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Revision of *Acrochordonoposthia* Reisinger, 1924 (Rhabditophora, Typhloplanidae, Protoplanellinae) with the description of one new species

ALBRECHT M. HOUBEN¹, WILLEM PROESMANS^{1,2}, WIM BERT² & TOM J. ARTOIS¹

¹Hasselt University, Centre for Environmental Sciences, Research Group Zoology: Biodiversity & Toxicology, Agoralaan Gebouw D, B-3590 Diepenbeek, Belgium (e-mail: albrecht.houben@uhasselt.be; tom.artois@uhasselt.be)

²Ghent University, Department of Biology, Nematology Unit, Ledeganckstraat 35, B-9000 Ghent, Belgium.

Abstract

An overview of the morphology, taxonomy and distribution of all known species of the rhabdocoel taxon *Acrochordonoposthia* is provided. One new species *A. vandeputae* n. sp. is described from Graz (Austria). This new species can easily be distinguished from its congeners by the morphology of its copulatory organ, which contains a straight cirrus lined with spines. All species of *Acrochordonoposthia* are compared with one another, and an updated identification key is provided.

Key words: Platyhelminthes, flatworms, microturbellaria, (limno)terrestrial, biodiversity, taxonomy

Introduction

As is the case for most microturbellarians, rhabdocoel flatworms are generally thought of as aquatic animals, occurring in sediments and/or epiphytically on plants and algae in marine, brackish and freshwater habitats. As a result, the vast majority of taxonomic and systematic literature on rhabdocoels deals with aquatic species. However, rhabdocoels are also not uncommon in terrestrial habitats, but these enigmatic animals are understudied to say the least (see Van Steenkiste et al. 2010 for a recent overview). Only 46 out of the ±1650 rhabdocoel species described can be considered (limno)terrestrial.

With the exception of two provorticids *Archivortex silvestris* Reisinger, 1924 (in Reisinger 1924a), *Haplovortex bryophilus* Reisinger, 1924 (in Reisinger 1924b) and *Ventriciliella romanae* Kolasa, 1977, a species incertae sedis, all terrestrial rhabdocoels were traditionally placed within Typhloplanidae Graff, 1905, a taxon almost exclusively containing freshwater species (for details see Van Steenkiste et al. 2013). Most of the limnoterrestrial typhloplanid species are placed within the subfamily Protoplanellinae, which in total contains 49 species (Tyler et al. 2006–2012; Artois et al. 2013 Feb. 2). Within Protoplanellinae, the taxon *Acrochordonoposthia* Reisinger, 1924 (in Reisinger 1924a) is the second most species-rich genus, with eight valid species. Five of these species (*A. apopera*, *A. conica*, *A. nemoralis*, *A. ophiocephala* and *A. reversa*) were described by Reisinger (1924b) when he introduced the genus. More than thirty years later, An der Lan (1958) and Luther (1963) introduced two new species: *A. ramolia* and *A. robusta* respectively, but both descriptions were based on very little material, that of *A. robusta* even on one single specimen that was disintegrating while Luther (1963) studied it. As a consequence, the descriptions of these species are incomplete. The last-documented species, *A. diademula* was described by Schwank (1980). All species are only known from the European continent, except for *A. conica*, which is also recorded from Greenland (Steinböck & Reisinger 1931; Steinböck 1932; Luther 1963), and all occur on plants, mostly mosses.

During a number of sampling campaigns in Austria, Belgium and Germany, we found several specimens of *Acrochordonoposthia*, belonging to four different species, including one new one. Identification of these specimens appeared to be far from straightforward, mostly because the original descriptions lack detail. Therefore, we decided to provide a morphological and taxonomical overview of all species in order to facilitate future identification and research on these species.

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