



Koinocystididae and Gnathorhynchidae (Platyhelminthes: Rhabdocoela: Kalyptorhynchia) from the Galapagos, with the description of three new species

PATRICK C. REYGEL¹, WIM R. WILLEMS & TOM J. ARTOIS

Research Group Zoology: Biodiversity & Toxicology, Centre for Environmental Sciences, Hasselt University, Campus Diepenbeek, Agoralaan, Building D, B-3590 Diepenbeek, Belgium

¹Corresponding author. E-mail: patrick.reygel@uhasselt.be

Abstract

Seven species of eukalyptorhynch flatworms from the Galapagos Islands are reported. Six of them belong to the taxon Koinocystididae Meixner, 1924, three of which are new to science. Two of these new species can be attributed to the genus *Itaipusa* Marcus, 1949 based on the construction of the prostate vesicle and the general structure of the female system. *Itaipusa biglandula* n. sp. is characterised by a very short, muscular, unarmed penis papilla, whereas *I. renei* n. sp. is characterised by the presence of a cirrus armed with minute scales, and two large, blunt hooks in the male atrium. The third new species cannot be placed in any existing taxon and therefore a new genus is erected: *Galapagetula annikae* n. gen. n. sp. It is characterised by a straight and rather long cirrus, armed with small spines, and a clearly bipartite bursa in the female system. Additional morphological information is given for the three known species of Koinocystididae: *I. divae* Marcus, 1949; *I. variodentata* (Karling, Mack-Fira & Dörjes, 1972) Karling, 1978 and *Utelga heinckei* (Attems, 1897) Karling, 1954. For *I. divae* a new locality from Curaçao is also mentioned. The seventh species is a species of Gnathorhynchidae: *Prognathorhynchus eurytuba* Ax & Armonies, 1987, for which new morphological information on the organisation of the genital system is given.

Key words: free-living flatworms, Eukalyptorhynchia, taxonomy, biodiversity

Introduction

With in total 64 species recorded, the marine interstitial flatworm fauna of the Galapagos Islands is rather well-known (Ax & Ehlers 1973; Ax & Ax 1974a, b; Ehlers & Ax 1974; Sopott-Ehlers & Schmidt 1974a, b, 1975; Schmidt & Sopott-Ehlers 1976; Ax & Ax 1977; Ehlers & Ehlers 1981; Noldt & Hoxhold 1984; Ehlers & Sopott-Ehlers 1989; Artois & Schockaert 1999, 2000, 2001). This material was collected during intensive sampling campaigns by members of the Zoological Institute of the Göttingen University, during a broad-scale study on the interstitial fauna of the archipelago. A large number of species of Kalyptorhynchia, free-living flatworms characterised by the presence of a muscular proboscis, were present in the material. Part of this material was treated in four papers: one (Noldt & Hoxhold 1984) dealing with 10 new species of Schizorhynchia, kalyptorhynchs with a split proboscis, the other three (Artois & Schockaert 1999, 2000, 2001) dealing with in total 14 species of the eukalyptorhynch taxon Polycystididae Graff, 1905.

In this paper, a total of seven species is reported, six of them belonging to the Koinocystididae Meixner, 1924, while one is a member of the Gnathorhynchidae Meixner, 1929. Three of the koinocystidid species are new to science and are formally described and their taxonomical position is discussed. The remaining species of Koinocystididae, as well as the gnathorhynchid species are reported from the Galapagos for the first time. The material of the species of Gnathorhynchidae, *Prognathorhynchus eurytuba* Ax & Armonies, 1987, is of particular interest, as it reveals some important new morphological details, which could have implications for the taxonomy within the taxon Gnathorhynchidae.