



# Article

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## Capitellidae Grube, 1862 (Annelida: Polychaeta) from the Hawaiian Islands with description of two new species

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### Abstract

A survey of the capitellids from the Hawaiian Islands has yielded 16 species in seven genera, most represent new records and two species are newly described, *Notodasus dasybranchoides* sp. nov. and *Scyphoproctus edmondsoni* sp. nov. The species *Capitella minima*, *Capitellethus cinctus* and *Scyphoproctus pullielloides* are the most common and widely distributed capitellids in Hawaii, present in subtidal sediments surrounding outfall diffusers and also at reference locations. The species *Mediomastus californiensis* and *Capitella giardi* may have been introduced to Oahu from different sources, the former is abundant in soft sediments of Honolulu and Pearl Harbors and the latter is found associated with commercial oysters in muddy ponds. The genera *Branchiocapitella* and *Pulliella* are considered herein as synonyms of *Capitella* and *Scyphoproctus*, respectively. This paper is the first comprehensive study of the Hawaiian capitellids and all species are described and illustrated with line drawings, color and SEM photographs. A key to all 16 capitellid species found in shallow waters from the main Hawaiian islands is provided.

**Key words:** capitellids, taxonomy, synonymy, Oahu, Maui, Kauai, Hawaii

### Introduction

Capitellid polychaetes, although extremely relevant and widely accepted as biological indicators, have been neglected with respect to their taxonomy (Dean 2001). To begin with, the differentiation of genera within Capitellidae is problematic and mostly based on the number of thoracic chaetigers and chaetal distribution. The transition between thorax and abdomen is not always apparent and the types of chaetae on thoracic chaetigers may change during ontogeny (Warren 1976; Fredette 1982; Blake 2000). As a result, there are several monotypic genera that should be re-examined as part of a taxonomic revision of the family (e.g. Blake 2000; Green 2002).

The polychaetes from the Hawaiian Islands have been studied by several authors with the most important contributions being those by Treadwell (1906), Hartman (1966) and Bailey-Brock (1987). Current faunal revisions have been made at the family level and have shown that there may be a high local specialization of this fauna with close affinities to Indo-Pacific and East Pacific species and many species may still be undescribed (e.g. Magalhães & Bailey-Brock submitted). The most current resource for identification of the Hawaiian capitellids only lists four species (Bailey-Brock 1987), one of which is believed to be endemic, but poorly known taxonomically (*i.e.* *Notomastus anoculatus* Hartmann-Schröder, 1965). This paper describes 16 capitellid species from the islands of Oahu, Maui, Kauai, and Hawaii in the Hawaiian Islands. Line drawings, color photographs of MGSP and/or SEM photographs are presented for all these species.