



A new species of *Poecilochaetus* (Polychaeta: Poecilochaetidae) from coastal waters off Southern California, USA

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Abstract

A new species of *Poecilochaetus* (Polychaeta: Poecilochaetidae) is described from coastal waters off Southern California. Much of the material was collected as part of the benthic infaunal survey work carried out by the Sanitation Districts of Los Angeles County as part of their ocean monitoring program. Numerous specimens of this new species have also been collected throughout the Southern California Bight during U.S. Environmental Protection Agency (EPA) regional surveys in 1994, 1998, and 2003. The distinct characters of this new species were first noted three decades ago, but a formal description was never published. These specimens have been reported frequently in survey data under the provisional name *Poecilochaetus* sp. A. The number of branchial filaments, the location of these filaments along the body, and the absence of a middorsal chitinous plate on setiger 9 make *Poecilochaetus martini* sp. nov. unique. This new species also has elongated interramal papillae on the branchiate setigers, a character only recently noted. *P. martini* sp. nov. is compared to other branchiate species in the genus that also have interramal structures.

Key words: taxonomy, Polychaeta, Poecilochaetidae, new species, California

Introduction

Prior to 1977 the only described species reported from the Southern California area was *Poecilochaetus johnsoni* Hartman, 1939. For more than three decades, polychaete taxonomists working in Southern California have reported another species in coastal waters often occurring in benthic sediment samples with *P. johnsoni*.

This second species is mainly distinguishable from *P. johnsoni* by the presence of branched, multilobed branchiae after setiger 14. Generally *P. johnsoni* is found in deeper water (greater than 100 m) while the branchiate form, *P. martini* sp. nov., is seen at shallower depths.

For many years this second species has been reported with the provisional name of *Poecilochaetus* sp. A in both EPA regional surveys and National Pollutant Discharge Elimination System (NPDES) permitted ocean monitoring surveys by Publicly Owned Treatment Works (POTWs) in southern California. It was never formally described due to a lack of complete, whole material, although numerous researchers have collected thousands of specimens in the Southern California Bight.

Poecilochaetids have very fragile bodies, especially their median and posterior setigers. They fragment easily during the collection process, even when extreme care is taken to relax them with magnesium chloride or propylene phenoxylol. While posterior fragments are often found in benthic