



First report on Rhabdocoela (Rhabditophora) from deep parts of Skagerrak, with the description of four new species

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Abstract

In this contribution we report on 13 species of Rhabdocoela, found during a marine inventory of Skagerrak by the Swedish Taxonomy Initiative. Four new species are described, two of which are Kalyptorhynchia (Gnathorhynchidae and Polycystididae) and two belong to Dalytyphloplanoida (Solenopharyngidae). *Uncinorhynchus vorago* **sp. nov.**, (Gnathorhynchidae) has a triangular stylet consisting of a double-folded plate, which proximally forms a tube, but without a distal, needle-shaped tip. *Austrorhynchus artoisi* **sp. nov.** (Polycystididae), has two prostate stylets. Prostate stylet type II consists of a distal tube and a short proximal funnel, which has a stirrup-shaped ornament, whereas the stylet type III shows an unpronounced foot and style connected to each other by a narrow clasp and a comb-bearing plate. The foot and plate are connected to a thread-like flagellum. *Lenopharynx bathos* **sp. nov.** (Solenopharyngidae) resembles *Lenopharynx tubatus* Schockaert & Martens, 1985, but differs in the detailed structure of the stylet and by the lack of colouration and eyes. *Proceropharynx profundum* **sp. nov.** has a unique combination of small spines and hard ridges on the cirrus. Additional data are given for the remaining nine species, three of which are new for the Swedish fauna. *Espegrendia norvegica* Westblad, 1954 (Solenopharyngidae) is redescribed. For the sake of completeness, two more species are mentioned. One is identified as a new species of *Acrumena* Brunet, but lack of material prevents its formal description. The second one is probably a representative of the taxon *Ceratopera* Den Hartog, but cannot be identified with certainty because of the poor quality of the preserved material. This contribution is one of very few reports on Rhabdocoela collected from a depth exceeding 100 m and some preliminary biogeographical remarks are therefore given.

Key words: Platyhelminthes, turbellaria, Kalyptorhynchia, Dalytyphloplanida, taxonomy, biodiversity, deep-water

Introduction

Most studies dealing with marine rhabdocoels concern littoral and sublittoral localities down to 20 m depth. Records of rhabdocoels from locations with a depth range between 20 and 100 m are scarce (e.g. Karling 1952a, 1953, 1967, 1974; Noldt 1989 a-b, Willems *et al.* 2004a). There are very few reports of rhabdocoel species from depths exceeding 100 m, the only ones coming from some subantarctic islands (125-350 m; Reisinger 1926; Karling 1952a; Westblad 1952), the Weddell Sea (265-600 m; Artois *et al.* 2000), the Arctic (110-300 m; Steinböck 1932) and the Norwegian coast (Westblad 1954; Rieger & Sterrer 1975). These few deepwater surveys have revealed a total of 21 species of Rhabdocoela, of which 12 were newly described in the above mentioned reports. Furthermore, some yet undescribed species were collected at a depth of 2000 m (Artois *et al.* 2000), which indicates that there is a large potential of finding new rhabdocoel species in deeper waters.