1967); Kenai Peninsula, S of Hidden L; W of Seward, Marathon Mtn; Denali

Hwy, mi 0–28; Denali Hwy, mi 28; mi 32–37; Denali NP, Savage R; White Mts,

headwaters of Sheep Cr; White Mts, Lion Pk; Steese Hwy, Cleary Summit;

Seward Peninsula, King Mtn; Anvil Pk (KROG 1968); Prudhoe Bay (MURRAY &

MURRAY 1975a); Barrow (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER

et al. 1979); Colville R near Umiat; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs

on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson

(THOMSON 1979); Ogotoruk Cr (MURRAY 1985).

Cladonia turgida Hoffm. – Terricolous on mineral soils as well as soils rich in humus, forest and alpine habitats. – Unalaska Isl, Unalaska (DEGELIUS 1937); Unalaska (SANDSTEDE 1938); Mendenhall Glacier (MCCULLOUGH 1965); Alaska (THOMSON 1968a); Mendenhall L; Juneau area, Mt Roberts; Denali Hwy, mi 32–37; Nunivak Isl, Robert's Mtn; Seward Peninsula, King Mtn; Seward Peninsula; Kigluaik Mts, Rainbow Cr (KROG 1968); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a); Thompson Pass (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Aleutian Isls (LITTERSKI & AHTI 2004); Katmai NPPr, Hammersly L (MCCUNE et al. 2018: atranorin only, as cf.); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Cladonia uliginosa (Ahti) Ahti – Terricolous in periodically wet places from forests to *Betula* scrub. – Alaska Peninsula, Naknek; L Peters (AHTI 1998); Noatak NPr (MCCUNE et al. 2009); NW of Nome, Shake R; Gates of the Arctic NP, Reed R; Cantwell, Broad Pass (DILLMAN et al. 2012).

= “*Cladonia gracilescens* (Flk.) Wain.” – St Lawrence Isl (MERRILL 1929); Unalaska (SANDSTEDE 1938).

= *Cladonia lepidota* Nyl. var. *gracilescens* (Flörke) Du Rietz – Unalaska Isl, Unalaska (DEGELIUS 1937).

Cladonia umbricola Tønsberg & Ahti – Lignicolous on rotting wood of various stages of decomposition, also corticolous on *Betula*, *Picea* and *Tsuga*. Some (many?) old reports under *Cladonia transcendens* (q.v.) may be referable here. – SE Alaska (GEISER et al. 1994a, as “var. *umbricola*” though this species was never split into varieties; map); Alaska (BRODO & AHTI 1996); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010: 156, 184, 244); Afognak Isl, Blue Fox Bay; cape of Hogg Isl (DILLMAN 2010); Chilkoot Trail; Icy Junction 12 (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Alaska (STENROOS et al. 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Alaska (PINO-BODAS & STENROOS 2021 – Suppl. Inform. ESM1); Glacier Bay NP: Excursion Ridge, Glacier Bay, Gustavus

(SPRIBILLE et al. 2020, squamatic acid, squamatic/usnic acid and thamnolic acid chemotypes reported).

= *Cladonia flabelliformis* sensu Krog, non (Flörke) Vain. – Sitka area, Indian R Trail (KROG 1968).

= *Cladonia pseudomacilenta* auct. amer., non Asahina – Kodiak Isl (EVANS 1955; THOMSON 1968a; KROG 1968); near Juneau, Sheep Cr trail (GEISER et al. 1994a).

= *Cladonia umbricola* var. *colombiana* nom. nud. – SE Alaska (GEISER et al. 1994a).

Cladonia uncialis (L.) F. H. Wigg., **subspecies not specified** – Terricolous from woodlands to alpine tundra. – Kotzebue's Sound (BABINGTON 1851); Kotzebue Sound (BABINGTON 1852); Kotzebue Sound (LINDSAY 1868); Sitka; Kotzebue Sound (MANN 1868; TURNER 1886); Alaska (HOOPER 1884, as “*incolis*” in text, but illustrated as *uncialis*); Port Clarence (ALMQUIST 1887; NYLANDER 1887); Port-Clarence (HUE 1890); St George Isl; Sitka; Kotzebue Sound (MACOUN 1902); Sitka; Unalaska; St Lawrence Isl; Port Clarence; Rainder Station, Port Clarence; St Michael; Cape Nome; Seward Peninsula (CUMMINGS 1904); Amaknak Isl (HOWE 1913a); Nichols Bay (HERRE 1919); Alaska (HADWEN & PALMER 1922); Sitka; Unalaska; St Lawrence Isl; Port Clarence; St Michael; Cape Nome; Seward Peninsula; Kotzebue Sound; Unalakleet R; Amanak Isl (MERRILL 1929); Alaska (RÄSÄNEN 1933); Unalaska Isl (HEDRICK 1936); Unalaska Isl, Unalaska; Atka Isl; Attu Isl (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Yakutat Bay (STAIR 1947); Orca; PWS, Thum Bay (EYERDAM 1949); Kotzebue (HANSON 1950); Kiana; Perryville, in front of village; Akutan Isl, Akutan Village (HOWARD 1958); Umiat (KROG 1962; MURRAY 1974); Ogotoruk Cr drainage; Ogotoruk Cr drainage; St Matthew Isl; Hooper Bay; halfway up Tracy Arm, W side (KROG 1962); Mendenhall Glacier (McCULLOUGH 1965); Alaska (THOMSON 1968a); Juneau area, Loop Rd; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Little Nelchina, by Glenn Hwy; Kenai Peninsula, Bird Cr Ridge; S of Hidden L; Richardson Hwy, mi 24; Denali Hwy, mi 0–28, mi 100; White Mts, headwaters of Sheep Cr; Cache Mtn; Steese Hwy, Eagle Summit; Nunivak Isl, Mekoryuk Village; Seward Peninsula, King Mtn; Rainbow Cr (KROG 1968); Barrow; Eagle Summit (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; Anaktuvuk Pass; Okpilak (THOMSON 1979); Arey Cr; Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Nishlik L (THOMSON & DOELL 1989); Katmai NP, Brooks Lodge area (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier; Eagle Summit; Mt Fairplay; Deadman L CG; terminal moraine of Valdez Glacier; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Imnavait Cr (HAHN et al. 1996); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Isl; (DANIËLS et

al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Aleutian Isls (LITTERSKI & AHTI 2004); Bering Land Bridge NPr (HOLT et al. 2007); Riverside Lodge Airstrip; Mt Fairplay (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Unalaska Isl (TALBOT et al. 2010b); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a; STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (Taylor Bay), Excursion Ridge, Gustavus (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).
 = "*Cenomyce uncialis* Ach." – Kotzebue's Sound (HOOKER & ARNOTT 1841).
 = "*Cladonia uncialis adunca* (Ach.) Flot." – First Chance Cr; Nome, Dexter Cr; Bonasila R (MERRILL 1929).
 = "*Cladonia uncialis obtusata* (Ach.) Nyl." – Cape Nome; Unalakleet R; Akiak; Jarvis Cr (MERRILL 1929); Alaska (PALMER & ROUSE 1945).
 = "*Cladonia uncialis* f. *subobtusata* (Coem.) Arn." – Mendenhall Glacier (McCULLOUGH 1965).
 ? = "*Cladonia turgescens*" – Alaska (HADWEN & PALMER 1922).
 = "*Cladonia uncialis turgescens* Del." – Telegraph Cr; Death Valley; Nunivak Isl; Kobuk R; Cape Nome; Charosky R; McDonald Mtn; Quethluk R; Unalakleet R (MERRILL 1929); Alaska (PALMER & ROUSE 1945).
 = "*Cladonia uncialis* var. *turgescens* Fr." – St Paul Isl (MACOUN 1899).

Cladonia uncialis* subsp. *uncialis – Terricolous. – Aleutian Isls (STENROOS et al. 2015).

= *Cladonia pseudostellata* Asahina – Terricolous on mossy balds and in alpine tundra. Synonymy after STENROOS et al. (2015). – Aleutian Isl; N slope of the Brooks Range; Hot Springs (THOMSON 1968a); Eagle R Valley; Kenai Peninsula, Granite Cr Ridge; W of Seward, Marathon Mtn; Richardson Hwy, mi 24, mi 170; Denali Hwy, mi 70; Steese Hwy, Cleary Summit; Circle Hot Springs (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map); Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Chilkoot Trail (SPRIBILLE et al. 2010); Aleutian Isls (STENROOS et al. 2015).

Cladonia uncialis* subsp. *biuncialis (Hoffm.) Choisy – Terricolous. Neither subspecies of *C. uncialis* recognized by STENROOS et al. (2015) has been tracked in recent diversity studies, though *C. uncialis* and *C. pseudostellata* have been distinguished based on chemistry (e.g. SPRIBILLE et al. 2020). The single report of subsp. *biuncialis* may be based on the *C. pseudostellata* hypothamnolic acid chemotype, though it is not inconceivable that it could occur in Alaska.
 = "*Cladonia uncialis biuncialis* Hoffm." – Unalakleet R (MERRILL 1929).

Cladonia verruculosa (Vain.) Ahti – Terricolous in heath or snowbeds. –

Ketchikan (AHTI 1978b); Chaekuktuli L (THOMSON & DOELL 1989); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Haines (THOMSON & AHTI 1994); Juneau area (BRODO & AHTI 1996); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996, as cf.); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, northwest Lagoon Beach; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, West Arm; Gustavus, State Dock (SPRIBILLE et al. 2020).

Cladonia verticillata Hoffm. – Terricolous, rarely lignicolous, mostly at forested altitudes and latitudes. – Port Clarence (CUMMINGS 1904); Alaska (FINK 1904); Jarvis Cr; Port Clarence (MERRILL 1929); Bettles, N of Trading Post; Wiseman Cr (HOWARD 1963; MURRAY 1974); Alaska (THOMSON 1968a); Camp Eielson; McKinley Bar (WEBER & VIERECK 1967); central Alaska Range (REGER & PÉWÉ 1969); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Amchitka Isl (THOMSON & SOWL 1989); Mt Fairplay; Deadman L CG; Moon L CG (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Noatak NPPr (MCCUNE et al. 2009); Chugach NF (DERR 2010: 170); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Kenai Fjords NPPr, alpine lake system on Harris Peninsula; Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020).

= *Cladonia verticillata* var. *verticillata* – Juneau area, Mt Roberts; Ketchikan area, Deer Mtn; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; Windy Pt, Turnagain Arm; Richardson Hwy, mi 37; Richardson Hwy, mi 45; Denali Hwy, mi 0–28; Richardson Hwy, mi 32–37; Denali NP, Savage R; White Mts, headwaters of Sheep Cr; Seward Peninsula, King Mtn; N of Nome, Anvil Pk (KROG 1968).

= *Cladonia cervicornis* subsp. *verticillata* (Hoffm.) Ahti – Denali NP, Station Primrose (SCHINDLER 1987); Denali NP, Lynx Cr CG; Denali NP, rd E of Savage R (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992, revised to *Cladonia nitens* by MCCUNE et al. 2018); SE Alaska (GEISER et al. 1994a: map under *C. cervicornis*); on Mt Roberts near Juneau; Deer Mtn near Ketchikan; [SE Alaska] mainland, unnamed pk W of Elbow Mtn (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Seaton Roadhouse; Alaska Hwy, mi 1240; Riverside Lodge Airstrip (TALBOT et al. 2007); Chugach NF (DERR 2010).

= “*Cladonia gracilis* var. *verticillata* Fr.” – Sitka; Kotzebue Sound (MACOUN 1902).

= “*Cladonia verticillata* f. *evoluta* (T. Fr.) Stein.” – Juneau icefield nunatak (HEUSSER 1954).

Cladonia wainioi Savicz – Terricolous on shallow soils of balds in low elevation forest, also in the alpine. – Pt Barrow (THOMSON 1960); northern Alaska

(THOMSON 1968a, as ‘*wainii*’: these were later the basis of *C. thomsonii* [AHTI 1978b]); Mt Alyeska; Mt Fairplay; Thompson Pass (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Glacier Bay NP: Excursion Ridge, West Arm; Gustavus, State Dock (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cladonia pseudorangiformis* Asahina – Attu Isl; Nelchina Glacier (EVANS 1955); Alaska (AHTI 1962: map; THOMSON 1968a); Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; W of Seward, Marathon Mtn; Denali Hwy, mi 0–37 and mi 70; Denali NP, Savage R; Steese Hwy, Twelvemile Summit; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996).

Clauzadea metzleri (Körb.) Clauzade & Cl. Roux – Saxicolous on limestone. – Elliot Hwy, mi 40; Brooks Range, L Peters (FRYDAY 2017).

Clauzadea monticola (Schaer.) Hafellner & Bellem. – Saxicolous on calcareous rocks, and once on bone. – Alaska (THOMSON 1997: map); Izembek Lagoon (TALBOT et al. 2000); Seward Peninsula, Bering Land Bridge NPr, Bendeleben Mts, Eldorado Cr (MEYER 2002); Glacier Bay NP: Willoughby Isl (FRYDAY et al. 2014); Mancha Cr (FRYDAY & HERTEL 2014: in caption for Fig. 8); Alaska (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Lecidea monticola* Schaer. – Colville R near Umiat; valley of Mancha Cr and Firth R (HERTEL 1977a).

Clauzadeana macula (Taylor) Coppins & Rambold – Saxicolous on streamside rock outcrop. – Adak Isl (TALBOT et al. 1997, as cf.); Alatna R; Howard Pass Quad, Nigu Bluff (FRYDAY 2017); Alaska (MCCUNE 2017b).

Cliostomum griffithii (Sm.) Coppins – Corticolous and lignicolous on conifers, especially in ocean beach fringes, also once on *Amelanchier florida*. – Cleveland Peninsula, L McDonald; Frederick Sound, Sukoi Islets; Coronation Isl, Egg Harbor, Windy Bay; Kodiak Isl, Ft Abercrombie State Historical Park; Denali, W side of Chulitna R (DILLMAN et al. 2012); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr, Naknek L, N of Brooks Camp; Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Cliostomum leprosum (Räsänen) Holien & Tønsberg – Corticolous on *Tsuga heterophylla* and *T. mertensiana*, especially veteran trees. – Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Cliostomum tenerum (Nyl.) Coppins & S. Ekman – Saxicolous on granite wall of steep chasm. – Coastal Alaska (MCCUNE 2017b); Kenai Fjords NPPr, E side of Harris Bay (MCCUNE et al. 2020).

#*Clypeococcum bisporum* Zhurb. – On lobe bases of *Cetraria laevigata*. – Kotzebue (ZHURBENKO 2009a); “Beringian Alaska” (KRISTINSSON et al. 2010); Kotzebue (ZHURBENKO et al. 2019).

- #**Clypeococcum placopsiophilum** Øvstedal & D. Hawksw. – On *Placopsis* sp. on sea stacks – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
- Coccocarpia erythroxyli** (Spreng.) Swinscow & Krog – Terricolous among mosses on the ground in arctic tundra or dwarf shrub tundra. See also entries under *Coccocarpia pellita* and *Pectenium plumbea* in [Appendix A](#). – Noluck L; Anaktuvuk Pass (ARVIDSSON 1983); Anaktuvuk Pass; Noluck L (THOMSON 1984: map); Alaska (BRODO et al. 2001); Fielding L (JØRGENSEN 2000, a re-determination of an earlier report of *Pectenium plumbea*); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); North Slope, Toolik L; North Slope, Brooks Range, upper stream of Atigun R (ZHURBENKO 2009b); Gates of the Arctic NPPr (NELSON et al. 2015b).
- Coccocarpia pellita* → [Appendix A](#)
- Coccotrema hahrii** T. Sprib. & Tønberg – Corticolous on fine *Tsuga* twigs and *Picea sitchensis* branches. – Chilkoot Trail (**type** – SPRIBILLE et al. 2010); Chilkoot Trail (RESL et al. 2015, supplementary material); coastal SE Alaska (MCCUNE 2017b); Gustavus (SPRIBILLE et al. 2020).
- Coccotrema maritimum** Brodo – Saxicolous on coastal rocks, rarely lignicolous on driftwood. – SE Alaska (GEISER et al. 1994a: map); Adak Isl (TALBOT et al. 1997); Alaska (BRODO et al. 2001); SE Alaska (MCCUNE 2017b).
- Coccotrema pocillarium** (Cumm.) Brodo – Corticolous or lignicolous on conifers, especially *Picea sitchensis*, near the coast, also on *Alnus*. – Farragut Bay; Kodiak; Knight Isl, Thum Bay; Kuiu Isl, Washington Bay (BRODO 1973); SE Alaska (GEISER et al. 1994a: map); Chichagof Isl; Baranof Isl; Farragut Bay (GEISER et al. 1998); Kodiak Isl E, along rd to Cape Chiniak, near Twin Cr, W Fk (TØNSBERG 1999a); Tongass NF, 5 km N of Petersburg, Sukoi Islets (NASH et al. 2006); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Alaska (NORDIN et al. 2010); Alaska (MCCUNE 2017b); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
= *Pertusaria pocillaria* Cumm. – Farragut Bay (**type** – CUMMINGS 1904); Alaska (ZAHLEBRUCKNER 1904); Ratz Harbor; Heceta Isl, Port Alice; Coronation Isl, Egg Harbor (HERRE 1919).
= *Ochrolechia pacifica* H. Magn. – Kuiu Isl, Washington Bay (HOWARD 1970).
Synonymy after BRODO (1973).
- Coenogonium luteum** (Dicks.) Kalb & Lücking – Corticolous on *Picea* and *Tsuga* in maritime forests. – Frederick Sound, Sukoi Islets; Kruzof Isl (DILLMAN et al. 2012).
- Coenogonium pineti** (Ach.) Lücking & Lumbsch – Corticolous on tree bases and sometimes fungicolous on polypores. – Denali, W side of Chulitna R (DILLMAN et al. 2012); Glacier Bay NP, Bartlett Cove (RESL et al. 2015, supplementary material); Lake Clark NPPr, W of Hatchet Pt; Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
= *Dimerella pineti* (Ach.) Vězda – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).
- Collema bachmanianum* → [Enchylium bachmanianum](#)
- Collema callopismum* → [Scytinium callopismum](#)
- Collema ceraniscum* → [Rostania ceranisca](#)
- Collema coccophorum* → [Enchylium coccophorum](#)

Collema coniophilum Goward – Corticolous on *Alnus*, *Betula* and *Populus*. – Chilkoot Trail (SPRIBILLE et al. 2010).

Collema crispum → **Blennothallia crispa**

Collema cristatum → **Lathagrium cristatum**

Collema curtisporum Degel. – Corticolous on *Populus trichocarpa*. – Haines Hwy, mi 33 (THOMSON & AHTI 1994); NW of Haines (GEISER et al. 1998); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr, Cascade Cr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Coville L; Lake Clark NPPr, Portage L (MCCUNE et al. 2018).

Collema fecundum → **Blennothallia fecunda**

Collema flaccidum (Ach.) Ach. – Saxicolous. – Ogoruk Cr drainage (DEGELIUS 1974); Ogoruk Cr drainage (THOMSON 1984: map); St. Lazaria Isl (DILLMAN et al. 2012); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

Collema furfuraceum (Arnold) Du Rietz – Corticolous, mainly on *Populus balsamifera*, but also known from *Alnus incana*, *Betula* and *Tsuga heterophylla* and reported from mossy rock. – McKinley Bar (WEBER & VIERECK 1967); Juneau area, Loop Rd; Juneau area, Granite Basin; Talkeetna Mts, Little Susitna R; Knik R, near hwy; Portage Glacier; Kenai Peninsula, Copper Cr; Kenai Peninsula, Skilak L; Kenai Peninsula, Ninilchik; Richardson Hwy, Darling Cr; White Mts, lower Fossil Cr (KROG 1968); Alaska (THOMSON 1984: map); Katmai NP, Brooks Lodge area, in CG (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

= *Collema furfuraceum* var. *furfuraceum* – Alaska (DEGELIUS 1974).

Collema fuscovirens → **Lathagrium fuscovirens**

Collema glebulentum (Nyl. ex Cromb.) Degel. – Saxicolous on calcareous or base-enriched rocks. – Kenai Peninsula, Skilak L; Richardson Hwy, mi 9; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Anaktuvuk Pass; Valley of Okpilak R at Okpilak L, near Mt Michelson (DEGELIUS 1974); Anaktuvuk Pass (MOSER et al. 1979); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr, Turquoise L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge, Glacier Bay (SPRIBILLE et al. 2020).

Collema leptaleum Tuck. – Corticolous on *Alnus*, *Picea* and *Salix*. See also *Collema rysssoleum* in Appendix A. – Denali NP; Kenai Peninsula, Beluga (NELSON et al. 2011); Denali NPPr (STEHN et al. 2013: Supplementary Table

S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

Collema multipartitum → **Callome multipartita**

Collema nigrescens (Huds.) DC. – Corticolous on *Populus trichocarpa* at low elevations. – Chisik Isl (TALBOT et al. 1992, as cf.); SE Alaska (GEISER et al. 1994a: map); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010: 220); Katmai NPPr, Headwaters Cr; Lake Clark NPPr, Chinitna Bay (MCCUNE et al. 2018).

Collema occultatum → **Rostania occultata**

Collema polycarpon → **Enchylium polycarpon**

Collema rysssoleum → **Appendix A**

Collema subflaccidum Degel. – Corticolous, most reports from *Populus trichocarpa*, rarely *Tsuga heterophylla*. – Juneau, Granite Basin Rd; Anchorage area, Rabbit Cr Rd; Kenai Peninsula, Ninilchik (DEGELIUS 1974); Chisik Isl (TALBOT et al. 1992); Haines Hwy, mi 33 (THOMSON & AHTI 1994); Kadin Isl, Stikine R; near Haines (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, 3 km ENE of Chinitna Ranger Station (MCCUNE et al. 2018).

= *Collema subfurvum* auct., non (Müll. Arg.) Degel. (see DEGELIUS 1974: 150) – Anchorage, Rabbit Cr Rd; Kenai Peninsula, Ninilchik (KROG 1968).

Collema subparvum Degel. – Saxicolous on limestone. – Seward Peninsula, 3 km W of Penny R (DEGELIUS 1974); Kenai Fjords NPPr, N of Exit Glacier Visitor Center (MCCUNE et al. 2020).

Collema tenax → **Enchylium tenax**

Collema undulatum → **Lathagrium undulatum**

Collemopsidium bryospilum → **Frigidopyrenia bryospila**

Collemopsidium elegans (R. Sant.) Grube & B. D. Ryan – Saxicolous on supralittoral rocks. – Mitkof Isl, Sumner Straits (DILLMAN et al. 2012); Alaska (MCCUNE 2017b).

Collemopsidium foveolatum (A. L. Sm.) F. Mohr – Saxicolous on intertidal barnacles. See also entry for *Collemopsidium halodytes* in **Appendix A**. – Mitkof Isl, Sumner Straits (DILLMAN et al. 2012); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020).

Collemopsidium halodytes → **Appendix A**

Collemopsidium sublitorale (Leight.) Grube & B. D. Ryan – Saxicolous on intertidal barnacles and limestone rocks. See also entry for *Collemopsidium halodytes* in **Appendix A**. – Mitkof Isl, Sumner Straits (DILLMAN et al. 2012); Alaska (PÉREZ-ORTEGA et al. 2016: ‘*C. sublitorale* morphotype’); Alaska (MCCUNE 2017b); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Coriscium viride → **Lichenomphalia hudsoniana**

Cornicularia divergens → **Bryocaulon divergens**

Cornicularia normoerica (Gunnerus) Du Rietz – Saxicolous, apparently known from only a single locality in Alaska. – Muir Glacier (HASSELROT 1953; KROG 1968); no specific locality, specimen mentioned from SE Alaska (KÄRNEFELT 1986, one locality on map); Muir Glacier in Glacier Bay NP (GEISER et al.

- 1994a, 1998); Alaska (THOMSON 1984: map); Alaska (BRODO et al. 2001); Glacier Bay NP: Muir Glacier (SPRIBILLE et al. 2020).
= *Cetraria tristis* (Weber) Fr. – Muir Glacier (MACOUN 1902).
- #**Cornutispora ciliata** Kalb – On *Thamnotia*. – Alaska Range, Mt Hayes Quad (ZHURBENKO & OHMURA 2018).
- #**Cornutispora lichenicola** D. Hawksw. & B. Sutton – In apothecia of *Micarea*, on *Lepa subvelata* and *Pertusaria subambigens*. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- #**Corticifraga chugachiana** Zhurb. – On upper and lower lobe surfaces of *Lobaria oregana*; known only from Alaska. – Near Seward, Chugach NF (**type** – ZHURBENKO 2007a).
- #**Corticifraga fuckelii** (Rehm) D. Hawksw. & R. Sant. – On *Peltigera* spp., terricolous or muscicolous over marble. – Chilkoot Trail (SPRIBILLE et al. 2010); N of Wiseman (HAFELLNER 2013); Kenai Fjords NPPR, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).
- #**Corticifraga nephromatis** Pérez-Ort. – On *Nephroma bellum*. – Glacier Bay NP: East Arm (**type** – SPRIBILLE et al. 2020).
- #**Corticifraga peltigerae** (Nyl.) D. Hawksw. & R. Sant. – On various species of *Peltigera* (reported from Alaska from *P. rufescens*, *P. canina*, *P. scabrosa*) and *Pseudocyphellaria citrina*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Kobuk Valley Wilderness; Denali NP; Prince of Wales Isl (ZHURBENKO 2007a); Interior Alaska (LAURSEN & SEPPELT 2009); Prince of Wales Isl, coast N of Thorne Bay, near Barren Cr mouth (ZHURBENKO 2009b).
- #**Corticifraga santessonii** Zhurb. – “Commensalistic to mildly parasitic” on *Lobaria linita* and *Nephroma occultum*. – Kotzebue (ZHURBENKO 2007a).
- #**Corticifraga scrobiculatae** Pérez-Ort. – On *Lobaria scrobiculata*; known only from Alaska. – Chilkoot Trail (**type** – SPRIBILLE et al. 2010); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).
- Cresponea chloroconia** (Tuck.) Egea & Torrente – Corticolous on *Picea* trunks. – Chena R (DILLMAN et al. 2012); SE Alaska (MCCUNE 2017b).
- #**Crittendenia lopadii** Diederich et al. – On *Lopadium disciforme*. – Kodiak Isl, Red Cloud R (**type** – DIEDERICH et al. 2022a, 2022b).
- Crutarndina petractoides** (P. M. Jørg. & Brodo) Parmen et al. – Corticolous on *Alnus*.
= *Thelotrema petractoides* P. M. Jørg. & Brodo — Kenai Fjords NPPR, W shore of Beauty Bay; Kenai Fjords NPPR, near outlet of pond at N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020).
- #**Cryptodiscus epicladonia** Zhurb. & Pino-Bodas – On *Cladonia* spp. – Aleutian Isls, Unimak Isl, False Pass, 3 km SW of airstrip (**type**); Kotzebue (PINO-BODAS et al. 2017a).
- #**Cryptodiscus galaninae** Zhurb. & Pino-Bodas – On aged or moribund podetia or rarely basal squamules of *Cladonia* spp. – Kotzebue (PINO-BODAS et al. 2017a).
- Cryptodiscus gloeocapsa** (Nitschke ex Arnold) Baloch et al. – Muscicolous over boulder in forest. – SE Alaska (MCCUNE 2017a & b); Kenai Fjords NPPR, N end of Harris Bay (MCCUNE et al. 2020).
= *Bryophagus gloeocapsa* Nitschke ex Arnold – Chilkoot Trail (SPRIBILLE et al. 2010).

Cryptothele granuliforme (Nyl.) Henssen – Terricolous over soil and moss, or saxicolous. – Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr, Harding Icefield Trail; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay (McCUNE et al. 2020).

Cryptothele neglecta Henssen – Saxicolous on small siliceous cobble deposited over limestone. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Cryptothele permiscens (Nyl.) Th. Fr. – Saxicolous. – Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (McCUNE et al. 2020).

Cyphelium inquinans → **Acolium inquinans**

Cyphelium pinicola → **Calicium pinicola**

Cyphelium tigillare → **Calicium tigillare**

#Cystobasidium usneicola (Diederich & Alstrup) Millanes et al. – Fruiting from thalli of *Usnea* spp.

= *Cystobasidium usneicola* Diederich & Alstrup – Tongass NF, Mitkof Isl W, S of Petersburg, between Mitkof Hwy and Blind Slough SE, NW of Blind Slough R bridge (DIEDERICH 2003).

Cystocoleus ebeneus (Dillwyn) Thwaites – Saxicolous on siliceous boulders in lowland forest or cliff faces. Reports of this species on *Pinus contorta* twigs and wood (near Petersburg, GEISER et al. 1998) are doubtful. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (McCUNE 2017b); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, W shore of Beauty Bay (McCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

– D –

Dacampia hookeri (Borrer) A. Massal. – On soil. – Haul Rd (MURRAY et al. 1980).

Dactylina arctica (Hook.) Nyl. – Terricolous among mosses and lichens in wet depressions in tundra and late snow melt areas. – Behring's Straits (TUCKERMAN 1862); Insulae freti Beringiani (STIZENBERGER 1876); Lawrence-Insula; Port Clarence (NYLANDER 1887); Port Clarence (HUE 1890); Nome (HERRE 1920); Alaska (HADWEN & PALMER 1922); Camden Bay (MERRILL 1924b); St Paul Isl; St Matthew isl; Port Clarence; Lawrence Isl; Kotzebue Sound; Pt Barrow; Camden Bay (LYNGE 1933); Alaska (PALMER & ROUSE 1945); Eagle Summit (HANSON 1950); Anchorage, Chugach Mts (HERRE 1950a); Barrow (SCHOLANDER et al. 1952); Umiat, Colville R; Stampede (HOWARD 1958); Chandler L (WIGGINS & MACVICAR 1958); Valley of the Okpilak R at Okpilak L near Mt Michelson; S of Wainwright, Kaolak R; Circular Marsh near Barrow (THOMSON 1960; Lich. Arct. 51 is *D. beringica* fide KÄRNEFELT & THELL 1996); Anaktuvuk Pass; Umiat (KROG 1962; MURRAY 1974); Meade R Village; Pt Barrow; St Matthew Isl; Steese Hwy, Eagle Summit; Denali Hwy, mi 125 (KROG 1962); East Stony Flats (HOWARD 1963); Ogotoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Mt Eielson (WEBER & VIERECK 1967); Mendenhall Glacier Trail; Talkeetna Mts, Independence Mine; Talkeetna Mts, Mabel Mine; Turnagain Arm, Bird Cr Ridge; Richardson Hwy, mi 37; Denali Hwy, mi 0–37; Denali Hwy, mi 70; White Mts, headwaters of

Sheep Cr; White Mts, Lion Pk; White Mts, limestone ridge between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Steese Hwy, Eagle Summit; Kotzebue (KROG 1968, as 'PD-strain'); central Alaska Range (REGER & PÉWÉ 1969); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Anaktuvuk Pass (NASH 1977); Toolik L (ISKANDER et al. 1978); Fish Cr drilling site (LAWSON et al. 1978); Prudhoe Bay (MURRAY & MURRAY 1978); Anaktuvuk; Anaktuvuk Pass; Barter Isl; Big Delta; Boxer Bay, St Lawrence Isl; Brooks Range; Harbor Isl, Camden Bay; Cantwell; Chandler L; Chitina R; between Copper Mtn and Muldrow Glacier, Denali NP; Crowbill Ridge, Ogotoruk Cr; 6 mi N of Nome, Dexter Cr; Steese Hwy, Eagle Pass; Fairbanks Cr; Gambell, St Lawrence Isl; middle Fk of the Gulkana R; Igloo Mtn, Denali NP; Ikiakpuk; Iliamna Bay, L Iliamna; S of Wainwright, Kaolak R; Kaoakak; Kukpuk R; L Schrader; McCarthy R drainage; 80 mi SE of Big Delta; Mancha Cr at Firth R; Meade R; 2.5 mi W of Mentasta L; 6 mi W of Denali NP Hotel; Brooks Range, Mt Mary, S end of L Peters; 14 mi NW of Nome; Okpilak R at Okpilak L; Old Woman Cr, Sheenjek R; 28 mi W of Paxson; Pitmegea R, 15 mi from Cape Sabine; vicinity of Pt Barrow; vicinity of Pt Barrow; Quigley Hill, Kantishna; St Paul Isl, Bering Sea; Scolai-Chitistone Pass, Wrangell Mts; Sherman Glacier, Cordova; Teshekpuk L; Steese Hwy, Twelvemile Summit; Tyone Cr, Nelchina Caribou Range; Ukinyik Cr drainage; Umiat; Upper Telephone R; Virginia's Butte, N of Imuruk L, Seward Peninsula; vicinity of Wainwright (THOMSON & BIRD 1978); Barrow (WEBBER 1978); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Barrow (WILLIAMS et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Barter Isl; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); thaw lake plain near Barrow (BILLINGS & PETERSON 1980); Barter Isl; Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Prudhoe Bay (WALKER 1989); Imnavait Cr (WALKER et al. 1989); Denali NP, S of Eielson Visitor Center (SCHINDLER 1990); Prudhoe Bay region (WALKER & EVERETT 1991); Central Arctic coastal plain (WALKER et al. 1991); Chisik Isl (TALBOT et al. 1992); Imnavait Cr (HAHN et al. 1993, 1996); Mendenhall Glacier trail (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Mendenhall Glacier trail; Goat L NE of Skagway (GEISER et al. 1998); Imnavait Cr watershed, Philip Smith Mts (LANGE et al. 1998: including *D. beringica*); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Chugach NF (DEVELICE et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Franklin Bluffs; Happy Valley (WALKER et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay; Mentasta Mts (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Interior Alaska (LAURSEN & SEPPELT 2009); Steese

Hwy, Twelvemile Summit (OBERMAYER 2009); Chugach NF (DERR 2010); Dalton Hwy (LANG et al. 2012); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Brooks Range, Atigun Pass (OBERMAYER 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Hagemeister Isl (WALSH & GOWARD 2021).
= *Dactylina arctica* subsp. *arctica* – Mt McKinley (KÄRNEFELT & THELL 1996); White Pass (SPRIBILLE et al. 2010).

= *Cetraria arctica* (Hook.) Tuck. – Pt Barrow (GRAY 1885); Taku (CUMMINGS 1892b); St Paul Isl (MACOUN 1899, 1902); St Matthew Isl (CUMMINGS 1904).

= *Dufourea arctica* Hook. – Kotzebue's Sound (HOOKER & ARNOTT 1841).

Dactylina arctica subsp. *beringica* → **Dactylina beringica**

Dactylina beringica C. D. Bird & J. W. Thomson – Terricolous in tundra. – Banner Pk, 5 mi N of Nome; Blueberry L; Richardson Hwy, mi 219, Glacier; N of Nome, Dexter Cr; Eagle Summit; Franklin Bluffs, Sagavanirktok R; Nome, Grand Central Pt; Gulkana Glacier, N of Paxson; Jacsena R, Tanana; L Peters; 6.5 mi SW of Barrow Base, Loon L; Mancha Cr at Firth R; Moose Cr, 3 mi S of Wiseman; Mt Eielson; Denali NP Headquarters; Brooks Range, Mt Mary, S end of L Peters; “Mosquito Flats”, Haines Hwy, mi 86; Nelchina Caribou Range, 35 mi WNW of Paxson; headwaters of Ogotoruk Cr, Cape Thompson; Swift Fk of the E Fk of the Kuskokwim R; Romanzoff Mts; Sheenjek R; Taku; Umiat; Wiseman (THOMSON & BIRD 1978; type is from Canada); 6.5 mi SSW of Barrow Base, near Loon L; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Firth R at Mancha Cr; L Peters (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Chikuminuk L (THOMSON & DOELL 1989); Prudhoe Bay (WALKER 1989); Chisik Isl (TALBOT et al. 1992); Juneau area (GEISER et al. 1994a: map); Thompson Pass (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Juneau area (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

= *Dactylina arctica* subsp. *beringica* (C. D. Bird & J. W. Thomson) Kärnefelt & A. Thell – Denali Hwy; Seward Peninsula, Cape Prince of Wales; Mt St Elias Quad, Kluane L [actually in Yukon]; Chuagach [sic] Mts, Thompson Pass; Barrow (KÄRNEFELT & THELL 1996); Alaska (BRODO et al. 2001); Gates of the Arctic NPPr (NELSON et al. 2015b).

= “*Dactylina arctica* (Hook.) Nyl. PD+ strain” – Cook Inlet, Bird Cr Ridge; Denali Hwy, mi 0–37; Denali NP, Toklat; Denali NP, Savage R; Denali NP, Polychrome Pass; Richardson Hwy, Darling Cr; White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; N of Nome, Anvil Pk; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968).

Dactylina madreporiformis → **Allocetraria madreporiformis**

Dactylina ramulosa (Hook.) Tuck. – Terricolous in tundra, especially where base-enriched. – Behring's Straits (TUCKERMAN 1862); Tin City (LYNGE 1933); Alaska (DAHL 1946: map); Franklin Bluffs on the Sagavanirktok R (THOMSON

1960); Brooks Range, L Peters; Ogotoruk Cr drainage; Ukinyik Cr drainage; Vicinity of the Kukpuk R, Angmakroq Mtn; Porcupine Dome (KROG 1962); Ogotoruk Cr drainage (JOHNSON et al. 1966); Alaska Range, Dry Cr (VIERECK 1967); Mt Eielson (WEBER & VIERECK 1967); Alaska (HAKULINEN & HUUSKONEN 1968: map); Juneau area, Mt Roberts; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Puritan Cr; Rainbow Cr, Seward Peninsula, Kigluaik Mts; Denali Hwy, mi 0–37; mi 70; Denali NP, Toklat; Denali NP, Savage R; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, limestone ridge between Beaver Cr and Fossil Cr; Steese Hwy, Eagle Summit; N of Nome, Anvil Pk; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968, ‘PD+ strain’; map of both strains); Talkeetna Mts, Bald Mtn Ridge; Steese Hwy, Eagle Summit (KROG 1968, ‘PD– strain’); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Prudhoe Bay (MURRAY & MURRAY 1978); Chitistone Pass, Wrangell Mts; Crowbill Mtn; Eagle Summit; Meade R; Mentasta L; Tin City; Anaktuvuk Pass; L Schrader; Mancha Cr at Firth R; Tatalina; Romanzoff Mts; Pt Barrow; Franklin Bluffs on the Sagavanirktok R; Okpilak R at Okpilak L; Ukinyik Cr drainage; Ogotoruk Cr drainage; Kukpuk R; Swift Fk of the Kuskokwim R; Steese Hwy, Eagle Summit; Alaska Range, Lichen Mtn, Upper Dry Cr; Gulkana Glacier; Mt Eielson, Denali NP (THOMSON & BIRD 1978, ‘PD+ strain’); Pt Barrow; Cape Thompson; L Peters; Mancha Cr at Firth R; Okpilak R at Okpilak L (THOMSON & BIRD 1978, ‘PD– strain’); Anaktuvuk Pass (MOSER et al. 1979); Circular Marsh near Barrow; 6.5 mi SSW of Barrow Base, near Loon L; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Arey Cr (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Imnavait Cr (WALKER et al. 1989); Denali NP, Savage R (SCHINDLER 1990); Mt Roberts near Juneau (GEISER et al. 1994a: map); Eagle Summit (THOMSON & AHTI 1994); Barrow; Franklins Bluffs, Sagavanirktok R; Eagle Summit (KÄRNEFELT & THELL 1996); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Mt Roberts near Juneau (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Brooks Range, Sukakpak Mountain (OBERMAYER 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

Dactylospora aeruginosa → **Sclerococcum aeruginosum**

Dactylospora amygdalariae → **Sclerococcum amygdalariae**

Dactylospora attendenda → *Sclerococcum attendendum* in **Appendix A**

Dactylospora borealis → **Sclerococcum boreale**

Dactylospora deminuta → **Sclerococcum deminutum**

Dactylospora frigida → **Sclerococcum frigidum**

Dactylospora lobariella → **Sclerococcum lobariellum**

Dactylospora parasitula → *Sclerococcum attendendum* in [Appendix A](#)

Dactylospora protothallina → **Sclerococcum protothallinum**

Dactylospora purpurascens → **Sclerococcum purpurascens**

Dactylospora saxatilis → **Sclerococcum saxatile**

Dactylospora urceolata → **Sclerococcum urceolatum**

Degelia plumbea → *Pectenium plumbeum* in [Appendix A](#)

Dendrococaulon intricatulum → [Appendix A](#)

Dendrococaulon umhausense → *Dendrococaulon intricatulum* in [Appendix A](#)

Dendriscosticta gelida Ant. Simon et al. – Corticolous on *Picea sitchensis*, *Tsuga heterophylla*, *Alnus*, *Populus* and *Salix* in SE rainforests; Macoun's record from the Bering Strait is unlikely and may refer to *Sticta arctica*. A symbiodeme-forming fungus that forms a lichen symbiosis with either a green alga (chloromorph) or a cyanobacterium (cyanomorph), then often reported in the genus *Dendrococaulon*; see also *Dendriscosticta oroborealis* and *Dendrococaulon intricatulum* in [Appendix A](#). – Chilkoot Trail; Glacier Bay NP: Bartlett Cove, East Arm; Tongass NF, S of Brownling Isl, Mitkof Isl (SIMON et al. 2022).

= *Dendriscosticta wrightii* auct., non (Tuck.) Moncada & Lücking – Denali NPPr, Midway Lakes; Denali NPPr, Ruth Glacier Forest; Denali NPPr, Yentna R; Denali NPPr, Cascade Cr (STEHN et al. 2015); Glacier Bay NP: East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020, chloromorph); Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020, cyanomorph); Glacier Bay NP: East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020, cyanomorph).

= *Sticta wrightii* auct., non Tuck. – Isls in Behring Strait (MACOUN 1902); Juneau area, Loop Rd (KROG 1968); SE Alaska (GEISER et al. 1994a: map); Patterson R; Stikine R; Unuk R; Arnklen R (GEISER et al. 1998); NW of Juneau, along Glacier Hwy, just N of Herbert R (TØNSBERG & GOWARD 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1, as cf.).

Dendriscosticta oroborealis → [Appendix A](#)

Dermatocarpon arnoldianum Degel. – Saxicolous on coastal cliffs and seepage rocks. – Ukinyik Cr drainage, including the high ridges on either side of the valley (KROG 1968: erroneously reported as *D. miniatum* in KROG 1962, conf. as *D. arnoldianum* by Degelius); Ukinyik Cr drainage (THOMSON 1984: map); St Matthew Isl (TALBOT et al. 2001); Gates of the Arctic NPPr (NELSON et al. 2015b).

Dermatocarpon intestiniforme (Körb.) Hasse – Saxicolous on calcareous rock. – Brooks Range, L Peters (KROG 1962); Skilak L; Richardson Hwy, mi 9; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr (KROG 1968); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a, as '*intestiforme*'); Prince of Wales Isl, Naukati Bay (GEISER et al. 1998); Chugach NF (DERR 2010); Katmai NPPr, Katmai Bay Cliff; Lake Clark NPPr, Naknek L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Kenai Fjords NPPr, Camera Cliff (MCCUNE et al. 2020, as "cf.").

Dermatocarpon luridum (With.) J. R. Laundon – Saxicolous on wet siliceous rock. – Howkan Bay (GEISER et al. 1994a); Howkan Bay, near Ketchikan (GEISER et

al. 1998); Alaska (BRODO et al. 2001); Katmai NPPr, Naknek L; Katmai NPPr, Tanalian Falls (MCCUNE et al. 2018).

= *Dermatocarpon fluviatile* (Weber) Th. Fr. – How Kan Bay (KROG 1968).

Dermatocarpon miniatum (L.) W. Mann – Saxicolous on dry calcareous rocks, also reported from the supralittoral zone (GEISER et al. 1998). – Vicinity of the Kukpuk R, Angmakioq Mtn (KROG 1968); Cape Thompson(?) (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Tuxedni Wilderness, Duck Isl (TALBOT et al. 1992); Martin Cr on Bradfield Canal; Prince of Wales Isl, Naukati (GEISER et al. 1994a); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Gates of the Arctic NPPr (NELSON et al. 2015b, as s. lat.); Denali NPPr, S of the AK Range (STEHN et al. 2015); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

= *Dermatocarpon miniatum* var. *complicatum* (Lightf.) Th. Fr. – Howkan Bay (HERRE 1919); Vicinity of the Kukpuk R, Angmakroq Mtn; Ukinyik Cr drainage, base of Mt Hamlet (KROG 1962, but a misidentification of *D. arnoldianum*, see that species); Ogotoruk Cr drainage (JOHNSON et al. 1966).

Dermatocarpon reticulatum H. Magn. – Saxicolous, reported from “limestone” and “rock along coast”. – Kenai L (KROG 1962, as cf.); Kenai L; Kenai Peninsula, Skilak L; Richardson Hwy, mi 45 (KROG 1968); Chisik Isl (TALBOT et al. 1992); Alaska (BRODO et al. 2001); Tuxedni, Chisik Isl (MCCUNE et al. 2018).

Dermatocarpon rivulorum (Arnold) Dalla Torre & Sarnth. – Saxicolous on periodically wettened rock. – Brooks Range, L Peters (KROG 1962); White Mts, Cache Mtn (KROG 1968); Haul Rd [=Dalton Hwy] (MURRAY et al. 1980); White Mts; L Peters (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a); [SE Alaska] mainland, Elbow Mtn (GEISER et al. 1998); Brooks Range, Atigun Pass, Dalton Hwy, mi 247 (OBERMAYER 2007, as cf.); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Katmai NPPr, Mirror L; Katmai NPPr, Hammersly L; Lake Clark NPPr, D-3 Quad (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail; Kenai Fjords NPPr, ridge above Exit Glacier (MCCUNE et al. 2020).

Dibaeis baeomyces (L. f.) Rambold & Hertel – Terricolous, often on clayey soils. – Ft Wainwright (RACINE et al. 1997); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2014b); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020). = *Baeomyces roseus* Pers. – Alaska (SANDSTEDE 1932: map); Ogotoruk Cr drainage (JOHNSON et al. 1966); Bolio L (THOMSON 1967); Umiat (THOMSON 1967; MURRAY 1974); Alaska (THOMSON 1972a: map); Colville R near Umiat (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Mt Fairplay; Thompson Pass; Blueberry L CG (THOMSON & AHTI 1994)

#Didymellopsis latitans (Nyl.) Clem. & Shear – On *Biatorrella contigua*. – North Slope, Sagwon (ZHURBENKO 2009b).

#Didymellopsis pulposi (Zopf) Grube & Hafellner – On *Leptogium* s. lat., on organic accumulations over rock. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

- Dimelaena oreina** (Ach.) Norman – Saxicolous on acidic rocks. – Anaktuvuk Pass (MOSER et al. 1979); Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Willow L, near Alaska Hwy; 15 km WNW of Tanacross Village (TALBOT et al. 2007); Denali NPPr, N of the AK Range (STEHN et al. 2015); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).
= *Rinodina oreina* (Ach.) A. Massal. – Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).
- Diploschistes gypsaceus** (Ach.) Zahlbr. – Saxicolous on lakeshore rock. – Katmai NPPr, Naknek L (MCCUNE et al. 2018).
- Diploschistes muscorum** (Scop.) R. Sant. – Terricolous on mineral soil and muscicolous on mosses, often beginning as a parasymbiont on *Cladonia* squamules. – Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Riverside Lodge Airstrip; Willow L, near Alaska Hwy; Tetlin Junction; Mt Fairplay (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009) Sukakpak Mtn (HAFELLNER 2013); Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Kenai Fjords NPPr, Coleman Bay, NE end, off Aialik (MCCUNE et al. 2020).
= *Diploschistes muscorum* subsp. *muscorum* – Alaska (LUMBSCH 1989); Kupreanof Isl, Hall Pk (GEISER et al. 1998); Teck Isl (DILLMAN 2010).
= *Diploschistes bryophilus* (Ach.) Zahlbr. – Yukon R; Tanana R (MURRAY et al. 1983).
- Diploschistes scruposus** (Schreb.) Norman – Saxicolous on rock outcrops and talus slopes. – Quigley Hill, near summit (HOWARD 1963); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Colville R near Umiat; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b, as ‘*scruposes*’); Chisik Isl (TALBOT et al. 1992); Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Lake Clark NPPr, W of Hatchet Pt; L Clark NPPr, Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, Coleman Bay, NE end, off Aialik Bay; Kenai Fjords NPPr, E side of Harris Bay (MCCUNE et al. 2020).
= *Urceolaria scruposa* (Schreb.) Ach. – “Alaska and the adjacent region”, no locality given (ROTHROCK 1884); Alaska (MACOUN 1902); PWS, Thum Bay (EYERDAM 1949).
- Diplotomma alboatrum** (Hoffm.) Flot. – Corticolous; records from rock should be checked. – SE Alaska (GEISER et al. 1994a: map).
= *Buellia alboatra* (Hoffm.) Th. Fr. – St Paul’s Isl; Unalashka Isl (ROTHROCK 1884, as *B. albo-atra*); Wrangell (HERRE 1919); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Alaska (THOMSON 1997: map); Woewodski Isl, Spurt L and Harvey L; S Kupreanof Isl, along Petersburg Cr (GEISER et al. 1998); Little Diomedes Isl (NORDIN 2000); Katmai NPPr, Naknek L (MCCUNE et al. 2018); Katmai NPPr, shoreline of Naknek L, peninsula NE of Brooks Camp (MCCUNE et al. 2020).
= *Rhizocarpon alboatrum* (Hoffm.) Th. Fr. – Collinson Pt (MERRILL 1924b).

? = “*Buellia atro-alba* var. *chlorospora* Nyl.” – Chamisso Isl (ROTHROCK 1884).

Diplotomma nivale (Bagl. & Carestia) Hafellner – On *Xanthoria* and *Caloplaca*, later becoming free-living. Treated as a synonym of *D. alboatrum* in Fennoscandia. – Brooks Range, S of Atigun R (DILLMAN et al. 2012).

= *Buellia nivalis* (Bagl. & Carestia) Hertel – Pitmegea R, 15 mi upstream from Cape Sabine (HERTEL 1975; THOMSON 1979); St Paul Isl, S coast (SCHINDLER 1990); Alaska (THOMSON 1997: map).

Diplotomma venustum (Körb.) Körb. – Saxicolous on shaded calcareous rock.

= *Rhizocarpon cumulatum* J. W. Thomson – Pitmegea R (**type** – THOMSON 1968b; WONG 1993); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Pitmegea R (FEUERER 1991: aff. *Diplotomma epipolium*); Pitmegea R (THOMSON 1997); Noatak NPr (MCCUNE et al. 2009).

Discothecium gemmiferum → **Endococcus propinquus**

– E –

#*Echinothecium reticulatum* → **Sphaerellothecium reticulatum**

Eiglera flavida (Hepp) Hafellner – Saxicolous. – Alaska (THOMSON 1997: map); Alaska (MCCUNE 2017b); Lake Clark NPPR, Slope Mtn (MCCUNE et al. 2018). = *Lecanora flavida* Hepp – Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

Elixia flexella (Ach.) Lumbsch – Lignicolous. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017a).

Enchylium bachmanianum (Fink) Otálora et al. – Terricolous on bare calcareous soil.

= *Collema bachmanianum* (Fink) Degel. – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay (THOMSON 1979); Alaska (THOMSON 1984: map); Fielding L (THOMSON & AHTI 1994); Noatak NPr (MCCUNE et al. 2009).

Enchylium bachmanianum var. **millegranum** (Degel.) M. Schultz & McCune – Terricolous on bare calcareous soil. – Katmai NPPR, Naknek L (MCCUNE et al. 2018).

= *Collema bachmanianum* var. *millegranum* Degel. – Ogotoruk Cr drainage, Crowbill Pt; Seward Peninsula, York Mts; S of Wainwright, Kaolak R; Mt Umiat, W slope tundra N of Umiat; Pitmegea R, 15 mi upstream from Cape Sabine; Sagavanirktok R, Franklin Bluffs (DEGELIUS 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978).

= *Collema furvum* * *subhirsutulum* Nyl. – Port Clarence (**type** – NYLANDER 1887). Synonymy after DEGELIUS (1954).

Enchylium coccophorum (Tuck.) Otálora et al. – Substrate not indicated for Alaskan record, but usually terricolous.

= *Collema coccophorum* Tuck. – Copper R (MURRAY et al. 1983).

Enchylium expansum (Degel.) P. M. Jørg. – Terricolous. – Port Clarence (JØRGENSEN & GOWARD 2015).

= *Collema tenax* var. *expansum* Degel. – Ogotoruk Cr drainage (DEGELIUS 1974).

- Enchylium polycarpon** (Hoffm.) Otálora et al. – Saxicolous on calcareous rock, mainly limestone. – Denali NPPr, Mystic/Shellabarger Pass (STEHN et al. 2015); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).
= *Collema polycarpon* Hoffm. – Ogotoruk Cr drainage, Snowbank Cr; Seward Peninsula; Anaktuvuk Pass, Soakpuk Mtn; Valley of Okpilak R, near Mt Michelson (DEGELIUS 1974); Anaktuvuk Pass (MOSER et al. 1979); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009).
- Enchylium tenax** (Sw.) Gray – Terricolous, mainly on calcareous or enriched mineral soils.
= *Collema tenax* (Sw.) Ach. – Port Clarence (NYLANDER 1887; KROG 1968, but this collection reported as *E. expansum* by JØRGENSEN & GOWARD 2015); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a); Fielding L (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, 4.2 km SW of Pear L; Lake Clark NPPr, L Clark, Camel's Hump (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).
= “*Collema pulposum* Ach. var. *tenax* Nyl.” – Port Clarence (HUE 1890); “in America septentrionali, in Freto Behringii” (HUE 1898).
= “*Collema pulposum* (Bernh.) Ach.” – Cape Lisburne (ROTHROCK 1884); no locality given (HERRE 1919).
- Endocarpon adsurgens** Vain. – Terricolous. – Lake Clark NPPr, Portage L (MCCUNE et al. 2018).
- Endocarpon pusillum** Hedw. – Terricolous on calcareous soil. – S of Wainwright, Kaolak R (THOMSON 1979); Yukon R; Tanana R (MURRAY et al. 1983); Tetlin Junction (TALBOT et al. 2007); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Kenai Fjords NPPr, Camera Cliff (MCCUNE et al. 2020).
- #Endococcus macrosporus** (Hepp ex Arnold) Nyl. – On thallus of *Rhizocarpon* sp. (*geographicum* aggr.). – Brooks Range, Endicott Mtns, Atigun Pass (DILLMAN et al. 2012); Katmai NPPr, Mirror L (MCCUNE et al. 2018, ‘uncertain ID’).
- #Endococcus nanellus** Ohlert – Parasymbiotic on thallus and apothecia of *Stereocaulon* spp. – Denali NP, near C camp by the Rock Cr trail (ZHURBENKO & TRIEBEL 2008); White Pass (SPRIBILLE et al. 2010); middle Kobuk R at junction with Kavet Cr; Tanana R floodplain, Bonanza Cr; Fairbanks, Ballaine L; vicinity of Fairbanks, Murphy Dome; Wrangell-Saint Elias Park and Preserve, Nizina R (ZHURBENKO 2010).
- #Endococcus peltigericola** Zhurb. & Stepanchikova – On *Peltigera aphthosa*. – Caribou-Poker Cr watersheds (ZHURBENKO 2021).
- #Endococcus propinquus** (Körb.) D. Hawksw. – On *Porpidia* spp. and other crustose saxicolous lichens. – St Paul Isl (TRIEBEL et al. 1991); Katmai NPPr, Mirror L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Discothecium gemmiferum* auct., non (Taylor) Vouaux – “on thallus of a *Lecanora* sp. on shore.” – Chauekuktuli L (THOMSON & DOELL 1989).

Synonymy after HAWKSWORTH (1979).

#**Endococcus rugulosus** Nyl. – On *Rhizocarpon geographicum* s. lat. and *Aspicilia* sp. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Glacier Bay NP:

Excursion Ridge (SPRIBILLE et al. 2020).

#**Endohyalina insularis** (Arnold) Giralt et al. – On *Lecanora bicincta*. – Dalton Hwy, Finger Mtn (DILLMAN et al. 2012).

Enterographa zonata (Körb.) D. Hawksw. – Saxicolous. – Alaska (MCCUNE 2017b); Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Petersburg Borough, Mitkof Isl (FRYDAY & DILLMAN 2021a).

Eopyrenula parvispora R. C. Harris & Aptroot – Corticolous on *Alnus*, other hardwoods and *Pinus*. – Coastal Alaska (MCCUNE 2017b).

Ephebe hispidula (Ach.) Horw. – Saxicolous on shaded, vertical rock faces. – Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Lake Clark NPPr, Camel’s Hump on shore of L Clark (MCCUNE et al. 2018); Kenai Fjords NPPr, Crater Bay off of Harris Bay (MCCUNE et al. 2020).

Ephebe lanata (L.) Vain. – Saxicolous on seepage rock. – SE Alaska (GEISER et al. 1994a: map); Thompson Pass (THOMSON & AHTI 1994); Ketchikan area, ridge above Ward Cr; terminal moraine of Herbert Glacier (GEISER et al. 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
= “*Parmelia lanata* (L.) Wallr.” – Baranof Isl, Hot Springs; Unalaska; Muir Glacier (CUMMINGS 1904).

Ephebe multispora (Å. E. Dahl) Henssen – Flushed or sprayed, steep and exposed rock face. – Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).

Ephebe perspinulosa Nyl. – Saxicolous, on rocks in stream. – White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Mirror L camp; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018).

Ephebe solida Bornet – Flushed or sprayed, ± exposed rock. – Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay; Kenai Fjords NPPr, Crater Bay off of Harris Bay; Kenai Fjords NPPr, Harding Icefield Trail; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay (MCCUNE et al. 2020).

#**Epicleadonia sandstedei** (Zopf) D. Hawksw. – On *Cladonia* spp. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); 140 km E of Kotzebue, Kobuk Valley Wilderness; Sagwon (ZHURBENKO & ALSTRUP 2004); Chilkoot Trail (SPRIBILLE et al. 2010); Seward Peninsula, Newton Pk; Blueberry Hill; Kotzebue; Selawik Wildlife Refuge; Tanana R, Bonanza Cr; Goldstream Valley; Skyline Ridge; Fairbanks; Denali NPPr, Rock Cr; Anchorage, Ft. Richardson Army base; Prince of Wales Isl, Salt Chuck mine (ZHURBENKO & PINO-BODAS 2017); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

- #**Epicladonia simplex** D. Hawksw. – On *Cladonia* spp. – “Beringian Alaska” (KRISTINSSON et al. 2010); Kotzebue; Denali NPPr; Adak Isl, Clam Lagoon (ZHURBENKO & PINO-BODAS 2017).
- #**Epicladonia stenospora** (Harm.) D. Hawksw. – On terricolous *Cladonia* spp. – Adak Isl (PINO-BODAS et al. 2017a); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Epigloea medioincrassata** (Grummann) Döbbeler – Terricolous on algal biofilm on dead mosses in tundra. – Barrow (FRYDAY 2004a); Alaska (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Epigloea renitens** (Grummann) Döbbeler – Terricolous on detritus in alpine. – White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).
- #**Epigloea urosperma** Döbbeler – On *Placynthiella uliginosa*, muscicolous over log in upper beach meadow, and over *Peltigera aphthosa*. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020); Caribou-Poker Cr watersheds (ZHURBENKO 2021).
- #**Epilichen glaucinigellus** (Nyl.) Hafellner – On *Baeomyces rufus*. – Seward Peninsula, 10 km ESE of Nome (ZHURBENKO 2009b).
- #**Epilichen scabrosus** (Ach.) Clem. – On *Baeomyces rufus* and rarely *B. placophyllus*. – Denali NP, NW slope to the summit of Mt Eielson, Copper Mtn [sic]; Franklin Bluffs on the Sagavanirktok R (HAFELLNER 1979); Juneau icefield nunatak (GEISER et al. 1994a); Eagle Summit; Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Ft Wainwright (RACINE et al. 1997); Juneau icefield nunatak (GEISER et al. 1998); Mt McKinley NP, NW slope to summit of Mt Eielson (DIEDERICH 2003); Noatak NPr (MCCUNE et al. 2009); Seward Peninsula, 10 km ESE of Nome (ZHURBENKO 2009b); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Katmai NPPr, Hammersly L; Lake Clark NPPr, Camel’s Hump on shore of L Clark; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).
= *Buellia scabrosa* (Ach.) A. Massal. – Unalaska Isl, Kashaga (DEGELIUS 1937); Juneau Icefield (MCCULLOUGH 1965); Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).
= *Lecidea scabrosa* Ach. – Port Clarence (NYLANDER 1887; HUE 1891).
- Erinacellus dendroides** (Henssen) T. Sprib. et al. – Corticolous on *Picea sitchensis* and *Tsuga heterophylla* twigs in wet coastal muskegs. – Glacier Bay; Chilkoot Trail (SPRIBILLE et al. 2014a); SE Alaska (MCCUNE 2017a & b); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
= *Spilonema dendroides* Henssen – Juneau (HENSSEN 1981); Chilkoot Trail (SPRIBILLE et al. 2010).
- Erioderma mollissimum* → **Appendix A**
- Erioderma pedicellatum** (Hue) P. M. Jørg. – Corticolous on *Betula* and *Picea*. – Denali NP, Kahiltna forest (W); Denali NP, Kahiltna forest (E); Denali NP, Coffee R; Denali State Park, Byer’s L; Denali State Park, Ermine Hill Trailhead (NELSON et al. 2009); Katmai NPPr (MILLER & WALTON 2013); Denali NPPr, Cascade Cr; Denali NPPr, Kahiltna; Denali NPPr, Ruth Glacier; Denali NPPr,

Coffee R (STEHN et al. 2013; STEHN et al. 2015); Denali State Park; Denali NPPr (CORNEJO et al. 2016); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

Erioderma sorediatum D. J. Galloway & P. M. Jørg. – Corticolous on conifers (especially *Tsuga heterophylla*) in SE rainforests. – SE Alaska (GEISER et al. 1998); Sitka (JØRGENSEN 2000); SE Alaska (DILLMAN 2004); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014).

Euopsis granatina (Sommerf.) Nyl. – Saxicolous on acidic rock, mainly alpine. – Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, Harding Icefield Trail; Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

= *Lecanora granatina* Sommerf. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Chikuminuk L (THOMSON & DOELL 1989).

Euopsis pulvinata (Schaer.) Vain. – Saxicolous, terricolous or over the liverwort *Anthelia*. – Near Juneau, Gastineau Pk (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Pyrenopsis pulvinata* (Schaer.) Th. Fr. – Mt Eielson (WEBER & VIERECK 1967); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Alaska (THOMSON 1997: map).

Evernia divaricata (L.) Ach. – Corticolous on *Picea* and reported as terricolous in tundra. – McKinley Bar (WEBER & VIERECK 1967); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009).

Evernia esorediosa → [Appendix A](#)

Evernia mesomorpha Nyl. – Corticolous and lignicolous on conifers and hardwoods. – Bettles; Brooks Range, S slope, Wild L (KROG 1962; MURRAY 1974); Denali NP, Wonder L; Richardson Hwy, Darling Cr; White Mts, Beaver Cr; junction of Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Circle Hot Springs; Alaska Hwy, mi 1450 (KROG 1968); Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, Horseshoe L; Fairbanks, steamboat station on the Chena R (SCHINDLER 1987); Deadman L CG (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska Hwy, near Canadian border; Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr (MCCUNE et al. 2018).

= “*Evernia prunastri* var. *thamnodes* Flot.” – Port Clarence (HOWE 1911c).

= “*Evernia thamnodes* (Flot.)” – Port Clarence (NYLANDER 1887; HUE 1890).

= “*Letharia thamnodes* (Flot.) Hue” – “in America boreali... Lawrencebay” (HUE 1899). Lawrence Bay is however on the Asian side.

Evernia perfragilis Llano – Terricolous on calcareous soil. See also entry under *Evernia esorediosa* in [Appendix A](#). – Anaktuvuk Pass (**type** – LLANO 1951; MURRAY 1974); coastal area from Cape Dyer to Ukinyik Cr (KROG 1962); Ogotoruk Cr drainage (JOHNSON et al. 1966); N of Nome, Anvil Pk (KROG 1968); Cape Dyer; Mancha Cr; Ogotoruk Cr; Okpilak L; Pitmegea R; Port Clarence; Sagavanirktok R; Teller Mission; Etchejuk R; Timber Cr (BIRD 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Prudhoe Bay region (WALKER & EVERETT 1991); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009).

Evernia prunastri (L.) Ach. – Corticolous on conifer branches. – Stampede (HOWARD 1958); Denali NP, Stampede (KROG 1968); SE Alaska (DILLMAN 2004); Revillagigedo Isl (DILLMAN et al. 2012).

#**Everniicola flexispora** D. Hawksw. – On *Nephroma arcticum*. – S of Wainwright, Kaolak R (ALSTRUP & HAWKSWORTH 1990); Ft Richardson (ZHURBENKO et al. 1995); Byers L, N of Talkeetna (HAFELLNER 2014).

– F –

Farnoldia hypocrita (A. Massal.) Fröberg – Saxicolous on calcareous rocks. – Seaton Roadhouse (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009). = *Lecidea hypocrita* A. Massal. – Angmakroq Mtn, vicinity of the Kukpuk R (HERTEL 1973: map); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Chisik Isl (TALBOT et al. 1992, misidentification of *Porpidia thomsonii* per MCCUNE et al. 2018); Alaska (THOMSON 1997: map).

Farnoldia jurana (Schaer.) Hertel – Saxicolous on limestone or calcareous sandstone, on rocks and pebbles. – Amchitka Isl (THOMSON & SOWL 1989); beach near Yakutat; Cosmos Pk in Stikine area (GEISER et al. 1994a: map); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); beach at Yakutat; Cosmos Range; Thunder Mtn (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Tanacross Village (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Lecidea jurana* Schaer. – S of Wainwright, Kaolak R (HERTEL 1967); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass (THOMSON 1979).

= *Tremolecia jurana* (Schaer.) Hertel – Anaktuvuk Pass (MOSER et al. 1979).

Farnoldia micropsis (A. Massal.) Hertel – Saxicolous on calcareous shale. – Kaolak R, S of Wainwright (HERTEL 1991); SE Alaska (MCCUNE 2017b).

- Felipes leucopellaeus** (Ach.) Frisch & G. Thor – Corticolous on *Tsuga*. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Arthonia leucopellaea* (Ach.) Almq. – NE of Cordova, Tripod Hill (DILLMAN et al. 2012).
- Fellhanera bouteillei** (Desm.) Vězda – Corticolous on *Picea sitchensis* and *Salix* on upper beach. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- Fellhaneropsis vezdae** (Coppins & P. James) Sérus. & Coppins – Corticolous on *Alnus*, *Picea sitchensis*, *Ribes lacustre* and *Tsuga heterophylla* twigs, and fungicolous on *Fomitopsis* cf. *pinicola*. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- #Feltgeniomyces mongolicus** Zhurb. – On *Hypogymnia subobscura*. – Brooks Range, Atigun R (ZHURBENKO 2020).
- Fissurina insidiosa** C. Knight & Mitten – Corticolous on *Alnus* and *Tsuga*. – Coronation Isl, Egg Harbor, Windy Pass (DILLMAN et al. 2012, as aff.); Gustavus, Falls Cr (RESL et al. 2015, supplementary material); SE Alaska (McCUNE 2017b); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).
- Flavocetraria cucullata** (Bellardi) Kärnefelt & A. Thell – Terricolous in forest and tundra across much of Alaska, though apparently absent in the coastal SE. – Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Franklin Bluffs; Happy Valley (WALKER et al. 2004); Alaska Hwy, mi 1240; Riverside Lodge Airstrip; Mt Fairplay (TALBOT et al. 2007); Chugach NF (DERR 2010); Interior Alaska, Boundary; Alaska Range, Tangle Lakes; Chugach Mts, Thompson Pass; Arctic Coastal Plain, Franklin Bluffs; Brooks Range, Toolik L; Brooks Range, Atigun R; Brooks Range, Anmaguligauraq Cr; Brooks Range, Roche Mountonee Cr; Alaska Range, Savage R; Arctic Coastal Plain, Barrow; Brooks Range Ivotuk; Brooks Range, Atigun Pass; Interior Alaska, Finger Mtn; Interior Alaska, White Mts, Eagle Summit; Interior Alaska, White Mts, Wickersham Dome (GEMPL et al. 2010); Dalton Hwy (LANG et al. 2012); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Brooks Range, Atigun Pass (KASANKE 2019); Yukon-Kuskokwim Delta (FROST et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Hagemester Isl (WALSH & GOWARD 2021).
= *Cetraria cucullata* (Bellardi) Ach. – Kotzebue's Sound (HOOKER & ARNOTT 1841); Norton Sound; Kotzebue's Sound (BABINGTON 1851); Norton Sound; Kotzebue Sound (BABINGTON 1852); Chamisso Isl, Arctic Ocean (ROTHROCK 1884); Port Clarence (ALMQUIST 1887); Taku (CUMMINGS 1892b); St Paul Isl (MACCOUN 1899, 1902); Agattu Isl; Unalaska; St Michael; St Lawrence Isl; St Lawrence Isl, Northeast Cape; Port Clarence (CUMMINGS 1904); Amaknak Isl (HOWE 1913a); Alaska (HADWEN & PALMER 1922); 30 mi inland from Camden Bay; between Port Clarence Bay and Teller (MERRILL 1924b); Alaska (RÄSÄNEN 1933); St Paul Isl (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Kotzebue; Mt McKinley NP (HANSON 1950); 5 mi S of Anchorage (HERRE 1950a); Barrow

(SCHOLANDER et al. 1952); Nome (HANSON 1953); “Alaska med Aleuterna och Pribiloföarna” (HASSELROT 1953); Tanana; Port Heiden; Umiat, along the Colville R; Stuyahok Camp L; Kasigluk, near school (HOWARD 1958); Chandler L (WIGGINS & MACVICAR 1958; MURRAY 1974); S of Wainwright, Kaolak R; Pt Barrow (THOMSON 1960); Brooks Range, S slope, Wild L; Anaktuvuk Pass; Umiat (KROG 1962; MURRAY 1974); Pt Barrow; Brooks Range, L Peters; flanks of Contact Cr Mtn; Northern coastal plain, Meade R Village; Ogotoruk Cr; St Matthew Isl; Hooper Bay; Mt Harper; White Mts, headwaters of Sheep Cr; White Mts, the limestone ridge (KROG 1962); Quigley Hill, rd to Little Annie Mine; Denali NP Carlo Station; Polychrome Pass; Riley Cr Trail; edge of Wonder L (HOWARD 1963); mtn W of Wiseman (HOWARD 1963; MURRAY 1974); Alaska Range District, Dry Cr (WEBER 1963); Firth R Valley (DREW & SHANKS 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Alaska Range, Dry Cr (VIERECK 1967); Mt Eielson; Muldrow outwash (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Anchorage, Rabbit Cr Rd; Anchorage area, headwaters of Rabbit Cr; Richardson Hwy, mi 24; Denali Hwy, mi 0–28, mi 70, mi 100; Denali NP, Wonder L; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Circle Hot Springs; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Nunivak Isl, Lake where the geese don’t fly; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Kotzebue (KROG 1968); 6 mi NW of Nome, Snake R (PEGAU 1968); central Alaska Range (REGER & PÉWÉ 1969); Amchitka Isl (WEBER et al. 1969); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Anaktuvuk Pass (NASH 1977); Toolik L (ISKANDER et al. 1978); Fish Cr drilling site (LAWSON et al. 1978); E bluff of the Johns R, Anaktuvuk Pass (MOSER & NASH 1978); Barrow; Eagle Summit; Prudhoe Bay (MURRAY & MURRAY 1978); Barrow (WILLIAMS et al. 1978); Haul Rd, Finger Mtn Site, Haul Rd, Sukakpak Mtn Site, Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Okpilak Valley (COPPINS 1981); Seward Peninsula, Nimrod Hill (RACINE 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Anchorage, by Portage (SCHINDLER 1987); Amchitka Isl (THOMSON & SOWL 1989); Katmai NP, Hammersly L; Denali NP, Rock Cr Trail (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Prudhoe Bay region (WALKER & EVERETT 1991); Central Arctic coastal plain (WALKER et al. 1991); Alaska (KÄRNEFELT et al. 1992); Chisik Isl (TALBOT et al. 1992); Imnavait Cr (HAHN et al. 1993, 1996); SE Alaska (GEISER et al. 1994a); Eagle Summit; Mt Fairplay; Deadman L CG; Moon L CG; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Shumagin Isls, Simeonof Is; (DANIÉLS et al. 1998); Imnavait Cr watershed, Philip Smith Mts (LANGE et al. 1998); Gates of

the Arctic NPPr (NEITLICH & HASSELBACH 1998); Chugach NF (DEVELICE et al. 1999); Bering Land Bridge NPr (HOLT et al. 2007); Toolik L (GOUGH et al. 2008); Seward Peninsula (HOLT et al. 2008); Ulukluk Cr (JANDT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Nulato Hills (JOLY et al. 2010); Denali NPPr (NELSON et al. 2015a); Gates of the Arctic NPPr (NELSON et al. 2015b).

= *Nephromopsis cucullata* (Bellardi) Divakar et al. – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

= “*Platysma cucullatum* Hffm.” – Kotzebue Sound (LAUDER LINDSAY 1861: 179); Alaska, ‘common’ (MANN 1868; TURNER 1886); Port Clarence (NYLANDER 1887; HUE 1890).

Flavocetraria minuscula (Elenkin & Savicz) Ahti et al. – Terricolous in forest openings. – Denali NPPr, near C-camp by the Rock Cr Trail; Chena R State Recreation Area, SE of the Rosehip CG (ZHURBENKO et al. 2005); Alaska (THELL et al. 2009); Alaska Hwy at mi 1249, 90 km ESE of Tok, near Deadman L CG; near Delta Junction, Gerstle R (DILLMAN et al. 2012); Denali NPPr (NELSON et al. 2013); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

= *Cetraria minuscula* (Elenkin & Savicz) McCune – Katmai NPPr, Hammersly L; Lake Clark NPPr, Lime Hills quad (MCCUNE et al. 2018).

Flavocetraria nivalis (L.) Kärnefelt & A. Thell – Terricolous in forest and tundra. – Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Thunder Mtn; unnamed peak W of Elbow Mtn (GEISER et al. 1998); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Franklin Bluffs (WALKER et al. 2004); Riverside Lodge Airstrip; Mt Fairplay (TALBOT et al. 2007); Interior Alaska (LAURSEN & SEPPELT 2009); Chugach NF (DERR 2010); Wrangell Mts; Chugach Mts, Thompson Pass; Brooks Range, Atigun R, Atigun Pass; Brooks Range, Roche Mountanee Cr; Alaska Range, Savage R; Barrow; White Mts, Eagle Summit; Yukon-Tanana Uplands, Grapefruit Rocks; Wickersham Dome (GEML et al. 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Brooks Range, Atigun Pass (KASANKE 2019); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Hagemester Isl (WALSH & GOWARD 2021).

= *Cetraria nivalis* (L.) Ach. – Port Clarence (ALMQUIST 1887); Taku (CUMMINGS 1892b); St George Isl; St Paul Isl (MACOUN 1899, 1902); Agattu Isl; St Michael; St Matthew Isl (CUMMINGS 1904); Amaknak Isl (HOWE 1913a); Alaska (RÄSÄNEN 1933); St Paul Isl (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Naknek, Alaska Peninsula (HERRE 1950a); Barrow (SCHOLANDER et al. 1952); Juneau icefield nunatak (HEUSSER 1954); near Juneau, Taku Glacier valley (HEUSSER et al. 1954); Port Heiden; “Pike Knob”; Kvichak Moraine; Stampede (HOWARD 1958); Pt Barrow (THOMSON 1960); Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Umiat; Anaktuvuk Pass (KROG 1962; MURRAY 1974); Brooks Range, L Peters; Pt Barrow; Meade R Village; flanks of Contact Cr Mtn; Ogotoruk Cr; Hooper Bay (KROG 1962); Quigley Hill; hill E of rd to Kantishna; Savage R CG (HOWARD 1963); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson; Muldrow Glacier (VIERECK 1966); Muldrow outwash (WEBER & VIERECK 1967); Alaska Range, Dry Cr

(VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; mtn ridge Eagle R; Anchorage area, headwaters of Rabbit Cr; Kenai Peninsula, Skilak L; Richardson Hwy, mi 24; Denali Hwy, mi 0–37, mi 70; Denali NP, Savage R; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; Richardson Hwy, Darling Cr; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, Fossil Cr; White Mts, the limestone ridge; White Mts, Cache Cr; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Circle Hot Springs; Nunivak Isl, Roberts Mtn; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Kotzebue (KROG 1968); central Alaska Range (REGER & PÉWÉ 1969); Alaska (THOMSON 1972a: map); Chitstone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); E bluff of the Johns R, Anaktuvuk Pass (MOSER & NASH 1978); Barrow; Eagle Summit; Prudhoe Bay (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Barter Isl; Firth R at Mancha Cr (THOMSON 1979); Arey Cr; Barter Isl; Okpilak Valley (COPPINS 1981); Tanana R (MURRAY et al. 1983); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Denali NP, Horseshoe L; Denali NP, Station Primrose (SCHINDLER 1987); Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Katmai NP, Hammersly L (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Prudhoe Bay region (WALKER & EVERETT 1991); Central Arctic coastal plain (WALKER et al. 1991); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Moon L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Chugach NF (DEVELICE et al. 1999); Bering Land Bridge NPPr (HOLT et al. 2007); Toolik L (GOUGH et al. 2008); Seward Peninsula (HOLT et al. 2008); Noatak NPPr (HOLT et al. 2009; MCCUNE et al. 2009); Denali NPPr (NELSON et al. 2015a); Gates of the Arctic NPPr (NELSON et al. 2015b).

= *Nephromopsis nivalis* (L.) Divakar et al. – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

= “*Platysma nivale* (L.)” – Port Clarence (NYLANDER 1887; HUE 1890).

Flavoplaca citrina (Hoffm.) Arup et al. – Saxicolous on coastal rocks. The reports from tall *Salix alaxensis* thickets and moist tundra by MCCUNE et al. (2009) possibly represent a different species. – Katmai NPPr, Naknek L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

= *Caloplaca citrina* (Hoffm.) Th. Fr. – Juneau (ARUP 1993); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); SE Alaska (O’CLAIR et al. 1996); Alaska (BRODO et al. 2001); Okpilak L (WETMORE 2001); Noatak NPPr (MCCUNE et al. 2009); coastal Alaska (MCCUNE 2017b).

Flavoplaca flavocitrina (Nyl.) Arup et al. – Saxicolous, just above sea level.

= *Caloplaca flavocitrina* (Nyl.) H. Olivier – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Flavoplaca marina (Wedd.) Arup et al. – Saxicolous on coastal rocks, above *Hydropunctaria maura* zone.

= *Caloplaca marina* (Wedd.) Zahlbr. – St Lawrence Isl (THOMSON 1997: map).

Frigidopyrenia bryospila (Nyl.) Grube – Fretum Behring, Port Clarence (GRUBE 2005).

= *Collemopsidium bryospilum* (Nyl.) Coppins – Barrow (FRYDAY 2004a).

Incorrect identification (M. Grube, pers. comm. to AMF).

= *Didymella bryospila* (Nyl.) H. Magn. – Fretum Behring, Port Clarence (GRUBE & HAFELLNER 1990).

= *Verrucaria bryospila* Nyl. – Port Clarence (**type** – NYLANDER 1887).

Frutidella caesiocrata (Schaer.) Kalb – Muscicolous or terricolous on small cushions or patches of detritus over rock, alpine. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); SW & SE Alaska (MCCUNE 2017a & b); Katmai NPPr (FRYDAY & TØNSBERG 2015); Kenai Fjords NPPr (MCCUNE et al. 2020).

= *Lecidea arctica* Sommerf. – Isls in Behring Strait (MACOUN 1902).

Frutidella furfuracea (Anzi) M. Westb. & M. Svenss. – Corticolous, mainly on *Tsuga mertensiana* but also on *Abies*, *Alnus*, *Cassiope*, *Ledum groenlandicum*, *Picea sitchensis* krummholz and *Pinus contorta* in muskeg. – Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= *Frutidella pullata* (Norman) Schmull – SE Alaska (MCCUNE 2017b); Katmai NPPr, Hammersly L; Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

= *Lecidea pullata* (Norman) Th. Fr. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).

Frutidella pullata → **Frutidella furfuracea**

Fulgensia bracteata → **Gyalolechia bracteata**

Fulgensia bracteata subsp. *deformis* → **Gyalolechia bracteata**

Fulgensia desertorum → **Gyalolechia desertorum**

Fulgidea oligospora (Timdal) Bendiksby & Timdal – Lignicolous on charred wood.

– Alaska (MCCUNE 2017b); Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018)

= *Hypocenomyce oligospora* Timdal – 10 mi N of Glenallen along the Richardson Hwy (TIMDAL 2001).

#Fusarium peltigerae Westend. – On *Lobaria hallii*. – Chilkoot Trail (SPRIBILLE et al. 2010).

Fuscidea aleutica (Degel.) Fryday – Saxicolous on acidic rocks. – Unalaska Isl (FRYDAY 2008). – Katmai NPPr, Mirror L (MCCUNE et al. 2018).

= *Lecidea aleutica* Degel. – Unalaska Isl, Unalaska (**type** – DEGELIUS 1937); Amchitka Isl (WEBER et al. 1969, as cf.).

= *Fuscidea lowensis* auct., non (H. Magn.) R. A. Anderson & Hertel – Adak Isl (TALBOT et al. 1997); Unalaska Isl (THOMSON 1997: map). Synonymy after FRYDAY (2008).

Fuscidea circumflexa → **Appendix A**

Fuscidea intercincta (Nyl.) Poelt – Saxicolous on granite and argillite in subalpine and alpine habitats. – Coastal SW–SE Alaska (MCCUNE 2017a); Katmai NPPr,

W of Contact Cr; Katmai NPPr, N side of Mirror L; Katmai NPPr, NE of Mirror L (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Fuscidea lowensis → **Fuscidea aleutica**

Fuscidea mollis (Wahlenb.) V. Wirth & Vězda – Saxicolous on acidic rocks. – Alaska (THOMSON 1997: map); Seward Peninsula (BRODO & WIRTH 1998); Arrigetch Cr valley (FRYDAY 2008); Katmai, Mirror L (MCCUNE et al. 2018); Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020).

= “*Lecidea mollis* (Wnbg.) Nyl.” – Behring Strait (MAGNUSSON 1925).

Fuscidea muskeg Tønsberg & M. Zahrad. – Corticolous, mainly on branches of *Pinus contorta* but also on *Picea sitchensis*, *Alnus*, *Betula*, *Tsuga* and *Vaccinium ovalifolium*. – Kenai Fjords NPPr, N end of Harris Bay, near opening to Northwestern Lagoon; Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Gustavus (**type** – SPRIBILLE et al. 2020).

= *Fuscidea praeruptorum* auct., non (Du Rietz & H. Magn.) V. Wirth & Vězda – Most, if not all of these reports are probably referable to *F. muskeg*. – 10 km E (direct) of Sitka; 0.5 mi along Douglas Hwy NW of Juneau-Douglas Bridge (FRYDAY 2008); Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).

Fuscidea pusilla Tønsberg – Corticolous on *Alnus* and *Betula*. – Kodiak Isl (FRYDAY 2008); Juneau, N of Dotsons Landing; Kenai Pen, S of Sunrise, Sixmile Cr valley; S of fjord Turnagain Arm, just W of Sunrise Cr; Kodiak Isl E, along rd to Buskin L; Middle Bay (DILLMAN et al. 2012); coastal Alaska (MCCUNE 2017a & b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

Fuscidea thomsonii Brodo & V. Wirth – Saxicolous on coastal outcrops. – Adak Isl, Finger Bay area (FRYDAY 2008); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, Verdant Cove (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Fuscopannaria abscondita P. M. Jørg. – Terricolous among bryophytes. – Gates of the Arctic NPPr (NELSON et al. 2015b).

Fuscopannaria ahlneri (P. M. Jørg.) P. M. Jørg. – Corticolous on conifers, *Alnus* and *Betula*. – Yakutat lowlands (GEISER et al. 1998); Alaska (JØRGENSEN 2000); SE Alaska (DILLMAN 2004); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014: ‘includes *F. alaskana*’); Denali NPPr, Coffee R valley; Denali NPPr, Ruth Glacier forest; Denali NPPr, Cascade Cr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin (MCCUNE et al. 2020, as “cf.”); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

= *Pannaria ahlneri* P. M. Jørg. – SE Alaska (GEISER et al. 1994a: map); Alaska (HOLIEN & TØNSBERG 1996: map).

- Fuscopannaria alaskana*** P. M. Jørg. & Tønsberg – Corticolous on *Alnus*, *Betula* and *Populus*. – S of Seward, W of Lowell Pt, Spruce Cr (**type** – JØRGENSEN 2000; JØRGENSEN 2003; JØRGENSEN 2004a); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, headland between two arms of Coleman Bay; Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon (MCCUNE et al. 2020).
- Fuscopannaria aurita*** P. M. Jørg. – On moss and detritus over rock. – Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).
- Fuscopannaria cheiroloba*** (Müll. Arg.) P. M. Jørg. – Saxicolous, steep, relatively exposed, wet granite rock face. – Kenai Fjords NPPr, E side of Harris Bay (MCCUNE et al. 2020).
- Fuscopannaria confusa*** (P. M. Jørg.) P. M. Jørg. – Corticolous on *Populus* and *Tsuga*, and saxicolous on rock faces. – Kenai (JØRGENSEN 2000); Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Gustavus (SPRIBILLE et al. 2020).
- Fuscopannaria convexa*** P. M. Jørg. – Corticolous on *Alnus*, *Populus* and *Picea* and saxicolous on rock faces. – Cordova, Long Isl (**type**); Copper R Delta, Long Isl, along Copper R Hwy; end of Dangerous R Rd, near N bank of Dangerous R (JØRGENSEN 2004a, as *ined.*, JØRGENSEN 2005); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPPr, Exit Glacier CG; Kenai Fjords NPPr, Verdant Cove (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).
- Fuscopannaria dillmaniae*** T. Sprib. – Corticolous on *Alnus* and *Populus* in lowland temperate rainforests. – Glacier Bay NP: East Arm, Glacier Bay; Gustavus (**type**); Juneau Borough, Montana Cr (SPRIBILLE et al. 2020).
- Fuscopannaria globigera* → ***Vahliella globigera***
- Fuscopannaria incisa*** (Müll. Arg.) P. M. Jørg. – Corticolous on *Alnus*, *Salix* and *Tsuga* in rainforests. – Juneau, along Herbert R (JØRGENSEN 2000); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: East Arm, Gustavus (SPRIBILLE et al. 2020).
- Fuscopannaria laceratula* → ***Steineropsis laceratula***
- Fuscopannaria leucophaea* → ***Vahliella leucophaea***
- Fuscopannaria leucostictoides*** (Ohlsson) P. M. Jørg. – Corticolous on conifers and hardwoods in the oceanic SE. – SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Lake Clark NPPr, Chinitna Bay; Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, E side of Harris Bay; Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020).
= *Pannaria leucostictoides* Ohlsson – Anchorage, by Portage (SCHINDLER 1987); SE Alaska (GEISER et al. 1994a: map).
- Fuscopannaria maritima*** (P. M. Jørg.) P. M. Jørg. – Muscicolous or loosely saxicolous on coastal rocks just above the upper tide line. – SE Alaska (O'CLAIR

et al. 1996); Aaron Isl in Lynn Canal; Sitka, Starrigavan Bay (GEISER et al. 1998); Wrangell (JØRGENSEN 2000).

= *Pannaria maritima* P. M. Jørg. – SE Alaska (GEISER et al. 1994a: map).

Fuscopannaria mediterranea (C. Tav.) P. M. Jørg. – Corticolous on *Alnus*, *Betula*, *Picea* and *Populus* bark, once from among bryophytes below a flushed marble rock face (FRYDAY & DILLMAN 2021a). – Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, N of Exit Glacier Visitor Center (MCCUNE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021a & b).

Fuscopannaria nebulosa (Hoffm.) E. Tripp & Lendemer – Over moss on steep mossy granite rock face.

= *Moelleropsis nebulosa* (Hoffm.) Gyeln. – Kenai Fjords NPPr, Crater Bay off of Harris Bay (MCCUNE et al. 2020).

Fuscopannaria pacifica P. M. Jørg. – Corticolous on conifer twigs, *Alnus* and *Betula*, common in rainforests. – Juneau (JØRGENSEN 2000); Teck Isl (DILLMAN 2010, as a “complex”); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Glacier Bay NP: East Arm, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Fuscopannaria praetermissa (Nyl.) P. M. Jørg. – Terricolous on thin soil over rock or muscicolous. Many old records, especially from lowland areas, may apply to taxa that have been since described as distinct species. – SW Chichagof Isl; Sokoi Isl; [SE Alaska] mainland, subalpine at Swan L (GEISER et al. 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010, as ‘group’); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, headland between two arms of Coleman Bay (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay; Gustavus (SPRIBILLE et al. 2020).

= *Pannaria praetermissa* Nyl. – Amchitka Isl (THOMSON & SOWL 1989); SW Chichagof Isl (GEISER et al. 1994a: map).

= *Parmeliella praetermissa* (Nyl.) P. James – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Eagle Summit; Mt Fairplay; Richardson Hwy, mi 10; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994).

= *Pannaria lepidiota* (Sommerf.) Th. Fr. – Alaska (WEBER 1965).

= “*Parmeliella lepidiota* (Sommerf.)” – “on bark of alders” – Dall Isl, Augustine Bay; Coronation Isl, Aats Bay (HERRE 1919).

Fuscopannaria ramulina P. M. Jørg. & Tønsberg – Corticolous on *Alnus*, *Populus balsamifera*, *Salix* and conifers. – Juneau, Mendenhall L SE (**type** – JØRGENSEN 2000; JØRGENSEN 2003; JØRGENSEN 2004a); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr, Cascade Cr (STEHN et al. 2015); Katmai NPPr, near Brooks Camps; Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Kenai Fjords NPPr, near mouth of cr at

N end of James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Fuscopannaria saubinetii (Mont.) P. M. Jørg. – “On rock with mosses and/or humus, on conifers and deciduous trees in various forest types, low elevation to subalpine.” – SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Chugach NF (DERR 2010).

Fuscopannaria sorediata P. M. Jørg. – Corticolous on *Alnus*, once on fine *Tsuga* twigs. – Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Fuscopannaria viridescens P. M. Jørg. & Zhurb. – Terricolous in tundra. – Left bank of Middle Kobuk R, Kobuk Valley Wilderness (**type**); Dalton Hwy, near mi 248, Atigun Canyon; Dalton Hwy, mi 284.5, Toolik L (JØRGENSEN & ZHURBENKO 2002; JØRGENSEN 2003; JØRGENSEN 2004a); Barrow, Atqasuk (FRYDAY 2004a); near Kotzebue (ZHURBENKO et al. 2005); Alaska Range, Denali NP Wilderness, headwaters of Hennes Cr (ZHURBENKO 2009b); Denali NPPr, Primrose Ridge; Gates of the Arctic NPPr, Summit L, Kurupa L, Narvak L, Upper Nigu R; Barrow; Kobuk Valley NP, Kobuk R (NELSEN & WHEELER 2013); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, Primrose Ridge (STEHN et al. 2015); Katmai NPPr, Hammersly L; Lake Clark NPPr, Portage L; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018).

– G –

Gabura insignis (P. M. Jørg. & Tønsberg) Magain & Sérusiaux – Corticolous on naked and mossy bark of deciduous trees and twigs of conifers, especially *Picea sitchensis*. – Alaska (MAGAIN et al. 2020).

= *Leptogium insigne* P. M. Jørg. & Tønsberg – Sitka; Mitkof Isl; Yakutat (JØRGENSEN & TØNSBERG 2010).

= *Leptogium brebissonii* auct., non Mont. – Petroglyph Beach, Wrangell (GEISER et al. 1998); SE Alaska (DILLMAN 2004); S Alaska (ROOT et al. 2014).

Geisleria synchogonoides Nitschke – Terricolous on bare soil. – Barrow (MURRAY & MURRAY 1978); Circular Marsh near Barrow (THOMSON 1979); near Pt Barrow (THOMSON 1997: map). The voucher specimen (WIS-L-0098506) was seen by AMF in 2001.

#Geltingia associata (Th. Fr.) Alstrup & D. Hawksw. – On *Ochrolechia*, also once on *Arctoparmelia centrifuga*. – Barrow (ZHURBENKO et al. 1995); Interior Alaska (LAURSEN & SEPPELT 2009); Cordova, N of Copper R Hwy, along Saddlebag Glacier Trail, at the cr from Saddlebag L (DIEDERICH et al. 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (SUIJA et al. 2015b: DNA voucher); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

= *Lecidea associata* Th. Fr. – Lawrence Isl (NYLANDER 1887; HUE 1891); Barter Isl (COPPINS 1981).

Gilbertaria contristans (Nyl.) M. Svenss. & Fryday – Muscicolous on mosses on acidic rocks, including seepages.

= *Catillaria contristans* (Nyl.) Zahlbr. – 230 km SSW Fairbanks, Denali Hwy at milepost 13 (DILLMAN et al. 2012).

Gilbertaria squalescens (Nyl.) M. Svenss. & Fryday – Muscicolous on vertical rock face on cushions of *Andreaea*.

= *Toninia squalescens* (Nyl.) Th. Fr. – Chilkoot Trail (SPRIBILLE et al. 2010); Mitkof Isl, Crystal Mtn (FRYDAY & TØNSBERG 2015); SE Alaska (McCUNE 2017b); Lake Clark NPPr, Turquoise L (McCUNE et al. 2018); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Glypholecia scabra (Pers.) Müll. Arg. – Saxicolous on limestone. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Haul Rd [=Dalton Hwy](MURRAY et al. 1980); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); North Slope, Brooks Range, right bank of Atigun Canyon by the Dalton Hwy (ZHURBENKO 2009b).

Gongylia nadvornikii → *Sagediopsis barbara* in Appendix A

Gowardia arctica Halonen et al. – Terricolous in dry lichen-dwarf shrub tundra, on soil, often within lichen-moss mat. – Barrow (ZHURBENKO 2009b).

Gowardia nigricans (Ach.) Halonen et al. – Terricolous in alpine heath and tundra. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Alaska (MYLLYS et al. 2016); Denali NPPr (ROLAND et al. 2017); Brooks Range, Atigun Pass (KASANKE 2019); Alaska (GOWARD & MYLLYS 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Alectoria nigricans* (Ach.) Nyl. – Terricolous in tundra and loosely saxicolous over boulders and bedrock. – Lawrence-Insula; Port Clarence (NYLANDER 1887); Port-Clarence (HUE 1890); St Lawrence Isl, Unalaschka (STIZENBERGER 1892); St Paul Isl; St George Isl (MACOUN 1902); Agattu Isl; Unalaska; St Michael; St Lawrence Isl; Cape Nome (CUMMINGS 1904); Pt Barrow; Unalaska Isl; Cape Nome; St Michael; St Paul's Isl; St George Isl (HOWE 1911a); Alaska (HADWEN & PALMER 1922); 30 mi inland from Camden Bay (MERRILL 1924b); St Lawrence-Insel (DU RIETZ 1926); Attu Isl; St Paul Isl (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Kotzebue (HANSON 1950); Barrow (SCHOLANDER et al. 1952); Port Heiden; "Pike Knob"; Kasigluk (HOWARD 1958); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Pt Barrow; Meade R Village; Ogotoruk Cr; Ogotoruk Cr drainage, Crowbill Ridge; vicinity of Pt Hope; St Matthew Isl; Hooper Bay; Steese Hwy, Eagle Summit; White Mts, headwaters of Sheep Cr (KROG 1962); Wiseman, NE slope of mtn (HOWARD 1963, MURRAY 1974); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Talkeetna Mts, Independence Mine; base of Rainbow Mts, E of Richardson Hwy; Eagle R Valley; Turnagain Arm, Bird Cr Ridge; W of Seward, Marathon Mtn; Kenai Peninsula, Skilak L; Richardson Hwy, mi 24; Denali Hwy, mi 0–37, mi 70; Denali NP, Savage R; Denali NP, Wonder L; White Mts, headwaters of Sheep Cr; White Mts, lower Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Steese Hwy, Eagle Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Nunivak Isl, Robert's Mtn; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Kotzebue (KROG 1968); Amchitka Isl, S of Chitka Cove (WEBER et al. 1969); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Agattu Isl; Unalaska; St George Isl; St Lawrence Isl; St Paul Isl; Mt Juneau (BRODO & HAWKSWORTH 1977: map); Alaska (LINDSAY 1977: map); Fish Cr (LAWSON et al. 1978);

Barrow; Eagle Summit; Prudhoe Bay (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Circular Marsh near Barrow; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Barter Isl (THOMSON 1979); Anaktuvuk Pass (MOSER et al. 1979); thaw lake plain near Barrow (BILLINGS & PETERSON 1980); Okpilak Valley (COPPINS 1981); Seward Peninsula, Nimrod Hill (RACINE 1981); Alaska (JØRGENSEN 1983: map; THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Amchitka Isl, Fourteen-mile L (THOMSON & SOWL 1989); Hagemeister Isl (TALBOT et al. 1990); Prudhoe Bay region (WALKER & EVERETT 1991); Central Arctic coastal plain (WALKER et al. 1991); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Thompson Pass, Blueberry L CG (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay; Mentasta Mts (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Red Pk L (DILLMAN 2010); Kasatochi Isl (TALBOT et al. 2010a); Unalaska Isl (TALBOT et al. 2010b); S Alaska (ROOT et al. 2014); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, NPS weather station, McArthur Ridge; rocky alpine tundra NE of Coleman Bay; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

= *Alectoria ochroleuca* var. *nigricans* (Ach.) Körb. – Chernofski, Unalashka (ROTHROCK 1884).

= “*Alectoria thulensis* Fr.” – Pribilof Isls (MACOUN 1899).

= *Alectoria nigricans* var. *tschuctschorum* Vain. – Atka Isl (DEGELIUS 1937).

Graphis scripta (L.) Ach. – Corticolous on hardwoods in southern coastal areas, especially on *Alnus*. – Orca (CUMMINGS 1904); Coronation Isl, Egg Harbor; Kosciusko Isl, Shipley Bay (HERRE 1919); Kuiu Isl, Washington Bay (THOMSON 1950a); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Alaska (BRODO et al. 2001); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP; Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

#***Graphium aphthosae*** Alstrup & D. Hawksw. – On *Peltigera aphthosa* aggr. – Brooks Range, Peters L, Carnivora Cr (ESSLINGER & EGAN 1995); Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Brooks Range, Endicott Mtns, Midnight Dome (DILLMAN et al. 2012).

Gyalecta carneola → ***Pachyphiale carneola***

Gyalecta erythrozona Lettau – Muscicolous on moist ledge. – White Pass (SPRIBILLE et al. 2010, as aff.); SE Alaska (MCCUNE 2017b).

Gyalecta fagicola → **Pachyphiale fagicola**

- Gyalecta foveolaris** (Ach.) Schaer. – Terricolous on mineral soil and detritus in tundra, where base-enriched. – Camp Eielson (WEBER & VIERECK 1967); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvaapuk Pt (THOMSON 1979); Eagle Summit (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).
- Gyalecta friesii** Flot. ex Körb. – Terricolous on soil over roots of conifers and lignicolous on rotten wood. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).
- Gyalecta jenensis** (Batsch) Zahlbr. – Saxicolous on limestone and slightly calcareous rocks in humid and shaded habitat. – 4.5 km NE Cordova, Crater L; 5 km N Chitina, N end of Threemile L (DILLMAN et al. 2012); Glacier Bay NP: Excursion Ridge, Glacier Bay (SPRIBILLE et al. 2020).
- Gyalecta kukriensis** (Räsänen) Räsänen – Saxicolous. – Katmai NPPr, Naknek L (MCCUNE et al. 2018).
- Gyalectaria diluta** (Björk et al.) I. Schmitt et al. – Corticolous on *Alnus*, *Picea sitchensis*, *Tsuga heterophylla* and *Vaccinium ovalifolium*, lignicolous, and fungicolous on a polypore. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP, Bartlett Cove (RESL et al. 2015, supplementary material); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
- Gyalidea asteriscus** (Anzi) Aptroot & Lücking – Terricolous on dry calcareous soil. – Brooks Range, Sukakpak Mtn (DILLMAN et al. 2012).
- Gyalidea fritzei** (Stein) Vězda – Saxicolous in sheltered finger-sized depression in argillitic rock in alpine zone. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Gyalidea hyalinescens** (Nyl.) Vězda – Saxicolous on rocky outcrop in subalpine forest, on rocks in creeks at low and mid elevations. – Kupreanof Isl; [SE Alaska] mainland, Muddy R drainage (GEISER et al. 1998).
- Gyalidea lecideopsis** (A. Massal.) Lettau, **variety not specified** – Saxicolous on calcareous rocks. The records reported under this name (not stating variety) overlap with var. *convarians* (see below) and it is doubtful that two taxa are involved. – Bering Straits (THOR & VÉZDA 1984); Fielding L (THOMSON & AHTI 1994); Port Clarence (THOMSON 1997: map); N Alaska (MCCUNE 2017b).
- Gyalidea lecideopsis** var. **convarians** (Nyl.) Vězda – Saxicolous on calcareous rocks. – Bering Straits, Port Clarence (VÉZDA 1966); Port Clarence; 5 km N of Lookout Ridge, Awuna Test Well; Shublik Mts, Ikiapaurak Valley (THOMSON & MURRAY 1988: map).
= *Gyalecta convarians* Nyl. – “super saxa calcareo-schistosa” – Port Clarence (type – NYLANDER 1885b, NYLANDER 1887).
= *Lecidea convarians* (Nyl.) Hue – Port-Clarence (HUE 1891).
- Gyalidea lecideopsis** var. **eucarpa** (Servít) Vězda – On rock. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020; as aff.).

- Gyalidea subscutellaris*** (Vězda) Vězda – Terricolous on ca. 20 yr-old glacial foreland soils, *Dryas*-dominated habitats. – Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).
- Gyalideopsis epicorticis*** (A. Funk) Tønsgaard & Vězda – Corticolous on *Alnus* bark and fine *Picea sitchensis* and *Tsuga heterophylla* twigs, also once each on *Malus fusca* and *Salix*, mainly at low elevations. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017a, b); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, W shore of Beauty Bay; Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).
- Gyalideopsis helvetica*** van den Boom & Vězda – Lignicolous, muscicolous and corticolous (on *Alnus*) in coastal rainforests. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).
- Gyalideopsis muscicola*** P. James & Vězda – Muscicolous on *Rhytidiadelphus triquetrus* and on mosses over bark on tree trunks, on high beaches and over logs. – Kenai Fjords NP, Verdant Cove (TØNSBERG & PRINTZEN 2018); Kenai Fjords NPPr, headland between two arms of Coleman Bay; Kenai Fjords NPPr, North Arm Nuka Bay, Public Use Cabin; Kenai Fjords NPPr, Verdant Cove; Kenai Fjords NPPr, NE end of Harris Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay; Gustavus (SPRIBILLE et al. 2020).
- Gyalideopsis piceicola*** (Nyl.) Vězda & Poelt – Corticolous on smooth *Alnus* bark, *Picea* twigs, fine *Tsuga* twigs and once fungicolous on polypore. – Alaska (HOLIEN & TØNSBERG 1996: map); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
- Gyalolechia allochroa*** (Y. Joshi et al.) Søchting et al. – Saxicolous on vertical sheltered rock with overhanging vegetation. – Glacier Bay NP (VONDRÁK et al. 2016b).
= *Caloplaca allochroa* Y. Joshi et al. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Gyalolechia bracteata*** (Hoffm.) A. Massal. – Terricolous on calcareous or gypsum-rich soils; a report from “wooden ranch house shingles” in the Shumagin Isls is doubtful.
= *Fulgensia bracteata* (Hoffm.) Räsänen – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr; L Peters (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Alaska (THOMSON 1997: map); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Howe Isl (WALKER et al. 2004); Mt Fairplay (TALBOT et al. 2007).
= *Fulgensia bracteata* subsp. *deformis* Poelt – Brooks Range, Philip Smith Mtns, S of Atigun R (DILLMAN et al. 2012).
- Gyalolechia desertorum*** (Tomin) Søchting et al. – Saxicolous on loess.
= *Fulgensia desertorum* (Tomin) Poelt – Copper R (MURRAY et al. 1983).

- Gyalolechia flavovirescens** (Wulfen) Söchting et al. – Saxicolous on calcareous rocks. – Katmai NPPr, Naknek; Lake Clark NPPr, Portage L; Lake Clark NPPr, W of Hatchet Pt; Lake Clark NPPr: Tanalian Falls (MCCUNE et al. 2018).
= *Caloplaca flavovirescens* (Wulfen) Dalla Torre & Sarnth. – Alaska (THOMSON 1997: map); Brooks Range, Endicott Mtns: Midnight Dome; Sukakpak Mtn, N of Atigun R (DILLMAN et al. 2012); Katmai NPPr, Naknek L (MCCUNE et al. 2018).
- Gyalolechia persimilis** (Wetmore) Söchting et al. – Corticolous on *Cupressus nootkatensis*. – Glacier Bay NP: Dundas Bay (VONDRÁK et al. 2016b).
= *Caloplaca persimilis* Wetmore – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
= *Gyalolechia ussuriensis* (Oxner et al.) Vondrák – Glacier Bay NP (VONDRÁK et al. 2016b, as aff.). VONDRÁK et al. give geography as the main reason for maintaining this as distinct from *G. persimilis*, to which it is paraphyletic in their study. *Caloplaca persimilis* is the older basionym.
- Gyalolechia xanthostigmoidea** (Räsänen) Söchting et al. – Corticolous on *Populus*, also reported from carbonate rocks in tundra (ZHURBENKO 2009b). – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018, as s. lat.).
= *Caloplaca xanthostigmoidea* (Räsänen) Zahlbr. – Kodiak Isl, W of Kodiak village, along rd to Anton Laren Bay, just SW of Buskin L; Brooks Range, Mt Hulten, 1 km E of Dalton Hwy, mi 269; Prudhoe Bay, Endicott; Denali NP at access rd (SÖCHTING & TØNSBERG 1997); Kodiak Isl, along rd to Anton Larsen Bay, just W of Buskin L (TØNSBERG 1997); Denali NP, access rd; Prudhoe Bay, Endicott (WETMORE 2001); Munthlag L (TALBOT et al. 2007); North Slope, Brooks Range, Atigun Canyon by the Dalton Hwy (ZHURBENKO 2009b); Alaska (MCCUNE 2017b).
= *Caloplaca discolor* (Willey ex Tuck.) Fink – Corticolous and lignicolous on old wood and bark (incl. *Populus balsamifera*). – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Prudhoe Bay; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1997: map); Alaska Hwy, near Canadian border (TALBOT et al. 2007). Synonymy according to WETMORE (2001).
- Gypsoplaca macrophylla** Timdal – Terricolous on calcareous soil. – Arctic Coast District, valley of Mancha Cr and Firth R; valley of the Okpilak R, at Okpilak L near Mt Michelson (TIMDAL 1990); Alaska (GOWARD et al. 1996; BRODO et al. 2001); Alaska (MCCUNE 2017b).
- Gyrographa gyrocarpa** (Flot.) Ertz & Tehler – Saxicolous on shaded, vertical rock faces. – SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Camel's Hump on shore of L Clark (MCCUNE et al. 2018); Petersburg Borough, Mitkof Isl (FRYDAY & DILLMAN 2021a).
= *Opegrapha gyrocarpa* Flot. – White Pass (SPRIBILLE et al. 2010).

– H –

- Haematomma ochroleucum** (Neck.) J. R. Laundon – Saxicolous on vertical sheltered cliff face. – NNE of Dyea, Klondike Goldrush National Historical Park (BRODO et al. 2008); Chilkoot Trail (SPRIBILLE et al. 2010).

- #Hainesia longicladoniae** Diederich & van den Boom – On *Cladonia* spp. – Seward Peninsula, Newton Pk (ZHURBENKO & PINO-BODAS 2017).
- Halecania alpivaga** (Th. Fr.) H. Mayrhofer – Saxicolous on calcareous rock. – Port Clarence; Sukakpak Mtn; Brooks Range, Midnight Dome (DILLMAN et al. 2012). = *Lecania alpivaga* Th. Fr. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Alaska (THOMSON 1997: map); SE Alaska (MCCUNE 2017b). = *Lecanora disceptans* Nyl. – Port Clarence (NYLANDER 1887; HUE 1891). Synonymy follows DILLMAN et al. (2012).
- Halecania athallina** Fryday – Saxicolous on argillite outcrops in alpine heath. – Glacier Bay NP: Excursion Ridge (**type** – SPRIBILLE et al. 2020).
- Halecania viridescens** Coppins & P. James – Corticolous on *Alnus* twig below eagle perch, on *Shepherdia canadensis* stalk and on *Sambucus racemosa*. – Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
- #Halospora discrepans** (J. Lahm ex Arnold) Hafellner – On *Protoblastenia incrustans*. – Brooks Range, Philip Smith Mtns, S of Atigun R (DILLMAN et al. 2012).
- Helocarpon crassipes* → **Micarea crassipes**
- Henrica melaspora** (Taylor) Savić & Tibell – Saxicolous, once on flushed marble rock face. – Alaska (MCCUNE 2017b); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021a & b). = *Polyblastia scotinospora* (Nyl.) Hellb. – Sadlerochit R, 20 mi inland from Camden Bay (MERRILL 1924b). Synonymy after SAVIĆ & TIBELL (2008).
- Heppia lutosa** (Ach.) Nyl. – Terricolous on calcareous soil. – Franklin Bluffs on the Sagavanirktok R (WETMORE 1970; THOMSON 1979); Alaska (THOMSON 1997: map).
- Herteliana alaskensis** (Nyl.) S. Ekman – Saxicolous on seashore rocks (“mainly found on slightly shady surfaces at the upper edge of the *Verrucaria* belt”). – Ad Fret. Behringii (EKMAN 1996); SE Alaska (MCCUNE 2017a & b); Glacier Bay NP: Dundas Bay (Taylor Bay) (SPRIBILLE et al. 2020). = *Bacidia alaskensis* (Nyl.) Zahlbr. – Unalaska Isl (HEDRICK 1936). Attu Isl (DEGELIUS 1937); Raspberry Isl, Port Vita (THOMSON 1950a); Amchitka Isl, St Makarius Bay Beach (THOMSON & SOWL 1989); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998). = *Lecidea alaskensis* Nyl. – “Super saxa silicea in Alaska” (**type** – NYLANDER 1887; HUE 1891). The locality on the type specimen, collected by Bean, is given as “ad Fret. Behringii”; this and the synonymy follow EKMAN (1996).
- #Heterocephalacria bachmannii** → **#Zyzygomyces bachmannii**
- #Heterocephalacria physciacearum** → **#Zyzygomyces physciacearum**
- Heterodermia galactophylla** (Tuck.) W. L. Culb. – Corticolous on conifers and hardwoods. – Talkeetna Mts, Buffalo Mine; Talkeetna Mts, Little Susitna R; Knik R, near hwy; Kenai Peninsula, Skilak L; Kenai Peninsula, Copper Cr; Kenai Peninsula, Ninilchik; Kenai Peninsula, Salamatof (KROG 1968); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
- Heterodermia japonica** (M. Satô) Swinscow & Krog – Corticolous on *Populus* trunk. – Denali NPPr (STEHN et al. 2013: Supplementary Table S1, “includes *H. speciosa*”); Caribou-Poker Cr Research Watershed (MCCUNE & ROSENTEREY)

2014); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr, Naknek L (MCCUNE et al. 2018).

Heterodermia leucomelos → [Appendix A](#)

Heterodermia sitchensis → [Appendix A](#)

Heterodermia speciosa (Wulfen) Trevis. – Corticolous, especially on deciduous trees, also on *Picea* and *Tsuga*. See also entry under *H. sitchensis* in [Appendix A](#). – SE Alaska (GEISER et al. 1994a: map); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); [SE Alaska] mainland river valleys (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF, Twentymile R, Turnagain Arm (DERR 2010: 221); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Chilkoot Trail (RESL et al. 2015, supplementary material); Denali NPPr, S of the AK Range (STEHN et al. 2015); Lake Clark NPPr (MCCUNE et al. 2018).

= *Anaptychia pseudospeciosa* Kurok. [var. *tremulans* (Müll. Arg.) Kurok.] – Mendenhall Glacier (MCCULLOUGH 1965); “the record of *Anaptychia pseudospeciosa* from southeast Alaska by MCCULLOUGH (1965) may represent [*Heterodermia tremulans*]” (KROG 1968).

= *Heterodermia tremulans* (Müll. Arg.) W. L. Culb. – Juneau area, Loop Rd; Kenai Peninsula, Skilak L; Seward; Richardson Hwy, mi 9 (KROG 1968: reporting atranorin, zeorin, “revised by Kurokawa”).

#**Homostegia piggotii** (Berk. & Broome) P. Karst. – On *Parmelia saxatilis*. – Unalaska (ESSLINGER & EGAN 1995).

#**Hyalopeziza rapax** Huhtinen – On the lower side of *Pseudocyphellaria citrina* s. lat. on twigs of *Picea sitchensis* in rainforest. – Kodiak Isl E, S of Isthmus Bay, bank of Roslyn Cr (HUHTINEN et al. 2008).

Hydropunctaria alaskana Thüs & Pérez-Ort. – Semi-inundated siliceous rocks near the sea. – Glacier Bay NP: Dundas Bay (Taylor Bay) (**type** – SPRIBILLE et al. 2020).

Hydropunctaria maura (Wahlenb.) C. Keller et al. – Saxicolous on intertidal rocks. – Skagway area, Yakutania (SPRIBILLE et al. 2010); Kenai Fjords NPPr (MCCUNE et al. 2020, as s. lat.); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

= *Verrucaria maura* Wahlenb. – Ft Alexander, Cook’s Inlet (ROTHROCK 1884); Lawrence-Insula (NYLANDER 1887); Sitka; Port Wells, PWS; Ft Alexander, Bristol Bay; Cook Inlet; St Lawrence Isl (CUMMINGS 1904); Zarembo Isl, St John’s Harbor; Howkan Bay; Heceta Isl (HERRE 1919); Amchitka Isl (WEBER et al. 1969); Prince of Wales Isl; city of Wrangell; Zarembo Isl, St John’s Harbor; Howkan Bay; Heceta Isl; Douglas Isl (GEISER et al. 1994a); Haines, Port Chilkoot (THOMSON & AHTI 1994); SE Alaska (O’CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, Cold Bay (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska (MCCUNE 2017b).

Hydropunctaria rheitrophila (Zschacke) C. Keller et al. – Saxicolous on granite in alpine streamlet. – Alaska (MCCUNE 2017b); Katmai NPPr, Hammersly L (MCCUNE et al. 2018).

Hydropunctaria scabra (Vězda) C. Keller et al. – Alaska (MCCUNE 2017b);

Katmai NPPr, Malone L; Katmai NPPr, Mirror L (MCCUNE et al. 2018); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020).

Hydrothyria venosa → **Peltigera gowardii**

Hymenelia arctica (Lynge) Lutzoni – Saxicolous.

= *Ionaspis epulotica* var. *arctica* (Lynge) H. Magn. – Amchitka Isl, above Constantine Harbor (WEBER et al. 1969).

Hymenelia ceracea (Arnold) M. Choisy – Saxicolous on damp rock. – Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Hymenelia epulotica (Ach.) Lutzoni – Saxicolous on moist or wet rock. – Adak Isl (TALBOT et al. 1997); Elbow Mtn (GEISER et al. 1998); SE Alaska (MCCUNE 2017b).

= *Ionaspis epulotica* (Ach.) Arnold – Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); SE Alaska (GEISER et al. 1994a: map); Alaska (THOMSON 1997: map).

Hymenelia heteromorpha (Kremp.) Lutzoni – Saxicolous on calcareous rock. – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

= *Ionaspis heteromorpha* (Kremp.) Arnold – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

= *Ionaspis ochracella* (Nyl.) H. Magn. – Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Anaktuvuk Pass (THOMSON 1979). These reports are from siliceous rock and might not be = *H. heteromorpha*.

= *Ionaspis reducta* H. Magn. – S of Wainwright, Kaolak R (THOMSON 1979); near Wainwright (THOMSON 1997).

= *Ionaspis schismatopsis* (Nyl.) Hue – S of Wainwright, Kaolak R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Anaktuvuk Pass (NASH 1992); Alaska (THOMSON 1997: map).

Hymenelia lacustris → **Ionaspis lacustris**

Hymenelia melanocarpa (Kremp.) Arnold – Saxicolous on calcareous rock. – Okpilak L (FRYDAY 2017).

= *Ionaspis melanocarpa* (Kremp.) Arnold – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1997: map).

Hymenelia rhodopis (Sommerf.) Lutzoni – Saxicolous on “blackish calciferous mica-schist”.

= *Ionaspis ochromicra* (Nyl.) Hue – Port Clarence (MAGNUSSON 1933); Port Clarence (THOMSON 1997 writes: “... known only from the type specimen ...an exceedingly tiny fragment. It could be but a poorly developed specimen of another species”).

= *Lecanora ochromicra* Nyl. – Port Clarence (**type** – NYLANDER 1885b; NYLANDER 1887; HUE 1891). Synonymy after LUTZONI & BRODO (1995).

Hyperphyscia adglutinata → **Appendix A**

Hypocenomyce friesii → **Xylopsora friesii**

Hypocenomyce leucococca → **Toensbergia leucococca**

Hypocenomyce oligospora → **Fulgidea oligospora**

Hypocenomyce scalaris (Ach.) M. Choisy – Lignicolous on charred stumps. – Deadman L CG (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map);

Chugach NF (DERR 2010: 168); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018).

Hypocenomyce sorophora → **Pycnora sorophora**

Hypogymnia apinnata Goward & McCune – Corticolous on conifers and hardwoods in coastal forests of southern Alaska. – Attu Isl; Skagway area; Kodiak Isl (GOWARD & MCCUNE 1993); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); SE Alaska (DERR et al. 2007); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (GOWARD et al. 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Alaska (MCMULLIN 2021: map).

Hypogymnia austerodes (Nyl.) Räsänen – Corticolous and lignicolous on conifers and *Betula* and *Salix*, also muscicolous on rock outcrops, rarely terricolous. Records prior to 2012 may refer to *H. austerodes* s. str., *H. dichroma*, *H. protea*, *H. salsa* or *H. verruculosa*. – McKinley Bar (WEBER & VIERECK 1967); Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Eagle R Valley; Anchorage area, headwaters of Rabbit Cr; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Richardson Hwy, mi 45; Denali Hwy, mi 32–37; Denali NP, Toklat; base of Rainbow Mts, E of Richardson Hwy; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, lower Fossil Cr; Circle Hot Springs (KROG 1968); Alaska (OHLSSON 1973: map); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, slope N of Station Primrose (SCHINDLER 1987); Amchitka Isl, Magazine Rd (THOMSON & SOWL 1989); Katmai NP, Brooks Lodge area, in CG; Kenai Peninsula, Chugach NF, Quartz Junction; Denali NP, Rock Cr Trail (SCHINDLER 1990); Mt Fairplay, Deadman L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Riverside Lodge Airstrip (TALBOT et al. 2007); Chugach NF (DERR 2010); Alaska Peninsula, Mother Goose L; Survey Pass Quad, confluence of Alatna and Nahtuk Rivers (GOWARD et al. 2012); Denali NPPr (STEHN et al. 2013: Supplementary Table S1, “includes *H. bitteri*”); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).
= *Parmelia austerodes* (Nyl.) Nyl. – Lawrence-Insula; Port Clarence (NYLANDER 1887); Port-Clarence (HUE 1890); Brooks Range, L Peters (KROG 1962); Kantishna Airstrip; Savage R CG; Wonder L; Wonder L Lodge (HOWARD 1963).

Hypogymnia beringiana (Krog) McCune – Oceanic tundra, on mosses or detritus, or rock. – Atka Isl, Atka; Attu Isl, Cape Wrangell; Amchitka Isl; St Paul Isl; St Lawrence Isl, Camp Nasayluk; St Matthew Isl, Glory of Russia Cape area (McCune 2008).

= *Hypogymnia lugubris* (Pers.) Krog subsp. *beringiana* Krog – St Paul Isl (**type**); Nash Harbor; Lake where the geese don't fly (Krog 1968).

= *Hypogymnia lugubris* auct., non (Pers.) Krog – Amchitka Isl (Thomson & Sowl 1989).

= *Parmelia lugubris* auct., non Pers. – St Paul Isl (Bitter 1901, “*sub nomine P. phys. var. vittata* Ach., J.R. Macoun 1897”).

Hypogymnia bitteri (Lynge) Ahti – Corticolous and lignicolous on conifers, *Betula*, *Populus*, *Salix*, sometimes muscicolous or saxicolous. – McKinley Bar (Weber & Viereck 1967); Talkeetna Mts, Mabel Mine; Talkeetna Mts, Bald Mt Ridge; Eagle R Valley; Anchorage area, headwaters of Rabbit Cr; Anchorage, Eastchester Swamp; Anchorage, O'Malley Rd; Potter, on Turnagain Arm; Kenai Peninsula, Ninilchik; Denali Hwy, mi 0–28; Denali NP, Wonder L; Richardson Hwy, Darling Cr; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, between Beaver Cr and Fossil Cr; White Mts, Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit (Krog 1968); Alaska (Ohlsson 1973: map); Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (Thomson 1979); Alaska (Thomson 1984: map); Anchorage, by Portage; S of Talkeetna, Montana L (Schindler 1987); Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Kenai Peninsula, near the Wildlife Refuge Headquarters; Kenai Peninsula, Skilak L; Denali NP, Rock Cr Trail (Schindler 1990); SE Alaska (Geiser et al. 1994a); Mt Fairplay; Deadman L CG; Fielding L (Thomson & Ahti 1994); Gates of the Arctic NPPr, Walker L (Hasselbach & Neitlich 1996); Ft Richardson (Murray 1997); Gates of the Arctic NPPr (Neitlich & Hasselbach 1998); Izembek Refuge, near Frosty Pk (Talbot et al. 2000); Alaska (Brodo et al. 2001); Noatak NPr (Holt et al. 2009; McCune et al. 2009); Chugach NF (Derr 2010); S Alaska (Root et al. 2014); Gates of the Arctic NPPr (Nelson et al. 2015b); Denali NPPr (Stehn et al. 2015); Katmai NPPr; Lake Clark NPPr (McCune et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (McCune et al. 2020; Alaska (McCune & Conway 2022).

= *Parmelia obscurata* auct. – Alaska (Bitter 1901); Brooks Range, S slope, Wild L (Krog 1962; Murray 1974); Steese Hwy, Eagle Summit (Krog 1962). Widely misapplied for *H. bitteri*, including by Bitter.

= *Parmelia physodes* var. *obscurata* auct., non Ach. – Isls of Behring's Strait (Tuckerman 1882); isls in Behring Strait (Macoun 1902); Unalaska; St Matthew Isl; Hall Isl; Port Clarence (Cummings 1904).

Hypogymnia canadensis Goward & McCune – Corticolous on conifers and *Betula* in coastal southern Alaska. – Cordova, Tripod Hill; Chichagof Isl, Whitestone Harbor; S shoulder of Thunder Mtn; Stikine R, near Shakes Slough (Goward & McCune 2007); Chilkoot Trail; Skagway area (Spribille et al. 2010); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Peninsula, Tonsina Cr; Kenai Peninsula, Primrose Cr (McCune et al. 2020); Kenai Peninsula (McCune & Conway 2022).

? = *Hypogymnia metaphysodes* auct., non (Asahina) Rass. – Anchorage, by Portage (SCHINDLER 1987); Alaska (BRODO et al. 2001); Alaska Hwy, near Canadian border; Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010: 184, 202, 220, 224). It would be necessary to examine the specimens to see if they refer to *H. canadensis* or to *H. wilfiana*.

Hypogymnia castanea McCune & Krog – Oceanic tundra, on mosses or detritus, or rock, rarely on bark or wood. – Bering Land Bridge NPr (HOLT et al. 2007, as ‘*ined.*’); N of Nome, Teller Rd, 3 km W of Feather R (**type**); Port Clarence ad fretum Bering; NE of Nome; vicinity of Nome, Cabin Rock; Kotzebue Quad, Hill 988, Bering Land Bridge NPr; Oregon Cr N of Nome-Teller Rd; near Nome, enclosure near Monument Rock (McCune 2008).

Hypogymnia dichroma Goward – Corticolous on *Picea*. – Survey Pass Quad, confluence of Alatna and Nahtuk Rivers (Goward et al. 2012).

Hypogymnia duplicata (Ach.) Rass. – Corticolous on conifers in SE rainforests. – Alaska (PIKE & HALE 1982); Juneau area, Loop Rd; Juneau area, Shrine of St Therese; Juneau area, Montana Cr; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Ketchikan area, Ward L (KROG 1968); Alaska (OHLSSON 1973: map); SE Alaska (GEISER et al. 1994a: map); Yakutat Forelands (SHEPHARD 1995); Alaska (McCune et al. 1997); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004; DERR et al. 2007); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Kenai Fjords NPPr, Fire Cove FIA plot; Kenai Fjords NPPr, plot TSME_002 (McCune et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay (SPRIBILLE et al. 2020).

= *Parmelia elongata* Hillm. – “Chilcoot” (**type** – HILLMANN 1938). Synonymy after KROG (1968) and SPRIBILLE et al. (2010).

Hypogymnia enteromorpha (Ach.) Nyl. – Corticolous on conifer and hardwood, also lignicolous and on moss over rock. Many early reports may refer in part to *Hypogymnia apinnata*, which was not discriminated until 1993. – Juneau area, Loop Rd; Juneau area, Mt Roberts; Juneau area, Shrine of St Therese; Juneau area, Montana Cr; Sitka area, Indian R Trail; Ketchikan area, Ward L; Ketchikan area, Saxman Village; Kenai Peninsula, Salamatof; Kenai Peninsula, Skilak L; Homer; Kenai Peninsula, Ingram Cr; W of Seward, Marathon Mtn; Richardson Hwy, mi 9; PWS, Pigot Bay; PWS, Fish Bay (KROG 1968); Amchitka Isl, near Cyril Cove (WEBER et al. 1969); Alaska (OHLSSON 1973: map; PIKE & HALE 1982); Amchitka Isl, Magazine Rd; Amchitka Isl, St Makarius Pt; Amchitka Isl, main disturbed area from Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989); Kenai Peninsula, Chugach NF, Ptarmigan L Trail (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33 (but this specimen redetermined as *H. apinnata* by McCune); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); SE Alaska (DERR et al. 2007); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Kenai Fjords NPPr, N end of Harris Bay, near opening to Northwestern Lagoon

(McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Parmelia enteromorpha* Ach. – Alaska? (NYLANDER 1887); Alaska (HUE 1890); Sitka (STIZENBERGER 1895a, 1895b); Alaska (BITTER 1901); Dall Isl, Augustine Bay; Baker Isl, Port San Antonio; Kosciusko Isl; Tlevak Narrows; Brownson Bay (HERRE 1919); Skagway (HERRE 1920); Brownson Bay (MAGNUSSON 1932); Kodiak Isl, Kodiak; PWS, Crab Bay; Kenai Peninsula, Seward (DEGELIUS 1937); Cooks Inlet, Ft Alexander (BERRY 1941); Windham Bay; Yakutat Bay (STAIR 1947); Kuiu Isl, Washington Bay; Raspberry Isl, Port Vita (THOMSON 1950a); Port Heiden (HOWARD 1958); halfway up Tracy Arm, on W side (KROG 1962); Mendenhall Glacier (McCULLOUGH 1965).

= *Parmelia physodes* var. *enteromorpha* (Ach.) Tuck. – Russian America (LAUDER LINDSAY 1861); Alaska (TUCKERMAN 1882); near Juneau, Sheep Cr; Sitka; Juneau, Loring (CUMMINGS 1892a); Alaska (HUE 1899); Sitka; Wrangell; Farragut Bay; Glacier Bay; Kodiak (CUMMINGS 1904); Kodiak Isl; Seldovia (HEDRICK 1936); PWS, Thum Bay (EYERDAM 1949).

Hypogymnia fistulosa McCune & Krog – Oceanic tundra, on siliceous rock or detritus over rock. – Amchitka Isl; Bering Strait District, King Isl (**type**); Izembek NWR, Baldy Mtn; Semidi Isls, Choweit Isl; N slope Kigluaik Mts, Pilgrim Hot Springs Rd; Simeonof Isl, NE slope of HILL 1265; St Paul Isl, 0.5 km NE of Telegraph Hill; St Paul Isl, 1 km S of Bogoslof Hill; St Paul Isl, Telegraph Hill (McCUNE 2008); Afognak Isl, Blue Fox Bay (DILLMAN 2010).

Hypogymnia hultenii (Degel.) Krog – Corticolous on *Picea sitchensis*, *Pinus contorta*, *Tsuga heterophylla* and less commonly on *Alnus*, from beach fringe to upper montane area. – S Alaska (ROOT et al. 2014); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Kodiak [sic] Isl E; Cordova, Saddlebag Glacier (McCUNE & CONWAY 2022).

= *Cavernularia hultenii* Degel. – Kodiak Isl, Kodiak (**type** – DEGELIUS 1937); Alaska (AHLNER 1948); Sitka, on “Alaska spruce”; Kodiak Isl; PWS (DEGELIUS 1952); halfway up Tracy Arm, on W side (KROG 1962); Alaska (AHTI & HENSSEN 1965: map); Mendenhall Glacier (McCULLOUGH 1965); Juneau area, Loop Rd; Juneau area, Shrine of St Therese; Juneau area, Douglas Ski Bowl; Ketchikan area, Ward L; Ketchikan area, Saxman Village; Sitka area, Harbor Mtn; Portage Glacier; Kenai Peninsula, Ingram Cr; Seward; W of Seward, Marathon Mtn; Homer; Richardson Hwy, mi 9; PWS, Fish Bay; PWS, Pigot Bay (KROG 1968); Anchorage, by Portage (SCHINDLER 1987); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy; Portage Glacier (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Alaska (HOLIEN & TØNSBERG 1996: map); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DERR et al. 2007; DILLMAN 2004); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013);

Supplementary Table S1); Denali NPPr, S of the AK Range (STEHN et al. 2015).

Hypogymnia imshaugii → **Appendix A**

Hypogymnia intestiniformis → **Brodoa oroarctica**

Hypogymnia inactiva (Krog) Ohlsson – Corticolous on conifers, especially *Pinus contorta*, in coastal peatlands. – Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DERR et al. 2007); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= *Hypogymnia imshaugii* Krog var. *inactiva* Krog – Juneau area, Montana Cr (type); Ketchikan area, Deer Mtn (KROG 1968).

Hypogymnia lophyrea (Ach.) Krog – Corticolous on *Picea sitchensis* and *Pinus contorta* from beach fringe to krummholz. – S Alaska (ROOT et al. 2014); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Cavernularia lophyrea* (Ach.) Degel. – Kodiak Isl, Kodiak (DEGELIUS 1937); halfway up Tracy Arm, on W side (KROG 1962); Juneau area, Loop Rd; Mendenhall L; Juneau area, Shrine of St Therese; Juneau area, Douglas Ski Bowl; Ketchikan area, Ward L; Kenai Peninsula, Ingram Cr; Seward; W of Seward, Marathon Mtn; Homer; Richardson Hwy, mi 9; PWS, Pigot Bay (KROG 1968); Amchitka Isl, St Makarius Pt (THOMSON & SOWL 1989); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); SE Alaska (DERR et al. 2007); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010).

= *Parmelia lophyrea* Ach. – Sitka NM (HERRE 1950b).

Hypogymnia lugubris → **Hypogymnia beringiana**

Hypogymnia occidentalis L. Pike – Corticolous on conifers and hardwoods in southern Alaska. – Flat Isl (PIKE & HALE 1982); Anchorage, by Portage (SCHINDLER 1987); Kenai Peninsula, Quartz Junction (SCHINDLER 1990); Burro Cr near Skagway (GEISER et al. 1994a); Haines Hwy, mi 33 (THOMSON & AHTI 1994); Burro Cr near Skagway; near Haines (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Alaska Hwy, near Canadian border (TALBOT et al. 2007); Chugach NF (DERR 2010); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Hypogymnia oceanica Goward – Corticolous on conifers in coastal SE Alaska, also reported from *Alnus* and *Malus*. – SE Alaska (GEISER et al. 1994a: map); SE Alaska (GEISER et al. 1998); SE Alaska (DILLMAN 2004; DERR et al. 2007); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Kenai Fjords NPPr, N end of Harris Bay, near opening to Northwestern Lagoon; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020); Alaska (MCCUNE & CONWAY 2022).

= *Hypogymnia pseudophysodes* sensu Krog, non (Asahina) Rass. – Sitka area, Indian R Trail; Ketchikan area, Ward L (KROG 1968). What Krog describes is the form later described formally as *H. oceanica* (GOWARD 1988).

Hypogymnia oroarctica → **Brodia oroarctica**

Hypogymnia physodes (L.) Nyl. – Corticolous on conifers and hardwoods, and lignicolous on rotten wood, also saxicolous and terricolous. – McKinley Bar (WEBER & VIERECK 1967); Juneau area, Loop Rd; Sitka area, Harbor Mtn; Ketchikan area, Ward L; Talkeetna Mts, Mabel Mine; Eagle R Valley; mtn ridge, Eagle R; Anchorage, O'Malley Rd; Anchorage, Rabbit Cr Rd; Anchorage, Eastchester Swamp; Potter, on Turnagain Arm; Kenai Peninsula, Skilak L; Kenai Peninsula, Ingram Cr; Kenai Peninsula, Copper Cr; W of Seward, Marathon Mtn; PWS, Fish Bay; Denali Hwy, mi 0–28; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; Richardson Hwy, Darling Cr; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; White Mts, between Beaver Cr and Fossil Cr; White Mts, lower Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Circle Hot Springs; Alaska Hwy, mi 1450; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Amchitka Isl (WEBER et al. 1969); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Colville R near Umiat; 6.5 mi SSW of Barrow Base, near Loon L; Anaktuvuk Pass; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Anchorage, S of Talkeetna, by Montana L; Denali NP, on the rd to Horseshoe L; Denali NP, Morino Loop Trail; Fairbanks, by the Museum (SCHINDLER 1987); Tikchik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Katmai NP, Brooks Lodge area, in CG; Katmai NP, Brooks Lodge area, in CG; Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Kenai Peninsula, Kulik Lodge; Portage CG; Denali NP, Rock Cr Trail (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Haines Hwy, mi 33; Deadman L CG; Moon L CG; terminal moraine of Valdez Glacier; Richardson Hwy, mi 10, near Valdez (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, near Canadian border; Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten Mile Cr; Riverside Lodge Airstrip; Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).
= *Parmelia physodes* (L.) Ach. – Elephant Pt, Eschscholtz Bay, Arctic Ocean; Port Mulgrave, Yakutat Bay; Ft Alexander, in Cook's Inlet (ROTHROCK 1884); Loring (CUMMINGS 1892a); Sitka; Kodiak (CUMMINGS 1904); Anchorage,

Chugach Mts (HERRE 1950a); Stampede (HOWARD 1958); Anaktuvuk Pass; Brooks Range, S slope, Wild L; Bettles (KROG 1962; MURRAY 1974); halfway up Tracy Arm, on W side (KROG 1962); Kantishna Airstrip; hill E of rd to Kantishna; Wonder L (HOWARD 1963); Wiseman Cr (HOWARD 1963; MURRAY 1974); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

Hypogymnia pulverata (Nyl. ex Cromb.) Elix – Corticolous on branches of *Picea* and *Betula*. – Alaska (MCCUNE & GEISER 2009), this based on a specimen from the Kenai Peninsula (NELSON et al. 2011); Matanuska-Susitna Borough; Kenai Peninsula; Lake and Peninsula Boroughs (NELSON et al. 2011); Katmai NPPr (MILLER & WALTON 2013); S Alaska (ROOT et al. 2014); Denali NPPr, Ruth Glacier forest (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018, all specimens PD+ chemotype); Denali area (MCCUNE & CONWAY 2022).

Hypogymnia rugosa → [Appendix A](#)

Hypogymnia salsa Goward – Corticolous on *Picea*. – Mt Hayes Quad, Lower Gerstle R (**type**: GOWARD et al. 2012); Big Delta Quad (GOWARD et al. 2012).

Hypogymnia subobscura (Vain.) Poelt – Terricolous and muscicolous in tundra and woodland, also reported as lignicolous on beach log (TALBOT 1988) and corticolous on *Populus* (THOMSON & DOELL 1989). – Mt Eielson (WEBER & VIERECK 1967); Denali NP, Savage R; White Mts, Fossil Cr; White Mts, between Beaver Cr and Fossil Cr; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Kotzebue (KROG 1968); Amchitka Isl (WEBER et al. 1969); Alaska (OHLSSON 1973: map); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Barter Isl; Beaufort Lagoon, Nuvaapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Prudhoe Bay region (WALKER 1985); Chauekuktuli L (THOMSON & DOELL 1989); Central Arctic coastal plain (WALKER et al. 1991); Eagle Summit; Fielding L; Sheep Mt (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr (MCCUNE et al. 2018); Alaska (MCCUNE & CONWAY 2022).

Hypogymnia tubulosa (Schaer.) Hav. – Corticolous on conifers and *Betula*, primarily in SE and interior Alaska. – Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Kenai Peninsula, Ninilchik (KROG 1968); SE Alaska (GEISER et al. 1994a: map); Moon L CG (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of

the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

= "*Parmelia tubulosa* (Hag.) Bitt." – Halfway up Tracy Arm, on W side (KROG 1962).

Hypogymnia verruculosa Goward – Corticolous on *Populus*. – Fielding L (GOWARD et al. 2012).

Hypogymnia vittata (Ach.) Parrique – Corticolous on conifer branches and *Alnus*, also muscicolous and terricolous in heath or saxicolous. – Juneau area, Loop Rd; Juneau area, Mt Roberts; Juneau area, Douglas Ski Bowl; Juneau area, Montana Cr; Sitka area, Indian R Trail; Richardson Hwy, mi 9; PWS, Pigot Bay; PWS, Fish Bay; Kotzebue (KROG 1968); Alaska (OHLSSON 1973: map); Firth R at Mancha Cr; Tanana R, near Fairbanks (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Chisik Isl (TALBOT et al. 1992, misidentifications of *H. apinnata*, *H. occidentalis*, and *H. physodes* according to MCCUNE et al. 2018); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay; Thompson Pass; Richardson Hwy, mi 10; Sheep Mtn (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997, as cf.); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004; DERR et al. 2007); Chugach NF (DERR 2010); Skagway area (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020); Gates of the Arctic NPPr (NELSON et al. 2015b, as s. lat.); Matanuska-Susitna (MCCUNE & CONWAY 2022).
= *Parmelia vittata* (Ach.) Nyl. – Sitka (STIZENBERGER 1895a, 1895b); Adak Isl, Chapel Cove (DEGELIUS 1937); Mendenhall Glacier (MCCULLOUGH 1965).
= *Parmelia physodes* var. *vittata* Ach. – St Paul Isl (MACOUN 1899, but see entry under *H. beringiana*); Wrangell; Pt Gustavus, Glacier Bay; Virgin Bay (CUMMINGS 1904); Collinson Pt (MERRILL 1924b); PWS, Thum Bay (EYERDAM 1949).

Hypogymnia wilfiana Goward et al. – Corticolous on *Abies lasiocarpa* and *Picea glauca*. – Skagway area, near White Pass and Canadian border; Laughton Glacier Trail (DILLMAN et al. 2012); S Alaska (ROOT et al. 2014: 'includes *H. canadensis*'); Lake Clark NPPr (MCCUNE et al. 2018).

Hypotrachyna sinuosa (Sm.) Hale – Corticolous on trees and shrubs in low elevation coastal rainforests. – SE Alaska (GEISER et al. 1994a: map); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); S Alaska (ROOT et al. 2014).
= *Parmelia sinuosa* (Sm.) Ach. – Halfway up Tracy Arm, on W side (KROG 1962); Juneau area, Loop Rd; Mendenhall L; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Sitka NM; Juneau area, Ward Cove (KROG 1968); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

– I –

Icmadophila ericetorum (L.) Zahlbr. – Lignicolous and detriticolous, also muscicolous over *Sphagnum* in bogs, sometimes smothering other lichens; forest and tundra. – Anchorage, Chugach Mts; Nichols Bay (HERRE 1919); Alaska (HADWEN & PALMER 1922); Sitka (DEGELIUS 1937); Orca; PWS, Thum Bay (EYERDAM 1949); Anchorage, Chugach Mts (HERRE 1950a); PWS, Hinchinbrook Isl, Orca; Kuiu Isl, Washington Bay; Annette Isl; Annette Isl (THOMSON 1950a); Prince of Wales Isl (COOKE & SHAW 1952); Fox (HOWARD 1958); Denali NP, Rock Cr Trail (HOWARD 1963); Mendenhall Glacier (McCULLOUGH 1965); McKinley Bar (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Alaska (THOMSON 1972a: map); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Colville R near Umiat; Firth R at Mancha Cr (THOMSON 1979); campsite in Cantwell (SCHINDLER 1987); Chikuminuk L (THOMSON & DOELL 1989); Hagemeister Isl (TALBOT et al. 1990); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Eagle Summit; Mt Fairplay (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Wainwright (RACINE et al. 1997); Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1240; Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009); Interior Alaska (LAURSEN & SEPPELT 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Bartlett Cove (SPRIBILLE et al. 2014b); Denali NPPr (STEHN et al. 2015); Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, Pickerel L; Lake Clark NPPr, trail to Tanalian Falls (McCUNE et al. 2018); Kenai Fjords NPPr (McCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

= *Baeomyces ericetorum* (L.) Vain. – Ketchikan (HOWE 1913a).

= *Baeomyces aeruginosus* (Scop.) DC. – Sitka; Port Althorp (ROTHROCK 1884); Loring; near Juneau, Salmon Cr (CUMMINGS 1892a); PWS (CUMMINGS 1892b); Port Etches; Sitka Isl; Sitka; Port Althrop; near Juneau, Loring; near Juneau, Salmon Cr (MACOUN 1902); Orca; Sitka; Baranof Isl, Hot Springs; Fraser Reach; Farragut Bay; Port Wells (CUMMINGS 1904).

