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On some *Amphicorina* (Polychaeta, Sabellidae) species from the Mediterranean coast, with the description of *A. grahamensis*

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ABSTRACT

Species belonging to the genus *Amphicorina* are reported from some areas of the Mediterranean Sea, with the description of the new species *A. grahamensis*. The description of another species, *Amphicorina* sp., close to an Australian taxon, together with the redescription of *A. pectinata*, *A. persinosa*, and *A. armandi* are also given; the variability of this last taxon, probably deriving from misidentifications, is also considered. Examined specimens were prevalently from the Italian coast, and in particular from the Adriatic Sea.

KEY WORDS: Polychaeta - Sabellidae - *Amphicorina* - Mediterranean.

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INTRODUCTION

The genus *Amphicorina* Claparède, 1864 (Polychaeta: Sabellidae), although used correctly by Iroso (1921), became better known as *Oriopsis* Caullery and Mesnil, 1896. It was recently emended by Rouse (1994, "Addendum, page 202"). At present, 33 species have been described within the genus, but only four were known for the Mediterranean Sea: *A. armandi* Claparède, 1864, *A. eimeri*, (Langerhans, 1880), *A. persinosa* (Ben-Eliahu, 1975), and *A. pectinata* (Banse, 1957); these two last taxa are at present considered as sub-species of *A. eimeri*, and *A. alata*, respectively. All of them are typical of shallow water. However, since diagnostic features are few and not easily detectable, small sabellids with characteristics of the genus *Amphicorina* were often ascribed to the more common Mediterranean species *A. armandi* (Giangrande, 1989).

During a study on shallow hard-bottom communities along the Apulian coast (Adriatic Sea), a very interesting zone from a biogeographical point of view (Giangrande, 1989, 1992, 1994), several specimens belonging to the genus *Amphicorina* were collected, and a comparative study with the known species was carried out taking into account all the material from the first author's collection, coming from different areas and depths along the Mediterranean coasts.

MATERIAL AND METHODS

Samples were collected along the Apulian coast (Adriatic Sea), by scraping off the substrate within *Cystoseira* mats, at 1 m depth. Samples were fixed in 8% formaldehyde and sea water, sorted using a binocular microscope, and preserved in 70% alcohol.

In addition, material from different biotopes, mainly from the Tyrrhenian Sea (Islands of Ischia, Capraia, Ponza and Corsica) and from the southeastern coast of Spain, present in the first author's collection, were re-examined and compared with Adriatic specimens.

Holotype and paratypes of *A. eimeri persinosa* were examined from the British Museum (Natural History) (BMNH). The type is deposited in the Muséum National d'Histoire Naturelle, Paris (MNHN).

TAXONOMIC ACCOUNTS

Genus *Amphicorina* Claparède, 1864

Oriopsis Caullery & Mesnil, 1896: 483-484, Figs 1-2

Oria Quatrefages, 1866: 462

Oridia Rioja, 1917: 73

Oriades Chamberlin, 1919: 470

Diagnosis

Small Sabellinae with two to five pairs of crown radioles, radiolar skeleton with two rows of cells, radioles

without eyes, with flanges and palmate membrane. Ventral lips present, dorsal lips without dorsal radiolar or pinnular appendages. One or two pairs of ventral radiolar appendages present (previously referred to as ventral filaments). Anterior peristomial ring developed ventrally as a narrow lobe, with distal end sometimes furcate. Posterior peristomial ring collar usually present, often with a gap dorsally. Glandular girdle usually present on chaetiger 2. Body with eight thoracic and from five to 14 abdominal chaetigers. Thoracic notochaetae of two kinds: a row of elongate superior chaetae, with varying but narrow hoods, and an inferior row of smaller, thinned bayonet chaetae. Thoracic uncini acicular, with teeth of unequal sizes in first arc above main fang. Abdominal uncini usually quadrangular, handles absent, toothed margin with a more or less enlarged basal fang. Abdominal neurochaetae needle-like, or elongate and narrowly hooded.

Remarks

The above diagnosis is similar to that of Fitzhugh (1989) and Rouse (1994). The synapomorphy for the genus is the presence of teeth of unequal size above the main fang of thoracic uncini. This feature, which distinguishes this genus from the *Chone* complex, is homoplasious, occurring in most of the fabriciini genera. Another feature different from *Chone* is the absence of the posterior row of paleate chaetae. An additional feature which could help to distinguish *Amphicorina* from *Chone* and *Euchone* genera could be the presence of a wide dorsal gap in the collar, which, excluding *A. bicoloris*, seems always present in this genus. Recently, Rouse (1994) added some reproductive characters to the descriptions, such as the presence of spermathecae in the females, and, on the basis of sperm and spermathecal structure, he suggested that *Amphicorina* is probably not a monophyletic taxon.

