



Syllidae (Annelida: Phyllodocida) from Lizard Island, Great Barrier Reef, Australia

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Abstract

Thirty species of the family Syllidae (Annelida, Phyllodocida) from Lizard Island have been identified. Three subfamilies (Eusyllinae, Exogoninae and Syllinae) are represented, as well as the currently unassigned genera *Amblyosyllis* and *Westheidesyllis*. The genus *Trypanobia* (Imajima & Hartman 1964), formerly considered a subgenus of *Trypanosyllis*, is elevated to genus rank. Seventeen species are new reports for Queensland and two are new species. *Odontosyllis robustus* n. sp. is characterized by a robust body and distinct colour pattern in live specimens consisting of lateral reddish-brown pigmentation on several segments, and bidentate, short and distally broad falcigers. *Trypanobia cryptica* n. sp. is found in association with sponges and characterized by a distinctive bright red colouration in live specimens, and one kind of simple chaeta with a short basal spur.

Key words: Syllidae, Australia, taxonomy, new species

Introduction

The family Syllidae is one of the largest groups within Annelida in terms of the number of species. It is located within the clade Phyllodocida and part of Errantia (Weigert *et al.* 2014). Syllidae currently comprises 74 genera and more than 700 species (San Martín & Aguado 2014). The systematics of the family was reorganized by Aguado *et al.* (2012) based on a phylogenetic analysis including morphological and molecular information. The family is currently divided into five subfamilies: Anoplosyllinae, Eusyllinae, Exogoninae, Autolytinae and Syllinae, as well as several genera grouping outside these clades, such as *Anguillosyllis* Day, 1963, *Amblyosyllis* Grube, 1857, and *Perkinsyllis* San Martín, López & Aguado, 2009. Other genera are considered *incertae sedis*, such as *Westheidesyllis*, because they are not represented in any phylogenetic analyses including sequences of DNA (Aguado *et al.* 2012). *Westheidesyllis* was previously considered as part of Eusyllinae (San Martín *et al.* 2009).

Syllidae from Australia have been studied by several authors, among them Hartmann-Schröder (1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1989, 1990, 1991), and more recently by San Martín and others (San Martín 2002, 2005; San Martín & López 2003; San Martín & Hutchings 2006; San Martín *et al.* 2007, 2008a, 2008b, 2010). Some of these latter studies dealt with taxa that have been found only along the Australian coasts and whose evolutionary relationships within Syllidae are still enigmatic. Such is the case of the genera *Nooralia* San Martín, 2002, *Karroonsyllis* San Martín & López, 2003 and *Murrindisyllis* San Martín, Aguado & Murray, 2007.

Material and methods

The material examined was collected in August 2010 during a Census of Marine Life Coral Reef (CReefs) expedition and August 2013 during the Lizard Island Polychaete International Workshop, and is deposited in the