= "*Icmadophila aeruginosa*" – Port Clarence (ALMQUIST 1887).

= "*Baeomyces icmadophilus* (Ehrh.) Nyl." – Alaska (MANN 1868; TURNER 1886); Port Clarence (NYLANDER 1887; HUE 1890); Sitka (STIZENBERGER 1895a, 1895b).

#Illosporium carneum Fr. – On *Peltigera didactyla* and *P. leucophlebia*. – Ft Richardson (ZHURBENKO et al. 1995); Interior Alaska (LAURSEN & SEPPELT 2009); White Pass (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr (McCUNE et al. 2018).

Immersaria athroocarpa (Ach.) Rambold & Pietschm. – Saxicolous on upper surface of flat rock surface below cliff. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (McCUNE 2017b); Katmai NPPr, Hammersly L; Lake Clark NPPr (McCUNE et al. 2018).

Immersaria carbonioidea (J. W. Thomson) Esnault & Cl. Roux – Saxicolous on sandstone.

= *Lecidea carbonoidea* J. W. Thomson – Pitmegea R, 15 mi upstream from Cape Sabine (**type** – THOMSON 1960; WONG 1993); Pitmegea R (THOMSON 1972b); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Alaska (ESNAULT & ROUX 1987); Pitmegea R (THOMSON 1997).

Imshaugia aleurites (Ach.) S. L. F. Mey. – Corticolous on conifers and *Betula*. – SE Alaska (GEISER et al. 1994a: map); [SE Alaska] mainland, Cape Fanshaw, (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Midway L (TALBOT et al. 2007); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Cetraria aleurites* (Ach.) Th. Fries – Cook's Inlet; Eschscholtz Bay (ROTHROCK 1884: revised to *Parmelia enteromorpha* by NYLANDER 1887: 85).

= *Parmeliopsis aleurites* (Ach.) Nyl. – Port Clarence (NYLANDER 1887, revised to *Parmeliopsis hyperopta* by HASSELROT 1953); Port-Clarence (HUE 1890); Brooks Range, S slope, Wild L (KROG 1962; MURRAY 1974); Ketchikan area, Deer Mtn; Anchorage area, headwaters of Rabbit Cr; Kenai Peninsula, Skilak L; White Mts, Beaver Cr; White Mts, Fossil Cr (KROG 1968); Alaska (THOMSON 1984: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996).

#Intralichen christiansenii (D. Hawksw.) D. Hawksw. & M. S. Cole – On *Athallia holocarpa* and on *Nesolechia oxyspora*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003).

#Intralichen lichenum (Diederich) D. Hawksw. & M. S. Cole – On *Biatora* sp. – Chilkoot Trail (SPRIBILLE et al. 2010).

Ionaspis epulotica → **Hymenelia epulotica**

Ionaspis heteromorpha → **Hymenelia heteromorpha**

Ionaspis alba Lutzoni – Saxicolous on wetted boulder. – Lake Clark NPPr, Portage L (MCCUNE et al. 2018, as cf.)

Ionaspis lacustris (With.) Lutzoni – Saxicolous on wet, siliceous rock. – Adak Isl (TALBOT et al. 1997); [SE Alaska] mainland, Waterfall Pk (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); White Pass (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr, Malone L; Katmai NPPr, Hammersly L; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Saddle Mtn; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018 as s. lat.); Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay; Kenai Fjords NPPr, Crater Bay off of Harris Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

= *Hymenelia lacustris* (With.) M. Choisy – Alaska (THOMSON 1997: map); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= *Lecanora lacustris* (With.) Nyl. – Lawrence-Insula (NYLANDER 1887); Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

Ionaspis lavata H. Magn. – Saxicolous on siliceous rocks submerged in clear water, usually in mountain brooks. – Alaska (BRODO et al. 2001: photo and map); Alaska (MCCUNE 2017b); Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018,

as cf.); Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay; Kenai Fjords NPPr, Crater Bay off of Harris Bay (MCCUNE et al. 2020); Petersburg Borough, Baird Glacier; Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Ionaspis melanocarpa → *Hymenelia melanocarpa*

Ionaspis ochromicra → *Hymenelia rhodopis*

Ionaspis oblecta (Vain.) R. Sant. – Saxicolous on siliceous rocks. – Upper Etivluk R (FRYDAY 2017).

Ionaspis odora (Ach.) Stein. – Saxicolous. – Mt Eielson (WEBER & VIERECK 1967); Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L camp; Katmai NPPr, Malone L (MCCUNE et al. 2018); Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay; Kenai Fjords NPPr, Crater Bay off of Harris Bay; Kenai Fjords NPPr, alpine lake system on Harris Peninsula (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

Ionaspis reducta → *Hymenelia heteromorpha*

Ionaspis schismatopsis → *Hymenelia heteromorpha*

Ionaspis suaveolens (Schaer.) Th. Fr. ex Stein – Saxicolous on wet alpine rocks. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979, but these were misidentifications of *I. schismatopsis* fide THOMSON, 1997; see under *Hymenelia heteromorpha*); White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).

= “*Lecanora suaveolens* (Ach.)” – Port Clarence (NYLANDER 1887; HUE 1891).

Ionaspis ventosa P. M. Jørg. & R. Sant. – Saxicolous in *Dryas* mats in glacial forelands and on soft argillite on alpine ridge. – Glacier Bay NP, Excursion Ridge (RESL et al. 2015, supplementary material); Glacier Bay NP: East Arm, Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

– J –

Jamesiella anastomosans (P. James & Vězda) Lücking et al. – Corticolous on *Picea* twig and muscicolous on *Lobaria* on *Picea* branch. – Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, N arm of spit across James Lagoon; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay; Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin, Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Jamesiella dacryoidea Fryday – Over bryophytes on rock outcrop by saltwater lagoon. – Petersburg Borough, Mitkof Isl, SE coast (**type** – FRYDAY & DILLMAN 2021a).

Jamesiella scotica (P. James) Lücking et al. – On dead and living leaves of bryophytes. – Kenai Fjords NP, NE end of Coleman Bay (TØNSBERG 2016); coastal SW Alaska (MCCUNE 2017b); Kenai Fjords NPPr, Coleman Bay; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).

Japewia subaurifera Muhr & Tønsberg – Corticolous on various coniferous and deciduous trees, especially twigs. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Japewia tornöensis (Nyl.) Tønsberg – Corticolous and lignicolous on conifers, especially twigs; once on *Alnus* bark and seashore driftwood, sometimes terricolous on detritus in heaths and reported as overgrowing *Melanohalea septentrionalis*. – Portage Glacier (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (BRODO et al. 2001); Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Mt Fairplay (TALBOT et al. 2007); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
= *Lecidea tornöensis* Nyl. – Lawrence-Isula; Port Clarence (NYLANDER 1887); Wonder L (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; 6 mi SSW of Barrow, Imiksonn L; Anaktuvuk Pass (THOMSON 1979); Anchorage, by camp in Portage (SCHINDLER 1987); Alaska (THOMSON 1997: map).

– K –

Kaernefeltia californica (Tuck.) A. Thell & Goward – Corticolous on *Pinus contorta*, in open peatland forests at low elevation, hypermaritime localities. – SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
= *Cetraria californica* Tuck. – SE Alaska (GEISER et al. 1994a: map); SE Alaska (DERR et al. 2007).

Kaernefeltia merrillii (Du Rietz) A. Thell & Goward – Corticolous, mainly on *Pinus contorta* at low elevations, also on *Abies* and *Betula*. – Chugach NF (DERR 2010: 202); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE et al. 2010); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
= *Tuckermannopsis merrillii* (Du Rietz) Hale – Douglas Isl (GEISER et al. 1994a); Chugach NF (DERR 2010; listed elsewhere in the same publication as *Kaernefeltia merrillii*).

Koerberiella wimmeriana (Körb.) Stein – Saxicolous on wet, even submerged, rocks or rock walls. – Valdez (BRODO 1995a); coastal Alaska (MCCUNE 2017a & b); Katmai NPPr, Naknek L; Katmai NPPr, W of Contact Cr; Katmai NPPr, Hammersly L; Lake Clark NPPr, Saddle Mtn (MCCUNE et al. 2018).

– L –

- Lambiella aliphatica** T. Sprib. & Resl – On argillite rock on alpine ridgeline and in talus. – Glacier Bay NP: Excursion Ridge (**type** – SPRIBILLE et al. 2020).
- Lambiella caeca** (J. Lowe) Resl & T. Sprib. – Corticolous on *Pinus contorta* branches and old cones. – Glacier Bay NP: Moose Meadows (RESL et al. 2015); Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).
- Lambiella furvella** (Nyl. ex Mudd) M. Westb. & Resl – Saxicolous, parasymbiotic or overgrowing other crustose lichens. – Katmai NPPr, Mirror L camp (MCCUNE et al. 2018).
= *Rimularia furvella* (Nyl. ex Mudd) Hertel & Rambold – White Pass (SPRIBILLE et al. 2010, as aff.).
- Lambiella fusciora** (Muhr & Tønsberg) M. Westb. & Resl – Corticolous on *Betula*. – Lake Clark NPPr, Chinitna Bay Ranger Station (MCCUNE et al. 2018).
- Lambiella gyrizans** (Nyl.) M. Westb. & Resl – Saxicolous on acidic rock. – Ogotoruk Cr (FRYDAY 2017).
- Lambiella impavida** (Th. Fr.) M. Westb. & Resl – Saxicolous. – Alatna R; Toolik L (FRYDAY 2017); arctic-alpine Alaska (MCCUNE 2017b).
= *Rimularia impavida* (Th. Fr.) Hertel & Rambold – Mt Distin (HERTEL & ANDREEV 2003).
- Lasallia caroliniana* → **Umbilicaria caroliniana**
Lasallia pensylvanica → **Umbilicaria pensylvanica**
- #Lasiosphaeriopsis lecanorae** Pérez-Ort. & Halıcı – On *Lecanora polytropa* aggr. on rock. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).
- #Lasiosphaeriopsis stereocaulicola** (Linds.) O. E. Erikss. & R. Sant. – On *Stereocaulon alpinum*, *S. intermedium* and *S. paschale*. – St Lawrence Isl (ALSTRUP & HAWKSWORTH 1990); White Pass (SPRIBILLE et al. 2010); Wrangell-Saint Elias Park and Preserve, Mt George (ZHURBENKO 2010).
- Lathagrium cristatum** (L.) Otálora et al. – Saxicolous. – Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).
= *Collema cristatum* (L.) F. H. Wigg. – Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009).
= “*Collema melaenum* Ach.” – Port Clarence (NYLANDER 1885b, in part as ‘*malaenum*’; NYLANDER 1887; HUE 1890).
- Lathagrium fuscovirens** (With.) Otálora et al. – Saxicolous on calcareous rocks or on calcareous soil, often in floodplains. – Gates of the Arctic NPPr (NELSON et al. 2015b); Katmai NPPr, Naknek L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).
= *Collema fuscovirens* (With.) J. R. Laundon – Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); S Alaska (ROOT et al. 2014).
= *Collema tuniforme* (Ach.) Ach. – Quigley Hill (HOWARD 1963); N bluff of Wiseman Cr (HOWARD 1963, MURRAY 1974 as ‘*tunaeforme*’); Kantishna, Quigley Hill (KROG 1962); Wiseman, N bluff of Wiseman Cr (KROG 1968; MURRAY 1974); upper valley of Swift Fk of E Fk of Kuskokwim R; Ogotoruk Cr drainage, Snowbank Cr; Anaktuvuk Pass, lower part of Soakpuk Mtn; S of Wainwright, along Kaolak R; Valley of Mancha Cr and Firth R (DEGELIUS

1974); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978, as ‘*tunaeforme*’); Anaktuvuk Pass (MOSER et al. 1979, as ‘*tunaeforme*’); S of Wainwright, Kaolak R; Anaktuvuk Pass; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map).

Lathagrium undulatum (Laurer ex Flot.) Otálora et al. – Saxicolous on limestone, less commonly terricolous on calcareous soil. – Gates of the Arctic NPPr (NELSON et al. 2015b; also entered as *Collema undulatum*); Denali NPPr (STEHN et al. 2015)

= *Collema undulatum* Laurer ex Flot. – Alaska (DEGELIUS 1974); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Alaska (THOMSON 1984: map); Alaska (BRODO et al. 2001); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009; Gates of the Arctic NPPr (NELSON et al. 2015b).

Lathagrium undulatum var. **granulosum** (Degel.) M. Schultz & McCune – Saxicolous on calcareous rocks, also terricolous on calcareous soil; one record as an epiphyte on *Salix alaxensis* (TALBOT 1998) is doubtful. – Denali NPPr (STEHN et al. 2015); Tuxedni, Chisik Isl (MCCUNE et al. 2018); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= *Collema undulatum* var. *granulosum* Degel. – Junction of Beaver Cr and Fossil Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; N of Nome, Anvil Pk (KROG 1968); Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979); Chisik Isl (TALBOT et al. 1992); Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998).

Lecanactis abietina → **Lecanactis megaspora**

Lecanactis megaspora (G. Merr.) Brodo – Corticolous on old *Picea sitchensis* or *Tsuga* trunks or lignicolous. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= *Lecanactis abietina* auct., non (Ach.) Körb. – Afognak Isl, Blue Fox Bay (DILLMAN 2010); Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020).

Lecania aipospila (Wahlenb.) Th. Fr. – On seashore rocks. – Chugach NF, PWS (DERR 2010: 197).

Lecania alpivaga → **Halecania alpivaga**

Lecania cuprea (A. Massal.) van den Boom & Coppins – Saxicolous on limestone rocks on shore. – Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Lecania dubitans (Nyl.) A. L. Sm. – Corticolous on *Populus tremuloides*. – Mi 336, Parks Hwy, SW of Fairbanks (DILLMAN et al. 2012).

Lecania hutchinsiae (Nyl.) A. L. Sm. – Saxicolous on acidic rock in forests. – Chilkoot Trail (SPRIBILLE et al. 2010, as cf.); near Skagway (MCCUNE 2017b); Petersburg Borough, Mitkof Isl (FRYDAY & DILLMAN 2021a).

Lecania hydrophobica T. Sprib. & Fryday – Saxicolous on rain-sheltered underhangs of shale rocks near sea level. – Glacier Bay NP: Dundas Bay (Taylor Bay) (**type**); southern Baranof Isl (SPRIBILLE et al. 2020).

Lecania naegeli (Hepp) Diederich & van den Boom – Corticolous on *Picea sitchensis*. – Kodiak Isl, Anton Larsen Bay SW (DILLMAN et al. 2012); Katmai NPPr, Naknek L (MCCUNE et al. 2018).

Lecania subfuscula → **Bacidina subfuscula**

Lecanora aitema (Ach.) Hepp – Corticolous on *Alnus* bark. – Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020).

Lecanora alaskensis H. Magn. – On siliceous rocks just above the high tide line; currently known only from SE Alaska. See also comments under *Trapeliopsis flexuosa*. – “Wrangal” (type – MAGNUSSON 1932); Wrangell (MCCUNE 2017b); Wrangal; Tongass NF, Kupreanof Isl, Frederick Sound, Hessa Isl, Etolin Isl; Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Lecanora albella (Pers.) Ach. – Corticolous on *Alnus crispa* and *Salix pulchra*, and lignicolous on worked wood. – Kodiak Isl, Spiridon Peninsula (TALBOT 1998). = *Lecanora pallida* (Schreb.) Rabenh. – Orca (CUMMINGS 1904); Sheep Camp, Dyea Cr (HOWE 1911b); Eagle Summit; Moon L CG (THOMSON & AHTI 1994, as cf.). = *Lecanora pallida* var. *pallida* – Chisik Isl (TALBOT et al. 1992, misidentification of *Lecanora polytropa* per MCCUNE et al. 2018).

Lecanora albellula (Nyl.) Th. Fr. – Lignicolous on worked wood. – Tuxedni, Chisik Isl (MCCUNE et al. 2018). = *Lecanora piniperda* Körb. – Chisik Isl (TALBOT et al. 1992); Alaska (THOMSON 1997: map).

Lecanora albescens → **Polyozosia albescens**

Lecanora aleutica H. Magn. – Saxicolous on coastal rocks and on whalebone, and lignicolous on beach logs, known only from the Aleutians and Bering Straits region. See also entry under *Cladidium bolanderi* in Appendix A. – Atka Isl (type – HEDRICK 1936); Unalaska Isl, Kashega; Agattu Isl, N side (DEGELIUS 1937); Amchitka Isl (WEBER et al. 1969); Amchitka Isl; Agattu Isl; Atka Isl; Unalaska Isl; Little Diomedé Isl (BRODO 1984b); Amchitka Isl, Baraba Pt; Amchitka Isl, Fourteen-mile L; Amchitka Isl, St Makarius Bay Beach (THOMSON & SOWL 1989); St Paul Isl (SCHINDLER 1990); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk; Cold Bay (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Denali NPPr, W fork Yentna R (STEHN et al. 2015).

Lecanora allophana Nyl. – Corticolous on *Alnus*, *Betula*, *Picea*, *Populus*, *Salix* and *Sorbus* and lignicolous. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Amchitka Isl (WEBER et al. 1969); Ogotoruk Cr (MURRAY 1985); Zarembo Isl (GEISER et al. 1994a, interpreting the HERRE 1919 report of *Lecanora subfusca*); Alaska (BRODO et al. 2001); Alaska Hwy, near Canadian border; Alaska Hwy, mi 1240; Beaver Cr; Midway L; Mt Fairplay (TALBOT et al. 2007); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018, ‘includes var. *sorediata*’). = “*Lecanora subfusca allophana* Ach.” – Cook’s Inlet; Unalaska; Port Clarence (MACOUN 1902); Kodiak Isl, mouth of Sturgeon R; St Lawrence Isl; Cape Fox; St Michael (CUMMINGS 1904).

Lecanora anopta Nyl. – Lignicolous on *Picea*. – Katmai NPPr, Malone L; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018).

Lecanora argentata (Ach.) Malme – Corticolous and lignicolous. – SE Alaska (GEISER et al. 1994a); Katmai NPPr, Naknek L (MCCUNE et al. 2018). = “*Lecanora subfusca argentata* Ach.” – “on wood”. – “islands of Behring’s Strait” (TUCKERMAN 1882); Cape Fox (CUMMINGS 1904).

= *Lecanora subrugosa* Nyl. – “on bark of *Alnus*”. – SE Alaska (GEISER et al. 1994a). Not included in GEISER et al. (1998) and unknown what specimen this report was based on. Synonymy after MALÍČEK (2014).

Lecanora argentea Oxner & Volkova – Saxicolous on “acidic to slightly calcareous” rock. – Willow L, near Alaska Hwy (TALBOT et al. 2007).

Synonymy after LUMBSCH (1992).

= *Lecanora fuliginosa* Brodo – Alaska (THOMSON 1997: map).

Lecanora argopholis (Ach.) Ach. – Saxicolous on acidic rocks. – Alaska (VÄNSKÄ 1984: map; ‘chemodeme I’); Eagle Summit; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Katmai NPPr, Malone L; Katmai NPPr, Mirror L camp (MCCUNE et al. 2018).

Lecanora atromarginata (H. Magn.) Hertel & Rambold – Saxicolous on calcareous rock.

= *Lecidea atromarginata* H. Magn. – Juneau Icefield (MCCULLOUGH 1965); Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979; note that an Okpilak R specimen filed under this name was revised to *Lecidea umbonata* by HERTEL 1973); Mendenhall Valley (GEISER et al. 1994a, 1998).

Lecanora atosulphurea (Wahlenb.) Ach. – Saxicolous on acidic rocks. – Lawrence-Insula (NYLANDER 1887); Kodiak (CUMMINGS 1904); Unalaska Isl, Unalaska (DEGELIUS 1937); Colville R near Umiat (THOMSON 1979); Alaska (THOMSON 1997: map).

Lecanora bicincta Ramond – Saxicolous on bird-perch rock. – White Pass (SPRIBILLE et al. 2010); Dalton Hwy, Finger Mtn (DILLMAN et al. 2012); Katmai NPPr, Hammersly L; Katmai NPPr, Mirror L (MCCUNE et al. 2018).

Lecanora berengeri → **Polyozosia zosteræ**

Lecanora boligera (Norman ex Th. Fr.) Hedl. – Corticolous on *Abies* and *Tsuga mertensiana*, also *Betula papyrifera* and *Cassiope*, mostly near the treeline. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Lecanora bryopsora (Doppelb. & Poelt) Hafellner & Türk – Terricolous on plant remnants over low outcrops of limestone. – Brooks Range, Philip Smith Mtns, S of Atigun R; Sukakpak Mtn (DILLMAN et al. 2012).

Lecanora caesiosora Poelt – Saxicolous on a shaded underhang, in a stream, and on the undersides of overhanging boulders. – White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Lecanora caesiosulphurea Vain. – Saxicolous on acidic rock. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Okpilak R Valley (THOMSON 1997).

Lecanora campestris (Schaer.) Hue – Saxicolous. – Juneau Icefield (MCCULLOUGH 1965); SE Alaska (GEISER et al. 1994a).

= “*Lecanora subfusca campestris* Schaer.” – Zarembo Isl, St John’s Harbor; Kosciusko Isl, Shipley Bay (HERRE 1919).

Lecanora cateilea (Ach.) A. Massal. – Corticolous on *Alnus* and *Salix*. – NW of Haines (GEISER et al. 1998); White Pass (SPRIBILLE et al. 2010); Alaska

(MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018).

Lecanora cavicola Crevelde – Saxicolous on shaded underhang. – White Pass (SPRIBILLE et al. 2010); Dalton Hwy, Finger Mtn (DILLMAN et al. 2012); Alaska (MCCUNE 2017b); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Lecanora cenisia Ach. – Saxicolous. – Brooks Range, Endicott Mtns, Midnight Dome (DILLMAN et al. 2012); Kenai Fjords NPPr, E side of Harris Bay (MCCUNE et al. 2020, as “cf.”).

= *Lecanora atrynea* (Ach.) Röhl. var. *cenisia* (Ach.) Nyl. – Lawrence-Insula (NYLANDER 1887). The specimen (S!) appears to be typical *L. cenisea*.

= “*Lecanora atrynea* Ach.” – Lawrence-Insula (NYLANDER 1887).

Lecanora chlarotera Nyl. – Corticolous on *Alnus* and *Salix*. – Wonder L (WEBER & VIERECK 1967).

= *Lecanora rugosella* Zahlbr. – PWS, Thum Bay (EYERDAM 1949); Raspberry Isl, Port Vita (THOMSON 1950a); Anaktuvuk Pass (MOSER et al. 1979, THOMSON 1979); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Lecanora chloroleprosa (Vain.) H. Magn. – Saxicolous. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); coastal Alaska (MCCUNE 2017a & b); Kenai Fjords NPPr, Harding Icefield Trail (MCCUNE et al. 2020).

Lecanora cinereofusca H. Magn. – Corticolous on *Alnus* and other species. – Chisik Isl (TALBOT et al. 1992); Kadin Isl; Mallard Slough, Stikine R; N Kuiu Isl, Rowan Bay; S Mitkof Isl, Banana Pt (GEISER et al. 1998); Alaska (BRODO et al. 2001); Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Lecanora cinereorufescens → ***Bellemeria cinereorufescens***

Lecanora circumborealis Brodo & Vitik. – Corticolous on conifers and hardwoods, also lignicolous. – Fairbanks (BRODO 1984b); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay; Deadman L CG; Moon L CG (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Unuk R (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Lecanora coilocarpa* auct., non (Ach.) Nyl. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Ogotoruk Cr (MURRAY 1985).

= “*Lecanora subfusca coilocarpa* Ach.” – Muir Glacier, Glacier Bay; PWS, Virgin Bay (CUMMINGS 1904).

Lecanora coilocarpa → ***Lecanora circumborealis***

Lecanora confusa Almb. – Corticolous on *Alnus* twigs and lignicolous on beached driftwood. – Chilkoot Trail (SPRIBILLE et al. 2010, as cf.); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Lecanora contractula → ***Polyozosia contractula***

Lecanora crenulata → ***Polyozosia crenulata***

Lecanora crustacea (Savicz) Zahlbr. – Saxicolous on granite boulders. – Valley of the Okpilak R near Okpilak L and Mt Michelson; Jago R floodplain and McCall Creel fan (RYAN & NASH 1997).

Lecanora dispersa → **Polyozosia dispersa**

Lecanora distans → **Polyozosia populicola**

Lecanora ecorticata → **Lithocalla ecorticata**

Lecanora epanora (Ach.) Ach. – Saxicolous, usually on iron-rich rocks, in Alaska reported from coastal rocks. – Chisik Isl (TALBOT et al. 1992).

Lecanora epibryon (Ach.) Ach. – Muscicolous and terricolous on tundra soils, also a dubious report from a coastal driftwood log (TALBOT et al. 2001), which is probably referable to *L. xylophila*. – Port Clarence (NYLANDER 1887; HUE 1891, as “*epibrya*”); Demarcation Pt (MERRILL 1924b); S of Wainwright, Kaolak R (THOMSON 1960); Mt Eielson (WEBER & VIERECK 1967); Prudhoe Bay (MURRAY & MURRAY 1975a, b, 1978); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Haul Rd, Coastal Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Barter Isl; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Okpilak R Valley (BRODO 1984b); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Prudhoe Bay region (WALKER & EVERETT 1991); Central Arctic coastal plain (WALKER et al. 1991); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Deadman L CG; Fielding L, Sheep Mt (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); N Kuiu Isl, Port Camden (GEISER et al. 1998); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Howe Isl; Franklin Bluffs (WALKER et al. 2004). Beaver Cr; Willow L, near Alaska Hwy (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr, W of Hatchet Pt; Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

= *Lecanora subfusca* var. *hypnorum* (Wulfen) Schaer. – Port Clarence; Cape Lisburne (ROTHROCK 1884); Port Clarence; Cape Lisburne (MACOUN 1902).

Lecanora excludens Malme – Corticolous on bark of *Alnus* and *Salix*. – Juneau, “Mendenhall Flats,” at Brotherhood Park, Auke Bay (BRODO et al. 2019); Kenai Fjords NPPr, N of Exit Glacier Visitor Center; Kenai Fjords NPPr, Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020).

Lecanora expallens Ach. – Corticolous on *Picea* and *Populus*, also lignicolous on beach log. Records from before 2017 need to be compared to *L. stanislai*. – Adak Isl (TALBOT et al. 1997); Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); SE Mitkof Isl (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, E side of Harris Bay; Kenai Fjords NPPr, N arm of spit across James Lagoon; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP; Excursion Ridge (SPRIBILLE et al. 2020).

Lecanora farinaria Borrer – Corticolous on *Alnus* and *Picea sitchensis*, also lignicolous on suspended log on high beach. – Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Lecanora filamentosa → ***Palicella filamentosa***

Lecanora flavopunctata → ***Biatora flavopunctata***

Lecanora frustulosa (Dicks.) Ach. – Saxicolous on fissured acidic rock and alpine argillitic rocks. This species was excluded by VÄNSKÄ (1984), but we have confirmed material from coastal SE Alaska (SPRIBILLE et al. 2010, 2020), and cannot rule out that historical records are correct. – Taku (CUMMINGS 1892b, with ?); Kodiak; St Michael (CUMMINGS 1904); Colville R near Umiat (THOMSON 1979); White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Lecanora fuscescens (Sommerf.) Nyl. – Corticolous on *Abies* and also reported from *Alnus* (GEISER et al. 1998). – Port Clarence (NYLANDER 1887; HUE 1891); SE Alaska (GEISER et al. 1994a: map); Fielding L (THOMSON & AHTI 1994); N Baranof Isl, Goose Cove (GEISER et al. 1998); White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr, Portage L (MCCUNE et al. 2018).

Lecanora geophila (Th. Fr.) Poelt – Terricolous on moss and humus. – Little Okpilak L (RYAN 1989); Alaska (THOMSON 1997: map); North Slope, Toolik L (ZHURBENKO 2009b).

Lecanora grantii → ***Lecanora xylophila***

Lecanora hagenii → ***Polyozosia hagenii***

Lecanora hybocarpa (Tuck.) Brodo – Corticolous on smooth bark. – Chisik Isl (TALBOT et al. 1992); Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, Saddle Mtn; Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018).

Lecanora hypoptoides (Nyl.) Nyl. – Lignicolous on beach wood. – Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018).

Lecanora impudens Degel. – Corticolous on *Populus* and *Salix* trunks. – Chisik Isl (TALBOT et al. 1992, as cf.); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chilkoot Trail (SPRIBILLE et al. 2010).

= *Lecanora chloropolia* auct., non (Erichsen) Almb. – McKinley Bar (WEBER & VIERECK 1967). “*L. impudens* for most North American records” according to ESSLINGER (2021).

Lecanora intricata (Ach.) Ach. – Saxicolous on acidic rocks, often in wet or moist habitats. – S of Wainwright, Kaolak R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Amchitka Isl (THOMSON & SOWL 1989); St Paul, on the S coast (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Blueberry L CG; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Mirror L camp; Katmai NPPr, Hammersly L; Katmai NPPr, Naknek L (MCCUNE et al. 2018); Kenai Fjords NPPr, Crater Bay off of Harris Bay (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).
= “*Lecanora varia intricata* (Ach.) Nyl.” – Kodiak; Port Clarence (CUMMINGS 1904).

Lecanora invadens → ***Polyozosia invadens***

- Lecanora leptacina*** Sommerf. – Muscicolous and terricolous in the alpine. – Barrow (MURRAY & MURRAY 1978); S of Wainwright, Kaolak R; Colville R near Umiat; 6 mi SSW of Barrow, Imiksonn L (THOMSON 1979); Cosmos Pk (GEISER et al. 1994a: map); Alaska (THOMSON 1997: map); Kupreanof Isl, Sheridan Pk; [SE Alaska] mainland, Cosmos Range (GEISER et al. 1998); Katmai NPPr (FRYDAY & TØNSBERG 2015, as aff.); SW to SE Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L camp; Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018); Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, near NPS weather station, McArthur Ridge (MCCUNE et al. 2020); Klondike Gold Rush NHP; Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
- Lecanora leptacinella*** Nyl. – Muscicolous on tundra frost boils. – Barrow (ZHURBENKO et al. 1995); North Slope, Sagwon (ZHURBENKO 2009b); Brooks Range, Endicott Mtns, Midnight Dome (DILLMAN et al. 2012).
- Lecanora leucococca*** Sommerf. – Saxicolous on beach rocks. – Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018, as s. lat.).
- Lecanora luteovernalis*** Brodo – Terricolous on humus in alpine or on fibrous building material. – Anaktuvuk Pass; Okpilak; Franklin Bluffs on the Sagavanirktok R; Mancha Cr and Firth R Valley; Prudhoe Bay (BRODO 1981); Amchitka Isl, main disturbed area from Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989); Central Arctic coastal plain (WALKER et al. 1991); Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997, as cf.); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009).
- Lecanora marginata*** (Schaer.) Hertel & Rambold – Saxicolous on calcareous rocks in exposed habitats. – Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Mt Fairplay (TALBOT et al. 2007); Katmai NPPr, Hammersly L (MCCUNE et al. 2018).
= *Lecidea marginata* Schaer. – Pitmegea R, 24 km upstream of Cape Sabine (HERTEL 1967); Pitmegea R, 15 mi upstream from Cape Sabine; Firth R at Mancha Cr (THOMSON 1979).
- Lecanora microbola*** I. M. Lamb – Saxicolous on coastal sea stack. – Adak Isl (TALBOT et al. 1997); Kodiak Isl; Adak Isl (RYAN 1998).
- Lecanora microfusca*** Lyngb – Saxicolous on calcareous rocks. – S of Wainwright, Kaolak R (THOMSON 1979); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map).
- Lecanora nordenskiöldii*** Vain. – Saxicolous on calcareous rocks, also on concrete and bone. – Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000).
- Lecanora orae-frigidae*** R. Sant. – Lignicolous on driftwood, logs, fence rails, salmon net drying racks and beach wood. – SE Alaska (O'CLAIR et al. 1996; GEISER et al. 1998); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Katmai NPPr, Katmai Bay Bear Cam; Lake Clark NPPr, Chinitna Bay (MCCUNE et al. 2018); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Lecanora pacifica Tuck. – Corticolous on hardwood bark. – Port Wells (CUMMINGS 1904); Chisik Isl (TALBOT et al. 1992); Chilkoot Trail (SPRIBILLE et al. 2010).

Lecanora paddensis (Tuck.) T. Sprib. – Corticolous and lignicolous on conifers, also on *Salix*. – Alaska (MCCUNE 2017b); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Lecidea paddensis* (Tuck.) Zahlbr. – Chilkoot Trail (SPRIBILLE et al. 2010).

Lecanora palanderi → **Polyozosia zosteræ**

Lecanora perpruinosa → **Polyozosia perpruinosa**

Lecanora persimilis → **Polyozosia persimilis**

Lecanora phaeostigma (Körb.) Almb. – Corticolous on *Picea* and *Tsuga*, and lignicolous/resinicolous on scar of live *Pinus contorta*. – Chilkoot Trail (SPRIBILLE et al. 2010, as cf.); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Lecanora poliophaea → **Polyozosia poliophaea**

Lecanora polytropæ (Ehrh. ex Hoffm.) Rabenh. – Saxicolous on acidic rock, from bedrock to pebbles. – Unalaska Isl, Kashaga; Attu Isl (DEGELIUS 1937); Quigley Hill (HOWARD 1963); Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Chauekuktuli L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier; Eagle Summit; terminal moraine of Valdez Glacier; Blueberry L CG; Thompson Pass: Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Alaska Hwy, mi 1270, Ten Mile Cr; Riverside Lodge Airstrip (TALBOT et al. 2007); Chugach NF (DERR 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

Lecanora pringlei → **Pulvinora pringlei**

Lecanora pulicaris (Pers.) Ach. – Corticolous on hardwoods and conifers, also lignicolous. – Ketchikan (BRODO 1984b); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a); Alaska (THOMSON 1997: map); Juneau Icefield (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Seaton Roadhouse; Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, West of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay (SPRIBILLE et al. 2020).

= *Lecanora chlarona* (Ach.) Nyl. – Port Clarence (NYLANDER 1887); Juneau Icefield (MCCULLOUGH 1965); Colville R near Umiat; Firth R at Mancha Cr (THOMSON 1979).

Lecanora quadruplans Nyl. – Saxicolous on calcareous rock; taxonomic status uncertain. – Port Clarence (**type** – NYLANDER 1885b; NYLANDER 1887; HUE 1891). Not in the North American checklist and not synonymized or otherwise accounted for. The species was moved into *Pinacisca* by HUE (1910), most of the species of which are currently treated in *Hymenelia* s. lat. However, the name was not mentioned by MAGNUSSON (1933). The type (H-NYL 25112) has not been recently annotated.

= *Pinacisca quadruplans* (Nyl.) Hue – (HUE 1910).

Lecanora reagens Norman – Saxicolous. – Lake Clark NPPr, Portage L (MCCUNE et al. 2018).

Lecanora rupicola (L.) Zahlbr. – Saxicolous on siliceous rocks. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Tikchik L (THOMSON & DOELL 1989); Chisik Isl (TALBOT et al. 1992); Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Willow L, near Alaska Hwy; Tetlin Junction (TALBOT et al. 2007); Katmai NPPr, Hammersly L; Katmai NPPr, Mirror L (MCCUNE et al. 2018).

Lecanora salicicola H. Magn. – Corticolous on *Abies*, *Alnus* and *Salix*. – Chauekuktuli L (THOMSON & DOELL 1989); Haines Hwy, mi 33; Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); NW of Haines (GEISER et al. 1998); Lake Clark NPPr, Saddle Mtn; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Lecanora saligna (Schrad.) Zahlbr. – Lignicolous on enriched tidal driftwood, also reported from twigs of *Picea sitchensis* (DILLMAN 2010) and bark of deciduous trees (THOMSON 1997). – Alaska (THOMSON 1997: map); Teck Isl (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, Chinitna Range Stn (MCCUNE et al. 2018).

Lecanora salina H. Magn. – On non-calcareous seashore rocks. – SW Alaska (MCCUNE 2017b, as “tentative”).

Lecanora sambuci → **Polyozosia sambuci**

Lecanora schizochromatica → **Palicella schizochromatica**

Lecanora semipallida → **Polyozosia semipallida**

Lecanora stanislai Guzow-Krzem. et al. – Corticolous on smooth bark of deciduous trees, including *Salix*. – Skagway, along and uphill from Klondyke Hwy (GUZOW-KRZEMIŃSKA et al. 2017); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Lecanora straminea → **Polyozosia straminea**

Lecanora strobilina (Spreng.) Kieff. – On *Alnus*. – SE Alaska (GEISER et al. 1994: map); [SE Alaska] mainland, Unuk R (GEISER et al. 1998).

Lecanora subfusca → **Appendix A**

Lecanora subintricata (Nyl.) Th. Fr. – Corticolous and lignicolous, especially on conifers. – Port Clarence (NYLANDER 1887, HUE 1891); Alaska (THOMSON 1997: map).

Lecanora subrugosa → **Lecanora argentata**

- Lecanora sulphurea*** (Hoffm.) Ach. – Saxicolous. – Crete Cr (HERTEL & ANDREEV 2003); Kenai Fjords NPPr, North of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020).
- Lecanora swartzii*** (Ach.) Ach. – Saxicolous. – Dalton Hwy, Finger Mtn (DILLMAN et al. 2012); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Lecanora subradiosa* auct. – Lawrence-Insula (NYLANDER 1885a). Synonymy after WESTBERG et al. (2021).
- Lecanora symmicta*** (Ach.) Ach. – Corticolous on hardwoods and conifers, also lignicolous on beached driftwood and worked wood. – Ad Fretum Behringii (NYLANDER 1888, p. 63, “super ramos *Menziesiae ferrugineae* legit D^r Kellog”; but *Menziesia* does not extend to the Bering Straits!); Alaska (HUE 1891); Sitka (STIZENBERGER 1895a; 1895b: “thallus red on application of calcium hypochlorite” and thus likely not = *L. symmicta* s. str.); Amchitka Isl, main disturbed area from Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Deadman L CG; Moon L CG; Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); False Isl, SE Chichagof Isl; LeConte Bay (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Beaver Cr; Mt Fairplay (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009, as s. lat.); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, N end of Harris Bay, near opening to Northwestern Lagoon; Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Gustavus, West Arm (SPRIBILLE et al. 2020).
= “*Lecanora varia symmicta* Ach.” – St Lawrence Isl (CUMMINGS 1904).
= *Lecidea symmicta* (Ach.) Ach. – Amchitka Isl (WEBER et al. 1969, as cf.); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979).
- Lecanora torrida* → **Polyozosia torrida**
- Lecanora valesiaca*** (Müll. Arg.) Stizenb. – Saxicolous in warm, dry habitats. – Alaska (MCCUNE 2017b).
- Lecanora varia* → **Appendix A**
- Lecanora vegae*** Malme – Lignicolous on decorticated *Picea*. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979).
- Lecanora viridipruinosa*** M. Svenss. & T. Sprib. – On argillite rocks in the alpine zone. – Glacier Bay NP: Excursion Ridge (**type** – SPRIBILLE et al. 2020).
- Lecanora xylophila*** Hue – Lignicolous on driftwood logs on beaches, and on worked wood, also saxicolous on seashore rocks. – SE Alaska (O’CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Tongass NF, Mitkof Isl, 15 km S of Petersburg (NASH et al. 2006); Alaska (MCCUNE 2017b).
= *Lecanora eyerdamii* Herre – Port San Juan, Evans Isl (**type**); Kuiu Isl, Washington Bay (HERRE 1956). Synonymy after BRODO (1984b).
= *Lecanora grantii* H. Magn. – Port San Juan, Evans Isl; Port Clarence (BRODO 1984b); Amchitka Isl, St Makarius Pt; Amchitka Isl, Kirilof Pt (THOMSON &

SOWL 1989); Katmai NP, on the beach of Ninagiak Isl in the Shelikof Strait (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Alaska (THOMSON 1997: map).

Lecanora zosteræ → **Polyozosia zosteræ**

Lecidea albofuscescens Nyl. – Corticolous on *Picea sitchensis* twigs on coastal headlands, also once on *Pinus contorta* twigs. – Kadin Isl, Stikine R (GEISER et al. 1998); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Lecidea albohyalina → **Biatora albohyalina**

Lecidea alpestris → **Protomicarea alpestris**

Lecidea atrobrunnea (Ramond ex Lam. & DC.) Schaer. – Saxicolous on acidic rocks. – Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979); Hagemester Isl (TALBOT et al. 1990); Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Kuzitrin L; Cape Dyer (HERTEL & ANDREEV 2003); Alaska (LEUCKERT & HERTEL 2003, as s. lat.); along Richardson Hwy 62 km N of Valdez (HERTEL & LEUCKERT 2011: chemotype 'J'); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

Lecidea atromarginata → **Lecanora atromarginata**

Lecidea auriculata Th. Fr., **subspecies not given** – Saxicolous on acidic rock. – Unalaska Isl (HEDRICK 1936); Franklin Bluffs on the Sagavanirktok R (HERTEL 1977a); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Chisik Isl (TALBOT et al. 1992); Eagle Summit; Mt Fairplay (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018).

Lecidea auriculata subsp. **auriculata** – Saxicolous on acidic rock. – Big Cr; Glacial L; Kuzitrin L, Mt Boyan; Sturgeon Ridge; Killeak Lakes; Pilgrim R, Cottonwood Camp; Crete Cr; Mt Distin; Ella Cr; Horton Cr (HERTEL & ANDREEV 2003).

Lecidea auriculata subsp. **brachyspora** Th. Fr. – Saxicolous on acidic rock. – Crete Cr (HERTEL & ANDREEV 2003, both taxa).
= *Lecidea brachyspora* (Th. Fr.) Nyl. – Lawrence-Insula (NYLANDER 1887; HUE 1891); Franklin Bluffs on the Sagavanirktok R; St Lawrence Isl (HERTEL 1977a); Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1997: map).

Lecidea berengeriana (A. Massal.) Th. Fr. – Terricolous and muscicolous on mosses, humus and soil. – Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Circular Marsh near Barrow; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass (THOMSON 1979); Alaska (THOMSON 1997: map); White Pass (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Mycobilimbia berengeriana* (A. Massal.) Hafellner & V. Wirth – SE Alaska (GEISER et al. 1994a); Mt Alyeska; Mt Fairplay (THOMSON & AHTI 1994); Spurt L (GEISER et al. 1998); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015).

- Lecidea betulicola*** (Kullh.) H. Magn. f. ***endamynea*** (Hedl.) Hinteregger – Corticolous on base of trunk of *Picea* and twigs of *Tsuga*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).
- Lecidea brachyspora* → ***Lecidea auriculata*** subsp. ***brachyspora***
- Lecidea carnulenta*** (Tuck.) Fink – Kodiak Isl, Spiridon Peninsula (TALBOT 1998).
- Lecidea cinnabarina* → ***Ramboldia cinnabarina***
- Lecidea commaculans*** Nyl. – Saxicolous. – North Slope (KRISTINSSON et al. 2010).
- Lecidea confluens*** (Weber) Ach. – Saxicolous on siliceous rock. – St Michael (CUMMINGS 1904); Anaktuvuk Pass (MOSER et al. 1979); Anchorage, Chugach Mts (HERRE 1950a); 6 mi SSW of Barrow, Imiksonn L; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Thompson Pass (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018).
- Lecidea coriacea*** Holien & Palice – Lignicolous on conifer wood. – Mitkof Isl, Crystal Mtn (HOLIEN et al. 2016); SE Alaska (MCCUNE 2017b).
- Lecidea cuprea* → ***Biatora cuprea***
- Lecidea denotata*** Nyl. – On dead blades of grass, known only from the type. – Port Clarence (type [H-NYL!]) NYLANDER 1885b; NYLANDER 1887; HUE 1891). = *Biatorella denotata* (Nyl.) Zahlbr. – The reason for this combination is unclear, as the species has eight spores per ascus. The description suggests the species is close to the Fennoscandian *Lecidea septentrionalis*.
- Lecidea dipensiae* → ***Bryobilimbia dipensiae***
- Lecidea diducens*** Nyl. – Saxicolous on exposed acidic rocks. – Colville R near Umiat; Franklin Bluffs on the Sagavanirktok R; Valley of the Okpilak R at Okpilak L, near Mt Michelson (HERTEL 1977a); Anaktuvuk Pass (THOMSON 1979); vicinity of Juneau, Mt Robert's trail (HERTEL 1981); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Killeak Lakes; Crete Cr; Minnie Cr (HERTEL & ANDREEV 2003); Alaska (MCCUNE 2017b).
- Lecidea ecrustacea*** (Anzi ex Arnold) Arnold – Saxicolous on acidic rocks and pebbles. – Alaska (THOMSON 1997: map); Chikuminuk L (THOMSON & DOELL 1989); Ella Cr (HERTEL & ANDREEV 2003); Alaska (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Lecidea efflorescens* → ***Biatora efflorescens***
- Lecidea ementiens* → ***Biatora ementiens***
- Lecidea enteroleuca* → **Appendix A**
- Lecidea enteroleuca* var. *flavida* → **Appendix A**
- Lecidea enteroleuca* var. *latypha* → **Appendix A**
- Lecidea epiphaea*** Nyl. – Terricolous in the arctic and alpine. – Lawrence-Insula (NYLANDER 1887); White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b).
- Lecidea erythrophaea*** Flörke ex Sommerf. – Corticolous, almost exclusively on *Populus*, but also reported from *Alnus*, *Cupressus nootkatensis*, *Picea* and *Salix* (GEISER et al. 1998). – Port Clarence (NYLANDER 1887; HUE 1891); Eagle Summit (THOMSON & AHTI 1994); NW of Haines (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr, Naknek L, N of Brooks Camp; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

Lecidea fuscoatra (L.) Ach. – Saxicolous on acidic rocks. THOMSON (1997) states that “North American reports are all suspect”, but recognized by MCCUNE (2017b). – “Alaska and the adjacent region”, no locality given (ROTHROCK 1884).

Lecidea globulispora Nyl. – Lignicolous on a thin twig of *Pinus contorta*. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Lecidea griseomarginata Fryday – Saxicolous on siliceous rocks. – Glacier Bay NP: West Arm (**type** – SPRIBILLE et al. 2020).

Lecidea haerjedalica H. Magn. – Saxicolous on siliceous rocks and small pebbles in tundra. – Barrow (FRYDAY 2004a); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

Lecidea hypnorum → ***Bryobilimbia hypnorum***

Lecidea hypocrita → ***Farnoldia hypocrita***

Lecidea insperabilis Nyl. – Terricolous on detritus. – Port Clarence (**type** – NYLANDER 1885b; and NYLANDER 1887, as ‘*insperapilis*’; HUE 1891); Port Clarence (PRINTZEN 1995).

Lecidea laboriosa Müll. Arg. – Saxicolous on pebbles.

= *Lecidea leptoboloides* Nyl. – Fielding L (THOMSON & AHTI 1994).

Lecidea lactea Flörke ex Schaer. – Saxicolous on siliceous and argillite rocks. This name is used here for the taxon with a thick white thallus and ±innate apothecia that is distinct from *L. lapicida* var. *pantherina*, but the records included under both names need to be re-assessed. – Anaktuvuk Pass (MOSER et al. 1979); Tikchik L; Nishlik L (THOMSON & DOELL 1989); Portage Glacier; Eagle Summit; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Katmai NPPr, Mirror L; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

Lecidea lapicida (Ach.) Ach. **variety not specified** – Saxicolous on siliceous rocks, records from calcareous rock and concrete should be checked. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1960); Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Alaska (THOMSON 1997: map); Baranof Isl; Juneau, Visitors Center, Mendenhall Glacier (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Katmai NPPr, Hammersly L; Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

Lecidea lapicida var. **lapicida** – Vicinity of Juneau, Mt Roberts Trail (HERTEL 1991); Salmon L; Serpentine Hot Springs; Killeak Lakes; Big Cr; Crete Cr; Cottonwood; Minnie Cr; Ella Cr; Glacial L (HERTEL & ANDREEV 2003).

= *Lecidea lapicida* f. *lapicida* – Eagle Summit; Blueberry L CG; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994).

? = “*Lecidea lapicida* f. *ochracea* (Nyl.) Vain.” – Colville R near Umiat (THOMSON 1979); Chisik Isl (TALBOT et al. 1992); Adak Isl (TALBOT et al. 1997); St Matthew Isl (TALBOT et al. 2001); Eagle Summit; Mt Fairplay; Sheep Mtn (THOMSON & AHTI 1994).

Lecidea lapicida var. **pantherina** Ach. – Saxicolous on siliceous rock. – Lost Jim Lava Flow; Salmon L; Killeak Lakes; Glacial L; Ella Cr; Horton Cr (HERTEL & ANDREEV 2003); White Pass (SPRIBILLE et al. 2010); Mitkof Isl, Crystal Mtn (FRYDAY & TØNSBERG 2015).

= *Lecidea pantherina* (Ach.) Th. Fr. – Unalaska Isl, Unalaska (DEGELIUS 1937); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Ogotoruk Cr (MURRAY 1985).

Lecidea leprarioides Tønsberg – Corticolous on conifers. – Kenai Peninsula, Summit L (TØNSBERG 1993a); Chilkoot Trail (SPRIBILLE et al. 2010); coastal Alaska (MCCUNE 2017a & b).

Lecidea leucothallina Arnold – Saxicolous on lower, shaded sides of boulders and outcrops in late-snow sites. – Alaska (THOMSON 1997: map); Katmai NPPr, Hammersly L; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018).

Lecidea leucothallina var. **kujalae** (Räsänen) Hertel – On metal-rich rock. – Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018).

Lecidea limosa → **Protomicarea limosa**

Lecidea lithophila (Ach.) Ach. – Saxicolous on siliceous rocks. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Hagemeister Isl (TALBOT et al. 1990); Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018).

Lecidea malmeana Zahlbr. – Lignicolous on decorticated *Picea* branch and corticolous on *Pinus contorta*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Lecidea marginata → **Lecanora marginata**

Lecidea melaphanoides Nyl. – Saxicolous on schist. – Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Mt Alyeska (THOMSON & AHTI 1994); Chugach NF (DERR 2010); Kenai Fjords NPPr, ridge above Exit Glacier (MCCUNE et al. 2020, as cf.).

Lecidea myriocarpella → **Appendix A**

Lecidea paddensis → **Lecanora paddensis**

Lecidea pallida → **Pilophorus dovrensis**

Lecidea pantherina → **Lecidea lapicida** var. **pantherina**

Lecidea parasemella → **Schaereria parasemella**

Lecidea paupercula Th. Fr. – Saxicolous on siliceous rocks and alkaline argillite. This species is included as a synonym of *L. praenubila* in WESTBERG et al. (2021), but we prefer to keep them separate pending a full revision of this group of species, which also includes *L. protabacina*. – Okpilak R near Okpilak L and

Mt Michelson (THOMSON 1979); Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Salmon L; Glacial L; Mt Distin; St Paul Isl (HERTEL & ANDREEV 2003); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay, Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

Lecidea phaeops Nyl. – Saxicolous on low alpine outcrop. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Lecidea plana (J. Lahm) Nyl. – Saxicolous. – Cape Lisburne (NYLANDER 1887); Alaska (HUE 1891); Adak Isl (TALBOT et al. 1997); Kuzitrin L, Twin Calderas (HERTEL & ANDREEV 2003); Noatak NPr (MCCUNE et al. 2009); Lake Clark NPPr, headwaters of Johnson R (MCCUNE et al. 2018); Kenai Fjords NPPr, Bear Glacier nunatak (MCCUNE et al. 2020).

Lecidea plebeja Nyl. – Reported as corticolous on *Alnus*, *Picea*, *Populus balsamifera*, *P. tremuloides*, *Salix* and lignicolous on rotting wood; a widely misapplied name but we have not seen the reported material. – Firth R at Mancha Cr (THOMSON 1979); Portage Glacier; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska Hwy, mi 1270, Ten Mile Cr; Beaver Cr; Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010).

Lecidea praenubila Nyl. – Saxicolous on pebbles in fellfield, in cliff crevice above stream and on alkaline argillite in the alpine zone. – Adak Isl (TALBOT et al. 1997); Juneau, near Visitors Center, Mendenhall Glacier (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Katmai NPPr, Hammersly L; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018, Katmai specimen with stictic acid); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, N of Exit Glacier Visitor Center (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Lecidea praetermissa Tønsberg – Corticolous on *Betula*. – Between Sunrise and Hope (TØNSBERG 1993a); coastal Alaska (MCCUNE 2017a & b); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Lecidea promiscens Nyl. – Saxicolous. – Mt Boyan, Kuzitrin L (HERTEL & ANDREEV 2003, as cf.).

Lecidea promiscua Nyl. – Saxicolous “near a creek”. – Serpentine Hot Springs (HERTEL & ANDREEV 2003, as cf.).

Lecidea protabacina Nyl. – Saxicolous. – Katmai NPPr, Hammersly L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018, Katmai specimen with stictic acid); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

Lecidea pullata → ***Frutidella furfuracea***

Lecidea ramulosa Th. Fr. – Terricolous on mineral soil and humus, sometimes in seepage areas. – Lawrence-Insula (NYLANDER 1887; HUE 1891); Barrow (MURRAY & MURRAY 1978); Circular Marsh near Barrow; Franklin Bluffs on the Sagavanirktok R; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Mt Alyeska (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009).

- Lecidea roseotincta** Coppins & Tønsberg – Corticolous on *Alnus* spp., also found on *Oplopanax*, *Picea sitchensis* and *Salix*. – Kodiak Isl, Kalsin Bay; S of Seward, Spruce Cr; Yakutat; Douglas Isl; Herbert R; Old Sitka, Starrigavan R; Indian R (TØNSBERG 1993a); Yakutat; Sitka; Juneau (GEISER et al. 1998); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020).
- Lecidea rubrocastanea** T. Sprib. & Printzen – Corticolous on *Pinus contorta*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).
- Lecidea sabuletorum* → **Bilimbia sabuletorum**
- Lecidea sanguineoatra* → **Bryobilimbia sanguineoatra**
- Lecidea sarcognoides** Körb. – Saxicolous on rock on ridge. – Kenai Fjords NPPr, Skilak Glacier nunatak (MCCUNE 2017a); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).
- Lecidea silacea** (Hoffm.) Ach. – Saxicolous on metal-rich rocks. – Prince of Wales Isl (GEISER et al. 1994a; 1998: “There is a rust colored morph of *L. lapicida* which can be misidentified as *L. silacea*. This lichen has undergone several taxonomic revisions since 1919 and its inclusion in this inventory is tentative.”); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).
= *Lecidea silacea* var. *oxydata* Fr. – Prince of Wales Isl, Deweyville (HERRE 1919).
- Lecidea sphaerella** Hedl. – Corticolous on *Alnus incana*, *Oplopanax horridus*, *Populus* and *Tsuga*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Katmai NPPr, Naknek L (MCCUNE et al. 2018).
- Lecidea steineri** Hertel – Saxicolous on noncalcareous rocks. – Valley of the Okpilak R at Okpilak L, near Mt Michelson (HERTEL 1981); Alaska (THOMSON 1997: map); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); N & SE Alaska (MCCUNE 2017b).
- Lecidea stenotera* → **Protomicarea alpestris**
- Lecidea strasseri** Zahlbr. – Terricolous over rock. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).
- Lecidea streveleri** T. Sprib. – Corticolous on *Alnus* and *Populus*. – Glacier Bay NP: Dundas Bay (**type**), East Arm, Taylor Bay, Bartlett Cove (SPRIBILLE et al. 2020).
- Lecidea subcandida** H. Magn. – Terricolous on calcareous sandy soil. – S of Wainwright, Kaolak R (THOMSON 1979); Kaolak R (THOMSON 1997: map).
- Lecidea subduplex* → **Biatora subduplex**
- Lecidea swartzioidea** Nyl. – Saxicolous on siliceous rocks and alkaline argillite. – Katmai NPPr, Mirror L (MCCUNE et al. 2018, as cf.); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Lecidea tessellata** Flörke **variety not specified** – Saxicolous on acidic rock. – St Michael (CUMMINGS 1904); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Chisik Isl (TALBOT et al. 1992); Eagle Summit; Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000);

Alaska (BRODO et al. 2001); Killeak Lakes; Kuzitrin L, Sturgeon Ridge; Lost Jim Lava Flow; Serpentine Hot Springs; Coffee Dome; Mystery Cr; Horton Cr (HERTEL & ANDREEV 2003); Lake Clark NPPr, Camel's Hump on shore of Lake Clark; Lake Clark NPPr, Turquoise L campsite; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

= *Lecidea spilota* Fr. – Cape Lisburne (ROTHROCK 1884). Synonymy after WESTBERG et al. (2021).

Lecidea tessellata* var. *caesia (Anzi) Arnold – Saxicolous on calcareous sandstone. – Along the Pitmegea R 15 mi upstream from Cape Sabine (HERTEL 1971b).

Lecidea theodori Lynge – Saxicolous on quartzitic rocks. – North Slope (KRISTINSSON et al. 2010).

Lecidea tornoënsis → ***Japewia tornoënsis***

Lecidea turgidula Fr. – Lignicolous on wood of *Picea*, snag and fence rails. – Alaska (THOMSON 1997: map); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, Portage L (MCCUNE et al. 2018, as aff.).

= *Biatora turgidula* (Fr.) Nyl. – Adak Isl (TALBOT et al. 1997, specimen !Tønsberg).

Lecidea umbonata (Hepp) Mudd – Saxicolous on calcareous rocks. – Valley of the Okpilak R at Okpilak L, near Mt Michelson (HERTEL 1973: map); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Valley of the Okpilak R at Okpilak L, near Mt Michelson (TRIEBEL 1989); Mt Fairplay (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000).

Lecidea vacciniicola → ***Biatora vacciniicola***

Lecidea vernalis → ***Biatora vernalis***

Lecidella anomaloides (A. Massal.) Hertel & H. Kiliass – Saxicolous. – Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).

= *Lecidella goniophila* auct. – Colville R near Umiat; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979, record is *Lecidella stigmatea* according to HERTEL 1991).

Lecidella asema (Nyl.) Knoph & Hertel – Saxicolous, upper intertidal. – Southeast Alaska (GEISER et al. 1998, as “s. lat.”); Katmai NPPr, Naknek L; Lake Clark NPPr, Chinitna Bay (MCCUNE et al. 2018).

= *Lecidella subincongrua* (Nyl.) Hertel & Leuckert – Near Sitka (GEISER et al. 1998).

Lecidella bullata Körb. – Saxicolous under overhanging cliffs and on protected sides of acidic boulders. The Thomson record probably refers to *Lecanora formosa*. – Alaska (THOMSON 1997: map); Katmai NPPr, Hammersly L (MCCUNE et al. 2018).

Lecidella carpathica Körb. – Saxicolous on acidic rock, also reported by Thomson from calcareous rocks, bones and antlers. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Glenn Hwy, mi 113, Sheep Mtn (KNOPH & LEUCKERT 1994); Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Chilkoot Trail (SPRIBILLE et al. 2010, as cf.); Katmai NPPr, Naknek L; Lake Clark NPPr, Portage L; Lake Clark NPPr, Saddle Mtn (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

- Lecidella effugiens** (Nilson) Knoph & Hertel – Saxicolous on siliceous rock, perhaps in areas with enrichment. – Anaktuvuk Pass (KNOPH & LEUCKERT 1994); SE Alaska (O’CLAIR et al. 1996); top of Sunshine Cove, Auke Bay (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b).
- Lecidella elaeochroma** (Ach.) M. Choisy – On bark and wood. – Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1997: map); Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).
- Lecidella euphorea** (Flörke) Hertel – Corticolous, also lignicolous on anthropogenic substrates and growing on antlers. – Denali NP, Lynx Cr CG (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Deadman L CG; Moon L CG; Richardson Hwy, mi 10; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Admiralty Isl, Glass Peninsula (GEISER et al. 1998); Noatak NPr (MCCUNE et al. 2009); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr, Headwaters Cr (MCCUNE et al. 2018).
= “*Lecidea euphorea* Flörke” – Port-Clarence (HUE 1891).
= “*Lecidea parasema* * *euphorea* Flk.” – Port Clarence (NYLANDER 1887).
= *Lecidella glomerulosa* (DC.) M. Choisy – McKinley Bar (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979).
Synonymy after ESSLINGER (2021).
- Lecidella laureri** (Hepp) Körb. – Ecology unknown for Alaskan collection, but usually corticolous.
= *Biatora laureri* (Hepp) Tuck. – Alaska (TUCKERMAN 1888; MACOUN 1902).
- Lecidella patavina** (A. Massal.) Knoph & Leuckert – Saxicolous on argillite and other rocks. – Port Clarence ad fretum Bering (KNOPH & LEUCKERT 1994, two chemotypes). See also entry under *Lecidea enteroleuca* in Appendix A.
= *Lecidella inamoena* (Müll. Arg.) Hertel – Valley of the Okpilak R at Okpilak L, near Mt Michelson (HERTEL 1977a); Valley of the Okpilak R at Okpilak L, near Mt Michelson (TRIEBEL 1989); Alaska (THOMSON 1997: map). Synonymy after WESTBERG et al. (2021).
- Lecidella scabra** (Taylor) Hertel & Leuckert – Saxicolous on shaded rock. – Katmai NPPr, Naknek L (MCCUNE 2018).
- Lecidella stigmataea** (Ach.) Hertel & Leuckert – Saxicolous, mainly on calcareous rocks, occasionally on bones and antlers and lignicolous on wood. – Pitmegea R, 15 mi upstream from Cape Sabine; Kukpuk R Region, on Sahligvik Ridge; S of Wainwright, Kaolak R (HERTEL 1977a); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Pitmegea R, 15 mi upstream from Cape Sabine (TRIEBEL 1989); St Paul Isl, on the SW coast, near Ridge Wall (SCHINDLER 1990); Franklin Bluffs at the Sagavanirktok R (HERTEL 1991: specimen had been labeled as *Lecidea goniophila*); SE Alaska (GEISER et al. 1994a); Junction of Richardson Hwy and Tonsina Cr, S of

Glenallen; Colville R, at Umiat (KNOPH & LEUCKERT 1994, chemotype I: atranorin, zeorin); S of Wainwright, Kaolak R; Anaktuvuk Pass (KNOPH & LEUCKERT 1994, chemotype II: zeorin); S of Wainwright, Kaolak R (KNOPH & LEUCKERT 1994: chemotype III, zeorin, lichexanthone); SE Alaska (O'CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Sunshine Cove in the Lynn Canal; Chichigof Isl, Mirror Harbor; S Kupreanof Isl, Bear Claw Mtn (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr, Naknek L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020); Lake Clark NPPr, near campsite at northwest end of Turquoise L (MCCUNE et al. 2020).

= *Lecidea stigmata* Ach. – Colville R, at Umiat (THOMSON 1960); S of Wainwright, Kaolak R; N ridge of the Colville R at Umiat (LEUCKERT & HERTEL 1969).

= *Lecidea incongrua* Nyl. – Lawrence-Insula (NYLANDER 1887; HUE 1891).

Synonymy follows WESTBERG et al. (2021). All specimens determined as “*Lecidea incongrua*” need reinvestigation (H. Hertel, pers. comm. to AMF, 2015).

Lecidella subincongrua → ***Lecidella asema***

Lecidella wulfenii (Hepp) Körb. – Muscicolous on terricolous bryophytes, also reported (loosely?) saxicolous on alkaline argillite in alpine heath and once from soil in salt spray zone along shore (DILLMAN 2010). – Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); cape of Hogg Isl (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Hammersly L; Lake Clark NPPr, Portage L; Lake Clark NPPr, Turquoise L (MCCUNE 2018); Lake Clark NPPr, near campsite at NW end of Turquoise L (MCCUNE et al. 2020, as cf.); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecidea enteroleuca* var. *muscorum* Körb. – Isls in Behring Strait (MACOUN 1902).

Lecidoma demissum (Rutstr.) Gotth. Schneid. & Hertel – Terricolous on bare mineral soil or detritus in the alpine, also once at forested elevations. – Mt Alyeska (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1994a: map); Thunder Mtn (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Harding Icefield Trail; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

= *Lecidea demissa* (Rutstr.) Ach. – Juneau Icefield (MCCULLOUGH 1965); Mt Eielson (WEBER & VIERECK 1967); Circular Marsh near Barrow; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

= *Lecidea atrorufa* (Dicks.) Ach. – Lawrence-Insula (NYLANDER 1887).

Synonymy after WESTBERG et al. (2021).

- Leciophysma finmarkicum** Th. Fr. – Terricolous or muscicolous on mosses and other lichens over base-rich soils. – Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1984: map); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).
= *Collema triptodes* Nyl. – Port Clarence (NYLANDER 1887; HUE 1890).
Synonymy after DILLMAN et al. (2012).
- Leciophysma furfurascens** (Nyl.) Gyeln. – Muscicolous. – Alaska (THOMSON 1984: map); Lake Clark NPPr, headwaters of Johnson R (MCCUNE et al. 2018).
- Leciophysma saximontanum** (T. Sprib. et al.) P. M. Jørg. et al. – Corticolous on *Populus balsamifera*. – Kenai Fjords NPPr, N of Exit Glacier Visitor Center; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020).
- Leioderma sorediatum** D. J. Galloway & P. M. Jørg. – Corticolous on *Picea sitchensis* twigs in maritime forests. – SE Alaska (DILLMAN 2004); DeLong Isl, Foggy Bay; Kanagunut Isl, Lincoln Channel (DILLMAN et al. 2012).
- Lemmopsis arnoldiana** (Hepp) Zahlbr. – Terricolous. – Awuna Test Well, 5 km N of Lookout Ridge; Lookout Ridge; Ogotoruk Cr (FRYDAY 2017).
- Lempholemma cladodes** (Tuck.) Zahlbr. – Saxicolous on vertical rock face with seepage track. – Juneau, behind Mendenhall Visitor's Centre (DILLMAN et al. 2012); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).
- Lempholemma intricatum** (Arnold) Zahlbr. – Saxicolous on limestone rock face. – Gates of the Arctic NPPr (NELSON et al. 2015b, as cf.); Glacier Bay NP: East Arm, Excursion Ridge, Glacier Bay; Klondike Goldrush National Historical Park (SPRIBILLE et al. 2020).
- Lempholemma isidioides** (Nyl. ex Arnold) H. Magn. – Saxicolous on limestone rock face near shore. See also *Lempholemma radiatum*. – Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).
- Lempholemma minutulum** (Bornet) Zahlbr. – Saxicolous on pebbles on beach ridges. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).
- Lempholemma polyanthes** (Bernh.) Malme – Muscicolous over moist rock and saxicolous on hard limestone rocks on shore. – Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).
= *Lempholemma myriococcum* (Ach.) Th. Fr. – Mt Eielson (WEBER & VIERECK 1967, as cf.). Synonymy after WESTBERG et al. (2021).
- Lempholemma radiatum** (Sommerf.) Henssen – Terricolous or on organic accumulations on bare glacial till, on mossy bank beside creek, and over granitic or calcareous rocks. – Glacier Bay NP (WORLEY 1973); Alaska (THOMSON 1997: map, but a specimen in MSC collected by Thomson at this locality, Valley of the Okpilak R at Okpilak L near Mt. Michelson, and examined by AMF, appears to be *L. isidioides*); Gates of the Arctic NPPr (NELSON et al. 2015b); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021a & b).
- Lempholemma vesiculiferum** Henssen – Saxicolous. – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Lepra amara (Ach.) Hafellner – Corticolous on *Alnus* and *Betula*, also reported from *Populus balsamifera* by TALBOT et al. (2007); one record from rock (as ‘var. *flotowiana*’). – SE Alaska (MCCUNE 2017b).

= *Pertusaria amara* (Ach.) Nyl. – SE Alaska (GEISER et al. 1994a: map); Mitkof Isl, Bear Cr (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Tanacross Village (TALBOT et al. 2007); Chilkoot Trail (SPRIBILLE et al. 2010).
= *Pertusaria amara* var. *flotowiana* (Flörke) Erichsen – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

Lepra borealis (Erichsen) I. Schmitt et al. – Corticolous on *Alnus*, *Malus fusca*, *Menziesia ferruginea*, *Pinus contorta*, *Salix* and *Vaccinium ovalifolium*; southern coastal. – Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020 as aff.).

= *Pertusaria borealis* Erichsen – Kodiak Isl (**type** – ERICHSEN 1938); Juneau, Mendenhall Glacier; Evans Isl, Port San Juan (DIBBEN 1980); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Haines Hwy, mi 33; terminal moraine of Valdez Glacier; Richardson Hwy, mi 10, near Valdez (THOMSON & AHTI 1994); Juneau, near Mendenhall Glacier; Petersburg; NW of Haines (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); coastal SE Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

Lepra dactylina (Ach.) Hafellner – Terricolous and saxicolous in heath and alpine and arctic tundra. – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Pertusaria dactylina* (Ach.) Nyl. – Alaska Peninsula (ROTHROCK 1884); Port Clarence (ALMQUIST 1887; NYLANDER 1887; HUE 1891); Unalaska Isl; St Paul Isl; islands of Behring Strait (MACOUN 1902); Alaska (CUMMINGS 1904); Franklin Bluffs on the Sagavanirktok R (THOMSON 1960); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); St Lawrence Isl, Boxer Bay; St Paul Isl; Pt Barrow; Denali NP, NW slope of Mt Eielson; N ridge of Colville R at Umiat; E side of Jago R; valley of the Okpilak R, Okpilak L; Franklin Bluffs on the Sagavanirktok R; S of Wainwright, Kaolak R (DIBBEN 1980); Okpilak Valley (COPPINS 1981); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Tikchik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); St Paul Isl, S coast (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Thompson Pass; Blueberry L CG; Fielding L (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Red Pk; Devilpaw Mtn (DILLMAN 2010); Chilkoot Trail; White Pass

(SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Brooks Range, Atigun Pass (KASANKE 2019); Hagemester Isl (WALSH & GOWARD 2021).

Lepra excludens (Nyl.) Hafellner – Saxicolous. – Katmai NPPr, Naknek L, NNE of Brooks Camp (TØNSBERG 2018).

= *Pertusaria excludens* Nyl. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Valley of the Okpilak R at Okpilak L near Mt Michelson (DIBBEN 1980); Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map).

Lepra multipuncta → [Appendix A](#)

Lepra multipunctoides (Dibben) Lendemer & R.C. Harris – Lignicolous on wood of old beach log.

= *Pertusaria multipunctoides* Dibben – Gravina Isl, Bostwick Inlet (DILLMAN et al. 2012).

Lepra ophthalmiza (Nyl.) Hafellner – Corticolous on conifers and hardwoods. –

Katmai NPPr, Malone L; Lake Clark NPPr, Portage L; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); coastal Alaska (MCCUNE 2017b); Kenai Fjords NPPr (MCCUNE et al. 2020, as s. lat.); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Pertusaria ophthalmiza* (Nyl.) Nyl. – Baranof Isl, Sitka, Warm Spring; Juneau Quad, Mendenhall Glacier, Taku Glacier moraine; Tongass NF, Yakutat Bay (DIBBEN 1980); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).

= *Variolaria ophthalmiza* (Nyl.) Darb. – Denali NPPr, Chitsia Mtn; Denali NPPr, Castle Rocks; Denali NPPr, Roosevelt Hills (STEHN et al. 2015); Kenai Fjords NPPr (MCCUNE et al. 2020, as s. lat.).

= “*Pertusaria multipuncta ophthalmiza* Nyl.” – Kosciusko Isl, Shipley Bay (HERRE 1919).

Lepra panyrga (Ach.) Hafellner – Terricolous in heath and arctic and alpine tundra, occasionally corticolous on shrub bases. – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, FIA plot (MCCUNE et al. 2020).

= *Pertusaria panyrga* (Ach.) A. Massal. – Port Clarence (NYLANDER 1887; HUE 1891); St Paul Isl (MACOUN 1899, 1902); Unalaska Isl, Captains Harbour (DEGELIUS 1937); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); St Paul Isl; Port Clarence; Denali NP, NW slope of Mt Eielson; valley of Mancha Cr and Firth R; Pitmegea R, 15 mi upstream from Cape Sabine; N ridge of the Colville R at Umiat; valley of the Okpilak R, Okpilak L; Franklin Bluffs on the Sagavanirktok R; Kaolak R S of Wainwright (DIBBEN 1980); Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Chisik Isl (TALBOT et al. 1992); Eagle Summit; Mt Fairplay; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et

al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2017b); Brooks Range, Atigun Pass (KASANKE 2019).

Lepra subdactylina (Nyl.) Lendemer & R. C. Harris – Terricolous over detritus and mosses and in heath, one record (TALBOT et al. 1992) from bark of *Populus trichocarpa*.

= *Pertusaria subdactylina* Nyl. – Port Clarence (**type** – NYLANDER 1885b; NYLANDER 1887; HUE 1891); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Port Clarence; Kukpuk R Region; Denali NP, NW slope of Mt Eielson; Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R; S of Wainwright, Kaolak R (DIBBEN 1980); Chisik Isl (TALBOT et al. 1992); Eagle Summit; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Alaska (MCCUNE 2017b); Lake Clark NPPr, NW end of Turquoise L; Lake Clark NPPr, above Turquoise L (MCCUNE et al. 2018).

Lepra subvelata (G. Merr.) T. Sprib. – Corticolous on *Alnus*, *Picea sitchensis*, *Pinus contorta* and *Tsuga heterophylla*. See also records under *Varicellaria velata* in Appendix A. – Skagway; Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= *Pertusaria subvelata* G. Merr. – Skagway (**type** – MERRILL 1908c); Chilkoot Trail (SPRIBILLE et al. 2010, see note under *Pertusaria* sp. TT32951); Glacier Bay NP, near Muir Pt (RESL et al. 2015, supplementary material). Not a synonym of *P. panyrga* as stated by DIBBEN (1980); see SPRIBILLE et al. (2020).

Lepraria albicans (Th. Fr.) Lendemer & B. P. Hodk. – Terricolous. – Near Juneau (MCCUNE 2017b, chemotype III); Kenai Fjords NPPr, Harding Icefield Trail (MCCUNE et al. 2020).

= *Leprocaulon albicans* (Th. Fr.) Nyl. – Juneau, Mt Roberts (LAMB & WARD 1974: “Strain III” with squamatic, baeomycesic and unidentified fatty acids); SE Alaska (BRODO et al. 2001).

= *Stereocaulon albicans* Th. Fr. – Juneau icefield nunatak (HEUSSER 1954).

Lepraria alpina (de Lesd.) Tretiach & Baruffo – Muscicolous on forest boulder. – Chilkoot Trail (SPRIBILLE et al. 2010).

= *Lepraria cacuminum* (A. Massal.) Lohtander – Muscicolous over rock and bark. – S Kupreanof Isl, Bear Claw Mtn (GEISER et al. 1998); Lake Clark NP, Clam Cove (DILLMAN 2003); cape on Teck Isl (DILLMAN 2010); Kenai Fjords NPPr, near Harding Icefield Trail en route to high cliffs; Kenai Fjords NPPr, alpine lake system on Harris Peninsula (MCCUNE et al. 2020). Synonymy after BARUFFO et al. (2006).

= *Leproloma cacuminum* (A. Massal.) J. R. Laundon – SE Alaska (GEISER et al. 1994a, as cf.).

Lepraria borealis Lohtander & Tønsberg – Over moss, lichens and bark on *Salix*. – Kenai Fjords NPPr, N end of James Lagoon (MCCUNE et al. 2020, as aff.).

Lepraria brodoi Lendemer & Tønsberg – Muscicolous on cliff; British Columbia specimens also found on *Cupressus nootkatensis*. – Kuiu Isl (LENDEMER & TØNSBERG 2014: map; two chemotypes).

Lepraria cacuminum → **Lepraria alpina**

Lepraria caesioalba (de Lesd.) J. R. Laundon – Terricolous, or on thin soil over rocks. – Afognak Isl, Blue Fox Bay (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010, two chemotypes); Kenai Fjords NPPr, W shore of Beauty Bay; Kenai Fjords NPPr, Crater Bay off of Harris Bay; Kenai Fjords NPPr, NE end of Harris Bay (MCCUNE et al. 2020, as aff., two chemotypes).

Lepraria diffusa (J. R. Laundon) Kukwa – Muscicolous on rock faces or saxicolous in sheltered crevices or on rock ledges, at low elevations, also corticolous on *Alnus*, *Cupressus nootkatensis*, *Populus balsamifera* and *Tsuga heterophylla*. – Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); Kuiu Isl (LENDEMER 2013: map); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Lepraria diffusa* var. *diffusa* – Alaska (MCCUNE 2017b).

= *Leproloma diffusum* var. *chrysodetoides* J. R. Laundon – SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998, as “*chrysodectoides*”).

Lepraria eburnea J. R. Laundon – Muscicolous on shaded rocks, also once on *Alnus* bark. – Kuiu Isl, Washington Bay (ORANGE 1997); Chilkoot Trail (SPRIBILLE et al. 2010); Kuiu Isl (LENDEMER 2013: map); SE Alaska (LENDEMER & TØNSBERG 2014: map); Alaska (MCCUNE 2017b); Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, West Arm; Gustavus (SPRIBILLE et al. 2020).

Lepraria elobata Tønsberg – Lignicolous on *Betula* or over mineral soil. – Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Portage L; Lake Clark NPPr, Pickerel (as Pickeral) L (MCCUNE et al. 2018); Kenai Fjords NPPr, E side of Harris Bay; Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020).

Lepraria finkii (de Lesd.) R. C. Harris – Terricolous, muscicolous and saxicolous, also reported as corticolous on *Picea sitchensis* and as occurring “on bark and detritus”. – SE Alaska (GEISER et al. 1994a); Kuiu Isl (LENDEMER 2013). – Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Crater Bay off of Harris Bay; Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
= *Lepraria lobificans* auct., non Nyl. – Auke Bay, Juneau (GEISER et al. 1998); Alaska (BRODO et al. 2001); Lake Clark NP, Tuxedni R (DILLMAN 2003); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010). Synonymy after LENDEMER (2013).

Lepraria incana (L.) Ach. – Saxicolous on granite cliff. – Lake Clark NP, Tuxedni R (DILLMAN 2003).

Lepraria jackii Tønsberg – Muscicolous and terricolous at base of conifers. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Katmai NPPr, near Brooks Camp (MCCUNE et al. 2018); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Lepraria lobificans → **Lepraria finkii**

Lepraria membranacea (Dicks.) Vain. – Reported from bark and over moss. – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978).

= *Crocynia membranacea* (Dicks.) Zahlbr. – Beetles; N bluff of Wiseman Cr (HOWARD 1963; MURRAY 1974).

= *Crocynia lanuginosa* (Ach.) Hue – Raspberry Isl, Port Vita; Kuiu Isl, Washington Bay (THOMSON 1950a). Synonymy according to WESTBERG et al. (2021).

= *Pannaria lanuginosa* auct., non (Ach.) Körb. – White Pass (CUMMINGS 1904).

Lepraria neglecta (Nyl.) Lettau – Terricolous and over boulders. – SE Alaska (GEISER et al. 1994a: map); Adak Isl (TALBOT et al. 1997); Klondike Gold Rush Park, N of Skagway; Waterfall Ridge above Thomas Bay (GEISER et al. 1998); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr (FRYDAY & TØNSBERG 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018, as s. lat.); Kenai Fjords NPPr, Crater Bay off of Harris Bay; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay; Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay (MCCUNE et al. 2020, as s. lat.; s. str. not found at Kenai Fjords).

= *Crocynia neglecta* (Nyl.) Hue – Juneau icefield nunatak (HEUSSER 1954).

Lepraria nivalis J. R. Laundon – Terricolous in the alpine, and “on humus overhang on top of coastal sea stack”, also corticolous on *Cupressus nootkatensis*. – Adak Isl (TALBOT et al. 1997); White Pass (SPRIBILLE et al. 2010); Baranof Isl, NE tip of Redoubt L (LENDEMER 2013, who considered it unconfirmed); Glacier Bay NP: Dundas Bay, Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

Lepraria pacifica Lendemer – Corticolous on *Picea* branch, sheltered underhangs. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Lepraria rigidula (de Lesd.) Tønsberg – Muscicolous on rock faces and corticolous on *Alnus*, *Tsuga* trunks and *Picea* branches. – Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Lake Clark NPPr, Chinitna Bay (MCCUNE et al. 2018); Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

Lepraria subalbicans (I. M. Lamb) Lendemer & B. P. Hodk. – Terricolous or nearly saxicolous in crevices of rocks. – Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

= *Leprocaulon subalbicans* (I. M. Lamb) I. M. Lamb & Ward – Juneau Icefield, Taku Glacier; Juneau Icefield, summit of Taku D (LAMB & WARD 1974, with atranorin, squamatic, baeomycesic and unidentified fatty acids); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a); Thompson Pass (THOMSON & AHTI 1994); Mt Roberts, Juneau (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010, thamnolic acid chemotype); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010, baeomycesic and squamatic acid chemotype); White Pass (SPRIBILLE et al. 2010, cf. angardianic/roccellic, alectorialic and squamatic acid chemotype). = *Stereocaulon subalbicans* I. M. Lamb – Juneau area, Mt Roberts; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine (KROG 1968).

Lepraria svalbardensis Tønsberg – On moss on rock with a thin layer of soil. – Kenai Fjords NPPr, Coleman Bay, above NE end off Aialik Bay (MCCUNE et al. 2020).

Lepraria torii Pérez-Ort. & T. Sprib. – Corticolous, often on *Tsuga heterophylla* snags, also on *Picea sitchensis*, once directly lignicolous and on detritus. – ca. 20 km SE of Sitka, E of Redoubt L; Yakutat; Coronation Isl, Windy Bay; Chilkat

Peninsula, along Mt Riley trail; Taiya R upstream of Dyea; Chilkoot Trail (**type** – PÉREZ-ORTEGA & SPRIBILLE 2009; SPRIBILLE et al. 2010; LENDEMER 2013); Kuiu Isl (LENDEMER 2013); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Range Stn (MCCUNE et al. 2018); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, Verdant Cove; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Lepraria vouauxii (Hue) R. C. Harris – Saxicolous and muscicolous on calcareous rock faces and underhangs, often in seepage. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); PWS, Port Wells (LENDEMER 2013); Katmai NPPr, Naknek L; Lake Clark NPPr, Camel’s Hump on shore of Lake Clark; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Leptoloma vouauxii* (Hue) J. R. Laundon – SE Alaska (GEISER et al. 1994a: map); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000).

Lepraria zeorinica (L. Saag) Kukwa – Terricolous. – Afognak Isl, Blue Fox Bay (DILLMAN 2010).

Leprocaulon albicans → **Lepraria albicans**

Leprocaulon subalbicans → **Lepraria subalbicans**

Leptoloma cacuminum → **Lepraria alpina**

Leptoloma membranaceum → **Lepraria membranacea**

Leptoloma vouauxii → **Lepraria vouauxii**

Leptoplaca cirrochroa (Ach.) Arup et al. – Saxicolous on shaded calcareous rocks. = *Caloplaca cirrochroa* (Ach.) Th. Fr. – S of Wainwright, Kaolak R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1997: map).

Leptoplaca obliterans (Nyl.) Arup et al. – Saxicolous on sheltered vertical rock face.

= *Caloplaca obliterans* (Nyl.) Blomb. & Forssell – Umnak Isl, Nikolski (DEGELIUS 1937); Chilkoot Trail (SPRIBILLE et al. 2010, as aff.); SE Alaska (MCCUNE 2017b).

Leptochidium albociliatum (Desm.) M. Choisy – Muscicolous. – Seward (?) (THOMSON 1984: map); “S of Anchorage”, no spec. locality, refers to Thomson unpublished data (BRODO & ALSTRUP 1981); Alaska (BRODO et al. 2001). = *Leptogium albociliatum* Desm. – “On rocks near tide.” – PWS, Port Wells (CUMMINGS 1904).

Leptogidium dendriscum (Nyl.) Nyl. – Corticolous on conifers, *Alnus*, *Populus* and *Salix*. – Alaska (MUGGIA et al. 2011); Glacier Bay NP: East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020). Alaskan (“Pacific Northwest”) material does not match the type of *L. contortum*. = *Polychidium dendriscum* (Nyl.) Henssen – SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1994b [“or cf. contortum”]; GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020).

= *Leptogidium contortum* auct., non (Henssen) T. Sprib. & Muggia – SE Alaska (MCCUNE 2017a); Katmai NPPr, Naknek L; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin (MCCUNE et al. 2020).

= *Polychidium contortum* auct. amer., non Henssen – SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014).

Leptogium arcticum P. M. Jørg. – Terricolous in tundra. – Port Clarence; Ogotoruk Cr drainage, Snowbank Cr (JØRGENSEN 1973); Alaska (THOMSON 1984: map); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009).

Leptogium brebissonii → **Gabura insignis**

Leptogium burnetiae → **Leptogium stancookii**

Leptogium californicum → **Scytinium californicum**

Leptogium cellulosum → **Scytinium cellulosum**

Leptogium compactum D. F. Stone et al. – Most commonly corticolous on hardwoods and conifers, also saxicolous and terricolous. – Lake Clark NPPr, mouth of Horn Cr; Denali NPPr, Mt. Margaret; Juneau, Mendenhall Glacier Visitor Center; Haines Borough, Mosquito L CG; Kenai Borough; Kodiak Isl; Eklutna; Gates of the Arctic NPPr, mtns above SE corner of Narvak L; ESE of village of Yakutat, end of Dangerous R Rd (**type** – STONE et al. 2016); Lake Clark NPPr, SW end of Portage L; Lake Clark NPPr, W end Portage L (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Leptogium corniculatum → **Scytinium palmatum**

Leptogium cookii → **Leptogium stancookii**

Leptogium cyanescens (Rabenh.) Körb. – Corticolous on conifers and hardwoods, also terricolous on thin soil over boulder (SPRIBILLE et al. 2010). – Near Juneau, Salmon Cr (SIERK 1964); Mendenhall Glacier (MCCULLOUGH 1965); Juneau area, Granite Basin Rd (KROG 1968); Unuk and Stikine Valleys (GEISER et al. 1994a: map); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Unuk R Valley; Stikine R Valley (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010).

= “*Leptogium tremelloides* (L. fil.) Fr.” – Near Juneau, Salmon Cr (CUMMINGS 1892a; MACOUN 1902).

Leptogium furfuraceum → **Leptogium pseudofurfuraceum**

Leptogium gelatinosum → **Scytinium gelatinosum**

Leptogium hirsutum → **Leptogium stancookii**

Leptogium imbricatum → **Scytinium imbricatum**

Leptogium intermedium → **Scytinium intermedium**

Leptogium lichenoides → **Scytinium lichenoides**

Leptogium palmatum → **Scytinium palmatum**

Leptogium parculum → **Scytinium parculum**

Leptogium pseudofurfuraceum P. M. Jørg. – Corticolous on *Alnus*.

= *Leptogium furfuraceum* auct., non (Harm.) Sierk – Unuk R Valley; Stikine R Valley (GEISER et al. 1994a, 1998).

Leptogium pulvinatum → **Scytinium pulvinatum**

Leptogium saturninum (Dicks.) Nyl. – Corticolous on hardwoods (*Alnus*, *Betula*, *Ledum*, *Populus*, *Salix*) and reported as saxicolous. – Denali NP, Polychrome

Pass (KROG 1962); along Kaolak R (SIEK 1964); Mendenhall Glacier (McCULLOUGH 1965); McKinley Bar (WEBER & VIERECK 1967); Juneau area, Loop Rd; Mendenhall L; Talkeetna Mts, Little Susitna R; Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Knik R, near hwy; Anchorage, Rabbit Cr Rd; Turnagain Arm, Bird Cr Ridge; Portage Glacier; Kenai Peninsula, Granite Cr Ridge; Kenai Peninsula, Copper Cr; Kenai Peninsula, Skilak L; Seward; Richardson Hwy, mi 9; mi 24; Denali NP, Savage R; Denali NP, Toklat; base of Rainbow Mts, E of Richardson Hwy; Richardson Hwy, Darling Cr; White Mts, headwaters of Sheep Cr; White Mts, Fossil Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Eagle Summit; Circle Hot Springs; Alaska Hwy, mi 1450; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Kotzebue (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Anchorage, by Portage (SCHINDLER 1987); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Haines Hwy, mi 33; Richardson Hwy, mi 10; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Unuk R Valley; Stikine R Valley; Yakutat lowlands (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1270, Ten Mile Cr; Riverside Lodge Airstrip; Tanacross Village; 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; McCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Seward Peninsula, Norton Bay; Fairbanks, UAF campus along ski trail; S end of Kenai L; Katmai NPPr, Naknek L; Gates of the Arctic NPPr, S of Kurupa L; Noatak NPr (STONE et al. 2016); Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (McCUNE et al. 2020); Glacier Bay NP: East Arm, Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020).

= "*Leptogium myochroum saturninum* (Schaer.) Tuck." – Isls of Behring's Strait (TUCKERMAN 1882); Muir Glacier; Disenchantment Bay (CUMMINGS 1904).

= *Leptogium myochroum* (Bernh.) Nyl. – Port Clarence (NYLANDER 1887; HUE 1890); Disenchantment Bay (CUMMINGS 1904).

Leptogium schraderi → **Scytinium schraderi**

Leptogium stancookii D. F. Stone & Lendemer – Corticolous.

= *Leptogium burnetiae* auct., non C. W. Dodge – Originally described from East Africa, and widely misapplied to North America (STONE et al. 2016); reported records probably refer to *L. stancookii*. – Alaska (JØRGENSEN 1983: map); Anchorage, by Portage (SCHINDLER 1987); Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Kenai Peninsula, Chugach NF, Cooper Lodge; Kenai Peninsula, on the rd between Moose Pass and Seward; Denali NP, Tetlanika R (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998);

Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Katmai NPPr, Katmai Bear Cam; Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, W of Hatchet Pt (McCUNE et al. 2018) Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (McCUNE et al. 2020, as ‘cf’).

= *Leptogium burnetiae* var. *burnetiae* – White Mts, Fossil Cr (JØRGENSEN 1973).

= *Leptogium cookii* auct., non D. F. Stone & Lendemer – Juneau, Mendenhall Glacier Visitor Center; 4 km S of Council; Haines Borough, Unuk R; Kodiak Isl Borough; Lake Clark NPPr, Portage L; Noatak NPr (STONE et al. 2016); Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon (McCUNE et al. 2020).

The type of *L. cookii* is referable to *L. saturninum*, so a new name was required.

= *Leptogium hirsutum* auct., non Sierk – Terricolous and ?lignicolous on rotten logs, corticolous on deciduous trees. – Matanuska R (SIERK 1964); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Loop Rd; Juneau area, Granite Basin; White Mts, Fossil Cr (KROG 1968); Loop and Granite Basin Rds in Juneau (GEISER et al. 1994a); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Juneau, Loop Rd and Granite Basin Rd (GEISER et al. 1998); Denali NPPr, N of the AK Range (STEHN et al. 2015).

Leptogium subtile → **Scytinium subtile**

Leptogium tacomae → **Scytinium tacomae**

Leptogium tenuissimum → **Scytinium tenuissimum**

Leptogium teretiusculum → **Scytinium teretiusculum**

+**Leptorhaphis epidermidis** (Ach.) Th. Fr. – Corticolous on *Betula*. – Lake Clark NPPr, Pickerel L (McCUNE et al. 2018).

Letharia vulpina (L.) Hue – Corticolous on conifers in the Skagway Area, SE Alaska, known only from collections from the mid 20th century and possibly no longer extant. The status of this species is discussed by SPRIBILLE et al. (2010). –

White Pass (HERRE 1920); Shores of L Dewey, Skagway [sic]: on Pines (SCHADE 1955); White Pass; Shores of L Dewey, Skagway (KROG 1968).

= “*Cetraria vulpina*” – Chilkoot Trail, “auf der Hochebene reichlich” [abundant on the high plateau; on the Canadian side?] (KURTZ 1895).

= *Evernia vulpina* (L.) Ach. – Alaska (TRELEAVE 1904); Alaska (HOWE 1911c).

#*Lettauia cladoniicola* → **Appendix A**

Leucocarpia biatorella → **Psoroglaena biatorella**

#**Libertiella curvispora** D. Hawksw. & Miädl. – On *Peltigera collina*. – Kenai Peninsula, near Chugach NF (ZHURBENKO 2009a).

#**Lichenochora lepidiotae** (Anzi) Etayo & Nav.-Ros. – On *Fuscopannaria* sp. and *Biatora meiocarpa*, corticolous on *Alnus*. – Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

#**Lichenocodium erodens** M. S. Christ. & D. Hawksw. – On *Hypogymnia austerodes*, *H. bitteri* and *H. canadensis*, also on *Parmelia sulcata*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Chilkoot Trail (SPRIBILLE et al. 2010).

#**Lichenocodium lecanorae** (Jaap) D. Hawksw. – On *Lecanora pulicaris*, *Melanohalea septentrionalis*, *Ochrolechia* sp. and *Psoroma hypnorum*. – Barrow (ZHURBENKO et al. 1995); Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Chilkoot Trail (SPRIBILLE et al. 2010).

#**Lichenocodium pyxidatæ** (Oudem.) Petr. & Syd. – On *Cladonia* spp. – Prudhoe Bay (ZHURBENKO & ALSTRUP 2004); Brooks Range, Endicott Mtns, Midnight

- Dome (DILLMAN et al. 2012); Fairbanks; Kenai Peninsula, Chugach NF (ZHURBENKO & PINO-BODAS 2017).
- #**Lichenocodium usneae** (Anzi) D. Hawksw. – On *Cladonia sulphurina*, *Melanohalea septentrionalis* and *Ramalina dilacerata*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Kotzebue (ZHURBENKO & PINO-BODAS 2017).
- #**Lichenodiplus lichenicola** Dyko & D. Hawksw. – On *Rinodina turfacea*. – Barter Isl (ZHURBENKO et al. 1995).
- Lichenomphalia alpina** (Britzelm.) Redhead et al. – Terricolous. – Interior Alaska (LAURSEN & SEPPELT 2009).
= *Omphalina luteovitellina* (Pilát & Nannf.) M. Lange – Barrow (HEIKKILÄ & KALLIO 1969).
- Lichenomphalia hudsoniana** (H. S. Jenn.) Redhead et al. – Terricolous or muscicolous from forest habitats to arctic tundra. – Interior Alaska (LAURSEN & SEPPELT 2009); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); arctic Alaska (MCCUNE 2017b); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr (MCCUNE et al. 2018).
= *Omphalina hudsoniana* (H. S. Jenn.) H. E. Bigelow – Sheep Mtn (THOMSON & AHTI 1994); Windham Bay area (GEISER et al. 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007).
= “*Normandia laetevirens* Turn. and Borr.” – St George Isl (MACOUN 1899).
= *Omphalina luteoilacina* (Favre) D. H. Hend. – Barrow (HEIKKILÄ & KALLIO 1969).
= *Coriscium viride* (Ach.) Vain. – Skolai Pass, near Russell Glacier (MILLER 1968); Fish Cr drilling site (LAWSON et al. 1978); S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985).
- Lichenomphalia umbellifera** (L.) Redhead et al. – Lignicolous on rotten wood and terricolous on humus. – Interior Alaska (LAURSEN & SEPPELT 2009); Noatak NPPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Lake Clark NPPr, L Clark; Lake Clark NPPr, Portage L; Lake Clark NPPr, Camel’s Hump on shore of L Clark; Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, Crater Bay South; Kenai Fjords NPPr, FIA plot at Chance Cove (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
= *Omphalina ericetorum* (Pers.) M. Lange – Barrow (HEIKKILÄ & KALLIO 1969).
= *Omphalina umbellifera* (L.) Quél. – Alaska (BRODO et al. 2001).
- #**Lichenopeltella cetrariicola** (Nyl.) R. Sant. – On *Cetraria laevigata*. – Kotzebue (MOROZOVA & POPOV 2008).
- #**Lichenopeltella cladoniarum** E. S. Hansen & Alstrup – On *Cladonia stellaris*, *C. portentosa* subsp. *pacifica* and *C. arbuscula*. – White Pass (SPRIBILLE et al.

2010); Aleutians, Amlia Isl; Aleutians, Carlisle Isl (ZHURBENKO & PINO-BODAS 2017).

#**Lichenopeltella peltigericola** (D. Hawksw.) R. Sant. – On a member of the *Peltigera aphthosa* aggr., and on *Peltigera degenii*. – Valley of the Okpilak R at Okpilak L, near Mt Michelson (ALSTRUP 2004); Kenai Peninsula, near Chugach NF (ZHURBENKO 2009a); Chilkoot Trail (SPRIBILLE et al. 2010).

#**Lichenopeltella santessonii** (P. M. Kirk & Spooner) R. Sant. – On *Peltigera degenii*. – Kenai Peninsula, near Chugach NF (ZHURBENKO 2009a).

#**Lichenopuccinia poeltii** D. Hawksw. & Hafellner – On *Parmelia hygrophila*, *P. cf. pseudosulcata* and *P. squarrosa*. – Skagway area (SPRIBILLE et al. 2010); Coronation Isl, Egg Harbor (ZHURBENKO & DILLMAN 2010); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

#**Lichenosticta alcornaria** (Linds.) D. Hawksw. – On *Cladonia* spp. – Interior Alaska (LAURSEN & SEPPELT 2009); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Peninsula, Chugach NF; Tongass NF, Gravina Isl; Adak Isl, Mt Reed; Prince of Wales Isl, Salt Chuck mine; between Flicker and Baker Crs (ZHURBENKO & PINO-BODAS 2017).

#**Lichenostigma alpinum** (R. Sant. et al.) Ertz & Diederich – On *Cladonia rangiferina*, *Ochrolechia frigida* and *Pertusaria subambigans*. – Fairbanks area, Murphy Dome (ZHURBENKO & PINO-BODAS 2017, as s. lat.); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

#**Lichenostigma cosmopolites** Hafellner & Calatayud – On *Xanthoparmelia stenophylla* aggr. – Brooks Range, Philip Smith Mtns, S of Atigun R (DILLMAN et al. 2012).

#**Lichenostigma maureri** Hafellner – On *Evernia divaricata* and *Usnea* sp. on *Picea* twigs. – Dalton Hwy at mi 180.2, N of Marion Cr (DILLMAN et al. 2012).

#**Lichenostigma semiimmersum** Hafellner (ICNafp Art. 62.2. c for gender of species name, incorrectly given as *semiimmersa* by DILLMAN et al. 2012) – On *Buellia elegans* (thallus). – Brooks Range, Sukakpak Mtn (DILLMAN et al. 2012).

Lichinella nigritlella (Lettau) Moreno & Egau – Saxicolous. – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Lichinodium ahleri Henssen – Corticolous on twigs of *Picea sitchensis*. – Between head of Turnagain Arm and Portage L; S of Seward, near Millers Landing; Cordova, at Saddlebag Glacier Trail trailhead; S of village Yakutat, Cannon Beach; SE of Haines, at Mt Riley trail trailhead; Kodiak Isl E, at the end of Anton Larsen Bay Rd; 45 km S of Sitka, Yamani Islets, main isl; Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020).

Lichinodium canadense Henssen – Lignicolous on soft wood, also corticolous in adjacent British Columbia. – Chugach NF (DERR 2010: 172); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr, Cascade Cr; Denali NPPr, Coffee R valley (STEHN et al. 2015); Kenai Fjords NPPr, Crater Bay off of Harris Bay; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay (MCCUNE et al. 2020).

Lichinodium sirosiphoideum Nyl. – Overgrowing *Melanelia stygia* and *Porpidia* sp., also saxicolous on vertical rock face and corticolous on *Betula neoalaskana*

and *Pinus contorta*, once over *Lopadium* on dry, mossy branch near base of trunk of *P. contorta*. – Mt Fairplay (THOMSON & AHTI 1994); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Katmai NPPr, road between Naknek L and Lake Brooks; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Lithocalla ecorticata (J. R. Laundon) Orange – Saxicolous at base of overhanging rock wall.

= *Lecanora ecorticata* J. R. Laundon – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Lithographa tesserata (DC.) Nyl. – Saxicolous on granitic rocks. – Seward Peninsula, Cape Prince of Wales (FLOCK 1989); Cape Prince of Wales (THOMSON 1997); Eagle Summit (MCCUNE & ROSENTERTER 2014); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2014b, RESL et al. 2015, SPRIBILLE et al. 2020).

#**Llimoniella cinnabarinae** Pérez-Ort. et al. – On *Ramboldia cinnabarina*. – Denali NP, Tokositna R; Chilkoot Trail (**type** – PÉREZ-ORTEGA et al. 2011).

#**Llimoniella pertusariae** Diederich & Etayo – On *Lepra* sp. – Kenai Peninsula Borough, just SW of Turnagain Arm, along Seward Hwy, near mouth of the valley; Tongass NF, Prince of Wales Isl E, SW of Thorne Bay, Salt Chuch N [sic, = Salt Chuck] (DIEDERICH 2003); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Lobaria amplissima → **Ricasolia amplissima**

Lobaria anomala (Brodo & Ahti) T. Sprib. & McCune – Corticolous on branches and twigs of conifers and hardwoods in southern coastal Alaska, N to the Talkeetna area. – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Anomalobaria anomala* (Brodo & Ahti) Moncada & Lücking – Denali NPPr, S of the AK Range (STEHN et al. 2015).

= *Pseudocyphellaria anomala* Brodo & Ahti – Halfway up Tracy Arm (KROG 1962); Juneau area, Loop Rd; Mendenhall L; Ketchikan area, Ward L; Portage Glacier; Kenai Peninsula, Salamatof; Seward; Richardson Hwy, mi 9 (KROG 1968); Mendenhall L, Herbert Glacier (OHLSSON 1973: “chemical strain II”); SE Alaska (GEISER et al. 1994a: map); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 1998); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Teck Isl (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014).

Lobaria anthraspis (Ach.) T. Sprib. & McCune (*Anomalobaria anthraspis* [Ach.] B. Moncada & Lücking) – Corticolous on conifer branches, apparently known with certainty only from Coronation Isl. CUMMINGS’ (1904) report of this species (as *Sticta anthraspis*) “is believed to represent *P. [Pseudocyphellaria] anomala* or *Sticta limbata*” (KROG 1968) and the report from the Shumagin Isls is doubtful.

= *Pseudocyphellaria anthraxis* (Ach.) H. Magn. – Egg Harbour (KROG 1968); SE Alaska (GEISER et al. 1994a: map); Yakutat Forelands (SHEPHARD 1995); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010).

= *Sticta anthraxis* Ach. – Pt Gustavus (CUMMINGS 1904, but see above); Coronation Isl, Egg Harbor (HERRE 1919); Egg Harbour (MAGNUSSON 1932); Mendenhall Glacier (McCULLOUGH 1965).

Lobaria hallii (Tuck.) Zahlbr. – Corticolous on hardwoods, especially *Populus trichocarpa* but also *Alnus* and *Salix*, also on conifers, especially in dripzones, in coastal SE forests. – Bethel, at the Kuskokwim R (LLANO 1951); L Chandler (LLANO 1951; MURRAY 1974); Juneau area, Loop Rd; Mendenhall L; Talkeetna Mts, Little Susitna R; Knik R, near hwy; Anchorage, Rabbit Cr Rd; Portage Glacier; Kenai Peninsula, Skilak L; Kenai Peninsula, Ninilchik; Kenai Peninsula, Seward; Richardson Hwy, mi 9 (KROG 1968); Alaska (THOMSON 1984: map); Anchorage, by camp in Portage (SCHINDLER 1987); Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Kenai Peninsula, near the Wildlife Refuge Headquarters (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Haines Hwy, mi 33; Haines (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013; Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr (McCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Lobaria kurokawae Yoshim. – Terricolous in tundra and alpine heath. – Herbert Glacier; Mendenhall Glacier; Mendenhall L (JORDAN 1973); Alaska (THOMSON 1984: map); Mendenhall L, Mendenhall Glacier and Herbert Glacier areas (GEISER et al. 1994a); Fielding L (THOMSON & AHTI 1994); Mendenhall L; Mendenhall Glacier; Herbert Glacier (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (HOLT et al. 2009; McCUNE et al. 2009); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Lobaria linita (Ach.) Rabenh. – Terricolous or muscicolous on the ground, typically in tundra. Epiphytic low elevation records refer to *L. tenuior*. – Lawrence-Isula; Port Clarence (NYLANDER 1887; HUE 1890); Alaska (HADWEN & PALMER 1922); Alaska (RÄSÄNEN 1933); Sitka; Juneau; Kenai Peninsula, Seward; Unimak Isl, False Pass; Unalaska Isl, Unalaska; Amchitka Isl; Attu Isl; St Paul Isl (DEGLIUS 1937, SE Alaska specimens on bark probably = *L. tenuior*); PWS, Hinchinbrook Isl (EYERDAM 1949); Barrow (SCHOLANDER et al. 1952); Attu Isl, Siddens Valley (HOWARD 1958); Pt Barrow; Steese Hwy, Eagle Summit; Kenai Peninsula, Summit L; St Matthew Isl; Hooper Bay (KROG 1962); Mendenhall Glacier (McCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson; Stony Pass; McKinley Bar (WEBER & VIERECK 1967); central Alaska Range (REGER & PÉWÉ 1969); Amchitka Isl, above Cyril Cove (WEBER et al. 1969); Chitistone-Skolai region (SCOTT 1974); Umiat; Sitka, Mt

Cross (MAASS 1975); Prudhoe Bay (MURRAY & MURRAY 1975b); Anaktuvuk Pass (NASH 1977; MOSER et al. 1979); Fish Cr drilling site (LAWSON et al. 1978); Barrow (WEBBER 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; 6.5 mi SSW of Barrow Base, near Loon L; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvaġapuk Pt (THOMSON 1979); Alaska (THOMSON 1984: map); Oġotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Denali NP, Savage R (SCHINDLER 1987); Nuyakuk L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Denali NP, on the rd E of Savage R (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Portage Glacier; Mt Fairplay; Thompson Pass; Blueberry L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Isl (DANIĖLS et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Copper R Delta (BOGGS 2000); Izembek Refuge, near Frosty Pk; Cold Bay; Izembek Lagoon (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIĖLS et al. 2004); SE Alaska (DILLMAN 2004); Tongass NF, Lower Dewey L Trail, near Stargill's Landing (NASH et al. 2006); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Unalaska Isl (TALBOT et al. 2010b); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay; Gustavus (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Lobaria linita* var. *linita* – Juneau area, Mt Roberts; Talkeetna Mts, Government Pk; Talkeetna Mts, Independence Mine; Talkeetna Mts, Mabel Mine; Eagle R Valley; Anchorage, Rabbit Cr Rd; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Granite Cr Ridge; Richardson Hwy, mi 24; Denali Hwy, mi 0–37, mi 28, mi 70; Denali NP, Savage R; Denali NP, Polychrome Pass; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Nunivak Isl, Robert's Mtn; W Nunivak Isl, Lake where the geese don't fly; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Kotzebue (KROG 1968); Ft Wainwright (RACINE et al. 1997).

= *Sticta linita* Ach. – St Paul Isl (MACOUN 1899); Alaska (PALMER & ROUSE 1945).

= *Sticta pulmonaria* var. *linita* (Ach.) Nyl. – Isls of Behring's Strait (TUCKERMAN 1882); Unalaska; Hall Isl; St Matthew Isl; Port Clarence; Cape

Nome (CUMMINGS 1904); Skagway, Lynn Canal (HOWE 1911b); Unimak Isl (HEDRICK 1936).

Lobaria oregana (Tuck.) Müll. Arg. – Corticolous on conifers and sometimes on *Alnus* and *Populus balsamifera*, in coastal rainforests as far W as the Kenai Peninsula. – Ketchikan (HOWE 1913a); Prince of Wales Isl; Saltery Cove; Dall Isl, Augustine Bay; Heceta Isl (HERRE 1919); Prince of Wales Isl (MAGNUSSON 1932); Seward (DEGELIUS 1937); PWS, Thum Bay (EYERDAM 1949); Kuiu Isl, Washington Bay (THOMSON 1950a); Kenai Peninsula, Summit L (KROG 1962); Juneau area, Loop Rd; Juneau area, Mt Roberts; Juneau area, Granite Basin; Juneau area, Montana Cr; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Kenai Peninsula, Ingram Cr; Seward; Richardson Hwy, mi 9; PWS, Fish Bay; PWS, Pigot Bay (KROG 1968); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995, as ‘*oregania*’); SE Alaska (GEISER et al. 1998); Chugach NF (DEVELICE et al. 1999); Copper R Delta (BOGGS 2000, as “*oregania*”); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Kenai Fjords NPPr (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020); Kenai Peninsula, near Seward, by the road to the Chugach National Forest and Exit Glacier (ZHURBENKO et al. 2020).
= *Sticta oregana* Tuck. – Loring; near Juneau, Sheep Cr (CUMMINGS 1892a); Port Etches; Prince of Wales (MACOUN 1902); Sitka; Juneau; Yakutat; Pt Gustavus (CUMMINGS 1904).

Lobaria pseudopulmonaria Gyeln. – Terricolous on soil and mosses in tundra. – Mt Eielson (Copper Mtn) (YOSHIMURA 1971); Mendenhall L (JORDAN 1973); Pitmegea R, 15 mi upstream from Cape Sabine; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Fielding L (THOMSON & AHTI 1994); Mendenhall L area (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Noatak NPr (HOLT et al. 2009; McCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

? = *Lobaria pulmonaria* f. *hypomela* (Delise) Cromb. – Kenai Peninsula, near the Wildlife Refuge Headquarters (SCHINDLER 1990).

Lobaria pulmonaria (L.) Hoffm. – Corticolous on hardwoods and conifers and muscicolous on mossy rocks. – Heceta Isl; Dall Isl; Hidden Inlet; Ratz Harbor (HERRE 1919); Skagway (HERRE 1920); Yakutat Bay (STAIR 1947); Orca; PWS, Thum Bay; Valdez (EYERDAM 1949); Kuiu Isl, Washington Bay (THOMSON 1950a); American R (HOWARD 1958); Mendenhall Glacier, Juneau Icefield (McCULLOUGH 1965); Juneau area, Loop Rd; Juneau area, Granite Basin; Talkeetna Mts, Little Susitna R; Talkeetna Mts, Buffalo Mine; Eagle R Valley; Anchorage, O’Malley Rd; Anchorage, Rabbit Cr Rd; Potter, on Turnagain Arm; Portage Glacier; Kenai Peninsula, Skilak L; Kenai Peninsula, Ninilchik; Kenai Peninsula, Salamatof; Seward; Richardson Hwy, mi 9 (KROG 1968); Alaska (YOSHIMURA & HAWKSWORTH 1970: chemical race I); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Kenai Peninsula, near the Wildlife Refuge Headquarters; Portage CG; Katmai NP, Brooks Lodge area, in CG;

Katmai NP, Brooks Lodge area, Brooks Falls (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Haines Hwy, mi 33; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Matanuska-Susitna Borough, Byers L ca. 45 km N of Talkeetna (HAFELLNER 2018); Denali NPPr, Upper Moose Cr; Denali NPPr, Coffee R valley; Denali NPPr, Midway Lakes; Denali NPPr, Ruth Glacier forest; Denali NPPr, Tokositna Glacier terminus; Denali NPPr, Yentna R; Denali NPPr, Cascade Cr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm; Gustavus (SPRIBILLE et al. 2020).

= *Sticta pulmonaria* (L.) Ach. – Pt Althorp; Old Sitka (ROTHROCK 1884: specimen revised to *Lobaria linita* by NYLANDER 1887: 86); near Juneau, Salmon Cr (CUMMINGS 1892a); Sitka (STIZENBERGER 1895a, 1895b); Juneau; Farragut Bay; Pt Gustavus, Glacier Bay; Orca; Port Wells; Aguadulce R, Yakutat Bay; Attu Isl (CUMMINGS 1904).

= *Sticta pulmonacea* Ach. – Kotzebue's Sound (BABINGTON 1851); Kotzebue Sound (BABINGTON 1852); Kotzebue Sound; Sitka (MANN 1868; TURNER 1886).

Lobaria retigera (Bory) Trevis. – Corticolous on conifers, or muscicolous over vertical rock walls. Terricolous specimens in O reported by KROG (1968) have been annotated to *Lobaria pseudopulmonaria*. – Mt Eielson; Muldrow Glacier moraine (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Richardson Hwy, mi 24; Denali Hwy, mi 0–28; Denali NP, Savage R; White Mts, between Beaver Cr and Fossil Cr; N of Nome, Anvil Pk; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Juneau (JORDAN 1973); Katmai NP, Brooks Lodge area, Brooks Falls (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Yakutat Forelands (SHEPHARD 1995); Unuk R Valley; Stikine R Valley; Patterson R (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr, Brooks Falls area; Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, mouth of Horn Cr (MCCUNE et al. 2018); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

= *Lobaria isidiosa* auct., non (Müll. Arg.) Vain. – Juneau area, Loop Rd (KROG 1968, as s. lat.; this record is referable to *L. retigera* according to JORDAN 1973); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002, as cf.; the specimen, at WIS, has not been recently revised).

Lobaria scrobiculata → ***Lobarina scrobiculata***

Lobaria silvae-veteris (Goward & Goffinet) Goward & Goffinet – Corticolous on *Picea sitchensis* and *Tsuga* twigs and trunks. – Chilkoot Trail (SPRIBILLE et al. 2010).

= *Nephroma silvae-veteris* Goward & Goffinet – Chilkoot L State Recreation Area (GEISER et al. 1998); Gustavus (SPRIBILLE et al. 2020).

Lobaria tenuior (Hue) Sâto – Corticolous on conifers in low elevations forests near the coast. – Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay (SPRIBILLE et al. 2020).

= *Lobarina linita* var. *tenuior* (Hue) Asahina – N shore of Turnagain Arm, Girdwood (KROG 1962); Juneau area, Loop Rd; Juneau area, Granite Basin; Juneau area, Montana Cr; Juneau area, Shrine of St Therese; Juneau area, Douglas Ski Bowl; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Ward L; Kenai Peninsula, Portage Glacier; W of Seward, Marathon Mtn; PWS, Fish Bay (KROG 1968); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998: ‘mostly var. *tenuior*’).

Lobarina scrobiculata (Scop.) Nyl. – Corticolous on conifers and hardwoods and muscicolous over rocks. – Glacier Bay NP: Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Lobarina scrobiculata* (Scop.) DC. – Bethel, at the Kuskokwim R; L Peters (LLANO 1951); Chandler L (SCHOLANDER et al. 1952); halfway up Tracy Arm, on W side (KROG 1962); McKinley Bar (WEBER & VIERECK 1967); Juneau area, Loop Rd; Mendenhall L; Knik R, near hwy; Eagle R Valley; Anchorage, Eastchester Swamp; Anchorage, Rabbit Cr Rd; Anchorage, O'Malley Rd; Potter, on Turnagain Arm; Portage Glacier; Kenai Peninsula, Skilak L; Kenai Peninsula, Ninilchik; Kenai Peninsula, Salamatof; Seward; Richardson Hwy, mi 9; White Mts, Fossil Cr; Seward Peninsula, King Mtn (KROG 1968); Anaktuvuk Pass (NASH 1977; MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Haines Hwy, mi 33; terminal moraine of Valdez Glacier; Richardson Hwy, mi 10, near Valdez; Fielding L (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Shumagin Isls, Simeonof Isl (DANIËLS et al. 1998); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002, as ‘*scrobicularia*’); SE Alaska (DILLMAN 2004); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

= “*Sticta scrobiculata* Ach.” – Kotzebue Sound (MANN 1868).

= *Stictina scrobiculata* (Scop.) Nyl. – Sitka (STIZENBERGER 1895a; 1895b); Alaska (STIZENBERGER 1895c).

= *Lobarina verrucosa* (Huds.) Hoffm. – Anchorage, Chugach Mts (HERRE 1950a: Brownson Bay specimen “evernioid form with linear lobes”); Mendenhall Glacier (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966).

Lobothallia alphoplaca (Wahlenb.) Hafellner – Saxicolous on granite and sandstone. – Alaska (BRODO et al. 2001); Katmai NPPr, Naknek L (MCCUNE et al. 2018).

= *Aspicilia alphoplaca* (Wahlenb.) Poelt & Leuckert – Alaska (THOMSON 1997: map).

? = *Lecanora turgida* Hemsl., nom. nud. – “Kieselgestein”. – Diomedes Isl (FOLLMANN & HUNECK 1969: “Die Art tendiert zum Formenschwarm um *Lecanora alphoplaca* Ach.”).

- Lobothallia melanaspis** (Ach.) Hafellner – Saxicolous. – SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Turquoise L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018)
 = *Aspicilia melanaspis* (Ach.) Poelt & Leuckert – Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map).
 = *Lecanora melanaspis* (Ach.) Ach. – St Paul Isl (DEGELIUS 1937); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).
- Lopadium coralloideum** (Nyl.) Lyngé – Terricolous or muscicolous. – Circular Marsh near Barrow; 6.5 mi SSW of Barrow Base, near Loon L (THOMSON 1979); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Katmai NPPr, Hammersly L; Lake Clark NPPr, Portage L; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018).
 = “*Lecidea pezizoidea coralloidea* Nyl.” – Lawrence-Insula (NYLANDER 1887).
- Lopadium disciforme** (Flot.) Kullh. – Corticolous on conifers and sometimes hardwoods. – Haines (THOMSON & AHTI 1994); Kadin Isl, mouth of Stikine R (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay; Gustavus (SPRIBILLE et al. 2020).
- Lopadium pezizoideum** (Ach.) Körb. – Terricolous on moss and detritus in tundra; records from bark may refer to *L. disciforme*. – Collinson Pt (MERRILL 1924b); Kodiak Isl, Kodiak (DEGELIUS 1937); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); SE Alaska (GEISER et al. 1994a); Mt Alyeska Rd, 1 mi from hwy; Eagle Summit; Mt Fairplay; Richardson Hwy, mi 10; Blueberry L CG; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994, including *L. disciforme*); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (TØNSBERG & PRINTZEN 2018); Kenai Fjords NPPr, FIA plot; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield; Kenai Fjords NPPr, Verdant Cove, N side at shoreline (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).
 = *Heterothecium pezizoideum* (Ach.) Flot. – Isls in Behring Strait (MACOUN 1902).
 = *Lecidea pezizoidea* Ach. – Port Clarence (NYLANDER 1885b).
 = “*Lecidea pezizoidea muscicola* Smrf.” – Lawrence-Insula; Port Clarence (NYLANDER 1887).
- Loxospora elatina** (Ach.) A. Massal. – Corticolous on *Alnus*, *Betula*, *Malus*, *Picea* and *Tsuga*, and lignicolous on logs; coastal southern Alaska. – Chilkoot Trail (SPRIBILLE et al. 2010); Mitkof Isl W, between Mitkof Hwy and Blind Slough SE; Juneau, along Glacier Hwy, just N of Herbert R; Chilkat Peninsula, NW of Haines; Cordova, between Copper R Hwy and Euak R; Kodiak Isl, Ft

Abercrombie State Historical Park, NE of Gjertrude L; S of Isthmus Bay, bank of Roslyn Cr (DILLMAN et al. 2012); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, hill above Verdant Cove (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Loxospora ochrophaea → [Appendix A](#)

Loxosporopsis corallifera Brodo et al. – Corticolous on conifers and hardwoods, and lignicolous in rainforests of coastal southern Alaska. – Douglas Isl; near Juneau, Auk Village; vicinity of Juneau, Mt Roberts Trail; NW of Haines, Chilkoot L State Rec Area (BRODO & HENSSEN 1995); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Gustavus, Falls Cr (RESL et al. 2015, supplementary material); coastal Alaska (MCCUNE 2017a, b); Lake Clark NPPr, mouth of Horn Cr (MCCUNE et al. 2018); Kenai Fjords NPPr (TØNSBERG & PRINTZEN 2018, as cf.); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).
= “*Loxospora* sp. nov. Imshaug & Brodo ined.” – SE Alaska (GEISER et al. 1994a: map).

– M –

Masonhalea inermis (Nyl.) Lumbsch et al. – Corticolous on *Betula* and *Salix* twigs, or terricolous among bryophytes and other lichens, mainly western and northern Alaska. – Copter Pk; Steese Hwy (NELSEN et al. 2013).

= *Cetraria inermis* (Nyl.) Krog – Seward Peninsula, 3 km W of Penny R; Port Clarence; Kotzebue; Selawik R drainage, near Purcell Mtn; 20 km SSW of Ambler; Ogotoruk Cr drainage, Snowbank Cr; Coastal plain, Meade R; Voth Cr (KROG 1973); Barrow (MURRAY & MURRAY 1978); Ambler; Kotzebue; Meade R; Ogotoruk Cr drainage, Snowbank Cr; Port Clarence; Seward Peninsula, Nome area, NW of Snake R Bridge; Seward Peninsula, 3 km W of Penny R; Seward Peninsula, Cabin Rock; Upper Selawik R, near Purcell Mtn; Voth Cr, vicinity of Barrow (KÄRNEFELT 1979); Alaska (ANDREEV & MAKAROVA 1982); Alaska (THOMSON 1984: map); Barter Isl (ZHURBENKO et al. 1995); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b).

= *Nephromopsis inermis* (Nyl.) Divakar et al. – Katmai NPPr, Malone L; Katmai NPPr, Nonvianuk R; Lake Clark NPPr, Telaquana L; Lake Clark NPPr, S of Twin Lakes (MCCUNE et al. 2018).

= *Tuckermannopsis inermis* (Nyl.) Kärnefelt – Noatak NPr (THELL et al. 2009); Alaska (NELSEN et al. 2011).

Masonhalea richardsonii (Hook.) Kärnefelt – Unattached vagrant in tundra or shrub-tundra, rarely also attached to shrubs. – Alaska (KÄRNEFELT 1977b: map); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Okpilak Valley (COPPINS 1981); Alaska

(THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Denali NP, slope N of Station Primrose; Tok Junction, Mt Fairplay (SCHINDLER 1987); Denali NP, on slope above Eielson Visitor Center (SCHINDLER 1990); Central Arctic coastal plain (WALKER et al. 1991); Alaska (KÄRNEFELT et al. 1992); Imnavait Cr (HAHN et al. 1993, 1996); Eagle Summit; Mt Fairplay; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Wainwright (RACINE et al. 1997); Denali NP (RANDLANE et al. 1997: photo); Imnavait Cr watershed, Philip Smith Mts (LANGE et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Arctic NWR, between Peters and Schrader Lakes (PECK et al. 2000); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay; Mentasta Mts (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Interior Alaska (LAURSEN & SEPPELT 2009); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Brooks Range, Atigun Pass (KASANKE 2019).

= *Cetraria richardsonii* Hook. – Eagle (HERRE 1920); near Mt McKinley NP railroad station (HANSON 1951); Barrow (SCHOLANDER et al. 1952); Stampede (HOWARD 1958); Chandler L (WIGGINS & MACVICAR 1958; MURRAY 1974); Pt Barrow; Colville R; Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Valley of the Okpilak R at Okpilak L near Mt Michelson; Valley of Mancha Cr and Firth R (THOMSON 1960); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Steese Hwy, Eagle Summit (KROG 1962); East Stony Flats (HOWARD 1963); Wiseman, Nolan Cr Rd (HOWARD 1963; MURRAY 1974); Alaska Range District, Dry Cr (WEBER 1963); Firth R Valley (DREW & SHANKS 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Mt Eielson; McKinley Bar (WEBER & VIERECK 1967); Denali Hwy, mi 0–28, mi 70, mi 100; Denali NP, Savage R; Richardson Hwy, mi 170; White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; N of Nome, Anvil Pk; Seward Peninsula, Rainbow Cr (KROG 1968); Alaska (THOMSON 1972a: map); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Barrow; Eagle Summit; Prudhoe Bay (MURRAY & MURRAY 1978); Barrow (WEBBER 1978); Haul Rd, Sukakpak Mtn Site, Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Barrow (WILLIAMS et al. 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Imnavait Cr (WALKER et al. 1989).

= *Platysma richardsonii* (Hook.) Nyl. – Port Clarence (NYLANDER 1889, p. 44: “omissum est in meis *Lich. Fret. Behring* et addendum”); Port-Clarence, “statio quae in *Lich. Fr. Behr.* omissa” (HUE 1890).

Massalongia carnososa (Dicks.) Körb. – Muscicolous or loosely saxicolous over boulders and bedrock, lowland to alpine. – Mt Eielson; Wonder L (HENNSEN 1963a); Mendenhall Glacier (MCCULLOUGH 1965); Colville R near Umiat;

Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Anchorage, by Portage (SCHINDLER 1987); Kenai Peninsula, Chugach NF, Ptarmigan L Trail (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996, as cf.); Kupreanof Isl, Sheridan Pk; Cosmos Range; Elbow Mtn (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); North Slope, Toolik L (ZHURBENKO 2009b); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

Mastodia tessellata (Hook. f. & Harv.) Hook. f. & Harv. – Saxicolous on tops of intertidal boulders and limestone sea cliffs, also “on boulders under bird nests, forming nearly solid mats” (WEBER 1961). – Bering Strait District, Cape Lewis (WEBER 1961); Crowbill Pt, Ogotoruk Cr drainage (JOHNSON et al. 1966); Ogotoruk Cr (MURRAY 1985); Alaska (KOHLMAYER et al. 2004); Glacier Bay NP; Petersburg (GARRIDO-BENAVENT et al. 2017, for photobiont); Glacier Bay NP, Bartlett Cove; Sumner Straits (GARRIDO-BENAVENT et al. 2018); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Gustavus, West Arm (SPRIBILLE et al. 2020).
= *Guignardia alaskana* M. Reed – “coasts of Unalaska and Kodiak Islands” (type – REED 1902); Unalaska, Iliuliuk; St Paul Isl, Kodiak Isl (SETCHELL & GARDNER 1902).

Megalaria brodoana S. Ekman & Tønsberg – Corticolous on *Alnus*, *Cupressus nootkatensis*, *Malus fusca* and *Tsuga heterophylla*. – Kodiak Isl, Isthmus Bay (EKMAN & TØNSBERG 1996); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Megalaria jemtlandica (Th. Fr. & Almq.) Fryday – Terricolous. – Barrow (FRYDAY 2004a).

= *Catillaria jemtlandica* Th. Fr. & Almq. – St Lawrence Isl (THOMSON 1997: map).

= *Lecidea jemtlandica* (Th. Fr. & Almq.) Nyl. – Lawrence-Insula (NYLANDER 1887; HUE 1891).

Megalaria pulverea (Borrer) Hafellner & E. Schreiner – Corticolous on *Alnus* and *Tsuga heterophylla*. – Glacier Bay NP: East Arm, Gustavus (SPRIBILLE et al. 2020).

Megalospora tuberculosa (Fée) Sipman – Corticolous on *Alnus*. – Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020, as aff.).

Megaspora verrucosa (Ach.) Arcadia & A. Nordin – Terricolous on soil and moss in the alpine, also corticolous on *Populus*. – Thompson Pass; Fielding L

(THOMSON & AHTI 1994); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Denali NPPr (STEHN et al. 2015); Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018).

= *Lecanora verrucosa* (Ach.) Laurer – Eschscholtz Bay (ROTHROCK 1884); Eschscholtz Bay, Arctic Ocean (MACOUN 1902); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978).

= *Pachyospora verrucosa* (Ach.) A. Massal. – Anaktuvuk Pass (MOSER et al. 1979); Alaska (THOMSON 1997: map).

= *Lecanora mutabilis* (Ach.) Nyl. – Mt Eielson (WEBER & VIREECK 1967).

= “*Lecanora urceolaria* (Fr.) Wetm.” – Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapak Pt; Firth R at Mancha Cr (THOMSON 1979).

Melanelia agnata (Nyl.) A. Thell – Saxicolous. – Alaska (OTTE et al. 2005); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Unalaska Isl (TALBOT et al. 2010b); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr, Mirror L camp; Katmai NPPr, W of Contact Cr; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020). = *Cetraria agnata* (Nyl.) H. Krist. – L Schrader, Anaktuvuk Pass (KRISTINSSON 1974).

Melanelia commixta (Nyl.) A. Thell – Saxicolous. – Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Alaska (OTTE et al. 2005); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Muir Glacier (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b); Hagemeister Isl (WALSH & GOWARD 2021).

= *Cetraria commixta* (Nyl.) Th. Fr. – St Paul Isl (MACOUN 1902); Unalaska Isl, Unalaska (DEGELIUS 1937); Steese Hwy, Eagle Summit (KROG 1962); Mt Eielson (WEBER & VIREECK 1967); Eagle Summit (MURRAY & MURRAY 1978); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, slope N of Station Primrose (SCHINDLER 1987); Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Lake Clark NPPr, Turquoise L; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay (MCCUNE et al. 2020).

= *Cetrariella commixta* (Nyl.) A. Thell & Kärnefelt – Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015).

Melanelia disjuncta → **Montanelia disjuncta**

Melanelia elegantula → **Melanohalea elegantula**

Melanelia exasperatula → **Melanohalea exasperatula**

Melanelia fuliginosa → **Melanelixia glabrata**

Melanelia hepatizon (Ach.) A. Thell – Saxicolous on acidic rock. Some records may have been treated under the name *Cetraria fahlunensis* in the past; see synonym list under *M. hepatizon*. – Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Anaktuvuk Pass (NASH et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska (OTTE et al. 2005); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPr (NELSON et al. 2015b); Denali NPr (STEHN et al. 2015); Denali NPr (ROLAND et al. 2017); Katmai NPr; Lake Clark NPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020, no substances detected); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020, stictic acid chemotype).

= *Cetraria hepatizon* (Ach.) Vain. – Ogoruk Cr; Mt Harper; Porcupine Dome (KROG 1962); Quigley Hill; hill E of rd to Kantishna (HOWARD 1963); Mendenhall Glacier; Juneau Icefield (MCCULLOUGH 1965); Ogoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Mendenhall Glacier Trail; Juneau area, Mt Roberts; Juneau area, Granite Basin; Sitka area, Harbor Mtn; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Eagle R Valley; Anchorage area, headwaters of Rabbit Cr; Turnagain Arm, Bird Cr Ridge; W of Seward, Marathon Mtn; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Richardson Hwy, mi 24, mi 45; Denali Hwy, mi 0–37, mi 70; Denali NP, Savage R; Denali NP, Polychrome Pass; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Steese Hwy, Eagle Summit; Circle Hot Springs; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Nunivak Isl, Robert's Mtn; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); “Pinguicula Lake”, 23 km SE of Karluk, Kodiak Isl (KROG 1969); central Alaska Range (REGER & PÉWÉ 1969); Eagle Summit (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Denali NP, slope N of Station Primrose (SCHINDLER 1987); Tikchik L; Nishlik L (THOMSON & DOELL 1989); Amchitka Isl, main disturbed area from Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989); Denali NP, Savage R (SCHINDLER 1990); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Moon L CG; Blueberry L CG (THOMSON & AHTI 1994); Gates of the Arctic NPr, Walker L (HASSELBACH & NEITLICH 1996); Innavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Gates

of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009).

= *Cetraria hepatizon* var. *linearis* Vain. – St Paul Isl (DEGELIUS 1937).

= *Cetraria fahlunensis* auct., non (L.) Vain. This name has also been used for *Melanelia commixta* in the past. – “Alaska and the adjacent region”, no locality given (ROTHROCK 1884); St Paul Isl (MACOUN 1899); Muir Glacier, White Pass; Kodiak; Unalaska; Hall Isl; Cape Nome (CUMMINGS 1904); Unalaska Isl; Atka Isl (HEDRICK 1936).

= “*Cetraria fahlunensis* var. *polyschiza* (Nyl.) Th. Fr.” – 30 mi inland from Camden Bay (MERRILL 1924b).

Melanelia infumata → **Melanohalea infumata**

Melanelia multispora → **Melanohalea multispora**

Melanelia olivacea → **Melanohalea olivacea**

Melanelia olivaceoides → **Melanohalea olivaceoides**

Melanelia septentrionalis → **Melanohalea septentrionalis**

Melanelia sorediata → **Montanelia sorediata**

Melanelia stygia (L.) Essl. – Saxicolous on acidic rock. – Chikuminuk L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Eagle Summit; Mt Fairplay; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); AB Mtn Trail near Skagway (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska (OTTE et al. 2005); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

= *Parmelia stygia* (L.) Ach. – White Pass; Kodiak (CUMMINGS 1904); 30 mi inland from Camden Bay (MERRILL 1924b); Unalaska Isl, Unalaska (DEGELIUS 1937); Brooks Range, L Peters; Steese Hwy, Eagle Summit (KROG 1962); Quigley Hill (HOWARD 1963); Mt Eielson (WEBER & VIERECK 1967); Denali Hwy, mi 0–28; White Mts, headwaters of Sheep Cr (KROG 1968, acid-deficient strain); Talkeetna Mts, Independence Mine; Talkeetna Mts, Mabel Mine; mtn ridge Eagle R Valley; Anchorage area, headwaters of Rabbit Cr; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Richardson Hwy, mi 24, mi 28, mi 32–37; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968, fumarprotocetraric acid strain); Steese Hwy, Cleary Summit (KROG 1968, caperatic acid strain); central Alaska Range (REGER & PÉWÉ 1969); Alaska (ESSLINGER 1977: map); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON

1984: map); Ogotoruk Cr (MURRAY 1985); Denali NP, slope N of Station Primrose (SCHINDLER 1987, as '*P. stygia* group'); Denali NP, Savage R (SCHINDLER 1990).

Melanelixia subaurifera → **Melanelixia subaurifera**

Melanelixia tominii → **Montanelia tominii**

Melanelixia trabeculata → **Melanohalea trabeculata**

Melanelixia fuliginosa (Fr. ex Duby) O. Blanco et al. – On siliceous rock – Chilkoot Trail (SPRIBILLE et al. 2010, as “s. lat”).

= *Melanelixia fuliginosa* (Fr. ex Duby) Essl. – Kosciusko Isl, Shipley Bay (GEISER et al. 1994a); Kadin Isl, mouth of Stikine R; Kosciusko Isl, Shipley Bay (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Alaska (OTTE et al. 2005).

= *Parmelia fuliginosa* (Fr. ex Duby) Nyl. – Kosciusko Isl, Shipley Bay (HERRE 1919).

Melanelixia glabra → **Appendix A**

Melanelixia glabrata (Lamy) Sandler & Arup – Corticolous on conifers and hardwoods. See also entry under *Melanelixia glabra* in **Appendix A**.

= *Parmelia glabrata* Lamy – Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map).

Melanelixia subaurifera (Nyl.) O. Blanco et al. – Corticolous on hardwoods, less commonly conifers. – Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Alaska (MCMULLIN 2018: map).

= *Melanelixia subaurifera* (Nyl.) Essl. – Indian R Trail near Sitka; Saxman Village near Ketchikan (GEISER et al. 1994a, 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Alaska (OTTE et al. 2005); Chugach NF (DERR 2010).

= *Parmelia subaurifera* Nyl. – Sitka area, Indian R Trail; Ketchikan area, Saxman Village; Anchorage, Rabbit Cr Rd; Potter, on Turnagain Arm; Knik R, near hwy; Kenai Peninsula, Salamatof; Kenai Peninsula, Skilak L; Kenai Peninsula, Ninilchik (KROG 1968); Alaska (ESSLINGER 1977: map; THOMSON 1984: map).

Melanohalea beringiana S. D. Leav. et al. – Corticolous. – Fielding L (**type**); Alaska Hwy, 23 mi E of Tok (LEAVITT et al. 2016).

Melanohalea elegantula (Zahlbr.) O. Blanco et al. – Corticolous on trees and shrubs.

= *Melanelixia elegantula* (Zahlbr.) Essl. – Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).

= *Parmelia elegantula* (Zahlbr.) Szatala – Alaska (ESSLINGER 1977: map; THOMSON 1984: map).

= *Melanelixia incolorata* (Parrique) Essl. – Chisik Isl (TALBOT et al. 1992).
Synonymy after ESSLINGER (2021).

Melanohalea exasperata → **Appendix A**

Melanohalea exasperatula (Nyl.) O. Blanco et al. – Corticolous on conifers and hardwoods, also lignicolous. – Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr

(NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Katmai NPPr, Malone L; Lake Clark NPPr, mouth of Horn Cr; Lake Clark NPPr, Tlikakila R drainage (MCCUNE et al. 2018); Kenai Fjords NPPr, North arm of spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay (SPRIBILLE et al. 2020).

= *Melanelia exasperatula* (Nyl.) Essl. – Chisik Isl (TALBOT et al. 1992); Haines Hwy, mi 33; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); NW of Haines (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Alaska (OTTE et al. 2005); Chugach NF (DERR 2010).

= *Parmelia exasperatula* Nyl. – Mendenhall Glacier (MCCULLOUGH 1965); Kenai Peninsula, Skilak L; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Alaska Hwy, mi 1450 (KROG 1968); Alaska (ESSLINGER 1977: map); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map); Fairbanks, by the Museum (SCHINDLER 1987).

Melanohalea infumata (Nyl.) O. Blanco et al. – Saxicolous on siliceous rock. – White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr, Portage L; Lake Clark NPPr, Camel's Hump on shore of Lake Clark; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

= *Melanelia infumata* (Nyl.) Essl. – Eagle Summit (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (OTTE et al. 2005); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Gates of the Arctic NPPr (NELSON et al. 2015b).

= *Parmelia infumata* Nyl. – Porcupine Dome; Denali NP, Conglomerate Mtn, E of Teklanee R (KROG 1962); Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Denali Hwy, mi 28–37; base of Rainbow Mts, E of Richardson Hwy; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, between Beaver Cr and Fossil Cr (KROG 1968); Umiat; Ikaikpuk (ESSLINGER 1977: map); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map).

Melanohalea multispora (A. Schneid.) O. Blanco et al. – Corticolous on *Alnus*, *Populus balsamifera* and *Salix*, usually at the back of uplifted beaches. – S Alaska (ROOT et al. 2014: 'includes *M. subolivacea*'); Gates of the Arctic NPPr (NELSON et al. 2015b); Katmai NPPr, Headwaters Cr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; near Park entrance on Exit Glacier Rd, floodplain of Resurrection R; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020).

= *Melanelia multispora* (A. Schneid.) Essl. – Mendenhall L area (GEISER et al. 1994a); Haines Hwy, mi 33 (THOMSON & AHTI 1994); Mallard Slough, Stikine R (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004).

= *Parmelia multispora* A. Schneid. – Bettles (KROG 1962; MURRAY 1974; a misidentification of *M. trabeculata* (fide KROG 1968)); Kenai Peninsula, Ninilchik; N Cook Inlet area, Knik R; Juneau, Mendenhall L (AHTI 1966a: map); Mendenhall L; Knik R, near hwy; Kenai Peninsula, Ninilchik (KROG 1968); Alaska (ESSLINGER 1977: map).

- Melanohalea olivacea* (L.) O. Blanco et al.** – Corticolous mainly on *Alnus* and *Betula*. – Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (McCUNE et al. 2020); Glacier Bay NP (SPRIBILLE et al. 2020).
= *Melanelia olivacea* (L.) Essl. – Chisik Isl (TALBOT et al. 1992); Haines Hwy, mi 33; Moon L CG (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); NW of Haines (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001; OTTE et al. 2005); Chugach NF (DERR 2010).
= *Parmelia olivacea* (L.) Ach. – Port Clarence (NYLANDER 1887); Wrangell; Hidden Glacier Inlet; Sitka; Muir Glacier; Whale Isl, St Michael (CUMMINGS 1904); Port Heiden (HOWARD 1958); Glacier Bay (ESSLINGER 1977, acid-deficient chemotype: map); Fish Cr drilling site (LAWSON et al. 1978); Alaska (THOMSON 1984: map); Turnagain Arm, Rainbow (SCHINDLER 1987); Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Katmai NP, Brooks Lodge area, in CG (SCHINDLER 1990). The earliest records may apply in part to other taxa.
= *Parmelia olivacea* var. *albopunctata* (Asahina) Ahti – N Cook Inlet area, O'Malley Rd; Rabbit Cr Rd; Ninilchik; Skilak L; Talkeetna Mts, Little Susitna R, S of Fishhook Cr; 3 mi W of Fairbanks, NE of College; White Mts, lower Fossil Cr; Beaver Cr, E of Sheep Cr; 20 km SW of Fairbanks, on Tanana R (AHTI 1966a: map); Talkeetna Mts, Little Susitna R; Anchorage, O'Malley Rd; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; Kenai Peninsula, Ninilchik; White Mts, Beaver Cr; White Mts, lower Fossil Cr (KROG 1968).
- Melanohalea olivaceoides* (Krog) O. Blanco et al.** – Corticolous on *Populus*, *Salix* and *Sorbus*, also reported from *Picea*. – Gates of the Arctic NPPr (NELSON et al. 2015b); Alaska Hwy, 32 km W of Tok (**epitype** – LEAVITT et al. 2016).
= *Melanelia olivaceoides* (Krog) Essl. – Chisik Isl (TALBOT et al. 1992); Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998).
= *Parmelia olivaceoides* Krog – Circle Hot Springs (**type** – KROG 1968); Healy L; valley of Mancha Cr and Firth R (ESSLINGER 1977: map); Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map).
- Melanohalea septentrionalis* (Lynge) O. Blanco et al.** – Corticolous on *Alnus*, *Betula*, *Populus* and *Salix*, also reported from conifers and as lignicolous. – Noatak NPr (McCUNE et al. 2009); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018).
= *Melanelia septentrionalis* (Lynge) Essl. – Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Chatanika R Campsite; Mt Fairplay; Haines Hwy, mi 33; Deadman L CG; Moon L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); NW of Haines (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Alaska (OTTE et al. 2005);

Seaton Roadhouse (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010).

= *Parmelia septentrionalis* (Lyngé) Ahti – Umiat (AHTI 1966a; MURRAY 1974); S of Wainwright, Kaolak R; valley of the Okpilak R, at Okpilak L; near Mt Michelson; Valley of Mancha Cr and Firth R; 15 mi upstream from Cape Sabine, Pitmegea R; Sagavanirktok R, Franklin Bluffs; 20 km SW of Fairbanks, on Tanana R (AHTI 1966a: map); Kenai Peninsula, Skilak L; Kenai Peninsula, Salamatof; Richardson Hwy, mi 45 (KROG 1968); Anaktuvuk Pass; Tanana R, 25 km below Fairbanks (ESSLINGER 1977: acid-deficient chemotype; also map of usual chemotype specimens with fumarprotocetraric and protocetraric acids); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Anchorage, by Portage campsite; S of Talkeetna, Montana L (SCHINDLER 1987).

