



## A taxonomic revision of the genus *Haplosyllis* Langerhans, 1887 (Polychaeta: Syllidae: Syllinae)

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## Abstract

The genus *Haplosyllis* Langerhans, 1887 is revised based on available types and newly collected specimens. 19 species are considered as valid, five as incertae sedis and four are referred to nomina dubia. *Trypanoseta* (Imajima, 1966) is synonymised with *Haplosyllis*, as the presence of trepan is considered a non-robust taxonomic feature, affecting *H. ohma* **new comb.** (Imajima & Hartman, 1964) and *H. granulosa* **new comb.** (Lattig, San Martín & Martín, 2007). *Haplosyllis streptocephala* (Grube, 1857) is a new combination and two species are considered to belong to *Alcyonosyllis* Glasby & Watson, 2001: *A. bisetosa* **new comb.** (Hartmann-Schröder, 1960) and *A. gorgoniicola* **new comb.** (Sun & Yang, 2004). All valid species are described and figured except those described during the last decade, which only includes diagnoses and chaetae illustrations. A dichotomous key to all valid species of *Haplosyllis* is provided.

**Key words:** *Haplosyllis*, Syllidae, taxonomy, revision, identification key

## Introduction

The genus *Haplosyllis* Langerhans, 1887 (Polychaeta, Syllidae, Syllinae) has an unresolved taxonomy; it is characterized by the articulated cirri, palps fused only at bases and the simple bidentate chaetae. The genus is relatively small, includes 19 species, 5 incertae sedis and 4 nomina dubia (present study). Together with *Alcyonosyllis* Glasby & Watson, 2001, *Haplosyllides* Augener, 1924 *Parahaplosyllis* Hartmann-Schröder, 1990, constitute the only syllid taxa lacking compound chaetae, while some species of *Trypanosyllis* Claparède, 1864 and *Syllis* Lamarck, 1818 may also have simple chaetae in some parapodia along the body.

Members of *Haplosyllis* reproduce by schizogamy (stolonization), in which only the posterior end is transformed into an epitokous sexual stage (Garwood 1991; Franke 1999). There are two kinds of stolons in *Haplosyllis*: acephalous stolons, which bear a pair of parapodial ocular spots on each segment, and stolons with a well-developed head, often with large eyes and cephalic appendages (Martin *et al.* 2003; San Martín 2003).

The species of *Haplosyllis* are usually found inside sponges (Cognetti 1957; Magnino & Gaino 1998; Martin & Britayev 1998; López *et al.* 2001; Martin *et al.* 2003), but have also been reported in association with gorgonians (Utinomi 1956; López *et al.* 1996; Martin *et al.* 2002), and other polychaetes (Treadwell 1909), as well as from a variety of substrates, such as coarse sand, detritic and muddy bottoms, intertidal algae, calcareous concretions and *Posidonia oceanica* meadows (Laubier 1966; Campoy 1982; Martin 1987; Núñez *et al.* 1992; Paola *et al.* 2006; Lattig *et al.* 2007). The sparse ecological data suggest interesting relationships with their hosts, being ectoparasites in the case of polychaetes (Treadwell 1909), kleptoparasitic to mutualistic in the case of gorgonians (Martin *et al.* 2002), or mutualists in the case of sponges (Martin & Britayev 1998; Magnino & Gaino 1998; Sardá *et al.* 2002; Martin *et al.* 2003).

**Taxonomic history.** The type species, *H. spongicola* was first described from the Adriatic Sea (Grube, 1855). Since then, a few more species were reported with simple and currently inaccurate descriptions (e.g. *H. uncinigera* (Grube, 1878), *H. violaceoflava* (Grube, 1878) and *H. djiboutiensis* Gravier, 1900). In the early 1950s and 1980s, the description of species such as *H. anthogorgicola* Utinomy, 1956; *H. depressa chamaeleon* Laubier, 1960; *H. trifalcata* Day, 1960, and *H. agelas* Uebelacker, 1982, showed the existence of marked differences in the arrangement of both chaetae and cirri, indicating that *Haplosyllis* was not as simple as initially thought. During the last decade the use of Scanning Electron Microscopy (SEM) has allowed the description of several new species with detailed accounts of the chaetal morphology. Among them, *H.*