

FIRST RECORD OF THE GENUS *ARMANDIA* (OPHELIIDAE, POLYCHAETA) IN ARGENTINE WATERS, WITH THE DESCRIPTION OF *ARMANDIA LOBOI* SP. N.

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ABSTRACT

A series of surveys on shallow shelf bottoms along the southwestern Atlantic coast were conducted to determine the composition and distribution of benthic communities, and their response to sewage discharge and pollution. Polychaetes of the family Opheliidae were identified as belonging to the genus *Armandia*, which is herein newly reported from Argentine waters. The material contained a new species, *Armandia lobo*i, which is described herein. The species was collected from subtidal sand-gravel bottoms in the Southwestern Atlantic Ocean, and is characterized by external nonarticulate mid-ventral cirrus in the anal tube.

Earlier investigations on taxonomy and ecology of Argentine polychaetes treated the Mar del Plata area (38°S, 57°W), and published by Dr. J. M. “Lobo” Orensanz, in the early 1970s (i.e., Orensanz, 1972; 1973a,b; 1974a,b). However, our knowledge of both macrobenthic communities and identification and ecology of polychaete species is still poor in this area, as well as in the rest of the Argentine coast.

From 1996, in relation to Mar del Plata’s intertidal sewage discharge, several studies have been conducted to gain knowledge on the composition and distribution of macrobenthic communities in the intertidal and subtidal areas. Another study was carried out in Blanca Bay (39°S, 63°W), a polluted mixohaline environment, and adjacent waters, in order to compare changes during the last 15 yrs. These environments are characterized by a high dominance of polychaetes (Elías, 1992; Elías and Bremec, 1994; Elías et al., 2001).

This part of the southwestern Atlantic Ocean is interesting for many reasons, as the Argentine Province, divided by the Rio de la Plata estuary which defines a major hydrographic and biogeographic boundary, is also influenced by subtropical and subantarctic waters: Brazilian and Magellanic, respectively (Boltovskoy et al., 1999; Boschi, 2000).

Reports on opheliids from Argentinean waters were made by Kinberg (1866), Rioja (1944), Hartman (1949), Tebble (1953), and Jeldes (1962). These works and other unpublished reports cited 10 species (compiled by C. S. Bremec): *Ophelina scaphigera* (Ehlers, 1900); *O. syringopyge* (Ehlers, 1901); *O. gymnopyge* (Ehlers, 1908); *O. breviata* (Ehlers, 1913); *Euzonus (Thoracophelia) furciferus* (Ehlers, 1897); *Ophelia praetiosa* (Kinberg, 1866); *O. bipartita* Monro, 1936; *T. kerguelensis* McIntosh, 1885; *T. olens* Ehlers, 1897 and *Travisia doello-juradoi* Rioja, 1944.

In the present paper we describe *Armandia lobo*i new species from subtidal coarse-sand bottoms. This is the first record of the genus for Argentine waters.

MATERIAL AND METHODS

Material for this study came from three cruises, carried out in the littoral fringe of the Argentinean shelf from 1996 to 2000 (Table 1). The material was preserved in a 10 % formaldehyde solution, and stored in alcohol 70%. Drawings were made (R.E.) using a camera lucida attached to a Wild M8.

TAXONOMY

Identification and description follow the diagnostic characters presented for the genus and species by Hartmann-Schröder (1956), Jones (1962), Day (1967), Nonato and Luna (1970) and Uebelacker (1984).

The recorded number of species belonging to the genus *Armandia* are 23: 20 listed in Amoureux (1983), plus *A. maculata* (Webster, 1884), *A. secundariopapillata* Hartmann-Schröder, 1984, *A. bilobata* Hartmann-Schröder, 1986, and *A. amakusaensis* Saito, Tamaki and Imajima, 2000 (Nonato and Luna, 1970; Hartmann-Schröder, 1984; 1986; Saito et al., 2000).

Family Opheliidae Malmgren, 1867

Genus *Armandia* Filippi, 1861*Armandia loboi* new species

(Fig. 1)

Diagnosis.—A member of *Armandia* with 29–31 setigers; prostomium long and acuminate, without eyespots; branchiae cirriform, present on setiger two to last; with 11 to 13 pairs of lateral eyes usually starting before setiger five; anal tube obliquely truncate and marginally festooned with six to eight lanceolate papillae; without internally attached cirrus, but with an external mid-ventral nonarticulate cirrus.