Melanohalea subolivacea (Nyl.) O. Blanco et al. – Corticolous on *Betula* and *Salix*. – Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).
= *Melanelia subolivacea* (Nyl.) Essl. – Chugach NF (DERR 2010: 210, 220).
= *Parmelia subolivacea* Nyl. – White Mts, Cache Mtn (KROG 1968, a “single, fragmentary specimen”).

Melanohalea trabeculata (Ahti) O. Blanco et al. – Corticolous on conifer twigs. – Noatak NPr (MCCUNE et al. 2009); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).
= *Melanelia trabeculata* (Ahti) Essl. – Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010: 220).
= *Parmelia trabeculata* Ahti – McKinley Bar; Denali NP, on McKinley R, S of Wonder L; Kenai Peninsula, Ninilchik; N Cook Inlet area, Rabbit Cr Rd; Knik R; White Mts, lower Fossil Cr (AHTI 1966a: map); Knik R, near hwy; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Ninilchik; White Mts, lower Fossil Cr (KROG 1968); Denali NP, S of Wonder L (ESSLINGER 1977); the record of *Parmelia multispora* (q.v., under *Melanohalea multispora*) from Bettles (KROG 1962; MURRAY 1974) can also be referred here (KROG 1968).

Menegazzia terebrata (Hoffm.) A. Massal. – Corticolous on conifers and hardwoods in SE rainforests. The Kotzebue Sound record may refer to what is now called *Hypogymnia beringiana*. The specimens should also be checked for *M. subsimilis*. – SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004).
= “*Parmelia diatrypa* Ach.” – Kotzebue’s Sound (HOOKER & ARNOTT 1841). CUMMINGS (1904) says this “may be referred to *P. pertusa* (Schrank.) Schaer.”

#Merismatium coccisporum (Norman) Vouaux – On unknown terricolous lichen, alpine. – White Pass (SPRIBILLE et al. 2010).

#Merismatium decolorans (Rehm ex Arnold) Triebel – On *Biatora* sp. over *Alnus*, and on *Cladonia* and *Lobaria* sp. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

- #***Merismatium heterophractum*** (Nyl.) Vouaux – On *Biatora vernalis* and on *Lepraria caesiocalba*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).
- #***Merismatium lobariae*** Zhurb. – On *Lobaria oregana* (Alaska) and *Lobaria scrobiculata* (Kamchatka). – Kenai Peninsula, near Seward, by the road to the Chugach National Forest and Exit Glacier (ZHURBENKO et al. 2020).
- #***Merismatium nigritellum*** (Nyl.) Vouaux – On basal squamules of *Cladonia* sp., and on *Gyalecta foveolaris*. – Chilkoot Trail (SPRIBILLE et al. 2010); Yakutat (ZHURBENKO & DILLMAN 2010).
- Micarea anterior*** (Nyl.) Hedl. – On hard wood of snag. – Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020).
- Micarea assimilata*** (Nyl.) Coppins – Terricolous on mineral soil in tundra and woodland, also over humus and moss. – Amchitka Isl (THOMSON & SOWL 1989); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Blueberry L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Mitkof Isl, Crystal Mtn; [SE Alaska] mainland, Swan L; S Prince of Wales Isl (GEISER et al. 1998); Izembek Refuge, Cold Bay (TALBOT et al. 2000); Beaver Cr (TALBOT et al. 2007); Chugach NF (DERR 2010).
= *Lecidea assimilata* Nyl. – Lawrence-Insula (NYLANDER 1887); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).
? = *Lecidea assimilata* f. *irrubata* Th. Fr. – Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).
- Micarea botryoides*** (Nyl.) Coppins – Corticolous on *Picea sitchensis*, saxicolous on vertical shale outcrop, also on decaying bark flaps on tip-up and fungicolous on small polypore. – Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020, partly as aff.); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
- Micarea cinerea*** (Schaer.) Hedl. – Corticolous on *Alnus*, *Betula*, *Oplopanax horridus*, *Picea sitchensis*, *Tsuga heterophylla* and *Vaccinium ovalifolium*, at low elevations. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, Chinitna Bay Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).
- Micarea coppinsii*** Tønsberg – On organic matter, moss over rock, acidic bark, and rock. – coastal SE Alaska (MCCUNE 2017b).
- Micarea crassipes*** (Th. Fr.) Coppins – Terricolous on mineral soil and detritus in heath and tundra, also “on fibrous building material”. – Bering Straits, St Lawrence Isl (COPPINS 1983); Amchitka Isl (THOMSON & SOWL 1989, as cf.); Chisik Isl (TALBOT et al. 1992); Thompson Pass; Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (COPPINS 2009).

- = *Helocarpon crassipes* Th. Fr. – Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); arctic-alpine Alaska (MCCUNE 2017a &b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- = *Lecidea hypopodia* Nyl. f. *subassimilata* Nyl. – Lawrence-Insula (**type** – NYLANDER 1887; HUE 1891). The type has been annotated as *Micarea crassipes* by B. Coppins (<https://plants.jstor.org/stable/10.5555/al.ap.specimen.h9510301>).
- Micarea czarnotae** Launis et al. – Lignicolous on soft conifer wood. – Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).
- Micarea denigrata** (Fr.) Hedl. – Lignicolous on *Picea* stump and on worked wood. – Chisik Isl (TALBOT et al. 1992; MCCUNE et al. 2018); Fielding L (THOMSON & AHTI 1994); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020).
- Micarea erratica** (Körb.) Hertel et al. – Saxicolous on recently exposed rocks. – Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).
- Micarea farinosa** Coppins & Aptroot – Saxicolous on rocks under tip-ups. – Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).
- Micarea incrassata** Hedl. – Terricolous on alpine soils and pebbles. – Alaska (THOMSON & SOWL 1989); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); [SE Alaska] mainland, Thunder Mtn (GEISER et al. 1998); Noatak NPr (MCCUNE et al. 2009); Katmai NPPr, W of Contact Cr; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018); Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).
- = “*Lecidea assimilata* f. *infuscata* Fr. fil.” – Port Clarence (NYLANDER 1887; HUE 1891). Synonymy follows COPPINS (1983).
- Micarea inopinula** (Nyl.) Coppins & T. Sprib. – Lignicolous and muscicolous on logs and hepatics in rainforests. – Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020, as ined.); Alaska (COPPINS et al. 2021).
- = *Micarea prasinella* (Jatta) I. M. Lamb – Alaska (COPPINS 2009); Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, NW Lagoon Beach (MCCUNE et al. 2020).
- #Micarea inquinans** (Tul.) Coppins – On *Dibaeis baeomyces*. – L Kaniskrak (FRYDAY 2017); Denali Hwy (ZHURBENKO 2020).
- Micarea lignaria** (Ach.) Hedl. – Over terricolous bryophytes; one record as corticolous on *Populus balsamifera*. – Barrow (THOMSON 1997: map); Tanacross Village (TALBOT et al. 2007); Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021a & b).
- = *Biatora milliaria* (Fr.) Tuck. – Shumagin Group (ROTHROCK 1884); Shumagin group of islands (MACOUN 1902).
- Micarea melaena** (Nyl.) Hedl. – Terricolous on soil in seep and late snow areas on peaty soils and old wood and stumps. – Eagle Summit; Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Katmai NPPr, Brooks Camp; Lake

Clark NPPr, Chinitna Range Stn (McCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Bacidia melaena* (Nyl.) Zahlbr. – S of Wainwright, Kaolak R (THOMSON 1960); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979).

Micarea melaeniza Hedl. – Lignicolous on conifer wood. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Micarea micrococca (Körb.) Gams ex Coppins – Corticolous on twigs of *Picea* and *Tsuga* and on trunks of *Alnus* and *Betula*, also often growing on moribund cyanolichen thalli. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (McCUNE 2017b); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020); Alaska (COPPINS et al. 2021).

Micarea misella (Nyl.) Hedl. – Lignicolous in *Pinus contorta* muskeg and *Tsuga heterophylla* forest. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (McCUNE 2017b); Katmai NPPr, Brooks Camp (McCUNE et al. 2018); Alaska (McMULLIN 2018: map); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (McCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
= *Micarea globularis* (Ach.) Hedl. – Mt Eielson (WEBER & VIERECK 1967).

Micarea myriocarpa V. Wirth & Vězda ex Coppins – Saxicolous on vertical shale outcrops and growing on bark flaps under tip-up. – Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Micarea nigella Coppins – Lignicolous on dead tree. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Micarea paratropa (Nyl.) Alstrup – Saxicolous in alpine. – Coastal SE Alaska (McCUNE 2017b); Lake Clark NPPr, Saddle Mtn; Lake Clark NPPr, Tuxedni Bay (McCUNE et al. 2018); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Micarea peliocarpa (Anzi) Coppins & R. Sant. – Corticolous on *Alnus*, *Malus fusca*, *Picea sitchensis*, *Pinus contorta*, *Shepherdia canadensis*, *Tsuga heterophylla*, also once fungicolous on a bracket fungus and once saxicolous. – Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPPr (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Micarea prasina Fr. – Lignicolous, corticolous on *Picea* or *Tsuga*, and muscicolous. Recent research in this group (KANTELINEN et al. 2021, LAUNIS et al. 2019a & b) has segregated several distinct species and showed that *M. prasina* s. str. is a strictly lignicolous species. The Alaskan material should be reassessed. – Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, Chinitna Range Stn (McCUNE et al. 2018); Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (McCUNE et al. 2020, as s. lat.); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Micarea prasinella → ***Micarea inopinula***

Micarea synotheoides (Nyl.) Coppins – Alaskan collections may be referable to the recently described *M. longispora* Coppins. – Corticolous on *Picea* and *Tsuga*, typically on trunks and in sites with old trees. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (McCUNE 2017b); Kenai Fjords NPPr, W of Resurrection R

and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Micarea ternaria (Nyl.) Vězda – Muscicolous and terricolous. – Northern Alaska (COPPINS 1983); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Lecidea ternaria* Nyl. – Lawrence Isl (NYLANDER 1887).

= *Lecidea subballinita* Nyl. – Lawrence-Insula (**type** – NYLANDER 1885a; NYLANDER 1887; HUE 1891); insula Lawrence (PRINTZEN 1995: “= *Micarea ternaria* (Nyl.) Vězda (S. Ekman in litt.)”).

= *Bacidia trisepta* auct. – 6 mi SSW of Barrow, Imiksonn L (THOMSON 1979, but this was revised by B. J. Coppins to *Micarea ternaria* according to THOMSON 1997).

Micarea tuberculata → **Brianaria tuberculata**

Micarea turfosa (A. Massal.) Du Rietz – Terricolous and muscicolous. – Barrow (THOMSON 1997: map); 6 mi SSW of Barrow, near Imiksonn L (COPPINS 1983); Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Micarea xanthonica Coppins & Tønsberg – Corticolous on *Picea sitchensis* and *Tsuga heterophylla*, and lignicolous on soft wood of snags. – Ft Abercrombie Park, Gertrude L; Starrigavan R; Yamani Islets (COPPINS & TØNSBERG 2001); Alaska (MCCUNE 2017a & b); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Microcalicium arenarium (Hampe ex A. Massal.) Tibell – On rock. – Alaska [Eagle Quad, headwaters of Charley R, 1956, leg. G. Argus (MSC, conf. L. Tibell 1977)] (TIBELL 1978). Although the exact locality of this specimen was not cited in this paper, it has been seen by us (AMF); Alaska (MCCUNE 2017b); Alaska (MCMULLIN 2018: map).

Microcalicium disseminatum (Ach.) Vain. – Lignicolous on *Pinus contorta* snag and *Populus*. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017a); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

#Milospium graphideorum (Nyl.) D. Hawksw. – Over unidentified white crust (?*Lecanactis* s. lat.) on *Picea sitchensis* bark. – Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Miriquidica atrofulva (Sommerf.) A. J. Schwab & Rambold – Saxicolous on iron-rich rocks. – Alaska (RAMBOLD & SCHWAB 1990: map); Alaska (ANDREEV 2004); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, North of Exit Glacier Visitor Center; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020). = *Lecidea atrofulva* Sommerf. – Valley of the Okpilak R at Okpilak L, near Mt Michelson (SCHWAB 1986); Okpilak L (THOMSON 1997).

Miriquidica complanata (Körb.) Hertel & Rambold – Saxicolous on pebbles and larger cobbles near beaches. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Miriquidica deusta (Stenh.) Hertel & Rambold – Saxicolous on acidic rock. – Kuzitrin L, Twin Calderas; Kuzitrin L, Sturgeon Ridge; Lost Jim Lava Flow

(HERTEL & ANDREEV 2003); SE Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Miriquidica deusta var. *picea* → ***Miriquidica picea***

Miriquidica gyrizans Fryday – Saxicolous on the upper (flat) surfaces of large granitic boulders in snowy subalpine or alpine areas near the timberline, also from the side of a boulder at a lower altitude. – Glacier Bay NP: Dundas Bay (**type**); Klondike Gold Rush National Historical Park, White Pass; Kenai Fjords NP, above Exit Glacier, McArthur Ridge (SPRIBILLE et al. 2020); Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).

Miriquidica instrata (Nyl.) Hertel & Rambold – Saxicolous on acidic rock, alpine. – White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

= *Lecidea instrata* Nyl. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979).

Miriquidica leucophaea (Flörke ex Rabenh.) Hertel & Rambold – Saxicolous on siliceous rock.

= “*Lecidea leucophaea* (Floerke ex Rabenh.) Nyl.” – Unalaska Isl, Unalaska (DEGELIUS 1937); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1997: map).

Miriquidica leucophaeoides (Nyl.) Hertel & M. P. Andreev – Saxicolous on acidic rock. – Serpentine Hot Springs (HERTEL & ANDREEV 2003); Alaska (MCCUNE 2017b).

Miriquidica lulensis (Hellb.) Hertel & Rambold – Saxicolous on acidic rocks and pebbles. – Cape Dyer, drainage of Kipaloq and Angowlik Crs (HERTEL 1991); Big Cr (HERTEL & ANDREEV 2003).

= *Lecidea lulensis* Hellb. – Blueberry L CG; Fielding L (THOMSON & AHTI 1994).

Miriquidica nigroleprosa (Vain.) Hertel & Rambold – Saxicolous on acidic rock, alpine. – White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Katmai NPPr, Hammersly L; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); Kenai Fjords NPPr, Coleman Bay, NE end, off Aialik Bay (MCCUNE et al. 2020).

Miriquidica picea (M. P. Andreev) Øvstedal – Saxicolous on acidic rock.

= *Lecidea picea* Lynge, nom. illeg., non *Lecidea picea* (Dicks.) Ach. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979).

= *Miriquidica deusta* var. *picea* M. P. Andreev – Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018).

Miriquidica pulvinatula (Arnold) Hertel & Rambold – Saxicolous on acidic rock. – Mystery Cr (HERTEL & ANDREEV 2003); Alaska (MCCUNE 2017b).

Miriquidica subplumbea (Anzi) Cl. Roux – Saxicolous on acidic rock. – SE Alaskan mainland, Deboer L (HAFELLNER et al. 2014: “sterile specimen, therefore somewhat uncertain”); SE Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L camp; Katmai NPPr, NE of Mirror L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

#**Mixtoconidium nashii** (Hafellner) Etayo & van den Boom – On *Ramalina*, corticolous on *Picea sitchensis* on coastal headland. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

= *Plectocarpon nashii* Hafellner – Alaska (von BRACKEL & PUNTILLO 2016).

Moelleropsis nebulosa → **Fuscopannaria nebulosa**

#**Monodictys fuliginosa** Etayo – On *Lobaria pulmonaria*. – Kenai Peninsula, near Chugach NF (ZHURBENKO 2009a); Chilkoot Trail (SPRIBILLE et al. 2010).

Montanelia disjuncta (Erichsen) Divakar et al. – Saxicolous on acidic rocks. – Alaska (LEAVITT et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Melanelia disjuncta* (Erichsen) Essl. – Mt Fairplay; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001; OTTE et al. 2005); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010).

= *Parmelia disjuncta* Erichsen – Mt Eielson (WEBER & VIERECK 1967); Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Anchorage area, headwaters of Rabbit Cr; Kenai Peninsula, Skilak L; Denali Hwy, mi 28; Denali Hwy, mi 70; Denali NP, Toklat; Denali NP, Savage R; Denali NP, Polychrome Pass; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Alaska (ESSLINGER 1977: map); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Denali, Savage R (SCHINDLER 1990).

= *Parmelia denalii* Krog – Base of Rainbow Mts, E of Richardson Hwy (**type** – KROG 1968; ESSLINGER 1977).

= *Melanelia granulosa* (Lynge) Essl. – Ft Wainwright (RACINE et al. 1997).

Montanelia occultipanniformis S. D. Leav. et al. – Saxicolous. – Denali NP, Mt Healy trail (LEAVITT et al. 2016).

Montanelia panniformis (Nyl.) Divakar et al. – Saxicolous on acidic rock, also reported from calcareous rock and bird perches. – Denali NP (LEAVITT et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).

= *Melanelia panniformis* (Nyl.) Essl. – Mt Fairplay; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001; OTTE et al. 2005); Riverside Lodge Airstrip; 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010).

= *Parmelia panniformis* (Nyl.) Vain. – Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Kenai Peninsula, Skilak L; Richardson Hwy, mi 37; Denali Hwy, mi 0–37; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Seward Peninsula, King Mtn (KROG 1968); Alaska (ESSLINGER 1977: map); Anaktuvuk Pass (MOSER et

al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Ft Wainwright (RACINE et al. 1997).

Montanella secwepemc S. D. Leav. et al. – Saxicolous. – Liberty Falls, W of Copper R (LEAVITT et al. 2016).

Montanella sorediata (Ach.) Divakar et al. – Saxicolous on acidic rock. – Alaska (LEAVITT et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr, Harding Icefield Trail, lower slope; Kenai Fjords NPPr, Harding Icefield Trail en route to high cliffs (MCCUNE et al. 2020). = *Melanelia sorediata* (Ach.) Goward & Ahti – LeConte Bay, SE Alaska (GEISER et al. 1994a: map); Mt Fairplay; Moon L CG (THOMSON & AHTI 1994); [SE Alaska] mainland, LeConte Bay (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Alaska (OTTE et al. 2005); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010). = *Parmelia sorediosa* Almb. – Kenai Peninsula, S of Hidden L; Richardson Hwy, mi 45; Denali Hwy, mi 28; White Mts, Beaver Cr (KROG 1968); Alaska (ESSLINGER 1977: map); Alaska (THOMSON 1984: map).

Montanella tominii (Oxner) Divakar et al. – Saxicolous on acidic rock. – Alaska (LEAVITT et al. 2015); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018). = *Melanelia tominii* (Oxner) Essl. – Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska (OTTE et al. 2005); Noatak NPr (MCCUNE et al. 2009). = *Parmelia saximontana* R. A. Anderson & W. A. Weber – Kenai Peninsula, Skilak L; Denali Hwy, mi 28 (KROG 1966). = *Parmelia substygia* Räsänen – Mt Eielson (WEBER & VIERECK 1967); Kenai Peninsula, Skilak L; Denali Hwy, mi 28 (KROG 1968); Alaska (ESSLINGER 1977: map); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map).

#*Muellerella atricola* (Linds.) Sacc. & D. Sacc. – On *Tephromela atra* over rock. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

#*Muellerella erratica* (A. Massal.) Hafellner & V. John – On *Gyalolechia bracteata*, *Lecidea umbonata* and *Porpidia* sp. saxicolous in talus. – Prudhoe Bay, Howe Isl (ZHURBENKO 2009b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Muellerella pygmaea* var. *athallina* (Müll. Arg.) Triebel – Valley of the Okpilak R at Okpilak L, near Mt Michelson (TRIEBEL 1989).

#*Muellerella hospitans* Stizenb. – On *Biatora* and *Mycoblastus* spp. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

#*Muellerella lichenicola* (Sommerf.) D. Hawksw. – On *Lecanora pulicaris*, *Mycoblastus affinis* and *Pertusaria subambigens*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Brooks Range, Endicott Mtns, Midnight Dome; Sukakpak Mtn (DILLMAN et al. 2012); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

- #Muellerella pygmaea** (Körb.) D. Hawksw. – On *Lecidea*, *Porpidia* and *Rhizocarpon* spp. on acidic rock. It is unclear whether all these reports refer to *M. pygmaea* s. str. – Anaktuvuk Pass (TRIEBEL et al. 1991); White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Mirror L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Tichothecium pygmaeum* Körb. – Anaktuvuk Pass (MOSER et al. 1979).
- #Muellerella pygmaea** var. *athallina* → **#Muellerella erratica**
- #Muellerella pygmaea** var. *ventosicola* → **#Muellerella ventosicola**
- #Muellerella ventosicola** (Mudd) D. Hawksw. – On *Ophioparma* and *Rhizocarpon geographicum* s. lat. – Katmai NPPr, Mirror L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Muellerella pygmaea* var. *ventosicola* (Mudd) Triebel – White Pass (SPRIBILLE et al. 2010).
- Multiclavula corynoides** (Peck) R. H. Petersen – Tundra with bryophytes and *Dryas* and limestone rocks and mossy ground on shore. – Glacier Bay NP: East Arm, Glacier Bay (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).
- Multiclavula mucida** (Pers.) R. H. Petersen – Lignicolous. – Interior Alaska (LAURSEN & SEPPELT 2009); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- Multiclavula vernalis** (Schwein.) R. H. Petersen – Terricolous. – Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).
- Mycobilimbia berengeriana* → **Lecidea berengeriana**
- Mycobilimbia carnealbida** (Müll. Arg.) S. Ekman & Printzen – Corticolous or muscicolous on *Populus balsamifera*, also over terricolous bryophytes. – Noatak NPr (MCCUNE et al. 2009); Alaska (KRISTINSSON et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018).
? = *Bacidia sphaeroides* auct., non (Dicks.) Zahlbr. – Mendenhall Glacier (McCULLOUGH 1965); Mt Eielson; Wonder L (WEBER & VIERECK 1967); Barrow (MURRAY & MURRAY 1978); S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Firth R at Mancha Cr (THOMSON 1979); Anaktuvuk Pass (MOSER et al. 1979); Alaska (THOMSON 1997: map). It is not clear if the name *Bacidia sphaeroides* was used to apply to what is currently called *Mycobilimbia pilularis* in Europe, or to *M. carnealbida*, the common species in Alaska.
? = “*Biatora sphaeroides* (Dicks.) Tuckerm.” – Isls in Behring Strait (MACOUN 1902).
? = “*Lecidea sphaeroides* (Dicks.)” – Port Clarence (NYLANDER 1885b; NYLANDER 1887; HUE 1891).
- Mycobilimbia epixanthoides** (Nyl.) Vitik. et al. ex Hafellner & Türk – Corticolous on *Alnus* and *Tsuga heterophylla* as well as on organic accumulations over granitic rocks. – Juneau, pack trail N of Herbert R (DILLMAN et al. 2012); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Gustavus, West Arm (SPRIBILLE et al. 2020).

Mycobilimbia pilularis (Körb.) Hafellner & Türk – On moss on trees. – Alaska Hwy, mi 1240 (TALBOT et al. 2007, as “*pulicaris*”); Alaska (KRISTINSSON et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015).

Mycobilimbia obscurata → ***Mycobilimbia tetramera***

Mycobilimbia sabuletorum → ***Bilimbia sabuletorum***

Mycobilimbia tetramera (De Not.) Vitik. et al. ex Hafellner & Türk – Corticolous on *Populus* bark, also over terricolous bryophytes in the arctic and alpine. – Near Juneau, Gastineau Pk (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Glacier Bay NP: East Arm, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Bacidia fusca* (A. Massal.) Du Rietz – Anaktuvuk Pass (MOSER et al. 1979).

= *Bacidia obscurata* (Sommerf.) Zahlbr. – S of Wainwright, Kaolak R; Anaktuvuk Pass; Fairbanks, Chena Ridge (THOMSON 1979); Anaktuvuk Pass (MOSER et al. 1979).

= *Mycobilimbia obscurata* (Sommerf.) Rehm – Portage Glacier (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009, with ?).

= *Lecidea triplicans* (Nyl.) Nyl. – Port Clarence (NYLANDER 1887, species level combination made by Nylander in Norrlin & Nylander, *Herbarium Lichenum Fenniae* Fasc. 4, no. 174, 1875; not 1891 as given by Zahlbruckner); Port Clarence (HUE 1891). Listed by Zahlbruckner as a synonym of *Bacidia obscurata*, which = *M. tetramera*.

Mycoblastus affinis (Schaer.) T. Schauer – Corticolous on *Alnus*, *Picea sitchensis*, *Pinus contorta* and *Tsuga heterophylla*, also lignicolous and reported from rock in heath (TALBOT et al. 2000). See also entry under *Protomicarea limosa*.

= “*Heterothecium sanguinarium affine* (Schaer.) Flot.” – Orca; Virgin Bay (CUMMINGS 1904).

= *Lecidea affinis* Schaer. – Lawrence-Insula; Port Clarence (NYLANDER 1887); Port-Clarence (HUE 1891).

= *Mycoblastus affinis* (Schaer.) T. Schauer – SE Alaska (GEISER et al. 1994a: map); Alaska (THOMSON 1997: map); Myriad Isl, W of Chichigof Isl; near Petersburg (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Peninsula, Russian R (SPRIBILLE et al. 2011a,b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (TØNSBERG & PRINTZEN 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020). = “*Mycoblastus sanguinarius affinis* (Schaer.)” – Heceta Isl, Port Alice (HERRE 1919).

= *Mycoblastus marginatus* Degel. – Kodiak Isl (**type** – DEGELIUS 1937); Kodiak Isl (THOMSON 1997). Synonymy after SPRIBILLE & TØNSBERG (2007).

Mycoblastus alpinus (Fr.) Th. Fr. ex Hellb. – Muscicolous on tundra ledges, corticolous on *Betula* and *Picea* and loosely saxicolous over rock. – Amchitka Isl (WEBER et al. 1969); S of Wainwright, Kaolak R; Firth R at Mancha Cr (THOMSON 1979); Amchitka Isl (THOMSON & SOWL 1989); Katmai NP, Brooks

Lodge area, Brooks Falls (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Eagle Summit (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010, 2011a & b).

= "*Mycoblastus sanguinarius alpina* Fr." – Kosciusko Isl, Shipley Bay; Dall Isl, Augustine Bay; Coronation Isl, Egg Harbor; Kuiu Isl, Kell Bay (HERRE 1919).

= "*Mycoblastus sanguinarius* var. *alpinus* (E. Fr.) Stein" – Unalaska Isl; Atka Isl; Kodiak Isl (HEDRICK 1936); Atka Isl (THOMSON 1950a).

Mycoblastus caesius (Coppins & P. James) Tønsberg – Corticolous on *Alnus*, especially on trunks, *Malus fusca*, *Menziesia ferruginea*, *Picea sitchensis* and *Tsuga heterophylla* twigs. – Near Petersburg (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017a & b); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Mycoblastus fucatus → **Violella fucata**

Mycoblastus marginatus → **Mycoblastus affinis**

Mycoblastus sanguinarioides Kantvilas – Corticolous on conifers and *Betula*. – Kenai Peninsula; Chilkoot Trail (SPRIBILLE et al. 2011a, 2011b); SE Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L; Lake Clark NPPr, Chinitna Bay Ranger Station (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Mycoblastus sanguinarius (L.) Norman – Corticolous on coniferous and deciduous trees, also rarely saxicolous, as on Seward Peninsula. Many coastal records may refer to *M. sanguinarioides*, which was only recognized as a distinct species in 2009. – Ratz Isl; Augustine Bay (HERRE 1919); Anchorage, Chugach Mts (HERRE 1950a); Revillagigedo Isl, Ketchikan (THOMSON 1950a); Mendenhall Glacier (MCCULLOUGH 1965); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Amchitka Isl (THOMSON & SOWL 1989); Kenai Peninsula, Portage CG; Kenai Peninsula, Skilak L; Kenai Peninsula, near the Wildlife Refuge Headquarters by Kenai CG (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Beaver Cr (TALBOT et al. 2007); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE et al. 2010); Chena R; Chilkoot Trail (SPRIBILLE et al. 2011a); Kenai Peninsula, Russian R (SPRIBILLE et al. 2011b); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Heterothecium sanguinarium* (L.) Flot. – Eschscholtz Bay; Yakutat Bay; Cook's Inlet (ROTHROCK 1884); Juneau; near Juneau, Sheep Cr (CUMMINGS 1892a); St Paul Isl; St George Isl (MACOUN 1899, 1902); Yakutat Bay; White Pass; Virgin Bay; Port Wells; Unalaska (CUMMINGS 1904); Sheep Camp, Dyea Cr (HOWE 1911b).

= "*Lecidea sanguinaria* Ach." – Port Clarence (ALMQUIST 1887, as *sanguinaria*); Lawrence-Insula (NYLANDER 1887).

+***Mycocalicium subtile*** (Pers.) Szatala – Lignicolous, mainly on hard snags. – Deadman L CG (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Katmai NPPr, Brooks Camp; Lake Clark NPPr, Chinitna Bay Ranger Station (MCCUNE et al. 2018); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020). = *Mycocalicium parietinum* (Ach.) Vain. – Colville R near Umiat (THOMSON 1979).

Mycoporum antecellens (Nyl.) R. C. Harris – Corticolous on *Alnus*, *Menziesia*, *Salix* and *Tsuga*. – Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Myochroidea leprosula (Arnold) Printzen et al. – Corticolous on *Abies lasiocarpa* and *Tsuga mertensiana* in krummholz, also terricolous and muscicolous in alpine sod. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Myochroidea porphyrospoda (Anzi) Printzen et al. – Corticolous on *Abies lasiocarpa* and *Tsuga mertensiana* in krummholz. – White Pass (PRINTZEN et al. 2008); White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b).

Myochroidea rufofusca (Anzi) Printzen et al. – Terricolous on mosses and plant debris. – 20 km WNW Paxson, at milepost 13; Brooks Range, Sukakpak Mtn (DILLMAN et al. 2012); SW Alaska (MCCUNE 2017b); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).

Myriolecis contractula → **Polyozosia contractula**

Myriolecis dispersa → **Polyozosia dispersa**

Myriolecis invadens → **Polyozosia invadens**

Myriolecis persimilis → **Polyozosia persimilis**

Myriolecis schofieldii → **Polyozosia schofieldii**

Myriolecis semipallida → **Polyozosia semipallida**

Myriolecis straminea → **Polyozosia straminea**

Myriolecis zosteræ → **Polyozosia zosteræ**

Myrionora albidula → **Biatora albidula**

Myriospora dilatata (M. Westb. & Wedin) K. Knudsen & Arcadia – Saxicolous on iron-rich rock. – Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020).

Myriospora hassei (Herre) K. Knudsen & Arcadia – Saxicolous on sandstone. – Lake Clark NPPr, Chinitna Bay (MCCUNE et al. 2018).

Myriospora myochroa (M. Westb.) K. Knudsen & Arcadia – Saxicolous on rocky headland. – Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay; Eagle Summit (SPRIBILLE 2020).

Myriospora scabrida (Hedl. ex H. Magn.) K. Knudsen & Arcadia – Saxicolous. = *Acarospora scabrida* Hedl. – Colville R near Umiat (THOMSON 1979); Alaska (THOMSON 1997: map).

Myriospora smaragdula (Wahlenb. ex Ach.) Nägeli ex Uloth – Saxicolous on acidic rocks; see also note under *Acarospora cervina*. Nomenclature follows

ARCADIA & KNUDSEN (2012) – Lake Clark NPPr, Camel’s Hump on shore of Lake Clark (MCCUNE et al. 2018); Kenai Fjords NPPr, headland between two arms of Coleman Bay; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020).

= *Acarospora smaragdula* (Wahlenb. ex Ach.) A. Massal. – St Lawrence Isl (MAGNUSSON 1929: map); Mt Eielson (WEBER & VIERECK 1967); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Firth R at Mancha Cr (THOMSON 1979); Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map).

= “*Lecanora smaragdula* (Wahlenb.) Nyl.” – Lawrence Isl (NYLANDER 1887; HUE 1891).

Myriospora tangerina (M. Westb. & Wedin) K. Knudsen & Arcadia – Saxicolous on gneiss rocks on shore, in tidal flats and on rock under tip-up on coastal headland. – Glacier Bay NP: Dundas Bay, Glacier Bay (SPRIBILLE et al. 2020).

– N –

+**Naetrocymbe punctiformis** (Pers.) R. C. Harris – Corticolous, usually on *Salix*. – Noatak NPr (MCCUNE et al. 2009); Lake Clark NPPr, Chinitna Bay (MCCUNE et al. 2018); Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020).

= *Arthopyrenia punctiformis* (Pers.) A. Massal. – Alaska (THOMSON 1997: map); White Pass (SPRIBILLE et al. 2010, as “s. lat.”).

#**Nectriopsis lecanodes** (Cesati) Diederich & Schroers – On *Peltigera* spp. – Interior Alaska (LAURSEN & SEPPELT 2009); Kenai Peninsula, near Chugach NF (ZHURBENKO 2009a); Matanuska-Susitna Borough, Byers L ca. 45 km N of Talkeetna (HAFELLNER 2018); Glacier Bay NP: Dundas Bay; Gustavus (SPRIBILLE et al. 2020).

= *Nectria lecanodes* Cesati – Alaska (ALSTRUP & COLE 1998).

#**Neobarya peltigeræ** Lowen et al. – On *Peltigera* sp. – Kenai Peninsula near Seward, rd to Chugach NF and Exit Glacier (ZHURBENKO 2009c).

Neofuscelia subhosseana (Essl.) Essl. – Saxicolous. – [SE Alaska] mainland, LeConte Bay (GEISER et al. 1994a, 1998).

#**Neolamya ahtii** Zhurb. – On *Cladonia gracilis* subsp. *vulnerata*. – Seward Peninsula, 7 km ESE of Nome (ZHURBENKO & PINO-BODAS 2017).

Nephroma arcticum (L.) Torss. – Terricolous in forests and tundra, occasionally also corticolous on lower branches and trunks of conifers. – Kotzebue Sound (MANN 1868); Chamisso Isl (ROTHROCK 1884); Kotzebue Sound (TURNER 1886); Port Clarence (ALMQUIST 1887); Alaska (HUE 1890); Taku (CUMMINGS 1892b); Sitka (STIZENBERGER 1895a, 1895b); Cape Vancouver; Unimak Isl (MACCOUN 1902); Virgin Bay; Orca; White Pass; St Lawrence Isl; Hall Isl; St Matthew Isl; St Michael Isl; Port Clarence; Cape Nome; Seward Peninsula (CUMMINGS 1904); Nome (HOWE 1913a); Coronation Isl, Egg Harbor (HERRE 1919); Alaska (HADWEN & PALMER 1922); Unimak Isl; Alaska Peninsula (HEDRICK 1936); Seward, Kenai Peninsula; Juneau; Attu Isl (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Kuiu Isl, Washington Bay (THOMSON 1950a); Nome (HANSON 1953); “Alaska med Aleuterna, S:t Lawrenceön” (HASSELROT

1953); Sinuk; Hagemeister Isl; King Salmon, about 2.5 mi NNE of Airways Communications Station; Attu Isl, near L Nicholas; Akokpak (HOWARD 1958); S of Wainwright, Kaolak R; Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1960); Bettles; Brooks Range, across R from Wiseman; Umiat (WETMORE 1960; MURRAY 1974); Attu Isl, Massacre Bay; Attu Isl, base of Bruckner Mtn; Anchorage; Big Delta; Bristol Bay, Kanakanak; Cantwell; Cape Vancouver; Camisee Isl, Eschscholtz Bay; Coronation Isl, Egg Harbor; SE Egg Harbor (WETMORE 1960); Umiat; Anaktuvuk Pass; St Matthew Isl; Hooper Bay (KROG 1962); Bettles (KROG 1962; MURRAY 1974); Riley Cr; W of Savage R Bridge; Wonder L Lodge (HOWARD 1963); Fairbanks area, about 20 mi S of Fairbanks on the Nenana Hwy, in the Bonanza Cr Forest Preserve (WEBER 1963); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson; McKinley Bar (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Ketchikan area, Ward L; Talkeetna Mts, Independence Mine; Eagle R Valley; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Granite Cr Ridge; Homer; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Richardson Hwy, mi 37; Denali Hwy, mi 28, mi 70, mi 100; Denali NP, Savage R; Denali NP, Wonder L; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Roberts Mtn; Nunivak Isl, Lake where the geese don't fly; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Prudhoe Bay (MURRAY & MURRAY 1975b); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Beaufort Lagoon, Nuvgapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Anchorage, by Portage campsite (SCHINDLER 1987); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); Imnavait Cr (WALKER et al. 1989); Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Kenai Peninsula, Chugach NF, Ptarmigan L Trail (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Mt Fairplay; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Mt Roberts Trail in vicinity of Juneau (WETMORE 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Tongass NF, Lower Dewey L Trail, near Stargill's Landing (NASH et al. 2006); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, near Canadian border; Mt Fairplay; Mentasta Mtns (TALBOT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Byers L N of Talkeetna (OBERMAYER 2014); S Alaska (ROOT et al.

2014); Denali NPPr (NELSON et al. 2013; NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, near Harding Icefield Trail en route to high cliffs; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Hagemester Isl (WALSH & GOWARD 2021). = *Nephroma arcticum* (L.) Torss. f. *tuberculimarginatum* Gye. – Chilcoot (type – GYELNIK 1931). = “*Nephroma polaris* Ach.” – Kotzebue’s Sound (BABINGTON 1851); Kotzebue Sound (BABINGTON 1852).

Nephroma bellum (Spreng.) Tuck. – Corticolous on conifers and (especially) hardwoods, also terricolous or saxicolous into the alpine; see also comment under *N. laevigatum*. – Alaska (HASSELROT 1953); Anchorage; Bristol Bay, Snag Pt; Juneau; Salmon Cr; 0.75 mi below Mendenhall Glacier; NW shore of Wonder L; 9 mi N of Nome; Cape Nome; E Cape Nome; Popoff Isl; Port Clarence; Port San Juan, Evans Isl; vicinity of Portage Glacier and Portage Valley (WETMORE 1960); Mendenhall Glacier (MCCULLOUGH 1965); Wonder L (WEBER & VIERECK 1967); Juneau area, Loop Rd; Juneau area, Mt Roberts; Juneau area, Douglas Ski Bowl; Juneau area, Montana Cr; Sitka area, Harbor Mtn; Ketchikan area, Ward L; Talkeetna Mts, Little Susitna R; Anchorage, Rabbit Cr Rd; Anchorage area, Eastchester Swamp; Portage Glacier Rd, Kenai Peninsula; Ninilchik; Richardson Hwy, mi 9; PWS, Fish Bay; PWS, Pigot Bay; Denali Hwy, mi 28; White Mts, the limestone ridge; White Mts, lower Fossil Cr; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; N of Nome, Anvil Pk (KROG 1968); Alaska (THOMSON 1984: map); Anchorage, by Portage (SCHINDLER 1987); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Chikuminuk L (THOMSON & DOELL 1989); Katmai NP, Brooks Lodge area, in CG; Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Kenai Peninsula, Portage CG; Chugach NF, Quartz Junction (SCHINDLER 1990); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Mt Fairplay (TALBOT et al. 2007); Noatak NP (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Nephroma expallidum (Nyl.) Nyl. – Terricolous in mossy tundra and boreal woodland. – Port Clarence (NYLANDER 1887; HUE 1890); Unalaska Isl, Unalaska

(DEGELIUS 1937); Ogotoruk Cr drainage; Ukinyik Cr drainage; Talkeetna Mts near Anchorage (KROG 1962); on hill E of rd to Kantishna (HOWARD 1963); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson; Muldrow moraine (WEBER & VIERECK 1967); Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; W of Seward, Marathon Mt; Richardson Hwy, mi 24, mi 37; Denali Hwy, mi 0–37, mi 70; Denali NP, Savage R; Denali NP, Polychrome Pass; White Mts, Beaver Cr; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Steese Hwy, Eagle Summit; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L.; 6.5 mi SSW of Barrow Base, near Loon L; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Beaufort Lagoon, Nuvagapak Pt; Firth R at Mancha Cr (THOMSON 1979); Barter Isl; Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Mt Fairplay; Blueberry L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); AB Mtn Trail near Skagway (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Interior Alaska (LAURSEN & SEPPELT 2009); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Wosnesenski Glacier nunatak (MCCUNE et al. 2020).

***Nephroma helveticum* Ach., subspecies not specified** – Corticolous on *Alnus* and *Salix*, and on *Picea sitchensis* and *Tsuga heterophylla*, and also reported from siliceous rock (NEITLICH & HASSELBACH 1998 and TALBOT et al. 2007). SE Alaskan records are probably subsp. *sipeanum*, while interior and Brooks Range records may be subsp. *helveticum*. The two occur side-by-side in the Chena R near Fairbanks (DILLMAN et al. 2012). – Yakutat Forelands (SHEPHARD 1995); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); SE Alaska (DILLMAN 2004); Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018, including subsp. *sipeanum*); Kenai Fjords NPPr (MCCUNE et al. 2020).

Nephroma helveticum* subsp. *helveticum – Corticolous on *Salix*. – SE Alaska (GEISER et al. 1994a: map of whole species); Alaska (BRODO et al. 2001); Chena R (DILLMAN et al. 2012); Denali NPPr (STEHN et al. 2015).

***Nephroma helveticum* subsp. *sipeanum* (Gyeln.) Goward & Ahti** – Corticolous on twigs of *Alnus*, *Picea sitchensis*, *Populus* and *Tsuga heterophylla*. – SE Alaska (GEISER et al. 1994a: map of whole species); Portage Glacier; Haines Hwy, mi 33; Richardson Hwy, mi 10; Fielding L (THOMSON & AHTI 1994); SE Alaska

(GEISER et al. 1998); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Nephroma helveticum* var. *sipeanum* (Gyeln.) Wetmore – PWS, Virgin Bay; Windham Bay (WETMORE 1960); Mendenhall Glacier (MCCULLOUGH 1965); Juneau area, Loop Rd; Ketchikan area, Ward L; Eagle R Valley; Richardson Hwy, mi 9; Circle Hot Springs (KROG 1968); Alaska (BRODO et al. 2001).

= *Nephroma tropicum* sensu Timdal et al. – Alaska (TIMDAL et al. 2021). The Alaska specimen used for the Timdal et al. phylogeny was a Glacier Bay specimen previously reported by SPRIBILLE et al. (2020) as *N. helveticum* subsp. *sipeanum*. See introduction for discussion of taxonomic concepts.

Nephroma isidiosum (Nyl.) Gyeln. – Corticolous on *Alnus*, *Picea*, *Populus*, *Salix* and *Tsuga*, especially in coastal southern Alaska. – 5 mi E of Valdez, along Richardson Hwy in Lowe R Valley; valley of the Okpilak R at Okpilak L, near Mt Michelson; ridge E of Okpilak L (WETMORE 1960); halfway up Tracy Arm, on W side (KROG 1962); Juneau area, Loop Rd; Mendenhall L; Talkeetna Mts, Little Susitna R; Portage Glacier; Seward; Richardson Hwy, mi 9 (KROG 1968); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Anchorage, by Portage (SCHINDLER 1987); Kenai Peninsula, Portage CG (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Haines Hwy, mi 33 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Unuk R Valley; Stikine R Valley; Patterson R; [SE Alaska] mainland, Yakutat lowlands (GEISER et al. 1998); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Alaska (TIMDAL et al. 2021).

Nephroma laevigatum Ach. – Corticolous on branches of *Picea* and *Tsuga* in coastal SE Alaska, doubtful elsewhere. Records prior to WETMORE'S 1960 treatment usually refer to *N. bellum*. – Juneau; Sitka; Yakutat Bay; Virgin Bay; Port Clarence; Cape Nome (CUMMINGS 1904); Coronation Isl, Egg Harbor (HERRE 1919); Yakutat Bay (STAIR 1947); Anchorage, Chugach Mts (HERRE 1950a); Coronation Isl, Egg Harbor; Farragut Bay (WETMORE 1960); Juneau area, Loop Rd; Ketchikan area, Ward L; Seward (KROG 1968); SE Alaska (GEISER et al. 1994a: map); Stikine R Valley; Cape Fanshaw; Woewodski Isl, Harvey L trail; Myriad Isls on the outer W coast; Faragut Bay (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015).

Nephroma orvoi Timdal et al. – On trees and rocks. – Noatak NP; Lake Clark NPPr (MORRIS & STONE 2022).

Nephroma occultum Wetmore – Corticolous on *Picea* and *Tsuga* in oldgrowth forests in coastal SE Alaska. – Chilkoot L State Recreation Area (GEISER et al. 1998); Alaska (BRODO et al. 2001); Kuiu Isl (DILLMAN 2004: 31); Kenai Peninsula, Seward; Richardson Hwy, mi 9 (ZAVARZIN & TIMDAL 2004);

Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014).

Nephroma parile (Ach.) Ach. – Corticolous on bark of hardwoods and conifers, and saxicolous and muscicolous on rocks. – Anchorage, Chugach Mts; Bartlett Glacier, mi 48 on Alaska Railroad from Tunnel to Trail Glacier; Denali NP, NW shore of Wonder L; Newhalen, Flat Isl; Skagway; Yakutat; Yakutat Bay, Disenchantment Bay (WETMORE 1960); halfway up Tracy Arm (KROG 1962); Mendenhall Glacier (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Wonder L; McKinley Bar (WEBER & VIERECK 1967); Juneau area, Loop Rd; Mendenhall L; Ketchikan area, Deer Mtn; Talkeetna Mts, Willow Rd; Talkeetna Mts, Buffalo Mine; Eagle R Valley; Anchorage, O'Malley Rd; Anchorage, Eastchester Swamp; Potter, on Turnagain Arm; Anchorage, Rabbit Cr Rd; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Granite Cr Ridge; Kenai Peninsula, Copper Cr; Kenai Peninsula, Skilak L; Kenai Peninsula, Ninilchik; Seward; W of Seward, Marathon Mtn; Richardson Hwy, mi 9; Richardson Hwy, mi 24; Denali Hwy, mi 0–37; Denali Hwy, mi 70; White Mts, between Beaver Cr and Fossil Cr; White Mts, lower Fossil Cr; Nunivak Isl, Mekoryuk Village; Seward Peninsula, King Mtn; N of Nome, Anvil Pk (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Anchorage, by Portage (SCHINDLER 1987); Katmai NP, Brooks Lodge area, in CG; Denali NP, Rock Cr Trail (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Haines Hwy, mi 33; Richardson Hwy, mi 10; Blueberry L CG; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seaton Roadhouse; Beaver Cr; 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Alaska (MORRIS & STONE 2022).
= “*Nephroma laevigatum* f. *parile* Mudd.” – Yakutat Bay (STAIR 1947).
= “*Nephroma laevigatum* var. *parile* (Ach.) Nyl.” – Disenchantment Bay (CUMMINGS 1904); Skagway (MERRILL 1908c).

Nephroma resupinatum (L.) Ach. – Corticolous on conifers and hardwoods, lignicolous on logs and saxicolous/muscicolous over mossy boulders. – Juneau (DEGELIUS 1937); Skagway; Yakutat; Chena Ridge near Fairbanks (WETMORE 1960); Yakutat Bay (STAIR 1947); halfway up Tracy Arm, on W side (KROG 1962); Mendenhall Glacier (MCCULLOUGH 1965); Big Delta Quad, Chena Hot

Springs Rd (WEBER 1967); Juneau area, Loop Rd; Mendenhall Glacier Trail; Juneau area, Granite Basin; Talkeetna Mts, Little Susitna R; Portage Glacier; Kenai Peninsula, Skilak L; Seward; White Mts, lower Fossil Cr (KROG 1968); Alaska (THOMSON 1984: map); Anchorage, by Portage campsite (SCHINDLER 1987); Kenai Peninsula, Portage CG (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Wainwright (RACINE et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Nephroma tomentosum* (Hoffm.) Flot. – Near Juneau, Salmon Cr (CUMMINGS 1892a); Pt Gustavus (CUMMINGS 1904); Skagway (MERRILL 1908c).

Nephroma silvae-veteris → **Lobaria silvae-veteris**

Nephroma tropicum → **Nephroma helveticum** subsp. **sipeanum**

Nephromopsis americana → **Tuckermannopsis americana**

Nephromopsis andrejevii → **Arctocetraria andrejevii**

Nephromopsis cucullata → **Flavocetraria cucullata**

Nephromopsis nivalis → **Flavocetraria nivalis**

Nephromopsis inermis → **Masonhalea inermis**

Nephromopsis chlorophylla → **Tuckermannopsis chlorophylla**

Nephromopsis ciliaris → **Tuckermannopsis ciliaris**

#**Nesolechia cetrariicola** (Linds.) Arnold – On *Cetraria* spp. – Interior Alaska (LAURSEN & SEPPELT 2009).

#**Nesolechia fusca** (Triebe & Rambold) Pérez-Ort. – On *Hypogymnia hultenii* and *H. lophyrea*. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

= *Phacopsis fusca* (Triebe & Rambold) Diederich – Kodiak Isl Borough, Kodiak Isl E, Kalsin Bay SE; Cordova, Copper R Delta, along Copper R Hwy (TRIEBEL et al. 1991); Kodiak Isl E, Kalsin Bay SE, just W of Cape Chiniak Rd; ibid., at the end of Anton Larsen Bay Rd; Cordova, along Copper R Hwy (DIEDERICH 2003).

#**Nesolechia oxyspora** (Tul.) A. Massal. – On *Hypogymnia*, *Melanohalea*, *Parmelia* and *Platismatia* spp., these corticolous over *Picea* or lignicolous. – Dalton Hwy, mi 180.2, N Marion Cr (SUIJA 2006); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

= *Nesolechia oxyspora* var. *oxyspora* – 50 km ENE of Fairbanks, Caribou-Poker Crs Watershed (ZHURBENKO 2009b).

= *Phacopsis oxyspora* (Tul.) Triebe & Rambold – Kodiak Isl Borough, E of Kodiak Village, Near Isl N, Park; Kodiak Isl E, Middle Bay SW, American R; Kodiak Isl, Kalsin Bay SE, just W of and uphill from Cape Chiniak Rd (TRIEBEL et al. 1991; DIEDERICH 2003); Interior Alaska (LAURSEN & SEPPELT 2009).

= *Phacopsis oxyspora* var. *oxyspora* – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003).

Niebla cephalota (Tuck.) Rundel & Bowler – Corticolous on *Picea sitchensis* on beach fringe. – Delong Isl, Foggy Bay (DILLMAN et al. 2012).

Niebla ceruchis → [Appendix A](#)

#**Niesslia cladoniicola** D. Hawksw. & W. Gams – On *Cladonia* spp. – Kotzebue; Bering Land Bridge NPr; Seward Peninsula, Newton Pk; 7 km ESE of Nome; Kenai Peninsula, Chugach NF (ZHURBENKO & PINO-BODAS 2017); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

#**Niesslia keissleri** Zhurb. – On *Cladonia* spp. – Great Kobuk Sand Dunes; Fairbanks; Goldstream Valley; Fairbanks area, Skyline Ridge; Tanana R, Bonanza Cr; Denali NPPr, Hinnies Cr (ZHURBENKO & PINO-BODAS 2017).

#**Niesslia lobariae** Etayo & Diederich – On old lobe portions of *Lobaria linita*. – Coronation Isl, Egg Harbor (ZHURBENKO & DILLMAN 2010).

#**Niesslia peltigerae** Pérez-Ort. – Parasitic, bleaching host thallus, on *Peltigera kristinssonii* in *Tsuga mertensiana* parkland near the timberline. – Glacier Bay NP: Excursion Ridge (**type** – SPRIBILLE et al. 2020).

Nipponoparmelia isidioclada → [Appendix A](#)

Nodobryoria oregana (Tuck.) Common & Brodo – Corticolous on *Pinus contorta*, in low elevation open peatlands. – Prince of Wales Isl, Old Tom's Cr drainage (GEISER et al. 1998); S Alaska (ROOT et al. 2014).

= *Bryoria oregana* (Tuck ex Willey) Brodo & D. Hawksw. – SE Alaska (GEISER et al. 1994a: map).

Normandina acroglypta (Norman) Aptroot – Overgrowing *Leptogium* on *Populus balsamifera* and muscicolous on epiphytic mosses on *Alnus* bark. – Lake Clark NPPr, Chinitna Bay (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Normandina pulchella (Borrer) Nyl. – Corticolous or muscicolous on loosely adhering mosses over *Alnus*, *Picea sitchensis* and *Populus balsamifera*, also once over rock. A recent paper by ORANGE (2022) showed that two collections from Glacier Bay represent an undescribed species with other collections from the Americas distinct from *N. pulchella*. – SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Skagway, Chilkoot Trail (MUGGIA et al. 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, Currant Cr (MILLER & WALTON 2013); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

– O –

Ochrolechia alaskana (Versegghy) Kukwa – Muscicolous or over rocks or other lichens. – Atka Isl; St Lawrence Isl, Boxer Bay (KUKWA 2009); Atka Isl; Cape Nome (KUKWA 2011); St Lawrence Isl (MCCUNE 2017b); Katmai NPPr, E side Hammersly L; Katmai NPPr, ridge above Hammersly L (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

= *Ochrolechia frigida* f. *alaskana* Versegghy – Atka Isl (**type** – VERSEGHY 1958); Atka Isl; St Paul Isl (VERSEGHY 1962); Atka Isl (VERSEGHY 1964); Atka Isl (HANKO et al. 1985).

= *Ochrolechia frigida* var. *alaskana* (Versegghy) Versegghy – Atka Isl (VERSEGHY 1959).

Ochrolechia androgyna (Hoffm.) Arnold – Corticolous on *Betula*, *Picea*, *Pinus contorta* and *Tsuga* and lignicolous on wood, also muscicolous and terricolous in tundra. – East Cape Nome (HOWARD 1970); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Anaktuvuk Pass (THOMSON 1979); East Cape Nome; St Paul Isl; Wainwright, Kaolak R (BRODO 1991); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay; Deadman L CG; Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Yakutat lowlands (GEISER et al. 1998); Alaska (BRODO et al. 2001); 140 km E of Kotzebue, Kobuk R bank near junction with Kavet Cr (ZHURBENKO et al. 2005); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Teck Isl (DILLMAN 2010, as s. lat.); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus; Gustavus (SPRIBILLE et al. 2020).

Ochrolechia arborea (Kreyer) Almb. – Corticolous and lignicolous on conifers and hardwoods, reported from coastal localities. – Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); W Baranof Isl, Big Bay (GEISER et al. 1998); Lake Clark NPPr, W of Hatchet Pt; Katmai NPPr, Headwaters Cr; Lake Clark NPPr, Portage L (MCCUNE et al. 2018, second two records as aff., lacking gyrophoric acid).

Ochrolechia bahusiensis H. Magn. – Corticolous on trunk of huge *Picea* in oldgrowth forest. – Kenai Fjords NPPr, hill above Verdant Cove (MCCUNE et al. 2020).

Ochrolechia brodoi Kukwa – Corticolous on *Betula*, *Picea sitchensis* twigs, krummholz. – Lake Clark NP, Chinitna Bay Ranger Station (BRODO & MCCUNE 2017); coastal Alaska (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Ochrolechia cooperi T. Sprib. – On wood or bark of conifers, at low elevations from seashores to ca. 250 m. – Glacier Bay NP: Dundas Bay (Taylor Bay), Excursion Ridge (**type**); Gustavus; Chugach NF; Kenai Fjords NP, Three Hole Bay; Frederick Sound, N shore of Mitkof Isl (SPRIBILLE et al. 2020); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay (MCCUNE et al. 2020). = *Ochrolechia* sp. SPRIBILLE 38907 – Glacier Bay NP, Falls Cr (RESL et al. 2015, supplementary material). This is *O. cooperi* according to SPRIBILLE et al. (2020).

Ochrolechia elisabethae-kolae Versegghy – Saxicolous. – Atka Isl (**type** – VERSEGHY 1958, as ‘*elisabethi koli*’); Atka Isl (VERSEGHY 1959, as ‘*elisabethae kolae*’); Atka Isl (VERSEGHY 1962; VERSEGHY 1964; DEGELIUS 1968; HANKO et al. 1985; KUKWA 2011: 108).

Ochrolechia farinacea Howard – Corticolous on *Populus*. – Katmai NPPr, Headwaters Cr (MCCUNE et al. 2018).

Ochrolechia frigida (Sw.) Lynge – Terricolous, muscicolous and saxicolous in forest and tundra, also less commonly corticolous on conifers or *Betula*. – Unalaska Isl, Unalaska; Atka Isl; Adak Isl, Chapel Cove; Amchitka Isl; St Paul Isl (DEGELIUS 1937); Raspberry Isl, Port Vita; Kuiu Isl, Washington Bay (THOMSON 1950a); Juneau icefield nunatak (HEUSSER 1954); Mentasta Village; Pt Barrow, Central Marsh; Iliamna Moraine, 3 mi W of camp; Pt Barrow (HOWARD 1958); Quigley Hill; hill E of rd to Kantishna (HOWARD 1963); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Unalaska Isl; PWS, Knight Isl; Pt Barrow; St Paul Isl, Bering Sea (HOWARD 1970); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (NASH 1977); Haul Rd, Toolik Upland Rd Site, Haul Rd, Franklin Buffs Site, Haul Rd, Coastal Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Prudhoe Bay (WALKER & WEBBER 1979); thaw lake plain near Barrow (BILLINGS & PETERSON 1980); Barter Isl (COPPINS 1981); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Tikchik L; Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Hagemeister Isl (TALBOT et al. 1990); St Paul Isl (SCHINDLER 1990); Central Arctic coastal plain (WALKER et al. 1991); Chisik Isl (TALBOT et al. 1992); Portage Glacier; Eagle Summit; Mt Fairplay; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Alaska (THOMSON 1997: map); Shumagin Isls, Simeonof Isl (DANIËLS et al. 1998); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Teck Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Glacier Bay NP, Excursion Ridge (RESL et al. 2015, supplementary material); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP; Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Ochrolechia frigida* f. *frigida* – Umiat (HOWARD 1970; MURRAY 1974); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Barter Isl (THOMSON 1979); Adak Isl (TALBOT et al. 1997).

= “*Lecanora tartarea* f. *frigida* (Sw.)” – Lawrence-Insula; Port Clarence (NYLANDER 1887).

= “*Lecanora tartarea* var. *frigida*” – Lawrence-Insula (NYLANDER 1885a; HUE 1891); Pribilof Isls (MACOUN 1899); St Paul Isl; Kotzebue Sound (MACOUN 1902); Kodiak; Hall Isl; St Lawrence Isl (CUMMINGS 1904).

= “*Lecanora tartarica* var. *frigida* Ach.” – Kotzebue Sound (TURNER 1886; MANN 1868). Orthographic variant.

= “*Parmelia tartarea* var. *frigida* Fries” – Kotzebue’s Sound (BABINGTON 1851); Kotzebue Sound (BABINGTON 1852).

= "*Lecanora oculata* (Dicks.) Ach. var. *gonatodes* Ach." – St Paul Isl (MACOUN 1899).

= *Ochrolechia gonatodes* (Ach.) Räsänen – Anaktuvuk Pass (MOSER et al. 1979).

= *Ochrolechia frigida* f. *gonatodes* (Ach.) Lynge – St Lawrence Isl; Unalaska Isl; Goodnews Bay, near Platinum; St Lawrence Isl, Boxer Bay; Port Heiden (HOWARD 1958); Atka Isl; Cape Nome; Hall Isl, Bering Sea; Port Heiden; St Lawrence Isl, Boxer Bay (HOWARD 1970); Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).

= *Ochrolechia frigida* f. *lapuënsis* (Vain.) Tønsberg – Noatak NPr (MCCUNE et al. 2009).

= *Lecanora tartarea* var. *pterulina* Nyl. – In insula Lawrence (**type** – NYLANDER 1885a: p. 442, under *Pertusaria glomerata* var. *corniculata*; HUE 1891); Kodiak; Hall Isl; St Matthew Isl (CUMMINGS 1904).

= *Ochrolechia pterulina* (Nyl.) G. E. H. Howard – Bering Sea, Hall Isl; St Mathews Isl (HOWARD 1970).

= "*Lecanora tartarea* f. *telephoroidea*" – Lawrence-Insula (NYLANDER 1887, as host of *Geltingia associata*; HUE 1891).

= *Ochrolechia frigida* f. *thelephoroides* (Th. Fr.) Lynge – St. Lawrence Isl, Savoonga; Pt Barrow, Central Marsh; Pt Barrow, one mi S of Barrow Base (HOWARD 1958); Tongass NF, Mendenhall Visitor's Center Area; Bering Sea; Nunivak Isl; Pt Barrow (HOWARD 1970); Fish Cr drilling site (LAWSON et al. 1978); Prudhoe Bay (MURRAY & MURRAY 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L; Barter Isl; Beaufort Lagoon, Nuvagapak Pt (THOMSON 1979); Amchitka Isl (THOMSON & SOWL 1989); Prudhoe Bay region (WALKER & EVERETT 1991); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1994a, 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); St Matthew Isl; St Paul Isl (TALBOT et al. 2001).

Ochrolechia frigida f. *alaskana* → **Ochrolechia alaskana**

Ochrolechia geminipara → **Toensbergia geminipara**

Ochrolechia gowardii Brodo – Corticolous on *Pinus contorta* twigs. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, mouth of Horn Cr; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018).

Ochrolechia grimmiae Lynge – Terricolous or muscicolous over rock. – Alaska (MAKAROVA 1976); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Eagle Summit (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000).

Ochrolechia gyalectina (Nyl.) Zahlbr. – Terricolous in forest and tundra. "Revision of the type... in S revealed that it contained a fatty acid and a possible trace of gyrophoric acid; therefore it does not belong to the genus *Ochrolechia*" (KUKWA 2011: 114, 229). – Port Clarence (VERSEGHY 1962); Behring Strait (HOWARD 1970); Anchorage, Portage Glacier (SCHINDLER 1987); Thompson Pass

(THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Alaska (MCCUNE 2017b).

= *Lecanora gyalectina* Nyl. – Port Clarence (**type** – NYLANDER 1885b; NYLANDER 1887; HUE 1891).

Ochrolechia inaequatula (Nyl.) Zahlbr. – Terricolous or muscicolous on moss and humus; KUKWA (2009a) considers this a synonym of *O. frigida*. – Port Clarence (VERSEGHY 1955; HOWARD 1958; VERSEGHY 1962; VERSEGHY 1969); Port Clarence; S of Wainwright, Kaolak R; Richardson Hwy, mi 25.1, Thompson Pass (HOWARD 1970); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010, as aff.); Alaska (MCCUNE 2017b); Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

= *Lecanora inaequatula* Nyl. – Port Clarence (**type** – NYLANDER 1885b; NYLANDER 1887; HUE 1891).

Ochrolechia juvenalis Brodo – Corticolous or lignicolous on conifer bark or lignum, also on *Alnus*, coastal southern Alaska. – SE Alaska (GEISER et al. 1994a: map); W Baranof Isl, Big Bay; Mitkof Isl, Bear Cr; LeConte Bay (GEISER et al. 1998); Izembek Refuge, Cold Bay (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); King Salmon (MCCUNE et al. 2018); Kenai Fjords NPPr, N end of Harris Bay, near opening to Northwestern Lagoon; Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Ochrolechia laevigata (Räsänen) Verseghy ex Brodo – Corticolous on bark of conifers and hardwoods, coastal southern Alaska. – Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier; Haines Hwy, mi 33; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, near mouth of cr at N end of James Lagoon; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020, as cf.); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Ochrolechia mahuensis Räsänen – Corticolous on *Betula* and lignicolous on *Picea* snag. – Katmai NPPr, Brooks Camp; Lake Clark NPPr; Pickerel (as Pickeral) L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

Ochrolechia minuta (Degel.) T. Sprib. – Corticolous on *Picea*. – Kodiak Isl (SPRIBILLE et al. 2020).

= *Perforaria minuta* Degel. – Kodiak Isl, Kodiak (**type** – DEGELIUS 1937).

= *Coccotrema minutum* (Degel.) R. Sant. ex T. Sprib. et al. – Kodiak Isl (SPRIBILLE et al. 2010); Kodiak Isl (MCCUNE 2017a & b).

Ochrolechia montana Brodo – Corticolous on *Pinus contorta*. – Glacier Bay NP:

Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Ochrolechia oregonensis H. Magn. – Corticolous on conifers and hardwoods in southern coastal Alaska. – Kuiu Isl, Washington Bay (THOMSON 1950a); Kuiu Isl, Washington Bay; Tongass NF, Mendenhall Valley CG (HOWARD 1970); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33; terminal moraine of Valdez Glacier (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Tongass NF, Lower Dewey L Trail, near Stargill's Landing (NASH et al. 2006); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Ochrolechia pallescens → [Appendix A](#)

Ochrolechia parella → [Appendix A](#)

Ochrolechia parella var. *tumidula* → [Appendix A](#)

Ochrolechia rhodoleuca → [Appendix A](#)

Ochrolechia subpallescens Verseghey – Corticolous on *Alnus*, *Populus* and conifers, sea level to subalpine. – SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018).

Ochrolechia subpublicans (Nyl.) Brodo, **subspecies not specified** – Saxicolous. – Nishlik L (THOMSON & DOELL 1989); Hagemeister Isl (TALBOT et al. 1990); Thompson Pass (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010).

Ochrolechia subpublicans subsp. **subpublicans** – Saxicolous and one report from dry heath (“terricolous?”; GEISER et al. 1998). – Lawrence insula; Ogotoruk Cr drainage; Kukpuk R; Fretum Behringii; Lookout Ridge Quad, Pahrón Cr (BRODO 1988); Alaska (MCCUNE et al. 1997); near Juneau, Gastineau Pk (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (MCCUNE 2017b).

= *Pertusaria subpublicans* Nyl. – Lawrence-Insula (**type** – NYLANDER 1885a; NYLANDER 1887); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass (THOMSON 1979); Unalaska Isl; Atka Isl; St Lawrence Isl; St Paul Isl; Alexander Archipelago, Kuiu Isl, Washington Bay; Kodiak Isl; Pitmegea R, 15 mi upstream of Cape Sabine; Kukpuk R region, SE of Pt Hope (DIBBEN 1980); Ogotoruk Cr (MURRAY 1985).

Ochrolechia subpublicans subsp. **hultenii** (Erichsen) Brodo – Saxicolous on andesite, gneiss and argillite, calcareous rocks and basalt, also lignicolous on wooden planks. – Unalaska Isl; Kodiak Isl, Three Saints Bay; Fretum Behringii (BRODO 1988); Adak Isl (TALBOT et al. 1997); Aaron Isl near Juneau (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Glacier Bay NP, Icy Straits, Fern Harbor; Glacier Bay NP, Excursion Ridge (RESL et al. 2015, supplementary material); Glacier Bay NP, Excursion Ridge (SCHNEIDER et al. 2015); Alaska (MCCUNE 2017b); Katmai NPPr, Naknek L; Lake Clark NPPr,

Chinitna Bay; Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay; Kenai Fjords NPPr, N side of Verdant Cove (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

= *Pertusaria hultenii* Erichsen – Aleutians, Unalaska Isl (**type** – ERICHSEN 1938); Kuiu Isl, Washington Bay (THOMSON 1950a); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1960); Amchitka Isl, above Chitka Cove (WEBER et al. 1969).

Ochrolechia szatalaënsis Verseghy – Corticolous or lignicolous on conifers and hardwoods, mainly in SE Alaska. – Anchorage, by Portage (SCHINDLER 1987); Juneau (BRODO 1991); Chisik Isl (TALBOT et al. 1992); Haines Hwy, mi 33; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); NW of Haines; Juneau (GEISER et al. 1998); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); SE Alaska (MCCUNE 2017b); Glacier Bay NP: East Arm, Gustavus, West Arm (SPRIBILLE et al. 2020).

Ochrolechia tartarea (L.) A. Massal. – Saxicolous. Use of this name in the historical literature is impossible to interpret, and many records may refer to *O. frigida*. It is also unclear if THOMSON'S (1997) and subsequent uses of the name refer to the species in the original sense. – Summit of White Pass; Unalaska; Hall Isl; St Matthew Isl; St Lawrence Isl; Cape Nome (CUMMINGS 1904: “most specimens are sterile”); Baker Isl, Port San Antonio; Heceta Isl; Kosciusko Isl, Shipley Bay (HERRE 1919); Alaska (HADWEN & PALMER 1922, ‘*tatarea*’); Atka Isl; Amlia Isl; Unalaska Isl (HEDRICK 1936); Atka Isl; Amlia Isl (THOMSON 1950a); St Lawrence Isl (HOWARD 1958); Baker Isl, Port San Antonio; St Lawrence Isl; PWS, Knight Isl (HOWARD 1970); Amchitka Isl (THOMSON & SOWL 1989); SE Alaska (GEISER et al. 1994a); Unalaska Isl; Attu Isl (THOMSON 1997); Baker Isl, Port San Antonio; Heceta Isl; Kosciusko Isl, Shipley Bay (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Kenai Fjords NPPr, Northeast end of Harris Bay (MCCUNE et al. 2020).

= *Lecanora tartarea* (L.) Ach. – Shumagin Group; Unalashka Isl; Cape Lisburne, Arctic Ocean (ROTHROCK 1884); Port Clarence (ALMQUIST 1887); Pribilof Isls (MACOUN 1899); St George Isl; St Paul Isl; Shumagin Group; Cape Lisburne (MACOUN 1902).

Ochrolechia trochophora → [Appendix A](#)

Ochrolechia upsaliensis (L.) A. Massal. – Terricolous on soil and detritus and overgrowing *Selaginella* and moss, typically in tundra or steppe-like vegetation. – Chernofski (HOWE 1913a); Port Clarence (HOWARD 1958); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Amchitka Isl (THOMSON & SOWL 1989); Eagle Summit;

terminal moraine of Valdez Glacier; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010: 196); Denali NPPr, N of the AK Range (STEHN et al. 2015); Lake Clark NPPr, Portage L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

= "*Lecanora upsaliensis* (L.)" – Port Clarence (NYLANDER 1887; HUE 1891).

= "*Lecanora pallescens* var. *upsalensis* Fries" – Kotzebue Sound (MANN 1868; TURNER 1886; MACOUN 1902).

= "*Lecanora tartarea* Ach. var. *upsaliensis*" – Kotzebue's Sound (HOOKER & ARNOTT 1841).

= "*Parmelia pallescens* var. *upsaliensis* Fries" – Kotzebue's Sound (BABINGTON 1851; BABINGTON 1852).

Ochrolechia xanthostoma (Sommerf.) K. Schmitz & Lumbsch – On bark and wood in coastal areas; a record from rocky soil in the alpine (GEISER et al. 1998) may refer to another species. See also discussion of this taxon and "*Ochrolechia* sp. S38011" in SPRIBILLE et al. (2020). – Tawa Cr, Yakutat lowlands (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); coastal Alaska (MCCUNE 2017b); Kenai Fjords NPPr (MCCUNE et al. 2020).

= *Pertusaria xanthostoma* (Sommerf.) Fr. – "on *Populus trichocarpa*". – Chisik Isl (TALBOT et al. 1992, misidentification of *Pertusaria hymenea* per MCCUNE et al. 2018); Alaska (THOMSON 1997: map).

#*Odontotrema intermedium* → **Sphaeropezia intermedia**

#*Odontotrema melaneliae* → **Sphaeropezia melaneliae**

#*Odontotrema ochrolechiae* → **Sphaeropezia ochrolechiae**

#*Odontotrema thamnoliae* → **Sphaeropezia thamnoliae**

Omphalina hudsoniana → **Lichenomphalia hudsoniana**

Omphalina umbellifera → **Lichenomphalia umbellifera**

#**Opegrapha anomea** Nyl. – On *Ochrolechia* spp. – Cordova, Copper R delta, along Copper R Hwy, SE of the airport; Kodiak Isl E, Anton Larsen Bay, 1.6 mi along the road from the head of the bay (ERTZ et al. 2004).

Opegrapha fumosa Coppins & P. James – Corticolous on *Alnus*, *Picea sitchensis*, *Tsuga heterophylla*, and *Vaccinium* spp. – Coronation Isl, Windy Bay; Kuiu Isl, Table Bay; Kodiak Isl E, Ft Abercrombie State Historical Park (DILLMAN et al. 2012); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

#**Opegrapha geographicola** (Arnold) Hafellner – On *Rhizocarpon geographicum* aggr. – Brooks Range, Endicott Mtn, S below Atigun Pass (DILLMAN et al. 2012); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Alaska (FRISCH et al. 2022b).

Opegrapha gyrocarpa → **Gyrographa gyrocarpa**

Opegrapha halophila Brodo & Tønsberg – Saxicolous, especially on vertical, siliceous rock walls in the salt spray zone. – Kuiu Isl (BRODO & TØNSBERG 2019).

Opegrapha herbarum → **Alyxoria culmigena**

Opegrapha ochrocheila → **Alyxoria ochrocheila**

Opegrapha rupestris Pers. – Saxicolous on calcareous cliffs near shore. – Prince of Wales Isl (GEISER et al. 1994a, 1998).

= *Opegrapha saxicola* Ach. – Prince of Wales Isl, Deweyville (HERRE 1919); Alaska (THOMSON 1997: map).

Opegrapha saxicola → **Opegrapha rupestris**

#**Opegrapha sphaerophoricola** Isbrand & Alstrup – On *Sphaerophorus tuckermanii* and *S. venerabilis*, corticolous on *Pinus contorta* and *Tsuga heterophylla*. – Chilkoot Trail (SPRIBILLE et al. 2010); Coronation Isl, Egg Harbor (ZHURBENKO & DILLMAN 2010); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020).

#**Opegrapha stereocaulicola** Alstrup & D. Hawksw. – On *Stereocaulon alpinum*. – Seward Peninsula, Nome; Wrangell-Saint Elias NPPr, Nizina R (ZHURBENKO 2010).

#**Opegrapha thelotrematis** Coppins – On *Thelotrema* sp. – Coronation Isl, Windy Bay (DILLMAN et al. 2012); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Opegrapha varia → **Alyxoria varia**

Ophioparma lapponica (Räsänen) Hafellner & R. W. Rogers – Saxicolous on siliceous rock, especially where highly exposed. Many records prior to the revision of the genus in North America by MAY (1997) probably refer to *O. ventosa*. – Tikchik L; Nishlik L (THOMSON & DOELL 1989); Denali NP, Savage R (SCHINDLER 1990); Kantishna; Bering Strait, Little Diomedé Isl; Brooks Range; Okpilak L; E side of Opalak R; Franklin Bluffs; vicinity of Nome; 9 mi N of Nome; Bering Strait District; L Peters (MAY 1997: map); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); [SE Alaska] mainland, Elbow Mtn, Thunder Mtn and near glacier terminus, LeConte Bay; Mitkof Isl, Crystal Mtn (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Mt Fairplay (TALBOT et al. 2007); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Haematomma lapponicum* Räsänen – Records in part doubtful (MAY 1997). – Colville R, at Umiat (THOMSON 1960); Franklin Bluffs on the Sagavanirktok R; Steese Hwy, Eagle Pass (CULBERSON 1963); Juneau Icefield (MCCULLOUGH 1965); Steese Hwy, Eagle Summit; Thompson Pass N of Valdez; Franklin Bluffs on the Saganavirktok R; Sahlgvik Ridge near Cape Thompson; Okpilak L, Okpilak R; Umiat; Denali NP, Mt Eielson; Cape Nome; St Lawrence Isl, Boxer Bay (THOMSON 1968c); Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Arey Cr; Okpilak Valley (COPPINS 1981); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Chisik Isl (TALBOT et al. 1992, misidentification of *O. ventosa* per MCCUNE et al. 2018); SE Alaska (GEISER et

al. 1994a: map); Eagle Summit; Mt Fairplay; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996).
 = *Haematomma lapponicum* var. *lapponicum* – Denali NP, slope N of Station Primrose (SCHINDLER 1987).
 = *Haematomma ventosum* subsp. *lapponicum* (Räsänen) J. R. Laundon – Mt Eielson; Kantishna (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969).
 ?= *Haematomma lapponicum* var. *violascens* Räsänen – Denali NP, slope N of Station Primrose (SCHINDLER 1987).

Ophioparma rubricosa (Müll. Arg.) S. Ekman – Lignicolous on stump. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).

Ophioparma ventosa (L.) Norman – Saxicolous on acidic alpine rocks. – Amchitka Isl; Bering Strait, Little Diomedé Isl; Brooks Range; Steese Hwy, Eagle Summit; Mt Fairplay, Taylor Hwy, mi 33; King Salmon; L Schrader; Chandler L; Denali NP; St George Isl; Unalaska Isl, Captains Bay; Umiat; Mt Hayes Quad (MAY 1997: maps); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009, as s. lat.); Afognak Isl, Blue Fox Bay (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Hammersly L; Katmai NPPr, Malone L; Katmai NPPr, Mirror L; Lake Clark NPPr, Slope Mtn; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Kenai Fjords NPPr, NPS weather station (MCCUNE et al. 2020).
 = *Haematomma ventosum* (L.) A. Massal. – Alaska (HADWEN & PALMER 1922); Unalaska Isl (HEDRICK 1936); Unalaska Isl, Unalaska (DEGELIUS 1937); Port Heiden; Attu Isl, Dam Cr (HOWARD 1958); Quigley Hill; hill E of rd to Kantishna (HOWARD 1963).
 = *Lecanora ventosa* (L.) Ach. – Kotzebue's Sound (HOOKER & ARNOTT 1841); Isls of Behring's Strait (TUCKERMAN 1882); St George Isl (MACOUN 1899); St George Isl; islands of Behring Strait (MACOUN 1902).

Orphniospora moriopsis (A. Massal.) D. Hawksw. – Saxicolous on siliceous rocks, forest zone to arctic/alpine. – Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr, Mirror L; Katmai NPPr, W of Contact Cr; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).
 = *Buellia moriopsis* (A. Massal.) Th. Fr. – Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).
 = *Orphniospora atrata* (Anzi) Poelt – Arey Cr (COPPINS 1981).

Oxneriaria mashiginensis (Zahlbr.) S. Y. Kondr. & Lőkös – Saxicolous on outcrop just above sea-level beach, ice-free since 1970s. – Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

Oxneriaria nikrapensis (Darb.) S. Y. Kondr. & Lőkös – Saxicolous on calcareous rocks.
 = *Aspicilia nikrapensis* Darb. – Anaktuvuk Pass (MOSER et al. 1979).

= *Lecanora nikrapensis* (Darb.) Zahlbr. – Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979).

Oxneriaria supertegens (Arnold) S. Y. Kondr. & Lőkös – Saxicolous on acidic rocks.

= *Aspicilia supertegens* Arnold – Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Alaska (THOMSON 1997: map); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Alaska (MCCUNE & DI MEGLIO 2021).

= *Lecanora supertegens* (Arnold) Zahlbr. – Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

– P –

Pachyospora verrucosa → **Megaspora verrucosa**

#**Pachypeltis invadens** Søchting et al. – On other crustose lichens, particularly *Placynthium*, especially on seepage surfaces.

= *Caloplaca invadens* Lynge (nom. inval., ICNafp Art. 39.1) – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); arctic-alpine Alaska (MCCUNE 2017b); Katmai NPPr, Naknek L (MCCUNE et al. 2018).

Pachyphiale carneola (Ach.) Arnold – On old carpophores of a polypore.

= *Gyalecta carneola* (Ach.) Hellb. – Matanuska-Susitna Borough, Petersburg Rd (HAFELLNER 2022, as host of *Refractohilum intermedium*).

Pachyphiale fagicola (Arnold) Zwackh – Corticolous on *Alnus* and *Betula papyrifera*. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Gyalecta fagicola* (Arnold) Kremp. – SE Alaska (MCCUNE 2017a & b).

Palicella filamentosa (Stirt.) Rodr. Flakus & Printzen – Corticolous on *Alnus*. – Katmai NPPr, Headwaters Cr; King Salmon (MCCUNE et al. 2018).

Palicella schizochromatica (Pérez-Ort. et al.) Rodr.-Flakus & Printzen – Corticolous on *Betula* and *Abies lasiocarpa*. – Alaska (MCCUNE 2017b); Kenai Fjords NPPr, N end of Harris Bay, near opening to Northwestern Lagoon; Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon (MCCUNE et al. 2020).

= *Lecanora schizochromatica* Pérez-Ort. et al. – Near Skagway; E side of White Pass (PEREZ-ORTEGA et al. 2010); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE et al. 2010).

Pannaria ahlneri → **Fuscopannaria ahlneri**

Pannaria conoplea (Ach.) Bory – Muscicolous or terricolous over bedrock at base of rock cliffs. – Alaska (JØRGENSEN 1978); N bank of McKinley R (JØRGENSEN 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr, S of the AK Range (STEHN et al. 2015); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Alaska (McCune et al. 2022).

= *Pannaria pityrea* auct. – McKinley Bar (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979).

Pannaria hookeri (Borrer ex Sm.) Nyl. – Saxicolous on rock walls affected by seepage. – Alaska (JØRGENSEN 1978); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); White Pass (SPRIBILLE & MUGGIA 2013).

Pannaria leucostictoides → **Fuscopannaria leucostictoides**

Pannaria maritima → **Fuscopannaria maritima**

Pannaria mediterranea → **Fuscopannaria mediterranea**

Pannaria oregonensis McCune et al. – On bark, most often on hardwood trees and shrubs but also on conifers including *Picea sitchensis*; oceanic forests, dunes, and woodlands. – Alaska (MCCUNE et al. 2022).

= *Pannaria rubiginella* auct., non P. M. Jørg. & Sipman – Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Coronation Isl (JØRGENSEN 2005).

= *Pannaria rubiginosa* auct., non (Ach.) Bory – S Alaska (ROOT et al. 2014).

Pannaria praetermissa → **Fuscopannaria praetermissa**

Pannaria rubiginella → **Pannaria oregonensis**

Pannaria rubiginosa → **Pannaria oregonensis**

#Paranectria alstrupii Zhurb. – Commensalistic on lobes of *Steineropsis laceratula*. – S Mitkof Isl, Pt Howe (ZHURBENKO & DILLMAN 2010, as cf.).

Parmelia fraudans (Nyl.) Nyl. – Saxicolous on acidic boulders, also reported as lignicolous on wooden planks and twice as corticolous on *Alnus crispa* (TALBOT et al. 2000, 2007); these latter records are doubtful. – Camden Bay (MERRILL 1924b, but “Merrill (1924) reported this species from Alaska, but according to Lyngé’s notes this record was a misidentification of *P. sulcata*” according to KROG 1968); Camden Bay in Alaska (HASSELROT 1953, but without seeing the specimen); Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Anchorage area, headwaters of Rabbit Cr; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Denali Hwy, mi 32–37; Denali Hwy, mi 70; Denali NP, Savage R; Denali NP, Wonder L; White Mts, headwaters of Sheep Cr; White Mts, Fossil Cr; Steese Hwy, Cleary Summit; Circle Hot Springs (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, Morino Loop Trail (SCHINDLER 1987); Mt Fairplay (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Lake Clark NP, Tuxedni R (DILLMAN 2003); Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Tuxedni R (MCCUNE et al. 2018).

Parmelia hygrophila Goward & Ahti – Corticolous on conifers and hardwoods, mainly in SE Alaska, west to Kodiak Isl. See also entries under *Nipponoparmelia isidioclada* and *Punctelia subrudecta* in [Appendix A](#). – 6 km NW of Skagway, Dyea, on Taiya R estuary (GOWARD & AHTI 1983); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33; Richardson Hwy, mi 10; Fielding L (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); SE Alaska (DERR et al. 2007); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Kodiak Isl, inland from the SE corner of Halibut Bay and S of Halibut Lagoon (DILLMAN 2010); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE

et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, Coffee R valley; Denali NPPr, Kahiltna Glacier forest; Denali NPPr, Ruth Glacier forest; Denali NPPr, Cascade Cr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Parmelia isidioclada → *Nipponoparmelia isidioclada* in Appendix A

Parmelia omphalodes (L.) Ach. – Saxicolous, occasionally reported as terricolous. – Lawrence-Insula (NYLANDER 1887); Unalaska Isl, Unalaska; Kanaga Isl, NW side; Agattu Isl, N side (DEGELIUS 1937); Yakutat Bay (STAIR 1947); Anaktuvuk Pass (LLANO 1951; MURRAY 1974); Attu Isl, Siddens Valley, Engineers Canyon (HOWARD 1958); S of Wainwright, Kaolak R; Pt Barrow (THOMSON 1960); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Brooks Range, L Peters; St Matthew Isl; Steese Hwy, Eagle Summit; Porcupine Dome Ogotoruk Cr drainage, above Slate Cr; Cape Dyer, drainage of Angowlik and Kipaloq Crs; Cape Dyer, S of Angowlik Cr; S slope of Cape Dyer (KROG 1962); Quigley Hill; hill E of rd to Kantishna; 1 mi S of Wonder L Lodge (HOWARD 1963); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Ketchikan area, Saxman Village; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Eagle R Valley; Potter, on Turnagain Arm; Turnagain Arm, Bird Cr Ridge; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; Seward; Richardson Hwy, mi 24; Richardson Hwy, mi 45; PWS, Pigot Bay; Denali Hwy, mi 0–28; Denali Hwy, mi 70; Denali NP, Savage R; Denali NP, Polychrome Pass; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Nunivak Isl, Robert's Mtn; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr; Kotzebue (KROG 1968); Kodiak Isl, 29 km NW of Olga Bay Cannery, “Amara Lake”; Kodiak Isl, mtn top 6 km NNW of “Amara Lake” (KROG 1969); Amchitka Isl (WEBER et al. 1969); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Barter Isl; Beaufort Lagoon, Nuvagak Pt (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Alaska (HALE 1987); Arrigetch Cr valley (COOPER 1986b); Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Imnavait Cr (WALKER et al. 1989); St Paul Isl, SW coast; St Paul Isl, by the water towers; Katmai NP, Ninagiak Isl; Denali NP, Savage R (SCHINDLER 1990); Hagemester Isl (TALBOT et al. 1990); Central Arctic coastal plain (WALKER et al. 1991); SE Alaska (GEISER et al. 1994a); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft

Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Saxman village near Ketchikan (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk; Cold Bay (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Teck Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Parmelia omphalodes* subsp. *omphalodes* – Unalaska; White Mts; Denali Hwy, mi 28 (SKULT 1987, ‘type I’); Seward Peninsula, King Mtn; Denali NP; White Mts (SKULT 1987, ‘type II’); Eagle Summit; Mt Fairplay; Blueberry L CG; Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994).

= “*Parmelia saxatilis omphalodes* (L.) Fr.” – Kodiak; summit of White Pass; St Paul Isl; Port Clarence; St Michael; Cape Nome (CUMMINGS 1904).

= “*Parmelia saxatilis* var. *omphalodes* (L.) E. Fries” – Near Cape Lisburne (ROTHROCK 1884); St Paul Isl; Unalaska Isl; Cape Vancouver (MACOUN 1902); Atka Isl (HOWE 1913a); Camden Bay (MERRILL 1924b); Unalaska Isl; Atka Isl (HEDRICK 1936).

Parmelia pinnatifida Kurok. – Saxicolous on siliceous rock. Phylogenetic evidence (MOLINA et al. 2004) suggests this is distinct from *P. omphalodes* and we recognize it at species level in agreement with the current European list (HAWKSWORTH et al. 2008).

= *Parmelia omphalodes* subsp. *pinnatifida* (Kurok.) Skult – Pt Barrow (SKULT 1984); Nunivak Isl, Robert's Mtn; Denali Hwy, mi 70; Talkeetna Mts (SKULT 1987); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).

Parmelia pseudosulcata Gyeln. – Corticolous on conifers and *Populus*, SE Alaska. – SE Alaska (GEISER et al. 1998; DILLMAN 2004); Chugach NF (DERR 2010); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Parmelia kerguelensis* auct., non F. Wilson – SE Alaska (GEISER et al. 1994a: map).

Parmelia saxatilis (L.) Ach. – Saxicolous and terricolous on detritus over rock, lignicolous on driftwood, and widely reported as corticolous on conifers. – Kotzebue's Sound (BABINGTON 1851); Kotzebue Sound (BABINGTON 1852; MANN 1868; TURNER 1886); Cape Lisburne; Unalashka; Cross Sound (ROTHROCK 1884); Lawrence-Insula (NYLANDER 1887; HUE 1890); near Juneau,

Sheep Cr (CUMMINGS 1892a); St Paul Isl; St George Isl (MACOUN 1899, 1902); Sitka; Baranof Isl, Hot Springs; Yakutat; Virgin Bay; Sturgeon R Bay; Kukak; Unalaska; St Michael; Port Clarence (CUMMINGS 1904); St George Isl; St Paul Isl (MERRILL 1908b); Unalaska Isl, Chernofski; St Paul Isl (HOWE 1913a); Baker Isl, Port San Antonio; Nichols Bay; Saltery Cove; Kosciusko Isl; Kuiu Isl, Kell Bay (HERRE 1919); Camden Bay (MERRILL 1924b); Kodiak Isl; Atka Isl; Sitkalidak Isl (HEDRICK 1936); Kenai Peninsula, Seward; Kodiak Isl, Kodiak; Unalaska Isl, Unalaska; Agattu Isl, N side; Attu Isl (DEGELIUS 1937); Cross Sound; near Kink; Quinhagak; Unalaska; Cape Lisbon, Arctic Ocean (BERRY 1941); PWS, Thum Bay (EYERDAM 1949); Anchorage, Chugach Mts (HERRE 1950a); Kuiu Isl, Washington Bay; Raspberry Isl, Port Vita (THOMSON 1950a); Port Heiden; Hagemeister Isl (HOWARD 1958); Cape Dyer, drainage of Kipaloq and Angowlik Crs, S slope of Cape Dyer; Hooper Bay (KROG 1962); Quigley Hill; hill E of rd to Kantishna (HOWARD 1963); Wiseman, mtn across the Koyukuk R (HOWARD 1963; MURRAY 1974); Mendenhall Glacier (McCULLOUGH 1965); Wonder L (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Ketchikan area, Deer Mtn; Ketchikan area, Saxman Village; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; mtn ridge, Eagle R Valley; Turnagain Arm, Bird Cr Ridge; Anchorage area, headwaters of Rabbit Cr; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Portage Glacier; Seward; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Denali Hwy, mi 28; Denali NP, Savage R; White Mts, Cache Mtn; Steese Hwy, Twelvemile Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Kotzebue (KROG 1968); Kodiak Isl, 29 km NW of Olga Bay Cannery, "Amara Lake," "Pinguicula Lake", 23 km SE of Karluk, Kodiak Isl (KROG 1969); Amchitka Isl (WEBER et al. 1969); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Alaska (six specimens: HALE 1987); Anchorage, by Portage campsite; S of Talkeetna, Montana L (SCHINDLER 1987); Chikuminuk L (THOMSON & DOELL 1989); Amchitka Isl, Baraba Pt (THOMSON & SOWL 1989); Chisik Isl; Duck Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Haines Hwy, mi 33; terminal moraine of Valdez Glacier; Richardson Hwy, mi 10, near Valdez; Thompson Pass; Haines (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); SE Alaska (O'CLAIR et al. 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Lake Clark NP, Clam Cove (DILLMAN 2003); SE Alaska (DILLMAN 2004; DERR et al. 2007); Noatak NPPr (HOLT et al. 2009; McCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Teck Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr (McCUNE et al.

2020); Glacier Bay NP: Dundas Bay (including ‘marginalis’ morph), Excursion Ridge, Glacier Bay, Gustavus (‘marginalis’ morph), West Arm (SPRIBILLE et al. 2020).

= “*Parmelia saxatilis* var. *furfuracea* Schaer.” – St Paul Isl (HOWE 1913a).

= “*Parmelia saxatilis isidiata*” – Kosciusko Isl; Wrangell (HERRE 1919).

Parmelia skultii Hale – Terricolous on tundra. – W wall of Anaktuvuk Pass; St Matthew Isl; Port Clarence; Cape Lisburne; Diomedes Isl; Pt Barrow; Attu Isl (HALE 1987); Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); Alaska (MCCUNE 2007); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, Portage L (MCCUNE et al. 2018).

? = “*Parmelia omphalodes* subsp. *arctica*” – Denali NP, slope N of Station Primrose (SCHINDLER 1987). We are not aware of any subspecies by this name, and assume the author meant subsp. *glacialis*.

= *Parmelia omphalodes* subsp. *glacialis* Skult – Pt Barrow; Anaktuvuk Pass; Diomedes Isl; St Matthew Isl; Agattu Isl; Kanaga Isl; Talkeetna Mts; Eagle R Valley; Seward Peninsula, King Mtn; Nunivak Isl (SKULT 1985).

Parmelia squarrosa Hale – Corticolous on conifers and *Betula* in lowland rainforests, SE Alaska. A record from northwest Alaska (MCCUNE et al. 2009) is doubtful and should be re-examined. – “extremely rare in ...southern Alaska” (HALE 1971); SE Alaska (GEISER et al. 1994a: map); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004; DERR et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Parmelia saxatilis* var. *divaricata* Delise ex Nyl. – Halfway up Tracy Arm, on W side (KROG 1962); Juneau area, Loop Rd; Juneau area, Granite Basin; Juneau area, Shrine of St Therese; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Ketchikan area, Ward L; W of Seward, Marathon Mtn; Richardson Hwy, mi 9 (KROG 1968).

Parmelia sulcata Taylor – Corticolous on conifers and hardwoods, lignicolous, also over mossy rock. – Lawrence-Insula; Port Clarence (NYLANDER 1887; HUE 1890); Sitka (STIZENBERGER 1895a, 1895b); Middleton Isl (MERRILL 1908b); Kodiak Isl, Kodiak; Unalaska Isl, Unalaska; Unalaska Isl, Kashaga; Agattu Isl, N side (DEGELIUS 1937); PWS, Thum Bay (EYERDAM 1949); Raspberry Isl, Port Vita; Kuiu Isl, Washington Bay (THOMSON 1950a); Port Heiden (HOWARD 1958); Brooks Range, S slope, Wild L; Bettles (KROG 1962; MURRAY 1974); Steese Hwy, Eagle Summit (KROG 1962); Bettles, Lookout Mtn on Charlie's Trail (HOWARD 1963; MURRAY 1974); Kantishna Airstrip; Quigley Hill; hill E of rd to Kantishna (HOWARD 1963); Mendenhall Glacier, Juneau Icefield (MCCULLOUGH 1965); Mt Eielson; Wonder L; McKinley Bar (WEBER & VIERECK 1967); Juneau area, Loop Rd; Mendenhall Glacier Trail; Juneau area,

Granite Basin; Juneau area, Shrine of St Therese; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Sitka NM; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Talkeetna Mts, Mabel Mine; Knik R, near hwy; Eagle R Valley; mtn ridge Eagle R Valley; Anchorage, O'Malley Rd; Potter, on Turnagain Arm; Anchorage, Rabbit Cr Rd; Anchorage area, headwaters of Rabbit Cr; Anchorage, Eastchester Swamp; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Copper Cr; Kenai Peninsula, Skilak L; Homer; Kenai Peninsula, Ninilchik; Kenai Peninsula, Ingram Cr; Richardson Hwy, mi 9; Richardson Hwy, mi 45; PWS, Pigot Bay; PWS, Fish Bay; Denali Hwy, mi 0–37; Denali Hwy, mi 70; Denali NP, Toklat; Denali NP, Polychrome Pass; Denali NP, Wonder L; Richardson Hwy, Darling Cr; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; Steese Hwy, Cleary Summit; Circle Hot Springs; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Kodiak Isl, mtn top 6 km NNW of “Amara Lake” (KROG 1969); Amchitka Isl (WEBER et al. 1969); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Okpilak Valley (COPPINS 1981); Yukon R (MURRAY et al. 1983); Alaska (THOMSON 1984: map); Ogoruk Cr (MURRAY 1985); Turnagain Arm, Rainbow; Anchorage, by Portage (SCHINDLER 1987); Amchitka Isl (THOMSON & SOWL 1989); Katmai NP, Brooks Lodge area, in CG; Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Kenai Peninsula, Ptarmigan L Trail; Kenai Peninsula, Chugach NF, Quartz Junction (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Eagle Summit; Mt Fairplay; Haines Hwy, mi 33; Moon L CG; Richardson Hwy, mi 10; Thompson Pass (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); SE Alaska (DERR et al. 2007); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1240; Riverside Lodge Airstrip; Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, FIA plot at Square Bay South; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd, floodplain of Resurrection R; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020, including a ‘punctiform’ morph).

= “*Parmelia saxatilis* var. *sulcata* (Tayl.) Nyl.” – St George Isl (MACOUN 1899); St George Isl; Middleton Isl (MACOUN 1902); Sitka; Yakutat; Virgin Bay (CUMMINGS 1904); Akun Isl (HOWE 1913a).

Parmeliella mariana → [Appendix A](#)

Parmeliella parvula P. M. Jørg. – Corticolous on *Picea* and *Tsuga* twigs. – SE Alaska (DILLMAN 2004); Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr, Brooks Camp; Katmai NPPr, Naknek L; Katmai NPPr, Grandma’s Rock; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon; Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Parmeliella praetermissa → **Fuscopannaria praetermissa**

Parmeliella triptophylla (Ach.) Müll. Arg. – Corticolous on *Alnus*, *Cupressus nootkatensis*, *Oplopanax horridus*, *Populus balsamifera*, *Ribes lacustre*, *Salix* and fine *Tsuga heterophylla* twigs, occasionally on rock elsewhere but not yet reported from that substrate in Alaska. – Kuiu Isl, Washington Bay; Prince of Wales Isl, Deweyville; Heceta Isl, Port Alice; Nichols Bay; Coronation Isl (HERRE 1919; Nichols Bay specimen revised to *Protopannaria pezizoides* by MAGNUSSON 1932); by Portage (SCHINDLER 1987); SE Alaska (GEISER et al. 1994a: map); Sheep Mtn (THOMSON & AHTI 1994); Unuk R Valley; Stikine R Valley (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Gustavus (SPRIBILLE et al. 2020).

Parmelina quercina → [Appendix A](#)

Parmelina tiliacea → [Appendix A](#)

Parmelina yalungana (Zahlbr.) P. R. Nelson & Kepler – Corticolous on *Alnus*. – Denali NP, upper Yentna R valley; Quartz L State Recreation Area (NELSON et al. 2012); Denali NPPr, S of the AK Range (STEHN et al. 2015).

Parmeliopsis ambigua (Hoffm.) Nyl. – Corticolous on conifers and hardwoods and lignicolous on logs. – Port Clarence (NYLANDER 1887; HUE 1890); Alaska (RIDDLE 1917); Bettles (KROG 1962; MURRAY 1974); Wonder L (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Eagle R Valley; Anchorage, Rabbit Cr Rd; Anchorage, O’Malley Rd; Anchorage, Eastchester Swamp; Kenai Peninsula, S of Hidden L; W of Seward, Marathon Mtn; Denali Hwy, mi 32–37; Denali NP, Savage R; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, the limestone ridge; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Kotzebue (KROG 1968); Amchitka Isl (WEBER et al. 1969); Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, Rock Cr Trail (SCHINDLER 1987); Tikchik L (THOMSON & DOELL 1989); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998);

Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2013; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= "*Parmelia ambigua* (Wulfen) Ach." – Juneau; Virgin Bay (CUMMINGS 1904).

Parmeliopsis hyperopta (Ach.) Arnold – Corticolous on conifers and hardwoods and lignicolous on decaying logs. – Port Clarence (HASSELROT 1953); Bettles (KROG 1962; MURRAY 1974); Mt Eielson; McKinley Bar (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Juneau area, Granite Basin; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn; Eagle R Valley; Kenai Peninsula, Ingram Cr; W of Seward, Marathon Mtn; Richardson Hwy, mi 37; Denali Hwy, mi 32–37; Denali NP, Savage R; Denali NP, Wonder L; White Mts, Beaver Cr; White Mts, the limestone ridge; White Mts, Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Circle Hot Springs; Kotzebue (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, Rock Cr Trail (SCHINDLER 1987); Nuyakuk L; Tikchik L; Chikuminuk L (THOMSON & DOELL 1989); Chisik Isl; Duck Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

= "*Parmelia ambigua albescens* Wahl." – Virgin Bay (CUMMINGS 1904).

= "*Parmeliopsis pallescens* A. Zahlbr." – Yakutat Bay (STAIR 1947).

Parmostictina mallota (Tuck.) B. Moncada et al. – Corticolous on *Tsuga* twigs, once on *Betula* bark.

= *Pseudocyphellaria mallota* (Tuck.) H. Magn. – Juneau area, Loop Rd (KROG 1968, as cf.; specimen appears to be lost, TØNSBERG 1999b); SE Alaska (DILLMAN 2004); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Parmotrema arnoldii (Du Rietz) Hale – Corticolous on branches of conifers along marine beaches. – SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004).

= *Parmelia arnoldii* Du Rietz – Sitka area, Indian R Trail (KROG 1968).

Parmotrema cetratum → [Appendix A](#)

Parmotrema chinense → **Parmotrema perlatum**

Parmotrema crinitum (Ach.) M. Choisy – Corticolous on branches of *Picea sitchensis* in beach fringes. – SE Alaska (DILLMAN 2004); DeLong Isl, Foggy Bay (DILLMAN et al. 2012).

= “*Parmelia perlata* var. *ciliata* (Lam. & DC.) Duby” – Seldovia (HEDRICK 1936; EYERDAM 1949).

Parmotrema dilatatum → [Appendix A](#)

Parmotrema perforatum → [Appendix A](#)

Parmotrema perlatum (Huds.) M. Choisy – Corticolous on conifer branches along marine beaches.

= “*Parmelia perlata* Ach.” – Kotzebue Sound (MANN 1868; TURNER 1886).

Unlikely in this place, perhaps *Cetrelia alaskana*.

= *Parmotrema chinense* auct., non (Osbeck) Hale & Ahti – Synonymy follows HAWKSWORTH (2004). – SE Alaska (GEISER et al. 1994a: map); Sokoi Isl, near Petersburg (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); S Alaska (ROOT et al. 2014).

Parvoplaca nigroblastidiata Arup et al. – Corticolous on *Populus*. – Katmai (ARUP et al. 2015, MCCUNE et al. 2018).

Parvoplaca tiroliensis (Zahlbr.) Arup et al. – Muscicolous and terricolous in tundra.

= *Caloplaca tiroliensis* Zahlbr. – Barrow (MURRAY & MURRAY 1978);

Anaktuvuk Pass (MOSEY et al. 1979); S of Wainwright, Kaolak R; Circular Marsh near Barrow; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Pectenota plumbea → [Appendix A](#)

Peltigera aphthosa (L.) Willd. – Terricolous on mossy soil in forest and tundra.

Most authors, especially before the 1990s, have not distinguished between *P. aphthosa*, *P. britannica*, *P. chionophila*, *P. latiloba* and *P. leucophlebia*. – Kotzebue Sound; Sitka (MANN 1868; TURNER 1886); Port Mulgrave, Yakutat Bay (ROTHROCK 1884); Loring; near Juneau, Sheep Cr (CUMMINGS 1892a); Taku (CUMMINGS 1892b); Pribilof Isls (MACOUN 1899); St Paul Isl; Port Etches (MACOUN 1902); Wrangell; Baranof Isl, Hot Springs; Juneau; Hidden Glacier Inlet, Yakutat Bay; Kodiak; Orca; Port Wells; Virgin Bay; Farragut Bay; Egg Isl, Disenchantment Bay; Shumagin Isls, Popof Isl; Attu Isl; Unalaska; Pastoliak R (CUMMINGS 1904); Zarembo Isl, St John's Harbor; Baker Isl, Port San Antonio; Wrangell (HERRE 1919); 30 mi inland from Camden Bay (MERRILL 1924b); Unalaska Isl; Atka Isl (HEDRICK 1936); Kenai Peninsula, Seward; Kodiak Isl, Kodiak; Akutan whaling station; Unalaska Isl, Captains Harbour; Attu Isl (DEGELIUS 1937); Yakutat Bay (STAIR 1947); Adak Isl (STAIR 1948); Skagway; PWS, Thum Bay (EYERDAM 1949); Eklutna; Umiat, valley of Colville R (HERRE 1950a); Barrow (SCHOLANDER et al. 1952); Anaktuvuk Pass; Bettles, Koyukuk R, middle Fk; Brooks Range, Umiat; Brooks Range, S slope, Wild L (KROG 1962; MURRAY 1974); Meade R Village; Brooks Range, L Peters; Pt Barrow; Hooper Bay (KROG 1962); Juneau Icefield (McCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Mt Eielson;

Glacier Cr; McKinley Bar; Muldrow outwash (WEBER & VIERECK 1967); Juneau area, Loop Rd; Juneau area, Mt Roberts; Sitka area, Indian R Trail; Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Anchorage, O'Malley Rd; Kenai Peninsula, Copper Cr; Homer; Richardson Hwy, mi 9; Denali Hwy, mi 0–28; Richardson Hwy, mi 170; White Mts, Beaver Cr; Steese Hwy, Cleary Summit; Nunivak Isl, Lake where the geese don't fly; Seward Peninsula, King Mtn (KROG 1968); Amchitka Isl (WEBER et al. 1969); Chena R (VIERECK 1970); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, b, 1978); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Barrow (WEBBER 1978); Haul Rd, Ray River Site, Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Barrow (WILLIAMS et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Okpilak Valley (COPPINS 1981); Yukon R; Tanana R (MURRAY et al. 1983); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); by camp in Cantwell; Tok Junction (SCHINDLER 1987); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Amchitka Isl (THOMSON & SOWL 1989); Imnavait Cr (WALKER et al. 1989); Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Kenai Peninsula, Chugach NF, Cooper Lodge (SCHINDLER 1990); Prudhoe Bay region (WALKER & EVERETT 1991); Chisik Isl (TALBOT et al. 1992); Imnavait Cr (HAHN et al. 1993: 'including *Peltigera leucophlebia*'); SE Alaska (GEISER et al. 1994a: map); Alaska (GOFFINET & HASTINGS 1994); Eagle Summit; Mt Fairplay; Moon L CG; terminal moraine of Valdez Glacier; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 1998); SE Alaska (GEISER et al. 1998); Imnavait Cr watershed, Philip Smith Mts (LANGE et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); SE Alaska (DILLMAN 2004); Franklin Bluffs; Happy Valley (WALKER et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, near Canadian border; Seaton Roadhouse; Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Interior Alaska (LAURSEN & SEPPELT 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Unalaska Isl (TALBOT et al. 2010b); Dalton Hwy (LANG et al. 2012); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018, as s. lat.); Alaska (PARDO-DE LA HOZ et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Peltidea aphthosa* (L.) Ach. – Kotzebue's Sound (HOOKER & ARNOTT 1841; BABINGTON 1851); Kotzebue Sound (BABINGTON 1852); Port Clarence (NYLANDER 1887; HUE 1890).

= *Peltigera aphthosa* var. *aphthosa* – Port Heiden; Attu Isl, Siddens Valley; Utukok R; Stampede; Seward (HOWARD 1958); E shore of John R, 10 mi above the mouth; N bank of Wiseman Cr (HOWARD 1963; MURRAY 1974); Quigley Hill; Riley Cr trail (HOWARD 1963); Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapak Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Nishlik L (THOMSON & DOELL 1989).

= *Peltigera aphthosa* var. *typica* – Raspberry Isl, Port Vita (THOMSON 1950a); Yakutat Bay at Hidden Glacier Inlet; Yakutat Bay at Port Mulgrave; Kodiak; Sheep Cr; Denali NP, Atka Isl; Fairbanks; Camden Bay; St Paul Isl; Wrangell; Unalaska Isl; Ft Yukon; Yukon R between Nulato and Nowikakat; Ft Cosmos; Sitka, Harbor Isl; Juneau; Shumagins Isls, Popoff Isl; Baranoff Isl, Hot Springs; PWS, Orca; Farragut Bay; Attu; Egg Isl, Disenchantment Bay; Raspberry Isl; Cantwell (THOMSON 1950b); Mendenhall Glacier (MCCULLOUGH 1965).

? = “*Peltigera aphthosa* f. *marginalis* Tuck.” – Isls of Behring's Strait (TUCKERMAN 1882).

Peltigera behringiana Gyeln. – Terricolous. – St. Paul Isl (**type** – GYELNIK 1928).

Peltigera britannica (Gyeln.) Holt.-Hartw. & Tønsberg – Terricolous or muscicolous on mosses at base of rock outcrops, corticolous on tree trunks and lignicolous on logs. – SE Alaska (GEISER et al. 1994a: map); Adak Isl (TALBOT et al. 1997); AB Mtn Trail near Skagway (GEISER et al. 1998: cyanomorph); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004: including cyanomorph); Alaska Hwy, near Canadian border; Alaska Hwy, mi 1240; Beaver Cr; Riverside Lodge Airstrip; Willow L, near Alaska Hwy; Tanacross Village; Mt Fairplay (TALBOT et al. 2007); Chugach NF (DERR 2010); Hogg Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Katmai NPP; Lake Clark NPP (MCCUNE et al. 2018); Kenai Fjords NPP (MCCUNE et al. 2020, both chloro- and cyanomorphs); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (cyanomorph) (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b); Hagemeister Isl (WALSH & GOWARD 2021).

Peltigera canina (L.) Willd. – Terricolous, muscicolous and lignicolous, in forested areas. This name was applied in a broad sense until the revisionary work in *Peltigera* that began in the late 20th century, and old records may apply to a wide range of taxa. – Kotzebue Sound (MANN 1868; TURNER 1886); Old Sitka; Port Mulgrave; Unalaska; Port Chatham, Cook's Inlet (ROTHROCK 1884); near Juneau, Salmon Cr (CUMMINGS 1892a); Taku (CUMMINGS 1892b, with ?); Pribilof Isls (MACOUN 1899); Kodiak Isl; St Paul Isl; Unalaska (MACOUN 1902); Yakutat; Aguadulce R, Yakutat Bay; Hidden Glacier Inlet, Yakutat Bay; Disenchantment Bay; Juneau; Muir Glacier; Farragut Bay; Orca; Port Wells; Kodiak; Agattu Isl; Cape Fox (CUMMINGS 1904); Amaknak Isl, Little Kiska; Little Kiska Isl; Akun Isl; Atka Isl (HOWE 1913a); Wrangell; Baker Isl, Port San

Antonio (HERRE 1919); Skagway (HERRE 1920); Ketchikan; Kodiak Isl, Kodiak; Unalaska Isl, Unalaska; Amchitka Isl (DEGELIUS 1937); Yakutat Bay (STAIR 1947); Adak Isl (STAIR 1948); Orca; PWS, Thum Bay (EYERDAM 1949); Barrow (SCHOLANDER et al. 1952); Attu Isl, Siddens Valley (HOWARD 1958); Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Pt Barrow (KROG 1962); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Quigley Hill (HOWARD 1963); Mendenhall Glacier (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Mt Eielson; Muldrow moraine; Muldrow outwash; McKinley Bar (WEBER & VIERECK 1967); Juneau area, Loop Rd; Juneau area, Shrine of St Therese; Ketchikan area, Ward L; Talkeetna Mts, Little Susitna R; Talkeetna Mts, Willow Rd; Anchorage, Rabbit Cr Rd; Anchorage, Eastchester Swamp; Potter, on Turnagain Arm; Kenai Peninsula, Skilak L; Kenai Peninsula, Copper Cr; Seward; W of Seward, Marathon Mtn; PWS, Fish Bay; Denali Hwy, mi 32–37; Denali NP, Savage R; White Mts, Beaver Cr; White Mts, the limestone ridge; White Mts, lower Fossil Cr; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Amchitka Isl (WEBER et al. 1969); Chena R (VIERECK 1970); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Barrow (WEBBER 1978); Haul Rd, Ray River Site, Haul Rd, Finger Mtn Site, Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Barrow (WILLIAMS et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Denali NP, Rock Cr Trail near train station; Denali NP, Morino Loop Trail; Tetlin Junction (SCHINDLER 1987); Amchitka Isl (THOMSON & SOWL 1989); Chugach NF, Cooper Lodge; Kenai Peninsula, Hammersly L; Kenai Peninsula, Anchor Pt; Denali NP, Rock Cr Trail (SCHINDLER 1990); Anaktuvuk Pass (NASH 1992); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Alaska (GOFFINET & HASTINGS 1994); Portage Glacier; Moon L CG (THOMSON & AHTI 1994); Anaktuvuk Pass (NASH & OLAFSEN 1995); Yakutat Forelands (SHEPARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Innavaik Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Izembek Lagoon (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Franklin Bluffs (WALKER et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seaton Roadhouse; Beaver Cr; Tanacross Village; Mentasta Mts; Munthag L (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Dalton Hwy (LANG et al. 2012); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Brooks Camp; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018, as s. str.); Brooks Range, Atigun Pass (KASANKE 2019); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= “*Peltidea canina* Ach.” – Kotzebue’s Sound (BABINGTON 1851); Norton Sound; Kotzebue Sound (BABINGTON 1852).

= “*Peltigera canina* var. *albescens* (Wahlb.) Thoms.” – Thum Bay; Kodiak Isl; Yakutat Bay, Disenchantment Bay (THOMSON 1950b).

= *Peltigera canina* var. *spongiosa* Tuck. – Pribilof Isls (MACOUN 1899); Middleton Isl; St Paul Isl; St George Isl; Unalaska (MACOUN 1902); St Paul Isl (CUMMINGS 1904); Hunker Cr; Choris Peninsula; Wood R; Middleton Isl; St Paul Isl (THOMSON 1950b); S of Wainwright, Kaolak R; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

= “*Peltigera canina* var. *ulorrhiza* (Flk.) Schaer.” – Aqua Dulce R, Yakutat Bay (THOMSON 1950b).

Peltigera castanea Goward et al. – Terricolous or muscicolous on rock outcrops. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Peltigera chionophila Goward & Goffinet – Mossy sites in open to somewhat sheltered forests, mountainous regions, often in areas of late snow-lie. – SE Alaska (GEISER et al. 1994a: map; species given as ‘*ined.*’); Bear Glacier; Baranof Isl, Harbor Mtn; Stikine area, Thomas Bay (GOWARD & GOFFINET 2000); Afognak Isl, Blue Fox Bay (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Peltigera cinnamomea Goward – Terricolous in forests in the SE, one record (TALBOT et al. 2007) from the interior; an otherwise southern species. – SE Alaska (GEISER et al. 1994a: map of species ‘*ined.*’; GEISER et al. 1998); Seaton Roadhouse (TALBOT et al. 2007); Chilkoot Trail (SPRIBILLE et al. 2010).

Peltigera collina (Ach.) Schrad. – Corticolous or muscicolous on nutrient-enriched hardwoods and conifers, also on mosses over rock outcrops, mainly at low elevations. – Alaska (THOMSON 1984: map); by Portage; by camp in Portage (SCHINDLER 1987); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Amchitka Isl (THOMSON & SOWL 1989); Katmai NP, Brooks Lodge area, on the way to Brooks Falls; Kenai Peninsula, Portage CG; Kenai Peninsula, Chugach NF, Ptarmigan L Trail; Kenai Peninsula, Anchor Pt (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Haines Hwy, mi 33; terminal moraine of Valdez Glacier; Richardson Hwy, mi 10, near Valdez; Haines (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Ft Wainwright (RACINE et al. 1997); Shumagin Isls, Simeonof Isl (DANIËLS et al. 1998); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998, “needs verification”); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); SE Alaska (DILLMAN 2004); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Teck Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Gates of the Arctic NPPr (NELSON et al. 2015b); Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East

Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

= "*Peltidea polydactyla* var. *scutata* Fries" – Kotzebue Sound (BABINGTON 1852).

= "*Peltigera scutata* (Dicks.) Duby" – Behring Isl (MACOUN 1902); Alaska Peninsula (HEDRICK 1936); PWS, Knight Isl, Thum Bay; Raspberry Isl, Port Vita (THOMSON 1950a); Cape Fox; Wrangell; Raspberry Isl, Port Vita, Kodiak Group; King Cove; Disenchantment Bay; Skagway; Hunker Cr; PWS, Orca (THOMSON 1950b); halfway up Tracy Arm, on W side (KROG 1962); Mendenhall Glacier (MCCULLOUGH 1965); Juneau area, Loop Rd; Juneau area, Mt Roberts; Mendenhall L; Juneau area, Granite Basin; Sitka area, Indian R Trail; Talkeetna Mts, Little Susitna R; Talkeetna Mts, Bald Mtn Ridge; Knik R, near hwy; Eagle R Valley; Kenai Peninsula, Ingram Cr; Portage Glacier; Windy Pt, Turnagain Arm; Skilak L; Kenai Peninsula, Ninilchik; Seward; Richardson Hwy, mi 9; White Mts, Beaver Cr; White Mts, lower Fossil Cr (KROG 1968).

Peltigera denigii Gyeln. – Terricolous on humus in forests. – SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Naknek L (MCCUNE et al. 2018 as aff.).

Peltigera didactyla (With.) J. R. Laundon – Mainly on bare mineral soil or over mosses. Older records of this and, in the past, *P. spuria*, may include material now referred to *P. extenuata* or even *P. castanea*. – By Portage Glacier; Delta Junction, by the pipeline; Robertson R, Tok Junction (SCHINDLER 1987); Kenai Peninsula, Chugach NF, Cooper Lodge (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Lagoon (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska Hwy, near Canadian border; Riverside Lodge Airstrip; Midway L; Willow L, near Alaska Hwy (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Harding Icefield Trail en route to high cliffs; Kenai Fjords NPPr, S of Exit Glacier Visitor Center (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Excursion Ridge, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

= "*Peltigera canina* f. *sorediata* Schaer." – Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow (THOMSON 1979).

= "*Peltigera spuria* f. *sorediata* Schaer." – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978).

= "*Peltigera canina* var. *spuria* f. *sorediata* Schaer." – Sitkalidak Isl; Camden Bay; Behring Straits; St Paul Isl (THOMSON 1950b).

= “*Peltigera canina* var. *sorediata* (Schaer.) Fink” – Isls in Behring Strait (MACOUN 1902); 30 mi inland from Camden Bay (MERRILL 1924b); Sitkalidak Isl (HEDRICK 1936).

= *Peltigera spuria* (Ach.) DC. – 30 mi inland from Camden Bay (MERRILL 1924b); St Paul Isl (DEGELIUS 1937); PWS, Thum Bay (EYERDAM 1949); 47 mi N of Fairbanks (HERRE 1950a); Koyukuk R, middle Fk Bettles (KROG 1962; MURRAY 1974); Juneau area, Loop Rd; Talkeetna Mts, Willow Rd; Talkeetna Mts, Puritan Cr; Anchorage, Rabbit Cr Rd; Potter, on Turnagain Arm; Turnagain Arm, Bird Cr Ridge; S of Hidden L, Kenai Peninsula; base of Portage Glacier; W of Seward, Marathon Mtn; Windy Pt, Turnagain Arm; Kenai Peninsula, Skilak L; Richardson Hwy, mi 9, mi 45; Denali Hwy, mi 0–28; Denali NP, Polychrome Pass; Toklat; Denali NP, Wonder L; White Mts, granite outcrop close to the limestone ridge; Circle Hot Springs; Alaska Hwy, mi 1450; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr; Kotzebue (KROG 1968); Amchitka Isl, Constantine Harbor (WEBER et al. 1969); Fish Cr drilling site (LAWSON et al. 1978, as cf.); Anaktuvuk Pass (MOSER et al. 1979); Okpilak Valley (COPPINS 1981); Copper R; Tanana R (MURRAY et al. 1983).

= “*Peltigera canina* f. *spuria* (Ach.) Nyl.” – Yakutat (CUMMINGS 1904).

= “*Peltigera canina* var. *spuria* (Ach.) Schaer.” – Pribilof Isls (MACOUN 1899); Fairbanks; Choris Peninsula; Camden Bay (THOMSON 1950b); Denali NP Headquarters (HOWARD 1963); Mendenhall Glacier (MCCULLOUGH 1965); S of Wainwright, Kaolak R; Pt Barrow; Anaktuvuk Pass (THOMSON 1979).

Peltigera dolichorrhiza → [Appendix A](#)

Peltigera elisabethae Gyeln. – Terricolous on mineral soil, muscicolous on mossy rock faces, also lignicolous. – SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Ft Wainwright (RACINE et al. 1997); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1240; Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, Camel’s Hump; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Peltigera erumpens → [Appendix A](#)

Peltigera evansiana Gyeln. – Terricolous or on logs in forested habitats. – Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Kenai NWR (WATERS 2011); Chena R State Recreation Area: along Chena R, near Granite Tors trailhead; Talkeetna, confluence of Susitna R and Talkeetna R (DILLMAN et al. 2012).

Peltigera extenuata (Nyl. ex Vain.) Lojka – Terricolous in lowland forest. – Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

= *Peltigera didactyla* var. *extenuata* (Nyl. ex Vain.) Goffinet & Hastings – Ft Wainwright (RACINE et al. 1997).

Peltigera gowardii Lendemer & H. O’Brien – On rock immersed in stable-flow streams. – Denali NP, Skihi Cr watershed (LENDEMER & O’BRIEN 2011); [SE Alaska] mainland, Thunder Mtn; Kupreanof Isl (DILLMAN et al. 2012); Alaska (MIADLIKOWSKA et al. 2014); Denali NPPr, Skihi Cr (STEHN et al. 2015).

= *Hydrothyria venosa* auct., non J. L. Russell – Kupreanof Isl, N of Portage Bay (GEISER et al. 1998).

Peltigera horizontalis (Huds.) Baumg. – Terricolous on soil, mossy logs and over mossy rocks in forests. – Shores of Behring's Strait (TUCKERMAN 1882); PWS (CUMMINGS 1892b); shores of Behring Strait (MACOUN 1902); Aguadulce R, Yakutat Bay; Yakutat; Egg Isl, Disenchantment Bay (CUMMINGS 1904); Baker Isl, Port San Antonio (HERRE 1919); Juneau area, Mt Roberts; Portage Glacier; White Mts, Beaver Cr; White Mts, lower Fossil Cr (KROG 1968); Alaska (THOMSON 1984: map); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Hugh Smith L, Misty Fjords NM; Kadin Isl, mouth of Stikine R (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Peltidea horizontalis* (Huds.) Ach. – Kotzebue's Sound (BABINGTON 1851).

Peltigera hymenina (Ach.) Delise – Terricolous in heath. – Attu Isl, Sn's Valley [sic; Sidden's?] (DILLMAN et al. 2012); Kenai Fjords NPPr, Crater Bay South (MCCUNE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

Peltigera kristinssonii Vitik. – Terricolous in forests and tundra. – Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr, N of Exit Glacier Visitor Center (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

Peltigera latiloba Holt.-Hartw. – Terricolous in tundra. – “3 localities in Alaska” (HOLTAN-HARTWIG 2005); White Pass (SPRIBILLE et al. 2010); Katmai NPPr, road between Naknek L and L Brooks (MCCUNE et al. 2018, confirmed by DNA, but does not match morphologically); Alaska (PARDO-DE LA HOZ et al. 2018).
= “*Peltigera* sp. 1” – “3 localities in Alaska” (HOLTAN-HARTWIG 1993).

Peltigera lepidophora (Nyl. ex Vain.) Bitter – Terricolous on exposed soil or shallow soil over rock. – Camp Eielson (WEBER & VIERECK 1967); Juneau area, Granite Basin; Kenai Peninsula, Skilak L; White Mts, lower Fossil Cr; Circle Hot Springs (KROG 1968); Fish Cr drilling site (LAWSON et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Yukon R (MURRAY et al. 1983, as cf.); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map); Moon L CG; Blueberry L CG; Sheep Mtn (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); NW Revilla[gigedo] Isl; Mitkof Isl, Ohmer Cr (GEISER et al. 1998); Alaska (BRODO et al. 2001); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et

al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

***Peltigera leucophlebia* (Nyl.) Gyeln.** – Terricolous on mosses in tundra, heath and forest. – Sitka; Kenai Peninsula, Seward; Atka Isl; Attu Isl (DEGELIUS 1937); Brooks Range, Umiat; Koyukuk R, middle Fk, Bettles; Bettles [sic](KROG 1962; MURRAY 1974); Meade R Village; Steese Hwy, Eagle Summit; White Mts, the limestone ridge; Kenai Peninsula, Summit L (KROG 1962); Juneau area, Loop Rd; Juneau area, Mt Roberts; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Willow Rd; Talkeetna Mts, Puritan Cr; Eagle R Valley; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Granite Cr Ridge; W of Seward, Marathon Mtn; Richardson Hwy, mi 45; Denali Hwy, mi 0–28; Denali Hwy, mi 70; Denali NP, Savage R; Denali NP, Polychrome Pass; Denali NP, Wonder L; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; junction of Beaver Cr and Fossil Cr; White Mts, Lion Pk; White Mts, between Beaver Cr and Fossil Cr; Circle Hot Springs; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Roberts Mtn; Nunivak Isl, Lake where the geese don't fly; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Kotzebue (KROG 1968); Prudhoe Bay (MURRAY & MURRAY 1975b); Fish Cr drilling site (LAWSON et al. 1978); Portage Glacier; Denali NP, by campsite; Tok Junction, by camp (SCHINDLER 1987); Amchitka Isl, Gallon Pt (THOMSON & SOWL 1989); Katmai NP, Brooks Lodge area, in CG (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay; Deadman L CG; Moon L CG; Thompson Pass (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1240 (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010, including '*conspersa*' morph); Kasatochi Isl (TALBOT et al. 2010a); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Alaska (PARDO-DE LA HOZ et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020); Parks Hwy, Summit L (HAFELLNER 2021)..
= *Peltigera aphthosa* var. *leucophlebia* Nyl. – PWS, Virgin Bay (THOMSON 1950b); S of Wainwright, Kaolak R; Circular Marsh near Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1984: map).

= *Peltigera aphthosa* f. *complicata* (Th. Fr.) Zahlbr. – Circular Marsh near Barrow; 6.5 mi SSW of Barrow Base, near Loon L (THOMSON 1979).

= *Peltigera aphthosa variolosa* f. *complicata* (Th. Fr.) Zahlbr. – Quigley Hill (HOWARD 1963).

= *Peltigera aphthosa* var. *variolosa* f. *crispa* (Vain.) A. Zahlbr. – Fairbanks (THOMSON 1950b).

= *Peltigera aphthosa* var. *variolosa* (A. Massal.) J. W. Thomson – Raspberry Isl, Port Vita (THOMSON 1950a); Ketchikan; Gold Cr; Yakutat Bay, Hidden Glacier Inlet; Baranoff Isl, Hot Springs; PWS, Port Wells; PWS, Orca; Denali NP; Lower Yukon R, Anvik; Copper Center; Cantwell; West Dawson; McDonald L region; Fairbanks; PWS, Knight Isl, Thum Bay; Skagway; Behrings Straits; Unalaska Isl; Atka Isl; Ft Cosmos; St Paul Isl (THOMSON 1950b); Attu Isl, Siddens Valley; Holtz-Sarana Pass; Stampede (HOWARD 1958); Franklin Bluffs on the Sagavanirktok R (THOMSON 1960); Kantishna Airstrip (HOWARD 1963); Mendenhall Glacier; Juneau Icefield (MCCULLOUGH 1965).

Peltigera lyngei Gyeln. – Terricolous in heath and tundra. – Amchitka Isl, SW of Crown Reefer Pt; Kirilov Wharf, Constantine Harbor (DILLMAN et al. 2012); Gates of the Arctic NPPr (NELSON et al. 2015b).

Peltigera malacea (Ach.) Funck – Terricolous on soil or moss or moss over rock. – Kodiak Isl (HEDRICK 1936); Unalaska Isl, Unalaska (DEGELIUS 1937); Behring Isls; Unalaska; Fairbanks; Kodiak Isl (THOMSON 1950b); King Salmon, Civil Aeronautics Administration (HOWARD 1958); Bettles (KROG 1962; MURRAY 1974); Quigley Hill (HOWARD 1963); Mendenhall Glacier (MCCULLOUGH 1965); Muldrow Glacier (VIERECK 1966); McKinley Bar; Glacier Cr; McKinley R (WEBER & VIERECK 1967); Anchorage, Rabbit Cr Rd; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Skilak L; Richardson Hwy, mi 45; Denali Hwy, mi 0–37; Richardson Hwy, mi 170; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, Beaver Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy Cleary Summit; N of Nome, Anvil Pk (KROG 1968); Amchitka Isl, above Cyril Cove (WEBER et al. 1969); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, b, 1978); Fish Cr drilling site (LAWSON et al. 1978); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Yukon R (MURRAY et al. 1983, as cf.); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b, as ‘*malaceae*’); Tok Junction, at Tanana R (SCHINDLER 1987); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Amchitka Isl (THOMSON & SOWL 1989); Imnavait Cr (WALKER et al. 1989); Katmai NP, Hammersly L (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); Imnavait Cr (HAHN et al. 1993); Alaska (GOFFINET & HASTINGS 1994); Mt Fairplay; Deadman L CG; Moon L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Yakutat (GEISER et al. 1998); Imnavait Cr watershed, Philip Smith Mts (LANGE et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek

Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seaton Roadhouse; Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten Mile Cr; Beaver Cr; Riverside Lodge Airstrip; Willow L, near Alaska Hwy; Mt Fairplay (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Dalton Hwy (LANG et al. 2012); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

Peltigera membranacea (Ach.) Nyl. – Terricolous, loosely saxicolous and lignicolous in humid forests. – Raspberry Isl, Port Vita; Kuiu Isl, Washington Bay (THOMSON 1950a); Unimak Isl; Middleton Isl; Unalaska; Baranof Isl; Port Armstrong; Unalaska Isl, Captains Harbour; Isl in Cross Sound; Port Etches; Sitka; Cape Fox; Yakutat; Unalaska; St Paul Isl; Baranoff Isl, Hot Springs; Pt Gustavus, Glacier Bay; Attu Isl, Casco Pt; Ketchikan; St George Isl; Atka Isl; False Pass, Unimak Isl; Skagway; Thum Bay, Knight Isl; Raspberry Isl, Port Vita; Kuiu Isl, Washington Bay (THOMSON 1950b); Juneau area, Shrine of St Therese; Anchorage, Eastchester Swamp; PWS, Fish Bay (KROG 1968); Barrow (WEBBER 1978); Anaktuvuk Pass (MOSER et al. 1979, but NEITLICH & HASSELBACH 1998 say “in need of verification in light of taxonomic revisions of this group. Far outside known Alaskan range of this species in SE”); Alaska (THOMSON 1984: map); Tuxedni Wilderness, Duck Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Alaska (GOFFINET & HASTINGS 1994); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Isl (DANIËLS et al. 1998); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Copper R Delta (BOGGS 2000); Morzhovi Bay; Izembek Refuge, near Frosty Pk; Izembek Lagoon; Izembek Refuge, Cold Bay; N coast of Izembek Refuge (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten Mile Cr; Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Kasatochi Isl (TALBOT et al. 2010a); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Unalaska Isl (TALBOT et al. 2010b); S Alaska (ROOT et al. 2014, as ‘*membranaceum*’); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020, including two morphs).

= “*Peltigera canina membranacea* (Ach.) Nyl.” – Head of Russell Fiord; Sitka; Baranof Isl, Hot Springs; Glacier Bay, Pt Gustavus; Farragut Bay; Unalaska; St Paul Isl; St Michael; Pastoliak R (CUMMINGS 1904); Heceta Isl (HERRE 1919).
 = “*Peltigera canina* var. *membranacea* (Ach.) Duby” – Port Etches (MACOUN 1902); Unalaska Isl; Unimak Isk; Atka Isl (HEDRICK 1936).

Peltigera monticola Vitik. – Terricolous on forest floor. – Katmai NPPr (MCCUNE et al. 2018).

Peltigera neckeri Hepp ex Müll. Arg. – Terricolous on mossy soils and corticolous/lignicolous on mossy logs and tree bases. – Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, near Canadian border; 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr (MCCUNE et al. 2018); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

Peltigera neopolydactyla (Gyeln.) Gyeln. – Terricolous in coastal rainforests, also corticolous on *Tsuga* and reported from northwestern tundra. – Alaska (BRODO et al. 1987); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Chugach NF (DEVELICE et al. 1999); Copper R Delta (BOGGS 2000); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Interior Alaska (LAURSEN & SEPPELT 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020); Hagemester Isl (WALSH & GOWARD 2021, as s. lat.).

Peltigera neorufescens → **Appendix A**

Peltigera occidentalis (E. Dahl) Kristinsson – Terricolous, or on logs, low arctic and alpine. – Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr, Polychrome Pass; Denali NPPr, Fish Cr ridge; Denali NPPr, E Sushana; Denali NPPr, Upper Sushana; Denali NPPr, Upper Moose Cr; Denali NPPr, Nika Ridge; Denali NPPr, Middle Moose Cr; Denali NPPr, Bear Cr; Denali NPPr, Sandless Cr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Malone L (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Peltigera pacifica Vitik. – Terricolous and lignicolous on logs and stumps, also reported as an epiphyte (DILLMAN 2004) in SE Alaska. – Juneau area, Granite Basin (VITIKAINEN 1985); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Peltigera polydactylon (Neck.) Hoffm., **subspecies not specified** – Before ca. 1995 usually reported as *P. polydactyla*. – Terricolous, muscicolous and corticolous

on humus, mosses, over *Populus* bark and boulders, forest to alpine sites. – Kotzebue Sound; Sitka (MANN 1868; TURNER 1886); Gold Cr Canyon, near Juneau (CUMMINGS 1892a); Sitka; Baranof Isl, Hot Springs; Farragut Bay; Orca; Unalaska (CUMMINGS 1904); Prince of Wales Isl (HERRE 1919); Sitka (DEGELIUS 1937); Yakutat Bay (STAIR 1947); Denali Hwy, mi 26 from Cantwell (KROG 1962); Denali NP, Carlo, 1 mi W of station (HOWARD 1963); Juneau Icefield (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); McKinley Bar (WEBER & VIERECK 1967); Big Delta Quad, Chena Hot Springs Rd (WEBER 1967); Juneau area, Granite Basin; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Ketchikan area, Saxman Village; Talkeetna Mts, Little Susitna R; Talkeetna Mts, Bald Mtn Ridge; Portage Glacier; Kenai Peninsula, Ingram Cr; Kenai Peninsula, Copper Cr; Seward; W of Seward, Marathon Mtn; Richardson Hwy, mi 9; PWS, Fish Bay; Denali Hwy, mi 32–37; White Mts, headwaters of Sheep Cr; Seward Peninsula, King Mtn (KROG 1968); Chena R (VIERECK 1970); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Haul Rd, Toolik Upland Rd Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass (THOMSON 1979); Okpilak Valley (COPPINS 1981, as ‘aggr.’); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy; Portage Glacier; Richardson Hwy, mi 10; Thompson Pass (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Imnavait Cr (WALKER & WALKER 1996); Ft Wainwright (RACINE et al. 1997, “*polydactyla* aggregate”); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Alaska Hwy, near Canadian border; Seaton Roadhouse; Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009, as s. lat.); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Dalton Hwy (LANG et al. 2012, as ‘group’); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

= “*Peltigera polydactylon* var. *typica*” – Admiralty Isl, Windfall Harbor; Prince of Wales Isl; PWS, Orca; Hinchinbrook Isl; Kodiak, Kodiak Isl; Sitka, Baranoff Isl; Sitka; Farragut Bay; PWS; Cordova; Kogway (THOMSON 1950b); Mendenhall Glacier (MCCULLOUGH 1965).

= *Peltigera polydactylon* var. *crassoides* Gyeln. – St Paul Isl; Kodiak Isl, Kodiak; Unalaska (THOMSON 1950b); Attu Isl, Siddens Valley; Stampede (HOWARD 1958); Mendenhall Glacier (MCCULLOUGH 1965).

= “*Peltigera polydactyla* var. *typica* f. *microphylla* Anders” – Wrangell (THOMSON 1950b).

Peltigera polydactylon subsp. **udeghe** Magain et al. – Terricolous in forests or thickets. – Katmai NP, NE side of Malone L; Seward Peninsula, Anvil Mtn (MAGAIN et al. 2016); Katmai NPPr, Malone L (MCCUNE et al. 2018).

Peltigera ponojensis Gyeln. – Terricolous on organic accumulations or over rock, on moss over rock, on uplifted beaches and sandy soil as well as lignicolous on a stump. – SE Alaska (GEISER et al. 1994a: map); Mendenhall Glacier trail; AB Mtn Trail near Skagway (GEISER et al. 1998); Alaska (BRODO et al. 2001); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail en route to high cliffs; Kenai Fjords NPPr, west shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm; Gustavus (SPRIBILLE et al. 2020, including a ‘polyphyllous’ morph); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Peltigera praetextata (Flörke ex Sommerf.) Zopf – Terricolous on moss or humus or over rock, also corticolous on conifer branches in coastal forests (DILLMAN 2004). – Kenai Peninsula, Ninilchik; Kenai Peninsula, Copper Cr; Richardson Hwy, mi 9; White Mts, Fossil Cr; White Mts, between Beaver Cr and Fossil Cr; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Kotzebue (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); SE Alaska (GEISER et al. 1994a: map); Moon L CG; terminal moraine of Valdez Glacier (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm (green morph), Glacier Bay, West Arm (SPRIBILLE et al. 2020).

Peltigera retifoveata Vitik. – Terricolous in forest. – Mt McKinley NP, Mt Eielson (VITIKAINEN 1985); Mt Eielson, Copper Mtn (GOFFINET 1992: map); Alaska (GOFFINET & HASTINGS 1994); Ft Wainwright (RACINE et al. 1997); Alaska Hwy, mi 1240 (TALBOT et al. 2007); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

Peltigera rufescens (Weiss) Humb. – Terricolous, often in mineral soil. – Wrangell; Juneau; Muir Glacier; Cape Fox; St Michael (CUMMINGS 1904); Saltery Cove (HERRE 1919); Unalaska Isl, Unalaska (DEGELIUS 1937); Orca; PWS, Thum Bay (EYERDAM 1949); Brooks Range, Umiat; Koyukuk R, middle Fk, Bettles (KROG 1962; MURRAY 1974); Denali NP, Polychrome Pass (KROG 1962); Mt Eielson; Glacier Cr; Muldrow outwash; Muldrow moraine (WEBER & VIERECK 1967); Juneau area, Granite Basin; Talkeetna Mts, Willow Rd; Eagle R Valley; Potter, on Turnagain Arm; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Granite Cr Ridge; S of Hidden L, Kenai Peninsula; W of Seward, Marathon Mtn; Richardson Hwy, mi 24, mi 45; Denali Hwy, mi 0–28; Denali NP, CG near

hotel; base of Rainbow Mts, E of Richardson Hwy; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, limestone ridge between Beaver Cr and Fossil Cr; White Mts, lower Fossil Cr; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Seward Peninsula, Rainbow Cr (KROG 1968); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Yukon R (MURRAY et al. 1983); Ogotoruk Cr (MURRAY 1985); Denali NP, by campsite; Denali NP, on foot-trail to Park Headquarters; Denali NP, Rock Cr Trail (SCHINDLER 1987); Nuyakuk L (THOMSON & DOELL 1989); Katmai NP, on the way to the Three Folks Overlook cabin (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992, “specimens identified as *P. rufescens* ... are a mixture of *P. praetextata*, *P. cf. ponojensis*, and *P. polydactylon* group” per MCCUNE et al. 2018); SE Alaska (GEISER et al. 1994a); Alaska (GOFFINET & HASTINGS 1994); terminal moraine of Valdez Glacier (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 1998); Granite Basin, near Juneau; Sitka; Ketchikan (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Beaver Cr; Riverside Lodge Airstrip Tetlin Junction; Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020).

= *Peltigera canina* var. *rufescens* (Weiss) Mudd – Raspberry Isl, Port Vita (THOMSON 1950a); Copper Center; Anvik; St Paul Isl; Yakutat Bay, Hidden Glacier Inlet; Head of Russel Fiord; Cape Fox; Skagway; Muir Glacier, Glacier Bay; Kodiak Isl, Sturgeon R Bay; PWS, Port Wells; Agattu Isl; Juneau; Sitka; Unalaska; Kodiak Group, Raspberry Isl; Fairbanks; Holy Cross; Cantwell (THOMSON 1950b); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1960); S of Bettie Air Field; N of Trading Post at Bettles; Wiseman, rd to Hammond R (HOWARD 1963; MURRAY 1974); Denali NP Headquarters (HOWARD 1963); Mendenhall Glacier (McCULLOUGH 1965); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Pt Barrow; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map).