Fitzhugh (1989), in his revision of Sabellidae, considered *Oriopsis metchnikowi* Caullery & Mesnil, 1896 as the type species for the genus, but later Rouse (1994) clarified the systematic position of the genus; a brief description by Quatrefages (1850) was used by Claparède (1864) for regarding *Amphicorina* as a subgenus of *Fabricia* Blainville. Within this, *Fabricia (Amphicorina) armandi* is to be regarded as the type species by subsequent monotypy. Quatrefages (1866) incorrectly erected the genus *Oria* to accommodate *A. armandi* and used *Amphicorina* for three species: *A. cursoria*, *A. argus*, and *A. desiderata*. The latter two are synonyms of *Myxicola aesthetica* (Claparède) and *Amphiglena mediterranea* (Leydig); respectively, while *A. cursoria* must be considered a synonym of *A. armandi*. According to Rouse (1994), *Oriopsis metchnikowi* is also at present a synonym of *A. armandi* and should be considered a valid species only if the type species is shown to be distinct from *A. armandi*. Names erected subsequently to replace *Oria*, *Oridia* Rioja, 1917 and

Oriades Chamberlin, 1919 are also synonyms of *Amphicorina*.

The 34 taxa ascribed to *Amphicorina* (Table I) show a wide variability in shape of thoracic chaetae, and thoracic and abdominal uncini, especially in recent descriptions using electron microscopy (Rouse, 1990, 1994). The following species (some listed by Rouse, 1990) are excluded from the table: *Oriopsis pacifica* Rullier, 1977 which probably was *Fabricia sabella*; *O. rivularis* Annenkova, 1929 and *O. crenicollis* Annenkova, 1934 which, judging from the illustrations of uncini and thoracic chaetae, probably belong to the genus *Chone*; *O. bicincta* (Ozolinsh, 1988) which is probably a new genus (Giangrande & Ozolinsh, in prep.); and *O. pulchra*, recently described from the Antarctic by Hartmann-Schroder (1991), which has thoracic uncini typical of the genus *Chone*. Also dubious are some species included in the list, such as *A. gracilis*, Hartman, 1969 which has three types of thoracic chaetae, *A. bicoloris* Rouse, 1990, which has no dorsal gap in its collar, and a shape of thoracic uncini more similar to *Chone* genus, and *A. dentata* Rouse, 1990 which has unusual abdominal uncini. Such variation suggests a probable further splitting of the genus *Amphicorina*.

Amphicorina grahamensis n. sp.

Material examined

Ionian Sea, Sicilian Channel, one specimen, 40 m depth, hard bottom, 1983. Holotype MNHNP UE 911. Paratypes: 72 specimens from the same locality; eight specimens from Tyrrhenian Sea: Ponza island, 30 m depth on *Posidonia* bed, 1990, in the first author's collection.

Description

Complete specimens with eight thoracic and five abdominal chaetigers. Total length about 1.5 mm, including crown (Fig. 1a, b). The crown 1/3 length of entire worm, with three pairs of radioles, bearing lateral flanges, and several long pinnules ending at same height; one pair of ventral radiolar appendages present. Posterior peristomial ring collar absent (Figs 1a, b; 3b). Apex of the anterior peristome entire, shallow and partially hidden behind a transverse groove. Glandular ridge not visible on second chaetiger.

Superior thoracic notochaetae elongate, narrowly hooded (Fig. 1e), four-five per fascicle. Inferior thoracic notochaetae bayonet type (Fig. 1f), from chaetigers 2 to 4, 8 per fascicle. Thoracic uncini with three-four rows of teeth above main fang (Fig. 1d). Abdominal uncini quadrangular with seven rows of teeth above large basal tooth (Fig. 1g). Up to seven uncini per fascicle. Abdominal neurochaetae elongate and hooded (Fig. 1c), two-three per fascicle.

The pygidium is rounded.

TABLE 1 - Character variability among *Amphicorina* species.

