

New acoels (Acoela, Acoelomorpha) from North Carolina

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Abstract

From a survey of interstitial acoel flatworms at Lockwoods Folly Inlet, Oak Island, North Carolina, the new species *Anaperus singularis* **sp. nov.** (Anaperidae), *Diopisthoporus lofolitis* **sp. nov.** (Diopisthoporidae), *Conaperta earnhardti* **sp. nov.** (Convolutidae), *Kuma flava* **sp. nov.** (Haploposthiidae), *Pseudohaplogonaria cerasina* **sp. nov.** (Haploposthiidae), and *Proporus carolinensis* **sp. nov.** are described. Seven previously described acoel species and one nemertodermatid species were also collected from Lockwoods Folly, these were: *Diopisthoporus gymnopharyngeus*, *Endocincta punctata*, *Neochildia fusca*, *Parahaploposthia thiophilus*, *Paratomella rubra*, *Polychoreus caudatus*, *Pseudaphanostoma smithrii*, and *Flagellophora apelti*. A previously described species, *Anaperus trifurcatus* (Anaperidae) is transferred to the genus *Amphiscolops* (Convolutidae).

Key words: Acoelomorpha, meiofauna, turbellarians, *Anaperus*, *Diopisthoporus*, *Conaperta*, *Pseudohaplogonaria*, *Kuma*, *Proporus*

Introduction

Acoels from North Carolina have been used in many important investigations of flatworm ultrastructure (e.g., Tyler 1973, Crezée 1975, Crezée & Tyler 1976, Doe 1981, Smith & Tyler 1985, Rieger et al. 1991), and eight of the 40 acoel species known from the Atlantic coast of North America were originally described from North Carolina (see Hooge & Tyler 2003), including four species of the genus *Solenofilomorpha* (see Crezée 1975). There are many more acoels in North Carolina that have yet to be described, and we found that the shallow subtidal of Lockwoods Folly Inlet, Oak Island, North Carolina is especially abundant with acoel flatworms. We herein describe six previously unknown species, and report range extensions for two additional species.