Peltigera scabrosa Th. Fr. – Terricolous in heath and mossy soil in forest and tundra. – Lawrence-Insula; Port Clarence (NYLANDER 1887); Port-Clarence (HUE 1890); Kenai Peninsula, Seward (DEGELIUS 1937); PWS, Thum Bay (EYERDAM 1949); Ketchikan; Copper Center; Sitka; Skagway; Thum Bay, Knight Isl; Baranoff Isl; PWS, Port Wells; Juneau; Farragut Bay; Prince of Wales Isl; False Pass, Unimak Isl; Admiralty Isl, Deep Cove; St Michael; Fairbanks; Kotzebue's Sound (THOMSON 1950b); “S:t Lawrenceön, Port

Clarence" (HASSELROT 1953); Pt Barrow; Ogotoruk Cr drainage; Richardson Hwy, mi 126; halfway Tracy Arm, on W side (KROG 1962); Denali NP, between the lodge and Wonder L (HOWARD 1963); Mendenhall Glacier; Juneau Icefield (McCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson; McKinley Bar; Wonder L (WEBER & VIERECK 1967); Juneau area, Loop Rd; Juneau area, Mt Roberts; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Talkeetna Mts, Independence Mine; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Bald Mtn Ridge; PWS, Fish Bay; Denali Hwy, mi 28; Denali Hwy, mi 70; Denali NP, Wonder L; Richardson Hwy, mi 170; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Kotzebue (KROG 1968); Pitmegea R; Denali NP; Juneau, Mt Roberts trail, Montana Cr (OHLSSON 1973); Prudhoe Bay (MURRAY & MURRAY 1975b); Barrow (WILLIAMS et al. 1978); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); by camp in Cantwell (SCHINDLER 1987); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Hagemester Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Alaska (GOFFINET & HASTINGS 1994); Mt Fairplay; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Innuvait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Copper R Delta (BOGGS 2000); Izembek Refuge, near Frosty Pk; Cold Bay; Izembek Lagoon (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); SE Alaska (DILLMAN 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Dalton Hwy (LANG et al. 2012); S Alaska (ROOT et al. 2014); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin (but rhizines long and simple); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield; Kenai Fjords NPPr, hill above Verdant Cove (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

= *Peltigera pulverulenta* auct. – Kotzebue's Sound (TUCKERMAN 1882); freto Kotzebue (HUE 1890); Kotzebue Sound (MACOUN 1902); Disenchantment Bay; Port Wells; Hall Isl; Cape Nome (CUMMINGS 1904); Alaska (THOMSON 1955); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6.5 mi SSW of Barrow Base, near Loon L; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

- Peltigera scabrosella*** Holt.-Hartw. – Terricolous in heath. – Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chilkoot Trail (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Katmai NPPr, Hammersly L (MCCUNE et al. 2018, as aff.).
- Peltigera tartarea*** (Llano) Vitik. – Terricolous. – L Schrader [N slope] (VITIKAINEN 2006).
= *Peltigera venosa* f. *tartarea* Llano – L Schraeder [sic] (**type** – LLANO 1951).
- Peltigera venosa*** (L.) Hoffm. – Terricolous on bare mineral soil, sea level to arctic/alpine. – Kotzebue Sound (MANN 1868; TURNER 1886); Behring Strait (MACOUN 1902); Juneau; Hidden Glacier Inlet, Yakutat Bay; Unalaska (CUMMINGS 1904); Unalaska Isl, Unalaska (DEGELIUS 1937); Juneau; Hidden Glacier Inlet; Unalaska; Behrings Straits; Hunker Cr, Klondike (THOMSON 1950b); "Alaska med Aleuterna" (HASSELROT 1953); Denali NP, White Mts, between Beaver Cr and Fossil Cr (KROG 1962); E bank of Riley Cr (HOWARD 1963); Mt Eielson (WEBER & VIERECK 1967); Talkeetna Mts, Willow Rd; Talkeetna Mts, Bald Mtn Ridge; Anchorage, Rabbit Cr Rd; Denali NP, Toklat; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; Circle Hot Springs; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Stikine R; Unuk R; shore of Petersburg L (GEISER et al. 1998); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Seaton Roadhouse; Alaska Hwy, mi 1270, Ten Mile Cr; Riverside Lodge Airstrip; Willow L, near Alaska Hwy (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, near Harding Icefield Trail en route to high cliffs; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
= *Peltidea venosa* (L.) Ach. – Kotzebue's Sound (BABINGTON 1851); Port Clarence (NYLANDER 1887; HUE 1890).
- Pertusaria alaskensis*** Erichsen – Terricolous and saxicolous, mainly on coastal rocks; an inland record (MCCUNE et al. 2009) should be re-examined. – Aleutians, Unalaska Isl, Kashaga (**type** – ERICHSEN 1938); Unalaska Isl, Kashaga; Umnak Isl, Nikolski; Amchitka Isl, 14 mi NW of Constantin Harbor; Amlia Isl; Atka Isl; Umnak Isl; Bering Sea, Hall Isl; St Lawrence Isl; St Paul Isl; Kodiak Isl, Kodiak (DIBBEN 1980); Adak Isl (TALBOT et al. 1997); St Paul Isl; St Lawrence Isl; Kodiak Isl; coast of Seward Peninsula, many localities in the Aleutians (THOMSON 1997, localities deduced from map); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); coastal Alaska (MCCUNE 2017b);

Katmai NPPr, Naknek L; Lake Clark NPPr, Portage L (McCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (McCUNE et al. 2020).

= *Pertusaria aleutensis* Erichsen – Aleutians, Umanak [= Umnak] Isl, Nikolski (**type** – ERICHSEN 1938). Synonymy after DIBBEN (1980).

Pertusaria alpina Hepp ex Ahles – Corticolous on *Alnus* and *Populus* in western Alaska. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Chisik Isl (TALBOT et al. 1992, McCUNE et al. 2018); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (THOMSON 1997: map); Horsetail Falls, N of Valdez; Pitmegea R, 15 mi upstream of Cape Sabine (DIBBEN 1980); arctic Alaska (McCUNE 2017b); Kenai Fjords NPPr, Coleman Bay, NE end, off Aialik Bay (McCUNE et al. 2020, as aff.); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Pertusaria amara → ***Lepra amara***

Pertusaria borealis → ***Lepra borealis***

Pertusaria bryontha (Ach.) Nyl. – Terricolous on tundra soil over hummocks, mosses, humus, frost boils and dead *Diapensia*, also overgrowing *Peltigera* spp. and saxicolous. – Unalaska Isl (ROTHROCK 1884); Port Clarence (NYLANDER 1887; HUE 1891); isls in Behring Strait (MACOUN 1902); Alaska (HADWEN & PALMER 1922); Anaktuvuk Pass (NASH 1977); Fish Cr drilling site (LAWSON et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Franklin Bluffs on the Sagavanirktok R; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Unalaska Isl, Chamipski Bay; Bering Strait; Port Clarence; moraine ridge E of Okpilak L; W side of Jago R, 1 mi S of Jago L; Franklin Bluffs on the Sagavanirktok R (DIBBEN 1980); Amchitka Isl, St Makarius Pt, Husky Camp (THOMSON & SOWL 1989); SE Alaska (GEISER et al. 1994a, as cf.); Thompson Pass; Fielding L (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); [SE Alaska] mainland, Elbow Mtn (GEISER et al. 1998, as cf.); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (McCUNE et al. 2009); Chugach NF (DERR 2010); SW Alaska (McCUNE 2017b); Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Portage L (McCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Pertusaria bryophaga Erichsen – Muscicolous and terricolous over rocks. – Aleutians, Unalaska (**type** – ERICHSEN 1938); Pitmegea R, 15 mi upstream of Cape Sabine; Unalaska Isl (DIBBEN 1980); Alaska (THOMSON 1997: map). = *Pertusaria bryophaga* var. *robustior* Erichsen – Rat Isl (**type** – ERICHSEN 1938). Synonymy after DIBBEN (1980).

Pertusaria carneopallida (Nyl.) Anzi ex Nyl. – Corticolous on hardwoods, including *Alnus* and *Vaccinium ovalifolium*. – Port Clarence (NYLANDER 1887; HUE 1891); Disenchantment Bay (CUMMINGS 1904); Port Clarence; Yakutat Bay, Disenchantment Bay; Fairbanks, Bonanza Cr Experimental Forest; Denali NP, SW shore of Wonder L (DIBBEN 1980); Chisik Isl (TALBOT et al. 1992); Alaska (THOMSON 1997: map); Chilkoot Trail (SPRIBILLE et al. 2010); Denali

NPPr (STEHN et al. 2015); Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay; Exit Glacier CG, near Exit Glacier Cr; near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Pertusaria protuberans* (Sommerf.) Th. Fr. – Wonder L (WEBER & VIERECK 1967). Synonymy after DIBBEN (1980).

Pertusaria coccodes → [Appendix A](#)

Pertusaria communis isidioides → [Appendix A](#)

Pertusaria coriacea (Th. Fr.) Th. Fr. – Muscicolous or on humus in tundra. –

Unalaska Isl, Unalaska (DEGELIUS 1937); Ogotoruk Cr drainage (JOHNSON et al. 1966); Amchitka Isl (WEBER et al. 1969); Anaktuvuk Pass (MOSER et al. 1979); Aleutian Isls; Jago R, 10 mi N of Jago L; Pitmegea R, 15 mi upstream of Cape Sabine; valley of the Okpilak R, Okpilak L; N ridge of the Colville R at Umiat (DIBBEN 1980); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Anaktuvuk Pass (NASH 1989); St Paul Isl (SCHINDLER 1990); Prudhoe Bay region (WALKER & EVERETT 1991); Eagle Summit; Mt Fairplay; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Pertusaria coriacea* var. *coriacea* – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

= *Pertusaria coriacea* var. *obducens* (Nyl.) Vain. – Franklin Bluffs on the Sagavanirktok R (THOMSON 1960); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

Pertusaria dactylina → [Lepra dactylina](#)

Pertusaria excludens → [Lepra excludens](#)

Pertusaria flavocorallina Coppins & Muhr – Corticolous on *Alnus*, *Picea sitchensis*, *Populus* and *Salix*, also once terricolous. – Kodiak Isl, Buskin L; Yakutat; Herbert R (TØNSBERG 1993a); N of Juneau, bank of Herbert R; Yakutat (GEISER et al. 1998); coastal Alaska (MCCUNE 2017a & b); Glacier Bay NP: Dundas Bay, East Arm, Gustavus, West Arm; Gustavus (SPRIBILLE et al. 2020).

Pertusaria geminipara → [Toensbergia geminipara](#)

Pertusaria glaucomela (Tuck.) Nyl. – Corticolous on *Alnus* and *Picea* twigs and on wood. – “*Lignicola sin loco* (legit Dr. Bean)” (NYLANDER 1887: 87); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); coastal SE Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= *Lecanora glaucomela* Tuck. – “Alaska and the adjacent region”, no locality given (ROTHROCK 1884).

Pertusaria globularis → [Appendix A](#)

Pertusaria glomerata (Ach.) Schaer. – Terricolous in heath and on moss, also over rocks and rarely lignicolous. – Isls of Behring's Strait (TUCKERMAN 1882); Port Mulgrave (ROTHROCK 1884); Lawrence-Insula (NYLANDER 1887); isls in Behring Strait; Port Mulgrave (MACOUN 1902); Hall Isl; Port Clarence (CUMMINGS 1904); Amlia Isl (HEDRICK 1936); Adak Isl (STAIR 1948); Unalaska Isl; Amchitka Isl; St Lawrence Isl; Kodiak Isl; Pt Barrow, Footprint Cr (DIBBEN 1980); Alaska (THOMSON 1997: map); St Matthew Isl (TALBOT et al. 2001); Katmai NPPr, Naknek L (MCCUNE et al. 2018).

= *Pertusaria glomerata* var. *corniculata* Nyl. – Lawrence-Insula (**type** – NYLANDER 1885a; NYLANDER 1887; HUE 1891; DIBBEN 1980).

= *Pertusaria diffusilis* Erichsen – Aleutians, Unalaska Isl (**type** – ERICHSEN 1938; DIBBEN 1980).

Pertusaria hymenea (Ach.) Schaer. – Corticolous on *Populus trichocarpa*. See also comment under *Ochrolechia xanthostoma*. – Tuxedni, Chisik Isl (MCCUNE et al. 2018).

= "*Pertusaria wulfenii* (DC.) Fr." – "on alder bark". – Raspberry Isl, Port Vita (THOMSON 1950a). Identification in "serious doubt" according to DIBBEN (1980).

Pertusaria lactea f. *confluens* → [Appendix A](#)

Pertusaria leioplaca DC. – Corticolous on *Alnus*. – Yakutat Bay (STAIR 1947).

= *Pertusaria leucostoma* (Bernh.) A. Massal. – Chisik Isl (TALBOT et al. 1992, MCCUNE et al. 2018).

Pertusaria macounii → [Appendix A](#)

Pertusaria mccroryae Björk et al. – Corticolous on shaded *Picea sitchensis* and *Tsuga* trunks, lignicolous on *Betula*. – Skagway Borough, Chilkoot Trail (**type** – SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon; near North Arm Nuka Bay Public Use Cabin (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Pertusaria multipuncta → [Lepra multipuncta](#) in [Appendix A](#)

Pertusaria multipunctoides → [Lepra multipunctoides](#)

Pertusaria octomela (Norman) Erichsen – Terricolous and muscicolous over rocks and dead vegetation. – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Pitmegea R, 15 mi upstream from Cape Sabine; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Unalaska Isl; Shumagin Isls; Port Clarence; Pitmegea R, 15 mi upstream of Cape Sabine; Demarcation Pt, Beaufort Lagoon (DIBBEN 1980); Amchitka Isl (THOMSON & SOWL 1989); Alaska (THOMSON 1997: map).

Pertusaria oculata (Dicks.) Th. Fr. – Terricolous in tundra and muscicolous over rock in alpine zone. – Lawrence-Insula (NYLANDER 1887); Kodiak; Unalaska; Cape Nome; Hall Isl; St Matthew Isl (CUMMINGS 1904); St Paul Isl (DEGELIUS 1937); PWS, Thum Bay (EYERDAM 1949); Juneau icefield nunatak (HEUSSER 1954); Circular Marsh near Barrow (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Chikuminuk L (THOMSON & DOELL 1989); Chisik Isl (TALBOT et al. 1992); LeConte Bay (GEISER et al. 1994a: map); Eagle Summit; Blueberry L CG; Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); [SE Alaska] mainland, LeConte Bay shoreline (GEISER et al. 1998); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2017b);

Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Lake Clark NPPr, Saddle Mtn (MCCUNE et al. 2018, as cf., protocetraric acid only chemotype); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecanora oculata* (Dicks.) Ach. – St Paul Isl (MACOUN 1899, 1902); Atka (HOWE 1913a).

= “*Parmelia oculata* Fries” – “over *Polytricha*” – Kotzebue's Sound (BABINGTON 1851, with ?).

Pertusaria ophthalmiza → **Lepra ophthalmiza**

Pertusaria panyrga → **Lepra panyrga**

Pertusaria pacifica → **Appendix A**

Pertusaria pupillaris (Nyl.) Th. Fr. – Corticolous on *Abies* and *Betula* bark and lignicolous. – Kodiak Isl (TØNSBERG 1993b); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017a & b); Katmai NPPr, Brooks Camp (MCCUNE et al. 2018, as aff.); Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon; peninsula into Three Hole Bay off Aialik Bay; hill above Verdant Cove (MCCUNE et al. 2020).

Pertusaria pustulata → **Appendix A**

Pertusaria saximontana Wetmore – Terricolous. – Toolik L; Brooks Range, Atigun Canyon; Denali NP, C camp area (ZHURBENKO & LUMBSCH 2006).

Pertusaria sommerfeltii (Flörke ex Sommerf.) Fr. – Corticolous on conifers and hardwoods. – Port Clarence (NYLANDER 1887; HUE 1891); Juneau Icefield (MCCULLOUGH 1965); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R (THOMSON 1979); Port Clarence; Pitmegea R, 15 mi upstream of Cape Sabine; S of Wainwright, Kaolak R (DIBBEN 1980); Chisik Isl (TALBOT et al. 1992); Mendenhall Valley (GEISER et al. 1994a, 1998); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Noatak NPr (MCCUNE et al. 2009); Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, N of Exit Glacier Visitor Center; W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Pertusaria subambigans Dibben – Corticolous on conifer and *Alnus* twigs in low elevation rainforests. – SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay (SPRIBILLE et al. 2020).

Pertusaria subdactylina → **Lepra subdactylina**

Pertusaria subobducens Nyl. – Terricolous in heath and tundra; corticolous specimens (TALBOT et al. 2002) also reported. – Port Clarence (NYLANDER 1887; HUE 1891); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuwagapuk Pt (THOMSON 1979); Bering Strait; Bering Sea, Hall Isl; Port Clarence; Brooks Range, mtn slope E of Nolan; Kukpuk R region; Alaska Peninsula, King Salmon R; Pitmegea R, 15 mi upstream of Cape Sabine; N ridge of the Colville R at Umiat;

valley of the Okpilak R at Okpilak L; Franklin Bluffs on the Sagavanirktok R; Nuvagapak Pt, Beaufort Lagoon; S of Wainwright, Kaolak R (DIBBEN 1980); Thompson Pass; Fielding L (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Pertusaria communis* auct., non DC. – Port Clarence; Cape Lisburne; Port Althorp (ROTHROCK 1884); Port Clarence (NYLANDER 1887; HUE 1891); Kodiak; St Michael (CUMMINGS 1904); Unalaska Isl; Atka Isl (HEDRICK 1936). Also “NYLANDER (1887) described an earlier Alaskan collection of *P. subobducens* (Bean 1880) as the European corticole *P. communis* DC.” (DIBBEN 1980); Dibben is likely referring to the report of *P. communis* in ROTHROCK (1884), who summarized BEAN’s 1880 collections.

= *Pertusaria tuckermanii* Erichsen, nom. nud. – Bering Strait (DIBBEN 1980, but no Alaskan locality mentioned by ERICHSEN 1938; Dibben’s inclusion of Alaskan material as “syntype” is thus erroneous).

Pertusaria suboculata Brodo & Dibben – Corticolous on *Alnus crispa*, *Cassiope* sp., *Cupressus nootkatensis*, *Elliotia pyroliflora*, *Loiseleuria procumbens*, *Menziesia ferruginea*, *Picea sitchensis*, *Salix arctica*, *Tsuga mertensiana* and *Vaccinium ovalifolium*, also terricolous over bryophytes in the alpine. – Adak Isl (TALBOT et al. 1997); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); White Pass (OBERMAYER 2011); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, Harris Peninsula; NPS weather station, McArthur Ridge; N end of Three Hole Bay off Aialik Bay; hill above Verdant Cove (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Pertusaria subvelata → ***Lepra subvelata***

Pertusaria trachydactyla Vain. – Saxicolous. – Alaska (DIBBEN 1980). A “strongly isidiate, moderately thick, continuous, tuberculate, and sterile white-colored arctic taxon” with “two collections (MO) from Alaska... that appear to conform to the diagnosis” with “C and KC+ red medulla reactions and ... gyrophoric and (±) lecanoric acids on TLC”. Dibben (1980) listed this under “Excluded Species”, apparently not out of doubt of the conspecificity of Alaskan specimens with the type but because the species “could in fact be an *Ochrolechia*”.

Pertusaria trochiscea Norman – Terricolous and muscicolous. – Port Clarence (NYLANDER 1887; HUE 1891); S of Wainwright, Kaolak R (DIBBEN 1980); Alaska (THOMSON 1997: map); Lake Clark NPPr, Portage L (MCCUNE et al. 2018).

Pertusaria velata → ***Varicellaria velata*** in Appendix A

Pertusaria xanthostoma → ***Ochrolechia xanthostoma***

Pertusaria wulfenii → ***Pertusaria hymenea***

Petractis clausa (Hoffm.) Kremp. – Saxicolous on boulders of calcareous sandstone. – Brooks Range, Endicott Mtns, Sukakpak Mtn (DILLMAN et al. 2012).

#*Phacopsis huuskonenii* → ***Raesaenenia huuskonenii***

- #**Phacopsis vulpicidae** Zhurb. & Diederich – On *Vulpicida juniperina*. – 140 km E of Kotzebue, NE margin of the Great Kobuk Sand Dunes near Ahnewetut Creek; Seward Peninsula, 7 km NE of Nome, Newton Peak; Brooks Range, Atigun Canyon, Galbraith Lake (ZHURBENKO et al. 2019); Alaska (FRISCH et al. 2022b).
- +**Phaeocalicium compressulum** (Szatala) A. F. W. Schmidt – Corticolous (saprophytic) on *Alnus* bark. – Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr, Naknek L; Lake Clark NPPr, mouth of Horn Cr (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).
- +**Phaeocalicium interruptum** (Nyl.) Tibell – Corticolous on *Salix* branches at the back of beach meadows. – Glacier Bay NP: East Arm, Gustavus, West Arm (SPRIBILLE et al. 2020).
- +**Phaeocalicium populneum** (Brond. ex Duby) A. F. W. Schmidt – Corticolous (saprophytic) on *Alnus incana* and *Populus tremuloides*. – Tanacross Village (TALBOT et al. 2007); Alaska (MCCUNE 2017b); Katmai NPPr, Naknek L; Lake Clark NPPr, Chinitna Bay (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).
- +**Phaeocalicium praecedens** (Nyl.) A. F. W. Schmidt – Corticolous on *Salix* twigs. – Katmai NPPr, Malone L (MCCUNE et al. 2018)
- Phaeophyscia adiastrata** (Essl.) Essl. – Corticolous on the wet side of *Populus* trunk. – Kenai Peninsula, Chugach NF, upper Russian Lakes cabin (DERR 2010: 248).
- Phaeophyscia ciliata** (Hoffm.) Moberg – Corticolous on *Alnus* and *Populus balsamifera*. – Glacier Bay (GEISER et al. 1994a, 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).
= *Physcia ciliata* (Hoffm.) Du Rietz – North Slope (LLANO 1951); White Mts, lower Fossil Cr (KROG 1968).
- Phaeophyscia constipata** (Norrl. & Nyl.) Moberg – Terricolous and muscicolous especially over calcareous rock, also over logs. – Yukon R (MURRAY et al. 1983); Alaska (THOMSON 1984: map); Sheep Mtn (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1270, Ten Mile Cr; Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, W of Lachbuna L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).
= *Physcia constipata* Norrl. & Nyl. – Umnak Isl, Nikolski (DEGELIUS 1937); Mt Eielson (WEBER & VIERECK 1967); Umnak Isl, Nikolski; Denali NP, Mt Eielson (KROG 1968).
- Phaeophyscia decolor** (Kashiw.) Essl. – Saxicolous and on bone. Treated as a synonym of *Phaeophyscia endococcinodes* in Japan (OHMURA & KASHIWADANI 2018). – Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Gates of the Arctic NPPr (NELSON et al. 2015b); Lake Clark NPPr, Portage L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield

Trail en route to high cliffs; N of Exit Glacier Visitor Center; S of Exit Glacier Visitor Center (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

? = “*Physcia endococcinea* f. *lithotodes* (Vainio) Thomson” – Kuiu Isl, Washington Bay (THOMSON 1963).

Phaeophyscia endococcina (Körb.) Moberg – Saxicolous on acidic rocks and among mosses on rocks, especially on periodically flooded rocks, also reported from tree bases. – Alaska (THOMSON 1984: map); N Kuiu Isl (GEISER et al. 1994a, 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); White Pass (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

= *Physcia endococcina* (Körb.) Th. Fr. – Richardson Hwy, mi 24; White Mts, headwaters of Sheep Cr; Circle Hot Springs (KROG 1968, as “*endococcinea*”); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

Phaeophyscia erythrocardia → [Appendix A](#)

Phaeophyscia hirsuta (Mereschk.) Essl. – Corticolous on *Alnus* and *Populus*. – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

Phaeophyscia hirtella Essl. – Corticolous on *Alnus crispa* and *Populus balsamifera*. See also entry under *P. erythrocardia* in [Appendix A](#). – Chisik Isl (TALBOT et al. 1992, misidentification of *P. erythrocardia* per MCCUNE et al. 2018); [SE Alaska] mainland, Unuk R (GEISER et al. 1994a: map; GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998).

Phaeophyscia hispidula (Ach.) Essl. – Saxicolous. – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018)

Phaeophyscia kairamoi (Vain.) Moberg – Corticolous on *Alnus*, *Picea* and *Populus*, typically in dripzones. – Katmai NP, Brooks Lodge area, in CG (SCHINDLER 1990); Ft Wainwright (RACINE et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

Phaeophyscia orbicularis (Neck.) Moberg – Corticolous, lignicolous and saxicolous. – Chisik Isl (TALBOT et al. 1992, misidentification of *P. pusilloides* per MCCUNE et al. 2018); SE Alaska (O’CLAIR et al. 1996); Mitkof Isl, Wrangell Narrows; Aaron Isl in Lynn Canal (GEISER et al. 1998); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Denali NPPr (ROLAND et al. 2017); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Physcia orbicularis* (Neck.) Poetsch – McKinley Bar (WEBER & VIERECK 1967); Talkeetna Mts, Little Susitna R; Talkeetna Mts, Puritan Cr; Knik R, near hwy; Kenai Peninsula, Skilak L; Kenai Peninsula, Ninihchik; White Mts, headwaters of Sheep Cr; Kotzebue (KROG 1968); Firth R at Mancha Cr (THOMSON 1979); Denali NPPr (STEHN et al. 2015); Katmai NPPr, Naknek L (MCCUNE et al. 2018).

Phaeophyscia pusilloides (Zahlbr.) Essl. – Corticolous on *Alnus*. – Tuxedni, Chisik Isl (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Phaeophyscia sciastra (Ach.) Moberg – Saxicolous, on mosses over rocks, also reported from open tundra and in woodland. – Yukon R (MURRAY et al. 1983); Alaska (THOMSON 1984: map); Chisik Isl (TALBOT et al. 1992); Sheep Mtn (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1270, Ten Mile Cr; Beaver Cr; Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018) Kenai Fjords NPPr, Harding Icefield Trail en route to high cliffs (MCCUNE et al. 2020).

= *Physcia sciastra* (Ach.) Du Rietz – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1960); Umiat (KROG 1962; MURRAY 1974); vicinity of the Kukpuk R, Angmakroq Mtn (KROG 1962); Ogotoruk Cr drainage (JOHNSON et al. 1966); Talkeetna Mts, Little Susitna R; Talkeetna Mts, Puritan Cr; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Richardson Hwy, mi 45; White Mts, limestone ridge between Beaver Cr and Fossil Cr (KROG 1968); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Ogotoruk Cr (MURRAY 1985). = “*Physcia lithotea* Nyl. var. *sciastra* (Nyl.) Nyl.” – Port-Clarence (HUE 1890). = “*Physcia obscura* * *sciastra* (Ach.)” – Port Clarence (NYLANDER 1887).

#*Phaeopyxis punctum* → #*Bachmanniomyces punctum*

Phaeorrhiza nimbosa (Fr.) H. Mayrhofer & Poelt – Terricolous on calcareous soil, arctic and alpine. – Thompson Pass; Blueberry L CG (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); White Pass (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail en route to high cliffs (MCCUNE et al. 2020).

= *Rinodina nimbosa* (Fr.) Th. Fr. – Cape Lisburne, Arctic Ocean (ROTHROCK 1884); Colville R near Umiat; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979).

Phaeorrhiza sareptana (Tomin) H. Mayrhofer & Poelt var. **sphaerocarpa** (Th. Fr.) H. Mayrhofer & Poelt – Terricolous.

= *Rinodina nimbosa* var. *sphaerocarpa* Th. Fr. – Camp Eielson (WEBER & VIERECK 1967).

#**Phaeospora arctica** Horáková & Alstrup – On *Arctocetraria andrejevii*. – Ogotoruk Cr drainage (HORÁKOVÁ & ALSTRUP 1994; IHLEN & WEDIN 2005); Great Kobuk Sand Dunes (ZHURBENKO 2012).

#**Phaeospora parasitica** (Lönnr.) Arnold – On *Biatora alaskana* over *Picea* trunk and on *Rhizocarpum umbilicatum*. – Cape Krusenstern NM, Noak Mtn (ZHURBENKO 2009b); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

#**Phaeosporobolus alpinus** R. Sant., Alstrup & D. Hawksw. – On *Lepra dactylina*, *Ochrolechia frigida*, *O. gowardii*, *O. oregonensis* and *Stereocaulon paschale*. – Atka Isl; St Paul Isl (ALSTRUP & HAWKSWORTH 1990); Barrow; Barter Isl; Happy Valley (ZHURBENKO et al. 1995); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NP, Mt Healy (ZHURBENKO 2010).

#**Phaeosporobolus usneae** D. Hawksw. & Hafellner – On *Usnea dasopoga*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003).

Phlyctis argena (Spreng.) Flot. – Corticolous on *Alnus*, *Picea* and *Populus*. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP, Seebree Isl (RESL et al. 2015, supplementary material); coastal Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Glacier Bay NP: East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

#**Phoma grumantiana** Zhurb. & Diederich – On *Cladonia pocillum*. – Denali NPPr (ZHURBENKO & PINO-BODAS 2017).

#**Phoma lobariae** Diederich & Etayo – On *Lobaria pulmonaria*. – Chilkoot Trail (SPRIBILLE et al. 2010).

#**Phoma lobariicola** Alstrup – On *Lobarina scrobiculata*. – Chilkoot Trail (SPRIBILLE et al. 2010).

#**Phoma peltigerae** (P. Karst.) D. Hawksw. – On a member of the *Peltigera* *apthosa* aggr. and *P. malacea*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Chilkoot Trail (SPRIBILLE et al. 2010).

#**Phoma physciicola** Keissl. – On *Physcia alnophila*, corticolous on *Populus balsamifera*, upper beach. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

#*Phoma thamnoliae* → [Appendix A](#)

Phyllicum demangeonii (Moug. & Mont.) Nyl. – Saxicolous on acidic and soft argillite rocks, from just above the high tide mark to the alpine. – Zarembo Isl, Zarembo Bay (HERRE 1919); Hagemeister Isl (TALBOT et al. 1990); Alaska (THOMSON 1997: map); Zarembo Isl, Zarembo Bay (GEISER et al. 1994a, 1998); Cape Krusenstern NM, Tahinichok Mts (ZHURBENKO 2009b); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017a & b); Katmai NPPr, Mirror L camp (MCCUNE et al. 2018); Kenai Fjords NP (TØNSBERG & PRINTZEN 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Phyllicum tenue Henssen – Saxicolous on pebbles. – Blueberry L CG (THOMSON & AHTI 1994); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above glacier (MCCUNE et al. 2020).

Physcia adscendens H. Olivier – Corticolous on nutrient-enriched hardwoods and conifers in hardwood drip zones, also saxicolous and lignicolous. – Knik R, near hwy; Kenai Peninsula, Ninilchik (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass (THOMSON 1979); Alaska (THOMSON 1984: map); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a, 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); S Alaska (ROOT et al. 2014); Katmai NPPr, Katmai Bear Cam; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Physcia aipolia → **Physcia alnophila**

Physcia alnophila (Vain.) Loht. et al. – Corticolous on nutrient-rich hardwoods (especially *Alnus* and *Salix*) and conifers in dripzones or in calcareous regions, also rarely saxicolous. All reports of *P. aipolia* are referred here as we doubt any refer to that species in the strict sense. – Dalton Hwy at mi 114, Fish Cr (DILLMAN et al. 2012); Alutae R; L Kaniksrak (BRODO et al. 2013: map); Denali

NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm West Arm (SPRIBILLE et al. 2020).
 = *Physcia aipolia* auct., non (Ehrh. ex Humb.) Fűrnr. (for Alaskan material) North Slope (LLANO 1951); Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Alaska (THOMSON 1963: map); McKinley Bar (WEBER & VIERECK 1967); Mendenhall Glacier Trail; Juneau area, Granite Basin; Talkeetna Mts, Little Susitna R; Knik R, near hwy; Anchorage, Rabbit Cr Rd; Anchorage area, headwaters of Rabbit Cr; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Kenai Peninsula, Ninilchik; Seward; White Mts, lower Fossil Cr; Nunivak Isl, Mekoryuk Village (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Chikuminuk L (THOMSON & DOELL 1989); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33; Deadman L CG; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Beaver Cr; 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013; Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b).

= *Physcia aipolia* f. *aipolia* – Skagway; Unalaska; Glacier Bay, Muir Glacier; PWS, Virgin Bay (THOMSON 1963).

= *Physcia aipolia* var. *aipolia* – SE Alaska (GEISER et al. 1998). The material should be located and re-examined in light of BRODO et al. (2013).

= “*Physcia stellaris aipolia* (Ach.) Nyl.” – Muir Glacier; Virgin Bay; St Michael (CUMMINGS 1904, as ‘*apiola*’).

= *Physcia aipolia* f. *angustata* (Nyl.) Vain. – Skagway (THOMSON 1963).

Physcia biziana (A. Massal.) Zahlbr. – Saxicolous. – Lake Clark NPPr, Camel’s Hump on shore of L Clark (MCCUNE et al. 2018).

Physcia caesia (Hoffm.) Fűrnr. – Saxicolous on nutrient-rich rock, such as where fertilized by birds, large stable boulders in the upper intertidal and on alpine argillite, also reported from whalebone in Yup’ik midden (TALBOT et al. 2001) and once corticolous on *Alnus* in beach fringe (SPRIBILLE et al. 2020). – Lawrence-Insula (NYLANDER 1887; HUE 1890); Yakutat; Farragut Bay; Alaska Peninsula, Kukak Bay; St Paul Isl (CUMMINGS 1904); Heceta Isl; Zarembo Isl; Wrangell (HERRE 1919); Orca (EYERDAM 1949); Unalaska Isl, Unalaska; Unalaska Isl, Kashaga; Umnak Isl, Nikolski; Kanaga Isl, NW side (DEGELIUS 1937); Kuiu Isl, Washington Bay (THOMSON 1950a); Ogoruk Cr (KROG 1962); Yakutat; Glacier Bay, Muir Glacier; Farragut Bay; St Paul Isl; St Michael; Wrangell; Little Koniuki Isl, Shumagin Isls; Kuiu Isl, Washington Bay; Hinchbrook Isl; Denali NP, Mt Eielson (THOMSON 1963: map); Ogoruk Cr drainage (JOHNSON et al. 1966); Camp Eielson; Mt Eielson (WEBER & VIERECK

1967); Juneau area, Mt Roberts; Juneau area, Shrine of St Therese; Anchorage area, headwaters of Rabbit Cr; Kenai Peninsula, Skilak L; Seward; Denali Hwy, mi 28; Denali Hwy, mi 70; Denali NP, Toklat; Denali NP, Polychrome Pass; base of Rainbow Mts, E of Richardson Hwy; White Mts, Lion Pk; White Mts, the limestone ridge; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Amchitka Isl (WEBER et al. 1969); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagak Pt; Firth R at Mancha Cr (THOMSON 1979); Yukon R (MURRAY et al. 1983); Alaska (THOMSON 1984: map); Ogoruk Cr (MURRAY 1985); Amchitka Isl (THOMSON & SOWL 1989); St Paul Isl, S coast; Katmai NP, Ninagial Isl (SCHINDLER 1990); Chisik Isl; Duck Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); SE Alaska (O'CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Willow L, near Alaska Hwy (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); cape on Teck Isl (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Physcia dubia (Hoffm.) Lettau – Saxicolous on rock, caribou antlers, old bones, lignicolous on weathered boards, and on sea cliffs, ornithocoprophilous. – Umiat (KROG 1962; MURRAY 1974); Glacier Bay, Muir Glacier; Port San Juan (THOMSON 1963: map); Mendenhall Glacier (MCCULLOUGH 1965); Mendenhall Glacier Trail; Juneau area, Shrine of St Therese; Talkeetna Mts, Independence Mine; Willow Rd between Little Susitna Lodge and Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Turnagain Arm, Bird Cr Ridge; Seward; Richardson Hwy, mi 24; Denali Hwy, mi 28–37; White Mts, headwaters of Sheep Cr; White Mts, the limestone ridge; Nunivak Isl, Nash Harbour; Seward Peninsula, Rainbow Cr (KROG 1968); Amchitka Isl (WEBER et al. 1969); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Ogoruk Cr (MURRAY 1985); Tikchik L (THOMSON & DOELL 1989); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Juneau area (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et

al. 2015); Kenai Fjords NPPr, Verdant Cove, N side at shoreline (McCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Physcia intermedia* Vain. – Umiat (KROG 1962; MURRAY 1974); northern foothills of Brooks Range, Umiat (KROG 1968; MURRAY 1974); Pt Barrow (THOMSON 1979).

= *Physcia teretiuscula* (Ach.) Lynge – North Slope (LLANO 1951); Nunivak Isl, Nash Harbor (KROG 1968).

= *Physcia tribacia* auct. – Port Clarence (NYLANDER 1887); Alaska (HUE 1890); Yakutat (CUMMINGS 1904).

Physcia phaea (Tuck.) J. W. Thomson – Saxicolous on acidic or weakly base-enriched rock. – Kenai Peninsula, Granite Cr Ridge; Richardson Hwy, mi 45 (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979, as cf.); Mt Fairplay (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; McCUNE et al. 2009); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= “*Physcia melops* (Duf.)” – Lawrence-Insula (NYLANDER 1887; HUE 1890).

Physcia stellaris (L.) Nyl. – Corticolous on hardwood bark. – Alaska (MANN 1868; TURNER 1886); Chamisso Isl; Little Koniushi Isl, of Shumagin; White Mts, between Beaver Cr and Fossil Cr; Glacier Spit, in Cook’s Inlet (ROTHROCK 1884; revised to *Physcia melops* by NYLANDER 1887: 86); Chamisso Isl; Little Koniushi Isl, Shumagin Group; Glacier Spit, Cook’s Inlet (MACOUN 1902); Muir Glacier; Unalaska; Chamisso Isl, Eschscholtz Bay; Little Koniuji Isl, Shumagin Group; Glacier Spit, Cook Inlet (CUMMINGS 1904); Skagway (MERRILL 1908c); Alaska (THOMSON 1963: map); Knik R, near hwy; Turnagain Arm, Bird Cr Ridge (KROG 1968); Glacier Bay (GEISER et al. 1994a; GEISER et al. 1998, based on CUMMINGS 1904, “specimen should be checked”); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010).

= *Physcia stellaris* f. *stellaris* – Bering Straits; Cook’s Inlet, Glacier Spit (THOMSON 1963).

Physcia subtilis Degel. – Saxicolous. – Sheep Mtn (THOMSON & AHTI 1994).

Physcia tenella (Scop.) DC. – Corticolous on *Populus trichocarpa* and dripzone or bird perch conifers. – North Slope (LLANO 1951); Juneau area, Shrine of St Therese (KROG 1968); Chisik Isl (TALBOT et al. 1992); Stikine R Valley (GEISER et al. 1998); Alaska (RYAN 1998, as cf.); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); small unnamed island near cabin in Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b, as s. lat.); Katmai NPPr, S shore Naknek L; Katmai NPPr, NE of Brooks Camp; Lake Clark NPPr, Portage L (McCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Glacier Bay (SPRIBILLE et al. 2020).

Physciella chloantha (Ach.) Essl. – Corticolous on *Picea sitchensis* twigs. – SE Alaska (DILLMAN 2004); Foggy Bay, Very Inlet; Mitkof Isl, Ideal Cove (DILLMAN et al. 2012); Katmai NPPr, Katmai Bay (McCUNE et al. 2018).

Physconia americana Essl. – Corticolous on *Alnus*, *Picea* and *Populus balsamifera* in riparian areas, one record on rock (Katmai). – Chilkoot Trail (SPRIBILLE et al.

2010); S Alaska (ROOT et al. 2014); Katmai NPPr, Naknek L; Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020 as 'cf.').

Physconia deterosa (Nyl.) Poelt – Corticolous *Alnus*, *Betula* and *Picea*, also on moss over rock. – Talkeetna Mts, Mabel Mine; Talkeetna Mts, Buffalo Mine; Kenai Peninsula, Ninilchik; Kenai Peninsula, S of Hidden L; Denali Hwy, mi 70; Denali NP, Savage R; White Mts, headwaters of Sheep Cr; White Mts, Fossil Cr (KROG 1968); Alaska (THOMSON 1984: map); St Paul Isl, S coast; Katmai NP, Brooks Lodge area, in CG; Kenai Peninsula, coast of Ninilchik (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992, specimens are actually a mix of *P. enteroxantha*, *P. grumosa* and *P. perisidiosa* [MCCUNE et al. 2018]); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Physcia grisea* auct. amer., non (Lam.) Zahlbr. – Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

= *Physconia grisea* auct. amer., non (Lam.) Poelt – Anaktuvuk Pass (MOSER et al. 1979).

Physconia enteroxantha (Nyl.) Poelt – Corticolous on conifers. – Kenai Peninsula, Skilak L; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Ninilchik; Seward (KROG 1968); Chilkoot Trail (SPRIBILLE et al. 2010); Tuxedni, Chisik Isl (MCCUNE et al. 2018).

Physconia grumosa Kashiw. & Poelt – Saxicolous on marine rock outcrops above the high tide line. – Tongass NF, Blashke Isl, Kuiu Isl, Mosman Isl, Gravina Isl; Misty Fjords NM, Kanagunut Isl (ESSLINGER & DILLMAN 2010); Katmai NPPr; Lake Clark NPPr; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020).

Physconia isidiigera (Zahlbr.) Essl. – Corticolous on *Picea sitchensis* and *Populus balsamifera*. – Ft Wainwright (RACINE et al. 1997); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010).

Physconia labrata Essl. et al. – Corticolous on *Picea* and *Populus*. – SE Alaska, near Klukwan; Denali NPPr, S of Wonder L; Lake Clark NPPr, near W end of Portage L; Katmai NPPr, bay just N of Brooks Camp; Eklutna (ESSLINGER et al. 2017); Katmai NPPr, shore of Naknek L; Lake Clark NPPr, near W end of Portage L (MCCUNE et al. 2018).

Physconia muscigena (Ach.) Poelt – Terricolous in calcareous tundra and muscicolous over rock, reports from *Populus* bark (GEISER et al. 1998) may be referable to *P. americana*. – Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Eagle R Valley; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Skilak L; Kenai Peninsula, Granite Cr Ridge; W of Seward, Marathon Mtn; Denali Hwy, mi 70; Denali NP, Toklat; Denali NP, Savage R; White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; White Mts, Fossil Cr; Kotzebue (KROG 1968); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Tanana R (MURRAY et al. 1983); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); St Paul Isl, S

coast; Kenai Peninsula, Ptarmigan L Trail (SCHINDLER 1990); Central Arctic coastal plain (WALKER et al. 1991); Tuxedni Wilderness, Duck Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Innuvait Cr (WALKER & WALKER 1996); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska Hwy, mi 1270, Ten Mile Cr; Riverside Lodge Airstrip; Tetlin Junction; Willow L, near Alaska Hwy; 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017). = *Physcia muscigena* (Ach.) Nyl. – Port Clarence (NYLANDER 1887); Lawrence ins., Port Clarence (HUE 1890); Umnak Isl, Nikolski (DEGELIUS 1937); Port Heiden (HOWARD 1958); Umiat (KROG 1962; MURRAY 1974); Ogotoruk Cr drainage, Crowbill Ridge; vicinity of the Kukpuk R, Angmakroq Mtn; Cape Dyer, drainage of Kipaloq and Angowlik Crs; Denali NP, Conglomerate Mtn, E of Teklaneeka R (KROG 1962); Quigley Hill (HOWARD 1963); Alaska (THOMSON 1963: map); Ogotoruk Cr drainage (JOHNSON et al. 1966); Camp Eielson; Mt Eielson (WEBER & VIERECK 1967); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Barter Isl; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Physcia muscigena* f. *muscigena* – Umiat (THOMSON 1963; MURRAY 1974); Timber Cr; Denali NP, Mt Eielson; St George Isl; St Paul Isl; Eklutna; Perryville (THOMSON 1963).

= *Physcia muscigena* f. *isidiata* (Lynge) J. W. Thomson – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

= *Physcia muscigena* f. *lenta* (Ach.) Vain. – S of Wainwright, Kaolak R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979).

= *Physcia muscigena* f. *squarrosa* (Ach.) Lynge – Denali NP, Mt Eielson (THOMSON 1963); Timber Cr (THOMSON 1963); Colville R near Umiat; Circular Marsh near Barrow (THOMSON 1979).

? = “*Physcia pulverulenta* (Schreb.) Fürnr.” – St Paul Isl (CUMMINGS 1904); Collinson Pt (MERRILL 1924b); McKinley Bar (WEBER & VIERECK 1967).

Physconia perisidiosa (Erichsen) Moberg – Corticolous on *Populus trichocarpa* and *Picea sitchensis* in its dripzone. – Yukon R (MURRAY et al. 1983); Chisik Isl (TALBOT et al. 1992); Ft Wainwright (RACINE et al. 1997); Alaska (BRODO et al. 2001: one dot in the Arctic); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, N of Exit Glacier Visitor Center; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020).

= *Physconia farrea* auct. – Kenai Peninsula, Skilak L; Kenai Peninsula, S of Hidden L; Richardson Hwy, Darling Cr (KROG 1968).

Piccolia ochrophora (Nyl.) Hafellner – Corticolous on *Alnus* and on a cyanolichen on *Salix*. – Katmai NPPr, Malone L (McCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (McCUNE et al. 2020).

Pilophorus acicularis (Ach.) Nyl. – Saxicolous on acidic rock, southern and western coastal. – Russian America (MANN 1868; TURNER 1886, as *Pilophoron aciculare*, orthographic gender variant); Sitka, Saw-Mill Cr (ROTHROCK 1884); Alaska (SANDSTEDE 1932: map); Ketchikan; Sitka (DEGELIUS 1937; SANDSTEDE 1938, as *Pilophoron*); Annette Isl; Kuiu Isl, Washington Bay (THOMSON 1950a, as *Pilophoron*); Mendenhall Glacier (McCULLOUGH 1965, as *Pilophoron*); Juneau area, Mt Roberts; Juneau area, Granite Basin; Juneau area, Douglas Ski Bowl; Talkeetna Mts, Bald Mtn Ridge; Ketchikan area, Deer Mtn; Ketchikan area, Ward L (KROG 1968); Windham Bay; Skagway; Gold Cr Canyon, near Juneau; PWS, Knight Isl, Thum Bay; Kuiu Isl, Washington Bay (JAHNS 1970); Alaska (JAHNS 1981: map); Kenai Peninsula, Ptarmigan L Trail (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NP (TØNSBERG & PRINTZEN 2018); Kenai Fjords NPPr (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020). = *Pilophorus cereolus* var. *acicularis* (Ach.) Tuck. – Juneau, Salmon Cr; near Juneau, Gold Cr Canyon (CUMMINGS 1892a); St Paul Isl; Juneau; near Juneau, Salmon Cr; Gold Cr Canyon, near Juneau (MACOUN 1902); Sitka; Mt Verstovia, Sitka; Juneau; Orca (CUMMINGS 1904); Skagway (MERRILL 1908c); Cañon City, Dyea Cr (HOWE 1911b); Zarembo Isl, St John's Harbor; Dall Isl, Augustine Bay; Nichols Bay; Woewodsky Isl (HERRE 1919).

Pilophorus cereolus (Ach.) Hellb. (for authorities see *Nordic Lichen Flora* 5: 87; 2013). – Saxicolous on acidic rocks. – Yakutat Bay (STAIR 1947); PWS, Thum Bay (EYERDAM 1949); Prince of Wales Isl, Deep Cove (THOMSON 1950a, as *Pilophoron cereolus*, orthographic gender variant); Nome (HANSON 1953); Prince of Wales Isl, Deep Cove (KROG 1968); Thompson Pass (THOMSON & AHTI 1994); AB Mtn Trail near Skagway (GEISER et al. 1998); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; McCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

Pilophorus clavatus Th. Fr. – Saxicolous on acidic rock. – Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn (KROG 1968); Alaska (JAHNS 1981: map); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPPr (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

= "*Pilophorus cereolus hallii* Tuck." – Orca (CUMMINGS 1904); Zarembo Isl, St John's Harbor (HERRE 1919, as *Pilophoron*).

Pilophorus dovrensis (Nyl.) Timdal et al. – Saxicolous on seepage or moist rock, or terricolous on soil clumps in tundra. – Port Clarence; Colville R near Umiat; 6.5 mi SSW of Barrow Base, near Loon L (HERTEL & RAMBOLD 1988); Kenai

Peninsula, between Moose Pass and Seward (SCHINDLER 1990); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017a); Glacier Bay NP: East Arm, Excursion Ridge, West Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Lecidea dovrensis* Nyl. – Port Clarence (NYLANDER 1887; HUE 1891).

= *Lecidea pallida* Th. Fr. – Colville R near Umiat; 6.5 mi SSW of Barrow Base, near Loon L (THOMSON 1979); Alaska (THOMSON 1997: map).

Pilophorus fibula → Appendix A

Pilophorus nigricaulis M. Satô – Saxicolous on acidic rock. – Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn (KROG 1968); Alaska (JAHNS 1981, as ‘*nigricaulis*’: map); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Chugach NF (DERR 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018; Kenai Fjords NPPr (MCCUNE et al. 2020).

Pilophorus robustus Th. Fr. – Saxicolous on acidic rock and reported in part from detritus. – Isls of Behring's straits (MANN 1868, TURNER 1886, as *Pilophoron robustum*, orthographic gender variant); Insulae Freti Beringiam (STIZENBERGER 1876, as *Pilophoron*); St Paul Isl (MACOUN 1899); Alaska (SANDSTEDE 1932: map); Ogoturuk Cr (WEBER 1961, as *Pilophoron*); Ogoturuk Cr drainage (JOHNSON et al. 1966, as *Pilophoron*); Wonder L (WEBER & VIERECK 1967, as *Pilophoron*); Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Nunivak Isl, Lake where the geese don't fly; Seward Peninsula, King Mtn (KROG 1968: map); Anaktuvuk Pass (MOSER et al. 1979, as *Pilophoron*); Anaktuvuk Pass (THOMSON 1979); Aleutian Isls, Amchitka Isl (JAHNS 1981: map); Alaska (THOMSON 1984: map); Ogoturuk Cr (MURRAY 1985, as *Pilophoron*); St Paul Isl, SW coast; Kenai Peninsula, on the rd to Seward (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Adak Isl (TALBOT et al. 1997); Mitkof Isl, Crystal Mtn (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); North Slope, Toolik L (ZHURBENKO 2009b); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Becharof NWR, L Becharof (MCCUNE et al. 2018).
= “*Pilophorus cereolus* f. *robustus* Tuck.” – PWS, Thum Bay (EYERDAM 1949).
= “*Pilophorus cereolus* var. *robustus* Tuck.” – St Paul Isl (MACOUN 1902).
= *Pilophorus polycarpus* Tuck. – Port Clarence (NYLANDER 1887; HUE 1890, as *Pilophoron polycarpum*, orthographic gender variant). Described from Asian side of Bering Straits (TUCKERMAN 1858); synonymy after JAHNS (1981).
= “*Pilophoron fibula* Tuck. * *polycarpum* Tuck.” – Insulae Freti Beringiam (STIZENBERGER 1876).

Pilophorus vegae Krog – Saxicolous on acidic rock in oceanic regions. – Nunivak Isl (type – KROG 1968); Nunivak Isl; Talkeetna Mts (JAHNS 1981: map); Ogoturuk Cr (MURRAY 1985); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr, Mirror L (MCCUNE et al. 2018); Kenai Fjords NPPr, E side of Harris Bay (MCCUNE et al. 2020).

Placidopsis cervinula (Nyl.) Vain. – Terricolous and muscicolous. – Endicott Mts, Arrigetch Valley (THOMSON 1987; THOMSON 1997).

Placidiopsis pseudocinerea Breuss – Terricolous and muscicolous. – Alaska (BREUSS & HANSEN 1988); 32 km N of Ambresvajun L; L Peters (BREUSS & MCCUNE 1994); Alaska (MCCUNE 2017b).

Placidium lachneum (Ach.) de Lesd. – Terricolous on calcareous soil or saxicolous. – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).
= *Catapyrenium lachneum* (Ach.) R. Sant. – Alaska (THOMSON 1987: map); Sheep Mtn (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996).
= *Dermatocarpon lachneum* (Ach.) A. L. Smith – Mt Eielson (WEBER & VIERECK 1967); Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map).

Placidium norvegicum (Breuss) Breuss – Terricolous in tundra and shrub-tundra. – Noatak NPr (MCCUNE et al. 2009); Alaska (MCCUNE 2017b).
= *Catapyrenium norvegicum* Breuss – Alaska (BREUSS & MCCUNE 1994).

Placidium pilosellum (Breuss) Breuss – Terricolous. – Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Placidium squamulosum (Ach.) Breuss – Terricolous on calcareous soil. – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).
= *Dermatocarpon hepaticum* auct. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map). The type of *Dermatocarpon hepaticum* is *Catapyrenium cinereum*, but THOMSON (1987) used *D. hepaticum* in the sense of *Placidium squamulosum*.

Placopsis cribellans (Nyl.) Räsänen – Saxicolous on acidic rocks and cobbles. – Port Clarence (LAMB 1947); Alaska (BRODO et al. 1987); Unalaska Isl; Port Clarence (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010, as cf.); Glacier Bay NP, Bartlett Cove (RESL et al. 2015, supplementary material); Glacier Bay NP, Bartlett Cove; Mitkof Isl, Twin Cr rd (SCHNEIDER et al. 2016); coastal Alaska (MCCUNE 2017b); Katmai NPPr, Naknek L; Lake Clark NPPr, Saddle Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, headland between two arms of Coleman Bay; Kenai Fjords NPPr, spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier; Petersburg Borough, Patterson Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

Placopsis fusciculoides D. J. Galloway – Saxicolous on rocks and pebbles on high beaches. – Mitkof Isl, Twin Cr rd; Glacier Bay NP, West Arm (SCHNEIDER et al. 2016); Glacier Bay NP: East Arm, Excursion Ridge, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier; Petersburg Borough, Patterson Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

Placopsis gelida (L.) Linds. – Saxicolous on acidic rock in humid places. *Placopsis gelida* is widely reported for Alaska, but specimens corresponding to the Fennoscandian species are uncommon and most reports are referable to other taxa. – Glacier Bay, Muir Glacier; Baranoff Isl, Hot Springs; Cape Fox; Port Clarence; Alaska Peninsula, Belkoffski; PWS, Port Wells; Yakutat Bay (LAMB 1947); Juneau Icefield (MCCULLOUGH 1965); Mt Eielson (WEBER & VIERECK 1967); Kodiak Isl, Three Saints Bay (HERTEL & LEUCKERT 1969); Amchitka Isl (WEBER et al. 1969); Alaska (THOMSON 1972a: map); Keystone Canyon, 22 km E of Valdez (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R,

15 mi upstream from Cape Sabine; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Portage Glacier (SCHINDLER 1987); Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Kenai Peninsula, between Moose Pass and Seward; Kenai Peninsula, on the rd to Seward (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Eagle Summit; terminal moraine of Valdez Glacier; Richardson Hwy, mi 10, near Valdez; Thompson Pass (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Glacier Bay NP, Muir Glacier; near Juneau, Mendenhall L; Baird Glacier forelands (SCHNEIDER et al. 2016); Alaska (MCCUNE 2017b); Katmai NPPr, Naknek L; Lake Clark NPPr, Saddle Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, northwest Lagoon Beach; Kenai Fjords NPPr, spit across James Lagoon (MCCUNE et al. 2020, as s. lat.); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Lecanora gelida* (L.) Ach. – Chernofski Isl, Unalaska; Belkofski, Aliaska Peninsula (ROTHROCK 1884); Cape Lisburne (NYLANDER 1887); Alaska (HUE 1891); Unalaska Isl; Belkofski (MACOUN 1902); Muir Glacier; Hidden Glacier Inlet, Yakutat Bay; Port Wells; Port Clarence; Cape Fox (CUMMINGS 1904); Wrangell Isl (HERRE 1919); Unalaska Isl; Amlia Isl; Unimak Isl (HEDRICK 1936); Unalaska Isl, Unalaska; Carlisle Isl; Amchitka Isl, N side; Kanaga Isl, NW side (DEGELIUS 1937); PWS, Thum Bay (EYERDAM 1949); Juneau icefield nunatak (HEUSSER 1954).

= “*Lecanora gelida* var. *sorediosa* Ach.” – Eagle (HERRE 1920).

Placopsis lambii Hertel & V. Wirth – Saxicolous, especially in humid places, in the alpine and lower along streams and on rock outcrops. Many early reports of *P. gelida* belong here (BRODO et al. 2001). – Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Baird Glacier forelands (SCHNEIDER et al. 2016); Alaska (MCCUNE 2017b); Kenai Fjords NPPr (MCCUNE et al. 2020).

= *Lecanora gelida* f. *neglecta* Degel. – Kanaga Isl (**type** – DEGELIUS 1937); PWS, Thum Bay (EYERDAM 1949); Kuiu Isl, Washington Bay (THOMSON 1950a). Synonymy after MOBERG & CARLIN (1996).

= *Placopsis gelida* f. *neglecta* (Degel.) I. M. Lamb – Aleutian Isl, Kanaga (LAMB 1947); Alaska (MOBERG & CARLIN 1996).

Placopsis roseonigra Brodo – Saxicolous on acidic rock in hyperoceanic localities. – Sitka, Harbor Mtn; Juneau (BRODO 1995c); Sitka; Juneau (GEISER et al. 1998); Kupreanof Isl (SCHNEIDER et al. 2016); SE Alaska (MCCUNE 2017a & b); Katmai NPPr, Hammersly L; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018).

Placopyrenium fuscillum (Turner) Gueidan & Cl. Roux – Saxicolous on coastal rocks.

= *Verrucaria fuscella* (Turner) Winch – Baranof Isl, Hot Springs (CUMMINGS 1904); Adak Isl (TALBOT et al. 1997).

Placynthiella dasaea (Stirt.) Tønsberg – Corticolous on *Tsuga*, and lignicolous. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Placynthiella hyporhoda (Th. Fr.) Coppins & P. James – Terricolous on detritus. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); coastal Alaska (MCCUNE 2017b).

Placynthiella icmalea (Ach.) Coppins & P. James – Terricolous on soil over rock, overgrowing moribund lichen thalli, and lignicolous on hardwood logs. – Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Placynthiella oligotropa (J. R. Laundon) Coppins & P. James – Terricolous on (often peaty) humus or lignicolous on well-rotted wood. – Deadman L CG (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chugach NF, Kenai Peninsula, near Hope (DERR 2010: 237, as '*oligotropa*'); Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr, Pickerel L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Placynthiella uliginosa (Schrad.) Coppins & P. James – Terricolous on mineral or humic soil and lignicolous on logs. – Deadman L CG (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

= *Lecidea uliginosa* (Schrad.) Ach. – McKinley Bar (WEBER & VIERECK 1967); Pitmegea R, 15 mi upstream from Cape Sabine; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; Pt Barrow; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

Placynthium asperellum (Ach.) Trevis. – Saxicolous on seepage rocks. – Blueberry L CG; Thompson Pass (THOMSON & AHTI 1994); Noatak NPr (MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Portage L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Placynthium aspratile* (Ach.) Henssen – Saxicolous on calcareous rock, also reported from acidic rock. – Ukinyik Cr drainage (HENSSEN 1963c); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Ogoturuk Cr (MURRAY 1985). Synonymy after WESTBERG et al. (2021), but the genus is in need of revision.

Placynthium flabellusum (Tuck.) Zahlbr. – Saxicolous on lakeshore and streamside rocks. – Alaska (MCCUNE 2017b); Katmai NPPr, Hammersly L; Lake Clark

NPPr, Mirror L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

Placynthium garovaglii (A. Massal.) Malme – Saxicolous on calcareous rocks. – Brooks Range, L Peters (FRYDAY 2017).

Placynthium glaciale Fryday & T. Sprib. – On small siliceous boulders in recently deglaciated forelands and recently deglaciated marble cliff face. – Glacier Bay NP: East Arm (type); Petersburg Borough, Patterson Glacier (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

Placynthium nigrum (Huds.) Gray – Saxicolous on calcareous rocks, rarely also on base-enriched siliceous rocks. – Mt Eielson (WEBER & VIERECK 1967); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Bering Straits, Ukinyik Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Nishlik L (THOMSON & DOELL 1989); SE Alaska (GEISER et al. 1994a: map); [SE Alaska] mainland, Waterfall Pk (GEISER et al. 1998); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010, MUGGIA et al. 2011: Appendix 1); Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= *Placynthium nigrum* var. *nigrum* – Ukinyik Cr; Denali NP, NW slope of Mt Eielson (HENNSEN 1963c).

= “*Pannularia nigra* (Huds.)” – Port Clarence (NYLANDER 1885b; NYLANDER 1887; HUE 1891). THOMSON (1979) writes the specimens reported by Nylander from the Asian side are *P. aspratile*.

Placynthium pannariellum (Nyl.) H. Magn. – Saxicolous. – White Pass (SPRIBILLE et al. 2010; MUGGIA et al. 2011: Appendix 1); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018).

Placynthium rosulans (Th. Fr.) Zahlbr. – Saxicolous by creek. – Katmai NPPr, Headwaters Cr (MCCUNE et al. 2018).

Placynthium stenophyllum (Tuck.) Fink var. *isidiatum* Henssen – Saxicolous. – White Pass (SPRIBILLE et al. 2010); Denali NPPr, Simpson Pass (STEHN et al. 2015); arctic and SE Alaska (MCCUNE 2017b).

Placynthium subradiatum (Nyl.) Arnold – Saxicolous on exposed limestone. – Prince of Wales Isl, Virginia Pk (DILLMAN et al. 2012); Denali NPPr (STEHN et al. 2015); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Placynthium tantaleum (Hepp) Hue – Saxicolous in fellfield, on limestone and flushed marble rock face. – Lookout Ridge (FRYDAY 2017); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020, as aff.); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021a & b).

Platismatia glauca (L.) W. L. Culb. & C. F. Culb. – Corticolous and lignicolous on conifer and hardwood branches and trunks, occasionally saxicolous/muscicolous on rock faces. – PWS, Knight Isl, Thum Bay; Kuiu Isl, Washington Bay; Seward; Admiralty Isl, Windfall Harbor (CULBERSON & CULBERSON 1968: map); Juneau area, Loop Rd; Juneau area, Mt Roberts; Juneau area, Shrine of St Therese; Juneau area, Montana Cr; Juneau area, Douglas Ski Bowl; Sitka area,

Harbor Mtn; Sitka NM; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Ketchikan area, Saxman Village; Anchorage, O'Malley Rd; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; Kenai Peninsula, Ingram Cr; Seward; W of Seward, Marathon Mtn; Richardson Hwy, mi 9; PWS, Pigot Bay; PWS, Fish Bay (KROG 1968); Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1984: map); by Portage (SCHINDLER 1987); Amchitka Isl (THOMSON & SOWL 1989); Kenai Peninsula, CG Kenai; Kenai Peninsula, rd between Moose Pass and Seward; Kenai Peninsula, Ptarmigan L Trail (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy; Haines Hwy, mi 33; terminal moraine of Valdez Glacier; Richardson Hwy, mi 10, near Valdez (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); SE Alaska (DERR et al. 2007); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail, White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier, Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= *Cetraria glauca* (L.) Ach. – Kotzebue's Sound (BABINGTON 1851); Cook's Inlet (ROTHROCK 1884); near Juneau, Salmon Cr; near Juneau, Sheep Cr; Sitka (CUMMINGS 1892a); PWS (CUMMINGS 1892b); Sitka (MACOUN 1902); Sitka; Wrangell; Pt Gustavus, Glacier Bay; Orca (CUMMINGS 1904); Coronation Isl, Egg Harbor; Kosciusko Isl, Shipley Bay; Baker Isl, Port San Antonio (HERRE 1919); Eagle (HERRE 1920); Kodiak Isl (HEDRICK 1936); Sitka; PWS, Crab Bay; Kenai Peninsula, Seward; Kenai Peninsula, Tutka Bay; Kodiak Isl, Kodiak (DEGELIUS 1937); Yakutat Bay (STAIR 1947); PWS, Thum Bay (EYERDAM 1949); Kuiu Isl, Washington Bay; Kodiak Isl, Kodiak; Raspberry Isl, Port Vita (THOMSON 1950a); Tanana (HOWARD 1958); halfway up Tracy Arm, on W side (KROG 1962); Mendenhall Glacier (McCULLOUGH 1965); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= "*Platysma glaucum* Nyl." – Kotzebue Sound (MANN 1868; TURNER 1886); Cooks Inlet (NYLANDER 1887); Alaska (HUE 1890).

Platismatia herrei (Imshaug) W. L. Culb. & C. F. Culb. – Corticolous on conifer branches in SE rainforests. See also *P. stenophylla*. – Hecla Isl; PWS, Knight Isl, Thum Bay; Kuiu Isl, Washington Bay; Raspberry Isl, Port Vita (CULBERSON & CULBERSON 1968: map); Juneau area, Loop Rd; Juneau area, Montana Cr; Juneau area, Shrine of St Therese; Sitka area, Harbor Mtn; Sitka NM; Ketchikan area, Deer Mtn; Ketchikan area, Ward L (KROG 1968); SE Alaska (GEISER et al. 1994a: map); Haines (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004; DERR et al. 2007); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus; Gustavus (SPRIBILLE et al. 2020).

= *Cetraria tuckermanii* Herre, non Oakes, nom. illegit. – Brownson Bay; Heceta Isl (HERRE 1919). Synonymy after CULBERSON & CULBERSON (1968).

Platismatia lacunosa (Ach.) W. L. Culb. & C. F. Culb. – Corticolous on conifer branches, sometimes on rock. – Unalaska; PWS, Knight Isl, Thum Bay; Hinchinbrook Isl; Raspberry Isl, Port Vita; Revillagigedo Isl, Ketchikan; Annette Isl; Admiralty Isl, Windfall Harbor; Orca; Attu Isl, Engineers Canyon; Adak Isl, Chapel Cove; Atka Isl; Ketchikan, Deer Mtn; Kuiu Isl, Washington Bay (CULBERSON & CULBERSON 1968: map); Amchitka Isl, above Chitka Cove (WEBER et al. 1969, as ‘*Platysmatia*’; THOMSON & SOWL 1989); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004; DERR et al. 2007); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); S Alaska (ROOT et al. 2014); Katmai NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay (SPRIBILLE et al. 2020).

= *Cetraria lacunosa* Ach. – Cross Sound, Baranoff Isl, Sitka (ROTHROCK 1884); PWS (CUMMINGS 1892b); Pribilof Isls (MACOUN 1899); St George Isl; St Paul Isl; Unalaska Isl (MACOUN 1902); Sitka; Virgin Bay; Kodiak; Unalaska (CUMMINGS 1904); Brownson Bay; Kuiu Isl, Kell Bay; Dall Isl, Augustine Bay (HERRE 1919); Alaska (DU RIETZ 1924); Unalaska Isl; Atka Isl (HEDRICK 1936); Unalaska Isl, Unalaska; Atka Isl; Adak Isl, Chapel Cove (DEGELIUS 1937); Adak Isl (STAIR 1948); PWS, Thum Bay (EYERDAM 1949); Kuiu Isl, Washington Bay; PWS, Hinchinbrook Isl; Annette Isl; Raspberry Isl, Port Vita (THOMSON 1950a); Mendenhall Glacier (MCCULLOUGH 1965); Kodiak Isl, 29 km NW of Olga Bay Cannery, “Amara Lake” (KROG 1969).

= *Platismatia lacunosa* var. *lacunosa* – Juneau area, Mt Roberts; Juneau area, Shrine of St Therese; Juneau area, Montana Cr; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; PWS, Fish Bay (KROG 1968).

= *Platysma lacunosum* (Ach.) Nyl. – Insulae Aleuticae (STIZENBERGER 1876); Sitka (NYLANDER 1887); Alaska (HUE 1890); Sitka (STIZENBERGER 1895a, 1895b); Atka Isl; Ketchikan; Little Kiska Isl (HOWE 1913a).

= *Cetraria lacunosa* var. *acharii* Du Rietz – Halfway up Tracy Arm, on W side (KROG 1962).

? = *Cetraria lacunosa* var. *macounii* Du Rietz – Material in UPS (*leg.* Macoun) is scanty and may have been split from a larger collection; definitively resolving the identity of this taxon may have to wait until better original material can be found. – Unalaska; St. George Isl; St Paul Isl (**type** – DU RIETZ 1925a, also discussed by DU RIETZ 1924: 64, footnote, prior to description); Port Heiden; Attu Isl, Siddens Valley, Engineers Canyon (HOWARD 1958); St Matthew Isl (KROG 1962); Quigley Hill; hill E of rd to Kantishna; Wiseman, mtn across the Koyukuk R (HOWARD 1963 but these records apply to *Asahinea scholanderi* [WEBER & VIERECK, 1967]); mtn W of Wiseman (HOWARD 1963; MURRAY

1974, but record is probably *Asahinea scholanderi* according to WEBER & VIERECK 1967).

= *Platismatia lacunosa* var. *macounii* (Du Rietz) Culb. & Culb., nom. inval. – Nunivak Isl, Nash Harbor (KROG 1968). The combination appears to have been inadvertently made in KROG (1968) and is invalid because the basionym is not cited.

Platismatia norvegica (Lyngé) W. L. Culb. & C. F. Culb. – Corticolous on conifers and hardwoods and occasionally over low elevation rock faces in southern coastal forests. – Kodiak Isl, Kodiak; Beardsley Isls, Glacier Bay; PWS, Knight Isl; College Fjord; Bainbridge Glacier; Seward; Yakutat; Juneau (CULBERSON & CULBERSON 1968: map); Juneau area, Loop Rd; Juneau area, Shrine of St Therese; Juneau area, Montana Cr; Juneau area, Douglas Ski Bowl; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Sitka NM; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Ingram Cr; Seward; W of Seward, Marathon Mtn; Richardson Hwy, mi 9; PWS, Pigot Bay; PWS, Fish Bay (KROG 1968); by Portage (SCHINDLER 1987); Kenai Peninsula, near Exit Glacier; Kenai Peninsula, Ptarmigan L Trail (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska Rd, 1 mi from hwy; Haines Hwy, mi 33; terminal moraine of Valdez Glacier; Richardson Hwy, mi 10, near Valdez; Haines (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Tongass NF, Lower Dewey L Trail, near Stargill's Landing (NASH et al. 2006); SE Alaska (DERR et al. 2007); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Teck Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Katmai NPP; Lake Clark NPP (MCCUNE et al. 2018); Kenai Fjords NPP (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Cetraria norvegica* (Lyngé) Du Rietz – Juneau; Kenai Peninsula, Seward; Kodiak Isl, Kodiak (DEGELIUS 1937); Alaska (AHLNER 1948); Salisbury Pt (KROG 1962); Mendenhall Glacier (MCCULLOUGH 1965).

Platismatia stenophylla (Tuck.) W. L. Culb. & C. F. Culb. – On trees, mostly in humid coastal forests. No recent vouchers; at least one record is *P. herrei*, but the others have not been located. – Alaska (BRODO et al. 2001, map).

= *Cetraria glauca* f. *stenophylla* Tuck. – PWS (CUMMINGS 1892b); Skagway (MERRILL 1908c: 111; the voucher, FH-00473707, is *P. herrei* [TS, !image, 2023]).

= *Platysma glaucum* var. *stenophyllum* (Tuck.) R. Howe – Ketchikan (HOWE 1913a).

#*Plectocarpus cladoniae* R. Sant. – On *Cladonia merochlorophaea* and *C. pyxidata*. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Brooks Range, Endicott Mtns, Midnight Dome; near Cantwell, base of Panorama Mtn (DILLMAN et al. 2012).

#*Plectocarpus lambinonii* Diederich & Etayo – On *Lobaria anomala*. – Kodiak Isl E, Kalsin Bay W, along the rd to Middle Bay (ERTZ et al. 2005).

#*Plectocarpus lichenum* (Sommerf.) D. Hawksw. – On *Lobaria anomala* and *L. pulmonaria* on *Picea* branches. – Haines Hwy, mi 33; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Chilkoot Trail

(SPRIBILLE et al. 2010); Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

#Plectocarpon linitae (R. Sant.) Wedin & Hafellner – On *Lobaria linita*. – Alaska (ERTZ et al. 2005).

= *Arthonia linitae* R. Sant. – 0.7–2.0 km NE of Cordova (ESSLINGER & EGAN 1995).

#Plectocarpon nephromeum (Norman) R. Sant. – On *Nephroma* spp. (*N. bellum*, *N. parile*, *N. resupinatum*). – NW of Juneau City, N of Dotsons Landing, N bank of Herbert R, just W of the Hwy; Juneau, Mendenhall L (TRIEBEL et al. 1991); Juneau, N of Dotsons Landing, N bank of Herbert R (ERTZ et al. 2005); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

#Plectocarpon peltigerae Zhurb. et al. – On *Peltigera aphthosa* aggr. – Brooks Range, Endicott Mtns, Midnight Dome (DILLMAN et al. 2012).

Pleopsidium chlorophanum (Wahlenb.) Zopf – Saxicolous on dry, steep vertical rocks. As with most North American collections, the material likely refers to *Pleopsidium flavum* (Bellardi) Körb. (K. Knudsen, pers. comm.), but it needs to be checked.

= *Acarospora chlorophana* (Wahlenb.) A. Massal. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Eagle Summit (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map).

Pleopsidium flavum (Bellardi) Körb. – Saxicolous. – Lake Clark NPPr, Camel's Hump on shore of L Clark (McCUNE et al. 2018).

Poeltinula cerebrina (DC.) Hafellner – Saxicolous. – North Slope, Archimedes Ridge (FRYDAY 2017).

Polyblastia albida Arnold – Saxicolous on limestone rocks on shore. – Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Polyblastia bryophila Lönnr. – Terricolous over moss and humus. – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Port Clarence (DILLMAN et al. 2012). = “*Verrucaria bryophila* (Loennr.)” – Port Clarence (NYLANDER 1887; HUE 1892).

Polyblastia cruenta → **Sporodictyon cruentum**

Polyblastia cucurbitula J. W. Thomson & B. Murray – Saxicolous on calcareous rock in continental areas. The specimen from Thompson Pass was reported to have dark ascospores and probably belongs to *P. fulva*. – Survey Pass Quad, at the confluence of the Alatna and Nahtuk Rivers (**type**); Mt Michelson Quad, Ikiakpaurak Valley; Utukok R Quad, upper Utukok R; Archimedes Ridge; Lookout Ridge Quad, headwaters Pahron Cr; Lookout Ridge; Pt Hope Quad, Cape Thompson region, Angmakrok Mtn; Ogotoruk Cr; Crowbill Ridge; Kukpuk R region, Nasorak Cr; ANWR, Okpilak L; Philipp Smith Mtns, mi 276 Dalton Hwy; W end Atigun Canyon, mi 271 Dalton Hwy; mt behind Chandelar Camp, mi 242 Dalton Hwy; Mt Sukakpak; Endicott Mtns, Arrigetch Cr; Denali NP, Cathedral Mt; Mt Eielson; Valdez Quad, Thompson Pass (THOMSON & MURRAY 1988: map).

Polyblastia efflorescens Coppins – Saxicolous on shaded limestone crags behind beach. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Polyblastia exalbida (Nyl.) Zahlbr. – Saxicolous on calcareous rock. – Port Clarence (DILLMAN et al. 2012); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Verrucaria exalbida* Nyl. – Port Clarence (**type** – NYLANDER 1885b; NYLANDER 1887; HUE 1892); Port Clarence (McCUNE 2017b). The type specimen at S was annotated by V. Alstrup as *Polyblastia cupularis*; an apparent isolectotype is in H-NYL 2019, which was also det. by J. W. Thomson in 1988 to be *Polyblastia cupularis*. However, see discussion in DILLMAN et al. (2012).

Polyblastia fulva Zahlbr. – Saxicolous in rock crevices. – Alaska (Zahlbruckner 1921); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Verrucaria fulva* Cumm., nom. illeg., non *Verrucaria fulva* Hoffm. Also discussed by CUMMINGS (1902) and DILLMAN et al. (2012). – Port Wells (**type** – CUMMINGS 1904); Alaska (Zahlbruckner 1904); Dall Isl; Brownson Bay; Nichols Bay (Herre 1919).

Polyblastia gelatinosa → **Agonimia gelatinosa**

Polyblastia gothica Th. Fr. – Terricolous on humus and mosses. – Anaktuvuk Pass (Moser et al. 1979; Thomson 1979); Alaska (Thomson 1997).

Polyblastia hyperborea Th. Fr. – Saxicolous on calcareous rock, sometimes partly submerged. – Anaktuvuk Pass (Moser et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Firth R at Mancha Cr (Thomson 1979); Alaska (Thomson 1997: map).

Polyblastia integrascens (Nyl.) Vain. – Saxicolous on calcareous rock. – Colville R near Umiat (Thomson 1979).

Polyblastia intercedens → **Appendix A**

Polyblastia intermedia → **Appendix A**

Polyblastia melaspora → **Henrica melaspora**

Polyblastia quartzina Lynge – Saxicolous in the alpine. – White Pass (Spribille et al. 2010, as cf.); Lookout Ridge (Fryday 2017).

Polyblastia sendtneri Kremp. – Terricolous, over mosses and soil. – Prudhoe Bay (Murray & Murray 1975a, 1978); Anaktuvuk Pass (Moser et al. 1979); Prudhoe Bay; Firth R at Mancha Cr (Thomson 1979); Fielding L (Thomson & Ahti 1994); Alaska (Thomson 1997: map); Howe Isl; Franklin Bluffs (Walker et al. 2004).

Polyblastia septentrionalis Lynge – Lake Clark NPPr, Turquoise L (McCune et al. 2018).

Polyblastia sommerfeltii → **Sporodictyon terrestre**

Polyblastia terrestris → **Sporodictyon terrestre**

Polyblastia theleodes → **Sporodictyon schaeerianum**

Polycauliona candelaria (L.) Frödén et al. – Corticolous on enriched hardwood and conifers branches, saxicolous on bird perches, and on old boards and driftwood. – Gates of the Arctic NPPr (Nelson et al. 2015b); Denali NPPr (Stein et al. 2015); Katmai NPPr; Lake Clark NPPr (McCune et al. 2018); Kenai Fjords NPPr (McCune et al. 2020).

= *Xanthoria candelaria* (L.) Th. Fr. – Kodiak Isl, Kodiak; Unalaska Isl, Unalaska; Umnak Isl, Nikolski; Kanaga Isl, NW side; Agattu Isl, N side (Degelius 1937); Raspberry Isl, Port Vita (Thomson 1950a); Sitka, Baranoff Isl (Rudolph 1955); Port Heiden; Attu Isl, Dam Cr (Howard 1958); Ogotoruk Cr (Krog 1962); Allakaket (Howard 1963; Murray 1974); Savage R CG

(HOWARD 1963); Mendenhall Glacier (McCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Juneau area, Shrine of St Therese; Eagle R Valley; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Skilak L; White Mts, lower Fossil Cr; Nunivak Isl, Nash Harbour (KROG 1968); Kodiak Isl, 29 km NW of Olga Bay Cannery, “Amara Lake” (KROG 1969); Amchitka Isl (WEBER et al. 1969); Pt Barrow; near Rogers-Post monument S of Barrow (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Denali NP, rd to Horseshoe L (SCHINDLER 1987); Chisik Isl (TALBOT et al. 1992); Amchitka Isl (BATTEN & MURRAY 1993); SE Alaska (GEISER et al. 1994a: map); Thompson Pass; Haines (THOMSON & AHTI 1994); SE Alaska (O’CLAIR et al. 1996); many localities (LINDBLOM 1997: map); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska (SØCHTING & LUTZONI 2003); SE Alaska (DILLMAN 2004); Alaska Hwy, mi 1240 (TALBOT et al. 2007); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014).

= *Xanthoria candelaria* var. *candelaria* – Kenai Peninsula, Cooper Lodge (SCHINDLER 1990).

? = “*Physcia parietina* ζ *finmarkica* Ach.” – Behring’s Straits (TUCKERMAN 1862).

? = *Xanthoria candelaria* var. *finmarkica* (Ach.) Hillm. – Glacier Bay; St Paul Isl; Kodiak Isl, Sturgeon R Bay (RUDOLPH 1955); St Paul Isl; St Paul Isl, SW coast; Kenai Peninsula, coast of Ninagiak Isl (SCHINDLER 1990).

? = “*Physcia lychna* var. *laciniosa* (Schaer.) Stzb.” – Sitka (STIZENBERGER 1895a, 1895b).

= “*Physcia lychna* (Ach.) Nyl.” – Lawrence-Insula (NYLANDER 1887); Sitka (STIZENBERGER 1895a, 1895b).

= “*Theloschistes lychnus* (Nyl.) Tuck.” – St Paul Isl (MACOUN 1899); isls in Behring Strait (MACOUN 1902); Sitka; Kodiak; Unalaska; St Paul Isl (CUMMINGS 1904).

= *Xanthoria lychna* (Ach.) Th. Fr. – St Paul Isl (HOWE 1913a); Collinson Pt (MERRILL 1924b).

? = “*Physcia lychna* var. *pygmaea* (Bory) Nyl.” – Sitka (STIZENBERGER 1895a, 1895b).

? = “*Theloschistes lychnus* β *pygmaeus* (Fr.) Tuck.” – Isls of Behring’s Strait; Alaska (TUCKERMAN 1882); Muir Glacier; Kodiak Isl, Sturgeon R Bay; Unalaska; St Paul Isl; St Matthew Isl (CUMMINGS 1904).

? = “*Theloschistes lychnus* var. *pygmaeus* Fr.” – St Paul Isl (MACOUN 1899).

? = *Xanthoria lychna* var. *pygmaea* (Bory) Th. Fr. – Spy Isl; Demarcation Pt; Collinson Pt; Camden Bay (MERRILL 1924b).

Polycauliona flavogranulosa (Arup) Arup et al. – Saxicolous in the littoral zone, also lignicolous on driftwood.

= *Caloplaca flavogranulosa* Arup — Sitka; Kuiu Isl (ARUP 1993); Alaska (ARUP 1995b); SE Alaska (O'CLAIR et al. 1996; GEISER et al. 1998); Alaska (MCCUNE 2017b).

Polycauliona pollinarioides (L. Lindblom & D. M. Wright) Frödén et al. — Corticolous on twigs of *Alnus* and *Picea sitchensis*, often near eagle perches, also lignicolous on stabilized driftwood and saxicolous on supralittoral rocks. — Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus; S end of Mitkof Island (SPRIBILLE et al. 2020).

Polycauliona polycarpa (Hoffm.) Frödén et al. — Corticolous on hardwoods and conifers, especially where base-rich or nutrient-enriched through birds or salt-spray, also lignicolous on marine docks. — Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Xanthoria polycarpa* (Hoffm.) Th. Fr. ex Rieber — Heceta Isl (HERRE 1919); St Paul Isl; Glacier Bay (RUDOLPH 1955); Bettles; Wiseman Cr; 1.5 mi down rd to Hammond R (HOWARD 1963; MURRAY 1974, possible misidentification for *Rusavskia elegans* — WEBER & VIERECK [1967]); Quigley Hill (HOWARD 1963, but this record refers to *Rusavskia elegans* according to WEBER & VIERECK [1967]); Heceta Isl; Muir Glacier; Alaska Peninsula, Kukak Bay; Kantishna, Quigley Hill; Wiseman; St Paul Isl (KROG 1968); Alaska (THOMSON 1984: map); Chikuminuk L (THOMSON & DOELL 1989); Katmai NP, Brooks Lodge area (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33 (THOMSON & AHTI 1994); Kodiak Isl Marmot Isl; Tuxedni Wilderness Area, Chisik Isl (LINDBLOM 1997: map); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009).

= "*Theloschistes polycarpus* (Ehrh.) Tuck." — Muir Glacier; Alaska Peninsula, Kukak Bay; St Paul Isl (CUMMINGS 1904; MCCUNE et al. 2018).

= "*Theloschistes parietinus* var. *polycarpus* Ehrh." — Alaska (ROTHROCK 1884: revised to *Physcia lychnea* by NYLANDER 1887: 86).

= *Xanthoria ramulosa* (Tuck.) Herre — Attu Isl, vicinity of Massacre Bay (RUDOLPH 1955). Synonymy after LINDBLOM (1997).

Polycauliona verruculifera (Vain.) Arup et al. — Saxicolous on coastal rocks, ornithocoprophilous.

= *Caloplaca verruculifera* (Vain.) Zahlbr. — Attu Isl (NORDIN 1972); Amchitka Isl, St Makarius Bay Beach (THOMSON & SOWL 1989); Alaska (KÄRNEFELT 1990); Umnak Isl; Amchitka Isl; Attu Isl; Bering Strait District; Little Diomede Isl; Aaron Isl; St Paul Isl (ARUP 1994: map); SE Alaska (O'CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Aaron Isl in Lynn Canal (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Attu; Cherufsky; Amchitka Isl; Ukinyik Cr drainage; St Paul Isl; Umiak; Unalaska (WETMORE & KÄRNEFELT 1998); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Chugach NF (DERR 2010); coastal Alaska (MCCUNE 2017b).

= *Caloplaca granulosa* auct., non (Müll. Arg.) Jatta, for maritime records, others doubtful. — Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Agattu Isl, N side; Attu Isl (DEGELIUS 1937, = *C. verruculifera*, according to

THOMSON & SOWL 1989); Amchitka Isl (WEBER et al. 1969); Chauekuktuli L (THOMSON & DOELL 1989, as cf., 'in poor condition').

? = "*Lecanora granulolum*" – Alaska (HUE 1891).

? = "*Placodium granulolum* (Muell.)" – "St Mathew Isl Maris Behringiana" (NYLANDER 1887: 86).

Polychidium contortum → **Leptogidium dendriscum**

Polychidium dendriscum → **Leptogidium dendriscum**

Polychidium muscicola (Sw.) Gray – Mainly muscicolous over boulders, usually among acrocarpous mosses. – Mendenhall Glacier (McCULLOUGH 1965); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); by Portage (SCHINDLER 1987); Thompson Pass (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Stanley Isl, near Prince of Wales Isl (GEISER et al. 1998); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010; MUGGIA et al. 2011: Appendix 1); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Excursion Ridge, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= *Leptogium muscicola* (Sw.) Fr. – Isls of Behring's Strait (TUCKERMAN 1882); isls in Behring Strait (MACOUN 1902).

#**Polycoccum bryonthae** (Arnold) Vězda – On *Lecanora epibryon*. – Interior Alaska (LAURSEN & SEPPELT 2009); North Slope, Sagwon (ZHURBENKO 2009b).

#**Polycoccum deformans** R. Sant. & Brackel – On *Placopsis* sp. in the supralittoral zone. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

#**Polycoccum gelidarium** (Mudd) D. Hawksw. – On *Placopsis gelida*. – Keystone Canyon, 22 km E of Valdez (ALSTRUP & HAWKSWORTH 1990).

#**Polycoccum laursenii** Zhurb. – On *Cladonia pocillum*. – 140 km E of Kotzebue, Kobuk Valley Wilderness (**type** – ZHURBENKO & ALSTRUP 2004).

? = *Didymocyrtis* cf. *consimilis* Vain. – Alaska (Zhurbenko et al. 2019).

According to ZHURBENKO et al. (2019), this taxon belongs in *Didymocyrtis*.

#**Polycoccum microcarpum** Diederich & Etayo – On *Cladonia gracilis* (mainly subsp. *vulnerata*). – Kotzebue; Greate Kobuk Sand Dunes; near Nome; Seward Peninsula, Newton Pk (ZHURBENKO & PINO-BODAS 2017).

#**Polycoccum pulvinatum** (Eitner) R. Sant. – On *Physcia caesia*. – Brooks Range, S of Atigun R (DILLMAN et al. 2012); Glacier Bay NP: Dundas Bay, Glacier Bay (SPRIBILLE et al. 2020).

#**Polycoccum tryptethelioides** (Th. Fr.) R. Sant. – On *Stereocaulon* spp. – Interior Alaska (LAURSEN & SEPPELT 2009); Seward Peninsula, 7 km NE of Nome, Newton Pk; 115 km NE of Fairbanks, Eagle Summit; Denali NP, headwaters of Hinnes Cr (ZHURBENKO 2010).

#**Polycoccum vermicularium** (Linds.) D. Hawksw. – On *Thamnia*. – St Lawrence Isl (ESSLINGER & EGAN 1995); Great Kobuk Sand Dunes (ZHURBENKO 2012).

#**Polydesmia lichenis** Huhtinen & R. Sant. – On *Peltigera* sp. – Chilkoot Trail (SPRIBILLE et al. 2010).

Polyozosia albescens (Hoffm.) S.Y. Kondr. et al. – Saxicolous.

= *Lecanora albenscens* (Hoffm.) Branth. & Rostr. – Umnak Isl, Nikolski (DEGELIUS 1937).

Polyozosia contractula (Nyl.) S. Y. Kondr et al. – Saxicolous on beach rocks. It is not sure if we have *P. contractula* s. str. in Alaska, and the group is in need of revision.

= *Lecanora contractula* Nyl. – Lawrence-Insula (NYLANDER 1887, as companion of *L. lobulata*; HUE 1891); Sunshine Cove, Auke Bay (GEISER et al. 1998); Alaska (BRODO 2010, as aff.); Alaska (MCCUNE 2017b); Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018, ‘uncertain ID’); Crater Bay off of Harris Bay (MCCUNE et al. 2020, as ‘cf’).

= *Myriolecis contractula* (Nyl.) Šliwa et al. – Glacier Bay NP: Dundas Bay, Glacier Bay, West Arm (SPRIBILLE et al. 2020 as aff.).

Polyozosia crenulata (Ach.) S. Y. Kondr. et al. (syn. *Myriolecis crenulata* (Hook.) Šliwa et al.) – Saxicolous coastal cliffs, also reported from caribou antler. The nomenclature of the Kondratyuk et al. combination is complicated, as the identity of their basionym (*Lecanora hagenii* var. *crenulata* Ach.) is different to that used for other combinations of this epithet.

= *Lecanora crenulata* Hook. – Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); along Pitmegea R, 15 mi upstream from Cape Sabine; along S of Wainwright, Kaolak R; Kukpuk R region; Nasorak Cr (ŠLIWA 2007).

? = “*Lecanora crenulata* (Dicks.) Nyl.” – We are unsure in which sense Johnson and Thomson used this name but we suspect they were referring to *Lecanora crenulata* Hook. with incorrect authorship. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Firth R at Mancha Cr (THOMSON 1979); Ogotoruk Cr (MURRAY 1985).

Polyozosia dispersa (Pers.) S. Y. Kondr. et al. – Saxicolous on calcareous rocks and caribou antler and lignicolous on driftwood. Applied in a broad sense in most papers cited here; ŠLIWA (2007) accepted no records of *Lecanora dispersa* s. str. from Alaska, but also studied a rather small amount of material.

= *Lecanora dispersa* (Pers.) Sommerf. – Juneau icefield nunatak (HEUSSER 1954); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010).

= *Myriolecis dispersa* (Pers.) Šliwa et al. – Katmai NPPr, Naknek L; Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, NE end of Harris Bay, edge of Estuary (MCCUNE et al. 2020, as ‘group’).

Polyozosia hagenii (Ach.) S. Y. Kondr. et al. – Various reported from *Alnus* and *Salix*, bark of conifers and hardwoods, rock, and old wood.

= *Lecanora hagenii* (Ach.) Ach. – Cape Lisburne (ROTHROCK 1884); Lawrence-Insula (mentioned under *Lecanora lobulata*); Port Clarence (NYLANDER 1887, HUE 1891); Cape Lisburne (MACOUN 1902); Muir Glacier (CUMMINGS 1904); Alaskan Arctic coast, Spy Isl (MERRILL 1924b); Anaktuvuk Pass (THOMSON

1979); Anaktuvuk Pass (MOSER et al. 1979); Alaska (THOMSON 1997: map); Lake Clark NP, Tuxedni R (DILLMAN 2003).

? = *Lecanora umbrina* (Ach.) A. Massal. – Port Clarence (NYLANDER 1887); Alaskan Arctic coast, Spy Isl (MERRILL 1924b). According to ŠLIWA (2007), this is a synonym of *Lecanora hagenii*, but the two species are maintained as separate by WESTBERG et al. (2021). *Lichen umbrinus* Ach. is invalid (non *L. umbrinus* Ehrh.) and = *Verrucaria nigrescens* according to Index Fungorum. *Lichen umbrinus* Ehrh. is also invalid (ICNafp Art. 38.1(a)). The valid basionym is *Lecanora hagenii* var. *umbrina* Ach., which was raised to species level by MASSALONGO (1852). The combination into *Polyozosia* has not been made and we refrain to do it here in the absence of our own data on the merits of recognizing it at species level.

Polyozosia invadens (H. Magn.) S. Y. Kondr. et al. – Saxicolous on weakly calcareous rock.

= *Lecanora invadens* H. Magn. – Along N ridge of the Colville R, at Umiat (ŠLIWA 2007).

= *Myriolecis invadens* (H. Magn) Šliwa et al. – Katmai NPPr, Naknek L; Lake Clark NPPr, Portage L (MCCUNE et al. 2018).

Polyozosia perpruinosa (Fröberg) S. Y. Kondr. et al. – Saxicolous on calcareous rocks.

= *Lecanora perpruinosa* Fröberg – Brooks Range, Sukakpak Mtn (DILLMAN et al. 2012).

Polyozosia persimilis (Th. Fr.) S. Y. Kondr. et al. – Lignicolous on intertidal driftwood and corticolous on *Alnus* and *Shepherdia canadensis*.

= *Lecanora persimilis* (Th. Fr.) Nyl. – Chilkoot Trail (SPRIBILLE et al. 2010).

= *Myriolecis persimilis* (Th. Fr.) Šliwa et al. – Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).

Polyozosia poliophaea (Wahlenb.) A. Massal. – Saxicolous on rocks in the salt spray zone.

= *Lecanora poliophaea* (Wahlenb.) Ach. – Juneau, Sunshine Cover, 40 km W of Auke Bay; Juneau, Shrine of St Therese, E of shrine (BRODO 1995b, as s. lat.) SE Alaska (O'CLAIR et al. 1996; GEISER et al. 1998); Juneau, 10 mi W of Auke Bay (BRODO 2010); Alaska (MCCUNE 2017b); Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Polyozosia populicola (DC.) S. Y. Kondr. et al. – Corticolous, Alaskan record is from *Salix*.

= *Lecanora distans* (Ach.) Nyl. – Colville R near Umiat (THOMSON 1979).

Synonymy according to ESSLINGER (2021).

Polyozosia sambuci (Pers.) S. Y. Kondr. et al. – Corticolous (?) on *Picea sitchensis*.

= *Lecanora sambuci* (Pers.) Nyl. – Adak Isl (TALBOT et al. 1997).

Polyozosia schofieldii (Brodo) S. Y. Kondr. et al. – Saxicolous on shorelines.

= *Myriolecis schofieldii* (Brodo) Šliwa et al. – Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

Polyozosia semipallida (H. Magn.) S. Y. Kondr. et al. – Saxicolous.

= *Lecanora semipallida* H. Magn. – Atqasuk (FRYDAY 2004a); Brooks Range, Anaktuvuk Pass; Atqasuk, on bank of Mease R; S of Wainwright, Kaolak R; Pitmegea R, 15 mi upstream from Cape Sabine (ŠLIWA 2007).

= *Myriolectis semipallida* (H. Magn.) Šliwa et al. – Katmai NPPr, Naknek L; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Portage L (McCUNE et al. 2018).

Polyozosia straminea (Ach.) S. Y. Kondr. et al. – Saxicolous on enriched coastal rocks, especially igneous rocks.

= *Lecanora straminea* Ach. – Lawrence-Insula (NYLANDER 1887); Kodiak; Unalaska; St Paul Isl; St Matthew Isl (CUMMINGS 1904); Atka Isl; Unalaska Isl (HEDRICK 1936); Unalaska Isl, Unalaska; Kanaga Isl, NW side (DEGELIUS 1937); Ogotoruk Cr drainage (JOHNSON et al. 1966); Amchitka Isl (WEBER et al. 1969); Tikchik L (THOMSON & DOELL 1989); St Paul, on the S coast (SCHINDLER 1990); SE Alaska (O'CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Kuiu Isl, Washington Bay; Baranof Isl (GEISER et al. 1998); Cape Sabine; Cape Dyer; Ogotoruk Cr; Little Diomed Isl; St Lawrence Isl; St Matthews Isl; Attu Isl; Kanaga Isl; Unalaska Isl; Dutch Harbor; Glory of Russia Cape; St Paul's Isl; St George's Isl; Kuiu Isl; Amchitka Isl; Adak Isl; Baranof Isl; Kodiak Isl (RYAN 1998: four chemotypes; maps); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Juneau, Aaron Isl; Bering Strait, Little Diomed Isl (BRODO 2010); Chugach NF (DERR 2010); Alaska (McCUNE 2017b).

= *Myriolectis straminea* (Ach.) Šliwa et al. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Polyozosia torrida (Vain.) S. Y. Kondr. et al. – Saxicolous on calcareous rock.

= *Lecanora torrida* Vain. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Alaska (THOMSON 1997: map); Glacier Bay; Kuskokwim R near Georgetown; along Pitmegea R, 15 mi upstream from Cape Sabine (ŠLIWA 2007); Lake Clark NPPr, W of Hatchet Pt (McCUNE et al. 2018); Glacier Bay NP: Muir Glacier (SPRIBILLE et al. 2020).

Polyozosia zosteræ (Ach.) S. Y. Kondr. et al. – Lignicolous, corticolous, muscicolous, on detritus, and on old bones.

= *Lecanora zosteræ* (Ach.) Nyl. – Alaska (THOMSON 1997: map); near Skagway, W side of Lynn Canal (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon (McCUNE et al. 2020).

= *Myriolectis zosteræ* (Ach.) Šliwa et al. – Katmai NPPr; Malone L camp; Katmai NPPr, Naknek L (McCUNE et al. 2018, “appear to belong to *Lecanora zosteræ* var. *palanderi*”).

= *Lecanora beringii* Nyl. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Amchitka Isl, St Makarius Pt (THOMSON & SOWL 1989); Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Izembek Lagoon (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Alaska Hwy, mi 1270, Ten Mile Cr (TALBOT et al. 2007).

= *Lecanora zosteræ* var. *beringii* (Nyl.) Šliwa – Seward Peninsula, Cape Prince of Wales (ŠLIWA 2007).

= *Lecanora palanderi* Vain. – Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960, as ‘*pallanderi*’); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Copper R (MURRAY et al. 1983, as cf.).

Polysporina lapponica → **Sarcogyne lapponica**

Polysporina simplex → **Acarospora privigna**

Polysporina urceolata → **Acarospora urceolata**

Porina chlorotica (Ach.) Müll. Arg. – Saxicolous on alkaline argillite in alpine heath. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Porina lectissima (Fr.) Zahlbr. – Saxicolous on rock escarpment. – Kodiak Isl, Spiridon Peninsula (TALBOT 1998).

= *Segestria lectissima* Fr. – Alaska (MCCUNE 2017a & b).

= *Porina leptaleoides* (Nyl.) Vain. – Discussed by VAINIO (1921) but without additional Alaskan records. Synonymy after WESTBERG et al. (2021).

= *Verrucaria leptaleoides* Nyl. – Lawrence-Insula (NYLANDER 1887; HUE 1892).

Porina leptalea (Durieu & Mont.) A. L. Sm. – Corticolous on *Picea sitchensis* and *Tsuga heterophylla*, also lignicolous and once fungicolous on polypore. – Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

= *Segestria leptalea* (Durieu & Mont.) R. C. Harris – Corticolous on *Tsuga* twigs and trunks. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).

Porina mammosa (Th. Fr.) Zahlbr. – Terricolous on calcareous soil. See also entry under *Sagediopsis barbara* in **Appendix A**.

= *Segestria mammosa* Th. Fr. – Eagle Summit (FRYDAY 2004b).

Porina pacifica Brodo – Saxicolous on acidic shoreline rocks. – Kuiu Isl, Washington Bay; St Lawrence Isl (BRODO 2004); Alaska (MCCUNE 2017a & b); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

= *Porina chlorotica* auct., non (Ach.) Müll. Arg. – Unalaska Isl, Kashaga (DEGELIUS 1937); Alaska (HARRIS 1975, as ‘aff.’).

= “*Verrucaria chlorotica* Ach.” – Lawrence-Insula (NYLANDER 1887).

Porina sublectissima (Nyl.) Zahlbr. – Saxicolous; known only from type?

= *Verrucaria sublectissima* Nyl. – Lawrence-Insula (**type** – NYLANDER 1885a; NYLANDER 1887; HUE 1892).

Porocyphus coccodes (Flot.) Körb. – Saxicolous on moist rocks. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Nishlik L (THOMSON & DOELL 1989); Alaska (THOMSON 1997: map); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020).

= *Porocyphus furfurellus* (Nyl.) Forssell – Kuiu Isl, Washington Bay (THOMSON 1950a).

Porpidia albocaerulescens → **Appendix A**

Porpidia carlottiana Gowan – Saxicolous on acidic boulders along waterways and on deeply shaded rocks. – Kuiu Isl, Washington Bay (GOWAN 1989); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); SE Alaska (O’CLAIR et al. 1996); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); SW & SE Alaska (MCCUNE 2017b); Kenai Fjords NPPr, East side of Harris Bay; Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Porpidia cinereoatra (Ach.) Hertel & Knoph – Saxicolous on schist. – Mt Alyeska (THOMSON & AHTI 1994); Chugach NF (DERR 2010); Lake Clark NPPr, Saddle Mtn; Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018).

Porpidia contraponenda → ***Porpidia irrigua***

Porpidia crustulata (Ach.) Hertel & Knoph – Saxicolous on rocks and small pebbles. – Portage Glacier (THOMSON & AHTI 1994); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Katmai NPPr, Hammersly L; Lake Clark NPPr, Saddle Mtn; Saddle Mtn; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, NW side of Turquoise L; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd, floodplain of Resurrection R (MCCUNE et al. 2020); Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020).

= *Huilia crustulata* (Ach.) Hertel – Anaktuvuk Pass (MOSER et al. 1979).

= *Lecidea crustulata* (Ach.) Spreng. – Port Clarence (NYLANDER 1887; HUE 1891); St Lawrence Isl (HERTEL 1971a); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

= *Lecidea laurentiana* Nyl. – Lawrence Isl (**type** – NYLANDER 1885a; NYLANDER 1887; HUE 1891, incorrectly placing it in Asia). Synonymy follows HERTEL (1971a).

= *Lecidea crustulata* f. *laurentiana* (Nyl.) Vain. – WAINIO (1909) but without citing new Alaskan material.

= *Lecidea meiospora* (Nyl.) Nyl. – Port-Clarence (HUE 1891).

= *Lecidea contigua* * *meiospora* Nyl. – Port Clarence (NYLANDER 1887).

Synonymy based on GOWAN (1993).

Porpidia flavicunda (Ach.) Gowan – Saxicolous on acidic boulders and vertical rocks in tundra. – Cape Dyer; Anaktuvuk Pass; Okpilak R; Ogotoruk Cr drainage (GOWAN 1989); Nuyakuk L; Nishlik L (THOMSON & DOELL 1989); Hagemester Isl (TALBOT et al. 1990); SE Alaska (GEISER et al. 1994a: map); Mt Eielson (FRYDAY 2005); White Pass (SPRIBILLE et al. 2010); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Oasis Glacier (FRYDAY & DILLMAN 2021b).

= *Huilia flavocoerulescens* (Hornem.) Hertel & A. J. Schwab – Anaktuvuk Pass (MOSER et al. 1979, as *flavocaerulescens*).

= *Lecidea flavocaerulescens* Hornem. – Hornemann included both sorediate and esorediate specimens in his original description and the epithet has subsequently been used for the taxa currently known as *P. flavicunda* and *P. melinodes*. Many records are probably referable to *P. melinodes*. – Unalaska Isl, Unalaska (DEGELIUS 1937); PWS, Thum Bay (EYERDAM 1949); Kuiu Isl, Washington Bay (THOMSON 1950a); Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl, above Chitka Cove (WEBER et al. 1969); Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Imnavait Cr (WALKER et al. 1989).

= *Lecidea albocaerulescens* var. *flavocoerulescens* (Hornem.) Schaer. (as *flavocaerulescens*) – Aliaska Peninsula (ROTHROCK 1884); White Pass; Kodiak; Unalaska; Hall Isl; Cape Nome; St Michael (CUMMINGS 1904); Atka Isl; Unalaska Isl; Amlia Isl (HEDRICK 1936); Quigley Hill (HOWARD 1963).

= *Porpidia flavocoerulescens* (Hornem.) Hertel & A. J. Schwab (as *flavocaerulescens*) – Valley of the Okpilak R at Okpilak L, near Mt Michelson; Anaktuvuk Pass; Colville R at Umiat; Unalaska (SCHWAB 1986); Nishlik L (THOMSON & DOELL 1989); SE Alaska (GEISER et al. 1994a, listed in the same paper as *P. flavicunda*!); Thompson Pass (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; NPS weather station, McArthur Ridge; Skilak nunatak within Harding Icefield, on dry talus (MCCUNE et al. 2020).

Porpidia flavocruenta Fryday & Buschbom – Saxicolous. – Okpilak L (FRYDAY 2005).

Porpidia flavocaerulescens → **Porpidia flavicunda**

Porpidia glaucophaea → *Porpidia rugosa*

Porpidia grisea Gowan – Saxicolous on acidic rock. – Valley of the Okpilak R (type); Portage Glacier (GOWAN 1989); Nishlik L (THOMSON & DOELL 1989); Kenai Peninsula, rd between Moose Pass and Seward (SCHINDLER 1990); Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Valley of the Okpilak R (FRYDAY 2005); Noatak NPr (MCCUNE et al. 2009); Alaska (MCCUNE 2017b); Katmai NPPr, Hammersly L (MCCUNE et al. 2018).

Porpidia hydrophila (Fr.) Hertel & A. J. Schwab – On submerged metal-rich rock in creek. – Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay (MCCUNE et al. 2020, “uncertain ID”).

Porpidia irrigua Orange – Saxicolous on sedimentary and metamorphic rock from raised beaches to erratics in muskegs and exposed alpine rocks. ORANGE (2014) showed that *P. contraponenda* was a species with ±innate apothecia and described the new species *P. irrigua* for those European collections containing methyl-2'-*O*-methylmicrophyllinate with sessile apothecia. Because collections from SE Alaska had sessile apothecia, they were provisionally referred to *P. irrigua* but recent molecular investigation has shown that they do not belong to either species. – Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Porpidia contraponenda* auct., non (Arnold) Knoph & Hertel – Saxicolous. *P. contraponenda* s. str. has not reliably been reported from North America. – Kuiu Isl, Washington Bay (GOWAN 1989); Mt Alyeska (THOMSON & AHTI 1994); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al.

2010); Mitkof Isl, Crystal Mtn (FRYDAY & TØNSBERG 2015); coastal Alaska (MCCUNE 2017b); Lake Clark NPPr, headwaters of Johnson R; Lake Clark NPPr, Saddle Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay; W shore of Beauty Bay (MCCUNE et al. 2020, on shaded rock, TLC: nil).

Porpidia lowiana Gowan – Saxicolous on acidic rocks. – Mt Alyeska (GOWAN 1989, based on Thomson specimen); Nuyakuk L; Nishlik L (THOMSON & DOELL 1989, as cf.); Mt Alyeska (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Baranof Isl; Kupreanof Isl; [SE Alaska] mainland (GEISER et al. 1998); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b).

Porpidia macrocarpa (DC.) Hertel & A. J. Schwab – Saxicolous in the alpine and stream canyons. Many older records probably refer to other *Porpidia* species. – Chisik Isl (TALBOT et al. 1992); Mt Alyeska; Eagle Summit (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010, as aff.); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Huilia macrocarpa* (DC.) Hertel – Anaktuvuk Pass (MOSER et al. 1979).

= *Lecidea macrocarpa* (DC.) Steud. – Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Chitistone-Skolai region (SCOTT 1974); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

= *Lecidea contigua* Fr. – Unalaska; Aliaska Peninsula; Chamisso Isl; Eschscholtz Bay (ROTHROCK 1884); Kodiak; Hall Isl (CUMMINGS 1904). For discussion of synonymy see HERTEL (1977b: 219, footnote).

= *Lecidea platycarpa* Ach. – Baranof Isl, Hot Springs; White PASS, 1250 ft; White Pass; Kodiak; Port Wells; Unalaska; St Matthew Isl (CUMMINGS 1904). Synonymy after HERTEL (1977b).

= *Lecidea steriza* (Ach.) Vain. – Unalaska Isl, Unalaska (DEGELIUS 1937).

Synonymy after WESTBERG (2021).

= “*Lecidea platycarpa* f. *steriza* (Ach.)” – Orca; Kodiak (CUMMINGS 1904).

? = *Huilia macrocarpa* var. *trullisata* (Arnold) Hertel – Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R (HERTEL 1977a).

Porpidia melinodes (Körb.) Gowan & Ahti – Saxicolous on acidic rock. – Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Lecidea melinodes* (Körb.) H. Magn. – Colville R near Umiat (THOMSON 1979); Ogotoruk Cr (MURRAY 1985).

= *Porpidia flavocaerulescens* (Hornem.) Hertel & A. J. Schwab – Amchitka Isl; Cape Dyer; Umiat (GOWAN 1989); Denali NPPr (STEHN et al. 2015). See also notes under *P. flavicunda*.

Porpidia nigrocruenta (Anzi) Diederich & Sérus. – Saxicolous on granitic boulders in lowland woodland and shorelines and once on an alpine ridge. – Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020).

Porpidia ochrolemma (Vain.) Brodo & R. Sant. – Saxicolous. – White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Kenai Fjords NPPr, E side of Harris Bay (MCCUNE et al. 2020).

- Porpidia rugosa** (Taylor) Coppins & Fryday – Saxicolous on siliceous rock. – North Slope (KRISTINSSON et al. 2010); SW Alaska (MCCUNE 2017a & b); Lake Clark NPPr, Camel's Hump on shore of L Clark; Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018; confirmed by DNA).
 = *Huilia glaucophaea* (Körb.) Hertel – Anaktuvuk Pass (MOSER et al. 1979).
 = *Lecidea glaucophaea* Körb. – Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).
 = *Porpidia glaucophaea* (Körb.) Hertel & Knoph – “THOMSON (1979) reports *P. glaucophaea* from arctic Alaska ...most of them belong to a soresdiate, nonapotheciate species that only possibly belongs to *Porpidia*” (GOWAN 1989); Tikchik L (THOMSON & DOELL 1989).
- Porpidia seakensis** Fryday – On siliceous rocks and boulders in open, well-lit wooded areas. – Glacier Bay NP: Gustavus (**type** – SPRIBILLE et al. 2020).
- Porpidia soresdizodes** (Lamy ex Nyl.) J. R. Laundon – Saxicolous on boulder in deep shade and on submerged rock. – Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay (SPRIBILLE et al. 2020).
- Porpidia speirea** (Ach.) Kremp. – Saxicolous on alpine rocks, reported in part as calcareous. – Wainwright, Koalak R (GOWAN 1989); Nuyakuk L (THOMSON & DOELL 1989); Hagemester Isl (TALBOT et al. 1990); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); [SE Alaska] mainland, Thunder Mtn (GEISER et al. 1998); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
 = *Lecidea speirea* (Ach.) Ach. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979).
 = *Lecidea contigua* var. *speirea* (Ach.) Nyl. – “Alaska and the adjacent region”, no locality given (ROTHROCK 1884).
- Porpidia striata** Fryday – Saxicolous on rock in stream through muskeg. – Glacier Bay NP: Dundas Bay (Taylor Bay) (SPRIBILLE et al. 2020).
- Porpidia superba** (Körb.) Hertel & Knoph – Saxicolous on calcareous rocks. – Endicott Mts (GOWAN 1989); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).
- Porpidia thomsonii** Gowan – Saxicolous on acidic rock. – Amchitka Isl (GOWAN 1989); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Lake Clark NP, Tuxedni R (DILLMAN 2003); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Katmai NPPr; Lake Clark NPPr, Tuxedni, Chisik Isl (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, West Arm (SPRIBILLE et al. 2020, as cf.); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).
- Porpidia tuberculosa** (Sm.) Hertel & Knoph – Saxicolous on acidic rock from forest to tundra. – Okpilak L (GOWAN 1989); Alaska (THOMSON 1997: map);

Noatak NPr (MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010, two morphotypes and probably two species); Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Coleman Bay, above NE end, off Aialik Bay; Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Porpidia zeoroides (Anzi) Knoph & Hertel – Saxicolous on base-rich rock. – Wainwright, Koalak R; Cape Sabine (GOWAN 1989); Amchitka Isl, Pumphouse L (THOMSON & SOWL 1989); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (MCCUNE 2017b).

#***Pronectria dillmaniae*** Zhurb. – On *Catapyrenium cinereum*. – 140 km E of Kotzebue, middle Kobuk R; 140 km E of Kotzebue, middle Kobuk R (**type** – ZHURBENKO et al. 2005); Alaska (FRISCH et al. 2022b).

#***Pronectria erythrinella*** (Nyl.) Lowen – On *Peltigera leucophlebia*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Parks Hwy, Summit L (HAFELLNER 2021).

#***Pronectria fissuriprodians*** Etayo – On *Lobaria pulmonaria*. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

#***Pronectria robergei*** (Mont. & Desm.) Lowen – On *Solorina bispora* and *S. spongiosa* (hymenium). – North Slope, Sagwon; Kobuk Valley Wilderness; Great Kobuk Sand Dunes (ZHURBENKO 2009b, as s. lat.).

#***Pronectria tibellii*** Zhurb. – Mostly on the upper side of basal squamules, but also on the podetia of *Cladonia acuminata*, *C. pocillum* and *C. symphylicarpa*. – Seward Peninsula, Newton Pk (**type**); 140 km E of Kotzebue, Kobuk Valley Wilderness (ZHURBENKO & ALSTRUP 2004, as “*tibellae*”; corrected by ZHURBENKO et al. 2005).

#***Pronectria walkerorum*** Zhurb. – On *Ochrolechia* spp. – 140 km E of Kotzebue, Kobuk R bank near junction with Kavet Cr; Howe Isl; Prudhoe Bay, Deadhorse (ZHURBENKO et al. 2005); Alaska (ZHURBENKO 2009c).

Protoblastenia calva (Dicks.) Zahlbr. – Saxicolous on calcareous rocks. – Alaska (THOMSON 1997: map).
= *Protoblastenia rupestris* var. *calva* (Dicks.) Stein – Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979).

Protoblastenia cyclospora (Hepp ex Körb.) Poelt – Saxicolous on calcareous rocks. – Brooks Range, Sukakpak Mtn (DILLMAN et al. 2012); Elliot Hwy, mi 40 (FRYDAY 2017).

Protoblastenia incrustans (DC.) J. Steiner – Saxicolous on calcareous rocks. – Brooks Range, Philip Smith Mtns, S of Atigun R (DILLMAN et al. 2012); Elliot Hwy, mi 40; L Peters; Ogoruk Cr; Mt Steere (FRYDAY 2017); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

Protoblastenia lilacina Poelt & Vězda – Saxicolous on limestone. – Colleen Quad, Grayling L (FRYDAY 2017).

Protoblastenia rupestris (Scop.) J. Steiner – Saxicolous on limestone, argillite and calcareous sandstone. – S of Wainwright, Kaolak R; Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Ogoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of

Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Noatak NPr (McCUNE et al. 2009); Denali NPr (STEHN et al. 2015); Glacier Bay NP: East Arm, Excursion Ridge (SPRIBILLE et al. 2020).

= "*Lecanora irrubata* (Ach.)" – Port Clarence (NYLANDER 1887). Synonymy after STEINER (1911).

Protoblastenia siebenhaariana (Körb.) J. Steiner – Saxicolous on calcareous rock. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Protoblastenia terricola (Anzi) Lynge – Terricolous on calcareous soil and humus. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1997: map); Chugach NF (DERR 2010).

Protomicarea alpestris (Sommerf.) McCune – Terricolous and muscicolous in tundra. – Katmai NPr, Malone L; Katmai NPr, Malone L camp; Lake Clark NPr, Pickerel L; Lake Clark NPr, Slope Mtn; Lake Clark NPr, headwaters of Johnson R (McCUNE et al. 2018).

= *Lecidea alpestris* Sommerf. – Alaska (THOMSON 1997: map).

= *Lecidea stenotera* (Nyl.) Nyl. – Blueberry L CG (THOMSON & AHTI 1994). Synonymy based on PRINTZEN (1995).

Protomicarea limosa (Ach.) Hafellner – Terricolous on fine organic accumulations over granitic rock, also terricolous. – White Pass (SPRIBILLE et al. 2010); Katmai NPr, W of Contact Cr; Katmai NPr, Mirror L; Lake Clark NPr, Saddle Mtn; Lake Clark NPr, Turquoise L; Lake Clark NPr, headwaters of Johnson R (McCUNE et al. 2018); Katmai NPr, Mirror L camp (McCUNE et al. 2018, PD-chemotype); Kenai Fjords NPr (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

= *Lecidea limosa* Ach. – Port Clarence (NYLANDER 1887; HUE 1891); S of Wainwright, Kaolak R (THOMSON 1960, but the specimens [*Lich. Arct.* 11] issued under this name are misidentified *Mycoblastus affinis* [THOMSON 1979]); Alaska (THOMSON 1997: map); Mitkof Isl, Twin Crs area (GEISER et al. 1998); SE Alaska (McCUNE 2017b).

Protopannaria pezizoides (Weber) P. M. Jørg. & S. Ekman – Terricolous and muscicolous from forests to alpine, occasionally also corticolous on conifers and *Populus*. – SE Alaska (DILLMAN 2004); Alaska Hwy, near Canadian border; Alaska Hwy, mi 1270, Ten Mile Cr; Willow L, near Alaska Hwy; Tanacross Village (TALBOT et al. 2007); cape on Hogg Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Gates of the Arctic NPr (NELSON et al. 2015b); Denali NPr (STEHN et al. 2015); Denali NPr (ROLAND et al. 2017); Katmai NPr; Lake Clark NPr (McCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPr (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier; Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= *Pannaria pezizoides* (Weber) Trevis. – Nichols Bay (MAGNUSSON 1932); Unalaska Isl, Captains Harbour (DEGELIUS 1937); Kuiu Isl, Washington Bay (THOMSON 1950a); S end of Wonder L (HOWARD 1963); Alaska (WEBER 1965); Mendenhall Glacier (McCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et

al. 1966); Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Fish Cr drilling site (LAWSON et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Anchorage, by Portage (SCHINDLER 1987); Amchitka Isl (THOMSON & SOWL 1989); St Paul Isl, S coast (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); Mt Alyeska; Portage Glacier; Mt Fairplay; terminal moraine of Valdez Glacier; Blueberry L CG; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996, as cf.); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Chugach NF (DERR 2010); Denali NPPr (NELSON et al. 2015a).

= *Pannaria brunnea* (Sw.) A. Massal. – Isls of Behring's Strait (TUCKERMAN 1882); isl in Cross Sound; Chernofski Isl (ROTHROCK 1884); Lawrence-Insula; Port Clarence (NYLANDER 1887); Port Clarence (HUE 1891); St George Isl (MACOUN 1899); isls in Behring Strait (MACOUN 1902); Baranof Isl, Hot Springs; Hidden Glacier Inlet, Yakutat Bay; Unalaska; Hall Isl (CUMMINGS 1904); Cañon City, Dyea Cr (HOWE 1911b); Dall Isl, Augustine Bay (HERRE 1919).

#*Protoparmelia atriseda* (Fr.) R. Sant. & V. Wirth – On other lichens, in Alaska *Aspicilia*, *Lecidea* and *Rhizocarpon* spp. – Eagle Summit; Gates of the Arctic NPPr, Summit L (DILLMAN et al. 2012); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Protoparmelia badia (Hoffm.) Hafellner – Saxicolous on acidic rocks. – Eagle Summit; Mt Fairplay; Blueberry L CG; Thompson Pass (THOMSON & AHTI 1994); Alaska (BRODO et al. 2001); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Fairbanks (SINGH et al. 2015); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019, as *Protopannaria badia*); Kenai Fjords NPPr, NE of Coleman Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecanora badia* (Hoffm.) Ach. – Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); Alaska (THOMSON 1997: map).

Protoparmelia cupreobadia (Nyl.) Poelt – Saxicolous on inclined siliceous rocks in exposed tundra. – Dalton Hwy, Finger Mtn (DILLMAN et al. 2012).

Protoparmelia memnonia Hafellner & Türk – Saxicolous. – SW Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L; Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018).

Protoparmelia ochrococca (Nyl.) P. M. Jørg. – Corticolous and lignicolous on conifers. – Kodiak Isl E; SE of Haines, Chilkat State Park (BRODO & APTROOT 2005); Chilkoot Trail (SPRIBILLE et al. 2010); S coastal Alaska (MCCUNE

2017b); Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay (McCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Protoparmeliopsis achariana (A. L. Sm.) Moberg & R. Sant. – Saxicolous.

= “*Lecanora cartilaginea* Ach.” – St Paul Isl (HOWE 1913a). Synonymy according to WESTBERG et al. (2021).

Protoparmeliopsis laetokkaensis (Räsänen) Moberg & R. Sant. – Saxicolous.

= *Lecanora laetokkaensis* (Räsänen) Poelt – Lake Clark NPPr, Camel's Hump on shore of Lake Clark (McCUNE et al. 2018, with usnic acid and zeorin).

Protoparmeliopsis muralis (Schreb.) M. Choisy – Saxicolous on argillite rock outcrops, especially bird perches, on calcareous rocks and in the intertidal. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecanora muralis* (Schreb.) Rabenh. – St Matthew's Isl; St Paul's Isl; Sitka; Unalashka (ROTHROCK 1884); Alaska (CUMMINGS 1904); Ogotoruk Cr drainage (JOHNSON et al. 1966); Camp Eielson (WEBER & VIERECK 1967); Pitmegea R, 15 mi upstream from Cape Sabine; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Nuyakuk L; Chauekuktuli L (THOMSON & DOELL 1989); St Paul, S coast (SCHINDLER 1990); Alaska (THOMSON 1997: map); SE Alaska (O'CLAIR et al. 1996); Aaron Isl in Lynn Canal (GEISER et al. 1998); Alaska (BRODO et al. 2001); Riverside Lodge Airstrip (TALBOT et al. 2007); Chugach NF (DERR 2010); Teck Isl (DILLMAN 2010); Katmai NPPr, Naknek L; Lake Clark NPPr, Camel's Hump on shore Lake Clark; Lake Clark NPPr, W of Hatchet Pt (McCUNE et al. 2018); Kenai Fjords NPPr, FIA plot Peat_1_20120829; Kenai Fjords NPPr, Verdant Cove, N side at shoreline (McCUNE et al. 2020).

? = “*Lecanora saxatilis* (L.) Schaer.” – St Paul Isl (HOWE 1913a). Probably a typographical error, Howe has “*L. muralis*” in parentheses.

= “*Lecanora saxicola* (Pollich) Ach.” – Saltery Cove (HERRE 1919).

= “*Lecanora saxicola* Schaer.” – Pribilof Isls (MACOUN 1899, “may prove to be a new species”).

= “*Lecanora muralis* var. *saxicola* Schaer.” – St Matthew Isl; St Paul Isl; Sitka; Unalaska (MACOUN 1902).

Protothelenella corrosa (Körb.) H. Mayrhofer & Poelt – Saxicolous on alkaline argillite in alpine heath. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

#Protothelenella croceae (Bagl. & Carestia) Hafellner & H. Mayrhofer – On *Solorina crocea*. – White Pass (SPRIBILLE et al. 2010).

#Protothelenella santessonii H. Mayrhofer – On basal squamules of *Cladonia pocillum* and *C. pyxidata*. – Franklin Bluffs (ZHURBENKO & ALSTRUP 2004); Prudhoe Bay (ZHURBENKO & PINO-BODAS 2017).

Protothelenella sphinctrinoidella (Nyl.) H. Mayrhofer & Poelt – Terricolous in the alpine and on glacier terminal moraine at sea-level. – White Pass (SPRIBILLE et al. 2010); Alaska (McCUNE 2017b); Lake Clark NPPr, Saddle Mtn (McCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021a & b).

Protothelenella sphinctrinoides (Nyl.) H. Mayrhofer & Poelt – Terricolous on moist, mossy soil, especially among hepatics. – Port Clarence (THOMSON 1997).

= *Microglæna sphinctrinoides* (Nyl.) Lönnr. – McKinley Bar (WEBER & VIERECK 1967).

= *Verrucaria pernigrata* Nyl. – “supra vegetabilia destructata”, Port Clarence (type – NYLANDER 1885b; NYLANDER 1887; HUE 1892). The synonymy of the type specimen with *Protothelenella sphinctrinoides* (THOMSON 1997) was verified by S. Savić (in DILLMAN et al. 2012).

#Protounguicularia nephromatis (Zhurb. & Zavarzin) Huhtinen et al. – On *Nephroma* sp. – Kodiak Isl E, S of Isthmus Bay, bank of Roslyn Cr (HUHTINEN et al. 2008).

Pseudephebe minuscula (Nyl. ex Arnold) Brodo & D. Hawksw. – Saxicolous on acidic rocks in tundra. – E Fk of the Kuskokwim R; Okpilak L; Muir Glacier (BRODO & HAWKSWORTH 1977: map); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Denali NP, slope N of Station Primrose (SCHINDLER 1987); Amchitka Isl (THOMSON & SOWL 1989); Chisik Isl (TALBOT et al. 1992); Eagle Summit; Mt Fairplay (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Adak Isl (TALBOT et al. 1997); [SE Alaska] mainland, Thunder Mtn; Mitkof Isl, Crystal Mtn; terminal moraine of Herbert Glacier (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, NPS weather station, McArthur Ridge, on rock (MCCUNE et al. 2020).

= *Alectoria minuscula* (Nyl. ex Arnold) Degel. – Ogotoruk Cr drainage, Cape Lewis; Porcupine Dome; Steese Hwy, Eagle Summit (KROG 1962); Mendenhall Glacier (MCCULLOUGH 1965); Mt Eielson (WEBER & VIERECK 1967); Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; Denali Hwy, mi 28; Denali NP, Savage R; Denali NP, Polychrome Pass; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Seward Peninsula, Rainbow Cr (KROG 1968); mtn top 10 km E of Karluk, Kodiak Isl (KROG 1969); Eagle Summit (MURRAY & MURRAY 1978); Atigun Pass area (CALVIN & ELLIS 1980); Atigun Pass (CALVIN & ELLIS 1984); Brooks Range, Atigun Pass (HAWORTH et al. 1986).

= *Parmelia minuscula* (Nyl. ex Arnold) Nyl. – Unalaska Isl, Unalaska (DEGELIUS 1937); “Aleuterna” (HASSELROT 1953).

Pseudephebe pubescens (L.) M. Choisy – Saxicolous on acidic rocks. Two Alaskan specimens labeled as this were found to belong to a genetically distinct, as yet undescribed species by GARRIDO-BENAVENT et al. (2021). – Denali Hwy, mi 28; Unalaska, Captain's Bay; Ogotoruk Cr drainage; Eagle Summit; Sitka Harbor Mtn; Cold Bay (BRODO & HAWKSWORTH 1977: map); Anaktuvuk Pass (MOSER

et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; L Peters (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Amchitka Isl, Fourteen-mile L (THOMSON & SOWL 1989); Chikuminuk L (THOMSON & DOELL 1989); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Alaska (LINDGREN et al. 2014; MYLLYS et al. 2011, 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Alaska (MYLLYS et al. 2016); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, NE of Coleman Bay; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Alectoria pubescens* (L.) R. Howe – Juneau icefield nunatak (HEUSSER 1954); near Juneau, Taku Glacier valley (HEUSSER et al. 1954); Ogotoruk Cr drainage; Mt Harper; Porcupine Dome (KROG 1962); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Eagle R Valley; Anchorage, Rabbit Cr Rd; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Denali Hwy, mi 0–37; mi 70; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, the limestone ridge; White Mts, Cache Mtn; Steese Hwy, Twelvemile Summit; Steese Hwy, Eagle Summit; Nunivak Isl, Roberts Mtn; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr (KROG 1968); central Alaska Range (REGER & PÉWÉ 1969); Amchitka Isl (WEBER et al. 1969); Eagle Summit (MURRAY & MURRAY 1978); Atigun Pass area (CALVIN & ELLIS 1980).

= *Ephebe pubescens* (L.) Fr. – Mtn W of Muir Glacier (CUMMINGS 1904).

= *Parmelia pubescens* (L.) Vain. – Glacier Bay, Muir Glacier; Unalaska Isl, Unalaska; Attu Isl (DEGELIUS 1937); "Alaska med Aleuterna" (HASSELROT 1953); Port Heiden (HOWARD 1958).

Pseudevernia consocians → [Appendix A](#)

Pseudocyphellaria anomala → [Lobaria anomala](#)

Pseudocyphellaria anthraspis → [Lobaria anthraspis](#)

Pseudocyphellaria citrina (Gyeln.) Lücking et al. – Corticolous on conifers and hardwoods, sometimes muscicolous on vertical rock faces. – Alexander Archipelago, Farragut Bay; Knik, Mackenzie Pt Rd; Kodiak Isl, Ft. Abercrombie; Kupreanof Isl; Kenai Peninsula, Chinitna Ranger Station on Chinitna Bay; James Lagoon; Glacier Bay NP: park entrance; W side of Sitakaday Narrows; Tower Rd, 6.3 km NW of Gustavus; East Arm of Glacier

Bay; Wrangell-Petersburg Census Area (LÜCKING et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon; North Arm Nuka Bay Public Use Cabin (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Pseudocyphellaria crocata* auct., non (L.) Vain. – *P. crocata* s. str. does not occur in North America (LÜCKING et al. 2017). Records should be revisited to determine if they belong to *P. citrina*, *P. hawaiiensis* or *P. holarctica*. – Alaska (MITCHELL 1961: including map); halfway up Tracy Arm, on W side (KROG 1962); Juneau area, Loop Rd; Mendenhall L; Ketchikan area, Ward L; Eagle R Valley; Anchorage, Eastchester Swamp; Anchorage, O'Malley Rd; Anchorage, Campbell Cr; Anchorage, Rabbit Cr Rd; Portage Glacier; Kenai Peninsula, Salamatof; Richardson Hwy, mi 9 (KROG 1968); Katmai, Brooks Lodge area, in CG (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33; terminal moraine of Valdez Glacier (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Ft Richardson (MURRAY 1997); Shumagin Isls, Simeonof Isl (DANIËLS et al. 1998); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Teck Isl (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013; Supplementary Table S1, “includes *P. perpetua*”); S Alaska (ROOT et al. 2014); Denali NPPr (STEHN et al. 2015).

= *Sticta crocata* auct., non (L.) Ach. – Yakutat (CUMMINGS 1904); Coronation Isl, Egg Harbor (HERRE 1919); Yakutat Bay (STAIR 1947); Mendenhall Glacier (MCCULLOUGH 1965).

Pseudocyphellaria crocata → ***Pseudocyphellaria citrina*, *P. holarctica***

Pseudocyphellaria hawaiiensis H. Magn. – Corticolous on conifers and *Salix*. – Alexander Archipelago, Maurelle Isl Wilderness; Glacier Bay NP: Bartlett Cove; Denali NP (LÜCKING et al. 2017); Katmai NPPr, Brooks Camp; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020). = *Pseudocyphellaria perpetua* McCune & Miadl. – *P. perpetua* is a heterotypic synonym of *P. hawaiiensis* but the inland records here probably apply to *P. holarctica*. – SE Alaska (DILLMAN 2004); Chena R, Chena Hot Springs; DeLong Isl, Foggy Bay; Clarence Str[aits], Blashke Isl; Alaska Peninsula, Naknek L, Dumping Mtn (DILLMAN et al. 2012); S Alaska (ROOT et al. 2014); Denali NPPr, Coffee R valley; Denali NPPr, Tokositna Glacier terminus; Denali NPPr, Cascade Cr (STEHN et al. 2015).

Pseudocyphellaria holarctica McCune et al. – Corticolous on conifers and hardwoods. See also comment under *Pseudocyphellaria perpetua* (synonym of *P. hawaiiensis*). – Denali NP (LÜCKING et al. 2017); Katmai NPPr, Malone L (MCCUNE et al. 2018).

Pseudocyphellaria mallota → ***Parmostictina mallota***

Pseudocyphellaria rainierensis Imshaug – Corticolous and lignicolous on coastal *Alnus*, *Malus*, *Picea sitchensis*, and *Tsuga mertensiana*. – SE Alaska (GEISER et al. 1994a: map); Sukoi Islets, near Petersburg; Baird Isl, SW of Chichigof Isl; Kadin Isl, mouth of Stikine R (GEISER et al. 1998); SE Alaska (SILLET & GOWARD 1998: map); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004).

Pseudothelomma occidentale (Herre) M. Prieto & Wedin – Lignicolous on coastal driftwood and timber.

= *Thelomma occidentale* (Herre) Tibell – Juneau, Mendenhall Valley (TIBELL 1976); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (MCCUNE 2017b).

Psilolechia clavulifera (Nyl.) Coppins – Saxicolous on sheltered rock in mixed woodland. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Psilolechia leprosa Coppins & Purvis – Saxicolous on overhanging schistose rock wall on seashore. – Kenai Fjords NPPR, W shore of Beauty Bay (MCCUNE et al. 2020).

Psilolechia lucida (Ach.) M. Choisy – Saxicolous, often in cliff underhangs or “holes” in talus slopes. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

= *Biatora lucida* (Ach.) Fr. – White Pass (CUMMINGS 1904).

= *Lecidea lucida* (Ach.) Ach. – Record from “*Alnus*” (Moser) should be checked. – Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass (THOMSON 1979).

Psora cerebriformis W. A. Weber – Terricolous. – Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009).

Psora decipiens (Hedw.) Hoffm. – Terricolous on calcareous soil. – Copper R; Tanana R (MURRAY et al. 1983); SE Alaska (GEISER et al. 1994a: map); Eagle Summit (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); [SE Alaska] mainland, Elbow Mtn (GEISER et al. 1998); Gates of the Arctic NPPR (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Tetlin Junction (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Gates of the Arctic NPPR (NELSON et al. 2015b); Denali NPPR (STEHN et al. 2015); Lake Clark NPPR, W of Hatchet Pt (MCCUNE et al. 2018). = *Lecidea decipiens* (Hedw.) Ach. – Pitmegea R, 15 mi upstream from Cape Sabine; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Arrigetch Cr valley (COOPER 1986b).

Psora elenkinii Rass. – “On rocks (mostly carbonate) in dwarf shrub tundra, growing directly on rock or on soil deposits or occasionally mosses”. – North Slope, Brooks Range, Atigun Canyon by the Dalton Hwy (ZHURBENKO 2009b).

Psora globifera (Ach.) A. Massal. – Terricolous in crevices in calcareous rocks and on open ground. – Alaska (THOMSON 1997: map); Katmai NPPR, Naknek L; Lake Clark NPPR, W of Hatchet Pt (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020). = *Lecidea globifera* Ach. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

Psora himalayana (C. Bab.) Timdal – Saxicolous or terricolous over calcareous rock. – Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1270, Ten Mile Cr; Riverside Lodge Airstrip; Willow L, near Alaska Hwy (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Gates of the Arctic NPPR (NELSON et al. 2015b); Denali NPPR, S of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2017b); Lake Clark NPPR, W of Hatchet Pt (MCCUNE et al. 2018).

Psora lurida → **Romjularia lurida**

Psora luridella (Tuck.) Fink – Saxicolous or terricolous on soil over rock. – North Slope, Toolik L (ZHURBENKO 2009b).

Psora nipponica (Zahlbr.) Gotth. Schneid. – Saxicolous or on soil over rock. – Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr, Portage L; Lake Clark NPPr, headwaters of Johnson R; Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Psora rubiformis (Ach.) Hook. – Saxicolous or terricolous on thin mineral soil. – Ogotoruk Cr (MURRAY 1985); Blueberry L CG; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Lake Clark NPPr, Portage L; Lake Clark NPPr, Camel's Hump on shore of L Clark (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecidea rubiformis* (Ach.) Wahlenb. – Camp Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979); Arrigetch Cr valley (COOPER 1986b).

Psora russellii → [Appendix A](#)

Psora tenuifolia Timdal – Terricolous. – Okpilak L (TIMDAL 1986); Alaska (THOMSON 1997: map).

Psora tuckermanii R. A. Anderson ex Timdal – Terricolous on calcareous soil and in rock crevices. – Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998).

Psora vallesiaca (Schaer.) Timdal – Terricolous over calcareous schist. – Brooks Range, Sukakpak Mtn (DILLMAN et al. 2012).

Psoroglaena biatorella (Arnold) Lücking – Terricolous on plant detritus or saxicolous on limestone crags. – Brooks Range, Atigun Pass (DILLMAN et al. 2012); arctic Alaska (MCCUNE 2017a & b); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Leucocarpia biatorella* (Arnold) Vězda – Noatak NPr (MCCUNE et al. 2009).

Psoroma hirsutulum → ***Psoroma paleaceum***

Psoroma hypnorum (Vahl) Gray – Terricolous or muscicolous from sea level to arctic or alpine areas, over rock, moss over bark, seldom directly over bark or directly over rock. – Alaska (MANN 1868; TURNER 1886); Collinson Pt (MERRILL 1924b); Atka Isl (HEDRICK 1936); Unalaska Isl, Unalaska; Agattu Isl, N side (DEGELIUS 1937); Yakutat Bay (STAIR 1947); Annette Isl, Landing Field; Kuiu Isl, Washington Bay (THOMSON 1950a); Mendenhall Glacier; Juneau Icefield (MCCULLOUGH 1965); Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Chitistone-Skolai region (SCOTT 1974); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Denali NP, Station Primrose (SCHINDLER 1987); Amchitka Isl (THOMSON & SOWL 1989); Kenai Peninsula, Portage CG;

Kenai Peninsula, Quartz Junction; Denali NP, rd E of Savage R (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Mt Alyeska; Portage Glacier; Eagle Summit; terminal moraine of Valdez Glacier; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk; Cold Bay (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); SE Alaska (DILLMAN 2004); Beaver Cr; Mt Fairplay (TALBOT et al. 2007); Noatak NPPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Teck Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm; Gustavus (SPRIBILLE et al. 2020, including two morphs); Petersburg Borough, Patterson Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b); Hagemeister Isl (WALSH & GOWARD 2021).

= *Pannaria hypnorum* (Vahl) Körb. – Unalaska Isl (ROTHROCK 1884); Unalaska Isl (MACOUN 1902); Hidden Glacier, Russell Fiord; Disenchantment Bay; Egg Isl, Disenchantment Bay; Muir Glacier; Hidden Glacier Inlet, Yakutat Bay; Port Wells; Hall Isl; St Michael Isl (CUMMINGS 1904).

= "*Lecanora hypnorum* var. *deaurata* (Ach.)" – Port Clarence (NYLANDER 1887). Synonymy after JØRGENSEN (2006).

Psoroma paleaceum (Fr.) Timdal & Tønsberg – Terricolous in cool, oceanic heaths. – Alaska (TIMDAL & TØNSBERG 2006); Alaska (MCCUNE 2017b).

= *Psoroma hirsutulum* Nyl. ex Cromb. – Simeonof Isl; Shumagin Isl, NE corner of Hill 888 (JØRGENSEN 2005). Synonymy after TIMDAL & TØNSBERG (2006).

Psoroma spinuliferum Elvebakk & Tønsberg – Corticolous on *Picea sitchensis* on beach – Yakutat, Cannon Beach (**type** – ELVEBAKK & TØNSBERG 2018).

Psoroma tenue Henssen var. **boreale** Henssen – Terricolous. – Agattu, N side; Unalaska; Anatuvuk Pass in the Endicott Mts; 5 km E of Toolik L; Franklin Bluffs on the Sagavanirtoq; Glory of Russia Cape area, St Matthew Isl; S of Wainwright, Kaolak R; Kivalina; Kukpuk R Region; Pitmegea R; Pt Barrow; Choweit Isl; Richardson Hwy, mi 25.2; Valdez Glacier (JØRGENSEN 2004b); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Psorotichia schaeferi (A. Massal.) Arnold – Saxicolous. – Thompson Pass (THOMSON & AHTI 1994).

Psorula rufonigra (Tuck.) Gotth. Schneid. – Saxicolous on acidic rocks, always associated with the cyanolichen *Spilonema revertens*. – Yukon R; Tanana R

(MURRAY et al. 1983); Ft Wainwright (RACINE et al. 1997); North Slope, Toolik L (ZHURBENKO 2009b); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Pterygiopsis concordatula (Nyl.) P. M. Jørg. – Saxicolous on lakeshore rock. – Katmai NPPr, Naknek L (MCCUNE et al. 2018, “ID remains uncertain”).

Ptychographa xylographoides Nyl. – Lignicolous on *Pinus contorta*. – Katmai NPPr, Brooks Camp (MCCUNE et al. 2018); Glacier Bay NP: Gustavus; “near Juneau” (SPRIBILLE et al. 2020, as aff.).

Pulvinora pringlei (Tuck.) Davydov et al. – Saxicolous, beneath overhangs. = *Lecanora pringlei* (Tuck.) Lamb – Alaska (MCCUNE 2017b); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, E side of Harris Bay (MCCUNE et al. 2020).

Punctelia subrudecta → [Appendix A](#)

Puttea caesia (Fr.) M. Svenss. & T. Sprib. – Lignicolous in conifer forest. – Chena R (DILLMAN et al. 2012); Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Puttea exsequens (Nyl.) Printzen & Davydov – Lignicolous on *Betula* log and on exposed wood below high-water line in creek. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Puttea margaritella (Hulting) S. Stenroos & Huhtinen – On the leafy liverwort *Ptilidium californicum*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Pycnora leucococca → [Toensbergia leucococca](#)

Pycnora sorophora (Vain.) Hafellner – Lignicolous. – Skagway Fjord, W side of Taiya R (SPRIBILLE & BJORK 2008); Alaska (MCCUNE 2017a & b). Skagway collection reported as a misidentification of *Fuscidea praeruptorum* by SPRIBILLE et al. (2010) but is probably referable to *F. muskeg*. = *Hypocenomyce sorophora* (Vain.) P. James & Poelt – Near Petersburg (GEISER et al. 1998).

Pycnothelia cladonoides → *Cladonia caroliana* in [Appendix A](#)

Pycnothelia papillaria Dufour (for nomenclature see *Nordic Lichen Flora* 5: 90; 2013). – Terricolous. – St Paul Isl (CUMMINGS 1904: 95); St Paul Isl (KROG 1968); Coronation Isl, Egg Harbor; Steese Hwy, Eagle Summit (DILLMAN et al. 2012); Eagle Summit (MCCUNE & ROSENTERTER 2014); Katmai NPPr, Hammersly L (MCCUNE et al. 2018). Previously considered “a dubious report as it is known only from eastern North America and Europe” (THOMSON 1984, TALBOT 2001) but recent collections are correctly identified. = *Pycnothelia papillaria* var. *papillaria* – near Kotzebue; northern foot of Mt Healy (ZHURBENKO et al. 2005). = “*Cladonia papillaria* (Ehrh.) Hoffm.” – St Paul Isl (MACOUN 1899; MERRILL 1929; TALBOT et al. 2001).

#Pyrenidium actinellum Nyl. – On *Arctomia delicatula*, *Lobaria oregana*, *Protopannaria pezizoides* and *Solorina crocea* or corticolous/muscicolous on fallen branch. – White Pass (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020).

Pyrenocarpon thelostomum → [Appendix A](#)

Pyrenocollema halodytes → *Collemopsidium halodytes* in [Appendix A](#)

Pyrenodesmia variabilis → [Appendix A](#)

Pyrenopsis furfurea (Nyl.) Leight. – Saxicolous on pebbles in alpine snowbeds. – White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr, headwaters of Johnson R; Lake Clark NPPr, Saddle Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Pyrenopsis grumulifera Nyl. – Saxicolous. – Noatak NPr (MCCUNE et al. 2009).

Pyrenopsis haemalella (Nyl.) Blomb. & Forss. – Saxicolous on wet rock at low altitudes. – Kenai Fjords NPPr (MCCUNE et al. 2020).

Pyrenopsis haematina P. M. Jørg. & Henssen – Saxicolous on moist rocks or on soil over rock. – White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

Pyrenopsis myriospora E. Dahl – Saxicolous on moist rocks. – Tikchik Lakes area (THOMSON 1997, but “may represent a related species, such as *P. laatokkaënsis* Vainio”).

