Biology and biogeography in polar environments

SOME DATA ABOUT LIFE CYCLE AND GROTH OF BOECKELLA POPPEI FROM LAKES OF EIGHT ISLAND, WILHELM ARCHIPELAGO

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The crustacean Boeckella poppei (Mrazek, 1901) (Calanoida: Centropagidae) is one of the main species of freshwater zooplankton of the Maritime Antarctic (Nabokin et. al., 2023).

To understand the mechanism and distribution pathways in terms of adaptation of this widespread species to Antarctic conditions, knowledge of the parameters of its life cycle is necessary.

The size of B. poppei is known to vary from population to population (Weller, 1977; Pociecha & Dumont, 2007), perhaps due to the differences in latitude and the related environmental factors. We studied the animal's life cycle, growth rate, and developmental features in two lakes on Eight Island, Wilhelm Archipelago (65º13.550'S 64º12.600'W, 1st lake and 65º13.530'S 64º 12.601'W, 2nd lake). The samples were collected in the season 2023–2024 every two weeks.

Only nauplia were present in the first sample (December) from the 1st lake. Both lakes contained only adults in the last two samples (March). The density was lowest in January (0.46 / L). It peaked in March, at the end of the season, at 1.52 / L. The size varied from 0.33 mm (nauplia) to 2.41 mm (adult females). The males were smaller and somewhat less abundant (≈1:1,14), which agrees with the literature. The development to adulthood took around two months, slightly less than reported by Pociecha and Dumont (2007), perhaps adapted to a shorter hydroperiod.

References

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