

## Monograph of the Hypotricha (Ciliophora). Part 5

by

**Helmut Berger**

Consulting Engineering Office for Ecology, Radetzkystrasse 10, 5020 Salzburg  
[office@protozoology.com](mailto:office@protozoology.com); <http://www.protozoology.com>

The Hypotricha are a group of the Ciliophora (= ciliates) which is common in freshwater, saltwater (sea, salt lakes), and soil. The ciliates are single-celled microorganisms with a true nucleus, which is composed of two components (macronucleus and micronucleus). Since 1758, the beginning of zoological nomenclature, about 1000 hypotrichs – distributed in about 200 genera – have been described. The last detailed revision of species was provided by Kahl (1932, Tierwelt Dtl., 25, 399–650). However, since then many new species have been discovered, mainly from soil and the sea, and a high number of the long-known species has been redescribed with modern methods. Mainly for that reason a thorough revision of the hypotrichs has been started about 25 years ago. Prior to the present project three volumes were already available (Oxytrichidae, Berger 1999, [Monographiae Biologicae](#) [MB, Springer Publisher] 78: 1092 S; Urostyloidea, Berger 2006, MB 85: 1318 S; Amphiseliidae and Trachelostylidae, Berger 2008, MB 88, 753 S), supported, inter alia, by the Austrian Science Fund FWF and the AAS. In the framework of this project (1 person, 3 years, 20 h per week) smaller, rather difficult subgroups of the hypotrichs have been treated, inter alia the Gonostomatidae and the Uroleptidae. The gonostomatids have been published in volume 4, together with the Kahliellidae (Berger 2011, MB 90, 755 S). Volume 5 of the monograph is still in process and will be published very likely in early 2012. The genus *Gonostomum* was already revised in volume 1 (Oxytrichidae); however, the new interpretation of morphological data on the basis of molecular trees resulted in new hypotheses. Accordingly, this and related genera (e.g., *Wallackia*, *Paragonostomum*) very probably do not belong to the oxytrichids, but they obviously split off near the base of the Hypotricha tree. The kahliellids are likely a heterogeneous group and characterised by the preservation of parental cirri and/or dorsal bristles in postdividers. The uroleptids, previously assigned to the urostyloids because in both groups the ventral cirri form a conspicuous zigzag pattern, belong to the so-called “non-oxytrichid Dorsomarginalia”, a paraphyletic group with a dorsal bristle row pattern which is somewhat more complex than that of the gonostomatids, urostyloids, and amphiseliids, but not so complex like that of the oxytrichids. The uroleptids are not only taxonomically difficult, but also nomenclaturally because Ehrenberg, who described the genus in 1831, did not fix a typical species; in addition, the subsequent fixation by Borror in 1972 is also not beyond dispute. Volume 5 is the penultimate part of the Monograph of Hypotrichs. For details see [http://www.protozoology.com/projects/monograph\\_part-5/index.html](http://www.protozoology.com/projects/monograph_part-5/index.html).