

Abundance, Population structure and Production of *Hydrobia ventrosa* (Gastropoda: Prosobranchia) in a Mediterranean brackish lagoon, Lake Ichkeul, Tunisia

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With 5 figures and 3 tables

Abstract: Abundance, growth and production of the mud snail *Hydrobia ventrosa* (MONTAGU) were studied in the Ichkeul wetland, northern Tunisia. *H. ventrosa* occurred at annual mean densities (biomass) from 370 ± 78 individuals/m² (0.17 ± 0.03 g ash-free dry mass/m²) in the macrophyte-free area to $23\,475 \pm 9\,876$ individuals/m² (9.86 ± 3.48 gAFDM/m²) in the macrophyte covered areas. Mean aboveground macrophyte biomass was maximum in September followed by a complete breakdown of the *Potamogeton pectinatus* L. meadow from October onward due to high salinity. Only the meadow of *Ruppia cirrhosa* (PETAGNA) GRANDE at Tinja remained in place. Abundance and biomass of *H. ventrosa* were positively related to the macrophyte biomass ($p < 0.001$). Age class I was recruited twice: in May–June and in September. The first recruited cohort reached a mean length of 2.03 ± 0.04 mm in November. In the second recruited cohort, no growth was found after November, and their mean length remained around 1.29 ± 0.02 mm. Maximum length of age class II rarely exceeded 2.85 mm (mean = 2.78 ± 0.07 mm) and the average life span is approximately 13–15 months. The mean annual production of *Hydrobia ventrosa* for the whole lagoon (90 km²) was 11.86 g AFDM/m² (3.51 g C/m², 0.34 g N/m²) i. e. 85 % at Sejnene area (30.5 km²), 1 % in the Centre (49.6 km²), 4 % at Tinja area (3.0 km²) and 11 % at Joumine area (6.9 km²). The annual P/B ratio was about 3. On the basis of this value, *H. ventrosa* consumed 23 % of the energy income from the macrophytes during the study

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