

Monograph of the family Euplotidae Ehrenberg, 1838 (Ciliophora, Spirotrichea)

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The Euplotidae are an important, relatively homogenous subgroup of the Euplotia, one of the three major groups (Oligotrichia, Hypotrichia) of the spirotrichous ciliates. The predominantly benthic euplotids are widely distributed in marine and limnetic habitats (including sewage treatment plants); few species live in terrestrial habitats. The euplotids are a very uniform group compared to the hypotrichs. Most species are small or medium-sized, often distinctly sculptured, have 8–10 frontoventral cirri, 5 transverse cirri, 3 or 4 marginal and caudal cirri, and 8–10 dorsal kineties. An important morphological feature is the striking silverline system of the dorsal side. The nuclear apparatus is composed of a strongly curved macronucleus and a micronucleus. The contractile vacuole is in the posterior body portion near the right cell margin. Until now, more than 160 species, subspecies, varieties, and forms have been described and more than 4000 papers have been published on this group. In recent classifications, usually four genera or subgenera are accepted, namely *Euplotes*, *Euplotoides*, *Euplotopsis*, and *Moneuplotes*. However, this morphological separation is only partly supported by gene sequence data. The present monograph will have the same structure like the Monograph of the Hypotricha (Monographiae Biologicae, Springer) by H. Berger. The project comprises, inter alia, the following points: (i) The critical revision of the available data is the major part of the project. (ii) Description of the supposed ground pattern on the basis of a detailed analysis of all relevant features as well phylogenetic analyses. (iii) Investigation of some new populations mainly from limnetic and marine (Adriatic Sea) habitats with classical morphological methods. The monograph of the euplotids will be not only an important reference book for taxonomists dealing with this group, but also a comprehensive source of information for biologists of other disciplines (e.g., ecology, molecular biology, physiology). The PDF-file of the monograph will be freely available (Open Access). However, on safety grounds a printed version will guarantee long-term availability (>100 years). Supported by the Austrian Science Fund (FWF) Project 26974-B25.