Description.—The holotype is a complete specimen with 30 setigers, 16 mm long and 1.7 mm wide. Length of complete paratypes varies between 7 and 21 mm for 29–31 setigers. Body elongate (Fig. 1A), deeply grooved, with 29 to 31 setigers (usually 30). Prostomium long, conical and acuminate; nuchal organs large, usually everted, no eyespots present (Fig. 1B). Branchiae cirriform, longer than notosetae, lamelliform in mid-body region, and small and cirriform posteriorly, present from setiger two to the last one, but in some specimens lacking in a few posterior setigers (perhaps lost). Parapodia low, rounded; with a small presetal lobe, and a small cirriform ventral cirri; postsetal lobe absent (Fig. 1C). Usually with 11 to 13 pairs of lateral eyes starting before setiger five (one specimen with eyes beginning before setiger six). Some large specimens can have up to 18 pairs of eyes. Nephridiopores not observed. Anal tube short, with about 12 rings, slit at the posterior margin and dorsally; marginally festoon with six to eight lanceolate papillae (lost in bad preserved material); with an external midventral nonarticulate and very short cirrus (1/3 of the anal tube). In well preserved material (1999 cruises) the midventral external cirrus has two minute papillae terminally, and also a filiform cirrus inserted on its dorsum (Fig. 1D). All setae capillary, notosetae longer than neurosetae. Proboscis sac-like with distally pointed anterobasal proboscidean papillae.

Table 1. Locality data, number of specimens and depositories for material examined. Cruises "Guardacostas 1996" and "Luisito 1999" were in the Mar del Plata area, Argentina; collectors R. Elías and E. A. Vallarino. Cruises of CAPTÁN CANEPA CC14-2000, were in the Bahía Blanca area, Argentina, collector R. Elías; screen mesh for sieving was 1 mm except for : "Luisito 1999," where it was 0.5 mm. Sediment at all stations was coarse sand-gravel. H = holotype, P = paratype. Depositories: LBB = Laboratorio de Bioindicadores Bentónicos de la Universidad Nacional de Mar del Plata; MCNLP = Museo de Ciencias Naturales de La Plata; INIDEP = Instituto Nacional de Investigación y Desarrollo Pesquero.

Cruises	Latitude	Longitude	Depth (m)	Date	Gear	N° of spec., types, depository and catalogue n°
Guardacostas 1996						
Stn. R1	37°52.25'S	57°29.00'W	10	Autumn–Winter 1996	Benthic dredge 60 × 25 × 20 cm	53 P (LBB)
Stn. R2	37°54.28'S	57°29.46'W	11			15 P (LBB)
Stn. R3	37°55.99'S	57°30.55'W	9			8 P (LBB)
Stn. R9	37°58.00'S	57°30.62'W	9			23 P (LBB)
Stn. R50	37°55.49'S	57°29.01'W	11			8 P (LBB)
Stn. R62	37°56.60'S	57°30.90'W	8.5			27 P (LBB)
Luisito 1999						
Stn. 31	37°56.47'S	57°29.25'W	12	Winter 1999	van Veen Grab 0.05 m²	1 H (MCNLP), n° 6056 1 P (LBB)
Stn. 33	37°55.51'S	57°29.25'W	13			3 P (LBB)
Stn. 35	37°54.42'S	57°28.80'W	12			22 P (LBB)
						4 P (MCNLP), n° 6057
CC14-00						
Stn. 5	39°01.80'S	61°25.90'W	5	May 11–19th, 2000	Petersen Grab 0.12 m²	1 P (INIDEP)