= *Pyrenopsis multisporea* E. Dahl – Nishlik L (THOMSON & DOELL 1989).

Pyrenopsis phaeococca (Tuck.) Tuck. – Saxicolous on pebbles on raised beach, also on argillite in alpine heath. – Lake Clark NPPr, Naknek Lake NE of Brooks Camp (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

Pyrenopsis polycocca (Nyl.) Tuck. – Saxicolous on shale. – Thompson Pass (THOMSON & AHTI 1994).

Pyrenopsis pulvinata → **Euopsis pulvinata**

Pyrenopsis reducta Th. Fr. – Saxicolous in ephemeral snowmelt stream and on metamorphic rock on raised beach. – Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay; Harding Icefield Trail (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020, as ‘cf.’); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b as ‘cf.’).

Pyrenopsis sanguinea Anzi – Saxicolous. – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Harding Icefield Trail; near Harding Icefield Trail, ridge above Exit Glacier; Lake Clark NPPr, shore of L Clark, W of Hatchet (as s. lat.) (MCCUNE et al. 2020).

Pyrenopsis subareolata Nyl. – Saxicolous in ephemeral snowmelt stream. – Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018).

Pyrrhospora cinnabarina → **Ramboldia cinnabarina**

Pyrrhospora gowardiana → **Ramboldia gowardiana**

Pyrrhospora quernea (Dicks.) Korb. – Corticolous on *Picea* and *Pinus*. – Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018).

– R –

#Raciborskiomyces peltigericola (D. Hawksw.) M. E. Barr – On *Peltigera apthosa* aggr. – Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Racodium rupestre Pers. – Corticolous on *Alnus* and trunk of *Populus balsamifera*.

– Kenai Fjords NPPr, Northwest Lagoon Beach; Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

#***Raesaenienia huuskonenii*** (Räsänen) D. Hawksw. et al. – On *Bryoria* species.

= *Phacopsis huuskonenii* Räsänen – Kodiak Isl E, the peninsula W of Mill Bay, Ft Abercrombie State Historical Park (TRIEBEL et al. 1991); Moon L CG (THOMSON & AHTI 1994); Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010).

Ramalina almqvistii Vain. – Saxicolous, terricolous and lignicolous on cliffs, outcrops and beaches mostly in western Alaska. See also entries under *R. calicaris* and *R. inflata* in [Appendix A](#). – Fretum Behringii (WAINIO 1909); St Paul Isl; “rather common along the coasts of the Behring Sea” (DU RIETZ 1929); Unalaska Isl, Kashega; Atka Isl; Adak Isl, Chapel Cove; Agattu Isl, N side (DEGELIUS 1937); Port Heiden; Attu Isl, Dam Cr (HOWARD 1958); Meade R Village; Ogoruk Cr drainage, Crowbill Ridge; St Matthew Isl (KROG 1962); N of Nome, Anvil Pk; Kotzebue (KROG 1968); 29 km NW of Olga Bay Cannery, “Amara Lake” (KROG 1969); Amchitka Isl (WEBER et al. 1969); St Lawrence Isl (HUNECK & FOLLMANN 1971); Alaska (THOMSON 1972a: map); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Beaufort Lagoon, Nuwagapuk Pt (THOMSON 1979); Okpilak Valley (COPPINS 1981); Ogoruk Cr (MURRAY 1985); Amchitka Isl, Baraba Pt (THOMSON & SOWL 1989); Amchitka Isl (BATTEN & MURRAY 1993); SE Alaska (GEISER et al. 1994a, as cf.); Barter Isl (ZHURBENKO et al. 1995); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998, as cf.); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); North Slope, Brooks Range, Atigun Canyon by the Dalton Hwy (ZHURBENKO 2009b); Katmai NPPr, Mt Katmai D-6 quad; Lake Clark NPPr (MCCUNE et al. 2018, lacking sekikaic acid and atranorin); Aleutians, Amlia Isl (SPRIBILLE et al. 2020).
= *Fistulariella almqvistii* (Vain.) Bowler & Rundel – Alaska (THOMSON 1984: map); St Paul Isl, by the water towers; St Paul Isl, on the SW coast, near Ridge Wall (SCHINDLER 1990); Central Arctic coastal plain (WALKER et al. 1991).

Ramalina calicaris → [Appendix A](#)

Ramalina cuspidata → [Appendix A](#)

Ramalina dilacerata (Hoffm.) Hoffm. – Corticolous on conifers and hardwoods.

The SE Alaskan material may belong to an undescribed species. See also entry under *R. inflata* in [Appendix A](#). – Mendenhall Glacier (MCCULLOUGH 1965); along Mendenhall R (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Mendenhall R; Brotherhood Park in Juneau (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014);

Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018 as s. lat.).

= *Ramalina minuscula* (Nyl.) Nyl. – Lawrence-Insula; Port Clarence (NYLANDER 1887); Port Clarence (HUE 1890); Anchorage, Eagle R Valley; Anchorage, O'Malley Rd; Alaska Hwy, mi 1450; White Mts, Beaver Cr; White Mts, junction of Beaver Cr and Fossil Cr (KROG 1968).

Ramalina farinacea (L.) Ach. – Corticolous on hardwoods and sometimes conifers. – Alaska (HUE 1890); Sitka (STIZENBERGER 1895a, 1895b); Alaska (HOWE 1914); Kosciusko Isl, Shipley Bay; Howkan; Coronation Isl, Egg Harbor (HERRE 1919); Egg Harbour (MAGNUSSON 1932); Unalaska Isl, Kashega; Umnak Isl; Adak Isl, Chapel Cove; Kanaga Isl; Agattu Isl, N side (DEGELIUS 1937); Mendenhall Glacier (McCULLOUGH 1965); Juneau area, Shrine of St Therese; Sitka area, Indian R Trail; Sitka NM; Kenai Peninsula, Skilak L; Homer (KROG 1968, 'acid-deficient strain'); Juneau area, Shrine of St Therese; Sitka NM; Eagle R Valley; Anchorage, Rabbit Cr Rd; Anchorage, O'Malley Rd; Kenai Peninsula, Copper Cr; Homer; Kenai Peninsula, Ninilchik; Seward (KROG 1968, salazinic acid strain); Ketchikan (BOWLER & RUNDEL 1978); Kenai Peninsula, near Wildlife Refuge Headquarters; Kenai Peninsula, Anchor Pt (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33 (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, N arm of spit across James Lagoon; Kenai Fjords NPPr, Verdant Cove, N side at shoreline (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
= "*Ramalina calicularis* var. *farinacea* Fr." – Little Koniushu Isl, Shumagin group (ROTHROCK 1884).

Ramalina inflata subsp. *inflata* → [Appendix A](#)

Ramalina intermedia (Delise ex Nyl.) Nyl. – Saxicolous. – Bering Land Bridge NPr (HOLT et al. 2007); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Lake Clark NPPr, Tanalian Falls (McCUNE et al. 2018).

Ramalina leptocarpha Tuck. – Corticolous on *Menziesia ferruginea* along the beach. – Dog Isl, S of Ketchikan (GEISER et al. 1994a: map; GEISER et al. 1998, as cf.).

Ramalina menziesii Taylor – Corticolous on conifers on peninsulas or small offshore islands, in areas affected by sea fog. – SE Alaska (GEISER et al. 1994a: map); Hood Bay, Admiralty Isl; Shrine of St Therese, Juneau; [SE Alaska] mainland, Cape Fanshaw; Kuiu Isl, Table Bay; Schooner Isl; Kupreanof Isl, Kah Sheets Bay (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); SE Alaska (SORK & WERTH 2014: maps).
= *Ramalina reticulata* (Noehd.) Kremp. – Sitka (STIZENBERGER 1895a); Juneau area, Shrine of St Therese (KROG 1968).

Ramalina obtusata (Arnold) Bitter – Corticolous on conifers. – Knik R, near hwy; Eagle R Valley; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; Kenai Peninsula, Copper Cr; White Mts, Beaver Cr (KROG 1968); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Cleveland Peninsula, L McDonald (DILLMAN et al. 2012); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, Midway Lakes; Denali NPPr, Cascade Cr; Denali NPPr, Roosevelt Hill (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020, as ‘cf.’).

Ramalina pollinaria (Westr.) Ach. – Corticolous on hardwoods and conifers, also reported as lignicolous or saxicolous. The Unalaska Isl record may be referable to *R. scoparia*. The taxonomic work of GASPARYAN et al. (2017) did not demonstrate the absence of this taxon in North America. – Unalaska Isl, Behring Sea (MACOUN 1902); Kenai Peninsula, Copper Cr (KROG 1968); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Kenai Peninsula, near Wildlife Refuge Headquarters (SCHINDLER 1990); Alaska (BRODO et al. 2001); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018).

Ramalina polymorpha → ***Ramalina scoparia***

Ramalina roesleri (Hochst. ex Schaer.) Hue – Corticolous on conifer and hardwood branches and lignicolous on logs. THOMSON’S (1984) assertion that this species can also grow on cliffs suggests he confused it in part with *R. scoparia*. – Sitka (AHLNER 1948); Wonder L (WEBER & VIERECK 1967); Juneau area, Shrine of St Therese; Sitka NM; Anchorage, Rabbit Cr Rd; Eagle R Valley; Kenai Peninsula, Salamatof; Kenai Peninsula, Skilak L; Kenai Peninsula, Ninilchik (KROG 1968); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004; DERR et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Hogg Isl; Teck Isl (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, FIA plot at Verdant Cove; Kenai Fjords NPPr, Verdant Cove, N side at shoreline; Kenai Fjords NPPr, Exit Glacier CG; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Fistulariella roesleri* (Hochst. ex Schaer.) Bowler & Rundel – Alaska (THOMSON 1984: map); Kenai Peninsula, Chugach NF, by Cooper Lodge; Kenai Peninsula, near the Wildlife Refuge Headquarters (SCHINDLER 1990).

= *Ramalina pollinariella* Nyl. – Sitka (STIZENBERGER 1895a, 1895b).

= “*Ramalina dilacerata pollinariella* Arn.” – St Paul Isl (MERRILL 1908a).

Ramalina scoparia Vain. – Saxicolous on exposed rocks and boulders in coastal areas, also lignicolous on driftwood and planks. – Ukinyik Cr drainage, Cape Lewis; St Matthew Isl (KROG 1962); Nunivak Isl, Nash Harbour (KROG 1968);

Amchitka Isl (WEBER et al. 1969); St Paul Isl (NASH 1992); Amchitka Isl (BATTEN & MURRAY 1993); Adak Isl (TALBOT et al. 1997); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); St Lazaria Isl (DILLMAN et al. 2012). = *Fistulariella scoparia* (Vain.) Bowler & Rundel – Alaska (THOMSON 1984: map); Amchitka Isl (THOMSON & SOWL 1989); St Paul Isl (SCHINDLER 1990). ? = *Ramalina polymorpha* (Liljeblad) Ach. – Saxicolous on maritime rocks. – St Paul's Isl, Behring Sea (ROTHROCK 1884: revised by NYLANDER 1887: 85); St Paul Isl (MACOUN 1899, 1902); Unalaska; St Paul Isl (CUMMINGS 1904). ? = “*Ramalina polymorpha* * *emplecta* Ach.” – St Pauls Isl (NYLANDER 1887).

Ramalina sinensis Jatta – Corticolous on conifer branches. – Kenai Peninsula, Ninilchik; Richardson Hwy, Darling Cr (KROG 1968); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009: a misidentification of *Ramalina dilacerata*, B. McCune, pers. comm.).

Ramalina subfarinacea → [Appendix A](#)

Ramalina subleptocarpa Rundel & Bowler – Corticolous on conifers (esp. *Picea sitchensis*) on islands, often near bird perches. – SE Alaska (DILLMAN 2004); Afognak Isl, small unnamed island in Blue Fox Bay (DILLMAN 2010); DeLong Isl, Foggy Bay; Kodiak Isl Archipelago, Afognak Isl, Blue Fox Bay (DILLMAN et al. 2012).

Ramalina thrausta (Ach.) Nyl. – Corticolous on conifers. – Juneau area, Shrine of St Therese; Sitka NM; Kenai Peninsula, Skilak L (KROG 1968); Alaska (THOMSON 1984: map); Tok Junction, Robertson R (SCHINDLER 1987); Girdwood; Kenai Peninsula, CG; Kenai Peninsula, near Wildlife Refuge Headquarters (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33; Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Haines Borough (ELIX & TØNSBERG 2005); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Ramboldia cinnabarina (Sommerf.) Kalb et al. – Corticolous on *Abies*, *Pinus contorta* and *Tsuga*. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

= “*Biatora cinnabarina* (Smrft.) Fr.” – Port Wells; White Pass (CUMMINGS 1904).

= *Lecidea cinnabarina* Sommerf. – Kodiak Isl, Kodiak (DEGELIUS 1937); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map).

= *Pyrrospora cinnabarina* (Sommerf.) M. Choisy – SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010).

Ramboldia elabens → [Appendix A](#)

Ramboldia gowardiana (T. Sprib. & Hauck) Kalb et al. – Corticolous on *Alnus* and conifers, mostly pines. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); SE Alaska (McCUNE 2017b); Kenai Fjords NPPr, N arm of spit across James Lagoon (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Pyrrophospora gowardiana* T. Sprib & Hauck – Kodiak Isl Borough, NW of Kodiak (SPRIBILLE & HAUCK 2003).

Ramboldia subcinnabarina (Tønsberg) Kalb et al. – Corticolous on hardwoods (*Alnus*, *Populus*, *Salix*). – Alaska (KALB et al. 2008, mentioned in the key); Kodiak Isl Borough (HOLIEN & TØNSBERG 2012: map); SC Alaska (McCUNE 2017b); Katmai NPPr, Malone L; Lake Clark NPPr, Chinitna Bay (McCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, N of Exit Glacier Visitor Center (McCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

Ramonia melathelia (Nyl.) Ertz – Terricolous over calcareous schist.

= *Thelopsis melathelia* Nyl. – Brooks Range, Sukakpak Mtn (DILLMAN et al. 2012); Denali NPPr, Chitsia Mtn (STEHN et al. 2015).

#*Refractohilum galligenum* D. Hawksw. – On *Nephroma* sp. – Chilkoot Trail (SPRIBILLE et al. 2010).

#*Refractohilum intermedium* Cl. Roux & Etayo – On *Pachyphiale carneola*. – Matanuska-Susitna Borough, Petersville Rd (HAFELLNER 2022).

#*Refractohilum peltigeræ* (Keissl.) D. Hawksw. – On *Peltigera canina*, *P. degenii* and *P. membranacea*. – Caribou-Poker Cr Watershed (ZHURBENKO & LAURSEN 2003); Kenai Peninsula, Chugach NF (ZHURBENKO 2009a); Chilkoot Trail (SPRIBILLE et al. 2010).

#*Rhagadostoma lichenicola* (De Not.) Keissl. – On *Solorina crocea*. – Interior Alaska (LAURSEN & SEPPELT 2009); White Pass (SPRIBILLE et al. 2010).

Rhexophiale rhexoblephara → [Sagiolechia rhexoblephara](#)

Rhizocarpon alaxense J. W. Thomson ('*alaxensis*') – Saxicolous on calcareous rock. – Franklin Bluffs on the Sagavanirktok R (**type** – THOMSON 1968b, WONG 1993; THOMSON 1979; THOMSON 1997).

Rhizocarpon alpicola (Fr.) Rabenh. – Saxicolous. – St Lawrence Isl (NYLANDER 1885a; see discussion of the identification of these specimens by THOMSON 1968b); Atka Isl; Unalaska Isl (HEDRICK 1936); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010, authors as '[Anzi] Rabenh.');

Denali NPPr (STEHN et al. 2015); coastal Alaska (McCUNE 2017b); Katmai NPPr, Hammersly L; Lake Clark NPPr, Tuxdni Bay (McCUNE et al. 2018); Kenai Fjords NPPr, Bear Glacier nunatak (sterile); Kenai Fjords NPPr, NPS weather station, McArthur Ridge (McCUNE et al. 2020).

= "*Buellia alpicola* Wahl." – St George Isl (MACOUN 1899).

= "*Lecidea alpicola* Schaer." – Lawrence-Insula (NYLANDER 1887).

Rhizocarpon anaperum (Vain.) Vain. – Saxicolous on pebbles and rocks in subalpine meadows, and recently deglaciated areas at sea level. – Kodiak Isl, Spiridon Peninsula (TALBOT 1998 – a misidentification according to IHLEN & FRYDAY 2004); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Oasis Glacier (FRYDAY & DILLMAN 2021b).

- Rhizocarpon anseris** Lynge – Saxicolous on acidic rock and beach pebbles. – Hagemeister Isl (TALBOT et al. 1990; THOMSON 1997); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).
- Rhizocarpon atroflavescens** Lynge – Saxicolous on underhang. – White Pass (SPRIBILLE et al. 2010, as aff.; another White Pass specimen [Spribille 29230] confirmed by AMF, 2015); Ogotoruk Cr (FRYDAY 2017).
- Rhizocarpon badioatrum** (Flörke ex Spreng.) Th. Fr. – Saxicolous on acidic rocks, in several cases reported from shorelines or streams. – Lawrence Isl (THOMSON 1968b); Colville R near Umiat (THOMSON 1979); Adak Isl (TALBOT et al. 1997); Blueberry L CG (THOMSON & AHTI 1994); Nuyakuk L; Tikchik L (THOMSON & DOELL 1989); SE Alaska (GEISER et al. 1994a: map); Alaska (THOMSON 1997: map); [SE Alaska] mainland, Thunder Mtn (GEISER et al. 1998); Izembek Refuge, Cold Bay (TALBOT et al. 2000); White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018, one specimen with barbatic acid); Glacier Bay NP: Dundas Bay, West Arm (SPRIBILLE et al. 2020).
- Rhizocarpon bolanderi** (Tuck.) Herre – Saxicolous. – Kenai Fjords NPPr, Harding Icefield Trail; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).
- Rhizocarpon caesium** Fryday – Saxicolous on water-flushed rocks. – Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Rhizocarpon chioneum** (Norman) Th. Fr. – Saxicolous on calcareous rock. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Port Clarence; North Slope (THOMSON 1968b); Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Nishlik L (THOMSON & DOELL 1989); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Denali NPPr, S of the AK Range (STEHN et al. 2015); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Lecidea chionea* Norman – Port Clarence (NYLANDER 1887; HUE 1891).
- Rhizocarpon cinereonigrum** Vain. – Saxicolous. Sometimes considered to be the stictic acid chemotype of *R. badioatrum*. – Chilkoot Trail (SPRIBILLE et al. 2010, as aff.); SE Alaska (MCCUNE 2017b); Kenai Fjords NPPr, Harding Icefield Trail, lower slope, on rock (MCCUNE et al. 2020).
- Rhizocarpon cinereovirens** (Müll. Arg.) Vain. – Saxicolous. – Mt Fairplay (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); coastal Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L camp (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).
- Rhizocarpon concentricum* → **Rhizocarpon petraeum**
- Rhizocarpon copelandii** (Körb.) Th. Fr. – Saxicolous on siliceous rocks. – Unalaska Isl, Unalaska (DEGELIUS 1937); Mt Eielson (WEBER & VIERECK 1967); Aleutian Isls; Okpilak R Valley; Saganavirtok R (THOMSON 1968b); Franklin Bluffs on the Sagavanivirtok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); SE Alaska (GEISER et al. 1994a: map); Thompson Pass

(THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Kelp Bay on Baranof Isl; Wrangell Narrows; S Kupreanof Isl, Bear Claw Mtn; Cosmos Range; [SE Alaska] mainland, Elbow Mtn (GEISER et al. 1998); Katmai, Hammersly L (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

Rhizocarpon crystalligenum → **Rhizocarpon superficiale** subsp. **boreale**

Rhizocarpon cumulatum → **Diplotomma venustum**

Rhizocarpon disporum (Nägeli ex Hepp) Müll. Arg. – Saxicolous on acidic rock.

See also note under *Rhizocarpon geminatum*. – Unalaska Isl, Unalaska (DEGELIUS 1937); Juneau icefield nunatak; near Juneau, Taku Glacier valley (HEUSSER et al. 1954); Ogoruk Cr drainage (JOHNSON et al. 1966); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Endicott Mts, Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Copper R (MURRAY et al. 1983); Ogoruk Cr (MURRAY 1985); above trimline of Taku Glacier (GEISER et al. 1994a); Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Taku Glacier in the Juneau Icefield (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Brooks Range, Atigun Pass (KASANKE 2019); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

= “*Buellia petraea* (Fl.) Tuck. var. *montagnei* (Fl.) Tuck.” – Cook’s Inlet; Port Clarence (ROTHROCK 1884); St Paul Isl; Unalaska Isl; Cook’s Inlet; Port Clarence (MACOUN 1902); Baranof Isl, Hot Springs; White Pass; Kodiak; Unalaska; St Paul Isl (CUMMINGS 1904). = Synonymy according to ZAHLBRUCKNER (1926).

Rhizocarpon eupetraeoides (Nyl.) Blomb. & Forssell – Saxicolous on acidic rocks.

– Anaktuvuk Pass (MOSER et al. 1979); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Atigun Pass area (CALKIN & ELLIS 1980); Arrigetch Cr valley (COOPER 1986b); Brooks Range, Atigun Pass (WEBER 1984; HAWORTH et al. 1986 as “*eupetraeoides/inarense*”); St Paul Isl (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); [SE Alaska] mainland, unnamed pk W of Elbow Mtn (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Alaska (MCCUNE 2017b); Katmai NPPr, Hammersly L; Katmai NPPr, W of Contact Cr; Katmai NPPr, Mirror L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecidea atroalbans* Nyl. – Lawrence-Insula (NYLANDER 1887). THOMSON (1967a) writes that the specimen in H-NYL is a “tiny, molded fragment with but a single apothecium” but appears to be *Rhizocarpon eupetraeoides*. The specimen was also studied by M. Inoue in 1996, who concurred.

= *Rhizocarpon atroalbesens* (Nyl.) Zahlbr. – Unalaska Isl, Unalaska (DEGELIUS 1937); Unalaska (RUNEMARK 1956a: 139); Amchitka Isl (WEBER et al. 1969).

- Rhizocarpon eupetraeum** (Nyl.) Arnold – Saxicolous on acidic rock. – Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Denali NP, slope above Eielson Visitor Center (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); Portage Glacier; Mt Fairplay (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Anaktuvuk Pass (NASH et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018).
- Rhizocarpon expallesens** Th. Fr. – Saxicolous. A poorly understood species. – Noatak NPr (MCCUNE et al. 2009, reported with a ?).
- Rhizocarpon ferax** H. Magn. – Saxicolous. – Chugach NF (DERR 2010: 180, 194); Katmai NPPr, Hammersly L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, Harding Icefield Trail (MCCUNE et al. 2020).
- Rhizocarpon geminatum** Körb. – Saxicolous on acidic rocks. – Sadlerochit R, 25 mi inland from Camden Bay (MERRILL 1924b); Nuyakuk L (THOMSON & DOELL 1989); Prudhoe Bay, IBP Micromet. Station; Anaktuvuk Pass (FEUERER 1991); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Sheep Mtn (THOMSON & AHTI 1994); SE Alaska (O'CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Lake Clark NP, Tuxedni R; Lake Clark NP, Clam Cove (DILLMAN 2003); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, N of Exit Glacier Visitor Center (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020). = "*Lecidea geminata* Flot." – Alaska (NYLANDER 1887: 88). THOMSON (1967a) interprets this as *R. disporum*, though he did not find the specimen from St Lawrence Isl in H-NYL. See also note under *Rhizocarpon petraeum*).
- Rhizocarpon geographicum** (L.) DC. **subspecies not specified** – Saxicolous on acidic rocks. – 30 mi inland from Camden Bay (MERRILL 1924b); Unalaska Isl (HEDRICK 1936); Unalaska Isl, Unalaska; Amchitka Isl, N side; Attu Isl (DEGELIUS 1937); Denali NP hotel area; hill E of rd to Kantishna (HOWARD 1963); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); central Alaska Range (REGER & PÉWÉ 1969); Amchitka Isl (WEBER et al. 1969); White R Valley, St Elias Mts (DENTON & KARLÉN 1973); White R Valley; Skolai Pass (DENTON & KARLÉN 1977); Haul Rd, Finger Mtn Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R; Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Atigun Pass area (CALKIN & ELLIS 1980); Arey Cr; Okpilak Valley (COPPINS 1981); Arrigetch Pks (ELLIS et al. 1981); Atigun Pass (CALKIN & ELLIS 1984, as s. lat.); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Brooks Range, Atigun Pass (HAWORTH et al. 1986, as s. lat.); Nuyakuk L; Tikchik L; Nishlik L (THOMSON & DOELL 1989); Denali NP, Savage R (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Gulkana Glacier (BEGÉT 1994); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Eagle

Summit; Mt Fairplay; Blueberry L CG; Thompson Pass; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); northeastern Brooks Range (EVISON et al. 1996, as s. lat.); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Innavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Lake Clark NP, Clam Cove (DILLMAN 2003); Mt Fairplay (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009, as s. lat.); Chugach NF, Crow Pass trail (DERR 2010: 250); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010, as aff.); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

= *Buellia geographica* (L.) Tuck. – Aliaska Peninsula (ROTHROCK 1884); St George Isl (MACOUN 1899); Aliaska Peninsula (MACOUN 1902); Summit of White Pass; Kodiak; Hall Isl; St Matthew Isl; Port Wells; Port Clarence; Cape Nome; St Michael Isl; Alaska Peninsula; St George Isl (CUMMINGS 1904); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018, as s. str.).

? = “*Buellia geographica atrovirens* (L.) Tuck.” – Summit of White Pass (CUMMINGS 1904).

= “*Buellia geographica contigua* (Schaer.)” – Haenke Isl, Disenchantment Bay; Kodiak; Hall Isl (CUMMINGS 1904).

Rhizocarpon geographicum* subsp. *arcticum (Runemark) Hertel – Saxicolous. – Denali NP, slope N of Station Primrose (SCHINDLER 1987); Anaktuvuk Pass (MOSER et al. 1979).

= *Rhizocarpon tinei* (Tornab.) Runemark subsp. *arcticum* Runemark – Kodiak Isl (RUNEMARK 1956b).

Rhizocarpon geographicum* subsp. *frigidum (Räsänen) Hertel – Saxicolous. – Denali NP, slope N of Station Primrose (SCHINDLER 1987).

Rhizocarpon grande (Flörke) Arnold – Saxicolous on acidic rock. See also entry under *Tephromela atrocaesia* in Appendix A. – Unalaska Isl (HEDRICK 1936); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass (THOMSON 1979); St Paul Isl (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992); Blueberry L CG; Fielding L (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); St Matthew Isl (TALBOT et al. 2001); Denali NPPr, N of the AK Range (STEHN et al. 2015); Lake Clark NPPr, Camel’s Hump on shore of L Clark; Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, Verdant Cove, N side at shoreline (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay; Juneau icefield (SPRIBILLE et al. 2020, as cf.); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

= “*Buellia petraea grandis* (Flk.) Tuck.” – Alaska (CUMMINGS 1904).

Rhizocarpon haidense Brodo & Fryday – On siliceous rock near the coast, often in the aerohaline zone. – Glacier Bay NP: Dundas Bay; Juneau Borough, Aaron Isl; Petersburg Borough, Kupreanof Isl (SPRIBILLE et al. 2020).

Rhizocarpon hensseniae Brodo – Saxicolous on boulders and bedrock in frost pocket areas and in cold muskeg up to alpine heaths. – Juneau, Gastineau Ridge

(BRODO 1990); Juneau (INOUE 1997); Adak Isl (TALBOT et al. 1997); Gastineau Pk (GEISER et al. 1998); coastal Alaska (MCCUNE 2017b); Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Oasis Glacier (FRYDAY & DILLMAN 2021b).

Rhizocarpon hochstetteri (Körb.) Vain. – Saxicolous, on rocks in snowbeds and streams and outcrops; see also in [Appendix A](#) under *R. praeabadium*. – Alaska (THOMSON 1968b); Amchitka Isl (WEBER et al. 1969); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Kenai Peninsula, mi 13 on rd between Moose Pass and Seward (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Fielding L (THOMSON & AHTI 1994); SE Alaska (O'CLAIR et al. 1996); Alaska (THOMSON 1997: map); W Baranof Isl; Stikine R; Cosmos Range, [SE Alaska] mainland; S Kupreanof Isl, Bear Claw Mtn; Aaron Isl in Lynn Canal (GEISER et al. 1998); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010, as aff.); Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, NE end of Harris Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

? = *Lecidea confervoides* auct., non (DC.) Schaer. – Lawrence-Insula (NYLANDER 1887: THOMSON [1967a] did not find the St Lawrence Isl voucher in H-Nyl but interprets a piece from Bering Isl so named by Nylander as *R. hochstetteri*); Camden Bay (MERRILL 1924b).

Rhizocarpon inarense (Vain.) Vain. – Saxicolous, reported from calcareous and siliceous rock types. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Atigun Pass area (CALKIN & ELLIS 1980); Ogotoruk Cr (MURRAY 1985); Tikchik L (THOMSON & DOELL 1989); Chisik Isl (TALBOT et al. 1992); Alaska (THOMSON 1997: map); St Matthew Isl (TALBOT et al. 2001); Mt Fairplay (TALBOT et al. 2007); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Rhizocarpon infernulum (Nyl.) Lynge var. **infernulum** – Saxicolous on acidic rocks, including pebbles on raised beaches and on vertical rock face. – Katmai NPPr, Hammersly L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecidea infernula* Nyl. – Lawrence-Insula (NYLANDER 1885a). The type is from the Asian side of the Bering Straits (FRYDAY 2002).

= *Rhizocarpon hochstetteri* f. *infernulum* (Nyl.) Vain. – Amchitka Isl (DEGELIUS 1937).

Rhizocarpon intermediellum Räsänen – Saxicolous. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Denali NPPr, N of the AK Range (STEHN et al. 2015).

Rhizocarpon kitschikense Arnold – Saxicolous on alpine ridges and mountain tops. – Kenai Fjords NPPr, Coleman Bay, NE end, off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Rhizocarpon jemtlandicum (Malme) Malme – Saxicolous. – Chugach NF (DERR 2010: 178, 224); Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

Rhizocarpon lavatum (Fr.) Hazsl. – Saxicolous, including on alpine argillite. – Chauekuktuli L (THOMSON & DOELL 1989); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, E side of Harris Bay (as aff.); Kenai Fjords NPPr, Crater Bay off of Harris Bay (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Rhizocarpon lecanorinum Anders – Saxicolous on pebbles, cobbles and exposed outcrops, especially on beach ridges, also on bird perches. – Barrow (FRYDAY 2004a); Katmai NPPr, Hammersly L (MCCUNE et al. 2018); Kenai Fjords NPPr, Coleman Bay, NE end, off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).

Rhizocarpon leptolepsis Anzi – Saxicolous on acidic rock. – Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018).

Rhizocarpon macrosporum Räsänen – Saxicolous on siliceous rock. – Alaska (BRODO et al. 2001); Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020).

Rhizocarpon norvegicum Räsänen – Saxicolous on base-rich rocks. – Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (THOMSON 1997: map).

Rhizocarpon obscuratum → **Rhizocarpon reductum**

Rhizocarpon oederi (Weber) Körb. – Saxicolous on metal-rich rocks. – Katmai NPPr, 1 km SW of Malone L; Katmai NPPr, W end Malone L (MCCUNE et al. 2018); Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020). = “*Buellia petraea* (Fl.) Tuck. var. *Oederi* (Ach.) Kbr.” – “Alaska and the adjacent region; locality not given” (ROTHROCK 1884).

Rhizocarpon petraeum (Wulfen) A. Massal. – Saxicolous on pebbles and larger granitic rocks, also semi-inundated rock along creek. – Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020). = “*Buellia petraea* (Fl.) Tuck.” – St Pauls Isl; Kodiak; Port Clarence (ROTHROCK 1884; specimen revised to *Lecidea geminata* Flot. by NYLANDER 1887: 88); St Paul Isl; Kodiak Isl; Port Clarence (MACOUN 1902); Broughton Strait; St Michael (CUMMINGS 1904). = *Lecidea excentrica* Ach. – Port Clarence (NYLANDER 1887; HUE 1891); see discussion of the Konyam Bay (Russia) specimen by THOMSON (1967a). = *Rhizocarpon concentricum* auct. – Port Clarence (THOMSON 1968b); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map). Synonymy according to WESTBERG et al. (2021).

Rhizocarpon polycarpum (Hepp) Th. Fr. – Saxicolous on granite and argillite in tarns, muskegs and tundra. – Alaska (THOMSON 1968b); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Denali NP, slope N of Station Primrose (SCHINDLER 1987); Chisik Isl (TALBOT et al. 1992); Sheep Mtn (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Katmai NPPr, Hammersly L; Lake Clark NPPr, Portage L; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018); Kenai Fjords NPPr, Bear Glacier nunatak; Kenai Fjords NPPr, spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

- Rhizocarpon postumum** (Nyl.) Arnold – Saxicolous. – Lake Clark NPPr, Turquoise L (McCUNE et al. 2018); Kenai Fjords NPPr, headland between two arms of Coleman Bay (McCUNE et al. 2020).
Rhizocarpon praebadium → [Appendix A](#)
- #Rhizocarpon pusillum** Runemark – On the thallus of *Sporastatia testudinea*, on rocks. – Okpilak R near Okpilak L and Mt Michelson (HERTEL 1975: map; THOMSON 1979); Anaktuvuk Pass (MOSER et al. 1979); Alaska (THOMSON 1997: map); Alaska (McCUNE 2017b).
- Rhizocarpon quinonum** McCUNE et al. – Saxicolous on non-calcareous rocks in the alpine. – Katmai NP, NE of Mirror L; Katmai NP, W of Contact Cr (McCUNE et al. 2016; McCUNE et al. 2018); alpine coastal Alaska (McCUNE 2017b); Kenai Fjords NPPr, Bear Glacier nunatak (McCUNE et al. 2020).
- Rhizocarpon reductum** Th. Fr. – Saxicolous on pebbles and granitic and gneiss cobbles and boulders. – Alaska (McCUNE 2017b); Lake Clark NPPr, Turquoise L (McCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).
 = *Rhizocarpon obscuratum* auct., non (Ach.) A. Massal. – See FRYDAY (2000) for a nomenclatural and taxonomic discussion. – SE Alaska (O’CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); Aleutian Isls (THOMSON 1997: map); Baranof R (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chilkoot Trail (SPRIBILLE et al. 2010, as s. lat.).
- Rhizocarpon riparium** Räsänen, subspecies not specified – Saxicolous on acidic rocks. – Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1997: map); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (McCUNE et al. 2020). Taxonomy follows ROCA-VALIENTE (2013).
- Rhizocarpon riparium** subsp. *lindsayanum* (Räsänen) J. W. Thomson – Saxicolous on acidic rocks. – Kenai Fjords NPPr, NPS weather station, McArthur Ridge (McCUNE et al. 2020).
- Rhizocarpon rittokense** (Hellb.) Th. Fr. – Saxicolous on siliceous rock. – Umiat; Okpilak R Valley (THOMSON 1968b); Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Denali NP, Savage R (SCHINDLER 1990); Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map).
- Rhizocarpon rubescens** Th. Fr. – Saxicolous on moist vertical ledges. – Noatak NPr (McCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); SE Alaska (McCUNE 2017b).
- Rhizocarpon saanaëense** Räsänen – Saxicolous. – Alaska (McCUNE 2017b); Katmai NPPr, Hammersly L; Lake Clark NPPr, Camel’s Hump on the shore of L Clark (McCUNE et al. 2018); Kenai Fjords NPPr, Verdant Cove, N side at shoreline (McCUNE et al. 2020).
- Rhizocarpon sinense** Zahlbr. – Saxicolous. – Katmai NPPr, Naknek L (McCUNE et al. 2018).
- Rhizocarpon subgeminatum** Eitner – Saxicolous in an upper montane talus slope – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (McCUNE 2017b).

Rhizocarpon submodestum (Vain.) Vain. – Saxicolous on stones (the report of the species as “corticolous on *Picea glauca*” was in error, B. McCune, pers. comm. 2023). – Katmai NPPr, Malone L (MCCUNE et al. 2018).

Rhizocarpon subpostumum (Nyl.) Arnold – Saxicolous. – Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020).

Rhizocarpon superficiale (Schaer.) Vain. **subspecies not specified** – Saxicolous on acidic rocks. – S of Wainwright, Kaolak R; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Arey Cr (COPPINS 1981); Denali NP, Savage R (SCHINDLER 1990); Klondike Goldrush National Historical Monument near Skagway (GEISER et al. 1994a); Alaska (THOMSON 1997: map); Klondike Goldrush National Historical Monument, near Skagway (GEISER et al. 1998); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr, Mirror L; Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018).

Rhizocarpon superficiale subsp. ***boreale*** Runemark – Saxicolous on siliceous rock. – Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994).
= *Rhizocarpon crystalligenum* Lynge – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979).

Rhizocarpon tinei → ***Rhizocarpon geographicum*** subsp. ***arcticum***

Rhizocarpon umbilicatum (Ramond) Flagey – Saxicolous on calcareous rocks. – Kaolak R (THOMSON 1968b); S of Wainwright, Kaolak R (THOMSON 1979); Kukpuk R region, Angmakrok Mtn; S of Wainwright, Kaolak R (FEUERER 1981); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Cape Krusenstern NM, Noak Mtn (ZHURBENKO 2009b).
= “*Rhizocarpon* cf. *umbilicatum* f. *pseudospeireum* (Th. Fr.) Magnusson” – Fielding L (THOMSON & AHTI 1994); Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018).

Rhizocarpon viridiatrum (Wulfen) Körb. – Saxicolous. – Wonder L (WEBER & VIERECK 1967).

Rhizoplaca chrysoleuca (Sm.) Zopf – Saxicolous on acidic rocks. – Anaktuvuk Pass (MOSER et al. 1979); Yukon R; Tanana R (MURRAY et al. 1983); Alaska (MCCUNE 1987: two chemotypes [maps]); Tuxedni Wilderness, Duck Isl (TALBOT et al. 1992); SE Baranof Isl (GEISER et al. 1994a: map; omitted by GEISER et al. 1998); Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Alaska (THOMSON 1997: map); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Lake Clark NPPr (MCCUNE et al. 2018).

= *Lecanora chrysoleuca* (Sm.) Ach. – Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979).

= “*Lecanora rubina* (Vill.) Ach.” – Middleton Isl (MACOUN 1902); Baranof Isl, Hot Springs; St Paul Isl; Cape Fox (CUMMINGS 1904); Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Quigley Hill (HOWARD 1963); Polychrome Pass (WEBER & VIERECK 1967).

= “*Lecanora chrysoleuca* var. *rubina* (Vill.) Th. Fr.” – 50 mi inland from Camden Bay (MERRILL 1924b).

- ? = "*Lecanora rubina opaca* (Ach.) Tuck." – St Matthew Isl (CUMMINGS 1904).
- Rhizoplaca melanophthalma** (DC.) Leuckert & Poelt – Saxicolous. – Tanana R (MURRAY et al. 1983); Alaska (MCCUNE 1987: two chemotypes [maps]); Mt Fairplay (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Gates of the Arctic NPPr (NELSON et al. 2015b).
= *Lecanora melanophthalma* (DC.) Ramond – Polychrome Pass (HOWARD 1963); Colville R near Umiat; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).
- Rhizoplaca peltata** (Ramond) Leuckert & Poelt – Saxicolous on acidic rocks. – Alaska (THOMSON 1997: map).
= *Lecanora peltata* (Ramond) Steud. – Denali NP, Polychrome Pass (HOWARD 1963; but this is a misidentification of *Lecanora rubina* = *Rhizoplaca chryssoleuca* according to WEBER & VIERECK 1967); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).
- Rhizoplaca subdiscrepans** (Nyl.) R. Sant. – Saxicolous on siliceous rock. – Dalton Hwy, Finger Mtn (DILLMAN et al. 2012).
- #Rhymbocarpus neglectus** (Vain.) Diederich & Etayo – On *Lepraria*. – White Pass (SPRIBILLE et al. 2010); Brooks Range, Atigun Pass (DILLMAN et al. 2012).
- #Rhymbocarpus stereocaulorum** (Alstrup & D. Hawksw.) Etayo & Diederich – On *Stereocaulon alpinum*. – Barrow (ZHURBENKO 2010).
- Ricasolia amplissima** (Scop.) De Not. subsp. **sheiyi** Derr & Dillman – Corticolous on *Picea sitchensis* and *Tsuga heterophylla* on warm maritime islands. – Kuiu Isl, Explorer Basin; Coronation Isl, Egg Harbor; Warren Isl, Warren Cove; Windfall Isls, Tebenkof Bay; Kuiu Isl, Pt Ellis; Sukoi Islets, Frederick Sound; McDonald Isl, Frederick Sound (**type** – CORNEJO et al. 2017).
= *Lobaria amplissima* auct., non (Scop.) Forssell – Baranof Isl SW, Yamani Islets (TØNSBERG & GOWARD 2001); SE Alaska (DILLMAN 2004); North Slope (KRISTINSSON et al. 2010; an error?).
- Ricasolia quercizans* → [Appendix A](#)
- Rimularia gibbosa** (Ach.) Coppins et al. – Saxicolous. – Ogotoruk Cr; Etivluk R (FRYDAY 2017).
- Rimularia limborina** Nyl. – Saxicolous, including on argillite in the alpine zone. – Noatak NPr (MCCUNE et al. 2009); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2014b); Mitkof Isl, Crystal Mtn (FRYDAY & TØNSBERG 2015); Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L; Lake Clark NPPr, Saddle Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).
- Rinodina archaea** (Ach.) Arnold – Corticolous and lignicolous on hardwoods and old wood. – McKinley Bar (WEBER & VIERECK 1967); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat (THOMSON 1979); Chisik Isl (TALBOT et al. 1992); Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Borough of Juneau, Sunshine Cove (SHEARD 2010); Lake Clark NPPr, Turquoise L; Tuxedni, Chisik Isl (MCCUNE et al. 2018).
= *Rinodina lecideoides* (Nyl.) Kernst. – Firth R at Mancha Cr (THOMSON 1979).

Rinodina austroborealis Sheard – Corticolous. – E of Palmer; Kodiak NWR, Spiridon Peninsula (SHEARD 2010); Alaska (MCCUNE 2017b); Brooks Range, valley of Middle Fork of the Koyukuk R (OBERMAYER 2017).

Rinodina badiexcipula Sheard – Lignicolous on porous wood. – Katmai NPPr, Malone L (MCCUNE et al. 2018).

Rinodina bischoffii (Hepp) A. Massal. – Saxicolous on calcareous rock. – Colville R near Umiat (THOMSON 1979); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Umiat (SHEARD 2010).

Rinodina buckii Sheard – Corticolous on *Alnus* and *Salix*. – Katmai NP, Naknek L (SHEARD et al. 2014); Katmai NPPr, Brooks Camp; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018).

Rinodina cacuminum → ***Amandinea cacuminum***

Rinodina calcigena (Th. Fr.) Lynge – Saxicolous on calcareous rock. – Pitmegea R; Umiat (MAYRHOFER & SHEARD 1988); Alaska (THOMSON 1997: map); Pitmegea R; Umiat (SHEARD 2010).

= *Rinodina occidentalis* Lynge – Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass (THOMSON 1979).

Rinodina capensis Hampe – Corticolous on *Alnus*. – White Pass (SPRIBILLE et al. 2010).

Rinodina cinereovirens (Vain.) Vain. – Lignicolous and corticolous on hardwoods and bracket fungus conks. – Alaska (SHEARD et al. 2017); Lake Clark NPPr, Tuxedni, Chisik Isl (MCCUNE et al. 2018).

Rinodina cinnamomea (Th. Fr.) Räsänen – Terricolous on fine organic accumulations in the alpine zone. – Lake Clark NPPr, headwaters of Johnson R (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Rinodina mniaroea* var. *cinnamomea* Th. Fr. – Terricolous in the alpine. – White Pass (SPRIBILLE et al. 2010).

= *Rinodina mniaroea* (Ach.) Körb. “skyrin-containing strain”. – Kuskokwin [sic] R; Haines Hwy, mi 86 (SHEARD 2010).

Rinodina colobina (Ach.) Th. Fr. – Corticolous on *Populus*. – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Rinodina confragosa (Ach.) Körb. – Alaskan record is from “old boards”.

= “*Rinodina sophodes confragosa* (Ach.) Tuck.” – Farragut Bay (CUMMINGS 1904).

= “*Rinodina sophodes* var. *confragosa* Nyl.” – “Alaska and the adjacent region”, no locality given (ROTHROCK 1884; specimen revised to “*Lecanora milvina* Ach.” by NYLANDER 1887: 87).

Rinodina conradii Körb. – Terricolous, and lignicolous on beach log above high tide line. – Wainwright (MAYRHOFER et al. 2001; SHEARD 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Rinodina degeliana → ***Rinodina subpariata***

Rinodina disjuncta Sheard & Tønsberg – Corticolous on *Alnus* and *Picea*. – Borough of Juneau, W of Auke Bay, between Pt Louisiana and Indian Pt; bank of Cowee Cr (TØNSBERG 1992a); Alaska (HOLIEN & TØNSBERG 1996: map); Alaska (JØRGENSEN 1996: map); Cordova; White Pass, Skagway; Borough of Juneau, N Douglas Isl; Haines Borough, Chilkat Peninsula; Juneau, W Auke

Bay; Kodiak Isl Borough, E Kodiak Village; S Kalsin Bay; W Kodiak Airport (SHEARD 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Alaska (TØNSBERG & PRINTZEN 2018); Glacier Bay NP: Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Rinodina efflorescens Malme – Corticolous on *Alnus* trunk and *Shepherdia canadensis* stalk. – Mitkof Isl; Juneau Borough, Auke Bay; Kodiak Isl Borough, Red Cloud R (SHEARD 2010); Chilkoot Trail (SPRIBILLE et al. 2010); coastal Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, N of Exit Glacier Visitor Center; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Rinodina flavosoralifera Tønsberg – Corticolous on *Alnus* and deciduous park tree near sea level. – Juneau; Sitka (TØNSBERG 2002a); Douglas Isl, Borough of Juneau; Borough of Sitka, Baranof Isl, Sitka (SHEARD 2010); coastal Alaska (MCCUNE 2017a & b).

Rinodina freyi H. Magn. – Corticolous. – N Dyea; Mitkof Isl; Anchorage (SHEARD 2010); Alaska (MCCUNE 2017b); Lake Clark NPPr, inlet stream of Pickerel L; Lake Clark NPPr, SW end of Pickerel L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Rinodina gennarii Bagl. – Saxicolous on acidic rocks in the salt spray zone. – SE Alaska (O'CLAIR et al. 1996; GEISER et al. 1998); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Rinodina granulans → [Appendix A](#)

Rinodina griseosoralifera Coppins – Corticolous on *Salix* (J. Sheard, pers. comm., 2015). – Juneau Borough, Douglas Isl; Kodiak Isl Borough, Buskin L; S Kodiak; Yakutat Borough, Yakutat Foreland (SHEARD 2010); Katmai NPPr, Naknek L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Rinodina incurva Sheard & J. Walton – Corticolous on *Populus balsamifera*. – Katmai NPPr, Katmai Bay Bear Cam (SHEARD 2018; MCCUNE et al. 2018).

Rinodina laevigata (Ach.) Malme – Corticolous on hardwoods and *Tsuga* twigs in rainforests; records from Anaktuvuk Pass should be re-examined. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Deadman L CG; Squirrel Cr CG (THOMSON & AHTI 1994); Chilkoot Trailhead; Chisik Isl; Kodiak Isl, S Moashka Bay (SHEARD 2010); Chilkoot Trail (SPRIBILLE et al. 2010); SC Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).

Rinodina macrospora Sheard – Corticolous on *Alnus*, *Picea sitchensis* and *Tsuga heterophylla*. – Glacier Bay NP: Dundas Bay, Glacier Bay (SPRIBILLE et al. 2020).

Rinodina metaboliza Vain. – Corticolous on *Populus balsamifera* (J. Sheard, pers. comm., 2015). – E of Palmer; Tanana R (SHEARD 2010); Alaska (MCCUNE 2017b); Katmai NPPr, Brooks Camp (MCCUNE et al. 2018).

Rinodina milvina (Wahlenb.) Th. Fr. – Saxicolous. See also under *R. confragosa*. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979; a misidentification of *Amandinea cacuminum* fide MAYRHOFFER & SHEARD 2002); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Rinodina mniaroea (Ach.) Körb. **variety not indicated** – *Rinodina cinnamomea* and *R. mniaroeiza* have previously been included as varieties of this species, which is usually (incorrectly) spelled *mniaraea*. Terricolous on detritus and soil in tundra and on beach ridges. – Camp Eielson; Mt Eielson (WEBER & VIERECK 1967); S of Wainwright, Kaolak R; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Arrigetch Cr; Barrow; Bering Straits; Fielding L; Mt Eielson; Mt McKinley; Okpilak L; Sheep Mtn (SHEARD 2010: substance-deficient strain, not accorded taxonomic rank by Sheard); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

= *Lecanora mniaroea* Ach. – Port Clarence (NYLANDER 1887; HUE 1891).

= “*Rinodina turfacea* var. *mniaraea* (Wahl.) Nyl.” – Isls in Behring Strait (MACOUN 1902).

? = “*Lecanora mniaroea* var. *pachnea* Ach.” – Port Clarence (NYLANDER 1887; HUE 1891).

Rinodina mniaroea var. **mniaroea** – Terricolous in the alpine. – White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Rinodina mniaroeiza (Nyl.) Arnold (‘*mniaraeiza*’) – Terricolous on rock outcrop. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Rinodina mniaraea* (Ach.) Körb. ‘atranorin-containing strain’ – Barrow (SHEARD 2010).

Rinodina oleae Bagl. – Corticolous on dead *Alnus viridis*. – Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018, “the identification is tentative”).

Rinodina olivaceobrunnea C. W. Dodge & G. E. Baker – Muscicolous to terricolous. – Noatak NPr (MCCUNE et al. 2009); Barrow; Franklin Bluffs; Fielding L; Koalak R; Pt Barrow; 62 mi N of Valdez (SHEARD 2010); Lake Clark NPPr, Portage L; Lake Clark NPPr, headwaters of Johnson R; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Rinodina orculata Poelt & M. Steiner – Corticolous on *Abies* twigs, *Picea sitchensis* krummholz and trunk of *Alnus incana*. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Rinodina oregana H. Magn. – Corticolous on *Populus balsamifera* trunk. – Kenai Peninsula, Primrose Cr (MCCUNE & ROSENTERTER 2014; SHEARD et al. 2014); coastal Alaska (MCCUNE 2017b); Katmai NP, Naknek L (SHEARD et al. 2014; MCCUNE et al. 2018); Kenai Fjords NPPr, N of Exit Glacier Visitor Center (MCCUNE et al. 2020).

Rinodina pallidescens Sheard & Tønsberg – Corticolous on *Alnus*, *Picea* and *Salix*. See also *Rinodina subminuta* in [Appendix A](#). – Tony Malone L; Headwaters Cr; Glacier Bay NP: Muir Pt; Katmai NP, Naknek L (**type** – SHEARD et al. 2014); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

Rinodina parasitica H. Mayrhofer & Poelt – Often beginning on other lichens, Alaskan specimen was free-living and saxicolous (J. Sheard, pers. comm., 2015). – Barrow (SHEARD 2010).

Rinodina polyspora Th. Fr. – Corticolous on *Alnus*. – NW of Haines, E of Chilkat R (DILLMAN et al. 2012).

Rinodina roscida (Sommerf.) Arnold – Terricolous on calcareous soils and detritus. – Port Clarence (MAGNUSSON 1947a); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Copper R (MURRAY et al. 1983); Ogotoruk Cr (MURRAY 1985); Alaska (THOMSON 1997: map); Franklin Bluffs (WALKER et al. 2004); Noatak NPr (MCCUNE et al. 2009); W side Jago R; 10 mi N Jago L; Barrow; Bering Strait; E Okpilak L; Endicott Mts; Franklin Bluffs; Mancha Cr; Mt Eielson; Okpilak L; Pitmegea R; Prudhoe Bay (SHEARD 2010); White Pass (SPRIBILLE et al. 2010); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020). = *Rinodina roscida* var. *crassa* H. Magn. – Port Clarence (**type** – MAGNUSSON 1947a).

Rinodina septentrionalis Malme – Corticolous on trunks and twigs of hardwoods and lignicolous on coastal driftwood. – Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Chisik Isl (TALBOT et al. 1992); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Anaktuvuk Pass; Fielding L; Franklin Bluffs; Sheep Mtn; Squirrel Cr CG; E Kodiak Isl (SHEARD 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr (MCCUNE et al. 2020). = *Rinodina hyperborea* H. Magn. – Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979).

Rinodina sheardii Tønsberg – Corticolous or muscicolous on trunks of *Alnus*, *Populus* and *Salix* in riparian areas. – Borough of Juneau, NW of Juneau City, bank of Cowee Cr (**type**); Juneau; Dotson Landing (TØNSBERG 1992b); NW of Juneau, along Glacier Hwy, just N of Herbert R (TØNSBERG 1999a); Herbert R; Dotson Landing, Juneau vicinity (GEISER et al. 1998); Borough of Juneau, NW of Juneau City, bank of Cowee Cr; Juneau, N Dotson Landing; near Yakutat Airport; NW Haines; Kenai Peninsula, Resurrection Bay; Kodiak Isl, Kodiak Airport; Mitkof Isl, Wrangell-Petersburg (SHEARD 2010); Chilkoot Trail (SPRIBILLE et al. 2010); coastal Alaska (MCCUNE 2017a); Kenai Fjords NPPr, N of Exit Glacier Visitor Center; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Rinodina sibirica H. Magn. – Corticolous and lignicolous. – 20 km SW Fairbanks; Pitmegea R; Rosie Cr; Tanana R; Umiat (SHEARD 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

Rinodina sophodes → [Appendix A](#)

Rinodina stictica Sheard & Tønsberg – Corticolous on *Alnus*, *Oplopanax horridus*, *Picea sitchensis* and *Sambucus racemosa*. – Wrangell-Petersburg [sic], Coronation Isl; Mitkof Isl; Borough of Juneau, Mendenhall L; Baranof Isl, Borough of Sitka (SHEARD 2010); Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay, East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Rinodina subminuta → [Appendix A](#)

- Rinodina subpariata*** (Nyl.) Zahlbr. – Corticolous on conifers and hardwoods. – Coastal Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).
= *Rinodina degeliana* Coppins – N of Dyea; Chilkat Peninsula; Kodiak Isl, S Monashka Bay (SHEARD 2010); Chilkoot Trail (SPRIBILLE et al. 2010).
- Rinodina terrestris*** Tomin – Lignicolous on decaying wood. – Arrigetch Cr; Pitmegea R (SHEARD 2010).
= *Rinodina mucronatula* H. Magn. – Alaska (THOMSON 1997: map).
- Rinodina trevisanii*** (Hepp) Körb. – Corticolous on *Alnus incana* and corticolous on wood of log cabin. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Katmai NPPr, Malone L (MCCUNE et al. 2018); Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020).
- Rinodina turfacea*** (Wahlenb.) Körb. – Terricolous on detritus and soil in tundra and alpine heaths, also lignicolous on rotting wood. – “Alaska and the adjacent region”, no locality given (ROTHROCK 1884); isls in Behring Strait (MACOUN 1902); St Matthew Isl; St Michael (CUMMINGS 1904); Unalaska Isl, Unalaska (DEGELIUS 1937); Unalaska (MAGNUSSON 1947a,b); Mt Eielson (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapak Pt (THOMSON 1979); Barter Isl; Okpilak Valley (COPPINS 1981); Amchitka Isl (THOMSON & SOWL 1989); St Paul Isl, SW coast (SCHINDLER 1990); Central Arctic coastal plain (WALKER et al. 1991); Eagle Summit; Deadman L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Aleutian Isls, Amilia Isl; Amchitka Isl; Anaktuvuk Pass; Atqasuk; Barrow; Bering Strait; Brant Pt; Choris Peninsula; Eagle Summit; Fairbanks; Fielding L; Franklin Bluffs; Icy Cape; Imikson L; Kaolak R; Loon L; Mancha Cr; Mt Eielson; Atqasuk; Mancha Cr; Nuvagapak Pt; Sheensek R; Fairbanks; Fielding L; Kaolak R; Pitmegea R (SHEARD 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Alaska (SHEARD et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= “*Lecanora turfacea* Ach.” – Port Clarence (NYLANDER 1887; HUE 1891).
- Rinodina willeyi*** Sheard & Giralt – Corticolous on *Alnus viridis*. – Lake Clark NPPr, inlet stream of Pickerel L; Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, SW end of Pickerel L (MCCUNE et al. 2018).
- Romularia lurida*** (Ach.) Timdal – Terricolous.
= *Psora lurida* (Ach.) DC. – Eagle Summit (THOMSON & AHTI 1994).
- Ropalospora hibernica*** (P. James & Poelt) Tønsberg – Saxicolous on acidic rock near sea level. – Kodiak Isl (TØNSBERG 1993b); Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018, as aff.); Kenai Fjords NPPr, E side of Harris Bay (MCCUNE et al. 2020).
- Ropalospora lugubris*** (Sommerf.) Poelt – Saxicolous on acidic rock. – Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr

(MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); SE Alaska (MCCUNE 2017a & b); Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

= *Bacidia lugubris* (Sommerf.) Zahlbr. – Anaktuvuk Pass, on detritus and soil [sic] (MOSER et al. 1979); Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).

Ropalospora viridis (Tønsberg) Tønsberg – Corticolous on *Alnus*, *Malus fusca*, *Picea sitchensis* and *Tsuga heterophylla* twigs. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

#Roselliniella cladoniae (Anzi) Matzer & Hafellner – On decaying podetia and basal squamules of *Cladonia* spp. – White Pass (SPRIBILLE et al. 2010); Yakutat (ZHURBENKO & DILLMAN 2010); Seward Peninsula, Quartz Cr; Gates of the Arctic NPPr; Kotzebue; Great Kobuk Sand Dunes; Goldstream Valley; Fairbanks; Tanana R, Bonanza Cr (ZHURBENKO & PINO-BODAS 2017); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

#Roselliniella nephromatis (Crouan) Matzer & Hafellner – On *Nephroma bellum* and *N. parile*. – Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Alaska (FRISCH et al. 2022b).

#Roselliniella peltigericola D. Hawksw. & Miädl. – On *Peltigera aphthosa*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003).

#Roselliniopsis ventosa (Rostr.) Alstrup – On *Placopsis* sp. on coastal rock crags. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Rostania ceranisca (Nyl.) Otálora et al. – Terricolous or muscicolous in heaths or over rock outcrops. – Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

= *Collema ceraniscum* Nyl. – Seward Peninsula, Teller Rd W of Snake R; Franklin Bluffs, Sagavanirktok R (DEGELIUS 1974); Barrow (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1984: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Noatak NPr (MCCUNE et al. 2009).

Rostania occultata (Bagl.) Otálora et al. **variety not specified** – Corticolous on *Alnus* and *Populus balsamifera*. A thorough revision of Alaskan *Rostania* has not been undertaken, and some or all of these reports may be referable to *R. pallida* (see KOŠUTHOVÁ et al. 2022). – Denali NPPr, Beaverlog Lakes (STEHN et al. 2015); King Salmon; Katmai NPPr, Naknek L (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

Rostania occultata (Bagl.) Otálora et al. var. **occultata** – Corticolous on *Alnus viridis*. May be referable to *R. pallida* (see KOŠUTHOVÁ et al. 2022).

= *Collema occultatum* Bagl. var. *occultatum* – Anchorage, Alyeska, near Winner Cr Trailhead (DILLMAN et al. 2012).

Rostania pallida Košuthová et al. – Corticolous on *Alnus*. – Kenai Peninsula Borough (KOŠUTHOVÁ et al. 2022).

Rostania populina (Th.Fr.) Košuthová et al. – Corticolous on *Populus*.

= *Rostania occultata* var. *populina* (Th. Fr.) Perlmutter & Rivas Plata – Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Rufoplaca arenaria (Pers.) Arup et al. – Saxicolous on rock outcrop.

= *Caloplaca arenaria* (Pers.) Müll. Arg. – Willow L, near Alaska Hwy (TALBOT et al. 2007).

Rufoplaca scotoplaca → [Appendix A](#)

Rusavskia elegans (Link) S. Y. Kondr. & Kärnefelt – Saxicolous, usually on calcareous rock. – Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Caloplaca elegans* (Link) Th. Fr. – Unalaska Isl, Unalaska; Umnak Isl, Nikolski (DEGELIUS 1937); “Beringshavs-området med Alaska [inkl. Aleuterna]” (HASSELROT 1953); Stampede (HOWARD 1958); Chandler L (WIGGINS & MACVICAR 1958; MURRAY 1974); Wiseman Cr (HOWARD 1963; MURRAY 1974); Quigley Hill (HOWARD 1963; in addition to specimens reported as *C. murorum*, see entry under that sp. under *C. saxicola*); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson; Wonder L (WEBER & VIERECK 1967).

= *Gasparrinia elegans* (Link.) Stein – White Pass; Attu Isl, vicinity of Massacre Bay (RUDOLPH 1955).

= *Lecanora elegans* (Link) Ach. – Alaska (HUE 1891); Sitka (STIZENBERGER 1895a; 1895b).

= *Placodium elegans* (Link) DC. – Alaska (MANN 1868; TURNER 1886, author as ‘Fries’); Isls of Behring’s Strait (TUCKERMAN 1882); Chamisso Isl; Elephant Pt, in Eschscholtz Bay; Chernofski Bay (ROTHROCK 1884); St Paul Isl (MACOUN 1899); isls in Behring Strait; Alaska (MACOUN 1902); White Pass; Unalaska; St Michael (CUMMINGS 1904).

= *Xanthoria elegans* (Link) Th. Fr. – Juneau area, Shrine of St Therese; Turnagain Arm, Bird Cr Ridge; Seward; White Mts, headwaters of Sheep Cr; White Mts, the limestone ridge (KROG 1968); Amchitka Isl (WEBER et al. 1969); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Haul Rd, Finger Mtn Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Okpilak Valley (COPPINS 1981); Copper R (MURRAY et al. 1983); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Nuyakuk L; Chikuminuk L (THOMSON & DOELL 1989); St Paul Isl, S coast; Denali NP, Savage R (SCHINDLER 1990); Prudhoe Bay region (WALKER & EVERETT 1991); Chisik Isl; Duck Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH

1996); SE Alaska (O'CLAIR et al. 1996); Glacier Bay, Muir Glacier; Seward Peninsula, Cape Prince of Wales; other localities on map (LINDBLOM 1997: map); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Lake Clark NP, Tuxedni R (DILLMAN 2003); Alaska Hwy, mi 1270, Ten Mile Cr; Tetlin Junction; 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass; Yakutania Pt (SPRIBILLE et al. 2010); Elliott Hwy (GAYA et al. 2012: Supplementary Table 1); Brooks Range, Atigun Pass (KASANKE 2019).

= *Caloplaca splendens* (Darb.) Zahlbr. – Camp Eielson (WEBER & VIERECK 1967).

= *Gasparrinia splendens* (Darb.) E. D. Rudolph – Mt Mary, S end of L Peters, Brooks Range (RUDOLPH 1955).

= "*Lecanora elegans* (Link) Ach. var. *tenuis* (Wahlenb.) Ach." – Alaska (HUE 1891).

Rusavskia soarediata (Vain.) S. Y. Kondr. & Kärnefelt – Saxicolous on marble and gneiss just above tideline, sea level. – Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr, Naknek L; Lake Clark NPPr, W of Hatchet Pt; Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, S of Exit Glacier Visitor Center (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Xanthoria soarediata* (Vain.) Poelt – Saxicolous on calcareous or nutrient-enriched rocks and underhangs. – White Mts, the limestone ridge (KROG 1968); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Chauekuktuli L (THOMSON & DOELL 1989); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Eagle Summit (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Seward Peninsula, Cape Prince of Wales; 5 other localities on map (LINDBLOM 1997: map); N ridge of the Colville R at Umiat (SØCHTING 1997); Admiralty Isl, Gambier Bay (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Willow L, near Alaska Hwy; 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (MCCUNE et al. 2009).

– S –

Sagedia simoënsis (Räsänen) A. Nordin et al. – Saxicolous, in one case on top of bird perch. See also entry under *Aspicilia grisea* in Appendix A. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Aspicilia simoënsis* Räsänen – Kenai Fjords NPPr, Harding Icefield Trail, lower slope (MCCUNE et al. 2020); Alaska (MCCUNE & DI MEGLIO 2021).

#*Sagediopsis barbara* → [Appendix A](#)

#***Sagediopsis campsteriana*** (Linds.) D. Hawksw. & R. Sant. – On saxicolous *Ochrolechia* spp. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Metasphaeria tartarina* (Nyl.) Keissl. – Izembek Refuge, near Frosty Pk (TALBOT et al. 2000).

#***Sagediopsis lomnitzensis*** (Stein) Orange – On *Aspicilia* sp. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (FRISCH et al. 2022b).

Sagiolechia bairdensis Fryday – Saxicolous on small rocks and pebbles on terminal moraine. – Petersburg Borough, Baird Glacier (**type** – FRYDAY & DILLMAN 2021a & b).

Sagiolechia phaeospora Fryday & T. Sprib. – Saxicolous on small slabs of argillite rock in snowbed habitats in the low alpine zone. – Glacier Bay NP: Excursion Ridge (**type** – SPRIBILLE et al. 2020).

Sagiolechia protuberans (Ach.) A. Massal. – Saxicolous on limestone or slightly basic rocks near creek. – Galbraith L (FRYDAY 2017); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Sagiolechia rhexoblephara (Nyl.) Zahlbr. – Terricolous on detritus and moss in alpine tundra. – Mt Eielson (WEBER & VIERECK 1967); Mt Eielson (VÉZDA 1967); Chisik Isl (TALBOT et al. 1992); Eagle Summit (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Slope Mtn; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Gyalecta rhexoblephara* (Nyl.) Tuck. – Isls of Behring's Strait (TUCKERMAN 1882); isls in Behring Strait (MACOUN 1902).

= *Lecidea rhexoblephara* Nyl. – Lawrence-Insula (NYLANDER 1887).

= *Rhexophiale rhexoblephara* (Nyl.) Hellb. – North Slope, Toolik L (ZHURBENKO 2009b). Nomenclature follows SPRIBILLE et al. (2020).

Sanguineodiscus aractus → [Appendix A](#)

Santessoniella arctophila (Th. Fr.) Henssen var. **arctophila** – Muscicolous and terricolous on damp soil. HENSSEN (1997) recognized three varieties, only one in the conterminous part of North America north of Mexico; she revised the Alaskan record of WEBER (1965) to var. *arctophila*. – Mt McKinley NP (HENSSEN 1997; JØRGENSEN 2000); Denali NP (MCCUNE 2017b); Katmai NPPr, Naknek L (MCCUNE et al. 2018); Glacier Bay NP: East Arm, Glacier Bay (SPRIBILLE et al. 2020).

= *Pannaria arctophila* Th. Fr. – Mt Eielson (WEBER 1965).

= *Parmeliella arctophila* (Th. Fr.) Malme – Alaska (THOMSON 1984: map and reference to the Weber record).

Santessoniella grisea → [Appendix A](#)

Sarcogyne clavus (DC.) Kremp. – Saxicolous on pebbles in short turf below limestone crags. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Sarcogyne lapponica (Ach. ex Schaer.) K. Knudsen & Kocourk. – Saxicolous on upper beach and small pebbles on terminal moraine. – Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021a & b).

= *Acarospora lapponica* (Ach. ex Schaer.) Th. Fr. – Port Clarence (MAGNUSSON 1929). Most North American reports of this species have been referred to *Polysporina subfuscescens* by KNUDSEN & KOCOURKOVÁ (2008). The Port

Clarence specimen was not cited and its identity under current concepts is not known. The original specimen was not found in S (APRIL 2012).

= *Polysporina lapponica* (Ach. ex Schaer.) Degel. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Sarcogyne regularis Körb. – Saxicolous on calcareous rocks. – Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001).

Sarcosagium campestre (Fr.) Poetsch & Schied. – Muscicolous and on old caribou antlers. – Noatak NPr (MCCUNE et al. 2009).

= *Biatorella campestris* (Fr.) Almq. – Maunelak R (THOMSON 1997: map).

+**Sarea difformis** (Fr.) Fr. – Lignicolous on hanging wood of tip-up in muskeg hollow. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Sarea resinae → **Zythia resinae**

Schadonia fecunda (Th. Fr.) Vězda & Poelt – Muscicolous and terricolous in tundra. – Alaska (THOMSON 1997: map); Ft Wainwright (RACINE et al. 1997); 5 km W of Elson Lagoon (FRYDAY 2017); Alaska (MCCUNE 2017b).

= "*Lecidea fecunda* Fr. fil." – Port Clarence (NYLANDER 1887; HUE 1891).

= *Lopadium fecundum* Th. Fr. – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978; THOMSON 1979).

Schaereria brunnea Björk et al. – Corticolous on *Betula* and *Tsuga*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Denali NPPr, Chulitna R (DILLMAN et al. 2012).

Schaereria cinereorufa (Schaer.) Th. Fr. – Saxicolous on acidic rock. – Alaska (THOMSON 1997: map); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

= *Lecidea cinereorufa* Schaer. – Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat (THOMSON 1979).

Schaereria corticola Muhr & Tønsberg – Corticolous on *Alnus* and *Betula*. – Sixmile Cr Valley; Herbert R (TØNSBERG 1993a); N of Juneau, bank of Herbert R (GEISER et al. 1998); Alaska (MCCUNE 2017a & b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Schaereria dolodes (Nyl. ex Hasse) Schmull & T. Sprib. – Muscicolous on *Andreaea* over rock. – Katmai NPPr, Malone L (MCCUNE et al. 2018).

Schaereria endocyanea (Stirton) Hertel & Gotth. Schneider – Saxicolous. – Katmai NPPr, Mirror L (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, alpine lake system on Harris Peninsula (MCCUNE et al. 2020).

Schaereria fuscocinerea (Nyl.) Clauzade & Cl. Roux – Saxicolous on siliceous rock. – Alaska (BRODO et al. 2001); Mt Distin; Cottonwood; Kuzitrin L, summit of Mt Boyan (HERTEL & ANDREEV 2003); Katmai NPPr, Hammersly L; Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Slope Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr, Bear Glacier nunatak (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
? = *Lecidea tenebrosa* f. *subsparsa* Nyl. – Lawrence-Insula (NYLANDER 1887).

= *Schaereria tenebrosa* (Flot.) Hertel & Poelt – Thompson Pass (THOMSON & AHTI 1994); St Lawrence Isl (THOMSON 1997: map).

Schaereria parasemella (Nyl.) Lumbsch – Lignicolous or muscicolous (in Alaska). Sometimes thought to be a ‘lichenicolous’ fungus, this species only establishes on other thalli and quickly forms an independent thallus. – Kenai Peninsula, Russian R (DILLMAN et al. 2012).

= *Lecidea parasemella* Nyl. – Okpilak Valley (COPPINS 1981); Okpilak Valley (THOMSON 1997: map).

Schaereria tenebrosa → ***Schaereria fuscocinerea***

#*Sclerococcum aeruginosum* (Holien & Ihlen) Ertz & Diederich – On *Biatora efflorescens* and once on *Japewia subaurifera* growing corticolous on *Alnus crispa*.

= *Dactylospora aeruginosa* Holien & Ihlen – Kodiak Isl Borough, Near Isl (IHLEN et al. 2004a).

#*Sclerococcum ahtii* (Zhurb. & Pino-Bodas) Ertz & Diederich – On *Cladonia* spp., most finds on *C. rangiferina*.

= *Dactylospora ahtii* Zhurb. & Pino-Bodas – Alaska, Kodiak Archipelago, Chirikof Isl (**type**); Seward Peninsula, 7 km ESE of Nome; Mause Cr; Kotzebue; Kobuk Valley Wilderness, Waring Mts, Aleutian Isls, Carlisle Isl; Aleutian Isls, NW corner of Amalia Isl; Aleutian Isls, Adak Isl, N side of Finger Bay; Port Moller (PINO-BODAS et al. 2017a).

#*Sclerococcum amygdalariae* (Triebel) Ertz & Diederich – On *Amygdalaria panaeola*.

= *Dactylospora amygdalariae* Triebel – Denali NP, NW slope to summit of Mt Eielson (Copper Mtn) (TRIEBEL 1989); Denali Hwy, ca. 72 km W of Paxson; Brooks Range, Anaktuvuk Pass (TRIEBEL et al. 1991); Seward Peninsula, Bering Land Bridge NPr (ZHURBENKO 2009b); White Pass (SPRIBILLE et al. 2010).

#*Sclerococcum attendendum* → **Appendix A**

#*Sclerococcum boreale* (Holien & Ihlen) Ertz & Diederich – On *Mycoblastus affinis*, *M. sanguinarius* and *Pertusaria subambigens* on *Alnus*, *Picea* and *Tsuga*. – Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Dactylospora borealis* Holien & Ihlen – Chilkat Peninsula, at Mt Riley Trail trailhead (IHLEN et al. 2004a); Chilkoot Trail (SPRIBILLE et al. 2010).

#*Sclerococcum crassitunicatum* Zhurb. et al. – On *Cladonia* spp. – Fairbanks area, Skyline Ridge (**type** – ZHURBENKO & PINO-BODAS 2017).

#*Sclerococcum deminutum* (Th. Fr.) Ertz & Diederich – On *Biatora* sp., *Protopannaria pezizoides*, *Ochrolechia* sp., *Rinodina turfacea*, *Fuscopannaria viridescens*, *Pilophorus dovrensis* and *Solorina bispora*. – Glacier Bay NP: Dundas Bay, West Arm (SPRIBILLE et al. 2020).

= *Dactylospora deminuta* (Th. Fr.) Triebel – Barter Isl (ZHURBENKO et al. 1995); Barrow (FRYDAY 2004a); Barrow (ZHURBENKO 2009a); Alaska Range, Denali NP Wilderness, headwaters of Hinnes Cr; Kobuk Valley Wilderness (ZHURBENKO 2009b, as s. lat.); Chilkoot Trail (SPRIBILLE et al. 2010).

#*Sclerococcum fissurinae* Pérez-Ort. – On *Fissurina insidiosa* in *Alnus*-dominated riparian areas. – Glacier Bay NP: Dundas Bay; Gustavus (**type** – SPRIBILLE et al. 2020).

- #**Sclerococcum frigidum** (Hafellner) Ertz & Diederich – On thallus of *Brigantiaea fuscolutea*. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Dactylospora frigida* Hafellner – Brooks Range, Atigun Pass (DILLMAN et al. 2012).
- #**Sclerococcum gelidarium** Etayo & F. Berger – On *Placopsis* sp., saxicolous. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- #**Sclerococcum lobariellum** (Nyl.) Ertz & Diederich – On *Lobaria pulmonaria*. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
= *Dactylospora lobariella* (Nyl.) Hafellner – Kenai Peninsula, near Chugach NF (ZHURBENKO 2009a); Chilkoot Trail (SPRIBILLE et al. 2010).
- #**Sclerococcum parasiticum** (Flörke) Ertz & Diederich – On *Lepra subvelata*, *Mycoblastus sanguinarius*, *Ochrolechia* sp. and *Pilophorus acicularis* over *Cupressus*, *Picea sitchensis* and *Pinus*. – Kenai Fjords NPPr, Verdant Cove, N side at shoreline (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).
= *Dactylospora parasitica* (Flörke) Zopf – Kenai Fjords NP (TØNSBERG & PRINTZEN 2018).
- #*Sclerococcum parasitulum* → *Sclerococcum attendendum* in [Appendix A](#)
- #**Sclerococcum protothallinum** (Anzi) Ertz & Diederich – On biofilm adjacent to *Protopannaria pezizoides*.
= *Dactylospora protothallina* (Anzi) Hafellner – White Pass (SPRIBILLE et al. 2010).
- #**Sclerococcum purpurascens** (Triebe) Ertz & Diederich – On cephalodia of *Amygdalaria pelobotryon*. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Dactylospora purpurascens* Triebe – White Pass (SPRIBILLE et al. 2010).
- #**Sclerococcum saxatile** (Schaer.) Ertz & Diederich – On *Pertusaria* sp.
= *Dactylospora saxatilis* (Schaer.) Hafellner – Denali NP, NW slope to the summit of Mt Eielson, Copper Mtn (HAFELLNER 1979); Alaska (ALSTRUP & HAWKSWORTH 1990).
- #**Sclerococcum simplex** D. Hawksw. – On *Ochrolechia oregonensis* and *Lepra dactylina*. – Chilkoot Trail (SPRIBILLE et al. 2010).
- #**Sclerococcum urceolatum** (Th. Fr.) Ertz & Diederich – On *Parmelia* sp. and *Protopannaria pezizoides*, terricolous or muscicolous. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= *Dactylospora urceolata* (Th. Fr.) Arnold – White Pass (SPRIBILLE et al. 2010).
- Sclerophora amabilis** (Tibell) Tibell – Corticolous in deep fissures of old *Populus*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).
- Sclerophora coniophaea** (Norman) J. Mattsson & Middelb. – Corticolous on *Picea glauca* base. – Lake Clark NPPr, Portage L; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018).
- Scoliosporum chlorococcum** (Graewe ex Stenh.) Vězda – Corticolous on *Alnus*, *Oplopanax horridus* and *Picea sitchensis*. – Chisik Isl (TALBOT et al. 1992); Katmai NPPr, Malone L; Katmai NPPr, Brooks Camp (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

- #**Scoliciosporum intrusum** (Th. Fr.) Hafellner – On *Lecanora* sp., on vertical sheltered rock with overhanging vegetation. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Scoliciosporum umbrinum** (Ach.) Arnold – Saxicolous, on caribou antlers, and corticolous on conifers. – Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Petersburg Borough, Patterson Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).
- Scutula effusa** (Auersw. ex Rabenh.) Kistenich et al. – Corticolous on *Cupressus nootkatensis* and *Populus balsamifera*. – Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
= *Bacidia auerswaldii* (Hepp ex Stizenb.) Mig. – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b).
- #**Scutula epiblastematica** (Wallr.) Rehm – On *Peltigera collina* and *P. malacea*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Kenai Peninsula, near Chugach NF (ZHURBENKO 2009a); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
- #**Scutula heeri** (Hepp) Trevis. – On *Peltigera collina*. – Chilkoot Trail (SPRIBILLE et al. 2010).
- #**Scutula miliaris** (Wallr.) Trevis. – On *Peltigera aphthosa* aggr. – Chilkoot Trail (SPRIBILLE et al. 2010).
- #**Scutula stereocaulorum** (Anzi) Körb. – On *Stereocaulon* spp. – Interior Alaska (LAURSEN & SEPPELT 2009).
- #**Scutula tuberculosa** (Th. Fr.) Rehm – On *Solorina bispora*. – North Slope, Franklin Bluffs (ZHURBENKO 2009b).
- Scytinium aquale** (Arnold) Otálora et al. – Saxicolous on shaded boulder in woods. – Kenai Fjords NPPr, N of Exit Glacier Visitor Center (MCCUNE et al. 2020).
- Scytinium californicum** (Tuck.) Otálora et al. – Terricolous over mossy rock.
= *Leptogium californicum* Tuck. – Prince of Wales Isl (SIEK 1964); White Mts, limestone ridge between Beaver Cr and Fossil Cr (KROG 1968, !Sierk); top of Sunshine Cove, Auke Bay (GEISER et al. 1998, as s. lat.); Chugach NF (DERR 2010).
- Scytinium callopismum** (A. Massal.) Otálora et al. – Saxicolous on limestone. – Angmakrok Mtn (FRYDAY 2017); Glacier Bay NP: Glacier Bay, West Arm (SPRIBILLE et al. 2020).
= *Collema callopismum* A. Massal. – Noatak NPr (MCCUNE et al. 2009).
- Scytinium cellulosum** (P. M. Jørg. & Tønsberg) Otálora et al. – Corticolous on *Populus* and dead *Alnus*. – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, N of Exit Glacier Visitor Center (MCCUNE et al. 2020); Gustavus (Spribille et al. 2020).
= *Leptogium cellulosum* P. M. Jørg. & Tønsberg – Kodiak Isl (JØRGENSEN & TØNSBERG 1999); Chilkoot Trail (SPRIBILLE et al. 2010).
- Scytinium gelatinosum** (With.) Otálora et al. – Terricolous. – Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al.

2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Naknek L; Lake Clark NPPr (McCUNE et al. 2018); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Leptogium scotinum* (Ach.) Fr. – Port Clarence (NYLANDER 1887; HUE 1890).

= *Leptogium sinuatum* (Huds.) A. Massal. – Along Kaolak R (SIERK 1964);

White Mts, Fossil Cr (KROG 1968: “reported by ALMQUIST 1887 as *L.*

scotinum”); S of Wainwright, Kaolak R (THOMSON 1979); Alaska (THOMSON

1984: map).

Scytinium imbricatum (P. M. Jørg.) Otálora et al. – Terricolous or on bryophytes over rock outcrops. – Denali NPPr, Igloo Canyon (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr, W shore of Beauty Bay (McCUNE et al. 2020).

= *Leptogium imbricatum* P. M. Jørg. – Wrangell-St. Elias NPPr, 10 km NNE McCarthy, Bonanza Copper mine (DILLMAN et al. 2012); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Scytinium intermedium (Arnold) Otálora et al. – Saxicolous, muscicolous and terricolous. – Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr, N end of Harris Bay, near opening to Northwestern Lagoon (McCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Leptogium intermedium* (Arnold) Arnold – Chugach NF (DERR 2010: 206).

= *Leptogium minutissimum* auct., non (Flörke) Fr. – Attu Isl (SIERK 1964); Attu Isl, Casco Pt (KROG 1968). Old records of *Scytinium minutissimum* mostly apply to *S. intermedium*, though the type is *S. subtile* (JØRGENSEN 1994); the Alaskan material has not been revised.

Scytinium lichenoides (L.) Otálora et al. – Muscicolous on rock face, also sometimes terricolous, especially in base-rich areas. – Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NP (TØNSBERG & PRINTZEN 2018); Kenai Fjords NPPr, Harding Icefield Trail, lower slope; Kenai Fjords NPPr, northwest Lagoon Beach FIA plot; Kenai Fjords NPPr, Verdant Cove, N side at shoreline; Kenai Fjords NPPr, W shore of Beauty Bay (McCUNE et al. 2020, as s. lat.); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Leptogium lichenoides* (L.) Zahlbr. – Pitmegea R (SIERK 1964); Mt Eielson (WEBER & VIERECK 1967); White Mts, the limestone ridge (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Franklin Bluffs on the Sagavanirktok R; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); S Kuiu and S Prince of Wales Isls (GEISER et al. 1994a); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); 15 Mile Isl, Stikine R; Naukati Bay, Prince of Wales Isl (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; McCUNE et al. 2009); Teck Isl (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).

= *Leptogium lacerum* (Sw.) S. F. Gray – Heceta Isl, Port Alice; Prince of Wales Isl, Deweyville (HERRE 1919).

Scytinium palmatum (Huds.) Gray – Terricolous or muscicolous on shallow soils over rock.

= *Leptogium palmatum* (Huds.) Mont. – Coronation Isl, Egg Harbor; East Sound, Kashevarof Group; Howkan Bay ('sterile and non-typical') (HERRE 1919); How Kan Isl (MAGNUSSON 1932); How Kan (SIERK 1964); Coronation Isl, Egg Harbour; E Isl in Kashevarof Group; How Kan Bay (KROG 1968); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979); Alaska (THOMSON 1984: map); Chilkoot Trail; Skagway area, Yakutania (SPRIBILLE et al. 2010).

= *Leptogium corniculatum* (Hoffm.) Minks – SE Alaska (O'CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004).

Scytinium parculum (Nyl.) Otálora et al. – Saxicolous on calcareous rock.

= *Leptogium parculum* Nyl. – Port Clarence (**type** – NYLANDER 1885b, NYLANDER 1887); Port Clarence (SIERK 1964); Seward Peninsula, Port Clarence (KROG 1968); Port Clarence (THOMSON 1984: map).

Scytinium pulvinatum (Hoffm.) Otálora et al. – Mosses over rock in tundra.

SPRIBILLE et al. (2010, p. 463) listed a taxon close to *L. pulvinatum* as *Leptogium* sp. 29336. – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

= "*Leptogium lacerum pulvinatum* (Hoffm.) Nyl." – Howkan Bay (HERRE 1919). = *Leptogium lichenoides* var. *pulvinatum* (Hoffm.) Zahlbr. – How Kan Isl (MAGNUSSON 1932); Port Heiden (HOWARD 1958).

Scytinium rivale (Tuck.) Otálora et al. – Saxicolous on rock in seep. – Katmai NPPr, Mirror L (MCCUNE et al. 2018).

Scytinium schraderi (Bernh.) Otálora et al. – Terricolous on soil over limestone. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Leptogium schraderi* (Bernh.) Nyl. – Noatak NPr (MCCUNE et al. 2009).

Scytinium subtile (Schrad.) Otálora et al. – Terricolous and corticolous on *Salix*; record from "*Populus* along river edge" (GEISER et al. 1998) may apply to another species. – Katmai NPPr, Naknek L (MCCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

= *Leptogium subtile* (Schrad.) Torss. – 15 Mile Isl, Stikine R (GEISER et al. 1998).

Scytinium tacomae (P. M. Jørg. & Tønsberg) McCune – Corticolous on *Populus* sp.

= *Leptogium tacomae* P. M. Jørg. & Tønsberg – Kodiak Isl, N of Kodiak Airport, S of and near Buskin R (DILLMAN et al. 2012); S Alaska (ROOT et al. 2014).

Scytinium tenuissimum (Dicks.) Otálora et al. – Terricolous on sandy or clay soil; one record from *Populus* bark (GEISER et al. 1998) may refer to *S. teretiusculum* and should be checked. – Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Gustavus (SPRIBILLE et al. 2020).

= *Leptogium tenuissimum* (Dicks.) Körb. – Isls of Behring's Strait (TUCKERMAN 1882; MACOUN 1902); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R;

Prudhoe Bay; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); North Slope localities (THOMSON 1984: map); Unuk Valley (GEISER et al. 1994a: map); Unuk Valley; Kadin Isl at S end of Kupreanof Isl (GEISER et al. 1998).

Scytinium teretiusculum (Wallr.) Otálora et al. – Corticolous on *Picea* and *Populus*, also saxicolous on granite rocks. – Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd; Kenai Fjords NPPr, N of Exit Glacier Visitor Center (McCUNE et al. 2020).
= *Leptogium teretiusculum* (Wallr.) Arnold – SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33; Fielding L (THOMSON & AHTI 1994); Stikine R (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010).

Segestria leptalea → **Porina leptalea**

Segestria mammosa → **Porina mammosa**

Seiophora contortuplicata (Ach.) Frödén – Saxicolous on carbonate rocks on a mountain slope among tundra. – Brooks Range, Atigun Canyon (ZHURBENKO 2009b).

Siphula ceratites (Wahlenb.) Fr. – Terricolous or loosely saxicolous in wet areas. – Lawrence-Insula (NYLANDER 1885a, under *Lecidea suballinita*; NYLANDER 1887); Lawrence ins. (HUE 1890); Attu Isl (MACOUN 1902); Alaska (ARWIDSSON 1926: map); Attu Isl (DEGELIUS 1937); PWS, Thum Bay (EYERDAM 1949); Attu Isl, Siddens Valley; Kvichak Moraine (HOWARD 1958); Circular Marsh near Barrow (THOMSON 1960); St Matthew Isl (KROG 1962); Ogotoruk Cr drainage (JOHNSON et al. 1966); Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn; Nunivak Isl, Nash Harbour; Nunivak Isl, Roberts Mtn (KROG 1968); Amchitka Isl (WEBER et al. 1969); Attu Isl (KROG 1970); Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Amchitka Isl, Long Shot (THOMSON & SOWL 1989); SE Alaska (GEISER et al. 1994a: map); Yakutat Forelands (SHEPHARD 1995); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (McCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Dundas Bay (RESL et al. 2015, supplementary material); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Siphula dactyliza Nyl. – Saxicolous on quartzitic rock. – Lawrence-Insula (**type** – NYLANDER 1885a; NYLANDER 1887; HUE 1890); St Paul Isl (DEGELIUS 1937); St Paul Isl (SANTESSON 1967); St Lawrence Isl (KROG 1968). According to KANTVILAS (2002), a *Stereocaulon* sp., but we have viewed the type and have ruled this out.

#Skyttea caesii Diederich & Etayo – On *Mycoblastus caesius*. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

#Skyttea tavaresiae R. Sant. et al. ('tavaresae') – On *Pyrrhospora quernea*. – Chilkoot Trail (SPRIBILLE et al. 2010, incorrectly given as White Pass).

Solorina bispora Nyl. – Terricolous on base-enriched soils. – S of Wainwright, Kaolak R (THOMSON 1960); Mt Eielson; Camp Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Juneau area, Granite Basin; Richardson Hwy,

mi 24; Denali Hwy, mi 0–28; Denali NP, Toklat; White Mts, Beaver Cr; White Mts, Fossil Cr; Steese Hwy, Eagle Summit; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Fish Cr drilling site (LAWSON et al. 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Mt Roberts and Granite Basin, Juneau area (GEISER et al. 1994a); Eagle Summit (THOMSON & AHTI 1994); Imnavait Cr (WALKER & WALKER 1996); Adak Isl (TALBOT et al. 1997); Mt Roberts, Juneau area; Granite Basin, Juneau area (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Franklin Bluffs (WALKER et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Riverside Lodge Airstrip (TALBOT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Solorina crocea (L.) Ach. – Terricolous in tundra, and alpine heath, often in areas of late-lying snow. – Shores of Behring's Strait (TUCKERMAN 1882); ins. Freti Behringii (HUE 1890); St Paul Isl (MACOUN 1899); St Paul Isl; shores of Behring Strait (MACOUN 1902); Disenchantment Bay; Pt Gustavus; Orca; Pinnacle Rock, Chicagof Bay; St Matthew Isl (CUMMINGS 1904); Alaska (HADWEN & PALMER 1922); Unimak Isl; Carlisle Isl; Unalaska Isl; Alaska Peninsula (HEDRICK 1936); Kenai Peninsula, Seward; Unalaska Isl, Unalaska; Rat Isl; Kiska Isl, N side (DEGELIUS 1937); King Cove, Alaska Peninsula (THOMSON 1950a); Barrow (SCHOLANDER et al. 1952); “Alaska med Aleuterna och Pribiloföarna” (HASSELROT 1953); Juneau icefield nunatak (HEUSSER 1954); near Juneau, Taku Glacier valley (HEUSSER et al. 1954); Attu Isl, Siddens Valley, Engineers Canyon (HOWARD 1958); Ogotoruk Cr drainage; St Matthew Isl; Porcupine Dome; Mt Harper; N shore of Turnagain Arm, Girdwood (KROG 1962); Denali Hwy by Wonder L (HOWARD 1963); mtn W of Wiseman (HOWARD 1963; MURRAY 1974); Mendenhall Glacier; Juneau Ice Field (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Turnagain Arm, Bird Cr Ridge; Windy Pt, Turnagain Arm; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Denali Hwy, mi 0–28, mi 70; Denali NP, Savage R; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Nunivak Isl, Nash Harbour; Nunivak Isl, Roberts Mtn; Seward Peninsula, King Mtn (KROG 1968); central Alaska Range (REGER & PÉWÉ 1969); Anaktuvuk Pass (NASH 1977); Barrow (WEBBER 1978); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Denali NP, Savage R (SCHINDLER 1987); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); Chitka Ridge (THOMSON & SOWL 1989); Imnavait Cr (WALKER et al. 1989); Chisik Isl

(TALBOT et al. 1992); Mt Alyeska; Eagle Summit; Mt Fairplay; terminal moraine of Valdez Glacier; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

Solorina octospora Arnold – Terricolous or muscicolous in moist tundra, where base-rich. – Mt Eielson; Camp Eielson (WEBER & VIERECK 1967); Talkeetna Mts, Mabel Mine; Denali Hwy, mi 28; Denali Hwy, mi 70; Kotzebue (KROG 1968); Fish Cr drilling site (LAWSON et al. 1978); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R (THOMSON 1979); Alaska (THOMSON 1984: map); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); White Pass (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Solorina saccata (L.) Ach. – Terricolous on peaty tundra soils and muscicolous on rock ledges, usually where base-enriched. – Shores of Behring's Strait (TUCKERMAN 1882); shores of Behring Strait (MACOUN 1902); Ogotoruk Cr drainage (KROG 1962); Denali NP, E bank of Riley Cr (HOWARD 1963); Wiseman, 1 mi down Nolan Cr Rd (HOWARD 1963; MURRAY 1974); Ogotoruk Cr drainage (JOHNSON et al. 1966); Talkeetna Mts, Puritan Cr; Denali NP, Toklat; Junction of Beaver Cr and Fossil Cr; White Mts, limestone ridge between Fossil Cr and Beaver Cr; Seward Peninsula, King Mtn (KROG 1968); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

- Solorina spongiosa*** (Ach.) Anzi – Terricolous on calcareous soil. – Port Clarence (NYLANDER 1887; HUE 1890); Alaska (HUE 1911); Mt Eielson (WEBER & VIERECK 1967); Yakutat Bay, Disenchantment Bay; Denali NP, Mt Eielson; Seward Peninsula, Port Clarence (KROG 1968); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Fish Cr drilling site (LAWSON et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Alaska (THOMSON 1984: map); Yakutat Bay (GEISER et al. 1994a); Sheep Mtn (THOMSON & AHTI 1994); Yakutat Bay (GEISER et al. 1998); Izembek Lagoon (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).
= *Solorina saccata* var. *spongiosa* (Ach.) Nyl. – Shores of Behring's Strait (TUCKERMAN 1882); isls in Behring Strait (MACOUN 1902); Disenchantment Bay (CUMMINGS 1904).
- #***Sphaerellothecium abditum*** Triebel – On *Lecidea paupercula*. – White Pass (SPRIBILLE et al. 2010).
- #***Sphaerellothecium araneosum*** (Rehm ex Arnold) Zopf – On *Ochrolechia* spp. and in one case on *Lepa dactylina*. – Barrow; Barter Isl; Ft Richardson (ZHURBENKO et al. 1995); Interior Alaska (LAURSEN & SEPPELT 2009); White Pass (SPRIBILLE et al. 2010); 9 km ESE of Toolik L (ZHURBENKO 2015); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
- #***Sphaerellothecium cladoniae*** (Alstrup & Zhurb.) Hafellner – On *Cladonia pocillum*, *C. symphylicarpa* (psoromic acid strain) and members of the *Cladonia coccifera* aggr. – White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr; Denali Hwy (ZHURBENKO & PINO-BODAS 2017).
= *Sphaerellothecium araneosum* var. *cladoniae* Alstrup & Zhurb. – 139 km E of Kotzebue, Kobuk Valley Wilderness; coast of Norton Sound, Newton Pk; Toolik L; Deadhorse (ZHURBENKO & ALSTRUP 2004); North Slope, Franklin Bluffs; North Slope, Sagwon; North Slope, Atigun Canyon; Kobuk Valley Wilderness (ZHURBENKO 2009a).
- #***Sphaerellothecium cladonicola*** E. S. Hansen & Alstrup – On *Cladonia* (subgen. *Cladina*) species. – Alaska (HANSEN & ALSTRUP 1995); White Pass (SPRIBILLE et al. 2010); Seward Peninsula, Guy Rowe Cr; Great Kobuk Sand Dunes; Wrangell-St Elias NPPr, Chititu Ridge (ZHURBENKO & PINO-BODAS 2017).
- #***Sphaerellothecium contextum*** Triebel – On *Protoparmelia badia*, saxicolous. – Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).
- #***Sphaerellothecium minutum*** Hafellner – On *Sphaerophorus fragilis*. – Interior Alaska (LAURSEN & SEPPELT 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).
- #***Sphaerellothecium parmeliae*** Diederich & Etayo – On *Parmelia omphalodes* (thallus). – Dalton Hwy, Finger Mtn (DILLMAN et al. 2012).
- #***Sphaerellothecium reticulatum*** (Zopf) Etayo – On *Parmelia* spp. (thallus).
= *Echinothecium reticulatum* Zopf – Brooks Range, Endicott Mtns, Midnight Dome; Denali, Alaska Range, Panorama Mtn (DILLMAN et al. 2012).
- #***Sphaerellothecium stereocaulorum*** Zhurb. & Triebel – On *Stereocaulon groenlandicum*. – Denali NP, headwaters of Hinnes Cr (ZHURBENKO 2010).

- #**Sphaerellothecium thamnoliae** Zhurb. var. **thamnoliae** – On *Thamnolia*. – Kobuk Valley Wilderness, junction of Kobuk R and Kavet Cr (**type** – ZHURBENKO 2012; ZHURBENKO 2015); Great Kobuk Sand Dunes (ZHURBENKO 2012); Juneau Icefield, summit of mtn above Taku Glacier (ZHURBENKO & OHMURA 2018).
- #**Sphaeropezia intermedia** (Diederich et al.) Baloch & Wedin – On *Thamnolia*. – Alaska (ZHURBENKO et al. 2019).
= *Odontotrema intermedium* Diederich et al. – Kobuk Valley Wilderness (DIEDERICH et al. 2002).
- #**Sphaeropezia melaneliae** (Diederich & Zhurb.) Baloch & Wedin – On *Melanelia hepaticum*.
= *Odontotrema melaneliae* Diederich & Zhurb. – Near headwaters of Hinne Cr (DIEDERICH et al. 2002).
- #**Sphaeropezia ochrolechia** (Diederich et al.) Baloch & Wedin – On *Ochrolechia* sp.
= *Odontotrema ochrolechia* Diederich et al. – Near headwaters of Hinne Cr (DIEDERICH et al. 2002).
- #**Sphaeropezia thamnoliae** (Zhurb. et al.) Baloch & Wedin – On *Thamnolia*.
= *Odontotrema thamnoliae* Zhurb. et al. – Seward Peninsula, 7 km NE of Nome (ZHURBENKO 2012).
- Sphaerophorus fragilis** (L.) Pers. – Saxicolous and terricolous on thin soil over rock, mostly in alpine and arctic tundra. – Alaska (MANN 1868; TURNER 1886, as *Sphaerophoron fragile*, an orthographic variant); Pribilof Isls (MACOUN 1899, as *Sphaerophorum*); Summit of White Pass; St Matthew Isl; Port Clarence; St Michael Isl; Cape Nome (CUMMINGS 1904, as *Sphaerophoron fragile*); Unalaska Isl; Amlia Isl; Kodiak Isl (HEDRICK 1936); Unalaska Isl, Unalaska; Adak Isl, Chapel Cove (DEGELIUS 1937); Amlia Isl; Unalaska Isl (THOMSON 1950a); Juneau icefield nunatak (HEUSSER 1954); Circular Marsh near Barrow (THOMSON 1960); Brooks Range, L Peters; Ogotoruk Cr drainage, S of Ogotoruk Cr; Mt Harper; Steese Hwy, Eagle Summit (KROG 1962); Quigley Hill; hill E of rd to Kantishna (HOWARD 1963); Wiseman, mtn across Koyukuk R; mtn W of Wiseman (HOWARD 1963; MURRAY 1974); Mendenhall Glacier; Juneau Ice Field (McCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Alaska Range, Dry Cr (VIERECK 1967); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Independence Mine; Talkeetna Mts, Government Pk; Talkeetna Mts, Puritan Cr; Eagle R Valley; Anchorage, Rabbit Cr Rd; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Skilak L; Richardson Hwy, mi 24; Denali Hwy, mi 0–37, mi 70; Denali NP, Savage R; Denali NP, Polychrome Pass; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Romanzoff Mts; St Paul Isl (OHLSSON 1974, chemotype II, sphaerophorin); vicinity of Juneau, Mt Roberts trail; White Pass, NE of Skagway; Mt Eielson, Denali NP; Upper Salcha R; Cape Nome; Okpilak L near Mt Michelson (OHLSSON 1974, chemotype III, sphaerophorin and squamatic

acid); Unalaska Isl (OHLSSON 1974, chemotype IV, sphaerophorin, squamatic and hypothamnolic acid); Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Circular Marsh near Barrow; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Arey Cr; Okpilak Valley; Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Denali NP, slope N of Station Primrose (SCHINDLER 1987); Tikchik L; Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); St Paul Isl (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Eagle Summit; Mt Fairplay; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Alaska (MCMULLIN 2018: map); Kenai Fjords NPPr, NPS weather station, McArthur Ridge (MCCUNE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

Sphaerophorus globosus (Huds.) Vain. – Only records from tundra, rock and heath. – Unalaska Isl, Unalaska; Atka Isl; Adak Isl, Chapel Cove; Amchitka Isl; Semichi Isls, Alaïd; Attu Isl; St Paul Isl (DEGELIUS 1937); Kotzebue (HANSON 1950); Naknek, Alaska Peninsula (HERRE 1950a); Atka Isl; Unalaska Isl; Raspberry Isl (THOMSON 1950a); Anaktuvuk Pass (LLANO 1951; MURRAY 1974); S of Wainwright, Kaolak R (THOMSON 1960); northern foothills of Brooks Range, Umiat (KROG 1962; MURRAY 1974); Pt Barrow; Brooks Range, L Peters; Ogotoruk Cr; Ogotoruk Cr drainage; St Matthew Isl; Hooper Bay; Mt Harper; Porcupine Dome; halfway up Tracy Arm, on W side (KROG 1962); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Kodiak Isl, mtn top 6 km NNW of “Amara Lake” (KROG 1969); Amchitka Isl (WEBER et al. 1969); Russian America; Windham Bay; vicinity of Juneau, Herbert Glacier; Montana Cr Rd; Mt Juneau; Mt Roberts trail; Auke L; Skagway; Pt Gustavus; Yakutat Bay; Cordova Sheridan Glacier; PWS, Knight Isl, Thum Bay; Neknek; Steese Hwy, Eagle Pass; Mt Eielson, Denali NP; St Michael; Teller; between Port Clarence and Teller; E of Cape Lisburne, Pitmegea R; E of Wainwright; Pt Barrow; Elson Lagoon; Barrow; E of Colville R, 15 mi from Delta; Wiseman; Umiat; E of Okpilak L; Okpilak L; ENE of Okpilak L; Jago R, S of Jago L; 10 mi N of Jago L on Jago R; Jago R terrace; 1.2 mi N of Jago L; Jago L; Romanzoff Mts; St Lawrence Isl; Hall Isl; St George Isl; Aleutian Isl; Unalaska; Kagamil Isl; Atka Isl; Great Sitkin Isl; Amchitka Isl; Attu Isl (OHLSSON 1974, chemotype I, sphaerophorin only); Ketchikan; PWS, Knight Isl, Thum Bay; Kodiak Isl; St George Isl; St Paul Isl; Attu Isl (OHLSSON

1974, chemotype II, sphaerophorin and thamnolic acid); Wrangel; Baranoff Isl, Sitka; Montana Cr Rd; Juneau; Skagway; Pt Gustavus; Yakutat Bay; Orca; Hinchinbrook Isl; PWS, Knight Isl, Thum Bay; Mt Eielson, Denali NP; Port Clarence; E of Okpilak L; Jago R, S of Jago L; W side of Jago R; St Lawrence Isl; Diomed Isl; St George Isl; St Paul Isl; St Matthew Isl; Hall Isl; Nunivak Isl; Aleutian Isl; Unalaska; Amlia Isl; Atka Isl; Tanaga Isl; Amchitaka Isl; Attu Isl (OHLSSON 1974, chemotype III: sphaerophorin and squamatic acid); Cordova Sheridan Glacier; PWS, Knight Isl, Thum Bay; Bering Straits (OHLSSON 1974, chemotype IV, sphaerophorin and hypothamnolic acid); Orca (OHLSSON 1974, chemotype V, sphaerophorin, squamatic and hypothamnolic acids); PWS, Knight Isl, Thum Bay (OHLSSON 1974, chemotype VI, sphaerophorin, squamatic and thamnolic acids); Prudhoe Bay (MURRAY & MURRAY 1975a, b, 1978); Fish Cr drilling site (LAWSON et al. 1978); Barrow (WEBBER 1978); Haul Rd, Coastal Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map; southern coastal records usually apply to either *S. tuckermannii* or *S. venerabilis*); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Nishlik L (THOMSON & DOELL 1989); Amchitka Isl (THOMSON & SOWL 1989); Imnavait Cr (WALKER et al. 1989); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); Eagle Summit; Mt Fairplay; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Imnavait Cr (HAHN et al. 1996); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001, coastal records refer to *S. tuckermannii* or *S. venerabilis*); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chilkoot Trail (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Unalaska Isl (TALBOT et al. 2010b); S Alaska (ROOT et al. 2014: 'includes *S. tuckermannii* and *S. venerabilis*'); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP; Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021, as s. lat.).

= *Sphaerophorus globosus* var. *globosus* – Juneau area, Loop Rd; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Eagle R Valley; Anchorage, Rabbit Cr Rd; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Ingram Cr; Seward; W of Seward, Marathon Mtn; Homer; Richardson Hwy, mi 9, mi 24; Denali Hwy, mi 0–37; Denali NP, Savage R; White Mts, Lion Pk; White Mts, headwaters of

Sheep Cr; White Mts, Cache Mtn; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Eagle Summit; Nunivak Isl, Nash Harbour; Nunivak Isl, Roberts Mtn; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Lake where the geese don't fly; Seward Peninsula, King Mtn; Kotzebue (KROG 1968); Ft Wainwright (RACINE et al. 1997).

= *Sphaerophorus coralloides* auct. (including as '*Sphaerophoron*') – Records from tundra, shallow soil over rock and open heath. – Kotzebue's Sound (BABINGTON 1851); Russian America, 1837 (LAUDER LINDSAY 1861); Alaska (MANN 1868; TURNER 1886); Port Clarence (ALMQUIST 1887); Lawrence-Insula; Port Clarence (NYLANDER 1887); Port Clarence (HUE 1890); Collinson Pt; Port Clarence Bay; Teller (MERRILL 1924b, as "*Sphaerophorus*"); Unalaska Isl; Amlia Isl; Atka Isl (HEDRICK 1936); Alaska (PALMER & ROUSE 1945).

= "*Stereocaulon coralloides* Fr." – St Paul Isl (MACOUN 1899); Unalaska Isl (MACOUN 1902); Unalaska; St Paul Isl (RIDDLE 1910); Alaska (PALMER & ROUSE 1945, on tundra); Juneau icefield nunatak (HEUSSER 1954).

= *Sphaerophorus globiferus* (L.) DC. – Records from tundra, shallow soil over rock and open heath. – St Matthew's Isl in Behring Sea; Port Mulgrave; Little Koniushii Isl, Shumagin Group (ROTHROCK 1884); PWS (CUMMINGS 1892b, "on earth"); Pribilof Isls (MACOUN 1899, as *Sphaerophorum*); Loring; Juneau, Salmon Cr; St Matthew Isl; Port Mulgrave; Shumagin group (MACOUN 1902); Skagway (MERRILL 1908c, 'on rocks').

= *Sphaerophorus turfaceous* Asahina – "Aleutian" (MITUNO 1938).

Sphaerophorus melanocarpus → **Bunodophoron melanocarpum**

Sphaerophorus tuckermanii Räsänen – Corticolous on conifers. Records prior to 2009 may also apply to *S. venerabilis*. – Chisik Isl (TALBOT et al. 1992); Mt Alyeska Rd, 1 mi from hwy (THOMSON & AHTI 1994); Katwai NP; Kenai Peninsula, Summit L; Chugach NF, Girdwood; Whittier (WEDIN et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP; Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

= *Sphaerophorus coralloides* auct. – Records from forested areas; many will be = *S. tuckermanii*, some *S. venerabilis*. – Sitka (STIZENBERGER 1895a, 1895b); Sitka; Broughton Strait; Juneau; Yakutat; Wrangell; Orca; Pt Gustavus, Glacier Bay; Hall Isl; St Matthew Isl; St Lawrence Isl; St Micheal; Unalaska; Cape Nome (CUMMINGS 1904); Sheep Camp, Dyea Cr (HOWE 1911b); Yakutat Bay (STAIR 1947); PWS, Thum Bay (EYERDAM 1949).

= *Sphaerophorus globiferus* (L.) DC. – records from forested areas; many will be = *S. tuckermanii*, some *S. venerabilis*. – Loring; near Juneau, Salmon Cr (CUMMINGS 1892a); Ketchikan; Little Kiska Isl; Unalaska Isl, Chernofski (HOWE 1913a).

= *Sphaerophorus globosus* auct., non (Huds.) Vain. – records from bark or forested areas; many will be = *S. tuckermanii*, some *S. venerabilis*. – Kosciusko Isl; Dall Isl; Heceta Isl; Brownson Bay; Nichols Bay; Saltery Cove; Ratz Harbor (HERRE 1919); Skagway (HERRE 1920); Yakutat Bay (STAIR 1947); Orca; PWS, Thum Bay (EYERDAM 1949); Landing Field, Annette Isl; Kuiu Isl, Washington Bay; PWS, Hinchinbrook Isl, Orca; Raspberry Isl, Port Vita (THOMSON 1950a); Tanana; Akokpak (HOWARD 1958, 'in a spruce-birch parkland', ? *S. globosus*);

Mendenhall Glacier (McCULLOUGH 1965); Haines (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); Chugach NF (DEVELICE et al. 1999); SE Alaska (GEISER et al. 1998; DILLMAN 2004; DERR et al. 2007); Chugach NF (DERR 2010).

= *Sphaerophorus globosus* var. *gracilis* auct., non (Müll. Arg.) Zahlbr., pro parte (name has also been applied to what is now called *S. venerabilis*). – Ketchikan; Kenai Peninsula, Seward (DEGELIUS 1937); PWS, Thum Bay (EYERDAM 1949); Kenai Peninsula, Summit L; Salisbury Pt (KROG 1962); Juneau area, Loop Rd; Juneau area, Montana Cr; Sitka area, Harbor Mtn; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Ketchikan area, Saxman Village; Richardson Hwy, mi 9; PWS, Fish Bay and Pigot Bay (KROG 1968); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998).

Sphaerophorus venerabilis Wedin et al. – Corticolous on *Alnus*, *Betula*, *Picea sitchensis* and *Pinus contorta*, also seen on *Tsuga heterophylla*. – Kenai Peninsula Borough; Katmai NP; Klondike Gold Rush National Historical Park; Chilkoot L State Rec. Area (WEDIN et al. 2009); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Katmai Bay Bear Cam; Lake Clark NPPr, Chinitna Ranger Station (McCUNE et al. 2018); Kenai Fjords NPPr (McCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

#Sphinctrina turbinata (Pers.) De Not. – On *Pertusaria* spp. – Port Clarence (NYLANDER 1887); Barter Isl (ZHURBENKO et al. 1995); Port Clarence (THOMSON 1997: map); Interior Alaska (LAURSEN & SEPPELT 2009); Lake Clark NPPr, Portage L (McCUNE et al. 2018).

Spilonema americanum (Henssen & Tønsberg) T. Sprib. et al. – Corticolous, usually on hardwoods (including *Alnus*, *Malus fusca*, *Populus balsamifera*, *Viburnum edule*) but also conifers (including *Picea sitchensis* and *Tsuga heterophylla*). – Coastal Alaska (McCUNE 2017a & b); Katmai NPPr, Naknek L (McCUNE et al. 2018); Glacier Bay NP: East Arm, Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Spilonemella americana* Henssen & Tønsberg – Borough of Juneau; Baranof Isl (HENSSEN & TØNSBERG 2000); Chilkoot Trail (SPRIBILLE et al. 2010, MUGGIA et al. 2011: Appendix 1).

Spilonema maritimum T. Sprib. & Fryday – On rocks in the supralittoral zone. – Glacier Bay NP: Dundas Bay; Juneau Borough, Douglas Isl (**type**), Shrine of Ste.-Therese; Sitka, Starrigavan Bay, Sitka harbour; Kruzof Isl (SPRIBILLE et al. 2020).

Spilonema revertens Nyl. – Saxicolous, free-living and also found in all cases where *Psorula rufonigra* has been reported. – Yukon R; Tanana R (MURRAY et al. 1983); Alaska (BRODO et al. 2001); Denali NP, Mt. Healy; Yukon R, Kathul Mtn (SPRIBILLE et al. 2014a); Denali NPPr, S of the AK Range (STEHN et al. 2015); Lake Clark NPPr, headwaters of Johnson R; Lake Clark NPPr, W of Hatchet Pt (McCUNE et al. 2018); Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, Verdant Cove, N side at shoreline (McCUNE et al. 2020).

#Spirographa fusisporella (Nyl.) Zahlbr. – On *Lobaria pulmonaria*, *Mycoblastus affinis* and *Ochrolechia oregonensis*. – Chilkoot Trail (SPRIBILLE et al. 2010).

Sporastatia polyspora (Nyl.) Grumann – Saxicolous on siliceous rocks. – Alaska (THOMSON 1997: map); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr, S of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

= *Lecidea nigrocinerea* Nyl. – Port Wells (CUMMINGS 1904). Zahlbruckner lists this as a synonym of *Biatorrella cinerea* (= *Sporastatia polyspora*).

Sporastatia testudinea (Ach.) A. Massal. – Saxicolous on siliceous rock. – Mt Eielson (WEBER & VIERECK 1967); central Alaska Range (REGER & PÉWÉ 1969); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Nishlik L (THOMSON & DOELL 1989); Eagle Summit; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Mt Fairplay (TALBOT et al. 2007); Alaska (MCCUNE 2017b); Mt Healy (SPRIBILLE et al. 2020).

Sporodictyon cruentum (Körb.) Körb. – Saxicolous, on smooth rocks in slow streams and on damp rocks. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L (MCCUNE et al. 2018); Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021a & b).

= *Verrucaria subumbrina* Nyl. – Cape Lisburne (NYLANDER 1887). Considered by Zahlbruckner to be a synonym of *Polyblastia henscheliana* = *Sporodictyon cruentum*.

Sporodictyon schaeerianum A. Massal. – Saxicolous on calcareous rock. See also entry for *Thelotrema lepadinum* f. *rupestre* in Appendix A. – Katmai NPPr, Mirror L camp (MCCUNE et al. 2018); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Polyblastia theleodes* auct., non (Sommerf.) Th. Fr. – Quigley Hill; Mt Eielson (WEBER & VIERECK 1967); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Ogotoruk Cr (MURRAY 1985); Alaska (THOMSON 1997: map). The name *Polyblastia theleodes* has generally been misapplied to *S. schaeerianum*, see SAVIĆ & TIBELL (2009).

= *Verrucaria theleodes* auct., non Sommerf. – Port Clarence (NYLANDER 1887; HUE 1892); Hidden Glacier Inlet, Yakutat Bay (CUMMINGS 1904).

Sporodictyon terrestre (Th. Fr.) Savić & Tibell – Terricolous on calcareous and recently deglaciated soils, also saxicolous on damp calcareous rocks. – Pitmegea R (HAFELLNER 2010); Alaska (MCCUNE 2017b); Glacier Bay NP: East Arm, Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021a); Petersburg Borough, Patterson Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Polyblastia terrestris* Th. Fr. – Alaska (THOMSON 1997: map); Noatak NPPr (MCCUNE et al. 2009).

= *Verrucaria terrestris* (Th. Fr.) Tuck. – Behring Strait (MACOUN 1902).

= *Verrucaria obtenta* Nyl. – “*calvicola*”. – Port Clarence (type – NYLANDER 1885b; NYLANDER 1887; HUE 1892). Type at S bears annotation slip from V. Alstrup with note “*Polyblastia ?sommerfeltii*”, apparent isoelectotypes H-NYL

2022 + 2023, both identified by J. W. Thomson in 1987 as *Polyblastia terrestris*, thus = *Sporodictyon terrestre*! Synonymy discussed by DILLMAN et al. (2012). = *Polyblastia sommerfeltii* Lynge – Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R (THOMSON 1979).

Squamarina lentigera (Weber) Poelt – Terricolous on calcareous, argillaceous soil. – Copper R (MURRAY et al. 1983); Alaska (McCUNE 2017b).

= *Lecanora lentigera* (Weber) Ach. – Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Firth R at Mancha Cr (THOMSON 1979).

Staurothele arctica Lynge – Saxicolous. – Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Slope Mtn (McCUNE et al. 2018).

Staurothele areolata (Ach.) Lettau – Saxicolous. – Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Katmai NPPr, Naknek L; Lake Clark NPPr, Portage L (McCUNE et al. 2018).

Staurothele clopima (Wahlenb.) Th. Fr. – Saxicolous on wetted rocks. – Alaska (McCUNE 2017b); Katmai NPPr; Lake Clark NPPr (McCUNE et al. 2018); Kenai Fjords NPPr, Harding Icefield Trail, ridge above Exit Glacier (McCUNE et al. 2020).

Staurothele clopimoides (Arnold) J. Steiner – Saxicolous on stream boulders. – Mt Eielson (WEBER & VIERECK 1967); Chilkoot Trail (SPRIBILLE et al. 2010).

Staurothele discedens (Nyl.) Zahlbr. – Saxicolous on calcareous rocks. – Port Clarence; Ikiapaurak Valley, tributary of Cache Cr; L Peters; 5 km N of Lookout Ridge; Archimedes Ridge; Endicott Mts (THOMSON & MURRAY 1988: map); Alaska (THOMSON 1997: map); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Verrucaria discedens* Nyl. – Port Clarence (**type** – NYLANDER 1885b, NYLANDER 1887; HUE 1892).

Staurothele drummondii (Tuck.) Tuck. – Saxicolous on periodically inundated rocks. See also *Staurothele succedens*. – Chisik Isl (TALBOT et al. 1992); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Chilkoot Trail (SPRIBILLE et al. 2010); Lake Clark NPPr, W of Hatchet Pt (McCUNE et al. 2018).

= *Staurothele clopima* auct., non Th. Fr. – S of Wainwright, Kaolak R; Colville R near Umiat (THOMSON 1979). *Staurothele clopima* is a nomenclatural knot and the name has been under discussion for rejection. The name has been applied to three lichen species: 1) the type, which is a mixture of two elements according to THOMSON (1991) but is generally acknowledged to apply to the European species widely called *S. fuscocuprea*; 2) the widespread European usage of *S. clopima* has been a misapplication of the name *S. clopima* for *S. areolata*; and 3) in North America the name has been used for the taxon THOMSON (1991) called *S. drummondii*. It is not clear to which entity the usage of the name in Alaska applies.

= *Staurothele perradiata* Lynge – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Copper R (MURRAY et al. 1983). Synonymy after THOMSON (1991).

Staurothele fissa (Taylor) Zwackh. – Saxicolous, often on wet rock. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Naknek L; Lake Clark NPPr, Turquoise L (McCUNE et al. 2018).

Staurothele frustulenta Vain. – Saxicolous on lakeshore rock. – Lake Clark NPPr, Turquoise L; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Staurothele hymenogonia (Th. Fr.) Nyl. – On rock.

= *Verrucaria hymenogonia* Nyl. – Port Clarence (NYLANDER 1887; HUE 1892). ESSLINGER (2021) says “[*Staurothele*] *discedens* for North American records”, likely based on THOMSON’S (1991) re-identification of a Canadian record of *S. hymenogonia* as *S. discedens*. However, Nylander reported both *V. discedens* and *V. hymenogonia* in the same paper.

Staurothele septentrionalis Lynge – Saxicolous on granitic rock, from raised beaches to glacial forelands. – Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Oasis Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

Staurothele succedens (Rehm) Arnold – Saxicolous on semi-inundated, slightly basic rock. – Ogotoruk Cr (MURRAY 1985, as cf.; the specimen upon which this report is based is *S. drummondii* according to THOMSON [1991]); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Staurothele verruculosa J. W. Thomson – Saxicolous on semi-inundated, slightly basic rock, with *Atla recondita*. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020, as cf.).

Steineroopsis alaskana T. Sprib. & Muggia – Saxicolous on boulders and rock faces. – White Pass (**type**), Thompson Pass (SPRIBILLE et al. 2010); Glacier Bay NP: Dundas Bay (SCHNEIDER et al. 2015); coastal Alaska (MCCUNE 2017b); Kenai Fjords NPPr, headland between two arms of Coleman Bay (MCCUNE et al. 2020); Skagway Borough, White Pass; near Juneau, Mendenhall Glacier Visitor’s Centre; Glacier Bay NP: Dundas Bay, Excursion Ridge, West Arm; Petersburg Borough, Patterson Glacier (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b).

Steineroopsis laceratula (Hue) T. Sprib. & S. Ekman – Corticolous on *Alnus*, *Cupressus nootkatensis*, *Picea sitchensis* and *Salix*, in beach fringe or on coastal headlands and saxicolous on beach rock, rarely terricolous on grassy coastal cliffs, in hypermaritime habitats. – Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).

= *Fuscopannaria laceratula* (Hue) P. M. Jørg. – Corticolous on *Alnus*, *Picea sitchensis* and *Salix*. – Kadin Isl near mouth of Stikine R; Sokoi Isl near Petersburg; S Kuiu Isl, Table Bay; Yakutat lowlands (GEISER et al. 1998); Kuiu Isl, Sorefinger Bay (JØRGENSEN 2000); SE Alaska (DILLMAN 2004); Coronation Isl, China Cove; Windy Bay; Ft Abercrombie State Historical Park, Gertrude L; Baranof Isl, N Bank of Starrigavan R, at the CG; 45 km S of Sitka, Yamani Islets; Yakutat Foreland, S of Yakutat village, Cannon Beach; N of Yakutat, rd toward tip of peninsula; Phipps Peninsula, near Anakau Head Cemetery; Simeonof Isl, Shumagin Isl, E slope of hill (JØRGENSEN 2005); Tongass NF, 5 km N of Petersburg, Sukoi Inlets (NASH et al. 2006); Chugach NF (DERR 2010); S Alaska (ROOT et al. 2014); Glacier Bay NP: Taylor Bay (SCHNEIDER et al. 2015); Kenai Fjords NPPr, headland between two arms of Coleman Bay; Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, Verdant Cove; Kenai Fjords NPPr, Bear Cove (MCCUNE et al. 2020).
= *Pannaria laceratula* Hue – SE Alaska (GEISER et al. 1994a; map).

= *Pannaria lepidiota* f. *corallophora* Tuck. – Baranof Isl, Hot Springs (CUMMINGS 1904, as '*coralliphora*'). Synonymy after JØRGENSEN (2004a).

Steinia geophana (Nyl.) Stein – On *Peltigera aphthosa*. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); North Slope, Happy Valley (ZHURBENKO et al. 2005).

+**Stenocybe clavata** Tibell – Corticolous on *Tsuga heterophylla*. – Cordova, Tripod Hill (TIBELL 1991); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, peninsula into Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

+**Stenocybe flexuosa** Selva & Tibell – Lignicolous on *Picea* twigs. – Chilkoot Trail (SPRIBILLE et al. 2010); coastal Alaska (MCCUNE 2017b); Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020).

+**Stenocybe pullatula** (Ach.) Stein – Corticolous on *Alnus* twigs. – Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Stereocaulon alpestre (Flot.) Dombr. – Terricolous. – Alaska (DOMBROVSKAYA 1996); Noatak NPr (MCCUNE et al. 2009, with ?); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

= *Stereocaulon tomentosum* var. *alpestre* Flot. – Franklin Bluffs on the Sagavanirktok R (THOMSON 1960); Wiseman, 1.5 mi down rd to Hammond R (HOWARD 1963; MURRAY 1974); Talkeetna Mts, Bald Mtn Ridge; Turnagain Arm, Bird Cr Ridge; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Denali Hwy, mi 28, mi 70; White Mts, headwaters of Sheep Cr; N of Nome, Anvil Pk; Seward Peninsula, King Mtn (KROG 1968); Amchitka Isl, S of Constantine Harbor (WEBER et al. 1969); terminal moraine of Valdez Glacier (THOMSON & AHTI 1994).

Stereocaulon alpinum Laurer – Terricolous in forest, heath and tundra. – Lawrence-Insula (NYLANDER 1887); St Paul Isl; Isl in Behring Strait; Port Foulke (RIDDLE 1910); Bronson Bay (MAGNUSSON 1932, as cf.; a revision of a collection called *Stereocaulon paschale* by Herre, 1911); Akutan whaling station; St Paul Isl (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Raspberry Isl, Port Vita (THOMSON 1950a); Unalaska Isl, Dutch Harbor; Stampede; Hagemeister Isl (HOWARD 1958); Brooks Range, L Peters; Meade R Village; vicinity of Pt Hope; Ukinyik Cr drainage; Hooper Bay; White Mts, the limestone ridge (KROG 1962); Juneau Ice Field (MCCULLOUGH 1965); Mt Eielson; McKinley R (WEBER & VIERECK 1967); Amchitka Isl, above Cyril Cove (WEBER et al. 1969); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Alaska (LAMB 1977); Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Arey Cr; Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); Amchitka Isl, South Hangar; W end of Baker Runway (THOMSON & SOWL 1989); Kenai Peninsula, Exit Glacier; Denali NP, Rock Cr Trail; Denali NP, on slope above Eielson Visitor Center (SCHINDLER 1990); Prudhoe Bay region (WALKER & EVERETT 1991); Chisik Isl (TALBOT et al. 1992); Imnavait Cr (HAHN et al. 1993); Blueberry L CG; Fielding L (THOMSON

& AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996) Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); SE Alaska (GEISER et al. 1998); Imnavait Cr watershed, Philip Smith Mts (LANGE et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); Alaska Hwy, near Canadian border; Willow L, near Alaska Hwy; Mt Fairplay; Mentasta Mts (TALBOT et al. 2007) Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Kasatochi Isl (TALBOT et al. 2010a); Unalaska Isl (TALBOT et al. 2010b); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr, Harding Icefield Trail, lower slope; Kenai Fjords NPPr, N of Exit Glacier Visitor Center; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Stereocaulon alpinum* var. *alpinum* – “Flower Slope” along Nunivak Slough near Barrow (THOMSON 1960); Juneau area, Loop Rd; Juneau area, Mt Roberts; Sitka area, Indian R Trail; Talkeetna Mts, Independence Mine; Kenai Peninsula, Skilak L; Kenai Peninsula, S of Hidden L; Portage Glacier; Windy Pt, Turnagain Arm; W of Seward, Marathon Mtn; Denali Hwy, mi 0–37; Denali Hwy, mi 70; Denali NP, Polychrome Pass; Richardson Hwy, Darling Cr; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, limestone ridge between Beaver Cr and Fossil Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Eagle Summit; Circle Hot Springs; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Seward Peninsula, King Mtn; Kotzebue (KROG 1968).

= *Stereocaulon paschale* var. *alpinum* (Laurer) Du Rietz – Juneau icefield nunatak (HEUSSER 1954); near Juneau, Taku Glacier valley (HEUSSER et al. 1954).

= *Stereocaulon tomentosum* var. *alpinum* Th. Fr. – Alaska (TUCKERMAN 1882); isls in Behring Strait (MACOUN 1902); Muir Glacier, Glacier Bay; summit of White Pass; Disenchantment Bay; Yakutat Bay; Kadiak [sic]; St Matthew Isl (CUMMINGS 1904).

= *Stereocaulon alpinum* var. *gracilentum* (Th. Fr.) H. Magn. – Matanuska R (LAMB 1977).

Stereocaulon apocalypticum Nyl. – Saxicolous and on thin soil over rock. – Alaska (LAMB 1977; LAMB 1978); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); [SE Alaska] mainland, Cosmos Range (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Lake Clark NPPr (MCCUNE et al. 2018).

Stereocaulon arcticum Lynge – Saxicolous or on thin soil over rock. – Talkeetna Mts, Government Pk; Eagle R Valley; W of Seward, Marathon Mtn; Denali Hwy, mi 0–28; White Mts, Lion Pk (KROG 1968); Alaska (THOMSON 1984: map); Adak Isl (TALBOT et al. 1997); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Paul Isl (TALBOT et al. 2001); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Katmai NPPr, Mirror L camp (MCCUNE et al. 2018).

Stereocaulon arenarium (Savicz) I. M. Lamb – Saxicolous, sometimes reported as terricolous. – Kenai Peninsula, Quartz Cr; Marathon Mtn; Talkeetna Mts, Government Pk; Anchorage Pk, Eagle R; nunataks of Juneau Icefield; Denali NP, Mt Eielson, Copper Mtn; Denali Hwy, mi 28; White Mts, Lion Pk (LAMB 1972); Alaska (LAMB 1977); Alaska (THOMSON 1984: map); Amchitka Isl (THOMSON & SOWL 1989); Thompson Pass (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); SE Alaska (GEISER et al. 1994a: map); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk; Cold Bay (TALBOT et al. 2000); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, Slope Mtn; Lake Clark NPPr, Saddle Mtn; Lake Clark NPPr, headwaters of Johnson R; Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Harding Icefield Trail, ridge above Exit Glacier; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield; Kenai Fjords NPPr, Double Glacier nunatak (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Stereocaulon areolatum McCune et al. – Non-calcareous rock, particularly in alpine areas with late-lying snow or in ephemeral snowmelt streams. – Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); Lake Clark NPPr, shoulder of mtn overlooking Tuxedni Bay; Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2019, 2020).

Stereocaulon botryosum Ach. – Saxicolous, sometimes terricolous. – Attu Isl (DEGELIUS 1937); Raspberry Isl, Port Vita (THOMSON 1950a); Ogotoruk Cr drainage (KROG 1962); Alaska Range, Dry Cr (VIERECK 1967); Juneau area, Granite Basin; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Richardson Hwy, mi 9; Richardson Hwy, mi 37; Richardson Hwy, mi 45; Denali Hwy, mi 28–37; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; White Mts, Lion Pk; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Nunivak Isl, Robert's Mtn; Seward Peninsula, King Mtn; Rainbow Cr, Seward Peninsula, Kigluaik Mts (KROG 1968); Alaska (LAMB 1977); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Amchitka Isl (THOMSON & SOWL 1989); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992, specimen found misidentification of *S. alpinum*, MCCUNE et al. 2018); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Blueberry L CG (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic

NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).

= *Stereocaulon botryosum* f. *congestum* (H. Magn.) Frey – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).

= *Stereocaulon botryosum* f. *subglobuliferum* I. M. Lamb – White Pass (SPRIBILLE et al. 2010).

Stereocaulon capitellatum H. Magn. – Terricolous in seepage areas and saxicolous. – Amchitka Isl (THOMSON & SOWL 1989, as cf.); Thompson Pass (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Kupreanof Isl, Bear Claw Pk; Kupreanof Isl, Sheridan Pk (GEISER et al. 1998).

Stereocaulon cephalocrustatum McCune et al. – Non-calcareous rock near sea level on steep rocky areas along somewhat sheltered ocean bays. – Kenai Fjords NPPr, E side of Harris Bay (**type**); Kenai Fjords NPPr, Coleman Bay (MCCUNE et al. 2019; MCCUNE et al. 2020).

Stereocaulon chlorellum → [Appendix A](#)

Stereocaulon condensatum Hoffm. – Terricolous. – Alaska (LAMB 1977); Denali NP, rd E of Savage R (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992, as cf., redetermined as *S. spathuliferum* by MCCUNE et al. 2018); SE Alaska (GEISER et al. 1994a: map); in alpine N of Stikine R, near BC border (GEISER et al. 1998); Chugach NF (DERR 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Malone L; Lake Clark NPPr, inlet stream to Pickerel L; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, SW end of Pickerel L; Lake Clark NPPr, headwaters Johnson R; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018).

Stereocaulon coniophyllum I. M. Lamb – Saxicolous on moist rock. – Mendenhall Glacier (McCULLOUGH 1965); Mendenhall L; Juneau area, Granite Basin; Ketchikan area, Ward L; Talkeetna Mts, Mabel Mine; Richardson Hwy, mi 9 (KROG 1968); Alaska (LAMB 1977); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map); Alaska (DOMBROVSKAYA 1996); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); near SE Alaskan mainland glacier termini at low elevations (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Glacier Bay NP: Dundas Bay, East Arm, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier; Petersburg Borough, Patterson Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

Stereocaulon cumulatum → [Appendix A](#)

Stereocaulon dactylophyllum Flörke – Saxicolous on acidic rocks. LAMB (1977) attributes erroneous reports of *S. dactylophyllum* for Alaska to EYERDAM (1949) and HEUSSER (1954), but neither author in fact reported this species. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984:

map); SE Alaska (GEISER et al. 1994a: map); Kruzof Isl, near Sitka (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998).

Stereocaulon depressum (Frey) I. M. Lamb – Saxicolous and terricolous, or on moss over granite. – White Pass (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Stereocaulon botryosum* f. *confluens* (H. Magn.) Frey – Anderson Pass Glacier moraine; Mt Eielson (WEBER & VIERECK 1967). Synonymy after LAMB (1977).

Stereocaulon fecundum McCune et al. – Non-calcareous rock along streams and ocean bays. – Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord (**type**); Kenai Fjords NPPr, Verdant Cove, N side at shoreline (MCCUNE et al. 2019; MCCUNE et al. 2020).

Stereocaulon glareosum (Savicz) H. Magn. – Saxicolous on rock and terricolous on bare soil, often binding the soil. – 1 mi N of Cape Thompson (KROG 1962); Mendenhall Glacier (MCCULLOUGH 1965); Alaska Range, Dry Cr (VIERECK 1967); Mt Eielson (WEBER & VIERECK 1967); Alaska (LAMB 1977); Anaktuvuk Pass (MOSER et al. 1979); S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; Pt Barrow; Anaktuvuk Pass (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Amchitka Isl (THOMSON & SOWL 1989); Kenai Peninsula, Exit Glacier (SCHINDLER 1990); Hagemester Isl (TALBOT et al. 1990); Eagle Summit; Mt Fairplay; Thompson Pass; Fielding L (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Horn Cliffs, near Petersburg; Skagway area (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Pickerel L; Lake Clark NPPr, Slope Mtn; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).
= *Stereocaulon glareosum* var. *glareosum* – Talkeetna Mts, Mabel Mine; Anchorage, Rabbit Cr Rd; Portage Glacier; Kenai Peninsula, Granite Cr Ridge; Denali Hwy, mi 0–28; Richardson Hwy, Darling Cr; Nunivak Isl, Nash Harbour; Seward Peninsula, King Mtn; N of Nome, Anvil Pk (KROG 1968).
= *Stereocaulon glareosum* var. *brachyphylloides* I. M. Lamb ex Llano – Anaktuvuk Pass (**type** – LLANO 1951; MURRAY 1974; WONG 1993); Colville R at Umiat (BLISS & CANTLON 1957); White Mts, Lion Pk (KROG 1968); Brooks Range, Anaktuvuk Pass (LAMB 1977); Alaska (DOMBROVSKAYA 1996); Ft Richardson (MURRAY 1997).

Stereocaulon grande (H. Magn.) H. Magn. – Terricolous over rock or directly saxicolous. – Mendenhall Glacier (MCCULLOUGH 1965); Mendenhall Glacier Trail; Portage Glacier; Denali Hwy, mi 28–37; White Mts, Beaver Cr; Circle Hot Springs; Nunivak Isl, Mekoryuk Village; Seward Peninsula, King Mtn (KROG 1968); Alaska (LAMB 1977); Alaska (THOMSON 1984: map); Nishlik L (THOMSON & DOELL 1989); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Moon L CG; Thompson Pass (THOMSON & AHTI 1994);

Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Glacier Bay NP: Dundas Bay, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

Stereocaulon groenlandicum (E. Dahl) I. M. Lamb – Saxicolous. – Richardson Hwy, mi 45; Talkeetna Mts, Bald Mtn Ridge; Alaska Range District, upper valley of Swift Fk of Kuskokwim R (LAMB 1973); Alaska (LAMB 1977); Alaska (TØNSBERG 1977, “a possibility”); Alaska (THOMSON 1984: map); Amchitka Isl, E of Sewage Lagoon (THOMSON & SOWL 1989); SE Alaska (GEISER et al. 1994a); Alaska (DOMBROVSKAYA 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Blue L Rd, Sitka; Blue R lava flow, [SE Alaska] mainland (GEISER et al. 1998); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Teck Isl (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Katmai NPPr, Hammersly L; Katmai NPPr, 3 km E of Hammersly L (MCCUNE et al. 2018); Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

= *Stereocaulon rivulorum* var. *groenlandicum* E. Dahl – Talkeetna Mts, Bald Mtn Ridge; Richardson Hwy, mi 45 (KROG 1968).

Stereocaulon hypothallinum McCune et al. – On granite on an exposed alpine Ridgetop. – Katmai NPPr, W of Contact Cr (MCCUNE et al. 2018; **type** – MCCUNE et al. 2019).

Stereocaulon incrustatum Flörke – Terricolous on sandy soils and wet flats. – Alaska (LAMB 1977); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Fielding L (THOMSON & AHTI 1994); Alaska (DOMBROVSKAYA 1996); St Matthew Isl (TALBOT et al. 2001).

Stereocaulon intermedium (Savicz) H. Magn. – Terricolous and thin soil over rocks in tundra and forest habitats. – Juneau (DEGELIUS 1937); Attu Isl, Siddens Valley, Engineers Canyon (HOWARD 1958); Mendenhall Glacier Trail; Juneau area, Granite Basin; Ketchikan area, Deer Mtn; Ketchikan area, Ward L; Nunivak Isl, Mekoryuk Village; Seward Peninsula, King Mtn (KROG 1968); Kodiak Isl, 29 km NW of Olga Bay Cannery, “Amara Lake” (KROG 1969); Amchitka Isl, S of Constantine Harbor (WEBER et al. 1969); Alaska (LAMB 1977); Alaska (THOMSON 1984: map); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Portage Glacier (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Tuxedn, Chisik Isl (MCCUNE et al.

2018); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, NE end of Harris Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Stereocaulon intermedium* f. *compactum* I. M. Lamb – Aleutian Isl, Rat Isl, Amchitka, near Constantine Harbor (**type** – LAMB 1977; WONG 1993); Alaska (DOMBROVSKAYA 1996).

Stereocaulon klondikense T. Sprib. – Terricolous in alpine, often on thin soil over rock. – Skagway Borough, White Pass; Chilkoot Trail, vicinity of Chilkoot Pass; E side of White Pass (**type** – SPRIBILLE et al. 2010); Katmai NPPr, Mirror L (MCCUNE et al. 2018).

Stereocaulon leprocephalum Vain. – Saxicolous (?) on streamside rock outcrop. – Amchitka Isl, Beach Crypt, St Makarius Bay Beach (THOMSON & SOWL 1989); Adak Isl (TALBOT et al. 1997).

Stereocaulon leucophaeopsis (Nyl.) P. James & Purvis – Saxicolous on rocks in alpine heath. – Alaska (MCCUNE 2017a & b); Kenai Fjords NPPr, E side of Harris Bay (MCCUNE et al. 2019; MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Stereocaulon myriocarpum Th. Fr. – Terricolous in forest and tundra. – Mendenhall Glacier (MCCULLOUGH 1965); Juneau area, Granite Basin; Juneau area, Shrine of St Therese; Richardson Hwy, mi 9 (KROG 1968: lobaric acid strain); Portage Glacier (KROG 1968: stictic acid strain); Alaska (LAMB 1977); Granite Basin; the Shrine of St Therese in the Juneau area (GEISER et al. 1994a, 1998).

Stereocaulon nivale (Follmann) Fryday – Saxicolous on alpine rocks. – Wrangell-Petersburg, Thunder Mtn (FRYDAY & GLEW 2003); SE Alaska (MCCUNE 2017a & b); alpine lake system on Harris Peninsula (MCCUNE et al. 2019; MCCUNE et al. 2020).

= *Bacidia nivalis* Follmann – SE Alaska (GEISER et al. 1994a: map); Thunder Mtn (GEISER et al. 1998).

Stereocaulon octomerum Müll. Arg. – On moss-covered rock in subalpine habitats. – Mendenhall Glacier Trail; Portage Glacier (KROG 1968); Kenai Peninsula (LAMB 1977; LAMB 1978); SE Alaska (GEISER et al. 1994a: map); Alaska (DOMBROVSKAYA 1996); Mitkof Isl, Crystal Mtn (GEISER et al. 1998); Chugach NF (DERR 2010); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Stereocaulon paschale (L.) Hoffm. – Terricolous in forest and tundra. – Kotzebue's Sound (HOOKER & ARNOTT 1841, as "Ach."); Kotzebue Sound (MANN 1868; TURNER 1886); 'common and everywhere met' (ROTHROCK 1884); Alaska (HUE 1890); St George Isl; St Paul Isl; Kodiak Isl; Kotzebue Sound (MACOUN 1902); Hidden Glacier, Russel Fiord; Muir Glacier, Glacier Bay; Orca; St Michael; Cape Nome (CUMMINGS 1904); near Juneau, Sheep Cr; Muir Glacier; Port Clarence (RIDDLE 1910); Atka (HOWE 1913a); Brownson Bay; Woewodsky Isl; Wrangell (HERRE 1919, but Brownson Bay collection later revised by MAGNUSSON 1932 to *S. cf. alpinum*, see that species); Alaska (HADWEN & PALMER 1922); Alaska Peninsula; Unalaska Isl (HEDRICK 1936); Yakutat Bay (STAIR 1947); Adak Isl (STAIR 1948); Anchorage; Naknek, Alaska Peninsula (HERRE 1950a); Amlia Isl (THOMSON 1950a); Juneau icefield nunatak (HEUSSER 1954); Stampede (HOWARD 1958); Umiat (KROG 1962; MURRAY 1974);

Ogotoruk Cr (KROG 1962); hill E of rd to Kantishna (HOWARD 1963); Muldrow Glacier (VIERECK 1966); McKinley R bar (WEBER & VIERECK 1967); Juneau area, Loop Rd; Juneau area, Mt Roberts; Ketchikan area, Saxman Village; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Puritan Cr; Little Nelchina, by Glenn Hwy; Eagle R Valley; headwaters of Rabbit Cr; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Skilak L; Richardson Hwy, mi 24, mi 37, mi 45, mi 170; Denali Hwy, mi 0–37, mi 70, mi 100; Denali NP, Savage R; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep Cr; White Mts, lower Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Eagle Summit; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr; Kotzebue (KROG 1968); Alaska (LAMB 1977); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Camp Cantwell (SCHINDLER 1987); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Denali NP, on slope above Eielson Visitor Center (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Mt Fairplay; Moon L CG; Blueberry L CG (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk; Cold Bay; Izembek Lagoon (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Seaton Roadhouse; Riverside Lodge Airstrip; Alaska Hwy, mi 1240; Alaska Hwy, mi 1270, Ten Mile Cr; Riverside Lodge Airstrip; Mt Fairplay (TALBOT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Harding Icefield Trail; Kenai Fjords NPPr, northwest Lagoon Beach; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b); Hagemeister Isl (WALSH & GOWARD 2021).

