



**A new species of *Odontosyllis* Claparède, 1863 (Annelida, Syllidae)
with re-descriptions of *O. liniata* Hartmann-Schröder, 1962
and *O. gymnocephala* Hartmann-Schröder, 1965**

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Abstract

Odontosyllis pentalineata, a new species from California is described. It differs from all other *Odontosyllis* species in the following characters: colour pattern consisting of five longitudinal black bands along body at median, dorso-lateral and lateral sides, a long pharynx with five large teeth directed backwards, and compound chaetae with short bidentate blades, slightly spinulated. Sequence data from COI are provided for molecular characterization. Additionally, the type species of *O. liniata* Hartmann-Schröder, 1962 and *O. gymnocephala* Hartmann-Schröder, 1965 are re-described based on type material.

Key words: *Odontosyllis*, Syllidae, polychaetes, taxonomy, new species, COI

Introduction

The family Syllidae Grube, 1850 is one of the largest families of polychaetes (Annelida), with more than 700 species and over 70 genera (Pleijel 2001; San Martín 2003; Aguado *et al.* 2007; Aguado & San Martín 2009). The family Syllidae is currently considered monophyletic (Aguado *et al.* 2007; Aguado & San Martín 2009; Aguado *et al.*, in press) and is highly diversified, being present in nearly all marine benthic habitats. Syllids are characterized by the presence of a proventricle, a specialization of the digestive tube considered to be a synapomorphy for the group (Glasby 1993; Fauchald & Rouse 1997; Aguado & San Martín 2009; Aguado *et al.* in press).

Although there are numerous systematic studies, new species and genera are constantly being described and syllid taxonomy is currently not well understood. The traditional classification into four subfamilies (Syllinae Grube, 1850; Exogoninae Langerhans, 1879; Autolytinae Langerhans, 1879; and Eusyllinae Malaquin, 1893) has been considered inadequate (Nygren 1999; Nygren & Sundberg 2003; Nygren 2004; Aguado *et al.* 2007; Aguado & San Martín 2009). The studies of Nygren (1999), Nygren & Sundberg (2003), Nygren (2004), Aguado *et al.* (2007) and Aguado & San Martín (2009) all corroborate Autolytinae, Syllinae and Exogoninae each as monophyletic, whereas Eusyllinae are either poly- or paraphyletic. Recently, Aguado *et al.* (in press) combined morphological and molecular information in a phylogenetic analysis of Syllidae with the highest number of terminals to date (213). These authors reorganized the subfamily Eusyllinae and provided a new diagnosis for a well-supported monophyletic group, which includes the following genera: *Eusyllis* Malmgren, 1867, *Odontosyllis* Claparède, 1863, *Nudisyllis* Knox & Cameron, 1970, *Pionosyllis* Malmgren, 1867, and *Synmerosyllis* San Martín *et al.*, 2009.

Odontosyllis was established by Claparède (1863) for the new species *O. dugesiana* and *Syllis fulgurans* Audouin & Milne-Edwards, 1833, both from the Mediterranean and the latter being the type species. *Odontosyllis* was diagnosed by a combination of morphological characteristics, including prostomium with three antennae, broad palps, basally fused but separated for most of their length, occipital flap, usually well developed, dorsal cirri