Abstract

Colacium vesiculosum (Euglenophyceae) is an epibiont common on planktonic microcrustaceans of continental waters. The interaction between epibionts and substrate organisms is not very well known, particularly in subtropical environments of South America. In the present work, we analyzed the prevalence, density, biomass and attachment sites of C. vesiculosum on planktonic microcrustaceans from Paiva Lake, a subtropical lake of Argentina. With the aim to evaluate whether epibionts affect the filtering rates of Notodiaptomus spiniger, the dominant planktonic crustacean, we carried out bioassays using phytoplankton <53µm. Crustaceans were sampled using a PVC tube (1.2m long and 10cm in diameter), filtering 50L of water through a 53µm-mesh. Microcrustaceans were counted in Bogorov chambers under a stereoscopic microscope. The infested organisms were separated and observed with a photonic microscope to determine density and biovolume of epibionts, by analyzing their distribution on the exoskeleton. The prevalence of C. vesiculosum was higher in adult crustaceans than in their larvae and juveniles. The most infested group was that of calanoid copepods, related to their high density. The attachment sites on the exoskeleton were found to be the portions of the body which have a higher probability of encounter with epibionts during locomotion and feeding, i.e., antennae and thoracic legs in copepods, and thoracic legs and postabdomen in cladocerans. The similar values found in the filtering rate of infested and uninfested individuals of N. spiniger and the constant prevalence (<40%) of epibiont algae, suggest that C. vesiculosum does not condition the life of planktonic crustaceans of Paiva Lake.

Keywords

Epibiont, Colacium vesiculosum, prevalence, bioassay, Notodiaptomus spiniger, filtering rate, shallow lake.