= *Stereocaulon alpinum* var. *erectum* Frey – Mendenhall Glacier (MCCULLOUGH 1965); Mendenhall Glacier Trail; Juneau area, Mt Roberts; W of Seward, Marathon Mtn; Denali Hwy, mi 0–37; White Mts, Beaver Cr; Seward Peninsula, King Mtn (KROG 1968); Portage Glacier (SCHINDLER 1987).

= *Stereocaulon paschale* var. *erectum* (Frey) I. M. Lamb ex Llano – Anaktuvuk Pass (LLANO 1951; MURRAY 1974).

***Stereocaulon pileatum* Ach.** – Saxicolous and on road surface or among crushed rock. – Amchitka Isl, South Hangar; Amchitka Isl, main disturbed area from Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989); LeConte Bay, [SE

Alaska] mainland (GEISER et al. 1994a: map; GEISER et al. 1998); Denali NPPr (ROLAND et al. 2017).

Stereocaulon plicatile (Leight.) Fryday & Coppins – On non-calcareous rock, exposed to somewhat sheltered, particularly in areas with deep snow. – Katmai, Malone L (MCCUNE et al. 2018); Katmai NPPr, ca. 1 km SW of Malone L; Kenai Fjords NPPr, near NPS weather station on McArthur Ridge (MCCUNE et al. 2019; MCCUNE et al. 2020).

Stereocaulon rivulorum H. Magn. – Terricolous and saxicolous, often near snowbanks. – Ogotruk Cr drainage (KROG 1962); Mendenhall Glacier (MCCULLOUGH 1965); Mt Eielson; Muldrow moraine (WEBER & VIERECK 1967); Chena R (VIERECK 1970); Alaska (LAMB 1977); Prudhoe Bay (MURRAY & MURRAY 1975a, 1978, ‘too scanty to determine with certainty’); Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotruk Cr (MURRAY 1985); Amchitka Isl (THOMSON & SOWL 1989); St Paul Isl, by the water towers; Denali NP, on the rd E of Savage R (SCHINDLER 1990); Anaktuvuk Pass (NASH 1992); Chisik Isl (TALBOT et al. 1992, misidentification of *S. glareosum*, MCCUNE et al. 2018); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier; terminal moraine of Valdez Glacier; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Alaska (DOMBROVSKAYA 1996: “типичная раса” (type race)); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); shore of Falls L, mainland; Cosmos Range alpine, mainland; Kupreanof Isl, Sheridan Pk (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Teck Isl (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr, Mirror L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Bear Glacier nunatak; Kenai Fjords NPPr, Wosnesenski Glacier nunatak; Kenai Fjords NPPr, Petrof Glacier nunatak (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b); Hagemester Isl (WALSH & GOWARD 2021). = *Stereocaulon rivulorum* var. *rivulorum* – Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Government Pk; W of Seward, Marathon Mtn; Richardson Hwy, mi 24, mi 37; Denali Hwy, mi 0–37; Denali NP, Toklat; Denali NP, Polychrome Pass; White Mts, between Beaver Cr and Fossil Cr; White Mts, Lion Pk; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968).

Stereocaulon sasakii Zahlbr., **infraspecific taxa not distinguished** – Terricolous or on thin soil over rock. – SE Alaska (GEISER et al. 1994a); Gallagher Cr, Chichagof Isl; near Petersburg; near Juneau; Sitka, Harbor Mtn; ‘near Hyder by E. G. Mayer’ (GEISER et al. 1998); Alaska (BRODO et al. 2001); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

Stereocaulon sasakii var. **simplex** (Riddle) I. M. Lamb – Terricolous. – Alaska (LAMB 1977). = *Stereocaulon tomentosum* var. *simplex* Riddle – Davidson Glacier (RIDDLE 1910); Eagle R Valley (KROG 1968).

Stereocaulon sasakii* var. *tomentosoides I. M. Lamb – Terricolous. – Alaska (LAMB 1977); White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Glacier Bay NP: Dundas Bay, East Arm, West Arm (SPRIBILLE et al. 2020).

Stereocaulon saviczii Du Rietz – Saxicolous in alpine areas. – Nunivak Isl, Robert's Mtn (KROG 1968); Alaska (LAMB 1977, 1978); Alaska (THOMSON 1984: map); Amchitka Isl, Engineer Camp (THOMSON & SOWL 1989); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996; doubtful: as '*saviczii/glareosum*'); SE Alaska (GEISER et al. 1994a: map); LeConte Bay; Blue R lava flow, [SE Alaska] mainland (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, N end of Harris Bay; Kenai Fjords NPPr, NE end of Harris Bay; Kenai Fjords NPPr, Petrof Glacier nunatak (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

Stereocaulon saxatile H. Magn. – Saxicolous on boulders and outcrops and on crushed rock surface of road. – Pt Barrow (THOMSON 1979); Alaska (THOMSON 1984: map); Amchitka Isl (THOMSON & SOWL 1989); Kenai Peninsula, Ptarmigan L Trail (SCHINDLER 1990); Chisik Isl (TALBOT et al. 1992, misidentification of *S. alpinum*, MCCUNE et al. 2018); SE Alaska (GEISER et al. 1994a: map); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk; Cold Bay (TALBOT et al. 2000); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b).

Stereocaulon spathuliferum Vain. – Saxicolous, also reported over humus. – Mendenhall Glacier Trail; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn; Talkeetna Mts, Independence Mine; Denali Hwy, mi 28–37; Seward Peninsula, King Mtn (KROG 1968); Alaska (LAMB 1977); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map); Alaska (DOMBROVSKAYA 1996); Dry Pass, NW Chichagof Isl; S Baranof Isl, Plotnikof L (GEISER et al. 1998); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); SE Alaska (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Unalaska Isl (TALBOT et al. 2010b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr, Mirror L; Katmai NPPr, W of Contact Cr; Tuxedni, Chisik Isl (MCCUNE et al. 2018); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield; Kenai Fjords NPPr, Verdant Cove, N side at shoreline (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020). = *Stereocaulon botryosum* f. *dissolutum* (H. Magn.) Frey – Juneau icefield nunatak (HEUSSER 1954). Synonymy after LAMB (1977). = *Stereocaulon spathuliferum* f. *globuliferum* (H. Magn.) I. M. Lamb – Alaska (LAMB 1977).

Stereocaulon sterile (Savicz) I. M. Lamb – Saxicolous. – Ketchikan area, Ward L; Anchorage area, headwaters of Rabbit Cr; Portage Glacier; Seward; Richardson

Hwy, mi 45; White Mts, Beaver Cr; Nunivak Isl, Mekoryuk Village (KROG 1968); Kenai Peninsula, Seward; Portage Glacier; Richardson Hwy, mi 45; Anchorage area, Rabbit Cr; White Mts, Beaver Cr, E of Sheep Cr; Ketchikan, Ward L; Nunivak Isl, Mekoryuk (LAMB 1973); Alaska (LAMB 1977); SE Alaska (GEISER et al. 1994a: map); W Baranof Isl, beach at Kanga Bay; shoreline of LeConte Bay, [SE Alaska] mainland (GEISER et al. 1998); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020).

Stereocaulon subcoralloides (Nyl.) Nyl. – Saxicolous. – Hill E of rd to Kantishna (HOWARD 1963); Talkeetna Mts, Independence Mine; Talkeetna Mts, Mabel Mine; Richardson Hwy, mi 45; Denali Hwy, mi 0–37; White Mts, between Beaver Cr and Fossil Cr; White Mts, Lion Pk; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Alaska (LAMB 1977); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Amchitka Isl (THOMSON & SOWL 1989); Kenai Peninsula, Ptarmigan L Trail (SCHINDLER 1990); Thompson Pass (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); near mouth of Kennel Cr, E Chichagof Isl (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Lake Clark NPPr, Tuxedni Bay; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr, Bear Glacier nunatak; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield; Kenai Fjords NPPr, Wosnesenski Glacier nunatak (MCCUNE et al. 2020).

Stereocaulon subdenudatum Hav. – Saxicolous in the alpine. – Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).

Stereocaulon symphycheilum I. M. Lamb – Saxicolous on boulders from sea level to tundra. – Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Denali Hwy, mi 0–37; Steese Hwy, Twelvemile Summit; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Alaska (LAMB 1977); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map); Adak Isl (TALBOT et al. 1997); LeConte Bay; Blue R lava flow, mainland; Mitkof Isl, Crystal Mtn (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Katmai NPPr, W of Contact Cr; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Stereocaulon tomentosum Fr. – Terricolous in forest and tundra. Some reports may apply to *S. alpestre*. – Kotzebue's Sound (BABINGTON 1851); Kotzebue Sound (BABINGTON 1852, with ?); Kotzebue Sound (MANN 1868); Port Clarence (ALMQUIST 1887); Port Clarence (NYLANDER 1887); Port Clarence (HUE 1890);

near Juneau, Sheep Cr; Davidson Glacier (CUMMINGS 1892a); Juneau, Sheep Cr; Davidson Glacier (MACOUN 1902); JUNEAU, 1200–1800 ft; Muir Glacier, Glacier Bay; Hidden Glacier Inlet, Yakutat; Disenchantment Bay, Yakutat; Disenchantment Bay, Yakutat Bay; Nunatak moraine, Yakutat Bay; Pt Gustavus, Glacier Bay; Hidden Glacier, Russel Fiord; Orca; Kodiak; Hall Isl; St Matthew Isl; Port Clarence; Postoliak R (CUMMINGS 1904); Disenchantment Bay (RIDDLE 1910); Unalaska Isl, Chernofski (HOWE 1913a); Alaska (HADWEN & PALMER 1922); Camden Bay (MERRILL 1924b); Alaska (RÄSÄNEN 1933); Juneau; Unalaska Isl, Unalaska (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Yakutat Bay (STAIR 1947); PWS, Thum Bay; Valdez (EYERDAM 1949); Unalaska Isl; King Cove, Alaska Peninsula; PWS, Valdez (THOMSON 1950a); Nome (HANSON 1953); Port Heiden (HOWARD 1958); Thorofare R (WEBER & VIERECK 1967); Chitistone-Skolai region (SCOTT 1974); Alaska (LAMB 1977); Barrow (WEBBER 1978); Haul Rd, Coastal Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Denali NP, Station Primrose (SCHINDLER 1987); Brooks L drainage, Katmai NP and Preserve (GUNTHER 1989); Amchitka Isl, Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989); Imnavait Cr (WALKER et al. 1989); Katmai NP, Hammersly L; Katmai NP, Brooks Lodge area, Margot Falls; Kenai Peninsula, Ptarmigan L Trail; Denali NP, Rock Cr Trail; Denali NP, on the rd E of Savage R (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Anaktuvuk Pass (NASH & OLAFSEN 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); N Baranof Isl, Pogibshi Anchorage; Kupreanof Isl, trail to Petersburg L (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Chugach NF (DEVELICE et al. 1999); Izembek Lagoon; Izembek Refuge, Cold Bay (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Toolik L (GOUGH et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Interior Alaska (LAURSEN & SEPPELT 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Stereocaulon tomentosum* var. *tomentosum* – Juneau area, Loop Rd; Talkeetna Mts, Independence Mine; Talkeetna Mts, Little Susitna R; Talkeetna Mts, Puritan Cr; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Skilak L; Kenai Peninsula, Granite Cr Ridge; Richardson Hwy, mi 9, mi 37; Richardson Hwy, mi 45; Denali NP, CG near hotel; Denali NP, Wonder L; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, Fossil Cr; Circle Hot Springs; Alaska Hwy, mi 1450; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Kotzebue (KROG 1968); Thompson Pass; Fielding L (THOMSON & AHTI 1994); Kenai Fjords NPPr, Exit Glacier CG, near Exit Glacier Cr; Kenai Fjords NPPr,

Double Glacier nunatak; Kenai Fjords NPPr, northwest Lagoon Beach (MCCUNE et al. 2020).

Stereocaulon tornense → [Appendix A](#)

Stereocaulon vesuvianum Pers. **variety not specified** – Saxicolous on rocks from low elevations to alpine. – Mt Eielson (WEBER & VIERECK 1967); Bare L, 6 km NNW of Olga Bay Cannery, Kodiak Isl (KROG 1969); Amchitka Isl, opposite Chitka Cove (WEBER et al. 1969); Alaska (LAMB 1977); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map); Portage Glacier; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); SE Alaska (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

Stereocaulon vesuvianum var. **denudatum** (Flörke) I. M. Lamb – Saxicolous on siliceous rocks. – Mendenhall Glacier Trail; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Ketchikan area, Deer Mtn; Denali Hwy, mi 28; Nunivak Isl, Robert’s Mtn (KROG 1968).

= *Stereocaulon denudatum* Flörke – Alaska (MACOUN 1902); Unalaska; St Michael (CUMMINGS 1904); Alaska (RIDDLE 1910); Dall Isl, Augustine Bay (HERRE 1919; MAGNUSSON 1932); Unalaska Isl; Atka Isl; Amla Isl; Unimak Isl (HEDRICK 1936); Attu Isl; St Paul Isl (DEGELIUS 1937).

= “*Stereocaulon denudatum* f. *pulvinatum* (Schaer.)” – Unalaska Isl; Atka Isl (DEGELIUS 1937).

Stereocaulon vesuvianum var. **nodulosum** (Wallr.) I. M. Lamb – Saxicolous. – Alaska (LAMB 1977); Afognak Isl; Red Peak L (DILLMAN 2010); Glacier Bay NP: Dundas Bay, Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

= *Stereocaulon vesuvianum* var. *nodulosum* f. *umbricola* (Frey) I. M. Lamb – Alaska (LAMB 1977); Alaska (DOMBROVSKAYA 1996).

= *Stereocaulon vesuvianum* var. *nodulosum* f. *verrucosum* I. M. Lamb – Attu Isl (**type** – LAMB 1977; POELT 1981; WONG 1993, as “*Stereocaulon vesuvianum* f. *verrucosum*”; DOMBROVSKAYA 1996).

Stereocaulon vesuvianum var. *obscurum* → [Appendix A](#)

Stereocaulon vesuvianum var. **symphycheileoides** I. M. Lamb – Saxicolous. – Alaska (LAMB 1977).

Stereocaulon vesuvianum var. **vesuvianum** – Nunivak Isl, Robert’s Mtn (KROG 1968).

Stereocaulon wrightii Tuck. – Isls of Behring’s Straits (**type** – TUCKERMAN 1859, with a ? regarding the genus *Stereocaulon*; the type locality is on Arakamtchehene Isl, Russia, fide LAMB 1977). LAMB (1977) says “most records in the literature refer to... *S. apocalypticum*”. All confirmed records come from the E side of the Bering Straits (Wright likely did not collect on the Alaskan side, see PFISTER 1978), and it is not clear if recent records have been compared with the type. – Isls of Behring’s Strait (TUCKERMAN 1882); St Michael (RIDDLE 1910); Alaska (HADWEN & PALMER 1922); Behring Strait (MAGNUSSON 1926: conflating it with *S. apocalypticum*?); Ogotoruk Cr drainage, above Slate Cr; Mt

Harper (KROG 1962); Kantishna, Red Top Mine (WEBER & VIERECK 1967); Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968: lobaric acid strain); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998: “possibly a misidentification”); Bering Land Bridge NPr (HOLT et al. 2007); Gates of the Arctic NPPr (NELSON et al. 2015b).

Sticta arctica Degel. – Terricolous in mossy tundra and heath. See also entry under *Ricasolia quercizans* in Appendix A. – Unalaska Isl, Captains Harbour (**type** – DEGELIUS 1937); Ogotoruk Cr drainage (KROG 1962); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Talkeetna Mts, Puritan Cr; Denali Hwy, mi 0–28; Denali NP, Savage R; Steese Hwy, Eagle Summit; Seward Peninsula, King Mtn (KROG 1968); Pitmegea R, 15 mi upstream from Cape Sabine; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (ANDREEV & MAKAROVA 1982); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Mt Roberts, Juneau area (GEISER et al. 1994a); Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Alaska (MCCUNE et al. 1997); Adak Isl (TALBOT et al. 1997); Mt Roberts, Juneau area (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Sticta fasciculata Di Meglio & Goward – Corticolous on conifers and *Alnus* and *Populus*, also saxicolous or muscicolous on rock faces in forest. – Alaska (DI MEGLIO & GOWARD 2023: map).

= *Sticta fuliginosa* auct., non (Hoffm.) Ach. pro parte – Research by DI MEGLIO & GOWARD (2023) has shown that material assigned to *S. fuliginosa* in northern North America can be assigned to four lineages, including *S. fuliginosa* s.str. (which they report from Québec in Table 2, but from Ontario in Fig. 5), *S. fasciculata*, *S. globulifuliginosa* and *S. gretae*. Of the 17 specimens sampled by DI MEGLIO & GOWARD (2023) from Alaska, eight were resolved as *S. fasciculata*, eight as *S. globulifuliginosa* and one as *S. gretae*. – Mendenhall Glacier (MCCULLOUGH 1965); Juneau area, Loop Rd; Ketchikan area, Ward L; Richardson Hwy, mi 9; Seward (KROG 1968); SE Alaska (GEISER et al. 1994a: map); Haines Hwy, mi 33; Richardson Hwy, mi 10; Haines (THOMSON & AHTI 1994); Yakutat Forelands (SHEPHARD 1995); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010); SE Alaska (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014); Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020, as s. lat.); Glacier Bay NP: East Arm, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

Sticta fuliginosa → *Sticta fasciculata* and *S. globulifuliginosa*

Sticta globulifuliginosa Moncada & Lücking – Epiphytic on trees and shrubs.

Material reported as *S. fuliginosa* in the literature is referable here in part (see under *S. fasciculata*). – Coastal Alaska (DI MEGLIO & GOWARD 2023: map).

Sticta gretae Goward & Di Meglio – Epiphytic; ecology of Alaskan record not specified. – SC Alaska (DI MEGLIO & GOWARD 2023: map).

Sticta limbata (Sm.) Ach. – Corticolous on conifers, *Alnus* and *Betula* and muscicolous on mossy rock faces in forest. – Near Juneau, Salmon Cr; near Juneau, Sheep Cr (CUMMINGS 1892a); Juneau area, Loop Rd; Sitka NM; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Salamatof (KROG 1968); SE Alaska (GEISER et al. 1994a: map); Stanley Isl, near Prince of Wales Isl; small Isl E of Pt Vandeput, [SE Alaska] mainland; Sukoi Isl near Petersburg (GEISER et al. 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DILLMAN 2004); Chilkoot Trail (SPRIBILLE et al. 2010); Chena R; near Delta Junction (DILLMAN et al. 2012); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Lake Clark NPPr, Camel's Hump; Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, plot B-3; Lake Clark NPPr, Telaquana L (MCCUNE et al. 2018); Glacier Bay NP: East Arm, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Sticta oroborealis → *Dendrocosticta oroborealis* in Appendix A

Sticta rhizinata Moncada & Lücking – Corticolous on *Alnus* and *Picea sitchensis*, often associated with beaches or edges of meadows. – Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

= *Sticta weigeli* auct., non (Isert ex Ach.) Vain. – This species was described from Martinique in the Caribbean, and Alaskan specimens are closer to the Colombian *S. rhizinata* (SPRIBILLE et al. 2020). – Mendenhall Glacier (MCCULLOUGH 1965); Ketchikan area, Ward L (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map); Yakutat Forelands (SHEPHARD 1995); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002, from “mosses over boulder”); Shumagin Isls, Simeonof Isl (DANIÉLS et al. 2004); SE Alaska (DILLMAN 2004); Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018).

Sticta torii Ant. Simon & Goward – Corticolous on *Alnus*, *Malus* or *Picea* in hypermaritime regions. – Coronation Isl, Egg Harbor (**type** – SIMON et al. 2018).

Sticta weigeli → ***Sticta rhizinata***

Sticta wrightii → ***Dendrocosticta gelida***

#*Stigmidium beringicum* Zhurb. & Triebel – On *Stereocaulon* spp. – Portage Glacier area, near Bayron Glacier (**type**); Yakutat; Wrangell Saint Elias Park and Preserve (ZHURBENKO & TRIEBEL 2008); Wrangell-Saint Elias Park and Preserve, Nizina R (ZHURBENKO 2010); Glacier Bay NP: Dundas Bay, East Arm, West Arm (SPRIBILLE et al. 2020).

#*Stigmidium conspurcans* (Th. Fr.) Triebel & R. Sant. – On *Psora rubiformis*. – Interior Alaska (LAURSEN & SEPPELT 2009); White Pass (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

- #**Stigmidium frigidum** (Sacc.) Alstrup & D. Hawksw. – On *Thamnomelia vermicularis*. – Alaska (ALSTRUP & HAWKSWORTH 1990); Brooks Range, headwaters of Atigun R near mi 248, Dalton Hwy (ZHURBENKO 2012).
- #**Stigmidium lobariae** Zhurb. & Etayo – On *Lobaria pulmonaria*. – Kenai Peninsula, rd to Exit Glacier (**type** – ZHURBENKO & ETAYO 2012).
- #**Stigmidium microcarpum** Alstrup & J. C. David – On *Flavocetraria cucullata*. – Kobuk Valley Wilderness (ZHURBENKO 2009a).
- #**Stigmidium mycobilimbiae** Cl. Roux et al. – On *Bilimbia lobulata*. – Barter Isl near Beaufort Sea coast (ZHURBENKO 2009a).
- #**Stigmidium peltideae** (Vain.) R. Sant. – On *Peltigera canina*. – Bering Strait, Little Diomed Isl (ALSTRUP 2004); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- #**Stigmidium pseudopeltideae** Cl. Roux & Triebel – On *Peltigera* spp. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Chilkoot Trail (SPRIBILLE et al. 2010).
- #**Stigmidium pumilum** (Lettau) Matzer & Hafellner – On *Physcia caesia* (thallus). – Brooks Range, Endicott Mtns, Sukakpak Mtn (DILLMAN et al. 2012).
- #*Stigmidium schaeferi* → [Appendix A](#)
- #**Stigmidium solorinarium** (Vain.) D. Hawksw. – On *Solorina bispora*. – North Slope, Franklin Bluffs; Brooks Range foothills, Sagwon Hills; Kobuk Valley Wilderness (ZHURBENKO 2009b).
- #**Stigmidium squamariae** (B. de Lesd.) Cl. Roux & Triebel – On *Lecanora polytropa*. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).
- #**Stigmidium tabacinae** (Arnold) Triebel – On *Toninia tristis*. – Brooks Range, Philip Smith Mtns: S of Atigun R, Sukakpak Mtn (DILLMAN et al. 2012).
- Strangospora microhaema** (Norman) R. Anderson – Corticolous on *Populus*. – Katmai NPPr, Naknek L (MCCUNE et al. 2018).
- Synalissa ramulosa** (Bernh.) Körb. – On calcareous (HCl+) rock. – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018)
- #*Szygospora bachmannii* → **#Zyzygomyces bachmannii**
- #*Szygospora physciacearum* → **#Zyzygomyces physciacearum**
- Szczawinskia tsugae** A. Funk – Corticolous, mainly on *Tsuga* twigs, but also on *Alnus* and *Malus fusca*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017a & b); Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

– T –

- #**Taeniolella beschiana** Diederich – On basal squamules of *Cladonia* spp. – 140 km E of Kotzebue, Kobuk Valley Wilderness; coast of Norton Sound, Newton Pk; Toolik L (ZHURBENKO & ALSTRUP 2004); Interior Alaska (LAURSEN & SEPPELT 2009); White Pass (SPRIBILLE et al. 2010); Seward Peninsula, Newton Pk; 7 km ESE of Nome; Toolik L; Howe Isl; Great Kobuk Sand Dunes; Susitna R;

Fairbanks; Goldstream Valley; Fairbanks area, Skyline Ridge; Tanana R, Bonanza Cr; Denali NPPr (ZHURBENKO & PINO-BODAS 2017).

#**Taeniolella christiansenii** Alstrup & D. Hawksw. – On *Stereocaulon glareosum*. – Seward Peninsula, 7 km NE of Nome, Newton Pk (ZHURBENKO 2010).

#**Taeniolella pertusariicola** D. Hawksw. & H. Mayrhofer – On *Pertusaria bryontha*. – Interior Alaska (LAURSEN & SEPPELT 2009).

#**Taeniolella rolfii** Diederich & Zhurb. – On *Cetraria aculeata* (lobe tips). – Kobuk Valley NP (ZHURBENKO 2009a).

Tephromela aglaea → **Calvitimela aglaea**

Tephromela armeniaca → **Calvitimela armeniaca**

Tephromela atra (Huds.) Hafellner – Saxicolous, also reported once from trees (THOMSON 1979). – Blueberry L CG (THOMSON & AHTI 1994); SE Alaska (O'CLAIR et al. 1996); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Lake Clark NP, Clam Cove (DILLMAN 2003); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

= *Lecanora atra* (Huds.) Ach. – Cape Lisburne (ROTHROCK 1884); Cape Lisburne (MACOUN 1902); Port Wells (CUMMINGS 1904); Unalaska Isl, Unalaska (DEGELIUS 1937); Camp Eielson (WEBER & VIERECK 1967); Amchitka Isl (WEBER et al. 1969); Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979).

Tephromela atrocaesia → **Appendix A**

Tetramelas chloroleucus (Körb.) A. Nordin – Corticolous on *Abies*, *Alnus*, *Picea sitchensis*, *Populus balsamifera* and *Tsuga heterophylla* and lignicolous. – Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020, as aff.).

= *Buellia chloroleuca* Körb. – Noatak NPr (MCCUNE et al. 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010).

Tetramelas geophilus (Flörke ex Sommerf.) Norman – On moss and over other lichens.

= *Buellia geophila* (Flörke ex Sommerf.) Lyngby – Alaska (THOMSON 1997: map).

= “*Buellia parasema triphragmia* (Nyl.) Th. Fr.” – Orca; St Michael (CUMMINGS 1904). Synonymy after WESTBERG et al. (2021).

Tetramelas insignis (Nägeli ex Hepp) Kalb – Muscicolous in alpine tundra. – Lake Clark NPPr, Portage L; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, headwaters of Johnson R (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020);

= *Buellia insignis* (Nägeli ex Hepp) Th. Fr. – Katmai NPPr, Malone L (MCCUNE et al. 2018).

= “*Lecidea disciformis* f. *insignis* (Naeg.)” – Lawrence-Insula; Port Clarence (NYLANDER 1887).

Tetramelas papillatus (Sommerf.) Kalb – Terricolous and over plant detritus and dead mosses, and also reported from rock. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Buellia papillata* (Sommerf.) Tuck. – Alaska (CUMMINGS 1904); Barrow; Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Pt Barrow; Anaktuvuk Pass; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); SE Alaska (GEISER et al. 1994a: map); Thompson Pass; Fielding L (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); LeConte Bay (GEISER et al. 1998); Alaska Hwy, mi 1270, Ten Mile Cr; Tanana R bridge, 2 km W of Tetlin Junction (TALBOT et al. 2007).

#***Tetramelas pulverulentus*** (Anzi) A. Nordin & Tibell – On *Physconia muscigena*. – Brooks Range, S of Atigun R; Brooks Range, Sukakpak Mtn (DILLMAN et al. 2012).

= *Buellia pulverulenta* (Anzi) Jatta – S of Wainwright, Kaolak R (HAFELLNER 1979); Alaska (THOMSON 1997: map).

Tetramelas triphragmioides (Anzi) A. Nordin & Tibell – Corticolous and lignicolous. – Alaska (MCCUNE 2017b); Katmai NPPr, Headwaters Cr; Lake Clark NPPr, Portage L; Lake Clark NPPr, Pickerel L; Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

= *Buellia triphragmioides* Anzi – Alaska (IMSHAUG 1951).

Thalloidima arcticum (Timdal) Timdal – Terricolous.

= *Toninia arctica* Timdal – Sukakpak Mtn; other Alaskan localities (TIMDAL 1991b: map).

Thalloidima candidum → [Appendix A](#)

Thalloidima opuntiodes (Vill.) Kistenich et al. – Terricolous on soil over rock.

= *Toninia opuntiodes* (Vill.) Timdal – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Thalloidima sedifolium (Scop.) Kistenich et al. – Terricolous on soil, often calcareous, and in dry regions. – Glacier Bay NP: East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020).

= *Toninia sedifolia* (Scop.) Timdal – Alaska (TIMDAL 1991b: map); Fielding L (THOMSON & AHTI 1994); Alaska (BRODO et al. 2001); Denali NPPr (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr, Camel's Hump (MCCUNE et al. 2018).

= *Toninia caeruleonigricans* auct., non (Lightf.) Th. Fr. – Ogotoruk Cr drainage (JOHNSON et al. 1966); Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Copper R; Tanana R (MURRAY et al. 1983); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Alaska (THOMSON 1997: map). Synonymy after TIMDAL (1991b).

#***Thamnogalla crombiei*** (Mudd) D. Hawksw. – On *Thamnolia vermicularis*, forming galls. – St Paul Isl (HAWKSWORTH 1980); Kotzebue; Great Kobuk Sand Dunes; Seward Peninsula, Bering Land Bridge NPr (ZHURBENKO 2012); Kenai Peninsula (LORD et al. 2013); Bering Strait District, Ukinyik Cr Drainage (ZHURBENKO & OHMURA 2018).

Thamnolia subuliformis → [Thamnolia vermicularis](#)

Thamnolia taurica → [Appendix A](#)

Thamnolia tundrae Onuþ-Brännström & Tibell – On soil. – Aleutians, Tigalda Isl (ONUÐ-BRÄNNSTRÖM et al. 2018, authors as ‘Brännström & Tibell’).
= *Thamnolia vermicularis* subsp. *tundrae* (Onuþ-Brännström & Tibell) P. M. Jørg. See JØRGENSEN (2019) for notes on nomenclature. – Aleutians (JØRGENSEN 2019).

Thamnolia vermicularis (Sw.) Schaer. s. lat., **new species in sense of ONUÐ-BRÄNNSTRÖM et al. (2018) not specified** – Terricolous in heath and on alpine turf, sometimes sprawling over rock faces. JØRGENSEN (2019) considered the clades within *Thamnolia vermicularis* s. lat. to be best treated as subspecies, but ONUÐ-BRÄNNSTRÖM et al. (2018) and LÜCKING et al. (2021) recognized these at the species level, an approach we follow here. As these species are only separated by DNA sequence data all records except the sequenced records published by ONUÐ-BRÄNNSTRÖM et al. (2018) are here included in *T. vermicularis* s. lat. – Alaska, ‘common’ (MANN 1868; TURNER 1886); Pt Barrow (GRAY 1885); Lawrence-Insula; Port Clarence (NYLANDER 1887); Port Clarence (ALMQUIST 1887); Port-Clarence (HUE 1890); Taku (CUMMINGS 1892b); Pribilof Isls (MACOUN 1899); Port Etches; Unalaska (MACOUN 1902); Umiat, valley of Colville R (CUMMINGS 1904); 30 mi inland from Camden Bay (MERRILL 1924b); Alaska (RÄSÄNEN 1933); Unalaska Isl, Unalaska; Attu Isl; St Paul Isl (DEGELIUS 1937); Alaska (PALMER & ROUSE 1945); Kotzebue; Mt McKinley NP (HANSON 1950); Umiat, valley of Colville R (HERRE 1950a); Barrow (SCHOLANDER et al. 1952); Nome (HANSON 1953); “Alaska med Aleuterna Pribiloföarna” (HASSELROT 1953); Juneau icefield nunatak (HEUSSER 1954); near Juneau, Taku Glacier valley (HEUSSER et al. 1954); Port Heiden; Volcano Veniamin; Kvichak Moraine; Stampede; Kasigluk (HOWARD 1958); Chandler L (WIGGINS & MACVICAR 1958); Kasigluk near Dry L (SATÔ 1959a); Alaska, 4 localities (SATÔ 1959b); Valley of the Okpilak R at Okpilak L near Mt Michelson; S of Wainwright, Kaolak R (THOMSON 1960); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Pt Barrow; flanks of Contact Cr Mtn; L Peters; Ogotoruk Cr; St Matthew Isl; Hooper Bay; Steese Hwy, Eagle Summit; White Mts, the limestone ridge (KROG 1962); Riley Cr Trail; Savage R CG (HOWARD 1963); mtn W of Wiseman (HOWARD 1963; MURRAY 1974); Alaska, 25 localities (SATÔ 1963); Alaska (SATÔ 1965a,b; maps); Firth R Valley (DREW & SHANKS 1965) Mendenhall Glacier; Juneau Ice Field (McCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Mt Eielson; McKinley Bar (WEBER & VIERECK 1967); Alaska Range, Dry Cr (VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Puritan Cr; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Denali Hwy, mi 28–37; Denali NP, Savage R; Denali NP, Wonder L; base of Rainbow Mts, E of Richardson Hwy; White Mts, limestone ridge between Beaver Cr and Fossil Cr; Steese Hwy, Eagle Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Roberts Mtn; Nunivak Isl, Lake where the geese don’t fly; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968, baeomycesic acid strain); Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Anchorage area, headwaters of Rabbit Cr; Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, Skilak L; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Denali Hwy, mi 37; Richardson Hwy, Darling Cr; base of Rainbow Mts, E of Richardson Hwy; White Mts, Beaver Cr; Steese Hwy, Cleary Summit;

Steese Hwy, Eagle Summit; Kotzebue (KROG 1968, thamnolic acid strain); Pinguicula Lake", 23 km SE of Karluk, Kodiak Isl (KROG 1969); central Alaska Range (REGER & PÉWÉ 1969); Amchitka Isl (WEBER et al. 1969: "all material fluoresces under ultraviolet light"); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975b); Barrow (WEBBER 1978); Barrow (WILLIAMS et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Colville R near Umiat; Circular Marsh near Barrow; 6 mi SSW of Barrow, Imiksonn L; 6.5 mi SSW of Barrow Base, near Loon L; Pt Barrow; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); thaw lake plain near Barrow (BILLINGS & PETERSON 1980); Arey Cr; Barter Isl; Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Prudhoe Bay region (WALKER 1985); Arrigetch Cr valley (COOPER 1986b); by camp in Cantwell; Denali NP, Polychrome Pass; Denali NP, on the rd to Horseshoe L; Denali NP, slope N of Station Primrose (SCHINDLER 1987); Chikuminuk L (THOMSON & DOELL 1989); Amchitka Isl, Rifle Range Pt (THOMSON & SOWL 1989); St Paul Isl (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Prudhoe Bay region (WALKER & EVERETT 1991, as s. lat.); Chisik Isl (TALBOT et al. 1992); Imnavait Cr (HAHN et al. 1993, 1996); Eagle Summit; Mt Fairplay; Thompson Pass; Sheep Mtn (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Imnavait Cr watershed, Philip Smith Mts (LANGE et al. 1998, including *T. subuliformis*); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Izembek Refuge, near Frosty Pk; Cold Bay (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Toolik L (GOUGH et al. 2008); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Alaska (NELSEN & GARGAS 2009); Chugach NF (DERR 2010); Chilkoot Pass; White Pass (SPRIBILLE et al. 2010); Kasatochi Isl (TALBOT et al. 2010a); Unalaska Isl (TALBOT et al. 2010b); Dalton Hwy (LANG et al. 2012); Chugach ('Chugah') State Park; Kenai Peninsula (LORD et al. 2013); Denali NPPr (NELSON et al. 2015a; STEHN et al. 2015); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP; Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020); Hagemeister Isl (WALSH & GOWARD 2021).
 = "*Cladonia vermicularis* Ach." – "Alaska and the adjacent region", no locality given (ROTHROCK 1884).
 ? = "*Thamnolia vermicularis* f. *gracilescens*" – St Paul Isl (MACOUN 1899).
 = *Thamnolia subuliformis* (Ehrh.) W. L. Culb. – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); St Paul Isl, behind town of St Paul (NASH 1977); Haul Rd, Toolik Upland Rd Site, Haul Rd, Franklin Buffs Site, Haul Rd, Coastal Site

(WEBBER et al. 1978); Barrow (WILLIAMS et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Barter Isl; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Imnavait Cr (WALKER et al. 1989); Amchitka Isl (THOMSON & SOWL 1989); St Paul Isl, by the water towers; Katmai NP, Hammersly L; Denali NP, on the rd E of Savage R (SCHINDLER 1990); Hagemester Isl (TALBOT et al. 1990); Central Arctic coastal plain (WALKER et al. 1991); Chisik Isl (TALBOT et al. 1992); Mt Alyeska; Eagle Summit; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Chugach NF (DEVELICE et al. 1999); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Seward Peninsula (HOLT et al. 2008); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

= *Thamnolia vermicularis* var. *subuliformis* (Ehrh.) Schaer. – Terricolous on tundra and in heath. – Metlakatla; S. Lawrence Isl; Unalaska; Cape Nome (CUMMINGS 1904); Barter Isl (COPPINS 1981).

= *Thamnolia subvermicularis* Asahina – Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Alaska, 10 localities (SATÔ 1959b); Alaska, 25 localities (SATÔ 1963); Alaska (SATÔ 1965a & b: maps).

Thamnolia vermicularis (Sw.) Schaer. s.str. – This is the correct name for the members of the clade treated as *T. subuliformis* s.str. by ONUȚ-BRÄNNSTRÖM et al. (2018); see JØRGENSEN (2019).

= “*Thamnolia subuliformis* s.str.” sensu ONUȚ-BRÄNNSTRÖM & Tibell – Unimak Isl; Koyukuk Canyon [“Canjon”]; Wiseman-Atigun Pass [“Antigu”]; Selby and Narvak Lakes; Summit L (ONUȚ-BRÄNNSTRÖM et al. 2018).

Thelenella modesta (Nyl.) Nyl. – Corticolous. – Katmai NPPr, Naknek L (MCCUNE et al. 2018).

Thelenella muscorum (Fr.) Vain. – Muscicolous or over humus, also over moribund thallus of *Peltigera aphthosa* aggr.

= *Chromatochlamys muscorum* (Fr.) H. Mayrhofer & Poelt – Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b).

= *Microglæna muscorum* (Fr.) Th. Fr. – Pitmegea R, 15 mi upstream from Cape Sabine (THOMSON 1979).

Thelenella pertusariella (Nyl.) Vain. – Corticolous on *Salix*. – Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

Thelidium aeneovinosum (Anzi) Arnold – Saxicolous on calcareous rock. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979; THOMSON 1997).

Thelidium areolatum J. W. Thomson – Saxicolous on seashore rocks. – Raspberry Isl, Port Vita (THOMSON 1950a).

Thelidium auruntii (A. Massal.) Kremp. – Saxicolous.

= *Verrucaria auruntii* A. Massal. – Port Clarence (NYLANDER 1887; HUE 1892).

Thelidium fontigenum A. Massal. – Saxicolous on seashore limestone. – Glacier Bay NP: East Arm (SPRIBILLE et al. 2020, as aff.).

Thelidium incavatum Nyl. ex Mudd – Saxicolous on limestone crags behind beach. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

Thelidium minutulum Körb. – Saxicolous on calcareous rocks. – Alaska (THOMSON 1997: map); Lake Clark NPPr; Saddle Mtn (MCCUNE et al. 2018).
= *Thelidium acrotellum* Arnold – Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979).

Thelidium papulare (Fr.) Arnold – Saxicolous on calcareous rocks. – Interior Alaska (THOMSON 1997: map).

Thelidium pyrenophorum (Ach.) Mudd – Saxicolous on calcareous rock. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).
= *Verrucaria pyrenophora* Ach. – Port Clarence (NYLANDER 1887; HUE 1892).

Thelidium submethorium (Vain.) Zschacke – Saxicolous on semi-inundated, slightly basic rock. – Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

Thelignya groenlandica (E. Dahl) Henssen – Saxicolous on limestone rocks on seashore. – Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Thelignya lignyota (Wahlenb.) P. M. Jørg. & Henssen – Saxicolous on rocks at the high tide line or on adjacent beaches, in glacial foreland *Dryas* mats and in alpine heaths. – Alaska (MCCUNE 2017a & b); Lake Clark NPPr, Chinitna Bay; Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020); Glacier Bay NP: Muir Glacier (FRYDAY & DILLMAN 2021b).

Thelocarpon depressellum Vain. – Lignicolous on *Cupressus nootkatensis*. – Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Thelocarpon epibolum Nyl. **variety not specified** – On soil. – Lake Clark NPPr, NW end of Turquoise L (MCCUNE et al. 2018); Parks Hwy, Summit L (HAFELLNER 2021).

#**Thelocarpon epibolum** Nyl. var. **epibolum** – On *Peltigera aphthosa* aggr. and *Solorina crocea*. – White Pass (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).

#**Thelocarpon epibolum** var. **epithallinum** (Leight.) G. Salisb. – On *Lobaria pulmonaria* and *Peltigera aphthosa* aggr. in forest habitats. – Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Interior Alaska (LAURSEN & SEPPELT 2009, without specifying variety, but following previous Laursen paper; see below); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
= *Thelocarpon epibolum* f. *longisporum* H. Magn., nom. inval. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003).

Thelocarpon immersum Fryday – On a biofilm over calcareous soil in a glacial outwash. – Glacier Bay NP: Gustavus (**type** – SPRIBILLE et al. 2020).

- Thelocarpon impressulum** Nyl. – Terricolous on once-disturbed soil, as along old roads. – Brooks Range, Endicott Mtns, Midnight Dome (DILLMAN et al. 2012); Brooks Range (MCCUNE 2017b).
- Thelocarpon laureri** (Flot.) Nyl. – Saxicolous on small granite boulder, low elevation. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b).
- Thelocarpon sphaerosporum** H. Magn. – Saxicolous.
= *Ahlesia sphaerospora* (H. Magn.) G. Salisb. – Lake Clark NP, Clam Cove (DILLMAN 2003).
- Thelocarpon superellum** Nyl. – Terricolous in *Dryas* mats in recent glacial forelands. – Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).
- Thelomma occidentale* → **Pseudothelomma occidentale**
- Thelopsis melathelia* → **Ramonia melathelia**
- Thelotrema lepadinum** (Ach.) Ach. – Corticolous on *Alnus*, *Cupressus nootkatensis*, *Malus fusca*, *Menziesia ferruginea*, *Picea sitchensis*, *Tsuga heterophylla*, *Vaccinium ovalifolium* and *Viburnum edule*. – Sheep Camp, Dyea Cr (HOWE 1911b); Kuiu Isl, Kell Bay (HERRE 1919); Kuiu Isl, Washington Bay (THOMSON 1950a); SE Alaska (GEISER et al. 1994a: map); inland of Half Moon Bay, mainland; near Sitka, along Indian R Trail; Mitkof Isl, Blind Slough (GEISER et al. 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP, Fern Harbor (RESL et al. 2015, supplementary material); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020).
- Thelotrema lepadinum* f. *rupestre* → **Appendix A**
- Thelotrema petractoides* → **Crutarndina petractoides**
- Thelotrema sueticum** (H. Magn.) P. James – Corticolous on *Alnus* along small streams. – Kenai Fjords NPPr, bay on E side and S end of McCarty Fjord; Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay; Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020 as aff.).
- Thermutis velutina** (Ach.) Flot. – Overgrowing other lichens and detritus, alpine. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017a & b).
- Tholurna dissimilis** (Norman) Norman – Corticolous on branches of *Abies* and *Picea sitchensis* in krummholz. – White Pass (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
- Thrombium epigaeum** (Pers.) Wallr. – Terricolous, especially on bare mineral soil. – Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Denali NPPr, S of the AK Range (STEHN et al. 2015).
- Thrombium mauroides* → **Appendix A**
- Tingiopsidium elaeinum** (Wahlenb. ex Ach.) Hafellner & T. Sprib. – Saxicolous, frequent on recently exposed rocks, very common in recent glacial forelands and on raised beaches. – Alaska (MCCUNE 2017a & b); Katmai NPPr, Mirror L; Lake Clark NPPr, Saddle Mtn (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier; Petersburg Borough,

Patterson Glacier; Petersburg Borough, Oasis Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Vestergrenopsis elaeina* (Wahlenb.) Gyeln. – Mendenhall Valley (MCCULLOUGH 1964); Mendenhall Glacier (MCCULLOUGH 1965); Portage Glacier CGs (THOMSON 1984: map); Mendenhall Valley; Glacier Valley N of Juneau (GEISER et al. 1994a); Portage Glacier; terminal moraine of Valdez Glacier (THOMSON & AHTI 1994); near terminus of Mendenhall Glacier; Glacier Valley N of Juneau (GEISER et al. 1998); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010, SPRIBILLE & MUGGIA 2013); Gates of the Arctic NPPr (NELSON et al. 2015b).

Tingiopsidium isidiatum (Degel.) Hafellner & T. Sprib. – Saxicolous on boulders, pebbles and snowbed rocks. – Coastal Alaska (MCCUNE 2017b); Katmai NPPr, Mirror L; Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier; Petersburg Borough, Oasis Glacier (FRYDAY & DILLMAN 2021b).

= *Vestergrenopsis isidiata* (Degel.) E. Dahl – Mt Eielson (HENSSEN 1963b); Mendenhall Valley (MCCULLOUGH 1964); Mendenhall Valley (MCCULLOUGH 1965); Alaska (THOMSON 1972a: map); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); mouth of Herbert Glacier; Mendenhall Valley (GEISER et al. 1994a: map); Mt Alyeska; Portage Glacier; Thompson Pass (THOMSON & AHTI 1994, but the Thompson Pass record = *Steineropsis alaskana*; SPRIBILLE et al. 2010); Adak Isl (TALBOT et al. 1997); Herbert Glacier terminus; Cosmos Pk, mainland; Kupreanof Isl, Sheridan Pk; Mendenhall Valley (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010, SPRIBILLE & MUGGIA 2013); Gates of the Arctic NPPr (NELSON et al. 2015b).

Toensbergia blastidiata T. Sprib. & Tønsberg – On bark of *Alnus viridis* subsp. *crispa*, *A. incana* subsp. *tenuifolia*, *A. rubra*, *Frangula purshiana*, *Malus fusca* and *Pinus contorta*. – Glacier Bay NP: Glacier Bay (**type**), Gustavus; Baranof Isl, Sitka, Beaver L, Starrigavan Bay; Kodiak Isl, Red Could R; Petersburg Borough, Mitkof Isl; Juneau Borough, Douglas Isl (SPRIBILLE et al. 2020).

Toensbergia geminipara (Th. Fr.) T. Sprib. & Resl – Terricolous on subalpine to alpine sod, or on thin, fine organic accumulations over rock. – Glacier Bay NP: Dundas Bay, Excursion Ridge, West Arm (SPRIBILLE et al. 2020).

= *Ochrolechia geminipara* (Th. Fr.) Vain. – Nome (HOWE 1913a); Nome (HOWARD 1970); Anaktuvuk Pass (MOSER et al. 1979).

= *Pertusaria geminipara* (Th. Fr.) Knight ex Brodo – Portage Glacier; Eagle Summit; Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020).

Toensbergia leucococca (R. Sant.) Bendiksby & Timdal – Corticolous on conifer twigs, common throughout forested Alaska but seldom reported. – Alaska (MCCUNE 2017a & b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018);

Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge Arm (SPRIBILLE et al. 2020).

= *Hypocenomycce leucococca* R. Sant. – Near Petersburg (GEISER et al. 1998).

= *Pycnora leucococca* (R. Sant.) R. Sant. – Chilkoot Trail, White Pass (SPRIBILLE et al. 2010).

Toninia alutacea (Anzi) Jatta – On steep calcareous rock walls. – Alaska (MCCUNE 2017b).

Toninia arctica → **Thalloidima arcticum**

Toninia aromatica → **Toniniopsis aromatica**

Toninia caeruleonigricans → **Thalloidima sedifolium**

Toninia cumulata → **Stereocaulon cumulatum**

Toninia lobulata → **Bilimbia lobulata**

Toninia opuntioides → **Thalloidima opuntioides**

Toninia philippea (Mont.) Timdal – On moist cliff face above sea. – Adak Isl (TALBOT et al. 1997).

Toninia sedifolia → **Thalloidima sedifolium**

Toninia squalescens → **Gilbertaria squalescens**

Toninia squalida (Ach.) A. Massal. – Muscicolous on rocks at edge of lake, over shallow soil accumulations and in rock crevices. – Wonder L (WEBER & VIERECK 1967); Alaska (TIMDAL 1991b: map); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Kenai Fjords NPPr, Harding Icefield Trail, ridge above Exit Glacier (MCCUNE et al. 2020); Glacier Bay NP: Dundas BayWest Arm (SPRIBILLE et al. 2020).

Toninia tristis (Th. Fr.) Th. Fr. **subspecies not specified** – Terricolous on alpine soils. – Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Amchitka Isl, main disturbed area from Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989); Eagle Summit (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Thunder Mtn, [SE Alaska] mainland (GEISER et al. 1998); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).

Toninia tristis subsp. **asiae-centralis** (H. Magn.) Timdal – Terricolous and saxicolous. – Alaska (TIMDAL 1991b: map).

Toninia tristis subsp. **canadensis** Timdal – Terricolous and saxicolous. – Alaska (TIMDAL 1991b: map).

Toninia tristis subsp. **scholanderi** (Lynge) Timdal – Muscicolous over limestone rock. – Coronation Isl (DILLMAN et al. 2012).

Toninia verrucarioides → **Toniniopsis verrucarioides**

Toniniopsis aromatica (Sm.) Kistenich et al. – Saxicolous and terricolous on limestone crags. – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Toninia aromatica* (Sm.) A. Massal. – Noatak NPr (MCCUNE et al. 2009).

Toniniopsis bagliettoana (A. Massal. & De Not.) Kistenich & Timdal – Terricolous on humus and muscicolous.

= *Bacidia bagliettoana* (A. Massal. & De Not.) Jatta – Barrow (MURRAY & MURRAY 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Pt Barrow; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Sheep Mtn

(THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Katmai NPPr, Malone L (MCCUNE et al. 2018); Glacier Bay NP: East Arm, Glacier Bay, West Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= "*Bacidia muscorum* (Sw.) Mudd" – Eureka Cr, Kantishna (WEBER & VIERECK 1967).

= "*Biatora muscorum* (Sw.) Tuckerm." – isls in Behring Strait (MACOUN 1902).

= "*Lecidea muscorum* (Sw.)." – Port Clarence (NYLANDER 1887; HUE 1891).

Toniniopsis coprodes → [Appendix A](#)

Toniniopsis subincompta auct., non (Nyl.) Kistenich et al. – Corticolous on *Alnus*, *Betula*, *Populus balsamifera* and *Salix*. The name *Toniniopsis subincompta* has been misapplied according to GERASIMOVA et al. (2021), and Alaskan material has yet to be revised to either of the two taxa they recognize as replacements, namely *Toniniopsis dissimilis* Gerasimova & A. Beck and *T. separabilis* (Nyl.) Gerasimova & A. Beck. – Glacier Bay NP: East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020).

= *Bacidia subincompta* (Nyl.) Arnold – Anaktuvuk Pass (THOMSON 1979); Anaktuvuk Pass (MOSER et al. 1979); Chisik Isl (TALBOT et al. 1992); 300 km NNW of Fairbanks; Chisik Isl; Wrangell St Elias NPPr, ca. 390 km E of Anchorage (EKMAN 1996); Alaska (THOMSON 1997: map); Tanacross Village (TALBOT et al. 2007, as "*subincompta*"); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

Toniniopsis verrucarioides (Nyl.) Kistenich et al. – On cyanolichens over calciferous rock. See also entry under *Toniniopsis coprodes* in [Appendix A](#).

= *Toninia verrucarioides* (Nyl.) Timdal – Alaska (TIMDAL 1991b: map); Brooks Range, Sukakpak Mtn; Brooks Range, S of Atigun R (DILLMAN et al. 2012).

#Torula lichenum → [Appendix A](#)

Trapelia coarctata (Sm.) M. Choisy – Saxicolous on moist acidic rock. – Alaska (THOMSON 1997: map); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP, Bartlett Cove (RESL et al. 2015, supplementary material); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, Crater Bay off of Harris Bay; Kenai Fjords NPPr, headland between two arms of Coleman Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Trapelia corticola Coppins & P. James – Lignicolous on soft wood, especially of *Betula*, also corticolous on *Picea* and *Tsuga*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Lake Clark NPPr, Pickerel L; Lake Clark NPPr, Chinitna Ranger Station; Lake Clark NPPr, W of Hatchet Pt; Lake Clark NPPr, Pickerel L (MCCUNE et al. 2018); Kenai Fjords NPPr, headland between two arms of Coleman Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).

Trapelia glebulosa (Sm.) J. R. Laundon – On rock. – Skagway (RESL et al. 2015, SCHNEIDER et al. 2016); Alaska (ORANGE 2018, based on DNA sequence generated by RESL et al. 2015).

= "*Lecanora ornata* (Nyl.) Sommerf." – "Lawrence ins." (HUE 1891). This is probably an error. Hue cites NYLANDER (1887, p. 57) but this record is from Bering Isl (Russia), not Alaska.

- Trapeliopsis flexuosa** (Fr.) Coppins & P. James – Lignicolous on weathered wood, also on worked wood and corticolous on *Abies*; a report from slate rock (GEISER et al. 1998) is likely misidentified. – Chisik Isl (TALBOT et al. 1992); near Wrangell (GEISER et al. 1994a, 1998, both referring to Herre’s record); Alaska (BRODO et al. 2001); White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Malone L; Lake Clark NPPr, Pickerel L; Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018).
= “*Lecidea flexuosa* (Fr.) Nyl.” – Wrangell (HERRE 1919; however this specimen is the type of *Lecanora alaskensis*, see MAGNUSSON 1932).
- Trapeliopsis gelatinosa** (Flörke) Coppins & P. James – Terricolous and muscicolous on tip-up and peat hags. – Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, East Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).
- Trapeliopsis glaucolepidea** (Nyl.) Gotth. Schneid. – Terricolous on fine organic matter over granitic erratic in muskeg. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
- Trapeliopsis granulosa** (Hoffm.) Lumbsch – Terricolous on soil and detritus, also commonly lignicolous. – Chisik Isl (TALBOT et al. 1992); Mt Alyeska (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).
= “*Biatora granulosa* (Ehrnb.) Mass.” – St Matthew Isl (CUMMINGS 1904).
= *Lecidea granulosa* (Hoffm.) Ach. – Hill E of rd to Kantishna (HOWARD 1963); Circular Marsh near Barrow (THOMSON 1979).
- Trapeliopsis pseudogranulosa** Coppins & P. James – Detriticolous and muscicolous on boulders and stumps, also reported as corticolous, in SE coastal forests. – Inland of Half Moon Bay, [SE Alaska] mainland (GEISER et al. 1998); Chilkoot Trail (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017a & b); Lake Clark NPPr, Portage L (MCCUNE et al. 2018); Kenai Fjords NPPr, near North Arm Nuka Bay Public Use Cabin; Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Gustavus (SPRIBILLE et al. 2020).
- Trapeliopsis viridescens** (Schräd.) Coppins & P. James – Usually on decaying trunks and stumps of large trees. The report of this species from bark by Cummings may refer to a *Biatora* species. – Denali NPPr (STEHN et al. 2015).
= *Biatora viridescens* (Schräd.) Fr. – Farragut Bay (CUMMINGS 1904).
- #Tremella cetrariicola** Diederich & Coppins – Fruiting from thalli of *Tuckermannopsis chlorophylla*. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Dundas Bay, Glacier Bay, Gustavus (SPRIBILLE et al. 2020); Alaska (DIEDERICH et al. 2022b).
- #Tremella cladoniae** Diederich & M. S. Christ. – Fruiting from thalli of *Cladonia* spp., on stick in muskeg, or corticolous on *Alnus* or *Populus balsamifera*. – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020); Juneau, Herbert R (DIEDERICH et al. 2022b).

- #**Tremella confluens** Pippola et al. – Fruiting from thalli of *Usnea longissima*. – PWS, Montague Isl (DIEDERICH et al. 2022b).
- #**Tremella hypogymniae** Diederich & M. S. Christ. – Fruiting from thalli of *Hypogymnia physodes*. – NW of Haines (GEISER et al. 1998); Brooks Range, Endicott Mtns, Midnight Dome (DILLMAN et al. 2012).
- #**Tremella nephromatis** Diederich – Fruiting from thalli of *Nephroma* spp. (including *N. parile*), corticolous on *Picea sitchensis* and *Ribes lacustre* – Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: East Arm, Gustavus (SPRIBILLE et al. 2020); Alaska (DIEDERICH et al. 2022b).
- Tremolecia atrata** (Ach.) Hertel – Saxicolous on siliceous rock. – Anaktuvuk Pass (MOSER et al. 1979); Valley of the Okpilak R at Okpilak L, near Mt Michelson (SCHWAB 1986); Hagemeister Isl (TALBOT et al. 1990); SE Alaska (GEISER et al. 1994a); Eagle Summit (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); unnamed pk W of Elbow Mtn, [SE Alaska] mainland (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Alaska (BRODO et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020).
= *Lecidea atrata* (Ach.) Wahlenb. – Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).
= *Lecidea dicksonii* auct., non (J. F. Gmel.) Ach. – Unalaska Isl, Unalaska (DEGELIUS 1937); Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Mt Eielson (WEBER & VIERECK 1967).
- #**Trichosphaeria lichenum** P. Karst. & Har. – On *Peltigera polydactylon* aggr. – Kenai Peninsula, near Chugach NF (ZHURBENKO 2009a).
- Trimmatothele perquisita** (Norman) Norman ex Zahlbr. – Saxicolous. – Ogotoruk Cr (FRYDAY 2017).
- Trimmatothelopsis dispersa** (H. Magn.) K. Knudsen & Lendemer – Saxicolous in superlittoral zone. – Glacier Bay NP: Taylor Bay (KNUDSEN & LENDEMER 2016); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).
- Tuckermannopsis americana** (Spreng.) Hale – Corticolous on conifers and *Betula*. The double n in the spelling of the genus name is part of a well-established and intentional practice in Latinization of names, and is not to be corrected to a single n (AHTI 2007b, also A. Sennikov pers. comm. to TA, 2023). – Deadman L CG (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska Hwy, mi 1240 (TALBOT et al. 2007); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).
= *Nephromopsis americana* (Spreng.) Divakar et al. – Katmai NPPr (MCCUNE et al. 2018).
= *Cetraria ciliaris* var. *atropaca* Trass – White Mts, Beaver Cr; White Mts, lower Fossil Cr (KROG 1968).
= *Cetraria halei* W. L. Culb. & C. F. Culb. – Fairbanks area (THOMSON et al. 1969); Alaska (THOMSON 1984: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Gates of the Arctic NPPr (NELSON et al. 2015b).

= *Cetraria ciliaris* var. *halei* (W. L. Culb. & C. F. Culb.) Ahti – Alaska (BRODO 1984a).

Tuckermannopsis chlorophylla (Willd.) Hale – Corticolous on *Alnus* and *Picea sitchensis* (including krummholz), lignicolous on dock and on beach logs and infrequently saxicolous. – Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Fairplay (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; Skagway area; White Pass (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Glacier Bay NP; Dundas Bay, East Arm, Excursion Ridge, Glacier Bay, Gustavus, West Arm (SPRIBILLE et al. 2020, including ‘pale, narrow-lobed morph’).

= *Cetraria chlorophylla* (Willd.) Vain. – PWS, Crab Bay; Kodiak Isl, Kodiak (DEGELIUS 1937); Mendenhall Glacier (MCCULLOUGH 1965); Juneau area, Loop Rd; Juneau area, Douglas Skibowl; Sitka area, Harbor Mtn; Sitka NM; Ketchikan area, Ward L; Ketchikan area, Saxman Village; Eagle R Valley; Anchorage, Rabbit Cr Rd; Anchorage, O’Malley Rd; Anchorage, Eastchester Swamp; Skilak L; Homer; Kenai Peninsula, Ingram Cr CG; Seward; Richardson Hwy, mi 9; PWS, Fish Bay (KROG 1968); Alaska (ESSLINGER 1973); Alaska (THOMSON 1984: map); Kenai Peninsula, Skilak L; on the street from Moose Pass to Seward (SCHINDLER 1990); Yakutat Forelands (SHEPHARD 1995); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Richardson (MURRAY 1997); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); SE Alaska (DERR et al. 2007).

= “*Cetraria sepincola chlorophylla* (Humb.) Th. Fr.” – Sitka; Yakutat (CUMMINGS 1904).

= *Nephromopsis chlorophylla* (Willd.) Divakar et al. – Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

= *Cetraria scutata* auct., non (Wulfen) Poetsch – Anchorage, Chugach Mts (HERRE 1950a); halfway up Tracy Arm, on W side (KROG 1962); N bluff of Wiseman Cr (HOWARD 1963; MURRAY 1974).

Tuckermannopsis ciliaris (Ach.) Gyeln. – Epiphytic on trees and shrubs. – Northern Alaska (BRODO et al. 2001).

= *Cetraria ciliaris* Ach. – Kodiak (CUMMINGS 1904); Adak Isl (STAIR 1948); Amchitka Isl (WEBER et al. 1969, “possibly an adventive species introduced during World War II occupation”); Amchitka Isl, Magazine Rd (THOMSON & SOWL 1989).

= *Nephromopsis ciliaris* (Ach.) Hue – Kasigluk (HOWARD 1958).

Tuckermannopsis orbata (Nyl.) M. J. Lai – Corticolous on *Abies lasiocarpa* bark near the treeline, once on low elevation *Alnus incana* in a swamp. – Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014).

= *Cetraria orbata* (Nyl.) Fink – Fish Cr drilling site (LAWSON et al. 1978, “verified by T. L. Esslinger”); Amchitka Isl, Magazine Rd; Amchitka Isl, Pistol

Range (THOMSON & SOWL 1989); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009).

Tuckermannopsis platyphylla (Tuck.) Hale – Corticolous on conifers and *Betula*. – Moon L CG (THOMSON & AHTI 1994); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); White Pass; Skagway area (SPRIBILLE et al. 2010); S Alaska (ROOT et al. 2014).

Tuckermannopsis sepincola → **Cetraria sepincola**

Tuckermannopsis subalpina → **Cetraria subalpina**

– U –

Umbilicaria americana Poelt & T. H. Nash – Saxicolous. – Denali NPPr, Coffee R valley (STEHN et al. 2015); Katmai NPPr, Cucumber L; Lake Clark NPPr, Portage L (MCCUNE et al. 2018).

Umbilicaria angulata Tuck. – Saxicolous on siliceous rock faces. – Andreanof Isls, Great Sitkin, Sand Bay Valley; PWS, Evan's Isl (LLANO 1950); Mendenhall Glacier Trail; Juneau area, Granite Basin; Talkeetna Mts, Mabel Mine; Portage Glacier; Denali Hwy, mi 28; Denali Hwy, mi 70; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Great Sitkin Isl (THOMSON 1984: map); Alaska (WEI & BIAZROV 1991: map); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay (THOMSON & AHTI 1994); N Kupreanof Isl, Hall Pk; W Baranof Isl, Warm Springs Bay; LeConte Bay, [SE Alaska] mainland (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE & CURTIS 2012: map); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).

= *Umbilicaria angulata* var. *compacta* Krog – Juneau area, Granite Basin (**type** – KROG 1968).

Umbilicaria arctica (Ach.) Nyl. – Saxicolous on acidic rock faces. – Alaska (FREY 1936: map); Brooks Range, E of Pt Barrow, L Chandler; St George Isl; St Matthews Isl; Aleutians, Amaak Isl; Atka Isl; Unalaska Isl; Kodiak Isl, Sturgeon R (LLANO 1950); Chandler L (LLANO 1950; MURRAY 1974); Juneau icefield nunatak (HEUSSER 1954); Franklin Bluffs on the Sagavanirktok R (THOMSON 1960); St Matthew Isl (KROG 1962); White Mts, Cache Mtn; Steese Hwy, Eagle Summit; Steese Hwy, Twelvemile Summit (KROG 1968); Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1984: map); Franklin Bluffs on Sagavanirktok R (WEI & JIANG 1993); SE Alaska (GEISER et al. 1994a: map); Portage Glacier (THOMSON & AHTI 1994); Mitkof Isl, Crystal Mtn; S Kupreanof Isl, Bear Claw Mtn (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls,

Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Alaska (MCCUNE 2018); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Alaska (MCMULLIN 2018: map); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

= *Gyrophora arctica* Ach. – Atka Isl (HOWE 1913a); Alaska (HADWEN & PALMER 1922); Atka Isl; Unalaska Isl; Amlia Isl (HEDRICK 1936).

= *Umbilicaria arctica* var. *diomedensis* Merrill ex Llano – Bering Straits, Diomede Isl (**type** – LLANO 1950; note that specimens cited for *U. arctica* as a whole on p. 117 are used for the photographs of var. *diomedensis* on p. 249!); Amchitka Isl, Infantry Rd (THOMSON & SOWL 1989); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998).

Umbilicaria caroliniana Tuck. – Saxicolous on acidic rock. Nomenclature after DAVYDOV et al. (2017). – E of Pt Barrow, L Peters; Kiana Kobuk R; Seward Peninsula, Cape Nome (LLANO 1950); Anaktuvuk Pass (LLANO 1950; MURRAY 1974); Colville R (THOMSON 1960); Mt Harper (KROG 1962); Alaska (THOMSON 1972a: map); Wiseman, mtn across Koyukuk R (HOWARD 1963; MURRAY 1974); White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass (THOMSON 1979); Alaska (THOMSON 1984: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic NPPr (NELSON et al. 2015b).

= *Lasallia caroliniana* (Tuck.) Davydov et al. – Colville R, at Umiat (DAVYDOV et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

Umbilicaria cinereorufescens (Schaer.) Frey – Saxicolous on siliceous rock. – E of Pt Barrow; L Peters; L Schraeder; Ikiak Puk Valley; Chandler L; Anaktuvuk Pass; Umiat (LLANO 1950; MURRAY 1974); Barrow (SCHOLANDER et al. 1952); Anaktuvuk Pass (KROG 1962); 1 mi S of Wonder L Lodge on Denali Hwy (HOWARD 1963); Wonder L (WEBER & VIERECK 1967); Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Anchorage, Rabbit Cr Rd; Denali Hwy, mi 70; Denali NP, Savage R; Denali NP, Wonder L; White Mts, headwaters of Sheep Cr; White Mts, between Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); Anaktuvuk Pass; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map); Chisik Isl (TALBOT et al. 1992); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

Umbilicaria coriacea Imshaug – Saxicolous on siliceous rock. The nomenclature is discussed in [Appendix B](#).

= *Agyrophora rigida* (Du Rietz) Llano – L Schrader; L Peters; Chandler L; Umiat (LLANO 1950); Signal Mtn NW of Old John L (LLANO 1950); Anaktuvuk Pass (LLANO 1950; MURRAY 1974); Juneau Ice Field (MCCULLOUGH 1965); Alaska Range, Dry Cr (VIERECK 1967); central Alaska Range (REGER & PÉWÉ 1969); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b).
= *Gyrophora rigida* Du Rietz – “Kadiak” (DU RIETZ 1928).

= *Umbilicaria rigida* (Du Rietz) Frey, non *U. rigida* Hoffm. – Talkeetna Mts, Bald Mtn Ridge; mtn ridge, Eagle R; Denali Hwy, mi 28; Denali Hwy, mi 70; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, Cache Mtn (KROG 1968); Portage (SCHINDLER 1987); Mendenhall Valley (GEISER et al. 1994a); Ft Richardson (MURRAY 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Arey Cr (COPPINS 1981); Mendenhall Valley (GEISER et al. 1998); Bering Land Bridge NPr (HOLT et al. 2007); Mt Fairplay (TALBOT et al. 2007); Chugach NF (DERR 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Alaska (MCCUNE 2018); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).

Umbilicaria cylindrica (L.) Delise ex Duby – Saxicolous on acidic rocks. – St Paul Isl; St George Isl (MACOUN 1902); Unalaska (CUMMINGS 1904); St Paul Isl (FREY 1936; DEGELIUS 1937); Anaktuvuk Pass (LLANO 1950; MURRAY 1974); E of Pt Barrow, L Schrader; L Peters; Ikiak Puk Valley; Diomedes Isls; St Paul Isl; St George Isl; Near Isls, Attu; Andreanoff Isls, Amlia; Atka; Great Sitkin, Sand Bay hills; Fox Isls, Unalaska; Captains Bay; Kodiak, near NOB [Naval Operating Base] runway (LLANO 1950); Juneau Ice Field (MCCULLOUGH 1965); Alaska Range, Dry Cr (VIERECK 1967); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; Northern Cook Inlet area, Mountain ridge, Eagle R; Northern Cook Inlet area, headwaters of Rabbit Cr; Northern Cook Inlet area, Turnagain Arm, Bird Cr Ridge; Kenai Peninsula, S of Hidden L; Kenai Peninsula, Granite Cr Ridge; W of Seward, Marathon Mtn; Denali Hwy, mi 0–37; White Mts, Lion Pk; White Mts, Cache Mtn; Nunivak Isl, Nash Harbour; Nunivak Isl, Roberts Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); central Alaska Range (REGER & PÉWÉ 1969); Amchitka Isl, near Cyril Cove (WEBER et al. 1969); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b); Amchitka Isl, Infantry Rd (THOMSON & SOWL 1989); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a); Mt Fairplay (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Adak Isl (TALBOT et al. 1997); Mt Roberts, near Juneau (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai

Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

= *Gyrophora cylindrica* (L.) Ach. – "Pribiloföarna och Aleuterna" (HASSELROT 1953).

= *Umbilicaria cylindrica* var. *delisei* (Despr.) Nyl. – Pribilof Isls (MACOUN 1899, as '*delisoei*').

Umbilicaria decussata (Vill.) Zahlbr. – Saxicolous, especially near bird perches. – L Chandler; Anaktuvuk Pass (KROG 1968; MURRAY 1974); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Gates of the Arctic NPPr (NELSON et al. 2015b, as s. lat.).

= *Omphalodiscus decussatus* (Vill.) Schol. – Anaktuvuk Pass; L Chandler (LLANO 1950; MURRAY 1974); E of Pt Barrow (LLANO 1950); Chandler L (SCHOLANDER et al. 1952); Alaska (THOMSON 1984: map).

Umbilicaria deusta (L.) Baumg. – Saxicolous. – E of Pt Barrow, Ikiak Puk Valley; PWS, Evan's Isl (LLANO 1950); McKinley Bar (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Little Susitna R; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Independence Mine; Kenai Peninsula, Skilak L; Kenai Peninsula, Granite Cr Ridge; Richardson Hwy, mi 24; Denali Hwy, mi 0–37; White Mts, Cache Mtn; Seward Peninsula, King Mtn (KROG 1968); Alaska (THOMSON 1984: map); Tikchik L (THOMSON & DOELL 1989); SE Alaska (GEISER et al. 1994a: map); Thompson Pass (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Ft Wainwright (RACINE et al. 1997); N Kuiu Isl, Rowan Mtn, edge of Swan L, [SE Alaska] mainland (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr, Hammersly L; Katmai NPPr, Malone L; Lake Clark NPPr, Tuxedni Bay (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

= *Umbilicaria flocculosa* Hoffm. – Behring Strait (MACOUN 1902). Synonymy after WESTBERG et al. (2021).

Umbilicaria dura McCune – Saxicolous on non-calcareous rock. – Lake Clark NP, above Turquoise L (MCCUNE 2018; MCCUNE et al. 2018).

Umbilicaria havaasii Llano – Saxicolous in alpine tundra and heath. – Adak Isl (TALBOT et al. 1997); W of N Fk Bradfield R (GEISER et al. 1998); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).

Umbilicaria herrei Frey – Saxicolous. – Katmai NPPr, Hammersly L; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020).

Umbilicaria hirsuta (Sw. ex Westr.) Hoffm. – Saxicolous on acidic rocks. – Muir Glacier (CUMMINGS 1904); E of Pt Barrow, Scholander L (LLANO 1950); Anaktuvuk Pass (LLANO 1950; KROG 1968; MURRAY 1974); Muir Glacier; L Schraeder (KROG 1968); Alaska (THOMSON 1984: map); Muir Glacier area (GEISER et al. 1994a, 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska (KOFRANEK & MCCUNE 2008).

Umbilicaria hyperborea (Ach.) Hoffm. **variety not specified** – Saxicolous on acidic rocks. – Unalaska (ROTHROCK 1884); St Paul Isl (MACOUN 1899, as

'hyporea'); Muir Glacier; summit of White Pass; Kodiak Isl, Sturgeon R; Hall Isl; Cape Nome; Seward Peninsula (CUMMINGS 1904); Glacier Bay, Muir Glacier; Unalaska Isl, Unalaska (DEGELIUS 1937); Anaktuvuk Pass (LLANO 1950; MURRAY 1974); Juneau Ice Field, Camp 12; 25–50 mi S of the Arctic Sea, Sadlerochit R; L Schraeder; Ikiak Puk Valley; L Noluck; Choris Peninsula; Seward Peninsula; Cape Nome; Bering Sea, Hall Isl; Glacier Bay; St Paul Isl; Atka Isl; Adak Isl; Great Sitkin, Sand Bay Valley; Attu Isl; Unalaska Isl; Iliu Link R; Kodiak Isl, Sturgeon R; White Pass; Muir Glacier; Flat (LLANO 1950); Juneau icefield nunatak (HEUSSER 1954); Port Heiden; Stampede (HOWARD 1958); Ogotoruk Cr; St Matthew Isl; Mt Harper; Porcupine Dome (KROG 1962); Mendenhall Glacier; Juneau Ice Field (MCCULLOUGH 1965); Alaska Range, Dry Cr (VIERECK 1967); Mt Eielson (WEBER & VIERECK 1967); Mendenhall Glacier Trail; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Talkeetna Mts, Independence Mine; Talkeetna Mts, Bald Mtn Ridge; headwaters of Rabbit Cr; Eagle R Valley; Turnagain Arm, Bird Cr Ridge; Portage Glacier; Kenai Peninsula, Skilak L; Kenai Peninsula, S of Hidden L; W of Seward, Marathon Mtn; Richardson Hwy, mi 24; Richardson Hwy, mi 45; Denali Hwy, mi 0–37; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; White Mts, Lion Pk; White Mts, headwaters of Sheep Cr; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Steese Hwy, Eagle Summit; Circle Hot Springs; N of Nome, Anvil Pk; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); central Alaska Range (REGER & PÉWÉ 1969); Anaktuvuk Pass (NASH 1977); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); by Portage (SCHINDLER 1987); Chikuminuk L; Nishlik L (THOMSON & DOELL 1989); St Paul Isl, SW coast; Denali NP, slope above Eielson Visitor Center (SCHINDLER 1990); Hagemeister Isl (TALBOT et al. 1990); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Mt Alyeska; Eagle Summit; Blueberry L CG; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Adak Isl (TALBOT et al. 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Mt Fairplay (TALBOT et al. 2007); Interior Alaska (LAURSEN & SEPPELT 2009); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Alaska (MCCUNE 2018); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021b).
= *Gyrophora hyperborea* (Ach.) Ach. – “Alaska med Aleuterna” (HASSELROT 1953).

Umbilicaria hyperborea var. **hyperborea** – Saxicolous on siliceous rock. – Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Denali NPPr (STEHN et al. 2015).

Umbilicaria hyperborea var. **radicula** Zett. – Saxicolous on siliceous rock. – Alaska Range, Dry Cr (VIERECK 1967); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010: 196); Denali NPPr (STEHN et al. 2015).

Umbilicaria krascheninnikovii (Savicz) Zahlbr. – Saxicolous in tundra. – Nash Harbour (KROG 1968); Alaska (BRODO et al. 2001); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Brooks Range, Atigun Pass (KASANKE 2019).
= *Omphalodiscus krascheninnikovii* (Savicz) Schol. – Anaktuvuk Pass (LLANO 1950; MURRAY 1974); Alaska (THOMSON 1984: map).

Umbilicaria leiocarpa DC. – The only Alaska record is from “timber”.
= *Agyrophora leiocarpa* (DC.) Gyeln. – Amchitka Isl, main disturbed area from Rifle Range Pt to Charlie Runway (THOMSON & SOWL 1989).
? = *Agyrophora atropuina* (Schaer.) Nyl. – Unalashka (HUE 1891).
? = *Umbilicaria atropuina* (Schaer.) Schaer. – Unalashka (NYLANDER 1863a, p. 6). This name as used by Nylander can be interpreted as *U. leiocarpa* according to LLANO (1950), but it is not clear if it is a heterotypic synonym or misapplied name.

Umbilicaria lyngei Schol. – Saxicolous. – Talkeetna Mts, Bald Mtn Ridge; Denali Hwy, mi 28; Denali Hwy, mi 70; Denali NP, Savage R; White Mts, Cache Mtn (KROG 1968); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Denali NPPr, N of the AK Range (STEHN et al. 2015); Alaska (MCCUNE 2018); Lake Clark NPPr, Turquoise L (MCCUNE et al. 2018).
= *Agyrophora lyngei* (Schol.) Llano – Anaktuvuk Pass (LLANO 1950; MURRAY 1974); E of Pt Barrow, L Peters (LLANO 1950); Alaska (THOMSON 1984: map); Sheep Mtn (THOMSON & AHTI 1994).

Umbilicaria mammulata (Ach.) Tuck. var. **magnaeva** Llano – On shaded rocks, sandstones, granites, slates. – Diomed Isl (**type** – LLANO 1950; KROG 1968; THOMSON 1984, without reference to variety).

Umbilicaria muehlenbergii (Ach.) Tuck. – Saxicolous. – Between Pt Barrow and MacKenzie R (KROG 1968); Pt Barrow (WEI & BIAZROV 1991); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000).
= *Actinogyra muehlenbergii* (Ach.) Schol. – Between Pt Barrow and Mackenzie R (LLANO 1950); Thompson Pass (THOMSON & AHTI 1994).
= “*Umbilicaria muehlenbergii alpina* Tuck.” – Alaska (CUMMINGS 1904).

Umbilicaria multistrata McCune – Saxicolous on non-calcareous rock. – Denali Hwy, mi 28; Seward Peninsula, Rainbow Cr; Lake Clark NP, Turquoise L (**type**); Kenai Fjords NP, Harding Icefield Trail; above Thompson Pass, E of Valdez (MCCUNE 2018); Kenai Fjords NPPr, Harding Icefield Trail; Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020).

Umbilicaria nylanderiana (Zahlbr.) H. Magn. – Saxicolous. Widely recognized as a distinct species in Europe, but requiring further study. – Chandler L; E of Pt Barrow; Brook Mtns, L Schraeder; Choris Peninsula; Behring Sea, Hall Isl (LLANO 1950, who listed specimens fitting the description of *U. nylanderiana*

but nonetheless treated it as a synonym of *U. hyperborea*); Chandler L (MURRAY 1974).

Umbilicaria pensylvanica Hoffm. – Saxicolous on acidic rock. Nomenclature after DAVYDOV et al. (2017). – Kenai Peninsula, Skilak L; Denali NP, Savage R; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit (KROG 1968).

= *Lasallia pensylvanica* (Hoffm.) Llano – Wiseman; Anaktuvuk Pass; Walker L (LLANO 1950; MURRAY 1974); E of Pt Barrow, L Peters; L Schraeder; 25–50 mi S of Arctic Sea, Sadlerochit R (LLANO 1950); Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979); Alaska (THOMSON 1984: map); Mt Fairplay (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); 15 km WNW of Tanacross Village; Mt Fairplay (TALBOT et al. 2007); Chugach NF, Crow Pass trail (DERR 2010: 250); Kasatochi Isl (TALBOT et al. 2010a); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr, Cucumber L; Lake Clark NPPr (MCCUNE et al. 2018).

Umbilicaria phaea Tuck. – Saxicolous. – Alaska (THOMSON 1984: map); Amchitka Isl, Baraba Pt (THOMSON & SOWL 1989); Chisik Isl (TALBOT et al. 1992); Alaska (BRODO et al. 2001); St Paul Isl (TALBOT et al. 2001); Noatak NPr (MCCUNE et al. 2009); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b, as s. lat.); Alaska (MCMULLIN 2018: map).

Umbilicaria polyphylla (L.) Baumg. – Saxicolous on acidic rocks. – Unalaska Isl (MACOUN 1902); PWS, Evan's Isl, about 1.5 mi NW of Port San Juan (LLANO 1950); W of Seward, Marathon Mtn; Steese Hwy, Twelvemile Summit (KROG 1968); Alaska (THOMSON 1984: map); Mt Fairplay (THOMSON & AHTI 1994); Adak Isl (TALBOT et al. 1997); Mt Riley Trail, SE of Haines (GEISER et al. 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl (TALBOT et al. 2001); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Kenai Fjords NPPr, Skilak nunatak within Harding Icefield (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).

= *Gyrophora anthracina* (Wulfen) Ach. – Unalaska Isl (HEDRICK 1936).

= *Umbilicaria anthracina* (Wulfen) Schaer. – Kodiak (CUMMINGS 1904).

Umbilicaria polyrhiza (L.) Fr. – Saxicolous on granite. – Tongass NF, Lower Dewey L Trail, near Stargill's Landing (NASH et al. 2006); Kenai Fjords NPPr, spit across James Lagoon (MCCUNE et al. 2020).

Umbilicaria proboscidea (L.) Schrad. – Saxicolous. – St Matthew's Isl (ROTHROCK 1884); Pribilof Isls (MACOUN 1899); St Paul Isl; St George Isl; St Lawrence Isl; St Matthew Isl (MACOUN 1902); Muir Glacier; Unalaska; St Matthew Isl; Cape Nome (CUMMINGS 1904); Glacier Bay, Muir Glacier; Unalaska Isl, Unalaska; Unalaska Isl, Captains Harbour; Adak Isl, Chapel Cove (DEGELIUS 1937: "two types are present in the material. The specimens from Muir Glacier and a few of those from Unalaska belong to the typical form with rather small thalli; the specimens from Adak and most of those from Unalaska differ, however, considerably in their very large (up to 13 cm broad) and rigid thalli. According

to Dr. Frey this form, ad interim, is to be referred to *U. proboscidea*"); Anaktuvuk Pass; Umiat (LLANO 1950; MURRAY 1974); L Schrader; L Peters and Chandler [considered doubtful by MURRAY 1974: "in all likelihood refers to Peters and Schrader lakes"]; 25–50 mi S of the Arctic Sea, Sadlerochit R; Kiana, Kobuk R; Cape Nome, Asses Ears, North of Imurk L; N slope of Virginia's Butte, N of Imuruk L; Anvil Mtn; SE face of Cape Nome; St Lawrence Isl; St Matthew Isl; St Paul Isl; St George Isl; Fox Isls, Unalaska; Captain's Bay; Andreanof Isls, Atka; Aleutian Isl, Amlia; Attu Isl; Kodiak Isl; Raspberry Isl, Port Vita; Muir Glacier; Flat Isl; L Noluk; Eastern Aleutians, Sanak Isl; Adak Isl; Great Sitkin; PWS, Evan's Isl (LLANO 1950); Raspberry Isl, Port Vita (THOMSON 1950a); Chandler L (SCHOLANDER et al. 1952); Juneau icefield nunatak (HEUSSER 1954); Port Heiden; Attu Isl, Siddens Valley, Engineers Canyon; Hagemeister Isl (HOWARD 1958); Schrader L; Ogotoruk Cr drainage; Cape Dyer, drainage of Kipaloq and Angowlik Crs; Mt Harper; top of Porcupine Dome; Denali Hwy, mi 43 from Cantwell (KROG 1962); mtn W of Wiseman (HOWARD 1963; MURRAY 1974); Ogotoruk Cr drainage (JOHNSON et al. 1966); Alaska Range, Dry Cr (VIERECK 1967); Mt Eielson (WEBER & VIERECK 1967); Juneau area, Mt Roberts; Talkeetna Mts, Independence Mine; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Bald Mtn Ridge; Eagle R Valley; headwaters of Rabbit Cr; Portage Glacier; Richardson Hwy, mi 24; Richardson Hwy, mi 45; Denali Hwy, mi 0–37; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, between Beaver Cr and Fossil Cr; White Mts, Cache Mtn; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Steese Hwy, Eagle Summit; Nunivak Isl, Mekoryuk Village; Nunivak Isl, Nash Harbor; Nunivak Isl, Robert's Mtn; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Kodiak Isl, 29 km NW of Olga Bay Cannery, "Amara Lake" (KROG 1969); central Alaska Range (REGER & PÉWÉ 1969); Amchitka Isl (WEBER et al. 1969); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass (THOMSON 1979); Atigun Pass area (CALKIN & ELLIS 1980); Arey Cr; Okpilak Valley (COPPINS 1981: usually C+ red, K–, PD–, both specimens are C–, K+ yellow and PD+ red); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Denali NP, slope N of Station Primrose (SCHINDLER 1987); Tikchik L; Nishlik L (THOMSON & DOELL 1989); St Paul Isl, SW coast; Denali NP, slope above Eielson Visitor Center (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Eagle Summit; Mt Fairplay; Thompson Pass; Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Alaska (BRODO et al. 2001); St Matthew Isl; St Paul Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Alaska (MCCUNE 2018); Katmai NPPr, Malone L (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr, bay on E side and S

end of McCarty Fjord; Kenai Fjords NPPr, NPS weather station, McArthur Ridge; Kenai Fjords NPPr, spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Gyrophora proboscidea* (L.) Ach. – Lawrence-Insula (NYLANDER 1887); Seward Peninsula (HERRE 1920); 30 mi inland from Camden Bay (MERRILL 1924b); “Alaska med Aleuterna och Pribiloföarna” (HASSELROT 1953).

Umbilicaria rigida → **Umbilicaria coriacea**

Umbilicaria scholanderi (Llano) Krog – Saxicolous on siliceous rock. – Talkeetna Mts, Bald Mtn Ridge; Denali NP, Savage R (KROG 1968); Anaktuvuk Pass (MOSER et al. 1979); Adak Isl (TALBOT et al. 1997); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); 15 km WNW of Tanacross Village (TALBOT et al. 2007); Gates of the Arctic NPPr (NELSON et al. 2015b, as s. lat.).

= *Agyrophora scholanderi* Llano – Denali NP Station (LLANO 1950); Shubelik Mts, near L Peters; Denali NP, off rd from Denali NP Station (LLANO 1956); Anaktuvuk Pass (THOMSON 1979); L Peters (THOMSON 1984: map); Thompson Pass (THOMSON & AHTI 1994).

Umbilicaria torrefacta (Lightf.) Schrad. – Saxicolous on acidic rock. – Glacier Bay, Muir Glacier; Unalaska Isl, Unalaska (DEGELIUS 1937); Anaktuvuk Pass (LLANO 1950; MURRAY 1974); E of Pt Barrow, L Schaefer; L Peters; L Noluk; Seward Peninsula, Choris peninsula; PWS, Evan's Isl, about 1.5 mi NW of Port San Juan; Fox Isls, Unalaska Ilinlink R; Andreanof Isls, Great Sitkin, Sand Bay Valley; Near Isls, Attu; Kodiak Isl, near NOB [Navel Operating Base] runway; Afognak Isl; Muir Glacier (LLANO 1950); Cape Dyer, drainage of Kipaloq and Angowlik Crs (KROG 1962); Mendenhall Glacier (MCCULLOUGH 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Mt Eielson (WEBER & VIERECK 1967); Mendenhall Glacier Trail; Juneau area, Mt Roberts; Sitka area, Harbor Mtn; Talkeetna Mts, Independence Mine; Talkeetna Mts, Mabel Mine; Talkeetna Mts, Bald Mtn Ridge; Eagle R Valley; headwaters of Rabbit Cr; Turnagain Arm, Bird Cr Ridge; Seward; Portage Glacier; Kenai Peninsula, Skilak L; S of Hidden L, Kenai Peninsula; Richardson Hwy, mi 24; Richardson Hwy, mi 45; Denali Hwy, mi 0–37; Denali NP, Toklat; White Mts, headwaters of Sheep Cr; White Mts, Lion Pk; White Mts, Cache Mtn; Steese Hwy, Eagle Summit; Nunivak Isl, Nash Harbor; Nunivak Isl, Robert's Mtn; Seward Peninsula, King Mtn; Seward Peninsula, Rainbow Cr (KROG 1968); central Alaska Range (REGER & PÉWÉ 1969); Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a); Thompson Pass (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); SE Alaska (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Chugach NF (DERR 2010); Afognak Isl, Blue Fox Bay; Teck Isl (DILLMAN 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Alaska (MCCUNE 2018); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay

NP: East Arm, Excursion Ridge, Glacier Bay, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier; Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

= *Umbilicaria erosa* (Weber) Hoffm. – Pribilof Isls (MACOUN 1899); St George Isl (MACOUN 1902); Muir Glacier; Kodiak; St Michael (CUMMINGS 1904).

= *Umbilicaria torrefacta* var. *pachydermata* Llano – E of Pt Barrow, L Schaefer; L Peters; Anaktuvuk Pass; L Noluk; Seward Peninsula, Choris peninsula; PWS, Evan's Isl, about 1.5 mi NW of Port San Juan; Fox Isls, Unalaska, Ilinlink R; Andreanof Isls, Great Sitkin, Sand Bay Valley; Near Isls, Attu; Kodiak Isl, near NOB [Navel Operating Base] runway; Afognak Isl; Muir Glacier (LLANO 1950).

Umbilicaria tylorrhiza → [Appendix A](#)

Umbilicaria vellea (L.) Hoffm. – Saxicolous on vertical, rain-sheltered rock faces. Records prior to POELT & NASH (1993) should be checked as they might include *U. americana*, which has only recently been reported for Alaska. – Anaktuvuk Pass (LLANO 1950; MURRAY 1974); Muir Glacier; Skagway; Kuiu Isl, Washington Bay (LLANO 1950); Juneau Ice Field (MCCULLOUGH 1965); Juneau area, Granite Basin; Talkeetna Mts, Bald Mtn Ridge; Talkeetna Mts, Independence Mine; Turnagain Arm, Bird Cr Ridge; Anchorage, O'Malley Rd; Seward; Kenai Peninsula, Skilak L; Richardson Hwy, mi 45; Denali Hwy, mi 28; Denali Hwy, mi 70; Steese Hwy, Cleary Summit; Steese Hwy, Twelvemile Summit; Seward Peninsula, King Mtn; Seward Peninsula, Kigluaik Mts, Rainbow Cr (KROG 1968); Alaska (THOMSON 1984: map); Tikchik L; Nishlik L (THOMSON & DOELL 1989); Chisik Isl (TALBOT et al. 1992); Gates of the Arctic NP; Seward Peninsula (POELT & NASH 1993); Granite Basin near Juneau (GEISER et al. 1994a, 1998); Sheep Mtn (THOMSON & AHTI 1994); Ft Wainwright (RACINE et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Lake Clark NP, Tuxedni R; Lake Clark NP, Clam Cove (DILLMAN 2003); Chugach NF (DERR 2010); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr, N of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

Umbilicaria virginis Schaer. – Saxicolous on siliceous rock. – Alaska (FREY 1936); Mt Eielson (WEBER & VIERECK 1967); Denali NP, Mt Eielson (KROG 1968); SE Alaska (GEISER et al. 1994a: map); Mitkof Isl, Crystal Mtn (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017); Kenai Fjords NPPr, spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Omphalodiscus virginis* (Schaer.) Schol. – Anaktuvuk Pass; Mt Vancouver (LLANO 1950); Alaska (THOMSON 1984: map).

= *Umbilicaria virginis* var. *lecanocarpoides* (Nyl.) Wei & Jiang – Mt Eielson (WEI & JIANG 1993).

= *Umbilicaria rugifera* Nyl. – Pribilof Isls (MACOUN 1899); Unalaska Isl; St Paul Isl; St George Isl (MACOUN 1902). Synonymy after LLANO (1950).

#**Unguiculariopsis nephromatis** Zhurb. & Zavarzin – On *Nephroma resupinatum*. – Chena Hot Springs Rd (ZHURBENKO 2007b).

Usnea angulata Ach. – Corticolous. – Chugach NF (DERR 2010).

Usnea arizonica → [Appendix A](#)

Usnea barbata (L.) F. H. Wigg. – Corticolous on branches of *Picea sitchensis* and *Tsuga heterophylla*, all confirmed records from SE Alaska. Historical records probably cannot be assigned to this name with certainty. – “Alaska and the adjacent region, locality not given” (ROTHROCK 1884); Baker Isl, Port San Antonio (HERRE 1919); Raspberry Isl, Port Vita (THOMSON 1950a); Admiralty Isl, Seymour Canal; Coronation Isl, Egg Harbor; Gravina Isl, Dall Head; Kuiu Isl, Kell Bay; SE Alaskan mainland, Juneau, Shrine of St Therese; Maurelle Isl Wilderness, San Lorenzo Isl; Misty Fjords Wilderness, Kah Sheets Isl, Boca de Quadra; Skagway, N of Dyea, W of Taiya R; Stikine R Flats, S end of Gut Isl (DILLMAN et al. 2012).

= *Usnea leucosticta* Vain. – “ad truncos arborum in Wrangell” (MOTYKA 1936); Wrangell (KROG 1968); Wrangell (GEISER et al. 1994a). Synonymy after CLERC (2011).

? = *Usnea monstrosa* Vain. – Juneau area, Shrine of St Therese; Sitka NM (KROG 1968). An ‘uncertain synonym’ of *U. barbata* according to WESTBERG et al. (2021); see long note in HALONEN et al. (1999).

= *Usnea scabrata* subsp. *nylanderiana* Motyka – White Mts, Beaver Cr; junction of Beaver Cr and Fossil Cr; Steese Hwy, Cleary Summit (KROG 1968); Stikine R flats (GEISER et al. 1994a: map, as species); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Chugach NF (DERR 2010: 216). This is the usnic acid-only chemotype of *U. scabrata* according to HALONEN et al. (1998).

= *Usnea scabiosa* Motyka (at least for Alaskan records, see DILLMAN et al. 2012) – Sitka NM; White Mts, Beaver Cr; White Mts, lower Fossil Cr (KROG 1968); Sitka NM (GEISER et al. 1994a).

= *Usnea scabrata* Nyl. – Corticolous on conifers and hardwoods. – Shrine of St Therese, Juneau; Pleasant Bay, Admiralty Isl; Gut Isl, mouth of Stikine R (GEISER et al. 1998, as s. lat.: det. Halonen; collections include “*Usnea prostrata*” morphs); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); SE Alaska (DILLMAN 2004); Chugach NF (DERR 2010); Kodiak Isl, Buskin R (DILLMAN 2010); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014: “includes *U. filipendula*” and probably cannot be taxonomically interpreted); Gates of the Arctic NPPr (NELSON et al. 2015b); Kenai Fjords NPPr, FIA plot at Verdant Cove (MCCUNE et al. 2020).

= *Usnea scabrata* subsp. *scabrata* – Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Katmai NPPr, Coville L (MCCUNE et al. 2018).

Usnea cavernosa Tuck. – Corticolous on *Picea*. – Alaska (THOMSON 1984: map); Tok Junction, Robertson R (SCHINDLER 1987); Haines Hwy, mi 33 (THOMSON & AHTI 1994); NW of Haines (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004).

= *Usnea cavernosa* subsp. *sibirica* (Räsänen) Motyka – Alaska Hwy, mi 1450 (KROG 1968).

Usnea ceratina Ach. – Pendent from conifer branches. – SE Alaska (GEISER et al. 1994a: map).

= “*Usnea barbata plicata* (L.) Fr.” – Baranof Isl, Hot Springs (CUMMINGS 1904).

= *Usnea plicata* (L.) F.H. Wigg. – Alaska (HOWE 1910); Baker Isl, Port San Antonio; Wrangell Isl; Kosciusko Isl, Shipley Bay (HERRE 1919). Synonymy after AHTI et al. (2016).

Usnea chaetophora auct. → **Usnea dasopoga**

Usnea cornuta Korb. – Corticolous on beach fringe trees and shrubs. – Stanley Isl near Prince of Wales Isl (GEISER et al. 1998, as cf.); SE Alaska (DILLMAN 2004); West Stanley Isl, Prince of Wales Isl; Coronation Isl, Windy Bay; Gravina Isl, Dall Head; Misty Fjords Wilderness, Kanagunut Isl (DILLMAN et al. 2012); S Alaska (ROOT et al. 2014).

Usnea cylindrica P. Clerc – Corticolous on *Picea sitchensis*, *Tsuga heterophylla* and small deciduous trees and shrubs along beach fringe. – Coronation Isl, Nation Pt outside Egg Harbor; Craig Cemetery Isl; Misty Fjords Wilderness, Kanagunut Isl, Lincoln Channel, SE Alaskan mainland, Stikine R flats, S end of Gut Isl (DILLMAN et al. 2012); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020, as ‘cf.’).

Usnea dasopoga (Ach.) Nyl. (often misspelled ‘*dasyopoga*’) – Corticolous on branches of conifers and *Betula*. Historical records probably cannot be reliably assigned to any current name. – Sitka (NYLANDER 1887); Alaska (HUE 1890); Sitka NM; Richardson Hwy, Darling Cr (KROG 1968); Alaska (THOMSON 1984: map); Betton Isl, Behm Canal, N of Clover Pass; Chichagof Isl, S Arm of Hoonah Sound, Douglass Bay; Coronation Isl, Egg Harbor; Gravina Isl, Dall Bay; Kruzof Isl, Sitka Sound, almost directly across from St Lazaria Isl; Kuiu Isl, Chatham Straits, Table Bay; Kupreanof Isl, Frederick Sound, outside of Portage Bay; Misty Fjords Wilderness, Kah Sheets Isl, Boca de Quadra; W Stanley Isl, Prince of Wales Isl; Revillagigedo Isl, Tongass Narrows, Mountain Pt; Mitkof Isl W, S of Petersburg; Warren Isl Wilderness, Warren Cove; SE Alaskan mainland, Chilkat Peninsula, Excursion Inlet, Homeshore Cr; Juneau, Shrine of St Therese (DILLMAN et al. 2012); Glacier Bay NP: Dundas Bay, East Arm, Gustavus (SPRIBILLE et al. 2020, as ‘cf.’).

= “*Usnea barbata* var. *dasyopoga* Fr.” – Old Sitka (ROTHROCK 1884).

= *Usnea chaetophora* Stirt. – Stanley Isl near Prince of Wales Isl; Shrine of St Therese, Juneau (GEISER et al. 1998, det. Halonen); SE Alaska (DILLMAN 2004); S Alaska (ROOT et al. 2014). The type specimen of *U. chaetophora* is *U. dasopoga*, but specimens from Alaska identified as *U. chaetophora* have been revised to *U. cylindrica*, *U. barbata* and *U. dasopoga* (DILLMAN et al. 2012).

= *Usnea diplotypus* Vain. – S Alaska (ROOT et al. 2014); Kenai Fjords NPPr, Exit Glacier CG, near creek (MCCUNE et al. 2020). Synonymy after CLERC (2011).

= *Usnea fibrillosa* Motyka – Juneau area, Shrine of St Therese; Sitka NM; Ketchikan area, Ward L; PWS, Fish Bay (KROG 1968); SE Alaska (GEISER et al. 1994a). Synonymy after WESTBERG et al. (2021).

= *Usnea filipendula* Stirt. – Denali NP, Horseshoe L (SCHINDLER 1987); Kenai Peninsula, Kenai CG (SCHINDLER 1990); Haines Hwy, mi 33 (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998: det. Halonen); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); Chugach NF (DERR

2010); Kodiak Isl, Buskin R (DILLMAN 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1). The type specimen of *U. filipendula* is *U. dasopoga*, but specimens from Alaska identified as *U. filipendula* have been revised to *U. barbata*, *U. dasopoga*, *U. pacificana* and *U. silesiaca* (DILLMAN et al. 2012). = *Usnea subluxa* Vain. – Kenai Peninsula, Skilak L; White Mts, lower Fossil Cr (KROG 1968). Synonymy after CLERC (2011).

Usnea diffracta Vain. – Pendent from trees, exact substrate unknown. – Sitka (LENDEMER et al. 2008).

Usnea filipendula → ***Usnea dasopoga***

Usnea flavocardia Räsänen – Corticolous on *Alnus*, *Menziesia*, *Picea* and *Tsuga* in SE rainforests. See also entry under *Usnea arizonica* in Appendix A. – Small isl S of Brownson Isl; Coronation Isl, Windy Bay; Gravina Isl, Dall Bay; Kruzof Isl, Sitka Sound, almost directly across from St Lazaria Isl; Misty Fjords Wilderness, Kah Sheets Isl, Boca de Quadra; Mitkof Isl, Sumner Straits, Pt Howe, S of Woodpecker Cove; Revillagigedo Isl, Tongass Narrows, Mountain Pt; Kuiu Isl, Tebenkof Bay; Warren Isl, Warren Cove (DILLMAN et al. 2012). = *Usnea wirthii* P. Clerc – SE Alaska (DILLMAN 2004).

Usnea florida → Appendix A

Usnea fragilescens Hav. ex Lynge – Corticolous on conifers near the coast, maritime SE Alaska. P. Clerc (in DILLMAN et al. 2012) distinguished four chemotypes in SE Alaska. – Baranof Isl, approximately 6 mi S of Sitka; Chichagof Isl, Leo's Anchorage; Coronation Isl, China Cove; Gravina Isl, Dall Head; Kuiu Isl, Chatham Straits, Table Bay; Maurelle Isl Wilderness, San Lorenzo Isl; Misty Fjords Wilderness, Kah Sheets Isl, Boca de Quadra; DeLong Isl, at entrance of Foggy Bay; Warren Isl, Warren Cove; Windfall Isl, Chatham Straits, S Tebenkof Bay; Southeast Alaskan mainland, S shore of Cape Fanshaw (DILLMAN et al. 2012, stictic acid); Gravina Isl, Dall Bay; Misty Fjords Wilderness, Kah Sheets Isl, Boca de Quadra; Kanagunut Isl (DILLMAN et al. 2012, psoromic acid); Dog Isl; Gravina Isl, Dall Head; Misty Fjords Wilderness, Kanagunut Isl (DILLMAN et al. 2012, salazinic acid); small isl S of Brownson Isl; Maurelle Isl Wilderness, San Lorenzo Isl; Misty Fjords Wilderness, DeLong Isl, at entrance of Foggy Bay (DILLMAN et al. 2012, norstictic acid). = "*Usnea fragilescens* Hav. ex Lynge sensu Brodo" – Dog Isl, S of Ketchikan (GEISER et al. 1994a: map). = *Usnea fragilescens* var. *mollis* (Vain.) P. Clerc – Corticolous on conifers near the coast. – Dog Isl, S of Ketchikan; W Staney Isl near Prince of Wales Isl; Cape Fanshaw, [SE Alaska] mainland (GEISER et al. 1998: det. Halonen); SE Alaska (DILLMAN 2004).

Usnea glabrata (Ach.) Vain. – Corticolous on hardwoods and conifers. – Stampede (HOWARD 1958); Sitka NM (KROG 1968); Katmai NP, Brooks Lodge area, Brooks Falls (SCHINDLER 1990); Sitka NM (GEISER et al. 1994a, 1998: "This collection and those of the following two species should be re-examined. In the inland and maritime regions of BC, but not the hypermaritime (Halonen et al. 1997 as here" [sic, presumably referring to HALONEN et al. 1998]); Alaska Hwy, near Canadian border; Tanacross Village (TALBOT et al. 2007); SE Alaskan mainland, Chilkat Peninsula, Excursion Inlet, Homeshore Cr (DILLMAN et al. 2012).

- Usnea glabrescens** (Nyl. ex Vain.) Vain. **variety not specified** – Corticolous. – Firth R at Mancha Cr (THOMSON 1979); Sitka NM (GEISER et al. 1994a, 1998, referring to earlier Krog report, under subsp. *glabella*: “This collection ... should be re-examined”); SE Alaska (DILLMAN 2004).
- Usnea glabrescens** var. **fulvoreagens** Räsänen – Corticolous on *Picea sitchensis*. – SE Alaskan Mainland, Chilkat Peninsula, Excursion Inlet, Homeshore Cr (DILLMAN et al. 2012).
- Usnea glabrescens** (Nyl. ex Vain.) Vain. var. **glabrescens** – On branches of *Malus fusca*. – Misty Fjords Wilderness, Kah Sheets Isl, Boca de Quadra (DILLMAN et al. 2012)
= *Usnea glabrescens* subsp. *glabrella* Motyka – Sitka NM; Eagle R Valley (KROG 1968). Synonymy after HALONEN et al. (1999).
- Usnea hesperina** Motyka – Corticolous on conifers. – SE Alaska (DILLMAN 2004).
- Usnea hirta** (L.) F. H. Wigg. – Corticolous on conifers. – Indian R Trail, Sitka (GEISER et al. 1994a, 1998, who write “This collection ... should be re-examined”); SE Alaska (DILLMAN 2004); Alaska Hwy, mi 1240 (TALBOT et al. 2007); Katmai NPPr (MCCUNE et al. 2018).
= “*Usnea florida hirta* (L.) Michx.” – Dall Isl, Augustine Bay (HERRE 1919).
= *Usnea hirta* subsp. *minutissima* (Mereschk.) Motyka – Sitka area, Indian R Trail; Denali NP, Wonder L (KROG 1968).
- Usnea implexa* → [Appendix A](#)
- Usnea lapponica* → [Usnea perplexans](#)
- Usnea longissima** Ach. – Corticolous, mainly on conifers in humid areas. – Alaska (MACOUN 1902); Sitka; Ft Cosmos (CUMMINGS 1904); Kosciusko Isl, Shipley Bay (HERRE 1919); Shifely [sic] Bay; Sitka; Ft Cosmos (MOTYKA 1938); Mendenhall Glacier (MCCULLOUGH 1965); SE Alaska (GEISER et al. 1994a: map); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); Yakutat Forelands (SHEPARD 1995); SE Alaska (GEISER et al. 1998); Alaska (BRODO et al. 2001); SE Alaska (DILLMAN 2004); SE Alaska (DERR et al. 2007); Chugach NF (DERR 2010); Finnegan’s Pt area, Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Denali NPPr, S of the AK Range (STEHN et al. 2015); Kenai Fjords NPPr, Crater Bay South (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).
= *Usnea longissima* var. *corticata* R. Howe – Juneau area, Loop Rd; Juneau area, Shrine of St Therese; Sitka area, Indian R Trail; Ketchikan area, Deer Mtn (KROG 1968).
= *Usnea longissima* var. *elegantissima* Motyka – Juneau area, Loop Rd; Sitka area, Indian R Trail; Richardson Hwy, mi 9 (KROG 1968).
= *Usnea longissima* var. *tenuis* Th. Fr. – Juneau area, Loop Rd; Richardson Hwy, mi 9 (KROG 1968).
- Usnea pacificana** Halonen – Corticolous on *Alnus* twigs and *Picea sitchensis*. – Baranof Isl, Sitka National Historical Park; Gravina Isl, Dall Bay; Kruzof Isl, Sitka Sound; Kuiu Isl, Kell Bay, Sorefinger Bay; Misty Fjords Wilderness, DeLong Isl, entrance of Foggy Bay (DILLMAN et al. 2012); Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020).
- Usnea perplexans** Stirt. – Corticolous on *Picea* and various hardwoods. See also entry under *Usnea wasmuthii* in [Appendix A](#).

= *Usnea betulina* Motyka – Augustine Bay (MOTYKA 1936); Sitka area, Harbor Mtn; Sitka NM; Ketchikan area, Saxman Village; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; White Mts, Beaver Cr; White Mts, lower Fossil Cr (KROG 1968); Denali NPPr, S of the AK Range (STEHN et al. 2015); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018).

= *Usnea lapponica* Vain. – Sitka NM; Talkeetna Mts, Puritan Cr; Kenai Peninsula, Skilak L; Darling Cr, Richardson Hwy; Alaska Hwy, mi 1450; White Mts, Beaver Cr; White Mts, lower Fossil Cr; Circle Hot Springs (KROG 1968); Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Denali NP, Horseshoe L; Tok Junction, Robertson R (SCHINDLER 1987); Kenai Peninsula, CG Kenai (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Juneau, Brotherhood Park; Sitka NM (GEISER et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska Hwy, near Canadian border (TALBOT et al. 2007); Chugach NF (DERR 2010); Chilkoot Trail; Skagway area (SPRIBILLE et al. 2010); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); Gates of the Arctic NPPr (NELSON et al. 2015b); Kenai Fjords NPPr, Exit Glacier CG, near creek; Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

= “*Usnea sorediifera* (auct.) Mot.” – Eagle R Valley (KROG 1968).

Usnea scholanderi Llano – Saxicolous. – L Peters (**type** – LLANO 1951, as ‘*scholanderii*’); Arctic Coast, L Peters (KROG 1968); L Peters (THOMSON 1979: “Dr. A. W. Herre has examined the type specimen and noted that it was too matted in preservation to be observed very well, and that the radiating fibrils of the original description were fungal hyphae of a mold”. The specimen at US is, however, in good condition.

Usnea silesiaca Motyka – On branches of *Tsuga heterophylla*. – Coronation Isl, Egg Harbor; Dog Isl, Dog Cove; Kuiu Isl, Chatham Straits, Table Bay; Kupreanof Isl, Frederick Sound, outside of Portage Bay; Misty Fjords Wilderness, DeLong Isl, at entrance of Foggy Bay; Kah Sheets Isl, Boca de Quadra; Kanagunut Isl, Lincoln Channel; SE Alaskan mainland, Chilkat Peninsula, Excursion Inlet, Homeshore Cr (DILLMAN et al. 2012).

= *Usnea madeirensis* Motyka – SE Alaska (DILLMAN 2004).

Usnea subfloridana Stirt. – Corticolous on *Betula*, *Picea* and *Tsuga*. – Alaska (THOMSON 1984: map); Kenai Peninsula, CG Kenai (SCHINDLER 1990); SE Alaska (GEISER et al. 1994a: map); Alaska (HALONEN et al. 1998); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); SE Alaska (DILLMAN 2004); Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010); SE Alaskan mainland, Chilkat Peninsula, Excursion Inlet, Homeshore Cr; Misty Fjords Wilderness, mouth of Boca de Quadra (DILLMAN et al. 2012).

= *Usnea comosa* (L.) Vain. – “Klodnike [sic] bank, Orhind, Dawson, specim. juvenile” (in Yukon?) (MOTYKA 1936); Sitka area, Harbor Mtn; Sitka NM (KROG 1968).

Usnea substerilis Motyka – Corticolous on hardwoods and conifers. – McKinley Bar (WEBER & VIERECK 1967); Denali NP, McKinley Bar (KROG 1968); Alaska (THOMSON 1984: map); Haines Hwy, mi 33; Deadman L CG; Moon L CG (THOMSON & AHITI 1994); Juneau, Brotherhood Park (GEISER et al. 1998: det. Halonen); SE Alaska (DILLMAN 2004); Alaska Hwy, mi 1240; Alaska Hwy, mi

1270, Ten Mile Cr (TALBOT et al. 2007); Chugach NF (DERR 2010); Chilkoot Trail (SPRIBILLE et al. 2010); Denali NPPr, N of the AK Range (STEHN et al. 2015).

Usnea trichinella → [Appendix A](#)

Usnea trichodea Ach. – Pendent from conifers and deciduous shrubs, often near beaches. – SE Alaska (GEISER et al. 1994a: map); Hugh Smith L; Misty Fjord NM; Admiralty Isl, Plotnikof L (GEISER et al. 1998).

Usnea wasmuthii → [Appendix A](#)

Usnea wirthii → [Usnea flavocardia](#)

– V –

Vahliella californica → [Appendix A](#)

Vahliella globigera (Fryday & P. M. Jørg.) P. M. Jørg. – Terricolous on soil and bryophytes. – Barrow (JØRGENSEN 2008, as “*globuligera*”).

= *Fuscopannaria globigera* Fryday & P. M. Jørg. – Barrow (**type** – FRYDAY 2004a; JØRGENSEN 2003 [as *ined.*]; JØRGENSEN 2008).

Vahliella leucophaea (Vahl) P. M. Jørg. – On rock; some reported habitats (e.g. *Populus trichocarpa*; GEISER et al. 1998, DERR 2010) are atypical, suggesting misidentifications.

= *Fuscopannaria leucophaea* (Vahl) P. M. Jørg. – Coastal [SE Alaska] mainland in Yakutat; Unuk R Valley (GEISER et al. 1998); Chugach NF (DERR 2010: 246, on *Populus*).

= *Pannaria leucophaea* (Vahl) P. M. Jørg. – Yakutat and Unuk R Valley (GEISER et al. 1994a).

= *Parmeliella microphylla* (Sw.) Müll. Arg. – “on graywacke”. – Unalaska Isl, Unalaska (DEGELIUS 1937); Tikchik L (THOMSON & DOELL 1989). Synonymy after JØRGENSEN (2004a).

Varicellaria lactea (L.) Schmitt & Lumbsch – Saxicolous on lakeshore cliffs. – Katmai NPPr, Naknek L, NNE of Brooks Camp; Lake Clark NP, Portage L (TØNSBERG 2018, MCCUNE et al. 2018); Lake Clark NPPr, Camel’s Hump (MCCUNE et al. 2018).

Varicellaria rhodocarpa (Körb.) Th. Fr. – Terricolous and corticolous on *Alnus*, *Betula* and *Tsuga heterophylla*. – Alaska (THOMSON 1997: map); Noatak NPPr (MCCUNE et al. 2009); White Pass (SPRIBILLE et al. 2010); Alaska (MCCUNE 2017b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

= *Pertusaria rhodocarpa* Körb. – Farragut Bay (CUMMINGS 1904); Sheep Camp, Dyea Cr (HOWE 1911b).

= *Varicellaria microsticta* Nyl. – Port Clarence (NYLANDER 1887; HUE 1891). Synonymy according to AHTI et al. (1973).

Varicellaria velata → [Appendix A](#)

Variolaria ophthalmiza → [Lepra ophthalmiza](#)

Verrucaria acrotella Ach. – Saxicolous on granitic rocks. – Lawrence insula (NYLANDER 1887; HUE 1892); Alaska (THOMSON 1997: map).

Verrucaria aethiobola Wahlenb. – Saxicolous on semi-inundated rocks. – S of Wainwright, Kaolak R (THOMSON 1960); Franklin Bluffs on the Sagavanirktok

R; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Chisik Isl (TALBOT et al. 1992); Alaska (THOMSON 1997: map); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010); White Pass (SPRIBILLE et al. 2010); Katmai NPPr, Hammersly L; Katmai NPPr, Naknek L; Lake Clark NPPr, Turquoise L; Lake Clark NPPr, Tanalian Falls (McCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Verrucaria alpicola → [Appendix A](#)

Verrucaria anziana Garov. – Saxicolous on semi-inundated, slightly basic rock, with *Hydropunctaria alaskana* and *Verrucaria aethiobola*. – Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

Verrucaria aquatilis Mudd – Saxicolous on hornblende augen gneiss beside creek, with *Verrucaria aethiobola*. – Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Verrucaria arctica Lynge – Saxicolous. – Terminal moraine of Valdez Glacier (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).

Verrucaria bryoetona (Th. Fr.) Orange – On basic soil and dead mosses. – Sukakpak Mtn (DILLMAN et al. 2012).

Verrucaria calciseda → [Bagliettoa calciseda](#)

Verrucaria cateleptoides (Nyl.) Nyl. – Saxicolous on both calcareous and acidic rocks in damp sites. – Alaska (THOMSON 1997: map).

Verrucaria ceuthocarpa Wahlenb. – Saxicolous on marine rocks. – Ft Alexander, Cook's Inlet (ROTHROCK 1884); Lawrence ins. (HUE 1892, but erroneously citing Nylander's reference of a specimen from Lawrence Bay, Chukotka); Alaska (THOMSON 1997: map); St Matthew Isl (TALBOT et al. 2001); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).

Verrucaria degelii R. Sant. – Saxicolous on littoral rock on sea cliff. – SE Alaska (O'CLAIR et al. 1996); Top of Sunshine Cove, Auke Bay (GEISER et al. 1998).

Verrucaria devergescens Nyl. – Saxicolous on acidic rocks in wet situations. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979).

Verrucaria deversa Vain. – Saxicolous on limestone. – Anaktuvuk Pass (MOSER et al. 1979); Alaska (THOMSON 1997: map).

Verrucaria ditmarsica Erichsen – Saxicolous on coastal rock outcrops and cobbles. – Adak Isl (TALBOT et al. 1997); Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (McCUNE et al. 2020); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Verrucaria divergens Nyl. ('*devergens*') – Saxicolous on calcareous rocks. – Prudhoe Bay (MURRAY & MURRAY 1975a, 1978); Prudhoe Bay; Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Nishlik L (THOMSON & DOELL 1989); Thompson Pass (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map).

Verrucaria dolosa Hepp – Saxicolous on cobbles. – Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (McCUNE et al. 2020).

Verrucaria epimaura Brodo – Saxicolous on littoral rock, characteristically overgrowing *Hydropunctaria maura*. – Juneau area; Skagway, Lynn Canal; S of Seward, Tonsina Pt (THOMSON 1967); Alaska (BRODO & SANTESSON 1997: map); W side Lynn Canal (GEISER et al. 1998); Alaska (BRODO et al. 2001); Alaska, N to Seward Pen (McCUNE 2017b); Kenai Fjords NPPr, N arm of spit

across James Lagoon; Kenai Fjords NPPr, Verdant Cove, N side at shoreline (McCUNE et al. 2020); Glacier Bay NP: Gustavus (SPRIBILLE et al. 2020).

Verrucaria erichsenii Zschacke – Saxicolous on granite, flushed by sea water. – Kenai Fjords NPPr, N arm of spit across James Lagoon (McCUNE et al. 2020, as “?”).

Verrucaria floerkeana Dalla Torre & Saroth. – Saxicolous on semi-shaded boulder. – Kenai Fjords NPPr, N of Exit Glacier Visitor Center (McCUNE et al. 2020).

Verrucaria funckii (Spreng.) Zahlbr. – Saxicolous on rocks and stones in water, also on branches of dead tree just above water. – Terminal moraine of Valdez Glacier (THOMSON & AHTI 1994); Katmai NPPr, Mirror L; Lake Clark NPPr, Chinirna Ranger Stn; Lake Clark NPPr, Saddle Mtn (McCUNE et al. 2018).

Verrucaria fusca auct. – Saxicolous. The term ‘auct.’ was used in place of authorities in both publications, and it is unclear if it refers to *Verrucaria fusca* Pers. or some other taxon. – Lake Clark NPPr, Turquoise L (McCUNE et al. 2018); Kenai Fjords NPPr, headland between two arms of Coleman Bay (McCUNE et al. 2020).

Verrucaria fuscella → **Placopyrenium fuscillum**

Verrucaria fuscoatra Servit – Saxicolous. – Katmai NPPr, Naknek L (McCUNE et al. 2018).

Verrucaria halizoa Leight. – Tidal flats with sedimentary rocks and boulders, sea level; pebbles in tidal creek. – Skagway area, Yakutania (SPRIBILLE et al. 2010); SE Alaska (McCUNE 2017b); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Verrucaria halophila (Nyl.) Nyl. – Saxicolous on non-calcareous metasedimentary rock, upper intertidal. Previously reported from North America as *V. halizoa* Leighton or ‘auct.’ – Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (McCUNE et al. 2020).

Verrucaria integra (Nyl.) Nyl. – Saxicolous on calcareous rocks. – Port Clarence (NYLANDER 1887; HUE 1892); Port Clarence; Kukpuk R (THOMSON 1997).

Verrucaria invenusta H. Magn. – Saxicolous on shaded rock. – Kenai Fjords NPPr, W shore of Beauty Bay (McCUNE et al. 2020, as “cf.”).

Verrucaria latebrosa Körb. – Saxicolous on smooth rock below high water line in river. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (McCUNE 2017b).

Verrucaria lobata → **Appendix A**

Verrucaria margacea (Wahlenb.) Wahlenb. – Saxicolous on wet rocks, from pebbles to boulders. – Anaktuvuk Pass (MOSER et al. 1979); Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Tikchik L (THOMSON & DOELL 1989); Portage Glacier (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Chugach NF (DERR 2010); Katmai NPPr, Naknek L; Lake Clark NPPr, Portage L; Lake Clark NPPr, Slope Mtn (McCUNE et al. 2018); Kenai Fjords NPPr, Crater Bay off of Harris Bay (McCUNE et al. 2020); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

? = “*Verrucaria leightonii*” – Copper R (MURRAY et al. 1983, as cf., no authority indicated).

Verrucaria maura → **Hydropunctaria maura**

Verrucaria mauroides f. *conizodes* → **Appendix A**

Verrucaria memnonia (Körb.) Arnold – Saxicolous. – Lake Clark NPPr, Portage L (McCUNE et al. 2018); Kenai Fjords NPPr, headland between two arms of Coleman Bay (McCUNE et al. 2020).

Verrucaria mucosa → ***Wahlenbergiella mucosa***

Verrucaria muralis Ach. – Saxicolous on calcareous rock. – Port Clarence (NYLANDER 1887; HUE 1892); Prince of Wales Isl (HERRE 1919); Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Prince of Wales Isl, Calder Quarry (GEISER et al. 1994a); Alaska (THOMSON 1997: map); Prince of Wales Isl, Calder Quarry (GEISER et al. 1998).

= “*Verrucaria muralis* Ach. f. *dolosula* Nyl.” – Port Clarence (NYLANDER 1887; HUE 1892).

= *Verrucaria rupestris* Schrad. – Saxicolous on calcareous rock. – Pitmegea R, 15 mi upstream from Cape Sabine; S of Wainwright, Kaolak R; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1997: map).

Verrucaria nigrescens Pers. – Saxicolous on calcareous rock. – Franklin Bluffs on the Sagavanirktok R (THOMSON 1979); Adak Isl (TALBOT et al. 1997); Alaska (THOMSON 1997: map); Katmai NPPr, Naknek L (McCUNE et al. 2018).

Verrucaria obnigrescens Nyl. – Saxicolous. – Port Clarence (NYLANDER 1887; HUE 1892); S of Wainwright, Kaolak R (THOMSON 1979).

Verrucaria praetermissa (Trevis.) Anzi – Saxicolous on submerged acidic rocks in streams. – Port Clarence (THOMSON 1997); Alaska (McCUNE 2017b); Katmai NPPr, Malone L (McCUNE et al. 2018).

= *Verrucaria laevata* auct. – Lawrence-Insula (NYLANDER 1887; HUE 1892). THOMSON (1997) considered *V. laevata* auct. a synonym of *V. praetermissa*.

Verrucaria prominula Nyl. – Saxicolous. – Port Clarence (NYLANDER 1887; HUE 1892).

Verrucaria schofieldii Brodo – Saxicolous on siliceous or rarely calcareous shoreline rocks. – Juneau area (BRODO & SANTESSON 1997); SE Alaska (GEISER et al. 1998); Alaska (McCUNE 2017b).

Verrucaria striatula → ***Wahlenbergiella striatula***

Verrucaria xyloxena Norman – Tundra with bryophytes and *Dryas*. – Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Glacier Bay NP, Muir Glacier (FRYDAY & DILLMAN 2021b).

#***Verrucocum spribillei*** V. Atienza et al. – In apothecia of epiphytic *Lobaria tenuior*. – Chilkoot Trail (type – ATIENZA et al. 2021).

= *Polycocum hymenicolica* auct., non (Berk. & Broome) Zhurb. – Chilkoot Trail (SPRIBILLE et al. 2010); Coronation Isl, Egg Harbor; Russell Fjords Wilderness, Harlequin L; NE coast of Prince of Wales Isl near mouth of Barren Cr (ZHURBENKO & DILLMAN 2010); Glacier Bay NP: Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020).

Vestergrenopsis elaeina → ***Tingiopsidium elaeinum***

Vestergrenopsis isidiata → ***Tingiopsidium isidiatum***

Vezdaea acicularis Coppins – Terricolous in recently deglaciated soils (20 yr) and on bryophytes, also on *Peltigera malacea* and over bryophytes on a bird-perching rock. – Caribou-Poker Crs Watershed (ZHURBENKO & LAURSEN 2003); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020); Petersburg Borough, Baird Glacier (FRYDAY & DILLMAN 2021a & b).

- Vezdaea aestivalis** (Ohlert) Tscherm.-Woess & Poelt – On *Nephroma* and partly corticolous on *Populus balsamifera*. – Glacier Bay NP: Dundas Bay, East Arm; Klondike Gold Rush National Historical Park, Chilkoot Trail (SPRIBILLE et al. 2020).
- Vezdaea cobria** Giralt et al. – Muscicolous in underhang under stump. – Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).
- Violella fucata** (Stirt.) T. Sprib. – Corticolous on *Tsuga* twigs. – SE Alaska (MCCUNE 2017a & b); Katmai NPPr, Brooks Camp; Katmai NPPr, Naknek L; Lake Clark NPPr, Camel's Hump; Lake Clark NPPr, Pickrel L; Lake Clark NPPr, Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, W of Resurrection R and N of Exit Glacier Rd (MCCUNE et al. 2020).
= *Mycoblastus fucatus* (Stirt.) Zahlbr. – Chilkoot Trail (SPRIBILLE et al. 2010).
- Vulpicida juniperinus** (L.) J.-E. Mattsson & M. J. Lai – Terricolous on calcareous soil. Synonymy after SAAG et al. (2014). – Alaska (SAAG et al. 2014, Figure 2 and Appendix 1, as “*Vulpicida tilesii*” but synonymizing this name under *V. juniperinus* in the results).
= *Cetraria juniperina* (L.) Ach. – Chamisso Isl (ROTHROCK 1884); Alaska (HADWEN & PALMER 1922); Anchorage, Chugach Mts (HERRE 1950a). This specific record may refer to *V. pinastri* (which was long considered a variety of *Cetraria juniperina*).
= “*Cetraria juniperina terrestris*” – Alaska (HADWEN & PALMER 1922).
= *Cetraria tilesii* Ach. – Port Heiden; Stampede (HOWARD 1958); Chandler L (WIGGINS & MACVICAR 1958; MURRAY 1974); Franklin Bluffs on the Sagavanirktok R (THOMSON 1960); Valley of the Okpilak R at Okpilak L near Mt Michelson (THOMSON 1960); Anaktuvuk Pass (KROG 1962; MURRAY 1974); Brooks Range, L Peters; flanks of Contact Cr Mtn; Bianca Pk; Ogotoruk Cr; Steese Hwy, Eagle Summit (KROG 1962); Quigley Hill, alpine slope; hill E of rd to Kantishna; Savage R CG (HOWARD 1963); 1.5 mi N of Wiseman, along the rd to Hammond R (HOWARD 1963; MURRAY 1974); Firth R Valley (DREW & SHANKS 1965); Ogotoruk Cr drainage (JOHNSON et al. 1966); Muldrow Glacier (VIERECK 1966); Mt Eielson; Glacier Cr-Thorofare R (WEBER & VIERECK 1967); Denali Hwy, mi 28; Denali NP, Savage R; Denali NP, Toklat; base of Rainbow Mts, E of Richardson Hwy; White Mts, Beaver Cr; White Mts, headwaters of Sheep Cr; White Mts, limestone ridge between Beaver Cr and Fossil Cr; Steese Hwy, Eagle Summit; N of Nome, Anvil Pk; Seward Peninsula, Rainbow Cr (KROG 1968); central Alaska Range (REGER & PÉWÉ 1969); Chitistone-Skolai region (SCOTT 1974); Prudhoe Bay (MURRAY & MURRAY 1975a, b); Anaktuvuk Pass (NASH 1977); Eagle Summit; Prudhoe Bay (MURRAY & MURRAY 1978); Haul Rd, Finger Mtn Site (WEBBER et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Pitmegea R, 15 mi upstream from Cape Sabine; Anaktuvuk Pass; Franklin Bluffs on the Sagavanirktok R; Prudhoe Bay; Okpilak R near Okpilak L and Mt Michelson; Firth R at Mancha Cr (THOMSON 1979); Arey Cr; Okpilak Valley (COPPINS 1981); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); Arrigetch Cr valley (COOPER 1986b); Denali NP, slope N of Station Primrose (SCHINDLER 1987); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Imnavait Cr (WALKER & WALKER 1996); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Gates of the Arctic

NPPr (NELSON et al. 2015b); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).

= *Platysma tilesii* (Ach.) Nyl. – Port Clarence (NYLANDER 1887; HUE 1890).

= *Vulpicida tilesii* (Ach.) J. E. Mattsson & M. J. Lai – Alaska (MATTSSON 1993); Thompson Pass; Fielding L (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Alaska (BRODO et al. 2001); Denali NPPr (STEHN et al. 2015); Denali NPPr (ROLAND et al. 2017).

Vulpicida pinastri (Scop.) J. E. Mattsson & M. J. Lai – Corticolous on shrubs and trees and lignicolous on logs. – Alaska (MATTSSON 1993); Mt Fairplay; Deadman L CG; Moon L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Alaska (BRODO et al. 2001); Alaska Hwy, near Canadian border; Seaton Roadhouse; Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010); Dalton Hwy (LANG et al. 2012); Denali NPPr (STEHN et al. 2013: Supplementary Table S1); S Alaska (ROOT et al. 2014); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Denali NPPr (STEHN et al. 2015); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Cetraria pinastri* (Scop.) Gray – Port Heiden; Stampede (HOWARD 1958); Umiat; Bettles (KROG 1962; MURRAY 1974); Across the Koyukuk R from Bettles (HOWARD 1963; MURRAY 1974); Kantishna Airstrip; Denali NP, 1 mi W of Carlo Station; Wonder L (HOWARD 1963); Mt Eielson; Wonder L; Muldrow outwash (WEBER & VIERECK 1967); Talkeetna Mts, Independence Mine; Talkeetna Mts, Little Susitna R; Talkeetna Mts, Puritan Cr; Eagle R Valley; Anchorage, O'Malley Rd; Potter, on Turnagain Arm; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Copper Cr; Kenai Peninsula, Skilak L; Richardson Hwy, mi 37; Denai Hwy, mi 0–28; Denali NP, Savage R; Denali NP, Wonder L; Richardson Hwy, Darling Cr; base of Rainbow Mts, E of Richardson Hwy; White Mts, Beaver Cr; White Mts, the limestone ridge; Steese Hwy, Cleary Summit; Circle Hot Springs; Nunivak Isl, Mekoryuk Village; Seward Peninsula, King Mtn; N of Nome, Anvil Pk; Kotzebue (KROG 1968); Alaska (ESSLINGER 1973); Fish Cr drilling site (LAWSON et al. 1978); Anaktuvuk Pass (MOSER et al. 1979); Colville R near Umiat; Anaktuvuk Pass; Firth R at Mancha Cr (THOMSON 1979); Alaska (THOMSON 1984: map); Anchorage, S of Talkeetna, by Montana L; Denali NP, on the rd to Horseshoe L (SCHINDLER 1987); Chauekuktuli L; Nishlik L (THOMSON & DOELL 1989); Amchitka Isl, Magazine Rd (THOMSON & SOWL 1989); Gates of the Arctic NPPr, Walker L (HASSELBACH & NEITLICH 1996); Bering Land Bridge NPr (HOLT et al. 2007); Noatak NPr (HOLT et al. 2009; MCCUNE et al. 2009); Katmai NPPr; Lake Clark NPPr (MCCUNE et al. 2018); Kenai Fjords NPPr, near Park entrance on Exit Glacier Rd (MCCUNE et al. 2020).

= “*Cetraria juniperina pinastri* Ach.” – St Michael; Cape Nome (CUMMINGS 1904).

= “*Platysma pinastri* (Nyl.) Nyl.” – Port-Clarence (HUE 1890).

= *Tuckermannopsis pinastri* (Scop.) Hale – Chisik Isl (TALBOT et al. 1992); Innvait Cr (WALKER & WALKER 1996).

Vulpicida tilesii → ***Vulpicida juniperinus***

– W –

- Wahlenbergiella mucosa** (Wahlenb.) Gueidan & Thüs – Saxicolous in the intertidal zone on seashore cliffs and rocks. – Kenai Fjords NPPr, N arm of spit across James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: East Arm (SPRIBILLE et al. 2020).
= *Verrucaria mucosa* Wahlenb. – Orca (CUMMINGS 1904); Alaska (SANTESSON 1939); Alaska (THOMSON 1997: map).
- Wahlenbergiella striatula** (Wahlenb.) Gueidan & Thüs – Saxicolous on seashore rocks and beach pebbles. – Kenai Fjords NPPr, N of Pilot Harbor on North Arm of Nuka Bay (MCCUNE et al. 2020).
= *Verrucaria striatula* Wahlenb. – Alaska (THOMSON 1997: map).
? = *Verrucaria striatula* f. *dealbata* Merrill – Sandspit of Hulahula R; Alaskan Arctic coast, Icy Reef (**type** – MERRILL 1924b). “The statement as to the occurrence of the species in ... Alaska ... must unhesitatingly be stigmatised as erroneous, for the information as to habitat shows that this is a fresh water species. *V. striatula* never occurs near fresh water. Merrill describes a new form, f. *dealbata*, which by him has been erroneously ascribed [to] *V. striatula*” (SANTESSON 1939). Santesson did not however state under which species f. *dealbata* would be better placed.

– X –

- Xanthocarpia crenulatella** (Nyl.) Frödén et al. – Saxicolous. – Lake Clark NPPr; W of Hatchet Pt (MCCUNE et al. 2018, as cf.).
- Xanthocarpia erichansenii** (S. Y. Kondr. et al.) Frödén et al. – Terricolous.
= *Caloplaca erichansenii* S. Y. Kondr. et al. – Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018).
- Xanthocarpia tominii** (Savicz) Frödén et al. (basonym: *Placodium tominii* Savicz, *Izvestiya Glavnogo Botanicheskogo Sada* 29: 194 [1930]). – Terricolous.
VONDRAK et al. (2011) excluded this species from the Arctic and North America based on two DNA sequences, but we do not accept this as evidence for all Arctic populations until further studies are undertaken. ARUP et al. (2013) erroneously cited “*Caloplaca tominii* Savicz” as the basonym, but the combination remains valid (ICNafp article 41.6).
= *Caloplaca tominii* (Savicz) Zahlbr., *Cat. Lich. Univ.* 7: 272 (1931). – The authorship for this taxon in ARUP et al. (2013) is incorrect. – Copper R (MURRAY et al. 1983).
- Xanthomendoza borealis** (R. Sant. & Poelt) Søchting et al. – Saxicolous and terricolous. – Noatak NPr (MCCUNE et al. 2009); Alaska (LEAVITT et al. 2013).
= *Xanthoria borealis* R. Sant. & Poelt – St Mary’s, Yukon R (LINDBLOM 1997: map).
- Xanthomendoza fallax** (Hepp) Søchting et al. – Corticolous or lignicolous on trees and rocks, occasionally on moss and old wood. – Alaska (GAYA et al. 2012: Supplementary Table 1).
= *Xanthoria fallax* (Hepp) Arnold – Okpilak R near Okpilak L and Mt Michelson; Beaufort Lagoon, Nuvagapuk Pt; Firth R at Mancha Cr (THOMSON

1979); Firth R (THOMSON 1984: map; “Some of the reports of *X. fallax* in the Arctic (and for which I take responsibility) have turned out on closer study to be based on poorly defined material of *X. candelaria*. *X. fallax* is much more southerly in distribution than *X. candelaria* but does reach into the Arctic along with other southern species as *Physcia aipolia* to the Firth R on the Alaskan-Yukon boundary”); Ogotoruk Cr (MURRAY 1985); Klondike Gold Rush NP (GEISER et al. 1994a).

= *Xanthoria fallax* var. *fallax* – Klondike Goldrush National Historical Park (GEISER et al. 1998, as s. lat.); Chugach NF (DERR 2010).

= *Xanthoria substellaris* (Ach.) Vain. – Unalaska (RUDOLPH 1955). Synonymy after POELT & PETUTSCHNIG (1992).

Xanthomendoza fulva (Hoffm.) Søchting et al. – Corticolous on hardwood bark. – Knik R (LINDBLOM 2006).

= *Xanthoria fulva* (Hoffm.) Poelt & Petutschnig – “commonly referred to *X. fallax*” prior to POELT & PETUTSCHNIG (1992; LINDBLOM 1997); Knik R (LINDBLOM 1997: map); Alaska (BRODO et al. 2001).

= *Xanthoria subramulosa* Räsänen – Knik R, near hwy (KROG 1968). Synonymy after LINDBLOM (1997).

Xanthomendoza hasseana (Räsänen) Søchting et al. – Corticolous. – King Salmon (MCCUNE et al. 2018).

= *Xanthoria hasseana* Räsänen – St Paul Isl (LINDBLOM 1997).

Xanthomendoza montana (L. Lindblom) Søchting et al. – Typically corticolous, substrate of single Alaskan record not known.

= *Xanthoria montana* L. Lindblom – Portage Glacier (LINDBLOM 1997).

Xanthoparmelia angustiphylla (Gyeln.) Hale – Saxicolous. – Lake Clark NPPR, Camel’s Hump (MCCUNE et al. 2018).

Xanthoparmelia coloradoënsis (Gyeln.) Hale – Saxicolous on siliceous rocks. – Gates of the Arctic NPPR (NEITLICH & HASSELBACH 1998); Noatak NPPR (MCCUNE et al. 2009); Gates of the Arctic NPPR (NELSON et al. 2015b); Denali NPPR, N of the AK Range (STEHN et al. 2015); Katmai NPPR, Naknek L; Lake Clark NPPR, W of Hatchet Pt (MCCUNE et al. 2018).

? = *Xanthoparmelia taractica* auct., non Kremp. – Yukon R; Tanana R (MURRAY et al. 1983); Alaska (THOMSON 1984: map); Ogotoruk Cr (MURRAY 1985); 15 km WNW of Tanacross Village (TALBOT et al. 2007). Typical *X. taractica* occurs from Argentina to Mexico, but is replaced north of Mexico by *X. coloradoënsis* (HALE 1990).

Xanthoparmelia conspersa → [Appendix A](#)

Xanthoparmelia stenophylla (Ach.) Ahti & D. Hawksw. – Saxicolous on siliceous rock.

= “*Parmelia stenophylla* (Ach.) Du Rietz” – Denali NP, Conglomerate Mtn, E of Teklaneeka R (KROG 1962); Mt Eielson (WEBER & VIERECK 1967). Synonymy after AHTI & HAWKSWORTH (2005).

= *Xanthoparmelia somloënsis* (Gyeln.) Hale – “extends northward into Alaska” (HALE 1990: 34); Sheep Mtn (THOMSON & AHTI 1994). Synonymy after AHTI & HAWKSWORTH (2005).

= *Parmelia taractica* sensu Krog – Talkeetna Mts, Puritan Cr; Kenai Peninsula, Skilak L; Richardson Hwy, mi 45; Denali Hwy, mi 70; Denali NP, Savage R; base of Rainbow Mts, E of Richardson Hwy; White Mts, headwaters of Sheep

Cr; White Mts, Fossil Cr (KROG 1968). Krog explicitly indicated that her interpretation was “= *P. stenophylla* (Ach.) Du Rietz”.

Xanthoparmelia subhosseana → **Neofuscelia subhosseana**

Xanthoparmelia taractica auct. → **Xanthoparmelia coloradoënsis**

Xanthoparmelia tasmanica (Hook. f. & Taylor) Hale – Saxicolous on acidic rock.

– Riverside Lodge Airstrip; Willow L, near Alaska Hwy; 15 km WNW of Tanacross Village (TALBOT et al. 2007).

= *Parmelia tasmanica* Hook. f. & Tayl. – Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Ogotoruk Cr (MURRAY 1985).

? = *Parmelia hypopsila* sensu Krog – White Mts, headwaters of Sheep Cr; White Mts, Fossil Cr (KROG 1968, as cf.; see also comment under *X. conspersa*).

Krog’s specimens lacked isidia, had a black undersurface and possessed usnic and salazinic acids and atranorin.

Xanthoparmelia wyomingica (Gyeln.) Hale – Yukon R (MURRAY et al. 1983).

Xanthoria alaskana J. W. Thomson – Corticolous on twigs of *Alnus* and *Picea*.

LINDBLOM (1997) considered this a pigment-deficient form of *Xanthoria* (*Polycauliona*) *polycarpa* but has since suggested it may be worthy of recognition (L. Lindblom, pers. comm. 2012). – Chisik Isl (**type** – TALBOT et al. 1992); Kodiak Isl, small unnamed island in Blue Fox Bay (DILLMAN 2010).

Xanthoria borealis → **Xanthomendoza borealis**

Xanthoria candelaria → **Polycauliona candelaria**

Xanthoria elegans → **Rusavskia elegans**

Xanthoria fallax → **Xanthomendoza fallax**

Xanthoria fulva → **Xanthomendoza fulva**

Xanthoria montana → **Xanthomendoza montana**

Xanthoria parietina → **Appendix A**

Xanthoria polycarpa → **Polycauliona polycarpa**

Xanthoria soreliata → **Rusavskia soreliata**

#Xenonectriella nephromatis Pérez-Ort. – On *Nephroma* cf. *bellum* (thallus in poor condition). – Glacier Bay NP: Glacier Bay (**type** – SPRIBILLE et al. 2020).

Xylographa abietina → **Xylographa parallela**

Xylographa bjoerkii T. Sprib. – Lignicolous on intertidal driftwood. – Glacier Bay NP: Taylor Bay (SPRIBILLE et al. 2014b); Alaska (RESL et al. 2015, supplementary material); Alaska (MCCUNE 2017b); Kenai Fjords NPPR, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Xylographa carneopallida (Räsänen) T. Sprib. – Lignicolous on logs. – Chena R near Fairbanks (SPRIBILLE et al. 2014b).

Xylographa erratica T. Sprib. – Lignicolous on intertidal driftwood and in forests. – Kodiak Isl; Glacier Bay NP, Icy Straits (SPRIBILLE et al. 2014b); coastal Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay (SPRIBILLE et al. 2020).

Xylographa hians Willey ex Tuck. – Lignicolous on logs in coastal rainforests. – Mitkof Isl; Unimak Isl; Glacier Bay, Bartlett Cove; Veteran’s Hwy N of Auke Bay (SPRIBILLE et al. 2014b); Alaska (RESL et al. 2015, supplementary material); SE Alaska (MCCUNE 2017b); Lake Clark NPPR, Pickerel L (MCCUNE et al. 2018); Glacier Bay NP: Dundas Bay, Excursion Ridge, Glacier Bay, Gustavus (SPRIBILLE et al. 2020); Kenai Fjords NPPR (MCCUNE et al. 2020).

