



Six new species of the genus *Armandia* Filippi, 1861 (Polychaeta, Opheliidae) from Lizard Island (Great Barrier Reef, Australia)

JULIO PARAPAR^{1*} & JUAN MOREIRA²

¹*Departamento de Biología Animal, Biología Vegetal e Ecología, Facultad de Ciencias, Universidade da Coruña, Rúa da Fraga 10, E-15008, A Coruña, Spain.*

²*Departamento de Biología (Zoología), Universidad Autónoma de Madrid, Cantoblanco E-28049, Madrid, Spain.*

*Corresponding author: jparapar@udc.es

Abstract

From the study of the material collected during the Polychaete Workshop held in Lizard Island (Great Barrier Reef, Australia) in August 2013, six species belonging to the genus *Armandia* (Polychaeta, Opheliidae) are newly described. *Armandia bifida* n. sp. is characterised by the bifid shape of the prechaetal lobe in CH1–CH3, *A. dolio* n. sp. by the barrel-shaped anal (=pygidial) tube (=funnel), *A. filibranchia* n. sp. by the extremely long and thin branchiae, *A. laminosa* n. sp. by the foliose shape and large size of the prechaetal lobe in CH1–CH3, *A. paraintermedia* n. sp. by the squared-shaped anal tube and size and shape of anal cirri, and *A. tubulata* n. sp. by the tubular shape of the anal tube. All species are fully described and illustrated, and compared with similar species. Several body characters of taxonomic relevance (e.g., anal tube and parapodia shape) are studied based on SEM micrographs. A key of the *Armandia* species hitherto described or reported in South-East Asia and Australasia is provided based on features of the anal tube.

Key words: Polychaeta, Opheliidae, *Armandia*, coral reef, new species, Australia

Introduction

Opheliid polychaetes are widely distributed across all oceans from the poles to the tropics, and from shallow waters to the abyssal depths (Hartmann-Schröder & Parker 1995). Members of this family are deposit feeders burrowing in different types of sediments (Rouse 2001). In Australia, the taxonomy and diversity of Opheliidae is poorly known and only six genera (i.e., *Armandia* Filippi, 1861, *Euzonus* Grube, 1866, *Lobochesis* Hutchings & Murray, 1984, *Ophelia* Savigny, 1818, *Ophelina* Örsted, 1843 and *Polyopthalmus* Quatrefages, 1850) and 16 species have been reported; most of these species show apparently a limited distribution (Day & Hutchings 1979; Hartmann-Schröder & Parker 1995; Hutchings 2000; Neave & Glasby 2013). The genera *Lobochesis* and *Euzonus* are now considered to belong to *Thoracophelia* Ehlers, 1897 (Blake 2011); the genus *Travisia* Johnson, 1840 was also reported in the area (Day & Hutchings 1979) but is now considered the sister group to the family Scalibregmatidae Malmgren, 1867 (Blake 2000; Paul *et al.* 2010).

The genus *Armandia* is characterized by having an elongated body, ventral groove, conical prostomium with palpode, eyes, a pair of eversible nuchal organs, single and cirriform distally tapered branchiae present from second chaetiger and continuing to posterior end, small and relatively simple parapodia bearing two bundles of capillary chaetae (noto- and neurochaetae), and provided with a prechaetal lobe, which is variable in shape depending on species and situated between both bundles of chaetae, a small spherical projection dorsal to notochaetae—the “dorsal cirrus” in Parapar *et al.* (2011)—and a low lingulate ventral lobe, located immediately ventral to neurochaetae. Furthermore, the pygidium is provided with characteristic anal (=pygidial) tube (=funnel); the shape of this tube is one of the most useful taxonomic features at the species level. All these characters are also present in the genus *Ophelina* (see Neave & Glasby 2013); the only distinguishing character is the presence of segmental lateral eyes between parapodia from anterior chaetigers to posterior end in *Armandia*, which are absent in *Ophelina* (Blake 2000).