



Two new species of *Aphelochaeta* (Polychaeta: Cirratulidae) from deep water off northern California

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Abstract

Two new species belonging to the genus *Aphelochaeta* (Polychaeta: Cirratulidae) are described from continental slope sediments off northern California. Specimens were collected during extensive monitoring of the San Francisco Deep Ocean Disposal Site off the Farallon Islands from 1996 to 2004. The genus *Aphelochaeta* is one of the more speciose genera collected from depths of 2400–3200 m. *A. bullata* sp. nov. is characterized by the presence of four peristomial annulations, a pronounced dorsal crest, and elongated, natatory-like simple capillaries in the noto- and neuropodia of the thoracic region. *A. guttata* sp. nov. has a unique methyl green staining pattern consisting of speckles all over the body, thoracic segments that are swollen ventrally, and weakly inflated posterior segments. Comparison is made with the type species *A. monilaris* (Hartman, 1960) and other continental shelf and slope species from California. Morphological characters important for differentiation of these species are discussed; these include characters related to the peristomium, shape of abdominal segments and methyl green staining patterns. The generic definition is emended to include numbers of asetigerous peristomial annulations.

Key words: continental slope, systematics, morphology

Introduction

One of the dominant infaunal polychaete families in continental slope sediments off the east and west coasts of the United States is the Cirratulidae, the majority of which are new to science and known only by provisional names (Blake & Grassle, 1994; Blake et al. 2009). The cirratulid fauna from California was described by Blake (1996) in a monograph that treated 46 species mostly from intertidal and nearshore subtidal habitats. The deep-water fauna from the continental shelves, however, is largely unknown. An extensive monitoring program from 1996 to 2004 at the San Francisco Deep-Ocean Disposal Site (SF-DODS) off northern California yielded 24 species of cirratulids in five genera: *Aphelochaeta* (11 species), *Chaetozone* (8 species), *Monticellina* (3 species), *Tharyx* (1 species) and *Dodecaceria* (1 species). A total of 20 species were determined to be new to science. Of these, Blake (2006) described three new species of *Chaetozone* and redescribed *Chaetozone spinosa* Moore, 1903.

The present paper, which deals with two new species of *Aphelochaeta*, complements that study by describing species from the same deep-water habitats off northern California. The new *Aphelochaeta* species described here provide new details concerning peristomial annulations, shape