- Xylographa opegraphella*** Nyl. ex Rothr. – Lignicolous on coastal driftwood, fences and docks. – Cook’s Inlet (**type** – ROTHROCK 1884; NYLANDER 1887: 89; MACOUN 1902; BRODO 1984a; BRODO 1992; SPRIBILLE et al. 2014b); Alaska (HUE 1891; CUMMINGS 1904); Zarembo Isl (HERRE 1919); Zarembo Isl (GEISER et al. 1994a); SE Alaska (O’CLAIR et al. 1996); Eagle Beach, Lynn Canal (GEISER et al. 1998); Dyea (SPRIBILLE et al. 2010, 2014b); Ogotoruk Cr; Amchitka Isl; Glacier Bay NPP, Muir Pt; [Kenai Pen:] Resurrection Bay, Lowell Pt (SPRIBILLE et al. 2014b); Alaska (MCCUNE 2017b); Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon (MCCUNE et al. 2020); Glacier Bay NP: Dundas Bay, East Arm, Gustavus, West Arm (SPRIBILLE et al. 2020). = *Xylographa sibirica* Zahlbr. – “may be sought in the American Arctic”; not definitively reported from Alaska (THOMSON 1997). Synonymy after SPRIBILLE et al. (2014b).
- Xylographa parallela*** (Ach.) Fr. – Lignicolous on logs and weathered wood, occasionally on worked wood. – Alaska? (NYLANDER 1887: 89); Alaska (HUE 1891); Isl in Cross Sound (MACOUN 1902); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Summit L, Parks Hwy (SPRIBILLE et al. 2014b); Lake Clark NPPr, Chinitna Ranger Stn (MCCUNE et al. 2018); Kenai Fjords NPPr, W shore of Beauty Bay (MCCUNE et al. 2020); Glacier Bay NP: East Arm, West Arm (SPRIBILLE et al. 2020); Petersburg Borough, Patterson Glacier (FRYDAY & DILLMAN 2021b). = *Xylographa abietina* (Pers.) Zahlbr. – Mt Eielson (WEBER & VIERECK 1967); Chisik Isl (TALBOT et al. 1992); Deadman L CG; Moon L CG (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map).
- Xylographa schofieldii*** T. Sprib. – Lignicolous on logs in coastal rainforest. – Gustavus, Falls Cr (**type** – SPRIBILLE et al. 2014b); SE Alaska (MCCUNE 2017b); Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).
- Xylographa soralifera*** Holien & Tønsberg – Lignicolous and once corticolous on *Tsuga*. – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (MCCUNE 2017b); Kenai Fjords NPPr, near mouth of creek at N end of James Lagoon (MCCUNE et al. 2020).
- Xylographa trunciseda*** (Th. Fr.) Minks ex Redinger – Lignicolous on logs and stumps. – Chilkoot Trail (SPRIBILLE et al. 2010); [Kenai Peninsula:] Resurrection Bay, Lowell Pt (SPRIBILLE et al. 2014b); Katmai NPPr, Brooks Camp (MCCUNE et al. 2018); Kenai Fjords NPPr (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus (SPRIBILLE et al. 2020). = *Xylographa parallela* var. *pallens* auct., non Nyl. – Isl in Cross Sound (ROTHROCK 1884). The type of *pallens* is a member of the *X. parallela* group, but the name was often applied to *X. trunciseda* in the late 19th century (SPRIBILLE et al. 2014b). Furthermore, *X. pallens* (Nyl.) K. P. Malmgr. is unlikely in this locality.
- Xylographa vermicularis*** T. Sprib. – Lignicolous on conifer and birch wood. – Kenai Peninsula, Russian R; Summit L, Parks Hwy; Chulitna R below Buckskin Glacier (SPRIBILLE et al. 2014b); Katmai NPPr, Malone L; Katmai NPPr, Brooks Camp (MCCUNE et al. 2018); Lake Clark NPPr, bay on SW side of Portage (MCCUNE et al. 2020).
- Xylographa vitiligo*** (Ach.) J. R. Laundon – Lignicolous on old wood and stumps. – McKinley NP, N bank of McKinley R, S of Wonder L (ANDERSON 1967);

Alaska (THOMSON 1997: map); Chilkoot Trail; White Pass (SPRIBILLE et al. 2010); Glacier Bay, Bartlett L trail (SPRIBILLE et al. 2014b); Alaska (MCCUNE 2017b); Katmai NPPr, Katmai Bay Bear Cam; Katmai NPPr, Brooks Camp; Lake Clark NPPr, Chinitna Ranger Station (MCCUNE et al. 2018); Kenai Fjords NPPr, N end of Three Hole Bay off Aialik Bay (MCCUNE et al. 2020); Glacier Bay NP: Excursion Ridge, Gustavus, West Arm (SPRIBILLE et al. 2020).

Xylopsora friesii (Ach.) Bendiksby & Timdal – Corticolous on *Tsuga* in old forest, also reported as lignicolous on charred stumps.

= *Hypocenomyce friesii* (Ach.) P. James & Gotth. Schneid. – Moon L CG (THOMSON & AHTI 1994); Chilkoot Trail (SPRIBILLE et al. 2010); Glacier Bay NP: Excursion Ridge Arm (SPRIBILLE et al. 2020).

– Z –

Zahlbrucknerella calcarea (Herre) Herre – Saxicolous on limestone. – Gates of the Arctic NPPr (NELSON et al. 2015b); Lake Clark NPPr, W of Hatchet Pt (MCCUNE et al. 2018); Glacier Bay NP: Glacier Bay (SPRIBILLE et al. 2020).

Zahlbrucknerella fabispora Henssen – Saxicolous. – Katmai NPPr, Naknek L (MCCUNE et al. 2018).

#Zwackhiomyces berengerianus (Arnold) Grube & Triebel – On *Bilimbia lobulata*. – (ZHURBENKO et al. 1995).

#Zwackhiomyces diderichii D. Hawksw. & Iturr. – On *Cladonia arbuscula*. – Kotzebue; Goldstream Valley (ZHURBENKO & PINO-BODAS 2017).

+Zythia resinae (Ehrenb.) P. Karst. – On resin, corticolous on sheltered *Tsuga mertensiana*, and on pitch of exposed wood at high water line.

= *Sarea resinae* (Fr.) Kuntze – Glacier Bay NP: Dundas Bay, Excursion Ridge (SPRIBILLE et al. 2020).

#Zyzygomyces bachmannii (Diederich & M. S. Christ.) Diederich et al. – On *Cladonia* spp. – Alaska (DIEDERICH et al. 2022b).

= *Heterocephalacria bachmannii* (Diederich & M. S. Christ.) Millanes & Wedin – Seward Peninsula, Newton Pk; Kotzebue; Great Kobuk Sand Dunes; Tanana R, Bonanza Cr; Denali NPPr, Rock Cr; Tongass NF, Laughton cabin; Kenai Peninsula, Chugach NF (ZHURBENKO & PINO-BODAS 2017); Unimak Isl; Unalga Isl; Noatak NPr (PINO-BODAS et al. 2017b); Glacier Bay NP: Excursion Ridge (SPRIBILLE et al. 2020).

= *Syzygospora bachmannii* Diederich & M. S. Christ – Vicinity of Juneau, Herbert Glacier (HAFELLNER et al. 2002); Noatak NPr (MCCUNE et al. 2009); SE Alaska (DILLMAN 2010); White Pass (SPRIBILLE et al. 2010).

#Zyzygomyces physciacearum (Diederich) Diederich et al. – On *Physcia aipolia*. = *Heterocephalacria physciacearum* (Diederich) Millanes & Wedin – Glacier Bay NP: West Arm (SPRIBILLE et al. 2020).

= *Syzygospora physciacearum* Diederich – E of Mud Cr (TRIEBEL et al. 1991; DIEDERICH 2003); Chilkoot Trail (SPRIBILLE et al. 2010).

Appendix A. Excluded and doubtful taxa

- Acarospora discreta* (Ach.) Arnold – Status unclear; not accepted by ESSLINGER (2021) for North America. The specimen upon which this is based (F-C1000366F, leg. Bean) has not been revised.
= “*Lecanora cervina* var. *discreta* Sommerf.” – Port Clarence (ROTHROCK 1884).
- Ahtiana aurescens* (Tuck.) A. Thell & Randlane – Likely a misidentification of *A. pallidula*.
= *Cetraria aurescens* Tuck. – Middleton Isl (MACOUN 1902).
- Alectoria fallacina* Motyka – Sitka area, Harbor Mtn (KROG 1968: “this species is very closely related to *A. sarmentosa*, and may belong in that complex”). An Appalachian endemic (BRODO & HAWKSWORTH 1977).
- Alectoria jubata* (L.) Ach., nom. rej. – This name has been applied to many different *Bryoria* species and cannot be interpreted. – “No locality given” (ROTHROCK 1884); between Cook Inlet and Tanana R; Baranof Isl, Hot Springs; Sitka; Wrangell (CUMMINGS 1904); St Paul Isl (HOWE 1911a); Wrangell (HERRE 1919); PWS, Thum Bay (EYERDAM 1949); Anchorage, Otter Cr (HERRE 1950a); Nanwhyenuk L; Stampede (HOWARD 1958); Ogotoruk Cr (KROG 1962); Brooks Range, S slope, Wild L (KROG 1962; MURRAY 1974); Savage R (HOWARD 1963, but these refer to *Bryoria glabra* fide WEBER & VIERECK 1967).
- Alectoria lata* (Tayl.) Linds. – “on ground” – Alaska (RÄSÄNEN 1933, as ‘*laeta*'). Likely a misidentification of *Alectoria sarmentosa*.
- Amandinea lignicola* Tønsberg & Nordin – On driftwood by the ocean. No Alaska specimens were mentioned in the protologue or are known to us (TT, Jan. 2023 and B. McCune, pers. comm.); the inclusion in the cited reference was probably in error. – Alaska (MCCUNE 2017b).
- Anaptychia palmulata* (Michx.) Vain. – Alaskan specimens at O are on moss and detritus and correspond to the species later described as *A. bryorum*. – Talkeetna Mts, Little Susitna R; Kenai Peninsula, Skilak L; Denali NP, Toklat (KROG 1968). Not mentioned for Alaska by ESSLINGER (2007).
- Aquacidia trachona* (Ach.) Aptroot – Substrate unknown for Alaskan record; perhaps based on literature reference for *Toniniopsis coprodes*?
= *Bacidia trachona* (Ach.) Lettau – North Slope (KRISTINSSON et al. 2010).
- Aspicilia grisea* Arnold – A mis-identification of *Aspicilia simoënsis* (B. McCune, pers. comm. to TS, 2023). – SE Alaska (MCCUNE 2017b).
- +*Atrozythia klamathica* J.K. Mitch. & Quijada – “Probably ... observed ... in Alaska”, but “no specimen was collected”. The type is from *Chamaecyparis* in California (MITCHELL et al. 2021).
- Bacidina phacodes* (Körb.) Vězda – Corticolous on *Alnus*. The species was omitted in the subsequent list for SE Alaska (GEISER et al. 1998). Excluded from North America by EKMAN (1996).
= *Bacidia phacodes* Körb. – SE Alaska (GEISER et al. 1994a).
- “*Biatora artyta* (Ach.) Tuckerm.” – Isls in Behring Strait (MACOUN 1902). Cannot be interpreted without location of voucher specimen.

- Biatora hemipolia* (Nyl.) S. Ekman & Printzen – Reported from Alaska by MCCUNE (2017b) citing PRINTZEN (2014), but the species is not mentioned for Alaska in the latter publication.
- Blastenia crenularia* (With.) Arup et al. – Alaskan records are from both acidic and calcareous rocks as well as old wood. Species excluded for North American by WETMORE (1996).
 = *Caloplaca crenularia* (With.) J. R. Laundon – Alaskan records are from both acidic and calcareous rocks as well as old wood. Species excluded for North American by WETMORE (1996). – Alaska (THOMSON 1997: map).
 = *Caloplaca festiva* (Ach.) Zwackh – Saxicolous. – Pitmegea R, 15 mi upstream from Cape Sabine; Colville R near Umiat; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979).
- Caloplaca pollinii* (A. Massal.) Jatta – Corticolous on *Populus*. A temperate zone species described from Italy and present in eastern North America. The Alaskan material needs to be checked. – SE Alaska (GEISER et al. 1994a: map); along the Unuk R, 2 km from BC border (GEISER et al. 1998; the specimen [TNFS L-1145] was annotated by TS in 2013 to *Caloplaca atosanguinea*).
 = *Blastenia ferruginea* (Huds.) Körb. var. *pollinii* A. Massal. – 50 mi inland from Camden Bay (MERRILL 1924b).
- Cetraria ericetorum* Opiz subsp. *ericetorum* – Reports predate Kärnefelt's monograph (1979) and likely refer to *C. ericetorum* subsp. *reticulata*.
 = *Cetraria crispa* (Ach.) Nyl. – Port Clarence (NYLANDER 1887; HUE 1890); Unalaska Isl, Unalaska; Atka Isl; Attu Isl; St Paul Isl (DEGELIUS 1937); Pt Barrow (THOMSON 1960); Ogotoruk Cr drainage (JOHNSON et al. 1966, but this material is either *C. laevigata* or *C. islandica* fide MURRAY 1985).
 = “*Cetraria islandica crispa*” – Alaska (HADWEN & PALMER 1922; PALMER & ROUSE 1945).
- Cetraria muricata* (Ach.) Roum. – Records likely refer to *C. aculeata* s. lat. or *C. odontella* (F. Fernández-Mendoza, pers. comm. 2011). Terricolous on humus in alpine, one record from *Rhododendron camtschaticum* (Izembek Refuge). – Ft Richardson (MURRAY 1997); Ft Wainwright (RACINE et al. 1997); [SE Alaska] mainland, Cape Fanshaw (GEISER et al. 1998); Kodiak Isl, Spiridon Peninsula (TALBOT 1998); Afognak Isl, Blue Fox Bay (DILLMAN 2010); Izembek Refuge, near Frosty Pk (TALBOT et al. 2000); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Chugach NF (DERR 2010, as ‘*mucricata*’); Shumagin Isls, Simeonof Isl (DANIËLS et al. 2004); Gates of the Arctic NPPr (NELSON et al. 2015b); Denali NPPr (ROLAND et al. 2017); Lake Clark NPPr, Lachbuna L (MCCUNE et al. 2018); Brooks Range, Atigun Pass (KASANKE 2019).
 = *Coelocaulon muricatum* (Ach.) J. R. Laundon – (KÄRNEFELT 1986: no specific localities, 17 specimens, ~9 localities on map); Amchitka Isl (THOMSON & SOWL 1989); SE Alaska (GEISER et al. 1994a: map); Fielding L (THOMSON & AHTI 1994); Gates of the Arctic NPPr (NEITLICH & HASSELBACH 1998); Noatak NPPr (HOLT et al. 2009; MCCUNE et al. 2009).
 = *Cornicularia muricata* (Ach.) Ach. – Juneau area, Mt Roberts; Anchorage, Rabbit Cr Rd; Kenai Peninsula, Skilak L; W of Seward, Marathon Mtn; Anchorage, Rabbit Cr Rd (KROG 1968); Beaufort Lagoon, Nuvagapuk Pt (THOMSON 1979); Alaska (THOMSON 1984: map); Arrigetch Cr valley (COOPER 1986b).

- Cladidium bolanderi* (Tuck.) B. D. Ryan – The specimen upon which all reports are based is *Lecanora aleutica* (DILLMAN et al. 2012). – St Matthew Isl (TALBOT et al. 2001); Bering Isls (KRISTINSSON et al. 2010).
= *Lecanora thamnitis* Tuck. – St Paul Isl (MACOUN 1899, as ‘*thamnites*’); St Paul Isl (CUMMINGS 1904: 110).
- Cladonia caroliniana* Tuck. – This record may refer to *C. kanewskii*, but no specimen has been located.
= *Pycnothelia cladinoidea* Nyl. – St Paul Isl (MACOUN 1899; CUMMINGS 1904: 147, as ‘*Pycnothalia*’). “Cummings indicated ‘no specimens in Harriman collection.’ The specimen was collected by William Palmer and determined by Calkins (MACOUN 1899: 583), but there appears to be no information as to where the specimen went and even if it is extant” (TALBOT et al. 2001).
- Cladonia cornucopioides* (L.) Fr. – Records refer to *Cladonia coccifera* s. lat. – Kotzebue’s Sound (BABINGTON 1851); Kotzebue Sound (BABINGTON 1852); Kotzebue Sound (LINDSAY 1868); Alaska (HOOPER 1884); Port Althorp (ROTHROCK 1884); Lawrence-Insula; Port Clarence (NYLANDER 1887; HUE 1890); Taku (CUMMINGS 1892b); Pribilof Isls (MACOUN 1899); St Paul Isl; St George Isl; Unalaska Isl; Port Althorp (MACOUN 1902).
= “*Cladonia coccifera* f. *cornucopioides* (Gray) Vain.” – Denali NP, Rock Cr Trail (HOWARD 1963).
- Cladonia cristatella* Tuck. – Habitat not given. Doubtful; an eastern species. – Denali NPPr (ROLAND et al. 2017).
- Cladonia dimorpha* S. Hammer – Habitat not indicated. Doubtful. – Denali NPPr (ROLAND et al. 2017).
- Cladonia foliacea* (Huds.) Willd. – “On glacial erratic”. – Mendenhall Glacier (McCULLOUGH 1965). Not found in North America; records might refer to *C. pseudalcicornis*.
= *Cladonia alcicornis* (Lightf.) Flörke – Taku (CUMMINGS 1892b); St Paul Isl (MACOUN 1899, 1902).
= “*Cladonia foliacea alcicornis* (Lightf.) Schaer.” – “on rocky soils” – St Paul Isl (MERRILL 1929).
- Cladonia glauca* Flörke – Terricolous. – Fairbanks, Chena Ridge (THOMSON 1979); Alaska (THOMSON 1984: map). Erroneous report.
- Cladonia graciliformis* Zahlbr. – All specimens are *Cladonia bellidiflora* (DILLMAN et al. 2012). – Juneau (DEGELIUS 1937, !H. Sandstede); Juneau (SANDSTEDE & VAINO 1938; SANDSTEDE 1938); Little Sitkin Isl (KROG 1968); St Matthew Isl (TALBOT et al. 2001).
= *Cladonia hookeri* sensu J. W. Thomson, non Tuck. – Alaska (THOMSON 1967).
- Cladonia luteoalba* Wheldon & A. Wilson – Terricolous in alpine tundra. These are unexplained morphs of *Cladonia coccifera* s. lat. (ČERNAJOVÁ et al. 2022) – Anaktuvuk Pass (DAHL & KROG 1970; MURRAY 1974); White Mtns, Cache Mt (ÖSTHAGEN 1972); Alaska (AHTI 1985); Alaska (STENROOS 1990: zeorin strain; dot on map); Thompson Pass (THOMSON & AHTI 1994); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002); Noatak NPr (MCCUNE et al. 2009); Katmai NPPr, Mirror L; Lake Clark NPPr, headwaters of Johnson R; Lake Clark NPPr, Saddle Mtn; Lake Clark NPPr, trail to Tanalian Falls (MCCUNE et al. 2018); Kenai Fjords NPPr, near Harding Icefield Trail (MCCUNE et al. 2020).

- Cladonia peziziformis* (With.) J. R. Laundon – Terricolous. An eastern species not found in Alaska.
= *Cladonia mitrula* Tuck. – Juneau (CUMMINGS 1892a; MACOUN 1902); Alaska (FINK 1906); Juneau (MERRILL 1929).
- Cladonia polydactyla* (Flörke) Spreng. – Terricolous and lignicolous. – Along the coast in Alaska (THOMSON 1968a); Chisik Isl (TALBOT et al. 1992). Incorrect, probably refers to *C. umbricola*.
- Cladonia prolifica* S. Hammer & Ahti – Habitat not given. Doubtful. – Denali NPP (ROLAND et al. 2017).
- Cladonia ramulosa* (With.) J. R. Laundon – Excluded, records probably refer to *C. verruculosa*. – Corticolous (?) on *Picea sitchensis*. – Cyril Cove (THOMSON & SOWL 1989); Cannon Beach, Yakutat (GEISER et al. 1998); Shumagin Isls, Simeonof Wilderness (TALBOT et al. 2002).
= *Cladonia anomaea* Ahti & P. James – Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a).
= *Cladonia pityrea* (Flörke) Fr. – Hooper Bay (KROG 1962).
- Cladonia rangiformis* Hoffm. – Terricolous. – Mt Hayes (THOMSON 1968a). Excluded, not likely to occur (AHTI 1962, 1968).
= “*Cenomyce pungens* Ach.” – Kotzebue’s Sound (HOOKER & ARNOTT 1841).
- Cladonia subcervicornis* (Vain.) Kernst. – Terricolous. – Alaska (THOMSON 1968a); Alaska (THOMSON 1984: map); SE Alaska (GEISER et al. 1994a: map). Misidentifications for North America.
- Cladonia subsubulata* Nyl. – “originally reported for Deer Mtn near Ketchikan by KROG (1968)” (GEISER et al. 1994a) but KROG (1968) does not report this species. Erroneous; a species of the Southern Hemisphere.
- Coccocarpia pellita* (Ach.) Müll. Arg. – Anaktuvuk Pass (MOSER et al. 1979; THOMSON 1979). A misidentification; records apply to *C. erythroxyli*.
- Collema rysssoleum* (Tuck.) Schneid. – “Saxicolous” according to the published record but the voucher in O is on bark and has been annotated as “probably not *C. rysssoleum*” by G. Degelius in 1973; the specimen may correspond to what has been since reported as *C. leptaleum* from Alaska. – Talkeetna Mts, Little Susitna R (KROG 1968).
- Collemopsidium halodytes* (Nyl.) Grube & B. D. Ryan – Reported on barnacles on coastal intertidal rocks; doubtful. *Collemopsidium halodytes* is a saxicolous species (GRUBE & RYAN 2002) and in Alaska *C. foveolatum* and *C. sublitorale* are known to occur on barnacles.
= *Pyrenocollema halodytes* (Nyl.) R. C. Harris – Adak Isl (TALBOT et al. 1997); Kodiak Isl, Spiridon Peninsula (TALBOT 1998).
- Dendriscoaulon intricatum* (Nyl.) Henssen – Corticolous on conifers, *Alnus* and *Salix*; in Alaska, this name and *D. umhausense* have been applied to cyanomorphs of *Dendriscosticta gelida* and, probably, *Ricasolia amplissima*. – Richardson Hwy, mi 10 (THOMSON & AHTI 1994); SE Alaska (GEISER et al. 1994a: map); Yakutat Forelands (SHEPHARD 1995); NW of Haines (GEISER et al. 1998); Alaska (BRODO et al. 2001).
? = “*Dendriscoaulon umhausense* (Auersw.) Degel.” – Saxicolous, in inland localities. – Anaktuvuk Pass (MOSER et al. 1979); Willow L, near Alaska Hwy (TALBOT et al. 2007).

- ? = *Polychidium umhausense* (Auersw.) Henssen – “among mosses in moist situations” and “on spruce twigs” (Mt Eielson) and “shore boulder” (Wonder L). – McKinley Bar; Wonder L (WEBER & VIERECK 1967); Juneau area, Loop Rd (KROG 1968); Colville R near Umiat; Okpilak R near Okpilak L and Mt Michelson (THOMSON 1979); Alaska (THOMSON 1984: map).
- Dendroscosticta oroborealis* auct., non (Goward & Tønsberg) B. Moncada & Lücking – Corticolous on *Alnus*, *Betula* and *Picea*. The specimens are the dendroscostictoid form of *Dendroscosticta gelida*.
= *Sticta oroborealis* Goward & Tønsberg – Chilkoot Trail (SPRIBILLE et al. 2010).
- Erioderma mollissimum* (Samp.) Du Rietz – “On conifer bark in open forest.” – SE Alaska (GEISER et al. 1994a: map); N of Juneau, Amalga Trail (GEISER et al. 1998). This record is based on a misidentification (JØRGENSEN & WOLSELEY 2009; JØRGENSEN et al. 2009).
- Evernia esorediosa* (Müll. Arg.) Du Rietz – Ogotoruk Cr; Ogotoruk Cr drainage, Crowbill Ridge; from Cape Dyer to Ukinyik Cr; Ukinyik Cr drainage (KROG 1962, as cf.); Ogotoruk Cr drainage (JOHNSON et al. 1966); White Mts, between Beaver Cr and Fossil Cr (KROG 1968). These are misidentifications of *Evernia perfragilis* (BIRD 1974, MURRAY 1985).
- Fuscidea circumflexa* (Nyl.) V. Wirth & Vězda – Saxicolous; only record is from the Asian side of Bering Straits (NYLANDER 1885a).
= *Lecidea circumflexa* Nyl. – Behring’s Strait, Lawrencebay E (MAGNUSSON 1925).
- Fuscopannaria leucosticta* (Tuck.) P. M. Jørg. – SE Alaska (DILLMAN 2004: Table 2). An eastern North American species, doubtful; voucher could not be relocated.
- Gyalolechia flavorubescens* (Huds.) Söchting et al.
? = *Placodium aurantiacum* (Lightf.) Nägeli & Hepp – “on dead wood” – St Lawrence Isl (CUMMINGS 1904). Impossible to interpret without revising Alaskan specimen, but this name has often been used for what is now called *G. flavorubescens* (SANTESSON et al. 2004).
? = *Pyrenodesmia aurantiaca* (Lightf.) C. W. Dodge & G. E. Baker – “On trees and wood.” – St Lawrence Isl (RUDOLPH 1955).
- Heterodermia leucomelos* (L.) Poelt – “from Mexico to Alaska” (MCCUNE et al. 1997). Range probably given in error, no known vouchers.
- Heterodermia sitchensis* Goward & Noble – “on *Alnus*” – “southern Alaska” (GOWARD et al. 1994); floodplains, lower Stikine R (GEISER et al. 1998). The voucher specimen was actually *H. speciosa* (T. Goward, pers. comm.).
- Hyperphyscia adglutinata* (Flörke) H. Mayrhofer & Poelt – “on hardwoods”. Out of the species’ range, voucher not located. – Glacier Bay (GEISER et al. 1994a, 1998).
= *Physcia adglutinata* (Flörke) Nyl. – “on *Salix*”. – Muir Glacier (CUMMINGS 1904).
- Hypogymnia imshaugii* Krog – No confirmed records from Alaska (T. Goward, pers. comm.; B. McCune, pers. comm., 2015); corticolous on *Betula*, *Picea* and *Pinus contorta*; records may refer to *H. inactiva* or presorediate forms of other taxa. – Amchitka Isl (THOMSON & SOWL 1989); Alaska (GOWARD et al. 1994); Richardson Hwy, mi 10 (THOMSON & AHTI 1994); SE Alaska (DERR et al. 2007);

- Riverside Lodge Airstrip; Tanacross Village (TALBOT et al. 2007); Chugach NF (DERR 2010: 202).
- Hypogymnia rugosa* (G. Merr.) L. Pike – Corticolous. – Alaska (BRODO et al. 2001, but possibly only “map slopover”); Chugach NF (DERR 2010: 168, 170, 210); White Pass (SPRIBILLE et al. 2010; but a misidentification of *H. enteromorpha* [DILLMAN et al. 2012]); S Alaska (ROOT et al. 2014).
- Lecanora subfusca* auct. – A name that has been applied to many species over time. – Yakutat; Kukak Bay (CUMMINGS 1904); Zarembo Isl (HERRE 1919); PWS, Thum Bay (EYERDAM 1949); Cook’s Inlet; Unalashka; Port Clarence (ROTHROCK 1884). Alaskan records have been referred to other species since BRODO (1984b).
- Lecanora varia* (Hoffm.) Ach. – *L. varia* s. str. is not found in North America (PÉREZ-ORTEGA et al. 2010). This name may apply to a variety of taxa known from this group in Alaska. – Chichagof Bay; Sitka; Kodiak; Port Clarence; Whale Isl, St Michael (CUMMINGS 1904); Wonder L (WEBER & VIERECK 1967, as ‘*stirps varia*’); Chisik Isl (TALBOT et al. 1992); SE Alaska (GEISER et al. 1994a: map); Moon L CG; Fielding L; Sheep Mtn (THOMSON & AHTI 1994); Alaska (THOMSON 1997: map); Kodiak Isl, Spiridon Peninsula (TALBOT 1998).
- Lecidea enteroleuca* Nyl. – Port Clarence (NYLANDER 1887); Sitka; Baranof Isl, Hot Springs; Port Clarence; St Michael (CUMMINGS 1904). An illegitimate name (non *Lecidea enteroleuca* Ach.); “*Lecidella* sp.” according to ESSLINGER (2021). The Port Clarence specimen (S-L3895) was revised to *Lecidella patavina* by Knoph in 1992.
- Lecidea* var. *enteroleuca flavida* Fr. – “on wood”. – Sitka (CUMMINGS 1904). Perhaps a *Lecidella*, but cannot be interpreted.
- Lecidea enteroleuca* var. *latypea* (Ach.) Nyl. – Chamisso Isl; Port Clarence; Cape Lisburne; Old Sitka (ROTHROCK 1884). Perhaps a *Lecidella*, but cannot be interpreted.
- Lecidea myriocarpella* (G. Merr.) Zahlbr. – Lignicolous on stump in bog. – THOMSON & AHTI (1994). The locality given by Thomson & Ahti (locality “D”) as well as the specimen at WIS (THOMSON 23314) are from Alberta, but the text erroneously states that the species is new for Alaska.
- Lepra multipuncta* (Turner) Hafellner – Alaska records were on conifer bark. A European species (DIBBEN 1980), records may refer to *L. ophthalmiza* and other taxa.
= *Pertusaria multipuncta* (Turner) Nyl. – Yakutat; Sitka (CUMMINGS 1904); Brownson Bay (HERRE 1919, specimen F-C1006242F not studied); Yakutat Bay (STAIR 1947, the specimen [PH-00094588] has been annotated to *Lepra ophthalmiza*); Mt Alyeska Rd, 1 mi from hwy (THOMSON & AHTI 1994).
- #*Lettauia cladoniicola* D. Hawksw. & R. Sant. – On *Cladonia stygia*. – Denali NP, headwaters of Hinnes Cr (ZHURBENKO 2009a). Revised to *Anzina carneonivea* (ZHURBENKO & PINO-BODAS 2017).
- Loxospora ochrophaea* (Tuck.) R. C. Harris – Specimen not located. Possibly fertile *L. elatina* or *Loxosporopsis corallifera*
= *Lecanora elatina* var. *ochrophaea* Tuck. – Near Juneau, Sheep Cr (CUMMINGS 1892a; MACOUN 1902).
- Melanelixia glabra* (Schaer.) O. Blanco et al.

- = *Parmelia glabra* (Schaer.) Nyl. – Kosciusko Isl, Shipley Bay (HERRE 1919).
This specimen is a misidentification of *Melanelixia glabratula* (KROG 1968).
- Melanohalea exasperata* (De Not.) O. Blanco et al. – corticolous – S Alaska (ROOT et al. 2014). An eastern North American species not found in Alaska (ESSLINGER 1977: map).
- = *Parmelia aspera* A. Massal. – Anchorage, Chugach Mts (KROG 1968).
= “*Parmelia aspidota* (Ach.) Roehling” – “on bark of *Betula*”. – Anchorage, Chugach Mts (HERRE 1950a).
- Niebla ceruchis* (Ach.) Rundel & Bowler
= *Ramalina ceruchis* (Ach.) De Not. – “growing on the ground beside a lake” – Baranof Isl, Port Armstrong (HERRE 1950b). A set of vouchers collected by Henry Hildebrand from a lakeshore at Port Armstrong are deposited at UC and include several *Cladonia* spp. and *Siphula ceratites* but we are not aware of any collections of *Niebla* from this locality.
- Nipponoparmelia isidioclada* (Vain.) Moon et al. – The voucher at O appears to be a highly lobulate form of *Parmelia hygrophila*.
= *Parmelia isidioclada* Vain. – Richardson Hwy, mi 9 (KROG 1968, as cf., det. Asahina).
- Ochrolechia pallescens* (L.) A. Massal. – Corticolous on alder and spruce bark; excluded for North America (BRODO 1991). – PWS, Thum Bay (EYERDAM 1949); Kuiu Isl, Washington Bay; Revillagigedo Isl, Ketchikan; Raspberry Isl, Port Vita (THOMSON 1950a); Juneau Ice Field (McCULLOUGH 1965); Juneau, Sheep Cr; Revillagigedo Isl, Ketchikan (HOWARD 1970).
= *Lecanora pallescens* (L.) Schaer. – Chugachick Bay, Cook’s Inlet (ROTHROCK 1884); Port-Clarence (HUE 1891); near Juneau, Sheep Cr (CUMMINGS 1892a); Sitka (STIZENBERGER 1895a, 1895b, as “[L.] Ach.”); Chugachick, Cook’s Inlet; Juneau, Sheep Cr (MACOUN 1902); Sheep Cr; Chugachik Bay, Cook Inlet; Port Clarence (CUMMINGS 1904: ‘an *Ochrolechia* sp.’ according to IMSHAUG & BRODO 1966).
- Ochrolechia parella* (L.) A. Massal. – Excluded for North America by BRODO (1991). Annette Isl, Landing Field (HOWARD 1970).
- Ochrolechia parella* var. *tumidula* (Pers.) Arnold – Tongass NF, Mendenhall CG (HOWARD 1970). Cannot be interpreted with certainty, see BRODO (1991).
- Ochrolechia rhodoleuca* (Th. Fr.) Brodo – Not found in North America according to BRODO (1988) and KUKWA (2011). The specimen seen by Nylander is “*Pertusaria subplicans*” according to DIBBEN (1980).
= “*Pertusaria rhodoleuca* Fr. fil.” – Lawrence-Insula (NYLANDER 1887; HUE 1891).
- Ochrolechia trochophora* (Vain.) Oshio – Corticolous on *Populus*. An eastern North American species according to BRODO (1991). – Chugach NF (DERR 2010, based on the Thomson & Ahti record below).
= *Lecanora “pallescens* var. *rosella* Tuck.” – Near Juneau, Sheep Cr (CUMMINGS 1892a); Juneau, Sheep Cr (MACOUN 1902). Synonymy after BRODO (1991).
= “*Ochrolechia rosella* (Müll. Arg.) Versegghy” – Portage Glacier (THOMSON & AHITI 1994).

- Parmeliella mariana* (Fr.) P. M. Jørg. & D. J. Galloway – A subtropical species, probably misidentification of an at that time undescribed pannarioid.
= *Pannaria mariana* (Fr.) Müll. Arg. – “On soil and bark”. – Mendenhall Glacier (McCULLOUGH 1965).
- Parmelina quercina* (Willd.) Hale – a Mediterranean species.
= *Parmelia quercina* (Willd.) Vain. – Yakutat Bay (STAIR 1947). The specimen is likely at PH.
- Parmelina tiliacea* (Hoffm.) Hale – A European species also reported from W Asia, that does not occur in Alaska.
= *Parmelia tiliacea* (Hoffm.) Ach. – Kotzebue Sound (MANN 1868; TURNER 1886).
- Parmotrema cetratum* (Ach.) Hale – Unlikely. A subtropical species, frequent in SE USA.
= *Parmelia cetrata* Ach. – Juneau (BERRY 1941, citing a Fink specimen at M).
- Parmotrema dilatatum* (Vain.) Hale – Mapped for SE Alaska by GEISER et al. (1994a) but omitted in the text and not mentioned in later papers (e.g., GEISER et al. 1998).
- Parmotrema perforatum* (Jacq.) A. Massal. – No specimens have been seen; unlikely.
= “*Parmelia perforata* (Wulfen) Ach.” – Kotzebue Sound (MANN 1868, TURNER 1886, as ‘Ach.’); Baker Isl, Port San Antonio; Howkan Bay (HERRE 1919).
- Pectenia plumbea* (Lightf.) P. M. Jørg. et al. – Corticolous.
= *Degelia plumbea* (Lightf.) P. M. Jørg. & P. James – Fielding L (THOMSON & AHTI 1994). A misidentification of *Coccocarpia erythroxyli* (JØRGENSEN 2000).
- Peltigera dolichorrhiza* (Nyl.) Nyl. – A tropical species unlikely to be found in Alaska, although it is known from Japan.
= *Peltigera polydactylon* var. *dolichorrhiza* Nyl. – Port San Antonio; Port Eches; Farragut Bay; Baranoff Isl, Sitka; PWS, Orca; Cooks Inlet, Port Chatham (THOMSON 1950b).
- “*Peltigera erumpens* (Tayl.) Vain.” – St. Paul Isl (DEGELIUS 1937, ‘belongs to f. *leptoderma* (Nyl.) Schol.’. Probably refers to *P. didactyla* or *P. extenuata*.
- Peltigera neorufescens* Miadl. et al. – Terricolous near ocean cliff. Nomen nudum. – Katmai NPP, Katmai Bay (McCUNE et al. 2018). Unclear what this refers to.
- Pertusaria coccodes* (Ach.) Nyl. – Terricolous in dwarf birch-lichen heath. – Nome (HANSON 1953, unrevised specimens at COLO and QFA). Unconfirmed as a member of the North American lichen biota (DIBBEN 1980).
- “*Pertusaria communis isidioidea* Schaer.” – “on the bark of shrubs; on dead wood; on moss”. – Sitka; Port Wells; PWS (CUMMINGS 1904). Impossible to interpret.
- Pertusaria globularis* (Ach.) Tuck. – “on bark of spruce trees associated with other lichens”. – PWS, Thum Bay (EYERDAM 1949). A misidentification according to DIBBEN (1980).
- Pertusaria lactea* f. *confluens* Erichsen – Mt Eielson (WEBER & VIERECK 1967). Impossible to interpret.
- Pertusaria macounii* (I. M. Lamb) Dibben – Late melt snowbed. – Chisik Isl (TALBOT et al. 1992, as cf.). Unlikely, an eastern deciduous woodland species (DIBBEN 1980).
- Pertusaria pacifica* Henss. ex McCullough – Mendenhall Glacier (McCULLOUGH 1965). We have been unable to find any other reference to this taxon.

- Pertusaria pustulata* (Ach.) Nyl. – Yakutat Bay; Farragut Bay (CUMMINGS 1904).
Most western records incorrect (DIBBEN 1980), and voucher of this report not found.
- Phaeophyscia erythrocardia* (Tuck.) Essl. – Corticolous on *Populus trichocarpa*. – Tuxedni, Chisik Isl (TALBOT et al. 1992 as *P. hirtella*, redet. Esslinger in MCCUNE et al. 2018).
- #*Phoma thamnoliae* Zhurb. – On *Thamnolia*. Nomen nudum. – Great Kobuk Sand Dunes (ZHURBENKO 2012).
- “*Physcia obscura* Fries” – Kotzebue Sound (MANN 1868; TURNER 1886); Eklutna (HERRE 1950a, on rock).
- Pilophorus fibula* (Tuck.) Th. Fr. – An eastern North American species, reports probably apply to *P. clavatus* or *P. cereolus*.
= *Pilophorus cereolus* var. *fibula* Tuck. – Sawmill Cr, Sitka (MACOUN 1902); Nichols Bay (HERRE 1919).
- Placopsis scripta* Schneider et al. – On rock. Nomen nudum. – Mitkof Isl, Twin Lakes rd; near Juneau, Mendenhall L (SCHNEIDER et al. 2016: Table S1).
- Placopsis sulcata* T. Sprib. – On rock. Nomen nudum. Katmai NPPr, Mirror L camp; Lake Clark NPPr, W of Contact Cr (MCCUNE et al. 2018).
- Placopsis taalkuensis* K. Schneider et al. – On soil. Nomen nudum. – Baird Glacier forelands (SCHNEIDER et al. 2016: Table S1).
- Polyblastia intercedens* (Nyl.) Lönnr. – On rock. The current disposition of this species is unresolved as the type has not been located (SAVIĆ & TIBELL 2012), and the Alaskan material has not been revised.
= *Verrucaria intercedens* Nyl. – Cape Lisburne (ROTHROCK 1884); Port Clarence (NYLANDER 1887; HUE 1892); Cape Lisburne (MACOUN 1902).
- Polyblastia intermedia* Th. Fr. – Not currently accepted for North America. It is necessary to locate and check the original Bean specimen that was first identified by Willey.
= “*Verrucaria intermedia* (Th. Fr.)” – Alaska (ROTHROCK 1884; NYLANDER 1887: 89; HUE 1892); Cape Lisburne (MACOUN 1902, based on Rothrock record).
- Polycaulonia coralloides* (Tuck.) Hue – Bering Sea, St Paul Isl (RUDOLPH 1955).
TALBOT et al. (2001) write “this report is probably erroneous as WETMORE & KÄRNEFELT (1998) report the species occurs only north to Oregon”. The specimen, in US, should be checked.
= *Placodium coralloides*? Tuck. – St Paul Isl (CUMMINGS 1904, with ?).
- Porpidia albocaerulescens* (Wulfen) Hertel & Knoph – An exclusively eastern species in North America, record probably refers to *P. carlottiana*.
= *Lecidea albocaerulescens* (Wulfen) Schaer. – “Alaska and the adjacent region”, no locality given (ROTHROCK 1884, citing author as Fr.); Orca; Kodiak (CUMMINGS 1904).
- “*Pseudoevernina consocians* (Vain.) Hale & W. L. Culb. – Barrow (WEBBER 1978).
Not clear what the record refers to, but it is unlikely to be *P. consocians*, an epiphytic lichen found from Alberta to the Atlantic coast.
- Psora russellii* (Tuck.) A. Schneid. – Terricolous. – Behrings Street [sic] (SCHNEIDER 1979). This record is doubtful for Alaska because it is based on a C. Wright specimen, and it is not clear if Wright actually collected on the Alaskan side of the Bering Straits (PFISTER 1978).

- Punctelia subrudecta* (Nyl.) Krog – Corticolous on dead *Alnus crispa* and living *Betula papyrifera* and *Picea sitchensis*, also on rotting log. A misidentification of *Parmelia hygrophila* (MCCUNE et al. 2018). – Chisik Isl (TALBOT et al. 1992).
- Pyrenocarpon thelostomum* (Ach. ex J. Harriman) Coppins & Aptroot – Synonymy after COPPINS & APTROOT (2008).
= “*Collemopsis flotowiana* (Hepp)” – Port Clarence (NYLANDER 1887). A misidentification of a *Collema* sp. (DILLMAN et al. 2012).
- Pyrenodesmia variabilis* (Pers.) A. Massal. – On bone in dry tundra. A species of rocks in warm climates such as the Mediterranean; we consider these reports to be highly unlikely, and have not been able to locate the voucher for the FRYDAY (2004a) record.
= *Caloplaca variabilis* (Pers.) Müll. Arg. – Atkasuk (FRYDAY 2004a, as cf.).
= *Placodium variabile* (Pers.) Nyl. – Port Clarence (ROTHROCK 1884; MACOUN 1902).
- Ramalina calicaris* (L.) Röhl. – Atka Isl; Amlia Isl (HEDRICK 1936). This record corresponds to *R. almquistii* (DEGELIUS 1937).
- Ramalina cuspidata* Ach. – St Paul Isl (MACOUN 1899, 1902). ESSLINGER (2021) treats *R. cuspidata* as misidentifications for North America.
- Ramalina inflata* (Hook. f. & Taylor) Hook f. & Taylor – Not known with certainty in North America. Records of *R. inflata* are likely an undescribed taxon similar to *R. dilacerata*; records of *R. geniculata* are likely referable to *R. almquistii*, based on their occurrence on islands of the Bering Straits.
= “*Ramalina geniculata* Hook. and Tayl.” – “Alaska and the adjacent region”, no locality given (ROTHROCK 1884; this specimen was revised to *R. minuscula* by NYLANDER 1887: 85).
= “*Ramalina pusilla geniculata*” sensu Cummings – St Michael; St Matthew Isl (CUMMINGS 1904). *Ramalina geniculata* s. str. occurs in southern Europe; the specimens from these islands are however more likely to be *R. almquistii*.
? = *Ramalina inflata* subsp. *inflata* auct. amer., non (Hook. f. & Taylor) Hook f. & Taylor – SE Alaska (GEISER et al. 1994a: map; GEISER et al. 1998).
- Ramalina subfarinacea* (Nyl. ex Cromb.) Nyl. – Saxicolous on maritime rocks and tundra. Misidentifications according to BOWLER & RUNDEL (1978). – St Paul Isl; Atka Isl (HOWE 1913a); Atka Isl; St Paul’s Isl; St George (HOWE 1913b; HOWE 1914); Bering Isls (KRISTINSSON et al. 2010).
- Ramboldia elabens* (Fr.) Kantvilas & Elix – Most western North American records are misidentifications of other species. A map showing dots for Alaska (MCMULLIN 2021) includes old, unverified records from databases and is therefore excluded here.
= *Lecidea elabens* Fr. – “on *Populus trichocarpa*” – Chisik Isl (TALBOT et al. 1992, as cf.). Misidentification of *Lecidea erythrophaea* (MCCUNE et al. 2018).
= *Lecidea melancheima* Tuck. – “on wood”. – St Lawrence Isl (CUMMINGS 1904). The voucher specimen at NY (Trelease & Saunders 832) has been annotated by TS to *Biatora* cf. *ementiens*.
- Rhizocarpon praebadium* (Nyl.) Zahlbr. – Saxicolous on alpine rocks. The single collection (Tongass NF herbarium, seen by AMF, 2015) is a misidentification of *R. hochstetteri*. – SE Alaska (GEISER et al. 1994a: map); Thunder Mtn, N of the Stikine R (GEISER et al. 1998).

- Ricasolia quercizans* (Michx.) Stizenb. – The specimen (UC-53084) has been revised to *Sticta arctica*.
 = *Sticta quercizans* (Michx.) Ach. – “on earth”. – Unalaska (CUMMINGS 1904, based on a Setchell specimen); Unalaska Isl (HEDRICK 1936).
- Rinodina granulans* Vain. – Corticolous on twigs of conifers and hardwoods. SHEARD (2010) rejects North American records and refers them to *R. sibirica*. – Alaska (THOMSON 1997: map); Teck Isl (DILLMAN 2010). *Rinodina sophodes* (Ach.) A. Massal. – Cape Lisburne (ROTHROCK 1884). North American material is misidentified (SHEARD 2010).
- Rinodina sophodes* (Ach.) A. Massal. – Cape Lisburne (ROTHROCK 1884). North American material is misidentified (SHEARD 2010).
 = *Lecanora sophodes* Ach. – Port Clarence (NYLANDER 1885b, NYLANDER 1887; HUE 1891).
- Rinodina subminuta* H. Magn. – Corticolous on *Populus* bark. Misidentifications of *R. pallidescens* (SHEARD et al. 2017). – Chilkoot Trail (SPRIBILLE et al. 2010); SE Alaska (McCUNE 2017b).
- Rufoplaca scotoplaca* (Nyl.) Arup et al.
 = “*Lecanora caesiorufa* Ach.” – Lawrence-Isula (NYLANDER 1887); Alaska (HUE 1891). This name has been widely used for *Rufoplaca scotoplaca* in Europe, but it is impossible to interpret with certainty without studying the original Almquist material in Stockholm (S-F106340).
- Sagediopsis barbara* (Th. Fr.) R. Sant. & Triebel – The identification was corrected to *Porina mammillosa* by FRYDAY (2004b).
 = *Gongylia nadvornikii* Servít – Eagle Summit (THOMSON & AHTI 1994).
- Sanguineodiscus aractus* (Fr.) I.V. Frolov & Vondrák – Alaskan record is from rock. Needs to be verified.
 = “*Placodium fuscoatrum* (Bayrh.)” – Kodiak (CUMMINGS 1904). Synonym after FROLOV et al. (2021).
- Santessonniella grisea* (Hue) Henssen – Corticolous on *Alnus*. North American reports are all misidentifications (SPRIBILLE et al. 2020). – Kiui Isl (JØRGENSEN 2000); SE Alaska (DILLMAN 2004); 6.3 km NW of Gustavus, Tower Rd (SCHNEIDER et al. 2015).
- #*Sclerococcum attendendum* (Nyl.) Ertz & Diederich – On *Pilophorus* spp. Not confirmed with certainty for Alaska; records are from the Russian side of the Bering Strait. For details on synonymy see Appendix B. – Kenai Fjords NPPr, NPS weather station, McArthur Ridge (McCUNE et al. 2020). The record is on rock and marked as “nonlichenized, nonlichenicolous” and is likely misidentified.
 = *Buellia parasitula* (Nyl.) Macoun – “on *Pilophorus cereolus* var. *robustus*”. – Isls in Behring Strait (MACOUN 1902).
 = *Lecidea parasitula* Nyl. – On *Pilophorus robustus*; described from the Russian side of the Bering Straits (NYLANDER 1866a, b). – Insulae Freti Beringiani (STIZENBERGER 1876); Bering Sea Isls (STIZENBERGER 1895a).
- Stereocaulon chlorellum* Tuck. – Isls of Behring’s Straits (TUCKERMAN 1859). Discussed by NYLANDER (1863b); “not a species, the specimens belonging to *Ramalina*” (WILLEY 1873). Cannot be interpreted without locating original material.
- Stereocaulon cumulatum* (Sommerf.) Timdal – On soil in snowbeds.

- = *Toninia cumulata* (Sommerf.) Th. Fr. – Alaska (THOMSON 1997: map).
 TIMDAL (2002) dismissed North American specimens as erroneous, citing
 ESSLINGER & EGAN (1995), who stated that the species, as *Toninia cumulata*,
 was a “misidentification for North America”. ESSLINGER & EGAN (1995), for
 their part, cited only WEBER & WITTMANN (1992) as the reason to remove *T.*
cumulata from the North American checklist, but the latter stated only that the
 Colorado reports of *Toninia cumulata* were “misidentifications of *Leproloma*
angardianum” and made no mention of any records from the North America
 arctic. TIMDAL (2002) likewise did not revise the Alaskan specimen (WIS-L-
 0099323), which came after ESSLINGER & EGAN (1995), and upon which the
 single Alaskan report is apparently based. We (AMF) have examined the
 specimen and found it to belong to *Bilimbia lobulata*.
- Stereocaulon tornense* (H. Magn.) P. James & Purvis – According to MCCUNE
 (2019), *S. tornense* does not occur in North America. This report possibly refers
 to sterile *S. plicatile*. – SW Alaska (MCCUNE 2017b).
- Stereocaulon vesuvianum* var. *obscurum* (Müll. Arg.) I. M. Lamb – Saxicolous on
 rock in alpine. Unlikely, heretofore known only from Cameroon and Kenya. –
 Afognak Isl, Blue Fox Bay (DILLMAN 2010).
- #*Stigmidium schaeferi* (A. Massal.) Trevis. – On *Lecanora* sp. – Chisik Isl (TALBOT
 et al. 1992). Probably another species because *S. schaeferi* s. str. occurs on
Dacampia hookeri.
- Tephromela atrocaesia* (Nyl. ex Cromb.) Fryday
 = *Lecidea atrocaesia* Nyl. – Lawrence-Insula (NYLANDER 1887). “Specimens in
 the Nylander herbarium ... represent *Rhizocarpon grande*” (THOMSON 1968b).
- Thamnomia taurica* (Wulfen) A. Massal. – This taxon was recognized as a regional
 subspecies of *T. vermicularis* in the Alps by JØRGENSEN (2019) and at the
 species level by LÜCKING et al. (2021). The record likely refers to *T.*
vermicularis subsp. *vermicularis*.
 = “*Thamnomia vermicularis taurica* Schaer.” – Agattu Isl; Hall Isl; St Matthew
 Isl; St Lawrence Isl (CUMMINGS 1904).
- Thelotrema lepadinum* f. *rupestre* (Turner & Borrer) Cromb. – Quigley Hill
 (HOWARD 1963; this specimen was seen by WEBER & VIERECK [1967] and
 reidentified as *Polyblastia theleodes* [see *Sporodictyon schaeferianum*]).
- Thrombium mauroides* (Körb.) Zschacke – “on lake shore rocks”. – Adak Isl
 (TALBOT et al. 1997, as cf. and with the comment “it may be an undescribed
 species”).
- Thalloidima candidum* (Weber) A. Massal. – Usually saxicolous. Not generally
 known from the Arctic (TIMDAL 1991b); the specimens should be revised.
 = “*Lecidea candida* Ach.” – Port Clarence (NYLANDER 1887).
 = *Toninia candida* (Weber) Th. Fr. – Gates of the Arctic NPPr (NELSON et al.
 2015b).
- Toniniopsis coprodes* (Körb. ex Arnold) S. Ekman & Coppins
 = *Bacidia coprodes* (Körb.) Lettau – Saxicolous on calcareous rock. –
 Anaktuvuk Pass (THOMSON 1979); Anaktuvuk Pass (MOSER et al. 1979). The
 voucher specimen of this at ASU has been revised to *Toniniopsis verrucarioides*
 (T. Nash, pers. comm., 2015).
- #*Torula lichenum* Keissler – In apothecia of a *Lecanora* on rocks. – Sheep Mtn
 (THOMSON & AHTI 1994). Impossible to interpret.

Umbilicaria tylorrhiza Nyl. – On rocks. This species, described from northern European Russia, is treated as a synonym of *U. vellea* by ESSLINGER (2021) but is recognized as a distinct species in the Russian checklist (URBANAVICHUS & ANDREEV 2010) and in recent work on the genus by DAVYDOV et al. (2017). The material needs to be checked as it is not impossible that this taxon occurs in Alaska.

= “*Umbilicaria vellea tylorrhiza* Nyl.” – Summit of White Pass (CUMMINGS 1904).

Usnea arizonica Motyka – Corticolous. A misidentification of *U. flavocardia* (det. T. Goward). – SE Alaska (DILLMAN 2004).

Usnea florida (L.) F. H. Wigg. – “On trees” and “on *Populus trichocarpa*”. The presence of this species in NW North America is questionable; MCCUNE & GEISER (2009) refer to the presence as ‘questionable’ (for the thamnolic acid chemotype) and HALONEN et al. (1998) lists it as a misapplied name for “*Usnea rigida* (Ach.) Mot.” The records cannot be interpreted. – Alaska (HOWE 1910); Chisik Isl (TALBOT et al. 1992).

= “*Usnea barbata florida* (L.) Fr.” – Sitka (CUMMINGS 1904).

Usnea implexa Ach. – Record cannot be interpreted. – Juneau area, Loop Rd (KROG 1968, as cf.).

Usnea trichinella Motyka – “branches of *Malus fusca*”. – Gut Isl, Stikine R flats (GEISER et al. 1994a, “taxonomic status uncertain”). Described from Central America, and not accepted by ESSLINGER (2021). Unlikely.

Usnea wasmuthii Räsänen – Sheep Mtn (THOMSON & AHTI 1994). Revised to *U. lapponica* (= *U. perplexans*) by HALONEN et al. (1998).

Vahliella californica (Tuck.) P. M. Jørg. – A southern species, unlikely in Alaska. HERRE (1950a) cites Lepage’s specimen collection number as 22402, which we were unable to locate. However, we note that his 22403 is present in UC and QFA with habitat description as “mossy rock along a stream” and has been annotated to *Protopannaria pezizoides*.

= *Parmeliella microphylla* f. *californica* (Tuck.) Herre – “on mossy rock along a stream”. – Anchorage, Chugach Mts (HERRE 1950a).

Varicellaria velata (Turner) Schmitt & Lumbsch – BRODO et al. (2001) map this species only from eastern North America, where it occurs on hardwoods. The sole remaining specimen that has not been revised to *Lepra* is WIS-L-0068427, from the Kaolak River where it occurred “on willows”. This has been seen by us and is referable to *L. subvelata*.

= *Pertusaria velata* (Turner) Nyl. – Warm Springs, Sitka (ROTHROCK 1884, a misidentification of *P. ophthalmiza* (now *Lepra ophthalmiza*) according to DIBBEN 1980); Revillagigedo Isl, Ketchikan (THOMSON 1950a; a misidentification according to DIBBEN 1980); S of Wainwright, Kaolak R (THOMSON 1979).

Variospora aurantia (Pers.) Arup et al. – Current name for *C. callopisma*; unlikely. = *Caloplaca callopisma* (Ach.) Th. Fr. – Chernofski (HOWE 1913a).

Verrucaria alpicola Zschacke – Mt Eielson (WEBER & VIERECK 1967, as cf.).

Impossible to interpret without locating and revising voucher.

Verrucaria lobata J. W. Thomson – Saxicolous. – RYAN (1988, under *V. maura*) indicates that there is an Alaskan specimen of this species at WIS identified by

- J. Thomson, but the species was not mentioned by THOMSON (1997) and the only specimens we could locate at WIS was the type material from British Columbia.
- Verrucaria mauroides* (Schaer.) Nyl. f. *conizodes* Nyl. – Cannot be interpreted. – Alaska [perhaps from near Anchorage, as it references collections by Bean] (**type** – NYLANDER 1887: 284); Alaska (HUE 1892).
- Xanthoparmelia conspersa* (Ehrh. ex Ach.) Hale – Questionable; the only record not determined as another species is from 1924.
 = *Parmelia conspersa* (Ehrh. ex Ach.) Ach. – Sitka; White Pass (CUMMINGS 1904); 50 mi inland from Camden Bay (MERRILL 1924b); Brooks Range, L Peters (KROG 1962, but corrected to “*Parmelia* cf. *hypopsila*” by KROG 1968). The White Pass collection (*Trelease* 1138, NY-1549713) has been annotated to *Arctoparmelia centrifuga* by R.C. Harris. The Krog record cannot be *X. conspersa* as it lacks isidia (KROG 1968), and the record cited by MERRILL (1924b) was not found.
- Xanthoria parietina* (L.) Th. Fr. – Yakutat Bay (STAIR 1947). The voucher (PH-00105469) has not been annotated.
 = “*Parmelia parietina* Ach.” – Kotzebue’s Sound (BABINGTON 1851, 1852b).
 = “*Physcia parietina* D.N.” – Kotzebue Sound (MANN 1868; TURNER 1886); Port Clarence (NYLANDER 1887).
 = *Theloschistes parietinus* (L.) Norman – Port Clarence (ROTHROCK 1884).

Appendix B. Nomenclatural notes

I. A new name for *Biatora marmorea* T. Sprib.

Biatora montis-marmorei T. Sprib., nom. nov. (MB 848920)

Biatora marmorea T. Sprib., *Lichenologist* 52: 89 (2020) (MB 830093), nom illeg., non *Biatora marmorea* (Scop.) Steud. & Hochst., *Enum. Pl. Germ.*: 209 (1826). Type: USA, Alaska, Hoonah-Angoon Census Area, Glacier Bay National Park, west side of Glacier Bay, base of Marble Mountain directly opposite Drake Island, 58°37.894'N, 136°14.639'W, corticolous on large, old *Oplopanax horridus* in dense beach fringe thicket of *Alnus incana*, just above sea level, 3 July 2012, Spribille 38009, Pérez-Ortega & Tønsberg (MSC–holotype; NY–isotype).

A new name is required because *Biatora marmorea* T. Sprib. is a later homonym of *Biatora marmorea* (Scop.) Steud. & Hochst. Scopoli described his new species as *Lichen marmoreus* Scop., *Fl. carniol.*, Edn 2 (Wien) 2: 367 (1772), and this was transferred to the genus *Bagliettoa* as *B. marmorea* (Scop.) Gueidan & Cl. Roux, *Mycol. Res.* 111(10): 1157 (2007) confirming its position in the *Verrucariaceae* and thus clearly not conspecific with the Alaskan species.

II. *Arthonia lapidicola* – Application and typification of its basionym

Bryostigma lapidicola (Taylor) S. Y. Kondr. & Hur, in Kondratyuk et al., *Acta bot. Hung.* 62(1-2): 100. 2020.

Lecidea lapidicola Taylor, in Mackay, *Flora Hibernica* 2: 124. 1836. — *Arthonia lapidicola* (Taylor) Branth & Rostr., *Bot. Tidsskr.* 3: 245. 1869. Type: Ireland, ‘Cappermore Bridge, Kerry, Dr Taylor’ (BM, lectotype, designated here, MBT No.: 10013235).

= *Bryostigma muscigenum* (Th. Fr.) Frisch & G. Thor, *Taxon* 63: 736. 2014. — *Arthonia muscigena* Th. Fr. *Bot. Not.*, 1865: 182. 1865. Type: Sweden, Närke, Götlunda par., Stäbacken, supra muscos emortuos, 1864, Blomberg s.n. (UPS L-026247, holotype).

= *Bryostigma leucodontis* Poelt & Döbbeler, *Pl. Syst. Evol.* 131: 212. 1979 — *Arthonia leucodontis* (Poelt & Döbbeler) Coppins, *Lichenologist* 21: 203. 1989. Type: Austria, Tirol, Karwendelgebirge, Hänge östl. der Rontalalm im Rontal, 1100 m, on *Leucodon sciurioides* on *Acer pseudoplatanus*, 6 Aug 1977, Döbbeler & Poelt s.n. (GZU).

As pointed out previously (FRYDAY 2004a), the original collections upon which the name *Lecidea lapidicola* Taylor is based are referable to the taxon known, at that time, as *Arthonia muscigena*. Application of the rules of botanical nomenclature would have resulted in *Arthonia muscigena* Th. Fr. (1865) being replaced with

A. lapidicola (Taylor) Branth & Rostr., and a new name being found for ‘*A. lapidicola*’ auct., which appears to be *A. fusca* (A. Massal.) Hepp. However, as this would have caused considerable confusion, the status quo was maintained pending further investigation and the probability that either Taylor’s name would be proposed for formal rejection, thus retaining *A. muscigena* as the name for that species or proposing a conserved type for *L. lapidicola*, which would have kept both names in their traditional usage.

However, *A. muscigena* has subsequently been transferred to the genus *Bryostigma* as *B. muscigenum* (Th. Fr.) Frisch & G. Thor (FRISCH et al. 2014) in a poorly supported clade that also included *A. lapidicola* auct. (= *A. fusca*). Because the *Bryostigma*-clade was poorly supported and it also included species that had been placed in genera that pre-dated *Bryostigma*, Frisch et al. declined to transfer the other species in that clade (including *A. lapidicola*) to *Bryostigma*. Unfortunately, KONDRATYUK et al. (2020), without presenting additional data supporting their action (or citing FRISCH et al. 2014) made the combinations into *Bryostigma*, thus creating numerous superfluous names but also, inadvertently, transferring the epithet “*lapidicola*” to its correct genus. Because the correct names for the two species *Bryostigma lapidicola* and *Arthonia fusca* are now in different genera and thus no longer as potentially confusing, we take up the name *Bryostigma lapidicola* as the correct name for the species currently referred to as *B. muscigenum*, while also resurrecting the name *Arthonia fusca* for the species currently referred to as *A. lapidicola*.

Taylor (MACKAY 1836) cited two specimens in the protologue of *Lecidea lapidicola*: ‘On slate rock, County of Down, Mr. Templeton’, and ‘On stones, on the bridge wall at Cappermore, near Dunkerron, Kerry.’ The Templeton collection could not be found in BM, FH, or MANCH, but there are two collections from Kerry in BM, annotated ‘Dr Taylor, Dunkerron’ and ‘Cappermore Bridge, Kerry, Dr Taylor’, that appear to be from Taylor’s original collection. The Cappermore Bridge collection has also been annotated ‘type-specimen’ in pencil and, although this typification does not appear to have been published, the same specimen is selected here as the lectotype.

III. *Lecidea parasitula* is a synonym of *Sclerococcum attendendum*¹

Sclerococcum attendendum (Nyl.) Ertz & Diederich

Lecidea attendenda Nyl., *Lich. Lapp. Orientalis*: 186 (1866). Russia. [Karelian Republic:] Pertnavolok, “ad Onegam”, on *Pilophorus cereolus* (= “*Pilophorus fibula* Tuck. f. *soredioso-capitati sterilis*”), 3 July 1863, T. Simming (H-NYL 11016 = H9508759, holotypus!, H6022640, isotypus). – *Lecidea attendenda* Nyl., *Flora* 49: 419 (1866). – *Leciographa attendenda* (Nyl.) Arnold, *Flora* 53: 479 (1870). – *Dactylospora attendenda* (Nyl.) Arnold, *Österr. Bot. Z.* 45: 106 (1895). –

¹ Contributed by S. Pérez-Ortega (Madrid).

Sclerococcum attendendum (Nyl.) Ertz & Diederich, in Diederich, Lawrey & Ertz, *Bryologist* 121: 397 (2018).

= *Lecidea parasitula* Nyl., *Lich. Lapp. Orientalis*: 186 (1866). [Russia. Chukchi Autonomous Okrug]. “in Insula arctica ad Behring’s Straits” [Arakamchechene Island], on *Pilophorus robustus* (= “*Pilophoron polycarpum* Tuck., ms.”), 14 Aug 1855, C. Wright (H-NYL 39752 = H903959, holotypus!). – *Buellia parasitula* (Nyl.) Macoun, *Cat. Canad. Pl.* 7: 165 (1902).

The name *Lecidea parasitula* Nyl. has remained apparently overlooked (TRIEBEL 1989) despite being accorded brief mention as a synonym of *Leciographa attendenda* by KEISSLER (1930), who also erroneously gave the year of publication of *L. parasitula* as 1882. In fact, Nylander described both *Lecidea attendenda* and *Lecidea parasitula* in the same footnote in *Lichenes Lapponiae orientalis* (NYLANDER 1866a), and also provided a separate description of *L. attendenda* the same year in *Flora* (NYLANDER 1866b). Because the date of publication of *Lichenes Lapponiae orientalis* was June 1866 and that of the separate description of *Lecidea attendenda* October 1866, the two names must be considered as being published simultaneously in the earlier publication. As mentioned above, KEISSLER (1930) included *Lecidea parasitula* as a synonym of *Leciographa attendenda* establishing *Lecidea attendenda* as the correct basionym for the taxon.

We studied and compared type material of both species in H-NYL, as well as additional collections of *S. attendendum* and *L. parasitula*, and concur with KEISSLER (1930) that they are conspecific. NYLANDER (1866a) differentiated the species in terms of their hosts (*Pilophorus cereolus* in *S. attendendum* and *P. robustus* in *L. parasitula*), the color of the excipulum (hyaline in *L. parasitula* and almost hyaline in *S. attendendum*) and the size of the ascospores ($10\text{--}16 \times 4 \mu\text{m}$ in *S. attendendum* and $9\text{--}14 \times 5\text{--}6 \mu\text{m}$ in *L. parasitula*). *Sclerococcum attendendum* grows on a wide range of hosts, among them four *Pilophorus* species (Triebel 1989), and the two additional collections of *L. parasitula* studied by Nylander (H-NYL 11013, H-NYL 11014) grow on *P. cereolus*; thus, the host seems not an important character in this case. The study of the types did not reveal any difference in size of ascospores or colour of the excipulum between these two taxa. NYLANDER (1866a) wrote that *L. parasitula* had ascospores of $10\text{--}16 \times 4 \mu\text{m}$ (although he annotated $11\text{--}14 \times 6\text{--}7 \mu\text{m}$ for the holotype) and $10\text{--}16 \times 4 \mu\text{m}$ for *S. attendendum*. TRIEBEL (1989) studied *S. attendendum* (as *Dactylospora attendenda*) growing on a wide range of hosts, and she gave the following ascospores sizes: $(10\text{--})11\text{--}15\text{--}(17) \times (4\text{--})4.5\text{--}5.5\text{--}(6.5) \mu\text{m}$. Further, we have measured the ascospore sizes in the two types with $9\text{--}12 \times 4\text{--}5.5 \mu\text{m}$ ($n=10$) for *L. parasitula* and $10\text{--}13 \times 4\text{--}5.5 \mu\text{m}$ in *S. attendendum* ($n=10$), noting that they are clearly overlapping. There is thus little doubt that *L. parasitula* is a synonym of *S. attendendum*.

The question of whether *Sclerococcum attendendum*, under any name, has actually been confirmed for Alaska is difficult to answer. The type specimen of *Lecidea parasitula* was probably collected on the Russian side of the Bering Straits as it is not thought that Wright ever collected on the territory of what is now the U.S. state

of Alaska (PFISTER 1978). Nonetheless, *L. parasitula* was repeatedly included in the Alaskan lichenicolous biota by MACOUN (1902). All of these records apparently are based on the same original Wright specimen. A recent collection of *S. attendendum* from Kenai Fjords NP (McCUNE et al. 2020) is reported as “on rock” and marked as “nonlichenized, nonlichenicolous”, and so must also be considered dubious. The species most probably does occur in Alaska but must be excluded until confirmed material from an Alaskan locality has been seen.

IV. *Umbilicaria coriacea* Imshaug must be used for the lichen currently called *Umbilicaria rigida* (Du Rietz) Frey

It has long been known that *Umbilicaria rigida* (Du Rietz) Frey (basonym: *Gyrophora rigida* Du Rietz, see DU RIETZ 1925b) is a later homonym of *Umbilicaria rigida* Hoffm., but why the latter name has continued to be used in major taxonomic references, with the former listed as a synonym, is unclear. Indeed, all evidence available to us suggests that IMSHAUG (1957) was correct in recognising the need for a nomen novum for this taxon.

HOFFMANN (1796) described *Umbilicaria rigida* as a note under *Umbilicaria crinita*, stating only “*umbricata - plicato undique nuda. Cum priori.*” It is possible that checklist authors such as SANTESSON et al. (2004) interpreted the name of the Hoffmann taxon as not intended to be used at the species level, as he only refers to *U. rigida*, using an abbreviation for the letter U that vaguely resembles a V. Examination of the use of this letter elsewhere in his text confirms however that he intended this to be a binomial. This was clearly the interpretation of LAMARCK & DE CANDOLLE (1805), who spelled out “*Umbilicaria rigida*. Hoffm. Germ. 2. P. 112” when listing the taxon as a variety under *U. proboscidea* (*U. proboscidea* β. *rigida* (Hoffm.) DC.). FRIES (1831) placed the name as a forma of *Umbilicaria cylindrica* (*U. cylindrica* β. *rigida*), again citing Hoffmann; and PERKTOLD (1842) clearly also saw the original Hoffmann usage as a binomial (“Die *U. rigida* (Hoffm. Germ. p. 112), eine abweichende Form der *cylindrica*, unterscheidet sich von Ihr durch ein spröderes und unterseits mit weniger Ragzasern [*sic*] versehenes Lager”).

It is unknown what *Umbilicaria rigida* Hoffm. refers to, as no original Hoffmann material in GOET has been seen, and the Hoffmann collection was unavailable for examination by TS on a recent visit to Göttingen. However, it is unlikely that it refers to the same taxon described by DU RIETZ (1925b) as *Gyrophora rigida*, which is found at higher latitudes and has never been reported from Germany. Regardless, the combination of Du Rietz’s name for a Nordic taxon is clearly a later homonym under Art. 53.1 and thus Imshaug’s name *Umbilicaria coriacea* must be adopted.

References

- Abbayes, H. des (1939). Revision monographique de *Cladonia* du sous-genre *Cladina* (Lichens). *Bulletin de la Société Scientifique de Bretagne*, 16 (hors sér. 2), 1–156.
- Acharius, E. (1803). *Methodus qua omnes detectos lichenes*. Stockholm: C. F. Marquard.
- Ahlner, S. (1948). Utbredningstyper bland nordiska barrträds-lavar. *Acta Phytogeographica Suecica*, 22, 1–257.
- Ahti, T. (1960). Four species of *Cladinae* new to North America. *Archivum Societatis Botanicae Zoologicae Fennicae Vanamo*, 14(2), 129–134.
- Ahti, T. (1961). Taxonomic studies on reindeer lichens (*Cladonia*, subgenus *Cladina*). *Annales Botanici Societatis Zoologicae Botanicae Fennicae Vanamo*, 32(1), 1–160.
- Ahti, T. (1962). Notes on the lichen *Cladonia pseudorangiformis* Asah. *Archivum Societatis Zoologicae Botanicae Fennicae Vanamo*, 17(1), 38–41.
- Ahti, T. (1966a). *Parmelia olivacea* and the allied non-isidiate and non-sorediate corticolous lichens in the Northern Hemisphere. *Acta Botanica Fennica*, 70, 1–68.
- Ahti, T. (1966b). Correlation of the chemical and morphological characters in *Cladonia chlorophaea* and allied lichens. *Annales Botanici Fennici*, 3, 380–390.
- Ahti, T. (1968). John. W. Thomson. The Lichen Genus *Cladonia* in North America [Review]. *The Bryologist*, 71(3), 292–294. <https://doi.org/10.2307/3240701>
- Ahti, T. (1973). Taxonomic notes on some species of *Cladonia*, subsect. *Unciales*. *Annales Botanici Fennici*, 10, 163–184.
- Ahti, T. (1977). Lichens of the boreal coniferous zone. In M. R. D. Seaward (Ed.), *Lichen Ecology* (pp. 145–181). London: Academic Press.
- Ahti, T. (1978a). Nomenclatural and taxonomic remarks on European species of *Cladonia*. *Annales Botanici Fennici*, 15, 7–14.
- Ahti, T. (1978b). Two new species of *Cladonia* from western North America. *The Bryologist*, 81(2), 334–338. <https://doi.org/10.2307/3242200>
- Ahti, T. (1980). Taxonomic revision of *Cladonia gracilis* and its allies. *Annales Botanici Fennici*, 17, 195–243.
- Ahti, T. (1984). The status of *Cladina* as a genus segregated from *Cladonia*. *Beiheft zur Nova Hedwigia*, 79, 25–61.
- Ahti, T. (1985). Pahtatorvijäkälä (*Cladonia luteoalba*) Suomessa. *Lutukka*, 1, 71–72.
- Ahti, T. (1993). Names in current use in the Cladoniaceae (lichen-forming Ascomycetes) in the ranks of genus to variety. *Regnum Vegetabile*, 128, 58–106.
- Ahti, T. (1998). A revision of *Cladonia stricta*. *Folia Cryptogamica Estonica*, 32, 5–8.
- Ahti, T. (2007a). Further studies on the *Cladonia verticillata* group (Lecanorales) in East Asia and western North America. *Bibliotheca Lichenologica*, 96, 5–19.
- Ahti, T. (2007b). 4742. *Tuckermannopsis* Gyeln. In H. T. Lumbsch & S. Huhndorf (Eds.), *Notes on ascomycete systematics* Nos. 4408–4750 (p. 59). Myconet 13. Chicago: Field Museum of Natural History.
- Ahti, T., & Hawksworth, D. L. (2005). *Xanthoparmelia stenophylla*, the correct name for *X. somloënsis*, one of the most widespread usnic acid containing species of the genus. *Lichenologist*, 37(4), 363–366. <https://doi.org/10.1017/S0024282905015197>
- Ahti, T., & Henssen, A. (1965). New localities for *Cavernularia hultenii* in eastern and western North America. *The Bryologist*, 68(1), 85–89. <https://doi.org/10.2307/3240988>
- Ahti, T., & Hyvönen, S. (1985). *Cladina stygia*, a common, overlooked species of reindeer lichen. *Annales Botanici Fennici*, 22, 223–229.
- Ahti, T., & Lai, M. J. (1979). The lichen genera *Cladonia*, *Cladina* and *Cladia* in Taiwan. *Annales Botanici Fennici*, 16, 228–236.

- Ahti, T., & Stenroos, S. (2013). Cladoniaceae. *Nordic Lichen Flora*, 5, 1–117.
- Ahti, T., & Zhurbenko, M. P. (1994). Distribution of *Cladonia alaskana* in Asia. *Graphis Scripta*, 6, 11–14.
- Ahti, T., Scotter, G. W., & Vänskä, H. (1973). Lichens of the Reindeer Preserve, Northwest Territories, Canada. *The Bryologist*, 76(1), 48–76.
<https://doi.org/10.2307/3241231>
- Ahti, T., Brodo, I. M., & Noble, W. J. (1987). Contributions to the lichen flora of British Columbia, Canada. *Mycotaxon*, 28, 91–97.
- Ahti, T., Mayrhofer, H., Schultz, M., Tehler, A., & Fryday, A. M. (2016). First supplement to the lichen checklist of South Africa. *Bothalia - African Biodiversity and Conservation*, 46(1), 1–8. <https://doi.org/10.4102/abc.v46i1.2065>
- Almqvist, E. (1887). Die Lichenenvegetation der Küsten des Beringmeeres. *Vega-expeditionens Vetenskapliga Iakttagelser*, 4, 511–541.
- Alstrup, V. (2004). New records in distribution of lichens and lichenicolous fungi. *Graphis Scripta*, 16, 46–57.
- Alstrup, V., & Cole, M. S. (1998). Lichenicolous fungi of British Columbia. *The Bryologist*, 101(2), 221–229. <https://doi.org/10.2307/3244200>
- Alstrup, V., & Hawksworth, D. L. (1990). The lichenicolous fungi of Greenland. *Meddelelser om Grønland. Bioscience*, 31, 1–90.
- Anderson, E. M. (2012). *Acrosyphus sphaerophoroides* (Caliciaceae) new to Alaska and most northerly report worldwide. *Evansia*, 29(3), 74–76.
<https://doi.org/10.1639/079.029.0302>
- Anderson, R. A. (1967). Additions to the lichen flora of North America. II. *The Bryologist*, 70(3), 339–343. <https://doi.org/10.2307/3241098>
- Andreev, M. P. (2004). Notes on the lichen genus *Miriquidica* (Lecanorales) in Russia. *Bibliotheca Lichenologica*, 88, 15–42.
- Andreev, M. P. & Makarova, I. I. (1982). Lichenes curiosi partis asiaticae articae. *Novitates systematicae plantarum non vascularium*, 19, 117–121.
- Arcadia, L., & Knudsen, K. (2012). The name *Myriospora* is available for the *Acarospora smaragdula* group. *Opuscula Philolichenum*, 11, 19–25.
- Arup, U. (1993). *Caloplaca flavogranulosa* sp. nov. and *C. citrina*, two sorediate species on seashore rocks in western North America. *The Bryologist*, 96(4), 598–603.
<https://doi.org/10.2307/3243991>
- Arup, U. (1994). The genus *Caloplaca* on seashore rocks in eastern North America. *The Bryologist*, 97(4), 377–392. <https://doi.org/10.2307/3243903>
- Arup, U. (1995). Eight species of *Caloplaca* in coastal western North America. *The Bryologist*, 98(1), 92–111. <https://doi.org/10.2307/3243645>
- Arup, U. (2009). The *Caloplaca holocarpa* group in the Nordic countries, except Iceland. *Lichenologist*, 41(2), 111–130. <https://doi.org/10.1017/S0024282909008135>
- Arup, U., Söchting, U., & Frödén, P. (2013). A new taxonomy of the family Teloschistaceae. *Nordic Journal of Botany*, 31(1), 16–83.
<https://doi.org/10.1111/j.1756-1051.2013.00062.x>
- Arup, U., Vondrák, J., & Halıcı, M. G. (2015). *Parvoplaca nigroblastidiata*, a new corticolous lichen (Teloschistaceae) in Europe, Turkey and Alaska. *Lichenologist*, 47(6), 379–385. <https://doi.org/10.1017/S0024282915000389>
- Arvidsson, L. (1983). A monograph of the lichen genus *Coccocarpia*. *Opera Botanica*, 67, 1–96.
- Arwidsson, T. (1926). Die Verbreitung von *Siphula ceratites* (Wg.) E.Fr. anlässlich der Auffindung der Art in Schweden. *Botaniska Notiser*, 1926, 379–392.

- Athukorala, S. N. P., Pino-Bodas, R., Stenroos, S., Ahti, T., & Piercey-Normore, M. D. (2016). Phylogenetic relationships among reindeer lichens in North America. *Lichenologist*, 48(3), 209–227. <https://doi.org/10.1017/S0024282915000572>
- Atienza, V., Hawksworth, D. L., & Pérez-Ortega, S. (2021). *Verrucococcum* (Dothideomycetes, Dictyosporiaceae), a new genus of lichenicolous fungi on *Lobaria* s. lat. for the *Dothidea hymeniicola* species complex. *Mycologia*, 113, 1233–1252. <https://doi.org/10.1080/00275514.2021.1966281>
- Babington, C. (1851). Lichenes arctici; collected in 1848, by Mr. Seemann in H.M.S. Herald. *Hooker's Journal of Botany and Kew Garden Miscellany*, 3, 248–250.
- Babington, C. (1852). Lichenes. In B. Seemann (Ed.), *The botany of the voyage of H.M.S. Herald, under the command of Captain Henry Kellett, R.N., C.B., during the years 1845–51* (pp. 47–49). London: Lovell Reeve.
- Baruffo, L., Zedda, L., Elix, J. A., & Tretiach, M. (2006). A revision of the lichen genus *Lepraria* s. lat. in Italy. *Nova Hedwigia*, 83(3–4), 387–429. <https://doi.org/10.1127/0029-5035/2006/0083-0387>
- Batten, A. R., & Murray, D. F. (1993). Dry coastal ecosystems of Alaska. In E. van der Maarel (Ed.), *Dry Coastal Ecosystems: Polar Regions and Europe* (pp. 23–37). Amsterdam: Elsevier.
- Begét, J. E. (1994). Tephrochronology, lichenometry and radiocarbon dating at Gulkana Glacier, central Alaska Range, USA. *The Holocene*, 4(3), 307–313. <https://doi.org/10.1177/095968369400400310>
- Bendiksby, M., Haugan, R., Spribille, T., & Timdal, E. (2015). Molecular phylogenetics and taxonomy of the *Calvitimela aglaea* complex (Tephromelataceae, Lecanorales). *Mycologia*, 107(6), 1172–1183. <https://doi.org/10.3852/14-062>
- Berry, E. C. (1941). A monograph of the genus *Parmelia* in North America, north of Mexico. *Annals of the Missouri Botanical Garden*, 28(1), 31–146. <https://doi.org/10.2307/2394500>
- Bieber, W., Benetka, E., & Türk, R. (1999). Contrastive analysis of heavy metals in lichens in alpine national parks in Alaska, Canada and Austria. *Phyton*, 39, 71–79.
- Billings, W. D., & Peterson, K. M. (1980). Vegetational change and ice-wedge polygons through the thaw-lake cycle in Arctic Alaska. *Arctic and Alpine Research*, 12(4), 413–432. <https://doi.org/10.2307/1550492>
- Bird, C. D. (1974). Studies on the lichen genus *Evernia* in North America. *Canadian Journal of Botany*, 52(11), 2427–2434. <https://doi.org/10.1139/b74-315>
- Bitter, G. (1901). Zur Morphologie und Systematik von *Parmelia*, Untergattung *Hypogymnia*. *Hedwigia*, 40, 171–274.
- Blanco, O., Crespo, A., Elix, J. A., Hawksworth, D. L., & Lumbsch, H. T. (2004). A molecular phylogeny and a new classification of parmelioid lichens containing *Xanthoparmelia*-type lichenan (Ascomycota: Lecanorales). *Taxon*, 53(4), 959–975. <https://doi.org/10.2307/4135563>
- Bliss, L. C., & Cantlon, J. E. (1957). Succession on river alluvium in northern Alaska. *American Midland Naturalist*, 58(2), 452–469. <https://doi.org/10.2307/2422628>
- Boggs, K. (2000). *Classification of community types, successional sequences, and landscapes of the Copper River Delta, Alaska*. General Technical Report PNW-GTR-469. Portland: USDA Forest Service, Pacific North West Research Station. <https://doi.org/10.2737/PNW-GTR-469>
- Bowler, P. A. (1972). The distribution of four chemical races of *Cladonia chlorophaea* in North America. *The Bryologist*, 75(3), 350–354. <https://doi.org/10.2307/3241474>

- Bowler, P. A., & Rundel, P. W. (1978). The *Ramalina farinacea* complex in North America: Chemical, ecological and morphological variation. *The Bryologist*, 81(3), 386–403. <https://doi.org/10.2307/3242241>
- Breuss, O., & Hansen, E. S. (1988). The lichen genera *Catapyrenium* and *Placidiopsis* in Greenland. *Plant Systematics and Evolution*, 159(1-2), 95–105. <https://doi.org/10.1007/BF00937428>
- Breuss, O., & McCune, B. (1994). Additions to the pyrenolichen flora of North America. *The Bryologist*, 97(4), 365–370. <https://doi.org/10.2307/3243901>
- Bricaud, O., & Roux, C. (1990). Champignons lichenisés et lichenicoles de la France meridionale (Corse comprise): Espèces nouvelles et intéressantes (IV). *Bulletin de la Société Linnéenne de Provence*, 41, 117–138.
- Brodo, I. M. (1973). The lichen genus *Coccotrema* in North America. *The Bryologist*, 76(2), 260–270. <https://doi.org/10.2307/3241328>
- Brodo, I. M. (1981). *Lecanora luteoernalis*, a new species of the *L. symmicta* complex from the Canadian Arctic. *The Bryologist*, 84(4), 521–526. <https://doi.org/10.2307/3242560>
- Brodo, I. M. (1984a). Lichenes Canadenses exsiccati: Fascicle III. *The Bryologist*, 87(2), 97–111. <https://doi.org/10.2307/3243115>
- Brodo, I. M. (1984b). The North American species of the *Lecanora subfusca* group. *Beiheft zur Nova Hedwigia*, 79, 63–185.
- Brodo, I. M. (1988). Studies of the lichen genus *Ochrolechia*. 1. A new classification for *Pertusaria subplicans* and *P. rhodoleuca*. *Canadian Journal of Botany*, 66(7), 1264–1269. <https://doi.org/10.1139/b88-181>
- Brodo, I. M. (1990). *Rhizocarpon hensseniae*, a cephalodiate lichen from the northwest coast of North America. *Bibliotheca Lichenologica*, 38, 29–35.
- Brodo, I. M. (1991). Studies in the lichen genus *Ochrolechia*. 2. Corticolous species of North America. *Canadian Journal of Botany*, 69(4), 733–772. <https://doi.org/10.1139/b91-099>
- Brodo, I. M. (1992). *Bryoria trichodes*, *Ochrolechia oregonensis* and *Xylographa opegraphella* new to Europe. *Graphis Scripta*, 4, 61–65.
- Brodo, I. M. (1995a). *Koerberiella* (Porpidiaceae, Ascomycotina), a new genus of lichens for North America. *The Bryologist*, 98(4), 609–611. <https://doi.org/10.2307/3243593>
- Brodo, I. M. (1995b). Lichens and lichenicolous fungi of the Queen Charlotte Islands, British Columbia, Canada. 1. Introduction and new records for B.C., Canada and North America. *Mycotaxon*, 56, 135–173.
- Brodo, I. M. (1995c). Notes on the lichen genus *Placopsis* (Ascomycotina, Trapeliaceae) in North America. *Bibliotheca Lichenologica*, 57, 59–70.
- Brodo, I. M. (2004). A new saxicolous *Porina* (Ascomycota, Porinaceae) from maritime rocks of Haida Gwaii (Queen Charlotte Islands), British Columbia, Canada. *Bibliotheca Lichenologica*, 88, 43–48.
- Brodo, I. M. (2010). The lichens and lichenicolous fungi of Haida Gwaii (Queen Charlotte Islands), British Columbia, Canada. 5. A new species of *Lecanora* from shoreline rocks. *Botany*, 88(4), 352–358. <https://doi.org/10.1139/B10-012>
- Brodo, I. M., & Ahti, T. (1996). Lichens and lichenicolous fungi of the Queen Charlotte Islands, British Columbia, Canada. 2. The Cladoniaceae. *Canadian Journal of Botany*, 74(7), 1147–1180. <https://doi.org/10.1139/b96-139>
- Brodo, I. M., & Alstrup, V. (1981). The lichen *Bryoria subdivergens* (Dahl) Brodo & D. Hawksw. in Greenland and North America. *The Bryologist*, 84(2), 229–235. <https://doi.org/10.2307/3242827>

- Brodo, I. M., & Aptroot, A. (2005). Corticolous species of *Protoparmelia* (lichenized Ascomycotina) in North America. *Canadian Journal of Botany*, 83(9), 1075–1081. <https://doi.org/10.1139/b05-091>
- Brodo, I. M., & Hawksworth, D. (1977). *Alectoria* and allied genera in North America. *Opera Botanica*, 42, 1–164.
- Brodo, I. M., & Henssen, A. (1995). A new isidiate, crustose lichen in Northwestern North America. *Bibliotheca Lichenologica*, 58, 27–42.
- Brodo, I. M., & Hertel, H. (1987). The lichen genus *Amygdalaria* (Porpidiaceae) in North America. *Herzogia*, 7(3–4), 493–521. <https://doi.org/10.1127/herzogia/7/1987/493>
- Brodo, I. M., & McCune, B. (2017). *Ochrolechia brodoi*, a new lichen for North America from Alaska, with updates to the key of corticolous North American species. *Evansia*, 34(3), 110–113. <https://doi.org/10.1639/0747-9859-34.3.110>
- Brodo, I. M., & Santesson, R. (1997). Lichens of the Queen Charlotte Islands, British Columbia, Canada. 3. Marine species of *Verrucaria* (Verrucariaceae, Ascomycotina). *The Journal of the Hattori Botanical Laboratory*, 82, 27–37.
- Brodo, I. M., & Tønsberg, T. (2019). *Opegrapha halophila* (Opegraphaceae), a new lichen species from coastal British Columbia, Canada, and Alaska, U.S.A. *The Bryologist*, 122(3), 457–462. <https://doi.org/10.1639/0007-2745-122.3.457>
- Brodo, I. M., & Wirth, V. (1998). Lichens and lichenicolous fungi of the Queen Charlotte Islands, British Columbia, Canada. 4. The genus *Fuscidea* (Fuscideaceae). In M. G. Glenn, R. C. Harris, R. Dirig, & M. S. Cole (Eds.), *Lichenographia Thomsoniana: North American lichenology in honor of John W. Thomson* (pp. 149–162). New York: Mycotaxon.
- Brodo, I. M., Noble, W. J., Ahti, T., & Clayden, S. (1987). Lichens new to North America from the flora of British Columbia, Canada. *Mycotaxon*, 28, 99–110.
- Brodo, I. M., Duran Sharnoff, S., & Sharnoff, S. (2001). *Lichens of North America*. New Haven, London: Yale University Press.
- Brodo, I. M., Culberson, W. L., & Culberson, C. F. (2008). *Haematomma* (Lecanoraceae) in North and Central America, including the West Indies. *The Bryologist*, 111(3), 363–423. <https://www.jstor.org/stable/20110953>
- Brodo, I. M., Freebury, C., & Alfonso, N. (2013). Notes on the lichens *Physcia aipolia* and *P. alnophila* in North America. *Evansia*, 30(4), 110–119. <https://doi.org/10.1639/079.030.0406>
- Brodo, I. M., Haldeman, M., & Malíček, J. (2019). Notes on species of the *Lecanora albella* group (Lecanoraceae) from North America and Europe. *The Bryologist*, 122(3), 430–450. <https://doi.org/10.1639/0007-2745-122.3.430>
- Bystrek, J. (1974). *Alectoria stigmata*, lichenum nova species in Alaska inventa. *Fragmenta Floristica et Geobotanica*, 20, 255–256.
- Calkin, P. E., & Ellis, J. M. (1980). A lichenometric dating curve and its application to Holocene glacier studies in the central Brooks Range, Alaska. *Arctic and Alpine Research*, 12(3), 245–264. <https://doi.org/10.2307/1550713>
- Calkin, P. E., & Ellis, J. M. (1984). Development and application of a lichenometric dating curve, Brooks Range, Alaska. In W. C. Mahaney (Ed.), *Quaternary dating methods* (pp. 227–246). Amsterdam: Elsevier. [https://doi.org/10.1016/S0920-5446\(08\)70074-8](https://doi.org/10.1016/S0920-5446(08)70074-8)
- Černajová, I., Steinová, J., Škvorová, Z., & Škaloud, P. (2022). The curious case of *Cladonia luteoalba*: No support for its distinction. *Lichenologist*, 54(6), 345–354. <https://doi.org/10.1017/S002428292200024X>
- Clerc, P. (2011). Notes on the genus *Usnea* Adanson (lichenized Ascomycota). III. *Bibliotheca Lichenologica*, 106, 41–51.

- Cooke, W. B., & Shaw, C. G. (1952). Notes on Alaskan fungi. *Research Studies of the State College of Washington*, 20, 15–20.
- Cooper, D. J. (1986a). White spruce above and beyond treeline in the Arrigetch Peaks Region, Brooks Range, Alaska. *Arctic*, 39(3), 247–252.
<https://doi.org/10.14430/arctic2081>
- Cooper, D. J. (1986b). Arctic-alpine tundra vegetation of the Arrigetch Creek Valley, Brooks Range, Alaska. *Phytocoenologia*, 14(4), 467–555.
<https://doi.org/10.1127/phyto/14/1986/467>
- Coppins, B. J. (1981). Lichens. In R. M. G. O'Brien (Ed.), *Grampian Schools North Alaska Expedition 1981: final report* (p. 57). Aberdeen: School Resource Services.
- Coppins, B. J. (1983). A taxonomic study of the lichen genus *Micarea* in Europe. *Bulletin of the British Museum of Natural History (Botany)*, 11(2), 17–214.
- Coppins, B. J. (2009). *Micarea* Fr. (1825). In C. W. Smith, A. Aptroot, B. J. Coppins, A. Fletcher, O. L. Gilbert, P. W. James, & P. A. Wolseley (Eds.), *The Lichens of Great Britain and Ireland* (pp. 583–606). London: British Lichen Society.
- Coppins, B. J., & Aptroot, A. (2008). New species and combinations in the lichens of the British Isles. *Lichenologist*, 40(5), 363–374.
<https://doi.org/10.1017/S0024282908008165>
- Coppins, B. J., & Tønsberg, T. (2001). A new xanthone-containing *Micarea* from Northwest Europe and the Pacific Northwest of North America. *Lichenologist*, 33(2), 93–96. <https://doi.org/10.1006/lich.2000.0311>
- Coppins, B. J., Kashiwadani, H., Moon, K. H., Spribille, T., & Thor, G. (2021). The genera *Brianaria* (Psoraceae) and *Micarea* (Pilocarpaceae) in Japan, with reports on other interesting species in Asia. *Lichenologist*, 53(1), 35–44.
<https://doi.org/10.1017/S0024282920000468>
- Cornejo, C., Derr, C., & Dillman, K. (2017). *Ricasolia amplissima* (Lobariaceae): One species, three genotypes and a new taxon from south-eastern Alaska. *Lichenologist*, 49(6), 579–596. <https://doi.org/10.1017/S002428291700041X>
- Cornejo, C., Nelson, P. R., Stepanchikova, I., Himelbrant, D., Jørgensen, P. M., & Scheidegger, C. (2016). Contrasting pattern of photobiont diversity in the Atlantic and Pacific populations of *Erioderma pedicellatum* (Pannariaceae). *Lichenologist*, 48(4), 275–291. <https://doi.org/10.1017/S0024282916000311>
- Crawford, S. D. (2015). Lichens used in traditional medicine. In B. Ranković (Ed.), *Lichen secondary metabolites* (pp. 27–80). Cham: Springer.
https://doi.org/10.1007/978-3-319-13374-4_2
- Culberson, C. F., & Culberson, W. L. (1966). The identification of imbricatic acid and a new imbricatic acid-containing lichen species. *The Bryologist*, 69(2), 192–202.
<https://doi.org/10.2307/3240511>
- Culberson, W. L. (1963). A summary of the lichen genus *Haematomma* in North America. *The Bryologist*, 66(4), 224–236. <https://doi.org/10.2307/3240633>
- Culberson, W. L., & Culberson, C. F. (1965). *Asahinea*, a new genus in the Parmeliaceae. *Brittonia*, 17(2), 182–190. <https://doi.org/10.2307/2805243>
- Culberson, W. L., & Culberson, C. F. (1968). The lichen genera *Cetrelia* and *Platismatia* (Parmeliaceae). *Contributions from the United States National Herbarium*, 34, 449–558.
- Culberson, W. L., & Culberson, C. F. (1978). *Cetrelia cetrarioides* and *C. monachorum* (Parmeliaceae) in the New World. *The Bryologist*, 81(4), 517–523.
<https://doi.org/10.2307/3242338>
- Culberson, W. L., Culberson, C. F., Johnson, A., & Park, Y. S. (1993). New chemistries in the *Cladonia cariosa* complex and homohevadride in natural thalli and single-

- spore cultures of *C. polycarpoides* and *C. polycarpa*. *Bibliotheca Lichenologica*, 53, 43–53.
- Cummings, C. E. (1892a). List of mosses and lichens. *Bulletin of the Torrey Botanical Club*, 19(8), 247–249. <https://doi.org/10.2307/2476276>
- Cummings, C. E. (1892b). Cryptogams collected by Dr. Willard Hayes in Alaska, 1891. *National Geographic*, 4, 160–162.
- Cummings, C. E. (1902). Notes on new species of lichens collected by the Harriman Expedition. *Science*, 15, 408.
- Cummings, C. E. (1904). The lichens of Alaska. *Harriman Alaska Series*, 5, 67–152.
- Czarnota, P., & Guzow-Krzemińska, B. (2012). ITS rDNA data confirm a delimitation of *Bacidina arnoldiana* and *B. sulphurella* and support a description of a new species within the genus *Bacidina*. *Lichenologist*, 44(6), 743–755. <https://doi.org/10.1017/S0024282912000515>
- Dahl, E. (1946). On different types of unglaciated areas during the Ice Ages and their significance to phytogeography. *The New Phytologist*, 45(2), 225–242. <https://doi.org/10.1111/j.1469-8137.1946.tb05058.x>
- Dahl, E., & Krog, H. (1970). On the distribution of *Cladonia luteoalba* Wils. & Whed. *Nytt Magasin for Botanik*, 17, 143–144.
- Daniëls, F. J. A., Talbot, S. S., Talbot, S. L., & Schofield, W. B. (1998). Geobotanical aspects of Simeonof Island, Shumagin Islands, southwestern Alaska. *Berichte der Reinhold-Tüxen-Gesellschaft*, 10, 125–138.
- Daniëls, F. J. A., Talbot, S. S., Looman Talbot, S., & Schofield, W. B. (2004). Phytosociological study of the dwarf shrub heath of Simeonof Wilderness, Shumagin Islands, Southwestern Alaska. *Phytocoenologia*, 34(3), 465–489. <https://doi.org/10.1127/0340-269X/2004/0034-0465>
- Davydov, E. A., Peršoh, D., & Rambold, G. (2010). The systematic position of *Lasallia caroliniana* (Tuck.) Davydov, Peršoh & Rambold comb. nova and considerations on the generic concept of *Lasallia* (Umbilicariaceae, Ascomycota). *Mycological Progress*, 9(2), 261–266. <https://doi.org/10.1007/s11557-009-0636-y>
- Davydov, E. A., Peršoh, D., & Rambold, G. (2017). Umbilicariaceae (lichenized Ascomycota) – Trait evolution and a new generic concept. *Taxon*, 66(6), 1282–1303. <https://doi.org/10.12705/666.2>
- Degelius, G. (1937). Lichens from southern Alaska and the Aleutian Islands collected by Dr. E. Hultén. *Meddelanden Från Göteborgs Botaniska Trädgård*, 12, 105–144.
- Degelius, G. (1952). On the lichen *Cavernularia Hulténii* Degel. and the problem of the glacial survival of spruce in Scandinavia. *Svensk Botanisk Tidskrift*, 46, 53–61.
- Degelius, G. (1954). The lichen genus *Collema* in Europe: morphology, taxonomy, ecology. *Symbolae Botanicae Upsalienses*, 13(2), 1–499.
- Degelius, G. (1968). Några växtgeografiskt intressanta lavfynd. *Svensk Botanisk Tidskrift*, 62, 405–410.
- Degelius, G. (1974). The lichen genus *Collema* with special reference to the extra-European species. *Symbolae Botanicae Upsalienses*, 20, 1–215.
- Denton, G. H., & Karlén, W. (1973). Lichenometry: Its application to Holocene moraine studies in southern Alaska and Swedish Lapland. *Arctic and Alpine Research*, 5(4), 347–372. <https://doi.org/10.1080/00040851.1973.12003745>
- Denton, G. H., & Karlén, W. (1977). Holocene glacial and tree-line variations in the White River Valley and Skolai Pass, Alaska and Yukon Territory. *Quaternary Research*, 7(1), 63–111. [https://doi.org/10.1016/0033-5894\(77\)90014-X](https://doi.org/10.1016/0033-5894(77)90014-X)

- Derr, C. C. (2010). *Air quality biomonitoring on the Chugach National Forest: 1993 & 1994 methods and baselines using lichens*. USDA Forest Service, Alaska Region, Technical Report TP-R10-147. Anchorage.
- Derr, C. C., McCune, B., & Geiser, L. H. (2007). Epiphytic macrolichen communities in *Pinus contorta* peatlands in southeastern Alaska. *The Bryologist*, 110(3), 521–532. <https://www.jstor.org/stable/20110886>
- DeVelice, R. L., Hubbard, C. J., Boggs, K. B., Boudreau, S., Potkin, M., Boucher, T., & Wertheim, C. (1999). *Plant community types of the Chugach National Forest: southcentral Alaska*. USDA Forest Service, Chugach National Forest, Alaska Region, Technical Publication R10-TP-76. Anchorage. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev2_037804.pdf
- Dibben, M. J. (1980). The chemosystematics of the lichen genus *Pertusaria* in North America north of Mexico. *Publications in Biology and Geology*, 5, 1–162. Milwaukee: Milwaukee Public Museum Press.
- Diederich, P. (2003). New species and new records of American lichenicolous fungi. *Herzogia*, 16, 41–90.
- Diederich, P., Zhurbenko, M., & Etayo, J. (2002). The lichenicolous species of *Odontotrema* (Syn. *Lethariicola*) (Ascomycota, Ostropales). *Lichenologist*, 34(6), 479–501. <https://doi.org/10.1006/lich.2002.0418>
- Diederich, P., Ertz, D., & Etayo, J. (2010). An enlarged concept of *Llimoniella* (lichenicolous Helotiales), with a revised key to the species and notes on related genera. *Lichenologist*, 42(3), 253–269. <https://doi.org/10.1017/S0024282909990612>
- Diederich, P., Millanes, A. M., Etayo, J., van den Boom, P. P. G., & Wedin, M. (2022a). Finding the needle in the haystack: A revision of *Crittendenia*, a surprisingly diverse lichenicolous genus of *Agaricostilbomycetes*, *Pucciniomycotina*. *The Bryologist*, 125(2), 248–293. <https://doi.org/10.1639/0007-2745-125.2.248>
- Diederich, P., Millanes, A. M., Wedin, M., & Lawrey, J. D. (2022b). *Flora of lichenicolous fungi. Vol. 1. Basidiomycota*. Luxembourg: National Museum of Natural History.
- Dillman, K. L. (2003). *Lichens of rock art sites from Lake Clark National Park* (19 pp.). Unpublished report prepared for Shah Conservation. Anchorage, Alaska.
- Dillman, K. L. (2004). *Epiphytic lichens from the forest-marine ecotone of southeastern Alaska*. M.S. Thesis. Arizona State University (67 pp.).
- Dillman, K. L. (2010). *Lichen surveys in the Blue Fox Bay environs of Afognak Island in July 2008*. Kodiak: U.S. Fish and Wildlife Service.
- Dillman, K. L., Ahti, T., Björk, C. R., Clerc, P., Ekman, S., Goward, T., . . . Spribille, T. (2012). New records, range extensions and nomenclatural innovations for lichens and lichenicolous fungi from Alaska, U.S.A. *Herzogia*, 25(2), 177–210. <https://doi.org/10.13158/heia.25.2.2010.177>
- Di Meglio, J., & Goward, T. (2023). Resolving the *Sticta fuliginosa* morphodeme (lichenized Ascomycota: Peltigeraceae) in northwestern North America. *The Bryologist*, 126(1), 90–110. <https://doi.org/10.1639/0007-2745-126.1.090>
- Dombrovskaya, A. V. (1996). Rod *Stereocaulon* na territorii byvshego SSSR [*The genus Stereocaulon in the territory of the former Soviet Union*]. Peterburg: Mir i sem'ya-95.
- Drew, J. V., & Shanks, R. E. (1965). Landscape relationships of soils and vegetation in the forest-tundra ecotone, Upper Firth River Valley, Alaska-Canada. *Ecological Monographs*, 35(3), 285–306. <https://doi.org/10.2307/1942140>
- Du Rietz, G. E. (1924). Flechtensystematische Studien. III. *Botaniska Notiser*, 1924, 49–68.

- Du Rietz, G. E. (1925a). Flechtensystematische Studien. V. *Botaniska Notiser*, 1925, 1–16.
- Du Rietz, G. E. (1925b). Die europäischen Arten der *Gyrophora* “*anthracina*”-Gruppe. *Arkiv för Botanik*, 19(12), 1–14.
- Du Rietz, G. E. (1926). Vorarbeiten zu einer “Synopsis Lichenum” I. Die Gattungen *Alectoria*, *Oropogon* und *Cornicularia*. *Arkiv för Botanik*, 20A(11), 1–43.
- Du Rietz, G. E. (1928). *Gyrophora rigida* DR. in North America. A new member of the west-arctic element in the Scandinavian mountain-flora. *Svensk Botanisk Tidskrift*, 22, 278–281.
- Du Rietz, G. E. (1929). The lichens of the Swedish Kamtchatka-Expeditions. *Arkiv för Botanik*, 22A(13), 1–25.
- Ekman, S. (1996). The corticolous and lignicolous species of *Bacidia* and *Bacidina* in North America. *Opera Botanica*, 127, 1–148.
- Ekman, S. (2023). Four new and two resurrected species of *Bacidina* from Sweden, with notes and a preliminary key to the known Scandinavian species. *Nordic Journal of Botany*, 2023(5), e03846. <https://doi.org/10.1111/njb.03846>
- Ekman, S., & Tønsberg, T. (1996). A new species of *Megalaria* from the North American west coast, and notes on the generic circumscription. *The Bryologist*, 99(1), 34–40. <https://doi.org/10.2307/3244435>
- Ekman, S., Svensson, M., Westberg, M., & Zamora, J. C. (2019). Additions to the lichen flora of Fennoscandia III. *Graphis Scripta*, 31, 34–46.
- Elix, J. A., & Tønsberg, T. (2005). On the chemistry of *Ramalina thrausta*. *Graphis Scripta*, 17, 35–36.
- Ellis, J. M., Hamilton, T. D., & Calkin, P. E. (1981). Holocene glaciation of the Arrigetch Peaks, Brooks Range, Alaska. *Arctic*, 34(2), 158–168. <https://doi.org/10.14430/arctic2517>
- Elvebakk, A., & Tønsberg, T. (2018). *Psoroma spinuliferum* (Pannariaceae), a new corticolous lichen species from Alaska with two different types of cephalodia. *The Bryologist*, 121(2), 166–173. <https://doi.org/10.1639/0007-2745-121.2.166>
- Erichsen, C. F. E. (1938). Neue arktische und subarktische besonders von Dr. E. Hultén und Prof. B. Lynge gesammelte Pertusarien nebst einer Bestimmungstabelle arktischer und subarktischer, über Erde und Moosen wachsender Pertusariaceae. *Annales Mycologici*, 36, 349–366.
- Ertz, D., Diederich, P., & Miadlikowska, J. (2004). The lichenicolous *Opegrapha* species (Roccellaceae, Ascomycota) with 3-septate ascospores on *Pertusaria* and *Ochrolechia*. *Botanical Journal of the Linnean Society*, 144(2), 235–241. <https://doi.org/10.1111/j.1095-8339.2003.00239.x>
- Ertz, D., Christnach, C., Wedin, M., & Diederich, P. (2005). A world monograph of the genus *Plectocarpon* (Roccellaceae, Arthoniales). *Bibliotheca Lichenologica*, 91, 1–155.
- Esnault, J., & Roux, C. (1987). *Amygdalaria tellensis* (Lichens), nouvelle espèce du tell algérien. *Anales del Jardín Botánico de Madrid*, 44, 211–225.
- Esslinger, T. L. (1973). Chemical and taxonomic studies on some corticolous members of the lichen genus *Cetraria* in western North America. *Mycologia*, 65(3), 602–613. <https://doi.org/10.1080/00275514.1973.12019474>
- Esslinger, T. L. (1977). A chemosystematic revision of the brown Parmeliaceae. *The Journal of the Hattori Botanical Laboratory*, 42, 1–211.
- Esslinger, T. L. (1997). *A cumulative checklist for the lichen-forming, lichenicolous and allied fungi of the continental United States and Canada*. North Dakota State University. <https://www.ndsu.edu/pubweb/~esslinge/chcklst/chcklst7-7.htm>

- Esslinger, T. L. (2007). A synopsis of the North American species of *Anaptychia* (Physciaceae). *The Bryologist*, 110(4), 788–797. <https://www.jstor.org/stable/20110907>
- Esslinger, T. L. (2021). A cumulative checklist for the lichen-forming, lichenicolous and allied fungi of the continental United States and Canada, version 24. *Opuscula Philolichenum*, 20, 100–394.
- Esslinger, T. L., & Dillman, K. L. (2010). *Physconia grumosa* in North America. *The Bryologist*, 113(1), 77–80. <https://doi.org/10.1639/0007-2745-113.1.77>
- Esslinger, T. L., & Egan, R. S. (1995). A sixth checklist of the lichen-forming, lichenicolous, and allied fungi of the continental United States and Canada. *The Bryologist*, 98(4), 467–549. <https://doi.org/10.2307/3243586>
- Esslinger, T. L., McCune, B., & Haughland, D. L. (2017). *Physconia labrata*, a new species from western North America and Asia. *The Bryologist*, 120(4), 427–434. <https://doi.org/10.1639/0007-2745-120.4.427>
- Evans, A. W. (1943). Microchemical studies on the genus *Cladonia*, subgenus *Cladina*. *Rhodora*, 45, 417–438.
- Evans, A. W. (1947). A study of certain North American Cladoniae. *The Bryologist*, 50(1), 14–51. <https://doi.org/10.2307/3239583>
- Evans, A. W. (1951). On *Cladonia transcendens* Vainio. *The Bryologist*, 54(4), 224–230. <https://doi.org/10.2307/3240000>
- Evans, A. W. (1952). *Cladonia ecmocyna* in North America. *Rhodora*, 54, 261–271.
- Evans, A. W. (1955). Notes on North American Cladoniae. *The Bryologist*, 58(2), 93–112. <https://doi.org/10.2307/3240424>
- Evison, L. H., Calkin, P. E., & Ellis, J. M. (1996). Late-Holocene glaciation and twentieth-century retreat, northeastern Brooks Range, Alaska. *The Holocene*, 6(1), 17–24. <https://doi.org/10.1177/095968369600600103>
- Eyderdam, W. J. (1949). Lichens from Alaska: Thum Bay, Knight Island, Prince William Sound. *The Bryologist*, 52(1), 34–38. <https://doi.org/10.2307/3239733>
- Feuerer, T. (1991). Revision der europäischen Arten der Flechtengattung *Rhizocarpon* mit nichtgelbem Lager und vielzelligen Sporen. *Bibliotheca Lichenologica*, 39, 1–218.
- Fink, B. (1904). Further notes on Cladonias. IV. *The Bryologist*, 7(6), 85–88. <https://doi.org/10.2307/3238058>
- Fink, B. (1905). Further notes on Cladonias. V. *Cladonia gracilis*. *The Bryologist*, 8(3), 37–41. <https://doi.org/10.2307/3237988>
- Fink, B. (1906). Further notes on Cladonias. VII. *Cladonia subcariosa*, *Cladonia mitrula* and *Cladonia leptophylla*. *The Bryologist*, 9(4), 57–60. <https://doi.org/10.2307/3237408>
- Fink, B. (1907a). A memoir of Clara E. Cummings. *The Bryologist*, 10(3), 37–41. <https://www.jstor.org/stable/3238923>
- Fink, B. (1907b). Further notes on Cladonias. X. *Cladonia decorticata* and *Cladonia degenerans*. *The Bryologist*, 10(3), 41–45. <https://doi.org/10.2307/3238924>
- Fink, B. (1907c). Further notes on Cladonias. XI. *Cladonia pyxidata* and *Cladonia pityrea*. *The Bryologist*, 10(4), 57–60. <https://doi.org/10.2307/3237954>
- Fink, B. (1907d). Further notes on Cladonias. XIII. *Cladonia cristatella* and *Cladonia coccifera*. *The Bryologist*, 10(6), 97–100. <https://doi.org/10.2307/3237572>
- Fink, B. (1908). Further notes on Cladonias. XIV. *Cladonia digitata*, *Cladonia deformis* and *Cladonia bellidiflora*. *The Bryologist*, 11(2), 21–24. <https://doi.org/10.2307/3238248>

- Flock, J. W. (1989). *Lithographa*, a lichen genus new to continental North America. *Mycotaxon*, 34, 643–645.
- Follmann, G., & Huneck, S. (1969). Mitteilungen über Flechteninhaltsstoffe. LXVIII. Zur Phytochemie und Chemotaxonomie der Sammelgattung *Lecanora*. *Willdenowia*, 5, 351–367.
- Frey, E. (1936). Die geographische Verbreitung der Umbilicariaceen und einiger alpiner Flechten. *Berichte der Schweizerischen Botanischen Gesellschaft*, 46, 412–444.
- Fries, E. (1831). *Lichenographia europaea reformata: Praemittuntur lichenologiae fundamenta. Compendium in theoreticum et practicum lichenum stadium*. Typis Berlingianis, venditur apud E. Mauritium. Lund: Gryphiae.
<https://doi.org/10.5962/bhl.title.79370>
- Frisch, A., Thor, G., Ertz, D., & Grube, M. (2014). The Arthonialean challenge: Restructuring Arthoniaceae. *Taxon*, 63(4), 727–744. <https://doi.org/10.12705/634.20>
- Frisch, A., Ohmura, Y., Holien, H., & Bendiksby, M. (2022a). A phylogenetic survey of the ascomycete genus *Arthrorhaphis* (Arthrorhaphidaceae, Lecanoromycetes) including new species in *Arthrorhaphis citrinella* sensu lato. *Taxon*, 71(5), 936–962. <https://doi.org/10.1002/tax.12718>
- Frisch, A., Holien, H., Klepsland, J. T., Suija, A., & Bendiksby, M. (2022b). New data on lichenicolous fungi in Norway. *Graphis Scripta*, 34(7), 59–133.
- Frolov, I., Vondrák, J., Košnar, J., & Arup, U. (2021). Phylogenetic relationships within *Pyrenodesmia* sensu lato and the role of pigments in its taxonomic interpretation. *Journal of Systematics and Evolution*, 59(3), 454–474. <https://doi.org/10.1111/jse.12717>
- Frost, G. V., Loehman, R. A., Saperstein, L. B., Macander, M. J., Nelson, P. R., Paradis, D. P., & Natali, S. M. (2020). Multi-decadal patterns of vegetation succession after tundra fire on the Yukon-Kuskokwim Delta, Alaska. *Environmental Research Letters*, 15(2), 025003. <https://doi.org/10.1088/1748-9326/ab5f49>
- Fryday, A. (2000). On *Rhizocarpon obscuratum* (Ach.) Massal., with notes on some related species in the British Isles. *Lichenologist*, 32(3), 207–224. <https://doi.org/10.1006/lich.2000.0269>
- Fryday, A. M. (2002). A revision of the species of the *Rhizocarpon hochstetteri* group occurring in the British Isles. *Lichenologist*, 34(6), 451–477. <https://doi.org/10.1006/lich.2002.0416>
- Fryday, A. M. (2004a). A new species of *Fuscopannaria* with a green photobiont, and other taxonomic innovations and new records of lichenized-fungi from Alaska. *The Bryologist*, 107(2), 173–179. <https://www.jstor.org/stable/3244841>
- Fryday, A. M. (2004b). A re-assessment of the genus *Gongylia* in North America, and a new species of *Protothelenella* from Colorado. *The Bryologist*, 107(2), 231–233. <https://www.jstor.org/stable/3244849>
- Fryday, A. M. (2005). The genus *Porpidia* in northern and western Europe, with special emphasis on collections from the British Isles. *Lichenologist*, 37(1), 1–35. <https://doi.org/10.1017/S0024282904014628>
- Fryday, A. M. (2008). The genus *Fuscidea* (Fuscideaceae, lichenized Ascomycota) in North America. *Lichenologist*, 40(4), 295–328. <https://doi.org/10.1017/S0024282908007755>
- Fryday, A. M. (2017). Additions to the lichenized fungi biota of North America and Alaska from collections held in the University of Alaska Museum of the North herbarium (ALA). *Arctic Science*, 3(3), 577–584. <https://doi.org/10.1139/as-2016-0040>

- Fryday, A. M., & Dillman, K. L. (2021a). Two new species of *Ostropales* (Lecanoromycetes) and other significant records of lichenized fungi from Southeastern Alaska. *The Bryologist*, 124(1), 20–26. <https://doi.org/10.1639/0007-2745-124.1.020>
- Fryday, A. M., & Dillman, K. L. (2021b). A preliminary investigation of the lichen biota associated with recently deglaciated terrain in southeastern Alaska. *Botany*, 100(3), 313–328. <https://doi.org/10.1139/cjb-2021-0087>
- Fryday, A. M., & Glew, K. A. (2003). *Stereocaulon nivale*, comb. nov., yet another crustose species in the genus. *The Bryologist*, 106(4), 565–568. <https://www.jstor.org/stable/3244617>
- Fryday, A. M., & Hertel, H. (2014). A contribution to the family Lecideaceae s. lat. (Lecanoromycetidae inc. sed., lichenized Ascomycota) in the southern subpolar region; including eight new species and some revised generic circumscriptions. *Lichenologist*, 46(3), 389–412. <https://doi.org/10.1017/S0024282913000704>
- Fryday, A. M., & Tønsberg, T. (2015). *Ameliella* — A bryicolous lichen genus rediscovered in North America after 50 years. *Evansia*, 32(4), 171–175. <https://doi.org/10.1639/0747-9859-32.4.171>
- Fryday, A. M., Printzen, C., & Ekman, S. (2014). *Bryobilimbia*, a new generic name for *Lecidea hypnorum* and closely related species. *Lichenologist*, 46(1), 25–37. <https://doi.org/10.1017/S0024282913000625>
- Fryday, A. M., Wheeler, T. B., & Etayo, J. (2021). A new species of *Aspicilia* (Megasporaceae), with a new lichenicolous *Sagediopsis* (Adelococcaceae), from the Falkland Islands. *Lichenologist*, 53(4), 307–315. <https://doi.org/10.1017/S0024282921000244>
- Galloway, D. J. (1995). The extra-European lichen collections of Archibald Menzies MD. FLS (1754–1842). *Edinburgh Journal of Botany*, 52(2), 95–139. <https://doi.org/10.1017/S0960428600000937>
- Garibaldi, A. (1999). *Medicinal flora of the Alaskan Natives*. Anchorage: Alaska Natural Heritage Program.
- Garrido-Benavent, I., Pérez-Ortega, S., & de los Ríos, A. (2017). From Alaska to Antarctica: Species boundaries and genetic diversity of *Prasiola* (Trebouxiophyceae), a foliose chlorophyte associated with the bipolar lichen-forming fungus *Mastodia tessellata*. *Molecular Phylogenetics and Evolution*, 107, 117–131. <https://doi.org/10.1016/j.ympev.2016.10.013>
- Garrido-Benavent, I., de los Ríos, A., Fernández-Mendoza, F., & Pérez-Ortega, S. (2018). No need for stepping stones: Direct, joint dispersal of the lichen-forming fungus *Mastodia tessellata* (Ascomycota) and its photobiont explain their bipolar distribution. *Journal of Biogeography*, 45(1), 213–224. <https://doi.org/10.1111/jbi.13105>
- Garrido-Benavent, I., Pérez-Ortega, S., de los Ríos, A., Mayrhofer, H., & Fernández-Mendoza, F. (2021). Neogene speciation and Pleistocene expansion of the genus *Pseudephebe* (Parmeliaceae, lichenized fungi) involving multiple colonizations of Antarctica. *Molecular Phylogenetics and Evolution*, 155, 107020. <https://doi.org/10.1016/j.ympev.2020.107020>
- Gasparyan, A., Sipman, H. J. M., & Lücking, R. (2017). *Ramalina europaea* and *R. labiosorediata*, two new species of the *R. pollinaria* group (Ascomycota: Ramalinaceae), and new typifications for *Lichen pollinarius* and *L. squarrosus*. *Lichenologist*, 49(4), 301–319. <https://doi.org/10.1017/S0024282917000226>

- Gaya, E. (2009). Taxonomical revision of the *Caloplaca saxicola* group (Teloschistaceae, lichen-forming Ascomycota). *Bibliotheca Lichenologica*, 101, 1–191.
- Gaya, E., Högnabba, F., Holguin, Á., Molnar, K., Fernández-Brime, S., Stenroos, S., . . . Lutzoni, F. (2012). Implementing a cumulative supermatrix approach for a comprehensive phylogenetic study of the Teloschistales (Pezizomycotina, Ascomycota). *Molecular Phylogenetics and Evolution*, 63(2), 374–387. <https://doi.org/10.1016/j.ympev.2012.01.012>
- Geiser, L. H., Dillman, K. L., Derr, C. C., & Stensvold, M. C. (1994a). *Lichens of Southeastern Alaska. An Inventory*. Petersburg, Alaska: USDA Forest Service, Tongass National Forest.
- Geiser, L. H., Derr, C. C. & Dillman, K. L. (1994b). *Air quality monitoring on the Tongass National Forest. Methods and baselines using lichens*. USDA Forest Service, Alaska Region, Technical Report R10-TB-46.
- Geiser, L. H., Dillman, K. L., Derr, C. C., & Stensvold, M. C. (1998). Lichens and allied fungi of southeast Alaska. In M. G. Glenn, R. C. Harris, R. Dirig, & M. S. Cole (Eds.), *Lichenographia Thomsoniana: North American Lichenology in Honor of John W. Thomson* (pp. 201–243). Ithaca: Mycotaxon.
- Geml, J., Kauff, F., Brochmann, C., & Taylor, D. L. (2010). Surviving climate changes: High genetic diversity and transoceanic gene flow in two arctic-alpine lichens, *Flavocetraria cucullata* and *F. nivalis* (Parmeliaceae, Ascomycota). *Journal of Biogeography*, 37, 1529–1542. <https://doi.org/10.1111/j.1365-2699.2010.02287.x>
- Gerasimova, J. V., Urbanavichene, I. N., Urbanavichus, G. P., & Beck, A. (2021). Morphological and phylogenetic analyses of *Toniniopsis subincompta* s. lat. (Ramalinaceae, Lecanorales) in Eurasia. *Lichenologist*, 53(2), 171–183. <https://doi.org/10.1017/S0024282921000013>
- Goffinet, B. (1992). The North American distribution of *Peltigera retifoveata* Vitik. *Evansia*, 9(2), 49–51. <https://doi.org/10.5962/p.345962>
- Goffinet, B., & Hastings, R. I. (1994). *The Lichen Genus Peltigera (Lichenized Ascomycetes) in Alberta*. Natural History Occasional Paper 21. Edmonton: Provincial Museum of Alberta.
- Golubkova, N. S. (1988). *Lishayniki semeystva Acarosporaceae Zahlbr. v SSSR*. Leningrad: Nauka.
- Gough, L., Shrestha, K., Johnson, D. R., & Moon, B. (2008). Long-term mammalian herbivory and nutrient addition alter lichen community structure in Alaskan dry heath tundra. *Arctic, Antarctic, and Alpine Research*, 40(1), 65–73. [https://doi.org/10.1657/1523-0430\(06-087\)\[GOUGH\]2.0.CO;2](https://doi.org/10.1657/1523-0430(06-087)[GOUGH]2.0.CO;2)
- Gowan, S. P. (1989). The lichen genus *Porpidia* (Porpidiaceae) in North America. *The Bryologist*, 92(1), 25–59. <https://doi.org/10.2307/3244016>
- Goward, T. (1988). *Hypogymnia oceanica*, a new lichen (Ascomycotina) from the Pacific Northwest of North America. *The Bryologist*, 91(3), 229–232. <https://doi.org/10.2307/3243225>
- Goward, T. (1999). *The Lichens of British Columbia. Illustrated Keys. Part 2 – Fruticose Species. Species Report Series, 9*. Victoria: Ministry of Forests Research Program.
- Goward, T., & Ahti, T. (1983). *Parmelia hygrophila*, a new lichen species from the Pacific Northwest of North America. *Annales Botanici Fennici*, 20, 9–13.
- Goward, T., & Goffinet, B. (2000). *Peltigera chionophila*, a new lichen (Ascomycetes) from the western Cordillera of North America. *The Bryologist*, 103(3), 493–498. <https://www.jstor.org/stable/3244136>

- Goward, T., & McCune, B. (1993). *Hypogymnia apinnata* sp. nov., a new lichen (Ascomycotina) from the Pacific Northwest of North America. *The Bryologist*, 96(3), 450–453. <https://doi.org/10.2307/3243877>
- Goward, T., & McCune, B. (2007). *Hypogymnia canadensis* (Parmeliaceae), a new lichen from the Pacific Coast of North America. *The Bryologist*, 110(4), 808–811. <https://www.jstor.org/stable/20110909>
- Goward, T., & Myllys, L. (2020). *Gowardia zebrina* sp. nov., a new species in a little-known genus of arctic-alpine lichens (Parmeliaceae). *Plant and Fungal Systematics*, 65(1), 219–226. <https://doi.org/10.35535/pfsyst-2020-0017>
- Goward, T., McCune, B. & Meidinger, D. (1994). *The Lichens of British Columbia. Illustrated Keys. Part 1 – Foliose and Squamulose Species. Special Report Series, 8*. Victoria: Ministry of Forests Research Program.
- Goward, T., Breuss, O., Ryan, B., McCune, B., Sipman, H., & Scheidegger, C. (1996). Notes on the lichens and allied fungi of British Columbia. III. *The Bryologist*, 99(4), 439–449. <https://doi.org/10.2307/3244108>
- Goward, T., Ahti, T., Elix, J., & Spribille, T. (2010). *Hypogymnia recurva* and *Hypogymnia wilfiana* spp. nov., two new lichens from western North America. *Botany*, 88(4), 345–351. <https://doi.org/10.1139/B10-028>
- Goward, T., Spribille, T., Ahti, T., & Hampton-Miller, C. J. (2012). Four new sorediate species in the *Hypogymnia austerodes* group (lichens) from northwestern North America, with notes on thallus morphology. *The Bryologist*, 115(1), 84–100. <https://doi.org/10.1639/0007-2745-115.1.84>
- Gray, A. (1885). VIII. Plants. In P. H. Ray (Ed.), *Report of the International Polar Expedition to Pt Barrow, Alaska* (pp. 191–192). Washington: Government Printing Office.
- Grube, M. (2005). *Frigidopyrenia* – a new genus for a particular subarctic lichen, with notes on similar taxa. *Phyton (Austria)*, 45(2), 305–318.
- Grube, M., & Hafellner, J. (1990). Studien an flechtenbewohnenden Pilzen der Sammelgattung *Didymella* (Ascomycetes, Dothideales). *Nova Hedwigia*, 51, 283–360.
- Grube, M., & Ryan, B. D. (2002). *Collemopsidium*. In T. H. Nash, III, B. D. Ryan, C. Gries, & F. Bungartz (Eds.), *Lichen flora of the greater Sonoran Desert region* (Vol. 1, pp. 162–164). Tempe: Arizona State University Lichen Herbarium.
- Gunther, A. J. (1989). Nitrogen fixation by lichens in a subarctic Alaskan watershed. *The Bryologist*, 92(2), 202–208. <https://doi.org/10.2307/3243946>
- Guzow-Krzemińska, B., Łubek, A., Maliček, J., Tønsberg, T., Oset, M., & Kukwa, M. (2017). *Lecanora stanislai*, a new, sterile, usnic acid containing lichen species from Eurasia and North America. *Phytotaxa*, 329(3), 201–211. <https://doi.org/10.11646/phytotaxa.329.3.1>
- Gyelnik, V. (1928). *Peltigerae novae et criticae. Österreichische botanische Zeitschrift*, 77(3), 220–226. <https://doi.org/10.1007/BF01254303>
- Gyelnik, V. (1931). *Nephromae novae et criticae. Annales de Cryptogamie Exotique*, 4(3–4), 121–149.
- Hadwen, S., & Palmer, L. J. (1922). Reindeer in Alaska. *U.S. Department of Agriculture Bulletin*, 1089, 1–70.
- Hafellner, J. (1979). *Karschia*: Revision einer Sammelgattung an der Grenze von lichenisierten und nichtlichenisierten Ascomyceten. *Nova Hedwigia, Beihefte*, 62, 1–248.
- Hafellner, J. (1984). Studien in Richtung einer natürlicheren Gliederung der Sammelfamilien Lecanoraceae und Lecideaceae. In H. Hertel & F. Oberwinkler

- (Eds.), *Beiträge zur Lichenologie. Festschrift J. Poelt. Beiheft zur Nova Hedwigia* 79 (pp. 241–371). Vaduz: J. Cramer.
- Hafellner, J. (1997). A world monograph of *Brigantiaea* (lichenized Ascomycotina, Lecanorales). *Symbolae Botanicae Upsalienses*, 32(1), 35–74.
- Hafellner, J. (2010). Contributions to a revision of lichenized, phaeosporous species of *Polyblastia* coll., mainly in the central European mountains. *Bibliotheca Lichenologica*, 104, 117–141.
- Hafellner, J. (2013). Lichenicolous Biota (Nos 151–180). *Fritschiana (Graz)*, 76, 47–68.
- Hafellner, J. (2014). Lichenicolous Biota (Nos 181–200). *Fritschiana (Graz)*, 78, 9–24.
- Hafellner, J. (2018). Lichenicolous Biota (Nos 271–300). *Fritschiana (Graz)*, 90, 1–22.
- Hafellner, J. (2021). Lichenicolous Biota (Nos 341–360). *Fritschiana (Graz)*, 97, 1–17.
- Hafellner, J. (2022). Lichenicolous Biota (Nos 361–380). *Fritschiana (Graz)*, 100, 13–29.
- Hafellner, J., Triebel, D., Ryan, B. D., & Nash, T. H., III. (2002). On lichenicolous fungi from North America. II. *Mycotaxon*, 84, 293–329.
- Hafellner, J., Obermayer, W., & Tretiach, M. (2014). *Miriquidica invadens*, an obligate youth parasite on *Sporastatia*, with remarks and a key to species of the *M. griseoatra* group. *Lichenologist*, 46(3), 303–331. <https://doi.org/10.1017/S002428291400005X>
- Hahn, S., Tenhunen, J. D., Popp, P. W., Meyer, A., & Lange, O. L. (1993). Upland tundra in the foothills of the Brooks Range, Alaska: Diurnal CO₂ exchange patterns of characteristic lichen species. *Flora (Jena)*, 188, 125–143. [https://doi.org/10.1016/S0367-2530\(17\)32257-0](https://doi.org/10.1016/S0367-2530(17)32257-0)
- Hahn, S. C., Oberbauer, S. F., Gebauer, R., Grulke, N. E., Lange, O. L., & Tenhunen, J. D. (1996). Vegetation structure and aboveground carbon and nutrient pools in the Innvavait Creek watershed. In J. F. Reynolds & J. D. Tenhunen (Eds.), *Landscape Function and Disturbance in Arctic Tundra. Ecological Studies*, 120, 109–128. Berlin, Heidelberg: Springer. https://doi.org/10.1007/978-3-662-01145-4_5
- Hakulinen, R., & Huuskonen, A. J. (1968). *Dactylina ramulosa* (Hook.) Tuck., eine für Fennoskandien neue Flechtenart. *Annales Botanici Fennici*, 5, 112–114.
- Hakulinen, R., & Ulvinen, T. (1966). *Asahinea chrysantha* (Tuck.) Culb. et Culb. in Fennoskandien. *Annales Universitatis Turkuensis, ser. A*, 2(36), 101–105.
- Hale, M. E., Jr. (1971). *Parmelia squarrosa*, a new species in section *Parmelia*. *Phytologia*, 22(1), 29.
- Hale, M. E., Jr. (1986). *Arctoparmelia*, a new genus in the Parmeliaceae (Ascomycotina). *Mycotaxon*, 25, 251–254.
- Hale, M. E., Jr. (1987). A monograph of the lichen genus *Parmelia* Acharius sensu stricto (Ascomycotina: Parmeliaceae). *Smithsonian Contributions to Botany*, 66, 1–55. <https://doi.org/10.5479/si.0081024X.66>
- Hale, M. E., Jr. (1990). A synopsis of the lichen genus *Xanthoparmelia* (Vainio) Hale (Ascomycotina, Parmeliaceae). *Smithsonian Contributions to Botany*, 74, 1–250. <https://doi.org/10.5479/si.0081024X.74>
- Halonen, P., Clerc, P., Goward, T., Brodo, I. M., & Wulff, K. (1998). Synopsis of the genus *Usnea* (lichenized Ascomycetes) in British Columbia, Canada. *The Bryologist*, 101(1), 36–60. <https://doi.org/10.2307/3244073>
- Halonen, P., Myllys, L., Ahti, T., & Petrova, O. V. (1999). The lichen genus *Usnea* in East Fennoscandia. III. The shrubby species. *Annales Botanici Fennici*, 36, 235–256.
- Halonen, P., Myllys, L., Velmala, S., & Hyvärinen, H. (2009). *Gowardia* (Parmeliaceae) – a new alectoroid lichen genus with two species. *The Bryologist*, 112(1), 138–146. <https://doi.org/10.1639/0007-2745-112.1.138>

- Hanko, B., Leuckert, C., & Ahti, T. (1985). Beiträge zur Chemotaxonomie der Gattung *Ochrolechia* (Lichenes) in Europa. *Nova Hedwigia*, 42, 165–199.
- Hansen, E. S., & Ahti, T. (2011). A contribution to the lichen genus *Cladonia* in Greenland and new records from other northern regions. *Graphis Scripta*, 23, 56–64.
- Hansen, E. S., & Alstrup, V. (1995). The lichenicolous fungi on *Cladonia* subgenus *Cladina* in Greenland. *Graphis Scripta*, 7, 33–38.
- Hansen, E. S., Poelt, J., & Søchting, U. (1987). Die Flechtengattung *Caloplaca* in Grönland. *Meddelelser om Grønland*, 25, 1–52.
- Hanson, H. C. (1950). Vegetation and soil profiles in some solifluction and mound areas in Alaska. *Ecology*, 31(4), 606–630. <https://doi.org/10.2307/1931578>
- Hanson, H. C. (1951). Characteristics of some grassland, marsh, and other plant communities in western Alaska. *Ecological Monographs*, 21(4), 317–378. <https://doi.org/10.2307/1948654>
- Hanson, H. C. (1953). Vegetation types in northwestern Alaska and comparisons with communities in other arctic regions. *Ecology*, 34(1), 111–140. <https://doi.org/10.2307/1930313>
- Harris, R. C. (1975). *A taxonomic revision of the genus Arthopyrenia Massal. s. lat. (Ascomycetes) in North America*. Ph.D. thesis, Michigan State University.
- Hasselbach, L., & Neitlich, P. (1996). *Vascular and nonvascular vegetation reconnaissance of Walker Lake National Natural Landmark, Alaska*. Fairbanks: National Park Service, Gates of the Arctic National Park.
- Hasselrot, T. E. (1953). Nordliga lavar i Syd- och Mellansverige. *Acta Phytogeographica Suecica*, 33, 1–200.
- Haugan, R., & Timdal, E. (1994). *Tephromela perlata* and *T. talayana*, with notes on the *T. aglaea*-complex. *Graphis Scripta*, 6, 17–26.
- Hawksworth, D. L. (1972). Regional studies in *Alectoria* (Lichenes) II. The British species. *Lichenologist*, 5(3–4), 181–261. <https://doi.org/10.1017/S002428297200026X>
- Hawksworth, D. L. (1979). Studies in the genus *Endococcus* (Ascomycotina, Dothideales). *Botaniska Notiser*, 132, 283–290.
- Hawksworth, D. L. (1980). Notes on British lichenicolous fungi: III. *Notes from the Royal Botanic Garden Edinburgh*, 38, 165–183.
- Hawksworth, D. L. (2004). Rediscovery of the original material of Osbeck's *Lichen chinensis* and the re-instatement of the name *Parmotrema perlatum* (Parmeliaceae). *Herzogia*, 17, 37–44.
- Hawksworth, D. L., Blanco, O., Divakar, P. D., Ahti, T., & Crespo, A. (2008). A first checklist of parmelioid and similar lichens in Europe and some adjacent territories, adopting revised generic circumscriptions and with indications of species distributions. *Lichenologist*, 40(1), 1–21. <https://doi.org/10.1017/S0024282908007329>
- Haworth, L. A., Calkin, P. E., & Ellis, J. M. (1986). Direct measurement of lichen growth in the central Brooks Range, Alaska, U.S.A., and its application to lichenometric dating. *Arctic and Alpine Research*, 18(3), 289–296. <https://doi.org/10.2307/1550886>
- Hedrick, J. (1936). Lichens from the Aleutian Islands and the Alaska Peninsula. *Papers of the Michigan Academy of Science, Arts and Letters*, 21, 75–80.
- Heikkilä, H., & Kallio, P. (1969). On the problem of subarctic basidiolichens. II. *Reports from the Kevo Subarctic Research Station*, 4, 88–97.

