



Two new and two poorly known autolytines (Polychaeta: Syllidae) from Madeira and the Mediterranean Sea

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Abstract

We describe *Proceraea albocephala*, new species, from Madeira, and *Erseia oligochaeta*, new genus and new species, from Istria, Croatia, and we provide redescrptions of *Proceraea madeirensis* (Nygren, 2004) from topotype material, and *Myrianida longoprimiticirrata* (López, San Martín & Jimenez, 1997) from material collected at Istria, Croatia, and Banyuls-sur-Mer, France. *Proceraea albocephala*, new species is morphologically separated from similar species by a prostomial white spot, and *E. oligochaeta*, new genus, new species is unique in having only a few (1–2) simple unidentate chaetae in all chaetigers, and a trepan with a single large and 25–28 smaller teeth. We assess the phylogenetic positions of the four species using nuclear 18SrDNA, together with mitochondrial COI and 16SrDNA. Our molecular data show that among the sequenced autolytines 1) *P. albocephala*, new species is most closely related to *P. nigropunctata* Nygren & Gidholm, 2001, *P. okadai* (Imajima, 1966), and *P. cornuta* (Agassiz, 1862), 2) *E. oligochaeta*, new genus, new species belongs within a clade together with *Procerastea nematodes* Langerhans, 1884, *Virchowia clavata* Langerhans, 1879, and *Imajimaea draculai* (San Martín & López, 2002), 3) *M. longoprimiticirrata* is sister species to *M. pentadentata* (Imajima, 1966), and 4) *P. madeirensis* has a basal position within Procerini. The molecular data suggests that *Proceraea* Ehlers, 1864 as currently delineated is paraphyletic.

Key words: New species, new genus, redescrptions, nuclear data, mitochondrial data

Introduction

Autolytines are free-living syllid polychaetes that are from a few mm to several cm in length and usually much less than one mm in width. They inhabit shallow waters and are mostly associated to sedentary invertebrates such as hydroids, bryozoans, and sponges, animals which they apparently feed upon (see Nygren & Pleijel 2010 for references). Autolytines constitute both in morphological and molecular terms a well-delineated group of syllid polychaetes. Currently it includes 11 recognized genera divided in three major lineages, corresponding to different types of reproductive strategies (Nygren 2004; Nygren & Pleijel 2007); Procerini Nygren, 2004, where the members reproduce with anterior scissiparity (a single stolon is produced from behind chaetiger 13 or 14), *Epigamia* Nygren, 2004 where the members reproduce with epigamy (the main individual is transformed into an epitoke), and Autolytini Grube, 1850 where the members reproduce with gemmiparity (several stolons are produced in a row) or posterior scissiparity (a single stolon from a more posterior chaetiger is produced). Following Nygren (2004), and Nygren and Pleijel (2007) there are 21 autolytines known from the Mediterranean Sea and from Maderia. Four of these were originally described from Madeira by Langerhans (1879, 1884), while 13 are described originally from the Mediterranean Sea, mainly during two decades in the 19th century by Claparède (1864, 1868), Ehlers (1864), Grube (1860), and Marenzeller (1874, 1875). Later additions to the Mediterranean fauna includes species described by Cognetti (1953a, b), San Martín & Alós (1989), López *et al.* (1997), Nygren (2004), and Çinar and Gambi (2005). In this paper we redescrbe one of Langerhans' species from Madeira, *Proceraea madeirensis* Nygren, 2004