Serpulids (Annelida: Polychaeta) from the Eastern Pacific, including a brief mention of Hawaiian serpulids

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Table of contents

Abstract ........................................................................................................................................... 4
Resumen ......................................................................................................................................... 4
Introduction ................................................................................................................................. 4
Material and methods ................................................................................................................ 5
Results ........................................................................................................................................ 8
Key to Eastern Pacific species of serpulids sensu stricto, including Hawaii ............................ 8
Systematics .................................................................................................................................. 12
Family Serpulidae Rafinesque, 1815 ......................................................................................... 12
   Genus Apomatys Benedict, 1887 .......................................................................................... 12
   Genus Bathyvermilia Zibrowius, 1973 ................................................................................ 14
   Genus Crucigera Benedict, 1887 ......................................................................................... 16
   Genus Ficopomatus Southern, 1921 ................................................................................... 19
   Genus Hyalopomatus Marenzeller, 1878 ............................................................................ 21
   Genus Hydroides Gunnerus, 1768 .................................................................................... 22
   Genus Laminatubus ten Hove & Zibrowius, 1986 ............................................................... 30
   Genus Placostegus Philippi, 1844 ..................................................................................... 30
   Genus Pomatoceros Philippi, 1844 ..................................................................................... 31
   Genus Pomatoleios Pixell, 1913 ......................................................................................... 33
   Genus Pomatostegus Schmarda, 1861 ................................................................................ 34
   Genus Protis Ehlers, 1887 .................................................................................................... 34
   Genus Protula Risso, 1826 .................................................................................................... 35
   Genus Pseudochitonopoma Zibrowius, 1969 ...................................................................... 38
   Genus Pseudovermilia Bush, 1907 ...................................................................................... 39
   Genus Pyrgopolon de Montfort, 1808 .................................................................................. 42
   Genus Salmacina Claparède, 1870 ...................................................................................... 43
   Genus Semivermilia ten Hove, 1975 .................................................................................. 45
   Genus Serpula Linnaeus, 1767 ............................................................................................ 45
   Genus Spirorhynchus de Blainville, 1818 .......................................................................... 48
   Genus Vermiliopsis de Blainville, 1818 ............................................................................ 53
Concluding remarks .................................................................................................................. 53
Acknowledgements .................................................................................................................... 54
References .................................................................................................................................. 55
Appendix 1. Checklist of serpulids s.s. from the Eastern Pacific ........................................... 60
Abstract

Serpulids are an important component of benthic hard-bottom communities, including fouling communities developing on natural and artificial substrates. This paper provides an overview of the serpulid fauna in the Eastern Pacific, including a brief mention of Hawaiian species. Fifty-eight serpulid species belonging to 21 genera were recorded in this area. Approximately 2,300 specimens were examined and 41 species were identified from the Eastern Pacific (Alaska to Chile) and Hawaii. Several specimens were recently collected, mainly in localities from the Pacific coast of Mexico and other localities from Panama and Hawaii; type material and additional specimens were revised in museum collections. The most diverse genus was, by far, *Hydroides* (21 species, 36.2%), followed by *Protula* and *Spirobranchus* (four species each, 6.9%). A new species, *Bathyvermilia kupriyanovae* n. sp., is described from deep waters off California and three species, *Pomatoleios* sp., *Serpula cf. hartmanae* and *Spirobranchus cf. gaymardi*, need further study for their correct determination. For each species, one or two important references, a material examined section, a brief diagnosis, habitat and updated distributional information are included. Taxonomic remarks of several species and a meristic exploratory analysis of two *Spirobranchus* species are included. An identification key, illustrations and a checklist of all the species recorded in this region are provided.

Key words: *Bathyvermilia*, *Ficopomatus*, fouling species, *Hydroides*, *Protula*, *Serpula*, *Spirobranchus*

Introduction

The Eastern Pacific extends from Point Barrow, Alaska, to the Magellan Strait, Chile (Fig. 1). The Eastern Pacific subdivisions into zoogeographical regions or provinces are recognized mainly by the geographical distribution of molluscs, crustaceans and echinoderms in tropical, subtropical, temperate and cold waters; however, the geographical limits of these regions (or provinces) varies from one author to another (Sverdrup et al. 1942; Keen 1971; Briggs 1974; Brusca 1980; Carvacho 1980; Maluf 1988; Hendrickx 1995).

The Eastern Pacific is characterized by cold waters from Alaska to Northern California, by temperate-subtropical waters from Central California to the western coast of Baja California Peninsula, by extensive tropical waters from Gulf of California to Peru, and another temperate-cold water region from Peru to Chile (Brusca 1980).

Since a strong North Equatorial current brings surface water from Western Mexico to Hawaii, combined with ship-transport, the Hawaiian Archipelago serpulids mostly originate from the American Pacific (cf. Bastida-Zaval & ten Hove 2003b). For this reason, the Hawaiian Archipelago is included in the present work (Fig. 1).