- Henssen, A. (1963a). The North American species of *Massalongia* and generic relationships. *Canadian Journal of Botany*, 41(9), 1331–1346. <https://doi.org/10.1139/b63-114>
- Henssen, A. (1963b). A study of the genus *Vestergrenopsis*. *Canadian Journal of Botany*, 41(9), 1359–1366. <https://doi.org/10.1139/b63-116>
- Henssen, A. (1963c). The North American species of *Placynthium*. *Canadian Journal of Botany*, 41(12), 1687–1724. <https://doi.org/10.1139/b63-155>
- Henssen, A. (1969). Eine Studie über die Gattung *Arctomia*. *Svensk Botanisk Tidskrift*, 63, 126–138.
- Henssen, A. (1981). *Hyphomorpha* als Phycobiont in Flechten. *Plant Systematics and Evolution*, 137(3), 139–143. <https://doi.org/10.1007/BF00989870>
- Henssen, A. (1997). *Santessonella*, a new cyanophilic genus of lichenized ascomycetes. *Symbolae Botanicae Upsalienses*, 32(1), 75–93.
- Henssen, A., & Tønsberg, T. (2000). *Spilonemella*, a new genus of cyanophilic lichens with species from North America and Japan (Coccocarpiaceae). *The Bryologist*, 103(1), 108–116. <https://www.jstor.org/stable/3244286>
- Herre, A. W. C. T. (1919). A list of lichens from southeastern Alaska. *Publications Puget Sound Biological Station*, 2, 279–285.
- Herre, A. W. C. T. (1920). Alaskan notes. *The Bryologist*, 23(3), 37–38. <https://doi.org/10.2307/3237588>
- Herre, A. W. C. T. (1950a). Lichens collected by Abbe Ernest Lepage in Alaska during the summer of 1948. *The Bryologist*, 53(1), 58–59. <https://doi.org/10.2307/3240258>
- Herre, A. W. C. T. (1950b). Two interesting lichen records from Alaska. *The Bryologist*, 53(2), 124. <https://doi.org/10.2307/3240376>
- Herre, A. W. C. T. (1956). A new Alaskan *Lecanora* and a new *Leptogium* from California. *The Bryologist*, 59(1), 39–41. <https://doi.org/10.2307/3240290>
- Hertel, H. (1967). Revision einiger calciphiler Formenkreise der Flechtengattung *Lecidea*. *Nova Hedwigia*, 24, 1–155.
- Hertel, H. (1971a). Über holarktische Krustenflechten aus den venezuelanischen Anden. *Willdenowia*, 6(2), 225–272. Retrieved from <https://www.jstor.org/stable/3995621>
- Hertel, H. (1971b). Beiträge zur Kenntnis der Flechtenfamilie Lecideaceae IV. *Herzogia*, 2(2), 231–261. <https://doi.org/10.1127/herzogia/2/1971/231>
- Hertel, H. (1973). Beiträge zur Kenntnis der Flechtenfamilie Lecideaceae V. *Herzogia*, 2(4), 479–515. <https://doi.org/10.1127/herzogia/2/1973/479>
- Hertel, H. (1975). Über einige gesteinsbewohnende Krustenflechten aus der Umgebung von Finse (Norwegen, Hordaland). *Mitteilungen der Botanischen Staatssammlung München*, 12, 113–152.
- Hertel, H. (1977a). *Lecidea* in der Arktis. I. *Mitteilungen der Botanischen Staatssammlung München*, 13, 337–352.
- Hertel, H. (1977b). Gesteinsbewohnende Arten der Sammelgattung *Lecidea* (Lichenes) aus Zentral-, Ost- und Südasien. *Khumbu Himal*, 6(3), 145–378.
- Hertel, H. (1981). *Lecidea* in der Arktis. II. *Mitteilungen der Botanischen Staatssammlung München*, 17, 171–184.
- Hertel, H. (1991). *Lecidea* in der Arktis III (Lecideoide Flechten; *Lecanorales*). *Mitteilungen der Botanischen Staatssammlung München*, 30, 297–333.
- Hertel, H., & Andreev, M. P. (2003). On some saxicolous lecideoid lichens of the Beringian region and adjacent areas of Eastern Siberia and the Russian Far East. *The Bryologist*, 106(4), 539–551. <https://www.jstor.org/stable/3244614>

- Hertel, H., & Leuckert, C. (1969). Über Flechtenstoffe und Systematik einiger Arten der Gattungen *Lecidea*, *Placopsis* und *Trapelia* mit C+ rot reagierendem Thallus. *Willdenowia*, 5, 369–383.
- Hertel, H., & Leuckert, C. (2011). On the *Lecidea atrobrunnea*-complex (Lecanorales, Lecideaceae) in the Americas. 2. The distribution of the taxa occurring in North America south of the 55th parallel. *Bibliotheca Lichenologica*, 106, 95–113.
- Hertel, H., & Rambold, G. (1988). Cephalodiate Arten der Gattung *Lecidea* sensu lato (Ascomycetes lichenisata). *Plant Systematics and Evolution*, 158(2-4), 289–312. <https://doi.org/10.1007/BF00936352>
- Hertel, H., & Rambold, G. (1995). On the genus *Adelolecia* (lichenized Ascomycotina, Lecanorales). *Bibliotheca Lichenologica*, 57, 211–230.
- Heusser, C. J. (1954). Nunatak flora of the Juneau Ice Field, Alaska. *Bulletin of the Torrey Botanical Club*, 81(3), 236–250. <https://doi.org/10.2307/2481815>
- Heusser, C. J., Schuster, R. L., & Gilkey, A. K. (1954). Geobotanical studies on the Taku Glacier anomaly. *Geographical Review*, 44(2), 224–236. <https://doi.org/10.2307/212357>
- Hillmann, J. (1938). Neue und wenig bekannte Flechten aus aller Welt. *Feddes Repertorium Specierum Novarum Regni Vegetabilis*, 45(8-16), 171–177. <https://doi.org/10.1002/fedr.19380450805>
- Hoffmann, G. F. (1796). *Deutschlands Flora oder Botanisches Taschenbuch*, Zweyter Theil für das Jahr 1795. Erlangen: Johann Iacob Palm.
- Holien, H., & Tønsberg, T. (1996). Boreal regnskog i Norge – habitatet for trøndelagselementets lavarter. *Blyttia*, 4, 157–177.
- Holien, H., & Tønsberg, T. (2012). *Ramboldia subcinnabarina* revisited. *Graphis Scripta*, 24, 9–13.
- Holien, H., Palice, Z., Björk, C. R., Goward, T., & Spribille, T. (2016). *Lecidea coriacea* sp. nov., a lichen species from oldgrowth boreal and montane forests in Europe and North America. *Herzogia*, 29(2), 412–420. <https://doi.org/10.13158/heia.29.2.2016.412>
- Holt, E. A., McCune, B., & Neitlich, P. (2007). Succession and community gradients of arctic macrolichens and their relation to substrate, topography, and rockiness. *North American Fungi*, 2, 1–21. <https://doi.org/10.2509/pnwf.2007.002.002>
- Holt, E. A., McCune, B., & Neitlich, P. (2008). Grazing and fire impacts on macrolichen communities of the Seward Peninsula, Alaska, U.S.A. *The Bryologist*, 111(1), 68–83. <https://www.jstor.org/stable/20110920>
- Holt, E. A., McCune, B., & Neitlich, P. (2009). Macrolichen communities in relation to soils and vegetation in Noatak National Preserve, Alaska. *Botany*, 87(3), 241–252. <https://doi.org/10.1139/B08-142>
- Holtan-Hartwig, J. (1993). The lichen genus *Peltigera*, exclusive of the *P. canina* group, in Norway. *Sommerfeltia*, 15(1), 1–83. <https://doi.org/10.2478/som-1993-0001>
- Holtan-Hartwig, J. (2005). *Peltigera latiloba*, a new lichen species from Norway and USA (Alaska). *Graphis Scripta*, 17, 34.
- Hooker, W. J., & Arnott, G. A. (1841). *The Botany of Captain Beechey's Voyage*. London: Henry G. Bohn.
- Hooper, C. L. (1884). *Report of the cruise of the U.S. Revenue Steamer Thomas Corwin in the Arctic Ocean, 1881*. U.S. Senate Ex. Doc. No. 204. Washington: Government Printing Office.
- Hopkins, B., & Tønsberg, T. (2006). Notes on *Botryolepraria lesdainii* in North America. *Evansia*, 23(2), 34–35. <https://doi.org/10.5962/p.346753>

- Horáková, J., & Alstrup, V. (1994). *Phaeospora arctica*, a new lichenicolous fungus. *Graphis Scripta*, 6, 61–63.
- Howard, G. E. (1958). Some lichens of western Alaska. *The Bryologist*, 61(1), 85–92. <https://doi.org/10.2307/3239972>
- Howard, G. E. (1963). Some lichens from interior Alaska. *The Bryologist*, 66(3), 145–153. <https://doi.org/10.2307/3240717>
- Howard, G. E. (1970). The lichen genus *Ochrolechia* in North America north of Mexico. *The Bryologist*, 73(1), 93–130. <https://doi.org/10.2307/3241590>
- Howe, R. H., Jr. (1910). A manual of the genus *Usnea*, as represented in North and Middle America, north of the 15th parallel. *Bulletin of the Torrey Botanical Club*, 37(1), 1–18. <https://doi.org/10.2307/2479325>
- Howe, R. H., Jr. (1911a). American species of *Alectoria* occurring north of the fifteenth parallel. *Mycologia*, 3(3), 106–150. <https://doi.org/10.1080/00275514.1911.12017669>
- Howe, R. H., Jr. (1911b). List of lichens collected in the Yukon region by Mr. R.S. Williams. *Bulletin of the Torrey Botanical Club*, 38(6), 287–293. <https://doi.org/10.2307/2479101>
- Howe, R. H., Jr. (1911c). The genus *Evernia* as represented in North and Middle America. *Botanical Gazette (Chicago, Ill.)*, 51(6), 431–442. <https://doi.org/10.1086/330542>
- Howe, R. H., Jr. (1913a). Some Alaskan lichens. *Botanical Gazette (Chicago, Ill.)*, 56(6), 496–500. <https://doi.org/10.1086/331198>
- Howe, R. H., Jr. (1913b). North American species of the genus *Ramalina*. II. *The Bryologist*, 16(6), 81–89. <https://doi.org/10.2307/3237886>
- Howe, R. H., Jr. (1914). North American species of the genus *Ramalina*. III. *The Bryologist*, 17(1), 1–7. <https://doi.org/10.2307/3238444>
- Hue, A. M. (1890). Lichenes exoticos, a professore W. Nylander descriptos vel recognitos, et in herbario Musei Parisiensis pro maxima parte asservatos. *Nouvelles Archives du Muséum d'Histoire Naturelle, Série 3*(2), 209–322.
- Hue, A. M. (1891). Lichenes exoticos, a professore W. Nylander descriptos vel recognitos, et in herbario Musei Parisiensis pro maxima parte asservatos. *Nouvelles Archives du Muséum d'Histoire Naturelle, Série 3*(3), 33–192.
- Hue, A. M. (1892). Lichenes exoticos, a professore W. Nylander descriptos vel recognitos, et in herbario Musei Parisiensis pro maxima parte asservatos. *Nouvelles Archives du Muséum d'Histoire Naturelle, Série 3*(4), 103–210.
- Hue, A. M. (1898). Lichenes extra-europaei a pluribus collectoribus ad museum Parisiense missi. *Nouvelles Archives du Muséum d'Histoire Naturelle, Série 3*(10), 213–280.
- Hue, A. M. (1899). Lichenes extra-europaei a pluribus collectoribus ad museum Parisiense missi. *Nouvelles Archives du Muséum d'Histoire Naturelle, Série 4*(1), 27–220.
- Hue, A. (1910). Lichenes morphologie et anatomice. *Nouvelles Archives du Muséum d'Histoire Naturelle, Série 5*(2), 1–120.
- Hue, A. (1911). Monographiam generis *Solorinae* Ach. morphologie et anatomice, addito de genere *Psoromaria* Nyl. appendice. *Mémoires de la société nationale des sciences naturelles et mathématiques de Cherbourg*, 38, 1–56.
- Huhtinen, S., Hawksworth, D. L., & Ihlen, P. G. (2008). Observations on two glassy-haired lichenicolous discomycetes. *Lichenologist*, 40(6), 549–557. <https://doi.org/10.1017/S002428290800827X>

- Hultén, E. (1940). History of botanical exploration in Alaska and Yukon territories from the time of their discovery to 1940. *Botaniska Notiser*, 1940, 289–346.
- Huneck, S., & Follmann, G. (1971). Mitteilungen über Flechteninhaltsstoffe. LXXXVII. Neue Flechtenanalysen. *Willdenowia*, 6(2), 273–282.
- Huovinen, K., & Ahti, T. (1986). The composition and contents of aromatic lichen substances in *Cladonia*, section *Unciales*. *Annales Botanici Fennici*, 23, 173–188.
- Ihlen, P. G., & Fryday, A. M. (2004). *Rhizocarpon anaperum* new to Svalbard. *Lichenologist*, 36(5), 343–344. <https://doi.org/10.1017/S0024282904014495>
- Ihlen, P. G., & Wedin, M. (2005). Notes on Swedish lichenicolous fungi. *Nova Hedwigia*, 81(3-4), 493–499. <https://doi.org/10.1127/0029-5035/2005/0081-0493>
- Ihlen, P. G., Holien, H., & Tønsberg, T. (2004a). Two new species of *Dactylospora* (Dactylosporaceae, Lecanorales), with a key to the known species in Scandinavia. *The Bryologist*, 107(3), 357–362. <https://www.jstor.org/stable/3244869>
- Ihlen, P. G., Owe-Larsson, B., & Tønsberg, T. (2004b). *Arthonia biatoricola* sp. nov. from north-western Europe and northern Pacific North America. *Symbolae Botanicae Upsalienses*, 34(1), 107–111.
- Imshaug, H. A. (1950). New and noteworthy lichens from Mt. Rainier National Park. *Mycologia*, 42(6), 743–752. <https://doi.org/10.1080/00275514.1950.12017877>
- Imshaug, H. A. (1951). *The lichen-forming species of the genus Buellia occurring in the United States and Canada*. Ph.D. thesis, University of Michigan.
- Imshaug, H. A. (1957). Alpine lichens of western United States and adjacent Canada. I. The macrolichens. *The Bryologist*, 60(3), 177–272. <https://doi.org/10.2307/3240365>
- Imshaug, H. A., & Brodo, I. M. (1966). Biosystematic studies on *Lecanora pallida* and some related lichens in the Americas. *Nova Hedwigia*, 12, 1–59.
- Inoue, M. (1997). Little known crustose lichens bearing lecideine black apothecia from Japan. *Bulletin of the National Science Museum, Tokyo, Series B*, 23(2), 43–58.
- Iskandar, I. K., Quarry, S. & Brown, J. (1978). Chemical composition of dust and vegetation. In J. Brown (ed.), *Ecological baseline investigations along the Yukon River – Prudhoe Bay Haul Road, Alaska* (pp. 110–111). U.S. Army Cold Regions Research and Engineering Laboratory, Special Report 78-13. Hanover, New Hampshire.
- Jahns, H. M. (1970). Remarks on the taxonomy of the European and North American species of *Pilophorus* Th. Fr. *Lichenologist*, 4(3), 199–213. <https://doi.org/10.1017/S0024282970000245>
- Jahns, H. M. (1981). The genus *Pilophorus*. *Mycotaxon*, 13, 289–330.
- Jandt, R., Joly, K., Randy Meyers, C., & Racine, C. (2008). Slow recovery of lichen on burned caribou winter range in Alaska tundra: Potential influences of climate warming and other disturbance factors. *Arctic, Antarctic, and Alpine Research*, 40(1), 89–95. [https://doi.org/10.1657/1523-0430\(06-122\)\[JANDT\]2.0.CO;2](https://doi.org/10.1657/1523-0430(06-122)[JANDT]2.0.CO;2)
- Johnson, A. W., Viereck, L. A., Johnson, R. E., & Melchior, H. (1966). Vegetation and flora. In N. J. Wilimovsky & J. W. Wolfe (Eds.), *Environment of the Cape Thompson region, Alaska* (pp. 277–354). Washington: U.S. Atomic Energy Commission.
- Joly, K., Chapin, F. S., III, & Klein, D. R. (2010). Winter habitat selection by caribou in relation to lichen abundance, wildfires, grazing, and landscape characteristics in northwest Alaska. *Ecoscience*, 17(3), 321–333. <https://doi.org/10.2980/17-3-3337>
- Jordan, W. P. (1973). The genus *Lobaria* in North America north of Mexico. *The Bryologist*, 76(2), 225–251. <https://doi.org/10.2307/3241326>
- Jørgensen, P. M. (1973). Über einige *Leptogium*-Arten vom *Mallotium*-Typ. *Herzogia*, 2, 453–468.

- Jørgensen, P. M. (1978). The lichen family Pannariaceae in Europe. *Opera Botanica*, 45, 1–124.
- Jørgensen, P. M. (1983). Distribution patterns of lichens in the Pacific region. *Australian Journal of Botany Supplementary Series*, 13(10), 43–66.
- Jørgensen, P. M. (1994). Further notes on European taxa of the lichen genus *Leptogium*, with emphasis on the small species. *Lichenologist*, 26(1), 1–29.
<https://doi.org/10.1017/S0024282994000034>
- Jørgensen, P. M. (1996). The oceanic element in the Scandinavian lichen flora revisited. *Symbolae Botanicae Upsalienses*, 31(3), 297–317.
- Jørgensen, P. M. (2000). Survey of the lichen family Pannariaceae on the American continent, north of Mexico. *The Bryologist*, 103(4), 670–704.
<https://www.jstor.org/stable/3244332>
- Jørgensen, P. M. (2003). Conspectus familiae Pannariaceae (Ascomycetes lichenosae). *Illicifolia*, 4, 1–78.
- Jørgensen, P. M. (2004a). *Conspectus familiae Pannariaceae (Ascomycetes lichenosae). Revised version*. Bergen: University of Bergen.
- Jørgensen, P. M. (2004b). *Psoroma tenue* var. *boreale*: A widespread, misunderstood, arctic-alpine lichen. *Graphis Scripta*, 15, 60–64.
- Jørgensen, P. M. (2005). Additions to the Pannariaceae of North America. *The Bryologist*, 108(2), 255–258. <https://www.jstor.org/stable/20061096>
- Jørgensen, P. M. (2006). *Conspectus familiae Pannariaceae (Ascomycetes lichenosae). Revised version 2006*. Bergen: University of Bergen.
- Jørgensen, P. M. (2008). *Vahliella*, a new lichen genus. *Lichenologist*, 40(3), 221–225.
<https://doi.org/10.1017/S0024282908007780>
- Jørgensen, P. M. (2019). The troublesome genus *Thamnolia* (lichenized Ascomycota). *Lichenologist*, 51(3), 221–226. <https://doi.org/10.1017/S0024282919000203>
- Jørgensen, P. M., & Goward, T. (2015). Notes on the *Collema tenax* complex, with recognition of two further species in the genus *Enchylium* (Ach.) Gray. *Evansia*, 32(1), 42–47. <https://doi.org/10.1639/079.032.0101>
- Jørgensen, P. M., & Tønsberg, T. (1999). Notes on some small species of *Leptogium* from Pacific North America. *The Bryologist*, 102(3), 412–417.
<https://doi.org/10.2307/3244229>
- Jørgensen, P. M., & Tønsberg, T. (2010). *Leptogium insigne*, a new species from the Pacific Northwest of North America. *Bibliotheca Lichenologica*, 104, 241–245.
- Jørgensen, P. M., & Wolseley, P. A. (2009). *Leioderma sorediatum* D.J. Galloway & P.M. Jørg. discovered in Thailand, with a note on the world distribution of *Erioderma mollissimum* (Sampaio) Du Rietz. *Lichenologist*, 41(3), 315–316.
<https://doi.org/10.1017/S0024282909008482>
- Jørgensen, P. M., & Zhurbenko, M. (2002). Two new, remarkable, arctic species in the lichen genus *Fuscopannaria* (Pannariaceae, lichenized Ascomycetes). *The Bryologist*, 105(3), 465–469. <https://www.jstor.org/stable/3244700>
- Jørgensen, P. M., Clayden, S. R., Hanel, C., & Elix, J. A. (2009). *Erioderma mollissimum* (Pannariaceae) found with certainty in Newfoundland, Canada. *The Bryologist*, 112(3), 572–575. <https://doi.org/10.1639/0007-2745-112.3.572>
- Kalb, K., Staiger, B., Elix, J. A., Lange, U., & Lumbsch, H. T. (2008). A new circumscription of the genus *Ramboldia* (Lecanoraceae, Ascomycota) based on morphological and molecular evidence. *Nova Hedwigia*, 86(1–2), 23–42.
<https://doi.org/10.1127/0029-5035/2008/0086-0023>

- Kantelinen, A., Westberg, M., Owe-Larsson, B., & Svensson, M. (2021). New *Micarea* records from Norway and Sweden and an identification key to the *M. prasina* group in Europe. *Graphis Scripta*, 33, 17–28.
- Kantvilas, G. (2002). Studies on the lichen genus *Siphula* Fr. *Bibliotheca Lichenologica*, 82, 37–53.
- Kärnefelt, I. (1977a). Three new species of brown fruticose *Cetraria*. *Botaniska Notiser*, 130, 125–129.
- Kärnefelt, I. (1977b). *Masonhalea*, a new lichen genus in the Parmeliaceae. *Botaniska Notiser*, 130, 101–107.
- Kärnefelt, I. (1979). The brown fruticose species of *Cetraria*. *Opera Botanica*, 46, 1–150.
- Kärnefelt, I. (1986). The genera *Bryocaulon*, *Coelocaulon* and *Cornicularia* and formerly associated taxa. *Opera Botanica*, 86, 1–90.
- Kärnefelt, I. (1990). Isidiate taxa in the Teloschistaceae and their ecological and evolutionary significance. *Lichenologist*, 22(3), 307–320. <https://doi.org/10.1017/S0024282990000342>
- Kärnefelt, I., Mattsson, J.-E., & Thell, A. (1992). Evolution and phylogeny of cetrarioid lichens. *Plant Systematics and Evolution*, 183, 113–160. <https://doi.org/10.1007/BF00937739>
- Kärnefelt, I., & Thell, A. (1996). A new classification for the *Dactylina/Dufourea* complex. *Nova Hedwigia*, 62, 487–511.
- Kasanke, S. A. (2019). *Plant succession in the arctic Brooks Range: floristic patterns from alpine to foothills, along a glacial chronosequence and elevation gradient*. MSc Thesis, University of Alaska, Fairbanks.
- Keissler, K. von (1930). *Die Flechtenparasiten. Dr. L. Rabenhorst's Kryptogamen-Flora von Deutschland, Österreich und der Schweiz* 8. Leipzig: Akademische Verlagsgesellschaft.
- Khodossotsev, A., Kuznetsova, E., & Himelbrant, D. (2004). Lichen genus *Caloplaca* on the Kamchatka Peninsula (Russian Far East). *Botanica Lithuanica*, 10, 195–208.
- Knoph, J.-G., & Leuckert, C. (1994). Chemotaxonomic studies in the saxicolous species of the lichen genus *Lecidella* (Lecanorales, Lecanoraceae) in America. *Nova Hedwigia*, 59, 455–508.
- Knowlton, F. H. (1885). List of plants collected by Mr. Charles L. McKay at Nushagak, Alaska, in 1881, for the United States National Museum. *Proceedings of the United States National Museum*, 8(513), 213–214. <https://doi.org/10.5479/si.00963801.8-513.213>
- Knudsen, K., & Kocourková, J. (2008). A study of lichenicolous species of *Polysporina* (Acarosporaceae). *Mycotaxon*, 105, 149–164.
- Knudsen, K., & Kocourková, J. (2017). *Acarospora toensbergii* (Acarosporaceae), a new species from Alaska, USA. *Opuscula Philolichenum*, 16, 317–321.
- Knudsen, K., & Kocourková, J. (2020). Lichenological Notes 7: On taxa of *Acarospora* and *Sarcogyne*. *Opuscula Philolichenum*, 19, 158–162.
- Knudsen, K., & Lendemer, J. C. (2016). A new perspective on *Melanophloea*, *Thelocarpella* and *Trimmatothelopsis*: Species previously placed in multiple families are united within a single genus in the Acarosporaceae. *The Bryologist*, 119(3), 266–279. <https://doi.org/10.1639/0007-2745-119.3.266>
- Knudsen, K., Lendemer, J. C., Schultz, M., Kocourková, J., Sheard, J. W., Pignoli, A., & Wheeler, T. (2017). Lichen biodiversity and ecology in the San Bernardino and San Jacinto Mountains in southern California (U.S.A.). *Opuscula Philolichenum*, 16, 15–138.

- Knudsen, K., Adams, J. N., Kocourková, J., Wang, Y., Ortañez, J., & Stajich, J. E. (2020). The monophyletic *Sarcogyne canadensis-wheeleri* clade, a newly recognized group sister to the European *Acarospora glaucocarpa* group. *The Bryologist*, 123(1), 11–30. <https://doi.org/10.1639/0007-2745-123.1.011>
- Kofranek, D., & McCune, B. (2008). *Umbilicaria hirsuta* (lichenized Ascomycetes) new to Oregon. *North American Fungi*, 3, 1–3. <https://doi.org/10.2509/naf2008.003.001>
- Kohlmeyer, J., Hawksworth, D. L., & Volkmann-Kohlmeyer, B. (2004). Observations on two marine and maritime ‘borderline’ lichens: *Mastodia tessellata* and *Collemopsidium pelvetiae*. *Mycological Progress*, 3(1), 51–56. <https://doi.org/10.1007/s11557-006-0076-x>
- Kondratyuk, S. Y., Lököš, L., Jang, S.-H., Hur, J.-S., & Farkas, E. (2019). Phylogeny and taxonomy of *Polyozosia*, *Sedelnikovaea* and *Versegghya* of the Lecanoraceae (Lecanorales, lichen-forming Ascomycota). *Acta Botanica Hungarica*, 61(1-2), 137–184. <https://doi.org/10.1556/034.61.2019.1-2.9>
- Kondratyuk, S. Y., Upreti, D. K., Mishra, G. K., Nayaka, S., Ingle, K. K., Orlov, O. O., . . . Hur, J.-S. (2020). New and noteworthy lichen-forming and lichenicolous fungi 10. *Acta Botanica Hungarica*, 62(1-2), 69–108. <https://doi.org/10.1556/034.62.2020.1-2.6>
- Košuthová, A., Westberg, M., & Wedin, M. (2022). A revision of the *Rostania occultata* (Collemataceae) complex in Fennoscandia. *Lichenologist*, 54(1), 13–24. <https://doi.org/10.1017/S0024282921000487>
- Kristinsson, H. (1974). Two new *Cladonia* and one *Cetraria* species from Iceland. *Lichenologist*, 6(2), 141–145. <https://doi.org/10.1017/S0024282974000223>
- Kristinsson, H., Zhurbenko, M. & Hansen, E. S. (2010). Panarctic checklist of lichens and lichenicolous fungi. *CAFF Technical Report*, 20, 1–120.
- Krog, H. (1962). A contribution to the flora of Alaska. *Arkiv för Botanik*, 2, 489–513.
- Krog, H. (1963). *Parmelia almquistii* and its distribution. *The Bryologist*, 66(1), 28–31. <https://doi.org/10.2307/3241084>
- Krog, H. (1966). Notes on the distribution of *Parmelia saximontana* Anderson & Weber. *Blyttia*, 24, 244–246.
- Krog, H. (1968). The macrolichens of Alaska. *Norsk Polarinstitutt Skrifter*, 144, 1–180.
- Krog, H. (1969). A list of lichens from Kodiak Island Refugium. In T. N. V. Karlstrom & G. E. Ball (Eds.), *The Kodiak Island Refugium: Its Geology, Flora, Fauna and History* (p. 103). Toronto: Ryerson Press.
- Krog, H. (1970). *Dactylina madreporiformis* in Alaska. *The Bryologist*, 73(3), 628–630. <https://doi.org/10.2307/3241505>
- Krog, H. (1973). *Cetraria inermis* (Nyl.) Krog, a new lichen species in the Amphiberingian flora element. *The Bryologist*, 76(2), 299–300. <https://doi.org/10.2307/3241334>
- Kukwa, M. (2009). *Ochrolechia aegaea* and *O. alaskana*, two species with gyrophoric and variolaric acids in the cortex. *Graphis Scripta*, 21, 42–48.
- Kukwa, M. (2011). *The lichen genus Ochrolechia in Europe*. Gdansk: Fundacja Rozwoju Uniwersytetu Gdańskiego.
- Kurtz, F. (1895). Die Flora des Chilcatgebietes im südöstlichen Alaska. *Engler's Botanische Jahrbücher*, 19, 327–431.
- Lamarck, J.-B. P. A. & De Candolle, A.-P. (1805). *Flore française, ou descriptions succinctes de toutes les plantes qui croissent naturellement en France, disposées selon une nouvelle méthode d'analyse, et précédées par un exposé des principes élémentaires de la botanique; troisième édition, tome second*. Paris: H. Agasse.
- Lamb, I. M. (1947). A monograph of the genus *Placopsis* Nyl. *Lilloa*, 13, 151–288.

- Lamb, I. M. (1972). *Stereocaulon arenarium* (Sav.) M. Lamb, a hitherto overlooked boreal-arctic lichen. *Occasional Papers of the Farlow Herbarium of Cryptogamic Botany*, 2, 1–11.
- Lamb, I. M. (1973). *Stereocaulon sterile* (Sav.) M. Lamb and *Stereocaulon groenlandicum* (Dahl) M. Lamb, two more hitherto overlooked lichen species. *Occasional Papers of the Farlow Herbarium of Cryptogamic Botany*, 5, 1–17.
- Lamb, I. M. (1977). A conspectus of the lichen genus *Stereocaulon* (Schreb.) Hoffm. *The Journal of the Hattori Botanical Laboratory*, 43, 191–355.
- Lamb, I. M. (1978). Keys to the species of the lichen genus *Stereocaulon* (Schreb.) Hoffm. *The Journal of the Hattori Botanical Laboratory*, 44, 209–250.
- Lamb, I. M., & Ward, A. (1974). A preliminary conspectus of the species attributed to the imperfect lichen genus *Leprocaulon* Nyl. *The Journal of the Hattori Botanical Laboratory*, 38, 499–553.
- Lang, S. I., Cornelissen, J. H., Shaver, G. R., Ahrens, M., Callaghan, T. V., Molau, U., . . . Aerts, R. (2012). Arctic warming on two continents has consistent negative effects on lichen diversity and mixed effects on bryophyte diversity. *Global Change Biology*, 18(3), 1096–1107. <https://doi.org/10.1111/j.1365-2486.2011.02570.x>
- Lange, O. L., Hahn, S. C., Meyer, A., & Tenhunen, J. D. (1998). Upland tundra in the foothills of the Brooks Range, Alaska, U.S.A.: Lichen long-term photosynthetic CO₂ uptake and net carbon gain. *Arctic and Alpine Research*, 30(3), 252–261. <https://doi.org/10.2307/1551972>
- Lauder Lindsay, W. (1861). Memoir on the spermagones and pycnides of filamentous, fruticulose and foliaceous lichens. *Transactions of the Royal Society of Edinburgh*, 22(1), 101–303. <https://doi.org/10.1017/S0080456800031355>
- Launis, A., Pykälä, J., van den Boom, P., Sérusiaux, E., & Myllys, L. (2019). Four new epiphytic species in the *Micarea prasina* group from Europe. *Lichenologist*, 51(1), 7–25. <https://doi.org/10.1017/S0024282918000555>
- Laursen, G. A., & Seppelt, R. D. (2009). *Common interior Alaska cryptogams. Fungi, lichenicolous fungi, lichenized fungi, slime molds, mosses, and liverworts*. Fairbanks: University of Alaska Press.
- Lawson, D. E., Brown, J., Everett, K. R., Johnson, A. W., Komárková, V., Murray, B. M., . . . Webber, P. J. (1978). *Tundra disturbances and recovery following the 1949 exploratory drilling, Fish Creek, northern Alaska*. CRREL Report 78-28. U.S. Geological Survey.
- Leavitt, S. D., Lumbsch, H. T., & St. Clair, L. L. (2013). Contrasting demographic histories of two species in the lichen-forming fungal genus *Xanthomendoza* (Teloschistaceae, Ascomycota). *The Bryologist*, 116(4), 337–349. <https://doi.org/10.1639/0007-2745-116.4.337>
- Leavitt, S. D., Divakar, P. K., Ohmura, Y., Wang, L.-S., Esslinger, T. L., & Lumbsch, H. T. (2015). Who's getting around? Assessing species diversity and phylogeography in the widely distributed lichen-forming fungal genus *Montanelia* (Parmeliaceae, Ascomycota). *Molecular Phylogenetics and Evolution*, 90, 85–96. <https://doi.org/10.1016/j.ympev.2015.04.029>
- Leavitt, S. D., Esslinger, T. L., Divakar, P. K., Crespo, A., & Lumbsch, H. T. (2016). Hidden diversity before our eyes: Delimiting and describing cryptic lichen-forming fungal species in camouflage lichens (Parmeliaceae, Ascomycota). *Fungal Biology*, 120(11), 1374–1391. <https://doi.org/10.1016/j.funbio.2016.06.001>
- Leighton, W. A. (1866). LIII. – Notulae Lichenologicae. XI. On the examination and rearrangement of the *Cladonie*, as tested by the hydrate of potash. *Annals and*

- Magazine of Natural History*, 18, 405–420.
<https://doi.org/10.1080/00222936608679670>
- Lendemer, J. C. (2013). A monograph of the crustose members of the genus *Lepraria* Ach. s. str. (Stereocaulaceae, lichenized ascomycetes) in North America north of Mexico. *Opuscula Philolichenum*, 11, 27–141.
- Lendemer, J. C., & O'Brien, H. E. (2011). How do you reconcile molecular and non-molecular datasets? A case study where new molecular data prompts a revision of *Peltigera hydrothyria* s.l. in North America and the recognition of two species. *Opuscula Philolichenum*, 9, 99–110.
- Lendemer, J. C., & Tønsberg, T. (2014). *Lepraria brodoi* (Stereocaulaceae, lichenized Ascomycetes), a new species from the temperate rainforests of western Canada and southeastern Alaska, U.S.A. *Opuscula Philolichenum*, 13, 20–25.
- Lendemer, J. C., & Westberg, M. (2010). *Candelariella xanthostigmoides* in North America. *Opuscula Philolichenum*, 8, 75–81.
- Lendemer, J. C., Kocourková, J., & Knudsen, K. (2008). Studies in lichens and lichenicolous fungi: Notes on some taxa from North America. *Mycotaxon*, 105, 379–386.
- Leuckert, C., & Hertel, H. (1969). Über Flechtenstoffe und Systematik einiger Arten der Gattung *Lecidea* II. *Nova Hedwigia*, 17, 31–43.
- Leuckert, C., & Hertel, H. (2003). On the *Lecidea atrobrunnea* complex (Lecanorales, Lecideaceae) in the Americas. I. Introduction and chemistry. *Bibliotheca Lichenologica*, 86, 13–31.
- Lindblom, L. (1997). The genus *Xanthoria* (Fr.) Th. Fr. in North America. *The Journal of the Hattori Botanical Laboratory*, 83, 75–172.
- Lindblom, L. (2006). *Xanthomendoza galericulata*, a new sorediate lichen species, with notes on similar species in North America. *The Bryologist*, 109(1), 1–8.
<https://www.jstor.org/stable/20110748>
- Lindgren, H., Velmala, S., Högnabba, F., Goward, T., Holien, H., & Myllys, L. (2014). High fungal selectivity for algal symbionts in the genus *Bryoria*. *Lichenologist*, 46(5), 681–695. <https://doi.org/10.1017/S0024282914000279>
- Lindsay, D. C. (1977). Lichens of cold deserts. In M. R. D. Seaward (Ed.), *Lichen Ecology* (pp. 183–209). London: Academic Press.
- Lindsay, W. L. (1868). I. On the Arctic Cladoniae. *Transactions of the Botanical Society of Edinburgh*, 9(1–4), 165–187. <https://doi.org/10.1080/03746606809469013>
- Litterski, B., & Ahti, T. (2004). World distribution of selected European *Cladonia* species. *Symbolae Botanicae Upsalienses*, 34(1), 205–236.
- Llano, G. A. (1950). *A monograph of the lichen family Umbilicariaceae in the Western Hemisphere*. Washington: Office of Naval Research.
- Llano, G. A. (1951). A contribution to the lichen flora of Alaska. *Journal of the Washington Academy of Sciences*, 41, 196–200.
- Llano, G. A. (1956). New Umbilicariaceae from the Western Hemisphere, with a key to genera. *Journal of the Washington Academy of Sciences*, 46(6), 183–185.
- Lord, J. M., Knight, A., Bannister, J. M., Ludwig, L. R., Malcolm, W. M., & Orlovich, D. A. (2013). Rediscovery of pycnidia in *Thamnolia vermicularis*: Implications for chemotype occurrence and distribution. *Lichenologist*, 45(3), 397–411.
<https://doi.org/10.1017/S0024282913000017>
- Lücking, R. (2019). Stop the abuse of time! Strict temporal banding is not the future of rank-based classifications in fungi (including lichens) and other organisms. *Critical Reviews in Plant Sciences*, 38(3), 199–253.
<https://doi.org/10.1080/07352689.2019.1650517>

- Lücking, R., Moncada, B., McCune, B., Farkas, E., Goffinet, B., Parker, D., . . . Yakovchenko, L. S. (2017). *Pseudocyphellaria crocata* (Ascomycota: Lobariaceae) in the Americas is revealed to be thirteen species, and none of them is *P. crocata*. *The Bryologist*, 120(4), 441–500. <https://doi.org/10.1639/0007-2745-120.4.14>
- Lücking, R., Leavitt, S. D., & Hawksworth, D. L. (2021). Species in lichen-forming fungi: Balancing between conceptual and practical considerations, and between phenotype and phylogenomics. *Fungal Diversity*, 109(1), 99–154. <https://doi.org/10.1007/s13225-021-00477-7>
- Lumbsch, H. T. (1989). Die holarktischen Vertreter der Flechtengattung *Diploschistes* (Thelotremaataceae). *The Journal of the Hattori Botanical Laboratory*, 66, 133–196.
- Lumbsch, H. T. (1992). *Lecanora argentea* Oxner & Volkova, the correct name for *L. fuliginosa* Brodo, and comments on related species. *The Bryologist*, 95(4), 430–432. <https://doi.org/10.2307/3243566>
- Lutzoni, F. M., & Brodo, I. M. (1995). A generic redelimitation of the *Ionaspis-Hymenelia* complex (lichenized Ascomycotina). *Systematic Botany*, 20(3), 224–258. <https://doi.org/10.2307/2419494>
- Lyngby, B. (1932). Om utbredelsen av en del arktiske lavar. *Svensk Botanisk Tidskrift*, 26, 401–430.
- Lyngby, B. (1933). On Dufourea and Dactylina — Three arctic lichens. *Skrifter om Svalbard og Ishavet*, 59, 1–62.
- Maass, W. S. G. (1975). Lichen substances VII. Identification of orsellinate derivatives from *Lobaria linita*. *The Bryologist*, 78(2), 178–182. <https://doi.org/10.2307/3242048>
- Macander, M. J., Palm, E. C., Frost, G. V., Herriges, J. D., Nelson, P. R., Roland, C., . . . Hebblewhite, M. (2020). Lichen cover mapping for caribou ranges in interior Alaska and Yukon. *Environmental Research Letters*, 15(5), 055001. <https://doi.org/10.1088/1748-9326/ab6d38>
- Mackay, J. T. (1836). *Flora Hibernica, comprising the Flowering Plants, Characeae, Musci, Hepaticae, Lichenes and Algae of Ireland*. Dublin: William Curry Jun & Co.
- Macoun, J. (1899). A list of the plants of the Pribilof Islands, with notes on their distribution. In *The Fur Seals and Fur-Seal Islands of the North Pacific Ocean*, 3, 559–587. Washington: Government Printing Office. <https://doi.org/10.5962/bhl.title.38420>
- Macoun, J. (1902). *Catalogue of the Canadian plants. Part VII – Lichenes and Hepaticæ*. Ottawa: William Foster Brown & Co.
- Magain, N., Sérusiaux, E., Zhurbenko, M. P., Lutzoni, F., & Miadlikowska, J. (2016). Disentangling the *Peltigera polydactylon* species complex by recognizing two new taxa, *P. polydactylon* subsp. *udeghe* and *P. seneca*. *Herzogia*, 29(2), 514–528. <https://doi.org/10.13158/heia.29.2.2016.514>
- Magain, N., Spribille, T., DiMeglio, J., Nelson, P., Miadlikowska, J., & Sérusiaux, E. (2020). Phylogenetic evidence for an expanded circumscription of *Gabura* (Arctomiaceae). *Lichenologist*, 52(1), 3–15. <https://doi.org/10.1017/S0024282919000471>
- Magnusson, A. H. (1925). Studies in the *Rivulosa*-group of the genus *Lecidea*. *Göteborgs Kungliga Vetenskaps-och Vitterhets-Samhälles Handlingar, ser. 4*, 29(4), 1–50.
- Magnusson, A. H. (1926). Studies on boreal *Stereocaulon*. *Göteborgs Kungliga Vetenskaps-och Vitterhets-Samhälles Handlingar, ser. 4*, 30(7), 1–89.
- Magnusson, A. H. (1929). A monograph of the genus *Acarospora*. *Kungliga Svenska Vetenskapsakademiens Handlingar, ser. 3*, 7(4), 1–400.
- Magnusson, A. H. (1930). Studien über einige Arten der *Lecidea armeniaca*- und *elata*-Gruppe. *Meddelanden från Göteborgs Botaniska Trädgård*, 6, 94–143.

- Magnusson, A. H. (1932). Lichens from western Northamerica [sic], mainly Washington and Alaska. *Annales de Cryptogamie Exotique*, 5, 16–38.
- Magnusson, A. H. (1933). A monograph of the genus *Ionaspis*. *Meddelanden från Göteborgs Botaniska Trädgård*, 8, 1–47.
- Magnusson, A. H. (1939). Studies in species of *Lecanora* mainly the *Aspicilia gibbosa* group. *Kungliga Svenska Vetenskapsakademiens Handlingar*, ser. 3, 17(5), 1–182.
- Magnusson, A. H. (1944). Studies in the *Ferruginea*-group of the genus *Caloplaca*. *Göteborgs Kungliga Vetenskaps-och Vitterhets-Samhälles Handlingar*, ser. 6B, 3(1), 1–71.
- Magnusson, A. H. (1947a). Studies in non-saxicolous species of *Rinodina*, mainly from Europe and Siberia. *Acta Horti Gothoburgensis*, 17, 191–338.
- Magnusson, A. H. (1947b). On North American, non-saxicolous species of the genus *Rinodina*. *Botaniska Notiser*, 1947, 32–54.
- Makarova, I. I. (1976). Species generis *Ochrolechia* Massal. peninsulae Czukotka. *Novitates Systematici Plantarum non Vascularium*, 13, 178–185.
- Maliček, J. (2014). A revision of the epiphytic species of the *Lecanora subfusca* group (Lecanoraceae, Ascomycota) in the Czech Republic. *Lichenologist*, 46(4), 489–513. <https://doi.org/10.1017/S0024282914000139>
- Mann, H. (1868). Lichenes. In J. T. Rothrock (Ed.), *Sketch of the flora of Alaska. Annual report of the board of regents of the Smithsonian Institution showing the operations, expenditures and condition of the institution for the year 1867* (pp. 462–463). Washington: Government Printing Office.
- Mark, K., Randlane, T., Thor, G., Hur, J.-S., Obermayer, W., & Saag, A. (2019). Lichen chemistry is concordant with multilocus gene genealogy in the genus *Cetrelia* (Parmeliaceae, Ascomycota). *Fungal Biology*, 123(2), 125–139. <https://doi.org/10.1016/j.funbio.2018.11.013>
- Massalongo, A. B. (1852). *Ricerche sull'autonomia dei licheni crostosi e materiali pella loro naturale ordinazione*. Verona: Tipografia di A. Frizierio.
- Mattsson, J.-E. (1993). A monograph of the genus *Vulpicida* (Parmeliaceae, Ascomycetes). *Nordic Journal of Botany*, 13(4), 472. <https://doi.org/10.1111/j.1756-1051.1993.tb00084.x>
- May, P. F. (1997). *Ophioparma lapponica* – A misunderstood species. *Harvard Papers in Botany*, 2, 213–228.
- Mayrhofer, H., & Moberg, R. (2002). *Amandinea*. *Nordic Lichen Flora*, 2, 7–9.
- Mayrhofer, H., & Sheard, J. W. (1988). Four notable saxicolous species of the lichenized ascomycete genus *Rinodina* from the Arctic. *The Bryologist*, 91(2), 106–112. <https://doi.org/10.2307/3242624>
- Mayrhofer, H., & Sheard, J. W. (2002). *Amandinea cacuminum*: A new combination (Physciaceae, lichenized Ascomycetes). *Mycotaxon*, 82, 437–441.
- Mayrhofer, H., Sheard, J. W., Grassler, M. C., & Elix, J. A. (2001). *Rinodina intermedia* (Physciaceae, lichenized ascomycetes): A well-characterized species with submuriform ascospores. *The Bryologist*, 104(3), 456–463. <https://www.jstor.org/stable/3244779>
- McCullough, H. A. (1964). *Vestergrenopsis elaeina* (Wahlenb.) Gyeln. in North America. *The Bryologist*, 67(3), 372–374. <https://doi.org/10.2307/3240904>
- McCullough, H. A. (1965). Lichens of the Mendenhall Valley, southeastern Alaska. *The Bryologist*, 68(2), 221–226. <https://doi.org/10.2307/3241020>
- McCune, B. (1987). Distribution of chemotypes of *Rhizoplaca* in North America. *The Bryologist*, 90(1), 6–14. <https://doi.org/10.2307/3243267>

- McCune, B. (2007). *Parmelia skultii* new to the lower 48 states. *Evansia*, 24(3), 76.
<https://doi.org/10.1639/0747-9859-24.3.76>
- McCune, B. (2008). Three new species of *Hypogymnia* (Ascomycota: Parmeliaceae) from the Bering Sea region, Alaska and Russia. *North American Fungi*, 3(6), 1–10.
<https://doi.org/10.2509/naf2008.003.006>
- McCune, B. (2017a). *Microlichens of the Pacific Northwest. Vol. 1. Key to the Genera*. Corvallis: Wild Blueberry Media.
- McCune, B. (2017b). *Microlichens of the Pacific Northwest. Vol. 2. Key to the Species*. Corvallis: Wild Blueberry Media.
- McCune, B. (2018). Two new species in the *Umbilicaria torrefacta* group from Alaska and the Pacific Northwest of North America. *Graphis Scripta*, 30, 65–77.
- McCune, B., & Conway, S. N. (2022). Two new species, *Hypogymnia tuckerae* and *H. discopruiina* (Parmeliaceae), from North America and China. *The Bryologist*, 125(3), 408–419. <https://doi.org/10.1639/0007-2745-125.3.406>
- McCune, B., & Curtis, M. J. (2012). *Umbilicaria semitensis* (lichenized fungi: Umbilicariaceae) resurrected. *The Bryologist*, 115(2), 255–264.
<https://doi.org/10.1639/0007-2745-115.2.255>
- McCune, B., & Di Meglio, J. (2021). Revision of the *Aspicilia reptans* group in western North America, an important component of soil biocrusts. *Monographs in North American Lichenology*, 5, 1–94.
- McCune, B., & Geiser, L. (2009). *Macrolichens of the Pacific Northwest*. (2nd ed.). Corvallis: Oregon State University Press. <https://doi.org/10.1353/book83965>
- McCune, B., & Ponzetti, J. (2011). *Bactrospora cascadiensis*, an uncommon epiphytic lichen new to Alaska. *North American Fungi*, 6, 1–3.
- McCune, B., & Rosentreter, R. (2014). New lichen records from Oregon to Alaska in North America. *Evansia*, 31(1), 1–7. <https://doi.org/10.1639/079.031.0101>
- McCune, B., Rosentreter, R., & Debolt, A. (1997). Biogeography of rare lichens from the coast of Oregon. In T. N. Kaye, A. Liston, R. M. Love, D. J. Luoma, R. J. Meinke, & M. V. Wilson (Eds.), *Conservation and management of native plants and fungi* (pp. 234–241). Corvallis: Native Plant Society of Oregon.
- McCune, B., Holt, E., Neitlich, P., Ahti, T., & Rosentreter, R. (2009). Macrolichen diversity in Noatak National Preserve, Alaska. *North American Fungi*, 4, 1–22.
<https://doi.org/10.2509/naf2009.004.004>
- McCune, B., Timdal, E., & Bendiksby, M. (2016). *Rhizocarpon quinonum*, a new anthraquinone-containing species from the Alaska Peninsula. *Lichenologist*, 48(5), 367–375. <https://doi.org/10.1017/S0024282916000347>
- McCune, B., Arup, U., Breuss, O., Di Meglio, E., Di Meglio, J., Esslinger, T. L., . . . Walton, J. (2018). Biodiversity and ecology of lichens of Katmai and Lake Clark National Parks and Preserves, Alaska. *Mycosphere: Journal of Fungal Biology*, 9(4), 859–930. <https://doi.org/10.5943/mycosphere/9/4/10>
- McCune, B., Di Meglio, E., Tønsgberg, T., & Yahr, R. (2019). Five new crustose *Stereocaulon* species in western North America. *The Bryologist*, 122(2), 197–218.
<https://doi.org/10.1639/0007-2745-122.2.197>
- McCune, B., Arup, U., Breuss, O., Di Meglio, E., Di Meglio, J., Esslinger, T. L., . . . Walton, J. (2020). Biodiversity and ecology of lichens of Kenai Fjords National Park, Alaska. *Plant and Fungal Systematics*, 65(2), 586–619.
<https://doi.org/10.35535/pfsyst-2020-0032>
- McCune, B., Schultz, M., Fennell, T., Passo, A., & Rodriguez, J. M. (2022). A new endemic, *Pannaria oregonensis*, replaces two misapplied names in the Pacific

- Northwest of North America. *The Bryologist*, 125(1), 170–185.
<https://doi.org/10.1639/0007-2745-125.1.170>
- McMullin, R. T. (2018). New and interesting lichens and allied fungi from British Columbia, Nova Scotia, Nunavut, Ontario, Prince Edward Island, and Quebec, Canada. *Opuscula Philolichenum*, 17, 275–292.
- McMullin, R. T., Dorval, H. R., Gillespie, L. J., Knight, T. L., Lendemer, J. C., Maloles, J. R., & Sokoloff, P. C. (2021). New and interesting Canadian lichens and allied fungi III: Reports from Newfoundland and Labrador, Nova Scotia, Nunavut, Prince Edward Island, Ontario, and Quebec. *Opuscula Philolichenum*, 20, 7–18.
- Merrill, G. K. (1908a). Lichen notes no. 5. Remarks on nomenclature and three new names. *The Bryologist*, 11(3), 48–53. <https://doi.org/10.2307/3238214>
- Merrill, G. K. (1908b). Lichen notes no. 6. A list of the *Parmelia* species of British North America, contained in the herbarium of the Canadian Government at Ottawa, with descriptions of those species not mentioned in Tuckerman's synopsis, and of several new forms. *The Bryologist*, 11(5), 84–95. <https://doi.org/10.2307/3238372>
- Merrill, G. K. (1908c). Lichen notes no. 7. Yukon lichens. *The Bryologist*, 11(6), 105–111. <https://doi.org/10.2307/3238860>
- Merrill, G. K. (1910). Lichen notes, no. 14. Two new *Cetraria* forms and three new combinations. *The Bryologist*, 13(2), 25–30. <https://doi.org/10.2307/3237415>
- Merrill, G. K. (1911). Lichen notes no. 16. *The Bryologist*, 14(2), 36–38.
<https://doi.org/10.2307/3237681>
- Merrill, G. K. (1924a). Some new species of American *Cladonia*: With an enumeration and description of some hitherto unrecognized varieties and forms of the older species. *The Bryologist*, 27(2), 21–26. <https://doi.org/10.2307/3237491>
- Merrill, G. K. (1924b). *Lichens collected by the Canadian Arctic Expedition, 1913–18. Report of the Canadian Arctic Expedition 1913–18: Vol. IV. Botany, Part D: Lichens* (pp. 3–12). Ottawa: F. A. Acland. <https://doi.org/10.5962/bhl.title.64761>
- Merrill, G. K. (1929). A new list of Alaskan lichens in the genus *Cladonia*. *The Bryologist*, 32(3), 41–50. <https://doi.org/10.2307/3237634>
- Meyer, B. (2002). Die Flechtengattung *Clauzadea*. *Sendtnera*, 8, 85–154.
- Miadlikowska, J., Richardson, D., Magain, N., Ball, B., Anderson, F., Cameron, R., . . . Lutzoni, F. (2014). Phylogenetic placement, species delimitation, and cyanobiont identity of endangered aquatic *Peltigera* species (lichen-forming Ascomycota, Lecanoromycetes). *American Journal of Botany*, 101(7), 1141–1156.
<https://doi.org/10.3732/ajb.1400267>
- Miller, A. E., & Walton, J. K. (2013). *Vegetation monitoring – Southwest Alaska Network: 2012 annual report. Natural Resource Data Series NPS/SWAN/NRDS-2-13/521*. Fort Collins: National Park Service.
- Miller, O. K., Jr. (1968). Interesting fungi of the St. Elias Mountains, Yukon Territory, and adjacent Alaska. *Mycologia*, 60(6), 1190–1203.
<https://doi.org/10.1080/00275514.1968.12018686>
- Mitchell, J. K., Garrido-Benavent, I., Quijada, L., & Pfister, D. H. (2021). Sareomycetes: More diverse than meets the eye. *IMA Fungus*, 12(1), 6.
<https://doi.org/10.1186/s43008-021-00056-0>
- Mitchell, M. E. (1961). L'élément eu-océanique dans la flore lichenique du sud-ouest d'Irlande. *Revista de Biologia*, 2(3–4), 177–256.
- Mituno, M. (1938). *Sphaerophorus*-Arten aus Japan. *Shokubutsu Kenkyu Zasshi*, 14(10), 659–669.
- Moberg, R., & Carlin, G. (1996). The genus *Placopsis* (Trapeliaceae) in Norden. *Symbolae Botanicae Upsalienses*, 31(3), 319–325.

- Molina, M. C., Crespo, A., Blanco, O., Lumbsch, H. T., & Hawksworth, D. L. (2004). Phylogenetic relationships and species concepts in *Parmelia* s. str. (Parmeliaceae) inferred from nuclear ITS rDNA and β -tubulin sequences. *Lichenologist*, 36(1), 37–54. <https://doi.org/10.1017/S0024282904013933>
- Morozova, O., & Popov, E. (Eds.). (2008). *Mycotheca Petropolitana ab Instituto Botanico nomine V. L. Komarovii Academiae Scientiarum Rossicae edita (series exsiccatorum). Fasc. III–V (nos. 41–100)*. St. Petersburg: Komarov Botanical Institute.
- Morris, C., & Stone, D. (2022). *Nephroma orvoi* in western North America. *Evansia*, 39(2), 82–86. <https://doi.org/10.1639/0747-9859-39.2.82>
- Moser, T. J., & Nash, T. H., III. (1978). Photosynthetic patterns of *Cetraria cucullata* (Bell.) Ach. at Anaktuvuk Pass, Alaska. *Oecologia*, 34(1), 37–43. <https://doi.org/10.1007/BF00346239>
- Moser, T. J., Nash, T. H., III, & Thomson, J. W. (1979). Lichens of Anaktuvuk Pass, Alaska, with emphasis on the impact of caribou grazing. *The Bryologist*, 82(3), 393–408. <https://doi.org/10.2307/3242215>
- Motyka, J. (1936). *Lichenum generis Usnea studium monographicum. Pars systematica, volumen primum*. Lublin: Leopoldi.
- Motyka, J. (1938). *Lichenum generis Usnea studium monographicum. Pars systematica, volumen secundum*. Lublin: Leopoldi.
- Motyka, J. (1964). The North American species of *Alectoria*. *The Bryologist*, 67(1), 1–44. <https://doi.org/10.2307/3241181>
- Muggia, L., Gueidan, C., & Grube, M. (2010). Phylogenetic placement of some morphologically unusual members of *Verrucariales*. *Mycologia*, 102(4), 835–846. <https://doi.org/10.3852/09-153>
- Muggia, L., Nelson, P., Wheeler, T., Yakovchenko, L. S., Tønsberg, T., & Spribille, T. (2011). Convergent evolution of a symbiotic duet: The case of the lichen genus *Polychidium* (Peltigerales, Ascomycota). *American Journal of Botany*, 98(10), 1647–1656. <https://doi.org/10.3732/ajb.1100046>
- Murray, B. M. (1974). *Catalog of bryophytes and lichens of Central Brooks Range, Alaska: a literature review*. Fairbanks: University of Alaska Museum.
- Murray, B. M. (1985). Appendix A: A checklist of bryophytes and lichens of the Ogotoruk Creek region. In K. R. Everett, B. M. Murray, D. F. Murray, A. W. Johnson, A. E. Linkins & P. J. Webber (Eds.), *Reconnaissance observations of long-term natural vegetation recovery in the Cape Thompson region, Alaska, and additions to the checklist of flora* (pp. 49–74). U.S. Army Corps of Engineers Cold Regions Research and Engineering Laboratory (CRREL) Report 85-11.
- Murray, B. M. (1997). Identified cryptogams at Fort Richardson (with synonyms). In R. Lichvar, C. Racine, B. M. Murray, G. Tande, R. Lipkin & M. Duffy (Eds.), *A floristic inventory of vascular and cryptogam plant species at Fort Richardson, Alaska* (pp. F1-F9). U.S. Corps of Engineers Waterways Experiment Station Technical Report EL-97-4.
- Murray, B. M., & Murray, D. F. (1975a). Provisional checklist to the vascular, bryophyte and lichen flora of Prudhoe Bay, Alaska. In J. Brown (Ed.), *Ecological Investigations of the Tundra Biome in the Prudhoe Bay Region, Alaska* (pp. 203–212). Fairbanks: University of Alaska Press.
- Murray, D. F., & Murray, B. M. (1975b). Notes on the floristics of tussock tundra at selected sites. In J. Brown (Ed.), *Ecological and limnological reconnaissances from Prudhoe Bay into the Brooks Range, Alaska. Research on Arctic Tundra Environments* (pp. 27–30). Hanover: CRREL.

- Murray, B. M., & Murray, D. F. (1978). Checklists of vascular plants, bryophytes and lichens for the Alaskan U.S. IBP tundra biome study areas – Barrow, Prudhoe Bay, Eagle Summit. In L. L. Tieszen (Ed.), *Vegetation and production ecology of an Alaskan Arctic Tundra* (pp. 647–677). New York: Springer.
- Murray, D. F., Murray, B. M., & Johnson, A. W. (1980). Floristic survey. In J. Brown & R. L. Berg (Eds.), *Environmental engineering and ecological baseline investigations along the Yukon River-Prudhoe Bay Haul Road* (pp. 42–45). Hanover: CRREL.
- Murray, D. F., Murray, B. M., Yurtsev, B. A. & Howenstein, R. (1983). *Biogeographic significance of steppe vegetation in subarctic Alaska. Permafrost: Fourth International Conference, Proceedings* (pp. 883–888). Washington: Academy Press.
- Myllys, L., Velmala, S., Holien, H., Halonen, P., Wang, L.-S., & Goward, T. (2011). Phylogeny of the genus *Bryoria*. *Lichenologist*, 43(6), 617–638.
<https://doi.org/10.1017/S0024282911000132>
- Myllys, L., Velmala, S., Lindgren, H., Glavich, D., Carlberg, T., Wang, L.-S., & Goward, T. (2014). Taxonomic delimitation of the genera *Bryoria* and *Sulcaria*, with a new combination *Sulcaria spiralifera* introduced. *Lichenologist*, 46(6), 737–752.
<https://doi.org/10.1017/S0024282914000346>
- Myllys, L., Velmala, S., Pino-Bodas, R., & Goward, T. (2016). New species in *Bryoria* (Parmeliaceae, Lecanoromycetes) from north-west North America. *Lichenologist*, 48(5), 355–365. <https://doi.org/10.1017/S0024282916000268>
- Nash, T. H., III. (1977). *Lichenes Exsiccati distributed by Arizona State University. Fasc. 1 & 2 (no 1–50)*. Tempe, Arizona, USA.
- Nash, T. H., III. (1989). *Lichenes Exsiccati distributed by Arizona State University. Fasc. 3 & 4 (no 51–100)*. Tempe, Arizona, USA.
- Nash, T. H., III. (1992). *Lichenes Exsiccati distributed by Arizona State University. Fasc. 5 & 6 (no. 101–150)*. Tempe, Arizona, USA.
- Nash, T. H., III., & Olafsen, A. G. (1995). Climate change and the ecophysiological response of arctic lichens. *Lichenologist*, 27(6), 559–565.
[https://doi.org/10.1016/S0024-2829\(95\)80014-X](https://doi.org/10.1016/S0024-2829(95)80014-X)
- Nash, T. H., III, Schramm, R. T., Herrera, M. A., & Ryan, B. D. (1999). *Lichenes Exsiccati, Distributed by Arizona State University, Fasc. 13 (No. 301–325), Fasc. 14 (No. 326–350)*. Tempe, Arizona, USA.
- Nash, T. H., III., Schroeder, R., Sweat, K. G. & Bates, S. A. (2006). *Lichenes Exsiccati distributed by Arizona State University. Fasc. 15 & 16 (no. 351–400)*. Tempe, Arizona, USA.
- Neitlich, P. N. & Hasselbach, L.M. (1998). *Lichen inventory and status assessment for Gates of the Arctic National Park, Alaska*. U.S. National Park Service Technical Report GAAR-98-01. Fairbanks, Alaska.
- Nelsen, M. P., & Gargas, A. (2009). Assessing clonality and chemotype monophyly in *Thamnia* (Icmadophilaceae). *The Bryologist*, 112(1), 42–53.
<https://doi.org/10.1639/0007-2745-112.1.42>
- Nelsen, M. P., Chavez, N., Sackett-Hermann, E., Thell, A., Randlane, T., Divakar, P. K., . . . Lumbsch, H. T. (2011). The cetrarioid core group revisited (Lecanorales: Parmeliaceae). *Lichenologist*, 43, 537–551.
<https://doi.org/10.1017/S0024282911000508>
- Nelsen, M. P., Thell, A., Leavitt, S. D., Hampton-Miller, C. J., & Lumbsch, H. T. (2013). A reappraisal of *Masonhalea* (Parmeliaceae, Lecanorales) based on molecular and morphological data. *Lichenologist*, 45(6), 729–738.
<https://doi.org/10.1017/S0024282913000509>

- Nelson, P. R., & Wheeler, T. (2013). *Cephalodia* found on *Fuscopannaria viridescens*. *Lichenologist*, 45(5), 694–696. <https://doi.org/10.1017/S002428291300039X>
- Nelson, P. R., Walton, J., & Roland, C. (2009). *Erioderma pedicellatum* (Hue) P.M. Jørg., new to the United States and western North America, discovered in Denali National Park and Preserve and Denali State Park, Alaska. *Evansia*, 26(1), 19–23. <https://doi.org/10.1639/0747-9859-26.1.19>
- Nelson, P. R., Walton, J., Root, H., & Spribille, T. (2011). *Hypogymnia pulverata* (Parmeliaceae) and *Collema leptaleum* (Collemataceae), two macrolichens new to Alaska. *North American Fungi*, 6, 1–8. <https://doi.org/10.2509/naf2011.006.007>
- Nelson, P. R., Kepler, R., Walton, J., Fankhauser, J., Nelson, L., & Song, W. L. (2012). *Parmelina yalungana* resurrected and reported from Alaska, China and Russia. *The Bryologist*, 115(4), 557–565. <https://doi.org/10.1639/0007-2745-115.4.557>
- Nelson, P. R., Roland, C., Macander, M. J., & McCune, B. (2013). Detecting continuous lichen abundance for mapping winter caribou forage at landscape spatial scales. *Remote Sensing of Environment*, 137, 43–54. <https://doi.org/10.1016/j.rse.2013.05.026>
- Nelson, P. R., McCune, B., Roland, C., & Stehn, S. (2015a). Non-parametric methods reveal non-linear functional trait variation of lichens along environmental and fire age gradients. *Journal of Vegetation Science*, 26(5), 848–865. <https://doi.org/10.1111/jvs.12286>
- Nelson, P. R., McCune, B., & Swanson, D. K. (2015b). Lichen traits and species as indicators of vegetation and environment. *The Bryologist*, 118(3), 252–263. <https://doi.org/10.1639/0007-2745-118.3.252>
- Nimis, P. L., Hafellner, J., Roux, C., Clerc, P., Mayrhofer, H., Martellos, S., & Bilovitz, P. O. (2018). The lichens of the Alps — An annotated checklist. *MycKeys*, 31, 1–634. <https://doi.org/10.3897/mycokeys.31.23568>
- Nordin, A. (2000). Taxonomy and phylogeny of *Buellia* species with pluriseptate spores (Lecanorales, Ascomycotina). *Symbolae Botanicae Upsalienses*, 33(1), 1–117.
- Nordin, A., Savić, S., & Tibell, L. (2010). Phylogeny and taxonomy of *Aspicilia* and *Megasporaceae*. *Mycologia*, 102(6), 1339–1349. <https://doi.org/10.3852/09-266>
- Nordin, I. (1972). *Caloplaca* sect. *Gasparrinia* i Nordeuropa. *Taxonomiska och ekologiska studier*. Uppsala: Skrivservice AB.
- Nowak, J. (1993). *Porosty (Lichenes)*. 6.3. *Physciaceae sensu stricto*. Krakau: Polska Akademia Nauk, Instytut Botaniki W. Szafera.
- Nylander, W. (1860). *Synopsis methodica lichenum omnium hucusque cognitorum praemissa introductione lingua gallica tractata*. Vol. I. Paris: Martinet.
- Nylander, W. (1863a). *Synopsis lichenum*. Vol. II. Paris: Martinet.
- Nylander, W. (1863b). Lichenes. In J. Triana & J. E. Planchon (Eds.), *Prodromus Florae Novo-Granatensis, ou énumération des plantes de la Nouvelle-Granade, avec description des espèces nouvelles*. *Annales des Sciences Naturelles*, 4(19), 286–382.
- Nylander, W. (1866a). *Lichenes Lapponiae orientalis* (=Prodromi Lichenographiae Scandinaviae Supplementum). *Notiser ur Sällskapetets pro Fauna et Flora Fennica Förhandlingar*, 8, 101–192.
- Nylander, W. (1866b). Addenda nova ad Lichenographiam Europaeam. *Continuatio tertia*. *Flora*, 49, 417–421.
- Nylander, W. (1882). Addenda nova ad Lichenographiam europaeam. *Continuatio nona et tricesima*. *Flora (Regensburg)*, 65, 451–458.
- Nylander, W. (1885a). Lichenes novi e Freto Behringii. *Continuatio*. *Flora (Regensburg)*, 68, 439–446.

- Nylander, W. (1885b). Lichenes novi e Freto Behringii. *Continuatio altera. Flora (Regensburg)*, 68, 601–604.
- Nylander, W. (1887). Enumeratio Lichenum Freti Behringii. *Bulletin de la Société Linneenne de Normandie, ser. 4, 1*, 198–286.
- Nylander, W. (1888). *Lichenes Novae Zelandiae*. Paris: P. Schmidt.
- Nylander, W. (1889). *Lichenes Insularum Guineensium (San Thomé, do Principe, das Cabras)*. Paris: P. Schmidt.
- Obermayer, W. (2002). Lichenotheca Graecensis, Fasc. 10 & 11 (Nos 181–220). *Fritschiana (Graz)*, 33, 1–14.
- Obermayer, W. (2003). Lichenotheca Graecensis, Fasc. 12 & 13 (Nos 221–260). *Fritschiana (Graz)*, 43, 1–12.
- Obermayer, W. (2007). Lichenotheca Graecensis, Fasc. 16 (Nos 301–320). *Fritschiana (Graz)*, 60, 1–6.
- Obermayer, W. (2009). Lichenotheca Graecensis, Fasc. 17 (Nos 321–340). *Fritschiana (Graz)*, 65, 1–6.
- Obermayer, W. (2011). Dupla Graecensia Lichenum (2011, nos 681–800). *Fritschiana (Graz)*, 69, 17–53.
- Obermayer, W. (2014). Lichenotheca Graecensis, Fasc. 22 (Nos 421–440). *Fritschiana (Graz)*, 78, 1–7.
- Obermayer, W. (2015). Dupla Graecensia Lichenum (2015, numbers 961–1020). *Fritschiana (Graz)*, 80, 1–20.
- Obermayer, W. (2017). Dupla Graecensia Lichenum (2017, numbers 1101–1190). *Fritschiana (Graz)*, 87, 15–40.
- O'Clair, R. M., Lindstrom, S. C. & Brodo, I. M. (1996). *Southeast Alaska's rocky shores. Seaweeds and lichens*. Auke Bay: Plant Press.
- Ohlsson, K. E. (1973). New and interesting macrolichens of British Columbia. *The Bryologist*, 76(3), 366–387. <https://doi.org/10.2307/3241719>
- Ohlsson, K. E. (1974). *A revision of the lichen genus Sphaerophorus*. Ph.D. thesis, Michigan State University.
- Ohmura, Y., & Kashiwadani, H. (2018). Checklist of lichens and allied fungi of Japan. *National Museum of Nature and Science Monographs*, 49, 1–143.
- Olson, W. M., & Thilenius, J. F. (1993). *The Alaska travel journal of Archibald Menzies*. Fairbanks: University of Alaska Press.
- Onut-Brännström, I., Johannesson, H., & Tibell, L. (2018). *Thamnolia tundrae* sp. nov., a cryptic species and putative glacial relict. *Lichenologist*, 50(1), 59–75. <https://doi.org/10.1017/S0024282917000615>
- Orange, A. (1997). Chemical variation in *Lepraria eburnea*. *Lichenologist*, 29(1), 9–13. <https://doi.org/10.1006/lich.1996.0055>
- Orange, A. (2014). *Porpidia irrigua*, a new species related to *P. contraponenda*. *Lichenologist (London, England)*, 46(3), 269–284. <https://doi.org/10.1017/S0024282914000073>
- Orange, A. (2018). A new species-level taxonomy for *Trapelia* (Trapeliaceae, Ostropomycetidae) with special reference to Great Britain and the Falkland Islands. *Lichenologist*, 50(1), 3–42. <https://doi.org/10.1017/S0024282917000639>
- Orange, A. (2022). The crustose species of *Normandina* (Verrucariaceae). *Lichenologist*, 54(6), 371–378. <https://doi.org/10.1017/S0024282922000317>
- Östthagen, H. (1972). The chemical strains in *Cladonia luteoalba* Wils. et Wheld. and their distribution. *Nordic Journal of Botany*, 19, 37–41.
- Oswalt, W. H. (1957). A western Eskimo ethnobotany. *Anthropological Papers of the University of Alaska*, 6, 16–36.

- Osyczka, P., & Skubała, K. (2011). Chemical races of *Cladonia cariosa* and *C. symphyocarpa* (lichenized Ascomycota) – a Polish case study in a worldwide context. *Nova Hedwigia*, 93(3–4), 363–373. <https://doi.org/10.1127/0029-5035/2011/0093-0363>
- Otálora, M. A. G., Jørgensen, P. M., & Wedin, M. (2014). A revised generic classification of the jelly lichens, Collemataceae. *Fungal Diversity*, 64(1), 275–293. <https://doi.org/10.1007/s13225-013-0266-1>
- Otte, V., Esslinger, T. E., & Litterski, B. (2005). Global distribution of the European species of the lichen genus *Melanelia* Essl. *Journal of Biogeography*, 32(7), 1221–1241. <https://doi.org/10.1111/j.1365-2699.2005.01268.x>
- Palice, Z., Printzen, C., Spribille, T., Svensson, M., Tonsberg, T., Urbanavichene, I., . . . Ekman, S. (2013). Taxonomy of the genus *Myrionora*, with a second species from South America. *Lichenologist*, 45(2), 159–167. <https://doi.org/10.1017/S0024282912000692>
- Palmer, L. J., & Rouse, C. H. (1945). Study of the Alaska tundra with reference to its reactions to reindeer and other grazing. *U.S. Fish and Wildlife Service Research Report*, 10, 1–48.
- Pardo-De la Hoz, C. J., Magain, N., Lutzoni, F., Goward, T., Restrepo, S., & Miadlikowska, J. (2018). Contrasting symbiotic patterns in two closely related lineages of trimembered lichens of the genus *Peltigera*. *Frontiers in Microbiology*, 9, 1–14. <https://doi.org/10.3389/fmicb.2018.02770>
- Peck, J. L., Ford, J., McCune, B., & Daly, B. (2000). Tethered transplants for estimating biomass growth rates of the arctic lichen *Masonhalea richardsonii*. *The Bryologist*, 103(3), 449–454. <https://www.jstor.org/stable/3244132>
- Pegau, R. E. (1968). Growth rates of important reindeer forage lichens on the Seward Peninsula, Alaska. *Arctic*, 21(4), 255–259. <https://doi.org/10.14430/arctic3268>
- Pérez-Ortega, S., & Spribille, T. (2009). *Lepraria torii*, a new epiphytic species with fumarprotocetraric acid from northwest North America. *Graphis Scripta*, 21, 36–41.
- Pérez-Ortega, S., Spribille, T., Palice, Z., Elix, J. A., & Printzen, C. (2010). A molecular phylogeny of the *Lecanora varia* group, including a new species from western North America. *Mycological Progress*, 9(4), 523–535. <https://doi.org/10.1007/s11557-010-0660-y>
- Pérez-Ortega, S., Etayo, J., & Spribille, T. (2011). A new species of *Llimoniella* (Ascomycota, Helotiales) on *Ramboldia cinnabarina* from Alaska. *Lichenologist*, 43(4), 363–366. <https://doi.org/10.1017/S0024282911000272>
- Pérez-Ortega, S., Garrido-Benavent, I., Grube, M., Olmo, R., & de los Ríos, A. (2016). Hidden diversity of marine borderline lichens and a new order of fungi: *Collemopsidiales* (Dothideomyceta). *Fungal Diversity*, 80(1), 285–300. <https://doi.org/10.1007/s13225-016-0361-1>
- Perktold, A. (1842). II. Erläuterung und Beschreibung der Umbilikarien von Tirol. *Veröffentlichungen des Tiroler Landesmuseums Ferninandeum*, 1842(8), 54–67.
- Pfister, D. H. (Ed.). (1978). *Cryptogams of the United States North Pacific Exploring Expedition, 1853–1856: Unpublished manuscripts*. Cambridge: Farlow Library and Herbarium of Cryptogamic Botany.
- Piercey-Normore, M. D., Ahti, T., & Goward, T. (2010). Phylogenetic and haplotype analyses of four segregates within *Cladonia arbuscula* s.l. *Botany*, 88(4), 397–408. <https://doi.org/10.1139/B10-027>
- Pike, L. H., & Hale, M. E., Jr. (1982). Three new species of *Hypogymnia* from western North America (Lichenes: Hypogymniaceae). *Mycotaxon*, 16, 157–161.

- Pino-Bodas, R. (2012). *Delimitación de especies en el género Cladonia: Revisión y evaluación de especies conflictivas*. PhD Thesis, Universidad Complutense de Madrid.
- Pino-Bodas, R., & Stenroos, S. (2021). Global biodiversity patterns of the photobionts associated with the genus *Cladonia* (Lecanorales, Ascomycota). *Microbial Ecology*, 82, 173–187. <https://doi.org/10.1007/s00248-020-01633-3>
- Pino-Bodas, R., Burgaz, A., Martín, M. P., & Lumbsch, H. T. (2011). Phenotypic plasticity and homoplasy complicate species delimitation in the *Cladonia gracilis* group (Cladoniaceae, Ascomycota). *Organisms, Diversity & Evolution*, 11(5), 343–355. <https://doi.org/10.1007/s13127-011-0062-2>
- Pino-Bodas, R., Burgaz, A. R., Martín, M. P., & Lumbsch, H. T. (2012a). Species delimitations in the *Cladonia cariosa* group (Cladoniaceae, Ascomycota). *Lichenologist*, 44(1), 121–135. <https://doi.org/10.1017/S002428291100065X>
- Pino-Bodas, R., Ahti, T., Stenroos, S., Martín, M. P., & Burgaz, A. R. (2012b). *Cladonia conista* and *C. humilis* (Cladoniaceae) are different species. *Bibliotheca Lichenologica*, 108, 161–176.
- Pino-Bodas, R., Ahti, T., & Burgaz, A. R. (2014). *Cladonia islandica* (Cladoniaceae, Ascomycota), una especie nueva descubierta en España, Alaska y Canada. *Botanica Complutensis*, 38, 25–27. https://doi.org/10.5209/rev_BOCM.2014.v38.45772
- Pino-Bodas, R., Burgaz, A. R., Martín, M. P., Ahti, T., Stenroos, S., Wedin, M., & Lumbsch, H. T. (2015). The phenotypic features used for distinguishing species within the *Cladonia furcata* complex are highly homoplasious. *Lichenologist*, 47(5), 287–303. <https://doi.org/10.1017/S0024282915000225>
- Pino-Bodas, R., Zhurbenko, M. P., & Stenroos, S. (2017a). Phylogenetic placement within *Lecanoromycetes* of lichenicolous fungi associated with *Cladonia* and some other genera. *Persoonia*, 39(1), 91–117. <https://doi.org/10.3767/persoonia.2017.39.05>
- Pino-Bodas, R., Laakso, I., & Stenroos, S. (2017b). Genetic variation and factors affecting the genetic structure of the lichenicolous fungus *Heterocephalacria bachmannii* (Filobasidiales, Basidiomycota). *PLoS One*, 12(12), e0189603. <https://doi.org/10.1371/journal.pone.0189603>
- Poelt, J. (Ed.). (1981). *Plantae Graecenses. Jahrg. 5 [Lich. 182–249]*. Graz: Institute of Plant Sciences.
- Poelt, J. (1983). *Bryonora*, eine neue Gattung der Lecanoraceae. *Nova Hedwigia*, 38, 73–111.
- Poelt, J., & Nash, T. H., III. (1993). Studies in the *Umbilicaria vellea* Group (Umbilicariaceae) in North America. *The Bryologist*, 96(3), 422–430. <https://doi.org/10.2307/3243872>
- Poelt, J., & Petutschnig, W. (1992). Beiträge zur Kenntnis der Flechtenflora des Himalaya. IV. Die Gattungen *Xanthoria* und *Teloschistes* zugleich Versuch einer Revision der *Xanthoria candelaria*-Gruppe. *Nova Hedwigia*, 54, 1–36.
- Printzen, C. (1995). Die Flechtengattung *Biatora* in Europa. *Bibliotheca Lichenologica*, 60, 1–275.
- Printzen, C. (2014). A molecular phylogeny of the lichen genus *Biatora* including some morphologically similar species. *Lichenologist*, 46(3), 441–453. <https://doi.org/10.1017/S0024282913000935>
- Printzen, C., & Tønsberg, T. (1999). The lichen genus *Biatora* in northwestern North America. *The Bryologist*, 102(4), 692–713. <https://doi.org/10.2307/3244256>
- Printzen, C., & Tønsberg, T. (2004). New and interesting *Biatora*-species, mainly from North America. *Symbolae Botanicae Upsalienses*, 34(1), 343–357.

- Printzen, C., Tønsberg, T., & Palice, Z. (2002). *Biatora aegrefaciens*, rare but widespread. *Graphis Scripta*, 13, 37–38.
- Printzen, C., Spribille, T., & Tønsberg, T. (2008). *Myochroidea*, a new genus of corticolous, crustose lichens to accommodate the *Lecidea leprosula* group. *Lichenologist*, 40(3), 195–207. <https://doi.org/10.1017/S0024282908007639>
- Racine, C. H. (1981). Tundra fire effects on soils and three plant communities along a hill-slope gradient in the Seward Peninsula, Alaska. *Arctic*, 34(1), 71–84. <https://doi.org/10.14430/arctic2508>
- Racine, C., Lichvar, R., Murray, B., Tande, G., Lipkin, R., & Duffy, M. (1997). *A floristic inventory and spatial database for Fort Wainwright, Interior Alaska. CRREL-SR-97-23*. Fairbanks: U.S. Army Cold Regions Research and Engineering Laboratory.
- Rambold, G., & Schwab, A. J. (1990). Rusty coloured species of the lichen genus *Miriquidica* (Lecanoraceae). *Nordic Journal of Botany*, 10(1), 117–121. <https://doi.org/10.1111/j.1756-1051.1990.tb01757.x>
- Randlane, T., Saag, A., & Thell, A. (1997). A second updated world list of cetrarioid lichens. *The Bryologist*, 100(1), 109–122. <https://doi.org/10.2307/3244394>
- Räsänen, V. J. P. B. (1933). Contribution to the lichen flora of North America. *Annals of the Missouri Botanical Garden*, 20(1), 7–21. <https://doi.org/10.2307/2394419>
- Reed, M. (1902). Two new ascomycetous fungi parasitic on marine algae. *University of California Publications in Botany*, 1, 142–164.
- Reger, R. D., & Péwé, T. L. (1969). Lichenometric dating in the central Alaska Range. In T. L. Péwé (Ed.), *The periglacial environment: past and present* (pp. 223–247). Montreal: McGill-Queen's University Press and Arctic Institute of North America. <https://doi.org/10.2307/j.ctt1w6tb9v.13>
- Resl, P., Schneider, K., Westberg, M., Printzen, C., Palice, Z., Thor, G., . . . Spribille, T. (2015). Diagnostics for a troubled backbone: Testing topological hypotheses of trapeloid lichenized fungi in a large-scale phylogeny of Ostropomycetidae (Lecanoromycetes). *Fungal Diversity*, 73(1), 239–258. <https://doi.org/10.1007/s13225-015-0332-y>
- Riddle, L. W. (1910). The North American species of *Stereocaulon*. *Botanical Gazette (Chicago, Ill.)*, 50(4), 285–304. <https://doi.org/10.1086/330363>
- Riddle, L. W. (1917). The genus *Parmeliopsis* of Nylander. *The Bryologist*, 20(5), 69–76. <https://doi.org/10.2307/3237780>
- Roca-Valiente, B. (2013). *Estudio filogenético del grupo de “Rhizocarpon geographicum” (líquenes, Rhizocarpaceae, ascomycota) análisis contrastado de los caracteres morfológicos y los patrones biogeográficos. (Phylogenetic study in the Rhizocarpon geographicum group (Lichens, Rhizocarpaceae, Ascomycota). Contrasting analysis of morphological characters and biogeographic patterns.)* Ph.D. thesis, Universidad Complutense de Madrid.
- Roland, C. A., Stehn, S. E., & Schmidt, J. H. (2017). Species richness of multiple functional groups peaks in alpine tundra in subarctic Alaska. *Ecosphere*, 8(6), e01848. <https://doi.org/10.1002/ecs2.1848>
- Root, H. T., McCune, B., & Jovan, S. (2014). Lichen communities and species indicate climate thresholds in southeast and south-central Alaska. *The Bryologist*, 117(3), 241–252. <https://doi.org/10.1639/0007-2745-117.3.241>
- Rothrock, J. T. (1868). Sketch of the flora of Alaska. *Annual Report of the Board of Regents of the Smithsonian Institution, 1867*, 433–463.

- Rothrock, J. T. (1884). List of, and notes upon, the lichens collected by Dr. T. H. Bean in Alaska and the adjacent region in 1880. *Proceedings of the United States National Museum*, 7(397), 1–9. <https://doi.org/10.5479/si.00963801.397>
- Rudolph, E. (1955). *Revisionary studies in the lichen family Blasteniaceae in North America north of Mexico*. Ph.D. thesis, Washington University.
- Runemark, H. (1956a). Studies in *Rhizocarpon*. I. Taxonomy of the yellow species in Europe. *Opera Botanica*, 2(1), 1–151.
- Runemark, H. (1956b). Studies in *Rhizocarpon*. II. Distribution and ecology of the yellow species in Europe. *Opera Botanica*, 2(2), 1–150.
- Ruoss, E. (1987). Chemotaxonomische und morphologische Untersuchungen an den Rentierflechten *Cladonia arbuscula* und *C. mitis*. *Botanica Helvetica*, 97, 239–263.
- Ryan, B. D. (1988). Marine and maritime lichens on serpentine rock on Fidalgo Island, Washington. *The Bryologist*, 91(3), 186–190. <https://doi.org/10.2307/3243217>
- Ryan, B. D. (1989). A new species of *Lecanora* sect. *Dactylon* (lichenized Ascomycotina) from Mexico, with notes on other species of the section in North America. *Cryptogamic Botany*, 1, 243–248.
- Ryan, B. D. (1998). A monograph of *Lecanora* subg. *Placodium* sect. *Arctoxanthae* (lichenized Ascomycotina). In M. G. Glenn, R. C. Harris, R. Dirig, & M. S. Cole (Eds.), *Lichenographia Thomsoniana: North American Lichenology in honor of John W. Thomson* (pp. 105–131). Ithaca: Mycotaxon.
- Ryan, B. D., & Nash, T. H., III. (1997). Systematics of *Lecanora* subgenus *Placodium* (lichenized Ascomycotina) in North America: An overview, with keys. *Nova Hedwigia*, 64(1–2), 111–127. <https://doi.org/10.1127/nova.hedwigia/64/1997/111>
- Saag, L., Mark, K., Saag, A., & Randlane, T. (2014). Species delimitation in the lichenized fungal genus *Vulpicida* (Parmeliaceae, Ascomycota) using gene concatenation and coalescent-based species tree approaches. *American Journal of Botany*, 101(12), 2169–2182. <https://doi.org/10.3732/ajb.1400439>
- Sandstede, H. (1932). Cladoniaceae. In E. Hannig & H. Winkler (Eds.), *Die Pflanzenareale, Reihe III* (Vol. 6, pp. 63–71). Jena: G. Fischer.
- Sandstede, H. (1938). Cladoniaceae A. Zahlbr. In E. Hannig & H. Winkler (Eds.), *Die Pflanzenareale, Reihe IV* (Vol. 7, pp. 83–92). Jena: G. Fischer.
- Sandstede, H. (1939). Cladoniaceae A. Zahlbr. III. In E. Hannig & H. Winkler (Eds.), *Die Pflanzenareale, Reihe IV* (Vol. 8, pp. 99–102). Jena: G. Fischer.
- Sandstede, H., & Vainio, E. A. (1938). Ergänzungen zu Vainio's "Monographia Cladoniarum universalis" unter besonderer Berücksichtigung des Verhaltens der Cladonien zu Asahina's Diaminprobe. *Feddes Repertorium Specierum Novarum Regni Vegetabilis, Beiheft*, 103, 1–103.
- Santesson, J. (1967). Chemical studies on lichens. 6. The chemistry of the genus *Siphula*. II. *Acta Chemica Scandinavica (Copenhagen, Denmark)*, 21, 1833–1837. <https://doi.org/10.3891/acta.chem.scand.21-1833>
- Santesson, R. (1939). Amphibious pyrenolichens I. *Arkiv för Botanik*, 29A(10), 1–67.
- Santesson, R., Möberg, R., Nordin, A., Tønsberg, T. & Vitikainen, O. (2004). *Lichen-forming and lichenicolous fungi of Fennoscandia*. Uppsala: Museum of Evolution, Uppsala University.
- Satō, M. (1959a). Range of Japanese lichens. V. *Bulletin of the Faculty of Arts and Sciences, Ibaraki University. Nature and Science*, 10, 77–87.
- Satō, M. (1959b). Mixture ratio of the lichen genus *Thamnia* collected in Japan and the adjacent regions. *Miscellanea Bryologica et Lichenologica*, 22, 1–6.
- Satō, M. (1963). Mixture ratio of the lichen genus *Thamnia*. *Nova Hedwigia*, 5, 149–155.

- Satô, M. (1965a). Distribution and ecology of the lichen genus *Thamnolia*. *Bulletin of the Faculty of Arts and Sciences, Ibaraki University. Nature and Science*, 16, 25–34.
- Satô, M. (1965b). The mixture ratio of the lichen genus *Thamnolia* in New Zealand. *The Bryologist*, 68(3), 320–324. <https://doi.org/10.2307/3240603>
- Savić, S., & Tibell, L. (2008). The lichen genus *Henrica* (Verrucariaceae, Eurotiomycetes) in northern Europe. *Nordic Journal of Botany*, 26(3–4), 237–247. <https://doi.org/10.1111/j.1756-1051.2008.00216.x>
- Savić, S., & Tibell, L. (2009). Taxonomy and species delimitation in *Sporodictyon* (Verrucariaceae) in Northern Europe and the adjacent Arctic—Reconciling molecular and morphological data. *Taxon*, 58(2), 585–605. <https://doi.org/10.1002/tax.582022>
- Savić, S., & Tibell, L. (2012). *Polyblastia* in northern Europe and the adjacent Arctic. *Symbolae Botanicae Upsalienses*, 36(1), 1–69.
- Savicz, V. P., & Elenkin, A. A. (1950). Vvedenie k flore lishaynikov aziatskoy chasti SSSR. *Trudy Botanicheskogo Instituta Akademii Nauk SSSR, ser. 2*, 6, 181–343.
- Schade, A. (1955). *Letharia vulpina* (L.) Vain. – II. Ihr Vorkommen in der neuen Welt und ihr Verhältnis zu *Letharia californica* (Lev.) Hue em. DR. *Feddes Repertorium*, 58, 179–197.
- Schiefelbein, U. (2006). Ökologische und naturschutzfachliche Aspekte der Flechtenflora des Landkreises Uecker-Randow (Mecklenburg-Vorpommern). *Archiv naturwissenschaftlicher Dissertationen*, 16, 1–216.
- Schindler, H. (1987). Beitrag zur Makrolichenenflora von Alaska und West-Kanada. *Herzogia*, 7(3–4), 561–591. <https://doi.org/10.1127/herzogia/7/1987/561>
- Schindler, H. (1990). Zweiter Beitrag zur Flechtenflora von Alaska. *Herzogia*, 8, 335–356. <https://doi.org/10.1127/herzogia/8/1990/335>
- Schneider, G. (1979). Die Flechtengattung *Psora* sensu Zahlbruckner. *Bibliotheca Lichenologica*, 13, 1–291.
- Schneider, K., Resl, P., Westberg, M., & Spribille, T. (2015). A new, highly effective primer pair to exclude algae when amplifying nuclear large ribosomal subunit (LSU) DNA from lichens. *Lichenologist*, 47(4), 269–275. <https://doi.org/10.1017/S002428291500016X>
- Schneider, K., Resl, P., & Spribille, T. (2016). Escape from the cryptic species trap: Lichen evolution on both sides of a cyanobacterial acquisition event. *Molecular Ecology*, 25(14), 3453–3468. <https://doi.org/10.1111/mec.13636>
- Scholander, P. F., Flagg, W., Walters, V., & Irving, L. (1952). Respiration in some arctic and tropical lichens in relation to temperature. *American Journal of Botany*, 39(10), 707–713. <https://doi.org/10.1002/j.1537-2197.1952.tb13092.x>
- Schwab, A. J. (1986). Rostfarbene Arten der Sammelgattung *Lecidea* (Lecanorales). Revision der Arten Mittel- und Nordeuropas. *Mitteilungen der Botanischen Staatssammlung München*, 22, 221–476.
- Scott, R. W. (1974). Alpine plant communities of the southeastern Wrangell Mountains, Alaska. In V. C. Bushnell & M. G. Marcus (Eds.), *Icefield Ranges Research Project Scientific Results* (Vol. 4, pp. 283–306). New York: American Geographical Society.
- Setchell, W. A., & Gardner, N. L. (1902). Algae of northwestern America. *University of California. Publications in Botany*, 1, 165–418.
- Sheard, J. W. (2010). *The lichen genus Rinodina* (Ach.) Gray (Lecanoromycetidae, Physciaceae) in North America, north of Mexico. Ottawa: NRC Research Press.
- Sheard, J. W. (2018). A synopsis and new key to the species of *Rinodina* (Ach.) Gray (Physciaceae, lichenized Ascomycetes) presently recognized in North America. *Herzogia*, 31(p1), 395–423. <https://doi.org/10.13158/heia.31.1.2018.395>

- Sheard, J. W., & May, P. F. (1997). A synopsis of the species of *Amandinea* (lichenized Ascomycetes, Physciaceae) as presently known in North America. *The Bryologist*, 100(2), 159–169. <https://doi.org/10.2307/3244044>
- Sheard, J. W., McCune, B., & Tønsberg, T. (2014). A new corticolous species of *Rinodina* (Physciaceae) and two interesting range extensions for species collected from Katmai National Park, Alaska. *The Bryologist*, 117(3), 253–258. <https://doi.org/10.1639/0007-2745-117.3.253>
- Sheard, J. W., Ezhkin, A. K., Galanina, I. R., Himelbrant, D., Kuznetsova, E., Shimizu, A., . . . Spribille, T. (2017). The lichen genus *Rinodina* (Physciaceae, Caliciales) in north-eastern Asia. *Lichenologist*, 49(6), 617–672. <https://doi.org/10.1017/S0024282917000536>
- Shephard, M. E. (1995). *Plant community ecology and classification of the Yakutat Foreland, Alaska*. USDA Forest Service Alaska Region, report R10-TP-56. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev2_037803.pdf
- Sierk, H. A. (1964). The genus *Leptogium* in North America north of Mexico. *The Bryologist*, 67(3), 245–317. <https://doi.org/10.2307/3240893>
- Sillett, S. C., & Goward, T. (1998). Ecology and conservation of *Pseudocyphellaria rainierensis*, a Pacific Northwest endemic lichen. In M. G. Glenn, R. C. Harris, R. Dirig, & M. S. Cole (Eds.), *Lichenographia Thomsoniana: North American Lichenology in Honor of John W. Thomson* (pp. 377–388). Ithaca: Mycotaxon.
- Simon, A., Goward, T., Di Meglio, J., Dillman, K., Spribille, T., & Goffinet, B. (2018). *Sticta torii* sp. nov., a remarkable lichen of high conservation priority from northwestern North America. *Graphis Scripta*, 30, 105–114.
- Simon, A., Goffinet, B., Wang, L.-S., Spribille, T., Goward, T., Pystina, T., . . . Sérusiaux, E. (2022). Global phylogeny and taxonomic reassessment of the lichen genus *Dendrocosticta* (Ascomycota: Peltigerales). *Taxon*, 71(2), 256–287. <https://doi.org/10.1002/tax.12649>
- Singh, G., Dal Grande, F., Divakar, P. K., Otte, J., Leavitt, S. D., Szczepanska, K., . . . Schmitt, I. (2015). Coalescent-based species delimitation approach uncovers high cryptic diversity in the cosmopolitan lichen-forming fungal genus *Protoparmelia* (Lecanorales, Ascomycota). *PLoS One*, 10(5), e0124625. <https://doi.org/10.1371/journal.pone.0124625>
- Skult, H. (1984). The *Parmelia omphalodes* (Ascomycetes) complex in eastern Fennoscandia. *Annales Botanici Fennici*, 21, 117–142.
- Skult, H. (1985). A new subspecies of *Parmelia omphalodes* (Ascomycetes) described from the arctic. *Annales Botanici Fennici*, 22, 201–206.
- Skult, H. (1987). The *Parmelia omphalodes* complex in the Northern Hemisphere. Chemical and morphological aspects. *Annales Botanici Fennici*, 24, 371–383.
- Śliwa, L. (2007). A revision of the *Lecanora dispersa* complex in North America. *Polish Botanical Journal*, 52, 1–70.
- Søchting, U. (1994). *Caloplaca ahtii* Søchting spec. nova and other *Caloplaca* species with greenish-bluish soredia from the Northern Hemisphere. *Acta Botanica Fennica*, 150, 173–178.
- Søchting, U. (1997). Two major anthraquinone chemosyndromes in Teloschistaceae. *Bibliotheca Lichenologica*, 68, 135–144.
- Søchting, U. (2004). *Caloplaca kamczatica* and *C. obesimarginata*, sp. nov., two species of temperate, Pacific North America. *Symbolae Botanicae Upsalienses*, 34(1), 399–403.
- Søchting, U., & Lutzoni, F. (2003). Molecular phylogenetic study at the generic boundary between the lichen-forming fungi *Caloplaca* and *Xanthoria* (Ascomycota,

- Teloschistaceae). *Mycological Research*, 107(11), 1266–1276.
<https://doi.org/10.1017/S0953756203008529>
- Søchting, U., & Tønsberg, T. (1997). *Caloplaca xanthostigmoidea* (Räs.) Zahlbr., a common lichen in cool regions of the Northern Hemisphere. *Symbolae Botanicae Upsalienses*, 32(1), 247–253.
- Søchting, U., Garrido-Benavent, I., Seppelt, R., Castello, M., Pérez-Ortega, S., de los Ríos Murillo, A., . . . Arup, U. (2014). *Charcotiana* and *Amundsenia*, two new genera in Teloschistaceae (lichenized Ascomycota, subfamily Xanthorioideae) hosting two new species from continental Antarctica, and *Austroplaca frigida*, a new name for a continental Antarctic species. *Lichenologist*, 46(6), 763–782.
<https://doi.org/10.1017/S0024282914000395>
- Sork, V., & Werth, S. (2014). Phylogeography of *Ramalina menziesii*, a widely distributed lichen-forming fungus in western North America. *Molecular Ecology*, 23(9), 2326–2339. <https://doi.org/10.1111/mec.12735>
- Šoun, J., Vondrák, J., Søchting, U., Hrouzek, P., Khodosovtsev, A., & Arup, U. (2011). Taxonomy and phylogeny of the *Caloplaca cerina* group in Europe. *Lichenologist*, 43(2), 113–135. <https://doi.org/10.1017/S0024282910000721>
- Spribille, T., & Björk, C. R. (2008). New records and range extensions in the North American lignicolous lichen flora. *Mycotaxon*, 105, 455–468.
- Spribille, T., & Hauck, M. (2003). *Pyrrhospora gowardiana*, a new montane lichen from western North America (Lecanoraceae, lichenized Ascomycetes). *The Bryologist*, 106(4), 560–564. <https://www.jstor.org/stable/3244616>
- Spribille, T., & Muggia, L. (2013). Expanded taxon sampling disentangles evolutionary relationships and reveals a new family in *Peltigerales* (Lecanoromycetidae, Ascomycota). *Fungal Diversity*, 58(1), 171–184. <https://doi.org/10.1007/s13225-012-0206-5>
- Spribille, T., & Tønsberg, T. (2007). *Mycoblastus marginatus*, a new synonym of *M. affinis*. *Mycotaxon*, 100, 105–107.
- Spribille, T., Pérez-Ortega, S., Tønsberg, T., & Schirokauer, D. (2010). Lichens and lichenicolous fungi of the Klondike Gold Rush National Historic Park, Alaska, in a global biodiversity context. *The Bryologist*, 113(3), 439–515.
<https://doi.org/10.1639/0007-2745-113.3.439>
- Spribille, T., Klug, B., & Mayrhofer, H. (2011a). A phylogenetic analysis of the boreal lichen *Mycoblastus sanguinarius* (Mycoblastaceae, lichenized Ascomycota) reveals cryptic clades correlated with fatty acid profiles. *Molecular Phylogenetics and Evolution*, 59(3), 603–614. <https://doi.org/10.1016/j.ympev.2011.03.021>
- Spribille, T., Goffinet, B., Klug, B., Muggia, L., Obermayer, W., & Mayrhofer, H. (2011b). Molecular support for the recognition of the *Mycoblastus fucatus* group as the new genus *Violella* (Tephromelataceae, Lecanorales). *Lichenologist*, 43(5), 445–466. <https://doi.org/10.1017/S0024282911000478>
- Spribille, T., Tønsberg, T., Stabentheiner, E., & Muggia, L. (2014a). Reassessing evolutionary relationships in the filamentous cyanolichen genus *Spilonema* (Peltigerales, Lecanoromycetes). *Lichenologist (London, England)*, 46(3), 373–388.
<https://doi.org/10.1017/S0024282913000601>
- Spribille, T., Resl, P., Ahti, T., Pérez-Ortega, S., Tønsberg, T., Mayrhofer, H., & Lumbsch, H. T. (2014b). Molecular systematics of the wood-inhabiting, lichen-forming genus *Xylographa* (Baecomyetales, Ostropomycetidae) with eight new species. *Symbolae Botanicae Upsalienses*, 37(1), 1–87.

- Spribille, T., Tuovinen, V., Resl, P., Vanderpool, D., Wolinski, H., Aime, M. C., . . . McCutcheon, J. P. (2016). Basidiomycete yeasts in the cortex of ascomycete macrolichens. *Science*, 353(6298), 488–492. <https://doi.org/10.1126/science.aaf8287>
- Spribille, T., Fryday, A. M., Pérez-Ortega, S., Svensson, M., Tønsberg, T., Ekman, S., . . . Sharman, L. (2020). Lichens and associated fungi from Glacier Bay National Park, Alaska. *Lichenologist (London, England)*, 52(2), 61–181. <https://doi.org/10.1017/S0024282920000079>
- Stair, L. D. (1947). A contribution to the cryptogamic flora of Yakutat Bay, Alaska. *The Bryologist*, 50(4), 349–365. <https://doi.org/10.2307/3239636>
- Stair, L. D. (1948). A few cryptogams from Adak Island, Alaska. *The Bryologist*, 51(4), 247–248. <https://doi.org/10.2307/3239166>
- Stehn, S. E., Nelson, P. R., Roland, C. A., & Jones, J. R. (2013). Patterns in the occupancy and abundance of the globally rare lichen *Erioderma pedicellatum* in Denali National Park and Preserve, Alaska. *The Bryologist*, 116(1), 2–14. <https://doi.org/10.1639/0007-2745-116.1.002>
- Stehn, S. E., Walton, J. K., Nelson, P. R., Hampton-Miller, C. J., & Roland, C. A. (2015). A lichen species list for Denali National Park and Preserve, Alaska, with comments on several new and noteworthy records. *Evansia*, 32(4), 195–215. <https://doi.org/10.1639/0747-9859-32.4.195>
- Steiner, J. (1911). Flechten aus dem italienisch-französischen Grenzgebiete und aus Mittelitalien. *Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien*, 61, 29–64.
- Stenroos, S. (1989a). Taxonomy of the *Cladonia coccifera* group. 1. *Annales Botanici Fennici*, 26(2), 157–168.
- Stenroos, S. (1989b). Taxonomy of the *Cladonia coccifera* group. 2. *Annales Botanici Fennici*, 26(3), 307–317.
- Stenroos, S. (1990). *Cladonia luteoalba* – an enigmatic *Cladonia*. *Karstenia*, 30(1), 27–32. <https://doi.org/10.29203/ka.1990.278>
- Stenroos, S., Hyvönen, J., Myllys, L., Thell, A., & Ahti, T. (2002). Phylogeny of the genus *Cladonia* s. lat. (Cladoniaceae, Ascomycetes) inferred from molecular, morphological, and chemical data. *Cladistics*, 18(3), 237–278. <https://doi.org/10.1111/j.1096-0031.2002.tb00151.x>
- Stenroos, S., Pino-Bodas, R., Weckman, D., & Ahti, T. (2015). Phylogeny of *Cladonia uncialis* (Cladoniaceae, Lecanoromycetes) and its allies. *Lichenologist (London, England)*, 47(4), 215–231. <https://doi.org/10.1017/S0024282915000183>
- Stenroos, S., Pino-Bodas, R., Hyvönen, J., Lumbsch, H. T., & Ahti, T. (2019). Phylogeny of the family Cladoniaceae (Lecanoromycetes, Ascomycota) based on sequences of multiple loci. *Cladistics*, 35(4), 351–384. <https://doi.org/10.1111/cla.12363>
- Stizenberger, E. (1876). *Index lichenum hyperboreorum. Bericht über die Thätigkeit der St. Gallischen Naturwissenschaftlichen Gesellschaft während des Vereinsjahres 1874–1875*, 189–245.
- Stizenberger, E. (1892). Die Alektorienarten und ihre geographische Verbreitung. *Annalen des Naturhistorischen Museums in Wien*, 7, 117–134.
- Stizenberger, E. (1895a). A list of lichens collected by Mr. Robert Reuleaux in the western parts of North America. *Proceedings of the Californian Academy of Sciences*, 2nd series, 5, 535–538.
- Stizenberger, E. (1895b). Notes on western lichens. *Erythrea*, 3, 30–32.
- Stizenberger, E. (1895c). Die Grübchenflechten (*Sticti*) und ihre geographische Verbreitung. *Flora (Regensburg)*, 81, 88–150.

- Stone, D. F., Hinds, J. W., Anderson, F. L., & Lendemer, J. C. (2016). A revision of the *Leptogium saturninum* group in North America. *Lichenologist*, 48(5), 387–421. <https://doi.org/10.1017/S0024282916000323>
- Stoy, P. C., Street, L. E., Johnson, A. V., Prieto-Blanco, A., & Ewing, S. A. (2012). Temperature, heat flux and reflectance of common subarctic mosses and lichens under field conditions: Might changes to community composition impact climate-relevant surface fluxes? *Arctic, Antarctic, and Alpine Research*, 44(4), 500–508. <https://doi.org/10.1657/1938-4246-44.4.500>
- Stuckenberga, E. C. (1956). Novyi vid lishainika roda *Cladonia* (Hill) Hoffm. (Species nova lichenis generi *Cladonia* (Hill.) Hoffm.). [In Russian]. *Botanicheskiy Materialy, Notulae Systematicae e Sectione Cryptogamica Instituti Botanici Academiae Scientiarum URSS*, 11, 12–18.
- Suija, A. (2006). Variation of morphological characters in the lichenicolous ascomycete genus *Abrothallus*. *Annales Botanici Fennici*, 43, 193–204.
- Suija, A., de los Rios, A., & Pérez-Ortega, S. (2015a). A molecular reappraisal of *Abrothallus* species growing on lichens of the order *Peltigerales*. *Phytotaxa*, 195(3), 201–226. <https://doi.org/10.11646/phytotaxa.195.3.1>
- Suija, A., Ertz, D., Lawrey, J. D., & Diederich, P. (2015b). Multiple origin of the lichenicolous life habit in *Helotiales*, based on nuclear ribosomal sequences. *Fungal Diversity*, 70(1), 55–72. <https://doi.org/10.1007/s13225-014-0287-4>
- Swinscow, T. D. V. (1971). Pyrenocarpous lichens: 15. Key to *Polyblastia* Massal. in the British Isles. *Lichenologist*, 5(1-2), 92–113. <https://doi.org/10.1017/S0024282971000124>
- Tagirdzhanova, G., Saary, P., Cameron, E. S., Garber, A., Díaz Escandón, D., Goyette, S., . . . Spribille, T. (2023). Evidence for a core set of microbial lichen symbionts from a global survey of metagenomes. *BioRxiv*. <https://doi.org/10.1101/2023.02.02.524463>
- Talbot, S. S. (1998). Lichens of the Spiridon Peninsula, western Kodiak Island, Alaska, with observations on lichen communities. In M. G. Glenn, R. C. Harris, R. Dirig, & M. S. Cole (Eds.), *Lichenographia Thomsoniana: North American Lichenology in Honor of John W. Thomson* (pp. 245–260). Ithaca: Mycotaxon.
- Talbot, S. S., & Talbot, S. L. (1994). Numerical classification of the coastal vegetation of Attu Island, Aleutian Islands, Alaska. *Journal of Vegetation Science*, 5(6), 867–876. <https://doi.org/10.2307/3236199>
- Talbot, S. S., Talbot, S. L., & Thomson, J. W. (1990). Contribution to the knowledge of the lichen flora of Hagemester Island, Bering Sea, Alaska. *Evansia*, 7(3), 49–53. <https://doi.org/10.5962/p.346441>
- Talbot, S. S., Talbot, S. L., & Thomson, J. W. (1992). Lichens of Tuxedni Wilderness Area, Alaska. *The Bryologist*, 95(1), 20–30. <https://doi.org/10.2307/3243780>
- Talbot, S. S., Talbot, S. L., Thomson, J. W., & Schofield, W. B. (1997). Lichens of Adak Island, Central Aleutian Islands, Alaska. *The Bryologist*, 100(2), 241–250. <https://doi.org/10.2307/3244058>
- Talbot, S. S., Talbot, S. L., Thomson, J. W., & Schofield, W. B. (2000). Lichens of Izembek National Wildlife Refuge, Westernmost Alaska Peninsula. *The Bryologist*, 103(2), 379–389. <https://www.jstor.org/stable/3244165>
- Talbot, S. S., Talbot, S. L., Thomson, J. W., & Schofield, W. B. (2001). Lichens from St. Matthew and St. Paul Islands, Bering Sea, Alaska. *The Bryologist*, 104(1), 47–58. <https://www.jstor.org/stable/3244914>

- Talbot, S. S., Talbot, S. L., Thomson, J. W., Daniëls, F. J. A. & Schofield, W. B. (2002). Lichens from Simeonof Wilderness, Shumagin Islands, southwestern Alaska. *The Bryologist*, 105(1), 111–121. <https://www.jstor.org/stable/3244828>
- Talbot, S. S., Thomson, J. W., & Schofield, W. B. (2007). Lichens from Tetlin National Wildlife Refuge and vicinity, east-central Alaska. *The Bryologist*, 110(1), 74–91. <https://www.jstor.org/stable/20110834>
- Talbot, S. S., Talbot, S. L., & Walker, L. R. (2010a). Post-eruption legacy effects and their implications for long-term recovery of the vegetation on Kasatochi Island, Alaska. *Arctic, Antarctic, and Alpine Research*, 42(3), 285–296. <https://doi.org/10.1657/1938-4246-42.3.285>
- Talbot, S. S., Schofield, W. B., Talbot, S. L., & Daniëls, F. J. A. (2010b). Vegetation of eastern Unalaska Island, Aleutian Islands, Alaska. *Botany*, 88(4), 366–388. <https://doi.org/10.1139/B09-113>
- Thell, A., Högnabba, F., Elix, J. A., Feuerer, T., Kärnefelt, I., Myllys, L., . . . Seaward, M. R. D. (2009). Phylogeny of the cetrarioid core (Parmeliaceae) based on five genetic markers. *Lichenologist*, 41(5), 489–511. <https://doi.org/10.1017/S0024282909990090>
- Thomson, J. W. (1950a). Some additional records of lichens from Alaska collected by Walter J. Eyerdam. *The Bryologist*, 53(1), 9–15. <https://doi.org/10.2307/3240250>
- Thomson, J. W. (1950b). The species of *Peltigera* in North America north of Mexico. *American Midland Naturalist*, 44(1), 1–68. <https://doi.org/10.2307/2421755>
- Thomson, J. W. (1955). *Peltigera pulverulenta* (Tayl.) Nyl. takes precedence over *Peltigera scabrosa* T. Fr. and becomes of considerable phytogeographic interest. *The Bryologist*, 58(1), 45–49. <https://doi.org/10.2307/3240099>
- Thomson, J. W. (1960). *Lichenes Arctici, numbers 1–96*. Madison, Wisconsin.
- Thomson, J. W. (1963). The Lichen Genus *Physcia* in North America. *Nova Hedwigia*, 7, 1–172.
- Thomson, J. W. (1967). The lichen genus *Baeomyces* in North America north of Mexico. *The Bryologist*, 70(3), 285–298. <https://doi.org/10.2307/3241088>
- Thomson, J. W. (1968a). *The Lichen Genus Cladonia in North America*. Toronto: University of Toronto Press.
- Thomson, J. W. (1968b). Notes on *Rhizocarpon* in the Arctic. *Nova Hedwigia*, 14, 421–481.
- Thomson, J. W. (1968c). *Haematomma lapponicum* Räs. in North America. *Shokubutsu Kenkyu Zasshi*, 43(10-11), 305–310.
- Thomson, J. W. (1972a). Distribution patterns of American Arctic lichens. *Canadian Journal of Botany*, 50(5), 1135–1156. <https://doi.org/10.1139/b72-138>
- Thomson, J. W. (1972b). Two new species of *Lecidea* and one of *Lecanora* from the north slope of Alaska. *The Bryologist*, 75(3), 354–359. <https://doi.org/10.2307/3241475>
- Thomson, J. W. (1973). Notes on American arctic species of *Candelariella*. *Revista da Faculdade de Ciencias de Lisboa II*, 17, 747–759.
- Thomson, J. W. (1977). *Cladonia asahinae* sp. nov. from western North America. *Shokubutsu Kenkyu Zasshi*, 51(12), 360–364.
- Thomson, J. W. (1979). *Lichens of the Alaskan Arctic Slope*. Toronto: University of Toronto Press. <https://doi.org/10.3138/9781487583989>
- Thomson, J. W. (1984). *American Arctic Lichens I. The Macrolichens*. New York: Columbia University Press.
- Thomson, J. W. (1987). The lichen genera *Catapyrenium* and *Placidopsis* in North America. *The Bryologist*, 90(1), 27–39. <https://doi.org/10.2307/3243269>

- Thomson, J. W. (1991). The lichen genus *Staurothele* in North America. *The Bryologist*, 94(4), 351–367. <https://doi.org/10.2307/3243824>
- Thomson, J. W. (1997). *American Arctic Lichens. 2. The Microlichens*. Madison: University of Wisconsin Press.
- Thomson, J. W., & Ahti, T. (1994). Lichens collected on an Alaska Highway expedition in Alaska and Canada. *The Bryologist*, 97(2), 138–157. <https://doi.org/10.2307/3243751>
- Thomson, J. W., & Bird, C. D. (1978). The lichen genus *Dactylina* in North America. *Canadian Journal of Botany*, 56(14), 1602–1624. <https://doi.org/10.1139/b78-190>
- Thomson, J. W., & Doell, J. K. (1989). Some lichens from southwest Alaska. *Evansia*, 6(2), 28–32. <https://doi.org/10.5962/p.345884>
- Thomson, J. W., & Murray, B. M. (1988). *Staurothele discedens* and *Gyalidea lecideopsis* var. *convarians* rediscovered in Alaska, together with *Polyblastia cucurbitula*, sp. nov. *The Bryologist*, 91(2), 86–90. <https://doi.org/10.2307/3242620>
- Thomson, J. W., & Scotter, G. W. (1983). Lichens from Bathurst Inlet Region, Northwest Territories, Canada. *The Bryologist*, 86(1), 14–22. <https://doi.org/10.2307/3242696>
- Thomson, J. W., & Sowl, L. W. (1989). Additional records of lichens from Amchitka Island, Alaska. *Evansia*, 6(1), 7–11. <https://doi.org/10.5962/p.345878>
- Thomson, J. M., Scotter, G. W., & Ahti, T. (1969). Lichens of the Great Slave Lake region, Northwest Territories, Canada. *The Bryologist*, 72(2), 137–177. <https://doi.org/10.2307/3241667>
- Thor, G., & Vězda, A. (1984). Einige neue oder bemerkenswerte Flechten mit gyalectoiden Apothecien von Nord-Indien und Nepal. *Folia Geobotanica et Phytotaxonomica*, 19(1), 71–82. <https://doi.org/10.1007/BF02853330>
- Tibell, L. (1976). The genus *Thelomma*. *Botaniska Notiser*, 129, 221–249.
- Tibell, L. (1978). The genus *Microcalicium*. *Botaniska Notiser*, 131, 229–246.
- Tibell, L. (1991). A new species of *Stenocybe* from western North America. *The Bryologist*, 94(4), 413–415. <https://doi.org/10.2307/3243834>
- Tibell, S., & Tibell, L. (2015). Two new species of *Atla* (Verrucariaceae). *Lichenologist*, 47(2), 93–98. <https://doi.org/10.1017/S0024282915000018>
- Timdal, E. (1986). A revision of *Psora* (Lecideaceae) in North America. *The Bryologist*, 89(4), 253–275. <https://doi.org/10.2307/3243197>
- Timdal, E. (1990). Gypsoplacaceae and *Gypsoplaca*, a new family and genus of squamiform lichens. *Bibliotheca Lichenologica*, 38, 419–427.
- Timdal, E. (1991a). *Anamylopsora*, a new genus in the Lecideaceae. *Mycotaxon*, 42, 249–254.
- Timdal, E. (1991b). A monograph of the genus *Toninia* (Lecideaceae, Ascomycetes). *Opera Botanica*, 110, 1–137.
- Timdal, E. (2001). *Hypocenomyce oligospora* and *H. sierrae*, two new lichen species. *Mycotaxon*, 77, 445–453.
- Timdal, E. (2002). *Stereocaulon cumulatum* comb. nov., another crustose species in the genus. *Lichenologist*, 34(1), 7–11. <https://doi.org/10.1006/lich.2001.0368>
- Timdal, E., & Tønsberg, T. (2006). *Psoroma paleaceum* comb. nov. the only hairy *Psoroma* in northern Europe. *Graphis Scripta*, 18, 54–57.
- Timdal, E., Hofton, T. H., Westberg, M., & Bendiksby, M. (2021). The *Nephroma helveticum* complex (Peltigerales, lichenized Ascomycota) in the Nordic countries. *Graphis Scripta*, 33, 86–110.
- Tønsberg, T. (1975). *Cladonia metacorallifera* new to Europe. *Nordic Journal of Botany*, 22, 129–132.

- Tønsberg, T. (1977). The chemical strains in *Stereocaulon rivulorum* and their distribution. *Nordic Journal of Botany*, 24, 231–234.
- Tønsberg, T. (1992a). The sorediate and isidiate, corticolous, crustose lichens in Norway. *Sommerfeltia*, 14(1), 1–336. <https://doi.org/10.2478/som-1992-0002>
- Tønsberg, T. (1992b). *Rinodina sheardii*, a new lichen species from northwest Europe and northwest North America. *The Bryologist*, 95(2), 216–217. <https://doi.org/10.2307/3243437>
- Tønsberg, T. (1993a). Additions to the lichen flora of North America. *The Bryologist*, 96(1), 138–141. <https://doi.org/10.2307/3243330>
- Tønsberg, T. (1993b). Additions to the lichen flora of North America. II. *The Bryologist*, 96(4), 629–630. <https://doi.org/10.2307/3243996>
- Tønsberg, T. (1997). *Lichenes isidiosi et sorediosi crustacei exsiccati. Fascicle 1* (no 1–25). Distributed by Herbarium BG, University of Bergen, Norway.
- Tønsberg, T. (1999a). *Lichenes isidiosi et sorediosi crustacei exsiccati. Fascicle 2* (no 26–50). Distributed by Herbarium BG, University of Bergen, Norway.
- Tønsberg, T. (1999b). *Pseudocyphellaria arvidssonii* new to Africa and *P. mallota* new to North America. *The Bryologist*, 102(1), 128–129. <https://doi.org/10.2307/3244475>
- Tønsberg, T. (2002a). Additions to the lichen flora of North America XI. *The Bryologist*, 105(1), 122–125. [https://doi.org/10.1639/0007-2745\(2002\)105](https://doi.org/10.1639/0007-2745(2002)105)
- Tønsberg, T. (2002b). Notes on non-corticolous *Lepraria* s. lat. in Norway. *Graphis Scripta*, 13, 45–51.
- Tønsberg, T. (2016). *Jamesiella scotica* new to North America from USA, Alaska. *Folia Cryptogamica Estonica*, 53, 23–24. <https://doi.org/10.12697/fce.2016.53.03>
- Tønsberg, T. (2018). *Varicellaria lactea* new to the U.S.A. from Alaska. *Opuscula Philolichenum*, 17, 1–5.
- Tønsberg, T., & Goward, T. (1992). *Cladonia norvegica* new to North America. *Evansia*, 9(2), 56–58. <https://doi.org/10.5962/p.345964>
- Tønsberg, T., & Goward, T. (2001). *Sticta oroborealis* sp. nov., and other Pacific North American lichens forming dendroscocauloid cyanotypes. *The Bryologist*, 104(1), 12–23. [https://doi.org/10.1639/0007-2745\(2001\)104](https://doi.org/10.1639/0007-2745(2001)104)
- Tønsberg, T., & Printzen, C. (2018). *Biatora troendelagica* new to North America from Alaska, USA. *Graphis Scripta*, 30, 161–165.
- Trelease, W. (1904). Cryptogamic botany of Alaska. I. Introduction. In J. Cardot, C. E. Cummings, A. W. Evans, C. H. Peck, I. Thériot, & W. Trelease (Eds.), *Harriman Alaska Expedition. V, Cryptogamic Botany* (pp. 1–9). New York: Doubleday, Page & Co.
- Triebel, D. (1989). Lecideicole Ascomyceten. Eine Revision der obligat lichenicolen Ascomyceten auf lecideoiden Flechten. *Bibliotheca Lichenologica*, 35, 1–278.
- Triebel, D., Rambold, G., & Nash, T. H., III. (1991). On lichenicolous fungi from continental North America. *Mycotaxon*, 42, 263–296.
- Tuckerman, E. (1858). Supplement to an enumeration of North American lichens. Part First – containing brief diagnosis of new species. *American Journal of Science and Arts, Ser. 2*, 25, 422–430.
- Tuckerman, E. (1859). Supplement to an enumeration of North American lichens, continued. *American Journal of Science and Arts, Ser. 2*, 28, 200–206.
- Tuckerman, E. (1862). Observations on North American and other lichens. *Proceedings of the American Academy of Arts and Sciences*, 5, 383–422. <https://doi.org/10.2307/20021278>

- Tuckerman, E. (1882). *A synopsis of the North American lichens. Part. I, comprising the Parmeliacei, Cladoniei and Coenogoniei*. Boston: S. E. Cassino.
<https://doi.org/10.5962/bhl.title.45947>
- Tuckerman, E. (1888). *A synopsis of the North American lichens. Part II, comprising the Lecideacei, and (in part) the Graphidacei*. New Bedford: E. Anthony & Sons Printers. <https://doi.org/10.5962/bhl.title.46052>
- Tuovinen, V., Ekman, S., Thor, G., Vanderpool, D., Spribille, T., & Johannesson, H. (2019). Two basidiomycete fungi in the cortex of wolf lichens. *Current Biology*, 29(3), 476–483. <https://doi.org/10.1016/j.cub.2018.12.022>
- Turner, L. M. (1886). *Contributions to the natural history of Alaska: results of investigations made chiefly in the Yukon district and the Aleutian Islands; conducted under the auspices of the Signal Service, United States Army, extending from May, 1874, to August, 1881*. Washington: Government Printing Office.
- Urbanavichus, G. P. & Andreev, M. P. (2010). *Spisok lichenoflory Rossii [A checklist of the lichen flora of Russia]*. Sankt Petersburg: Nauka.
- U'Ren, J. M., Lutzoni, F., Miadlikowska, J., Laetsch, A. D., & Arnold, A. E. (2012). Host and geographic structure of endophytic and endolichenic fungi at a continental scale. *American Journal of Botany*, 99(5), 898–914.
<https://doi.org/10.3732/ajb.1100459>
- Vainio, E. A. (1921). Lichenographia Fennica I. Pyrenolichenes iisque proximi Pyrenomycetes et Lichenes imperfecti. *Acta Societatis pro Fauna et Flora Fennica*, 49(2), 1–274.
- Vänskä, H. (1984). The identity of the lichens *Lecanora frustulosa* and *L. argopholis*. *Annales Botanici Fennici*, 21, 391–402.
- Veldkamp, J. F. (2004). *Bilimbia* (Lichenes) resurrected. *Lichenologist*, 36(3-4), 191–195. <https://doi.org/10.1017/S0024282904013908>
- Velmalä, S., Myllys, L., Goward, T., Holien, H., & Halonen, P. (2014). Taxonomy of *Bryoria* section *Implexae* (Parmeliaceae, Lecanoromycetes) in North America and Europe, based on chemical, morphological and molecular data. *Annales Botanici Fennici*, 51(6), 345–371. <https://doi.org/10.5735/085.051.0601>
- Verseghy, C. (1955). Studien über die Gattung *Ochrolechia*. I. *Annales Historico-Naturales Musei Nationalis Hungarici*, 7, 283–298.
- Verseghy, C. (1958). Studien über die Gattung *Ochrolechia*. II. *Annales Historico-Naturales Musei Nationalis Hungarici*, 8, 75–85.
- Verseghy, C. (1959). Studien über die Gattung *Ochrolechia*. III. Angaben zur Chemie der *Ochrolechia*-Arten. *Annales Historico-Naturales Musei Nationalis Hungarici*, 51, 145–159.
- Verseghy, K. (1962). Die Gattung *Ochrolechia*. *Nova Hedwigia, Beihefte*, 1, 1–146.
- Verseghy, K. (1964). *Typen-Verzeichnis der Flechtensammlung in der Botanischen Abteilung des Ungarischen Naturwissenschaftlichen Museums*. Budapest: Termesztudományi Múzeum.
- Verseghy, K. (1969). Die Verbreitung der *Ochrolechia inaequatula* Nyl. in den Alpen. *Fragmenta Botanica Musei historico-naturalis Hungarici*, 7, 61–65.
- Vězda, A. (1966). Flechtensystematische Studien IV. Die Gattung *Gyalidea* Lett. *Folia Geobotanica et Phytotaxonomica*, 1(1), 311–340.
<https://doi.org/10.1007/BF02854585>
- Vězda, A. (1967). Flechtensystematische Studien VI. Die Gattung *Sagirolechia* Massal. *Folia Geobotanica et Phytotaxonomica*, 2(4), 383–396.
<https://doi.org/10.1007/BF02854723>

- Viereck, L. A. (1966). Plant succession and soil development on gravel outwash of the Muldrow Glacier, Alaska. *Ecological Monographs*, 36(3), 181–199. <https://doi.org/10.2307/1942416>
- Viereck, L. A. (1967). Plants above 2,140 meters (7,000 feet) in the Alaska Range. *The Bryologist*, 70(3), 345–347. <https://doi.org/10.2307/3241100>
- Viereck, L. A. (1970). Forest succession and soil development adjacent to the Chena River in interior Alaska. *Arctic and Alpine Research*, 2(1), 1–26. <https://doi.org/10.2307/1550138>
- Viereck, L. A., Dyrness, C. T., Batten, A. R. & Wenzlick, K. J. (1992). *The Alaska vegetation classification. Gen. Techn. Report PNW-GTR-286*. Portland: USDA Forest Service, Pacific Northwest Research Station. <https://doi.org/10.2737/PNW-GTR-286>
- Vitikainen, O. (1985). Three new species of *Peltigera* (lichenized Ascomycota). *Annales Botanici Fennici*, 22, 291–298.
- Vitikainen, O. (2006). *Peltigera tartarea*, a new species from Arctic America. *The Journal of the Hattori Botanical Laboratory*, 100, 853–854.
- Vitt, D. H., Ostafichuk, M., & Brodo, I. M. (1973). Follicolous bryophytes and lichens of *Thuja plicata* in western British Columbia. *Canadian Journal of Botany*, 51(3), 571–580. <https://doi.org/10.1139/b73-068>
- von Brackel, W., & Puntillo, D. (2016). New records of lichenicolous fungi from Calabria (southern Italy), including a first checklist. *Herzogia*, 29(2), 277–306. <https://doi.org/10.13158/heia.29.2.2016.277>
- Vondrák, J., Říha, P., Redchenko, O., Vondráková, O., Hrouzek, P., & Khodosovtsev, A. (2011). The *Caloplaca crenulatella* species complex; its intricate taxonomy and description of a new species. *Lichenologist*, 43(5), 467–481. <https://doi.org/10.1017/S0024282911000466>
- Vondrák, J., Šoun, J., Vondráková, O., Fryday, A. M., Khodosovtsev, A., & Davydov, E. A. (2012). Absence of anthraquinone pigments is paraphyletic and a phylogenetically unreliable character in the Teloschistaceae. *Lichenologist*, 44(3), 401–418. <https://doi.org/10.1017/S0024282911000843>
- Vondrák, J., Halıcı, M. G., Güllü, M., & Demirel, R. (2016a). Taxonomy of the genus *Athallia* and its diversity in Turkey. *Turkish Journal of Botany*, 40, 319–328. <https://doi.org/10.3906/bot-1502-12>
- Vondrák, J., Frolov, I., Davydov, E. A., Urbanavichene, I., Chesnokov, S., Zhdanov, I., . . . Tchabanenko, S. (2016b). The extensive geographical range of several species of Teloschistaceae: Evidence from Russia. *Lichenologist*, 48(3), 171–189. <https://doi.org/10.1017/S0024282916000116>
- Vondrák, J., Frolov, I., Davydov, E. A., Yakovchenko, L., Malíček, J., Svoboda, S., & Kubásek, J. (2019). The lichen family Teloschistaceae in the Altai-Sayan region (Central Asia). *Phytotaxa*, 396(1), 1–66. <https://doi.org/10.11646/phytotaxa.396.1.1>
- Vondrák, J., Frolov, I., Košnar, J., Arup, U., Veselská, T., Halıcı, G., . . . Söchting, U. (2020). Substrate switches, phenotypic innovations and allopatric speciation formed taxonomic diversity within the lichen genus *Blastenia*. *Journal of Systematics and Evolution*, 58(3), 295–330. <https://doi.org/10.1111/jse.12503>
- Wainio (Vainio), E. A. (1909). Lichenes in viciniis hibernae expeditionis Vegae prope pagum Pitlekai in Sibiria septentrionali a D:re E. Almqvist collecti. *Arkiv för Botanik*, 8(4), 1–175.
- Walker, D. A. (1985). *Vegetation and environmental gradients of the Prudhoe Bay region, Alaska. CRREL Report 85-14*. Hanover: U.S. Army Cold Regions Research and Engineering Laboratory.

- Walker, D. A., & Everett, K. R. (1991). Loess ecosystems of northern Alaska: Regional gradient and toposequence at Prudhoe Bay. *Ecological Monographs*, 61(4), 437–464. <https://doi.org/10.2307/2937050>
- Walker, D. A., & Walker, M. D. (1996). Terrain and vegetation of the Imnavait Creek watershed. In J. F. Reynolds & J. D. Tenhunen (Eds.), *Landscape Function and Disturbance in Arctic Tundra* (pp. 73–108). Berlin: Springer. https://doi.org/10.1007/978-3-662-01145-4_4
- Walker, D. A., & Webber, P. J. (1979). Relationships of soil acidity and air temperature to the wind and vegetation at Prudhoe Bay, Alaska. *Arctic*, 32(3), 224–236. <https://doi.org/10.14430/arctic2622>
- Walker, D. A., Binnian, E., Evans, B. M., Lederer, N. D., Nordstrand, E., & Webber, P. J. (1989). Terrain, vegetation and landscape evolution of the R4D research site, Brooks Range foothills, Alaska. *Ecography*, 12(3), 238–261. <https://doi.org/10.1111/j.1600-0587.1989.tb00844.x>
- Walker, D. A., Epstein, H. E., Gould, W. A., Kelley, A. M., Kade, A. N., Knudson, J. A., . . . Shur, Y. (2004). Frost-boil ecosystems: Complex interactions between landforms, soils, vegetation and climate. *Permafrost and Periglacial Processes*, 15(2), 171–188. <https://doi.org/10.1002/ppp.487>
- Walker, M. D. (1989). Microhabitat preferences of *Dactylina arctica* and *D. beringica* on pingos in northern Alaska. *The Bryologist*, 92(4), 467–472. <https://doi.org/10.2307/3243667>
- Walker, M. D., Walker, D. A., Everett, K. E., & Short, S. K. (1991). Steppe vegetation on south-facing slopes of pingos, central Arctic Coastal Plain, Alaska, U.S.A. *Arctic and Alpine Research*, 23(2), 170–188. <https://doi.org/10.2307/1551381>
- Walsh, P., & Goward, T. (2021). Monitoring recovery of overgrazed lichen communities on Hagemeister Island, southwestern Alaska. *Rangifer*, 41(1), 1–12. <https://doi.org/10.7557/2.41.1.5340>
- Waters, D. P. (2011). *Peltigera evansiana* Gyelnik (Peltigeraceae) new in Alaska. *Evansia*, 28(2), 49. <https://doi.org/10.1639/079.028.0203>
- Webber, P. J. (1978). Spatial and temporal variation of the vegetation and its production, Barrow, Alaska. In L. L. Tieszen (Ed.), *Vegetation and production ecology of an Alaskan arctic tundra* (pp. 37–112). New York: Springer. https://doi.org/10.1007/978-1-4612-6307-4_3
- Webber, P. J., Komárková, V., Walker, D. A. & Werbe, E. (1978). Vegetation mapping and response to disturbance along the Yukon River–Prudhoe Bay Haul Road. In J. Brown (ed.), *Ecological baseline investigations along the Yukon River – Prudhoe Bay Haul Road, Alaska* (pp. 25–87). Special Report 78-13. Hanover: U.S. Army Cold Regions Research and Engineering Laboratory.
- Weber, W. A. (1961). *Lichenes Exsiccati distributed by the University of Colorado. Fac. 1* (no. 1–40). Boulder, Colorado, USA.
- Weber, W. A. (1963). *Lichenes Exsiccati distributed by the University of Colorado. Fac. 2* (no. 41–80). Boulder, Colorado, USA.
- Weber, W. A. (1965). The lichen flora of Colorado: 2. Pannariaceae. *University of Colorado Studies. Series in Biology*, 16, 1–10.
- Weber, W. A. (1967). *Lichenes Exsiccati distributed by the University of Colorado. Fac. 5* (no. 161–200). Boulder, Colorado, USA.
- Weber, W. A. (1984). *Lichenes Exsiccati distributed by the University of Colorado. Fac. 16* (no. 601–640). Boulder, Colorado, USA.
- Weber, W. A., & Viereck, L. A. (1967). Lichens of Mt. McKinley National Park, Alaska. *The Bryologist*, 70(2), 227–235. <https://doi.org/10.2307/3240948>

- Weber, W. A., & Wittmann, R. C. (1992). *Catalog of the Colorado Flora: a Biodiversity Baseline*. Boulder: University Press of Colorado.
- Weber, W. A., Erdman, J. A., & Krog, H. (1969). Annotated list of lichens. In H. T. Shacklette, L. W. Durrell, J. A. Erdman, J. R. Keith, W. M. Klein, H. Krog, . . . W. A. Weber (Eds.), *Vegetation of Amchitka Island, Aleutian Islands, Alaska* (pp. 47–50). Washington: U.S. Printing Office; <https://doi.org/10.3133/pp648>
- Wedin, M., Högnabba, F., & Goward, T. (2009). A new species of *Sphaerophorus*, and a key to the family Sphaerophoraceae in western North America. *The Bryologist*, 112(2), 368–374. <https://doi.org/10.1639/0007-2745-112.2.368>
- Wei, J. C., & Biazrov, L. G. (1991). Some disjunctions and vicariisms in the Umbilicariaceae (Ascomycotina). *Junwu Xuebao*, 4, 65–72.
- Wei, J. C., & Jiang, Y. M. (1993). *The Asian Umbilicariaceae (Ascomycota). Mycosystema Monographicum Series 1*. Beijing: International Academic Publishers.
- Westberg, M. (2007a). *Candelariella* (Candelariaceae) in western United States and northern Mexico; the species with biatorine apothecia. *The Bryologist*, 110(3), 365–374. <https://www.jstor.org/stable/20110872>
- Westberg, M. (2007b). *Candelariella* (Candelariaceae) in western United States and northern Mexico: The polysporous species. *The Bryologist*, 110(3), 375–390. <https://www.jstor.org/stable/20110871>
- Westberg, M. (2007c). *Candelariella* (Candelariaceae) in western United States and northern Mexico: The 8-spored, lecanorine species. *The Bryologist*, 110(3), 391–419. <https://www.jstor.org/stable/20110872>
- Westberg, M. (2010). The identity of *Candelariella canadensis*. *Lichenologist*, 42(1), 119–122. <https://doi.org/10.1017/S0024282909990272>
- Westberg, M., & Arup, U. (2011). *Candelaria pacifica* sp. nova (Ascomycota, Candelariales) and the identity of *Candelaria vulgaris*. *Bibliotheca Lichenologica*, 106, 353–364.
- Westberg, M., Moberg, R., Myrdal, M., Nordin, A. & Ekman, S. (2021). *Santesson's checklist of fennoscandian lichen-forming and lichenicolous fungi*. Uppsala University, Museum of Evolution.
- Wetmore, C. M. (1960). The lichen genus *Nephroma* in North and Middle America. *Publications of the Museum, Michigan State University, Biological series*, 1, 369–452.
- Wetmore, C. M. (1970). The lichen family Heppiaceae in North America. *Annals of the Missouri Botanical Garden*, 57(2), 158–209. <https://doi.org/10.2307/2395109>
- Wetmore, C. M. (1996). The *Caloplaca sideritis* group in North and Central America. *The Bryologist*, 99(3), 292–314. <https://doi.org/10.2307/3244301>
- Wetmore, C. M. (1999). *Schedae Lichenes Exsiccati*. Fasc. 3. St. Paul: University of Minnesota.
- Wetmore, C. M. (2001). The *Caloplaca citrina* group in North and Central America. *The Bryologist*, 104(1), 1–11. <https://www.jstor.org/stable/3244910>
- Wetmore, C. M. (2004). The sorediate corticolous species of *Caloplaca* in North and Central America. *The Bryologist*, 107(4), 505–520. <https://www.jstor.org/stable/3244945>
- Wetmore, C. M. (2005). *Schedae Lichenes Exsiccati*. Fasc. 6. St. Paul: University of Minnesota.
- Wetmore, C. M. (2007). Notes on *Caloplaca cerina* (Teloschistaceae) in North and Central America. *The Bryologist*, 110(4), 798–807. <https://www.jstor.org/stable/20110908>

- Wetmore, C. M., & Kärnefelt, E. I. (1998). The lobate and subfruticose species of *Caloplaca* in North and Central America. *The Bryologist*, 101(2), 230–255. <https://doi.org/10.2307/3244201>
- Wiggins, I. L., & MacVicar, D. G., Jr. (1958). Notes on the plants in the vicinity of Chandler Lake, Alaska. *Contributions from the Dudley Herbarium, Stanford University*, 5, 69–95.
- Wiley, H. (1873). Statistics and distribution of North American lichens. *Bulletin of the Buffalo Society of Natural Sciences*, 1, 161–167. <https://doi.org/10.5962/bhl.title.41106>
- Williams, M. E., Rudolph, E. D., Schofield, E. A., & Prasher, D. C. (1978). The role of lichens in the structure, productivity, and mineral cycling of the wet coastal Alaskan tundra. In L. L. Tieszen (Ed.), *Vegetation and production ecology of an Alaskan Arctic tundra* (pp. 185–206). New York: Springer. https://doi.org/10.1007/978-1-4612-6307-4_7
- Wong, P. Y. (1993). Type specimens of lichens and lichenicolous fungi in the Canadian Museum of Nature (CANL). *Mycotaxon*, 47, 295–357.
- Worley, I. A. (1973). The “black crust” phenomenon in upper Glacier Bay, Alaska. *Northwest Science*, 47, 20–29.
- Yarie, J. (1983). Environmental and successional relationships of the forest communities of the Porcupine River drainage, interior Alaska. *Canadian Journal of Forest Research*, 13(5), 721–728. <https://doi.org/10.1139/x83-102>
- Yoshimura, I. (1968). The phytogeographical relationships between the Japanese and North American species of *Cladonia*. *The Journal of the Hattori Botanical Laboratory*, 31, 227–246.
- Yoshimura, I. (1971). The genus *Lobaria* of eastern Asia. *The Journal of the Hattori Botanical Laboratory*, 34, 231–364.
- Yoshimura, I., & Hawksworth, D. L. (1970). The typification and chemical substances of *Lobaria pulmonaria* (L.) Hoffm. *Shokubutsu Kenkyu Zasshi*, 45, 33–41.
- Zahlbruckner, A. (1904). Flechten. *Just's Botanischer Jahresbericht*, 32(2), 1–35.
- Zahlbruckner, A. (1921). *Catalogus Lichenum Universalis* (Vol. 1). Berlin: Borntraeger.
- Zahlbruckner, A. (1926). *Catalogus Lichenum Universalis* (Vol. 4). Berlin: Borntraeger.
- Zahlbruckner, A. (1931). *Catalogus Lichenum Universalis* (Vol. 7). Berlin: Borntraeger.
- Zavarzin, A., & Timdal, E. (2004). Note on the occurrence of *Nephroma occutum* Wetm. in Alaska. *Evansia*, 21(2), 101–102. <https://doi.org/10.5962/p.346593>
- Zhurbenko, M. (2002). *Arthonia triebeliae* (Arthoniales), a new lichenicolous fungus from the Arctic. *Mycological Progress*, 1(2), 137–141. <https://doi.org/10.1007/s11557-006-0012-0>
- Zhurbenko, M. (2007a). *Corticifraga santessonii* and *C. chugachiana* (Lecanoromycetes, Ascomycota), new species of lichenicolous fungi from the Holarctic. *Lichenologist*, 39(3), 221–226. <https://doi.org/10.1017/S0024282907006317>
- Zhurbenko, M. (2007b). A new species of *Unguiculariopsis* (Helotiales) on *Nephroma* from Alaska. *Mikologiä i Fitopatologiä*, 41, 126–129.
- Zhurbenko, M. (2009a). Lichenicolous fungi and some lichens from the Holarctic. *Opuscula Philolichenum*, 6, 87–120.
- Zhurbenko, M. (2009b). Lichenicolous fungi and lichens from the Holarctic. Part II. *Opuscula Philolichenum*, 7, 121–186.
- Zhurbenko, M. (2009c). New and interesting lichenicolous and hypocrealean fungi from the Northern Hemisphere. *Sydowia*, 61, 177–188.
- Zhurbenko, M. (2010). Lichenicolous fungi and lichens growing on *Stereocaulon* from the Holarctic, with a key to the known species. *Opuscula Philolichenum*, 8, 9–39.

- Zhurbenko, M. P. (2012). Lichenicolous fungi growing on *Thamnolia*, mainly from the Holarctic, with a worldwide key to the known species. *Lichenologist*, 44(2), 147–177. <https://doi.org/10.1017/S0024282911000739>
- Zhurbenko, M. (2015). *Sphaerellothecium siphulae* (Dothideomycetes incertae sedis), a new lichenicolous fungus on *Siphula ceratites* from the Arctic. *Nova Hedwigia*, 101(3–4), 419–425. https://doi.org/10.1127/nova_hedwigia/2015/0277
- Zhurbenko, M. (2020). Lichenicolous fungi from the Holarctic. Part III: New reports and a key to species on *Hypogymnia*. *Opuscula Philolichenum*, 19, 180–189.
- Zhurbenko, M. (2021). Lichenicolous fungi from the Holarctic. Part IV: New reports and a key to species on *Dermatocarpon*. *Opuscula Philolichenum*, 20, 44–53.
- Zhurbenko, M. P., & Alstrup, V. (2004). Lichenicolous fungi on *Cladonia* mainly from the Arctic. *Symbolae Botanicae Upsalienses*, 34(1), 477–499.
- Zhurbenko, M., & Dillman, K. (2010). *Polycoccum hymeniicola* comb. nov. (Dacampiaceae) and other interesting lichenicolous fungi from southeastern Alaska. *The Bryologist*, 113(2), 260–266. <https://doi.org/10.1639/0007-2745-113.2.260>
- Zhurbenko, M., & Etayo, J. (2012). *Stigmidium lobariae*, a new lichenicolous fungus from the Holarctic. *Mycosphere: Journal of Fungal Biology*, 3(1), 62–64. <https://doi.org/10.5943/mycosphere/3/1/7>
- Zhurbenko, M., & Laursen, G. (2003). Lichenicolous fungi from central Alaska: New records and range extensions. *The Bryologist*, 106(3), 460–464. <https://doi.org/10.1639/14>
- Zhurbenko, M. P., & Lumbsch, H. T. (2006). *Pertusaria christae* is a synonym of *P. saximontana*. *Lichenologist*, 38(5), 487–490. <https://doi.org/10.1017/S0024282906005767>
- Zhurbenko, M. P., & Ohmura, Y. (2018). Contributions to the knowledge of lichenicolous fungi on *Thamnolia*. *Opuscula Philolichenum*, 17, 368–373.
- Zhurbenko, M. P., & Pino-Bodas, R. (2017). A revision of lichenicolous fungi growing on *Cladonia*, mainly from the Northern Hemisphere, with a worldwide key to the known species. *Opuscula Philolichenum*, 16, 188–266.
- Zhurbenko, M., & Triebel, D. (2005). *Lasiosphaeriopsis pilophori* sp. nov. (Sordariales) and other lichenicolous fungi on *Pilophorus*. *Mycological Progress*, 4(4), 317–323. <https://doi.org/10.1007/s11557-006-0136-2>
- Zhurbenko, M., & Triebel, D. (2008). Three new species of *Stigmidium* and *Sphaerellothecium* (lichenicolous ascomycetes) on *Stereocaulon*. *Mycological Progress*, 7(3), 137–145. <https://doi.org/10.1007/s11557-008-0559-z>
- Zhurbenko, M., Santesson, R., Walker, D. A., Auerbach, N. A., & Lewis, B. (1995). New and interesting lichenicolous fungi and lichens from Alaska. *Evansia*, 12(3), 92–97. <https://doi.org/10.5962/p.346057>
- Zhurbenko, M. P., Laursen, G. A., & Walker, D. A. (2005). New and rare lichenicolous fungi and lichens from the North American Arctic. *Mycotaxon*, 92, 201–212.
- Zhurbenko, M. P., Enkhtuya, O., & Javkhlan, S. (2019). A first synopsis of lichenicolous fungi of Mongolia, with the description of five new species. *Plant and Fungal Systematics*, 64(2), 345–366. <https://doi.org/10.2478/pfs-2019-0023>
- Zhurbenko, M. P., Stepanchikova, I. S., & Himelbrant, D. E. (2020). New species and new records of lichenicolous fungi from the Kamchatka Territory of Russia. *Herzogia*, 33, 512–524.

Bibliotheca Lichenologica Vol. 112

Toby Spribille, Alan M. Fryday, Celia J. Hampton-Miller, Teuvo Ahti,
Karen Dillman, Göran Thor, Tor Tønsberg and David Schirokauer

Compendium of the Lichens and Associated Fungi of Alaska

Alaska possesses one of the world's truly spectacular lichen biotas. Lichens play a major role in the terrestrial vegetation of Alaska and are part of the daily lives of both its wildlife and human inhabitants. They are also among the most species-rich of inventoried organismal groups in Alaska.

It has been almost 120 years since a comprehensive inventory of Alaska's lichens has been attempted, and available data on the region's lichens and associated fungi has increased dramatically in this time. Volume 112 of *Bibliotheca Lichenologica*, available freely as an Open Access publication (CC-BY-NC license), presents a catalog of 2126 accepted taxa fully referenced with published reports and their localities. Nearly half of these species have been first reported since 1997.

The present project was initiated in 2008 with the goal of providing an up-to-date and comprehensive baseline for assessing the lichen species that have been documented to occur in Alaska. During the intervening 15 years, interest in Alaskan lichens has increased greatly, and some of the most comprehensive species inventories to date have been undertaken in the state's large protected areas. The baseline and literature summary for lichens and lichen-associated fungi in the present volume is among the most comprehensive to date for any high latitude region, and represents an invaluable resource for future lichen studies in arctic and temperate regions.

www.borntraeger-cramer.de

DOI: 10.1227/bibl_lich/2023/112
ISBN 978-3-443-58093-3
ISSN 1436-1698 (Series)

