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First record of Sphaerodoridae (Phyllodocida: Annelida) from hydrothermal vents

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Abstract

Sphaerodoropsis anae **n. sp.** is described from sediments near active hydrothermal vents along the northern part of the Pacific Antarctic ridge, adjacent to the Easter Microplate. Two distinct features principally characterize *Sphaerodoropsis anae* **n. sp.**, the presence of a well-developed proventricle, quite similar to the proventricle found in Syllidae, and bi-dentate compound chaetae with spinulation. It is also characterized by the presence of four macrotubercles per transverse row, with the lateral ones pear-shaped and the median macrotubercles spherical and smaller. Types of other *Sphaerodoropsis* species were examined and *Sphaerodoropsis biserialis* (Berkeley & Berkeley, 1944) also has compound chaetae with spinulation. This feature was not previously described in this species. Some comments about the current systematics of *Sphaerodoropsis* and Sphaerodoridae are made, as well as a discussion of the proventricle.

Key words: *Sphaerodoridae*, *Sphaerodoropsis*, deep sea, Polychaeta, proventricle, Syllidae

Introduction

Sphaerodoridae Malmgren, 1867 is a small group of phyllodocid polychaete annelids where the body surface is covered by macro- and microtubercles and/or papillae that are often segmentally arranged in transversal rows (Pleijel, 2001). Sphaerodoridae currently comprises 85 species in 10 genera (Bakken, 2002) and are well represented in deep waters, with a considerable number known exclusively from bathyal or abyssal depths (Borowski, 1994). The generic classification and diagnostic characters were revised and discussed by Fauchald (1974), and Pleijel (2001) made a brief survey of the family.

Few studies have dealt with the phylogenetic relationships of Sphaerodoridae within Phyllodocida and these have conflicted on the group's placement. Rouse & Fauchald,

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