



Protozoa in the Lake Balaton at Fonyód (Southern Shore)

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Lake Balaton the largest lake in central Europe is a shallow calcareous lake of an average depth of 3m. Testate amoebid fauna has not been studied in Lake Balaton since the early seventies, thus this work is intended as the first modern well-illustrated report to be published on this rather neglected group. Testate amoebids have many names, called also arcellaneans or thecamoebids, a freshwater living group, that morphologically reminds us to the well-known foraminifera from marine environments. Three sampling campaigns were carried out in 22nd June 2005, 15th March 2008 and 4th July 2018 taking sediment samples off the shore at SW Balaton, Fonyód Beach. Samples were picked under the light microscope for tests, then representatives of important taxa were mounted for SEM (Scanning Electron Microscope) photographs. Meteorological data was collected from the Hungarian Meteorological Service e.g. temperature and precipitation of the area before sampling time. In 2005 *Centropyxis* species were dominant, and by 2008 *Diffugia urceolata* took over dominance, while *Centropyxis* became less abundant. Tintinnids appeared in the fauna in 2008 the first time, to be found the most frequent taxonomic group by last summer (2018). In the 2018 assemblage *Diffugia* species were also present. The abundance of tintinnids seem to be controlled by precipitation, as 2018 had the most rainfall before sampling, where they are dominant. The *Centropyxis* species are rather stress tolerant, so many stress factors can explain their dominance in 2005, perhaps related to the infamous negative water budget and low lake levels of previous years. Highest abundance of testate amoeba in the sediment was found associated to submerged macrophytes on muddy substrate. In spite of the fact, that testate amoebids were rather rare in the material and not too diverse in Fonyód, this study demonstrates the potential of testate protists preserved as microfossils in paleo environmental reconstruction. Further studies are needed to provide more information on testate protist distribution and ecology from the entire lake.