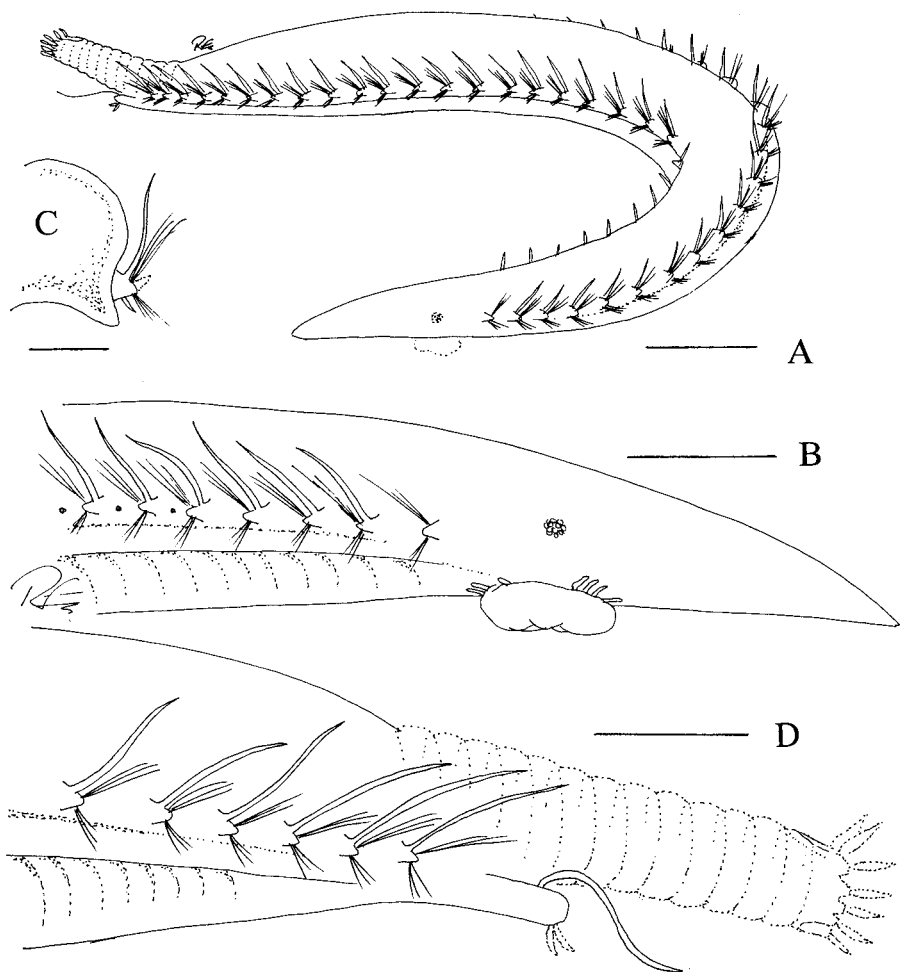


Figure 1. *Armandia loboï* sp. nov. A – Entire worm. B – Prostomium (lateral view). C – Median setiger (transverse section). D – Anal tube. Scale bars: A, B, D = 1.0 mm; C = 0.7 mm.

Color.—white.

Discussion.—*A. loboï* is similar to *A. maculata* (Webster, 1884), but differs in lacking eyespots in the prostomium, in having an anal tube that is not obliquely truncate ventrally, and in the presence of the external nonarticulate midventral cirrus. Specimens lacking a cirrus in the margin of the anal tube resemble *A. nonpapillata* Jones, 1962. The morphology of the anal tube is quite different from other forms of *Armandia*, and based on this features, Jones (1962) created *A. nonpapillata*. The nearly unique characteristic of *A. loboï*, i.e., the anal tube obliquely truncate so that the anus opens upward, is also present in a *A. leptocirris* Grube, 1878, but differs in the presence of an internally inserted midventral cirrus (absent in *A. loboï*), the total length of the anal tube, and the presence of a short and external nonarticulate midventral cirrus in *A. loboï*.

Habitat.—*A. lobo*i inhabits coarse sand-gravel bottoms off the city of Mar del Plata (38°S, 57°W) and off Blanca Bay (39°S, 61°W) in shallow shelf between 5 and 13 m depth. *A. lobo*i has sand grains in the gut contents (visible through body wall), probably indicating the adsorption of organic matter. This agrees with Fauchald and Jumars (1979), who consider opheliids to be non-selective deposit feeders, motile, with an unarmed proboscis (their category BMX).

Etymology.—The species is dedicated to Dr. José María “Lobo” Orensanz, for his many important contributions to the knowledge of polychaetes from the area.

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