Two new acoels (Acoela, Platyhelminthes) from the central coast of California

MATTHEW D. HOOGE & SETH TYLER

Department of Biological Sciences, The University of Maine, 5751 Murray Hall, Orono, ME 04469-5751, USA
E-Mail: hooge@umit.maine.edu
E-Mail: styler@maine.edu

Abstract

From a survey of interstitial acoel flatworms at Bodega Bay, California, the new species *Haplogonaria phyllospadicis* **sp. nov.**, (Haploposthiidae) and *Stylomecynostomum bodegensis* **gen. nov. sp. nov.** (Mecynostomidae) are described, and new distributional records for two species of acoels, *Raphidophallus actuosus* (Convolutidae) and *Paratomella rubra* (Paratomellidae), previously unknown from the Pacific coast of North America, are also reported.

Key words: Acoelomorpha, meiofauna, turbellarians, *Childia, Haplogonaria, Paratomella, Polychoerus, Raphidophallus, Stylomecynostomum*

Introduction

Acoel turbellarians live in a variety of marine environments, but the majority of species are found interstitially in silty sediment. As such, the highly exposed, clean sand that is common for much of California's intertidal zone is not ideal habitat for acoels. To date, of the 10 acoels positively identified from the Pacific coast of North America (see Kozloff 2000 for review) only two species, *Polychoerus carmelensis* Costello & Costello, 1938, and *Childia groenlandica* (Levinsen, 1879), have been reported from California. *P. carmelensis*, a large (4 mm long) ovoid-shaped worm, was described from the rocky intertidal of Carmel Bay, California, where it was found in great numbers in tide pools, and it was found in the intertidal zone on the Monterey Peninsula at least as recently as 1994, although its numbers appear to have decreased over the past decade (J. Pearse, personal communication). *C. groenlandica* is a cosmopolitan species, which has been found at several North American locations, including subtidally in the San Francisco Bay, California (Hyman 1959). Other reports of acoels from California include an unidentified species