

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

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The FWF-project “*Monograph of the family Euplotidae Ehrenberg, 1838 (Ciliophora, Spirotrichea)*” deals with single-celled organisms belonging to the ciliated protozoa (= ciliates or Ciliophora). The generally known *Paramecium* (“slipper animalcule”) and the “bell animalcules” (e.g., *Vorticella*) are also ciliates, however, they belong to different subgroups. The main goal of the project was to compose a book (a monograph) about the species of the family Euplotidae. A monograph treats the systematics (morphology, ecology, genealogical relationships, distribution, etc.) of a group in the most complete detail possible (Winston 1999, p. 121; “Describing species”, Columbia Univ. Press). The present monograph is basically a sequel of a series treating a closely related group of ciliates, the hypotrichs; for details on this group, see <https://www.protozoology.com/monograph/index.html>. Originally, it was planned to treat all species of the family in a single volume. About 170 species have been described since 1758, the beginning of zoological nomenclature. Until 1978, almost all species have been classified in the genus *Euplotes* Ehrenberg, 1830. Later, this genus was split and the present monograph deals with the members of the genus *Euplotoides* Borror & Hill, 1995 and some little-known species perhaps also belonging to this genus. *Euplotoides* species have several interesting features in common (e.g., nine frontoventral cirri, a double silverline pattern on the dorsal side, symbiotic bacteria) and live mainly in freshwater. The monograph comprises 16 valid species, several of them are very well known, for example, *E. patella*, *E. eurystomus*, *E. aediculatus*. However, in total 42 nominal species and subordinate taxa (subspecies, varieties, forms) are treated. The 26 invalid taxa are either junior synonyms of the valid species or species which cannot be recognized from the original description (species indeterminata). About 2000 papers about *Euplotoides* species have been published between 1773 and 2017. The common *Euplotoides patella* (type species of the genus) was already discovered by Müller (1773; *Vermium Terrestrium et Fluviatilium*, Heineck & Faber) and is thus mentioned in more than 700 papers. Each of the about 550 faunistic records from the literature is listed in detail and thus the monograph is the first work where the geographic distribution of this and the other species is presented comprehensively. Three species (*E. patella*, *E. eurystomus*, *E. aediculatus*) are used as biological indicators of water quality and thus the monograph is not only very useful for taxonomists dealing with ciliates, but also valuable for practitioners dealing with water quality or sewage treatment. Another important topic of the monograph is nomenclature (= assigning names to the groupings found). All scientific names mentioned in the monograph are explained in detail and registered in ZooBank, the official registry of zoological nomenclature (www.zoobank.org). The book will be published in Denisia (Linz, Upper Austria) in 2018.

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https://www.protozoology.com/monograph_euplotidae/index.htm

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