taxa	length (mm)	radioles (pairs)	abdominal chaetigers	ventral rad. appendages (pairs)	collar	thoracic notochaetae	anterior tooth of abdominal uncini	type locality	ecology
1 <i>A. alata</i> (Ehlers, 1897)	4	4	6	1	absent	narrow	small	South Georgia	littoral-rocky
2 <i>A. alatoides</i> (Hartmann-Schröder, 1962)	2	3	11	1	lateral cleft	large	large	Chile	littoral-sand
3 <i>A. anneae</i> (Rouse, 1994)	2.5	3	11	1	crenulate	narrow	large	Florida	littoral-rocky
4 <i>A. androgynae</i>	1	3	5	1	smooth	narrow	small	Belize	littoral-rocky
5 <i>A. armandi</i> (Claparède, 1864)	1.5-3	3	12	1	smooth	very large	small	Mediterranean	littoral-rocky
6 <i>A. australis</i> (Hartmann-Schröder, 1981)	3	4	8	0	crenulate	very large	?	W.A., Australia	?
7 <i>A. bansei</i> (Day, 1961)	2	4	9	1	smooth	very large	small	South Africa	?
8 <i>A. bicoloris</i> (Rouse, 1990)	2	3	9	2	smooth	narrow	large	N.S.W., Australia	intertidal
9 <i>A. brevicollaris</i> (Rouse, 1990)	1.8	3	7	2	vestigial	large	small	N.S.W., Australia	littoral-rocky
10 <i>A. bussettonensis</i> , (Hartmann-Schröder, 1982)	1.2	4	6	1	crenulate	large	small	W.A., Australia	algae?
11 <i>A. cincta</i> (Hartmann-Schröder, 1986)	2.1	4	8	?	crenulate	large	large	S.A., Australia	algae?
12 <i>A. coalescens</i> (Banse, 1959)	2.5	4	6	1	ventral proj.	large	large	South India	?
13 <i>A. dentata</i> (Rouse, 1990)	2.2	3	11	2	ventral notch	very large	?	N.S.W., Australia	intertidal
14 <i>A. denticollis</i> (Hartmann-Schröder, 1986)	4	4	6	2	crenulate	large	large	S.W. Australia	algae
15 <i>A. ehlersi</i> (Day, 1961)	3	3	7	2	ventral notch	very large	large	South Africa	?
16 <i>A. aimeri</i> (Langerhans, 1880)	3	4	10	1	crenulate	very large	large	Madeira	littoral-rocky
17 <i>A. gracilis</i> (Hartman, 1969)	?	3	8	0	absent	large	small	California	?
18 <i>A. grabamensis</i> present paper	1.5	3	6	1	absent	narrow	large	Mediterranean	40 m rocky
19 <i>A. hynensis</i> (Knight-Jones, 1983)	1.2	3	5	1	smooth, low	large	small	Ireland	intertidal
20 <i>A. kocki</i> (Hartmann-Schroder, 1989)	5	3	13	?	smooth, oblique	narrow	?	Antarctic	deep
21 <i>A. limbata</i> (Ehlers, 1897)	?	4	5	1	vent. project	narrow	small	South Patagonia	deep
22 <i>A. longipyge</i> (Hartmann-Schröder, 1989)	3.5	3	14	?	smooth	narrow	?	Antarctic	deep
23 <i>A. magellanica</i> (Hartmann-Schröder, 1962)	3	4	9	?	ventral notch	large	Chile	littoral	
24 <i>A. magna</i> (Banse, 1957)	6	5	5	1	ventral notch	large	large	South Georgia	intertidal
25 <i>A. michaelseni</i> (Banse, 1957)	3	5	6	1	vent. project	large	small	W.A., Australia	?
26 <i>A. minuta</i> (Berkeley & Bereley, 1932)	?	2	5	?	absent	very large	large	Canada	?
27 <i>A. mobilis</i> (Rouse, 1990)	1	3	5	1	ventral notch	narrow	small	N.S.W., Australia	littoral-rocky
27 <i>A. neglecta</i> (Banse, 1957)	2	4	6	1	absent	very large	large	South Africa	?
28 <i>A. paramobilis</i> (Rouse, 1994)	1.3	3	5	1	smooth	narrow	small	Indian Ocean	littoral-rocky
30 <i>A. parvula</i> (Ehlers, 1913)	4	3	6	1	vent. project	very narrow	large	South Africa	littoral-sand
31 <i>A. pectinata</i> (Banse, 1957)	4	4	6	2	absent	large	large	N.W. Australia	littoral-rocky
32 <i>A. persinosa</i> (Ben-Eliahu, 1975)	2.5	3	8	1	crenulate	narrow	large	Mediterranean	littoral-rocky
33 <i>A. taltanensis</i> (Hartmann-Schröder, 1962)	1.2	3	5	1	dorsal clefts	large	large	Chile	littoral-rocky
34 <i>A. tristanensis</i> (Day, 1954)	?	4	6	0	crenulate	very large	?	Trist. de Cunha	?

Etymology

The species was named after the type locality: Banco Graham.

Remarks

Amphicorina grabamensis was collected from 30 to 40 m depth, a bathymetric level unusual for this genus,

almost all the species being littoral or intertidal. The few species collected in similar environmental conditions, *A. limbata*, *A. kocki*, and *A. longipyge*, are all Antarctic species, and show morphological features clearly different from those of *A. grabamensis* (for instance the presence of a well-developed collar, especially in *A. kocki* and *A. longipyge*). *Amphicorina grabamensis* is very similar to other *Amphicorina* species

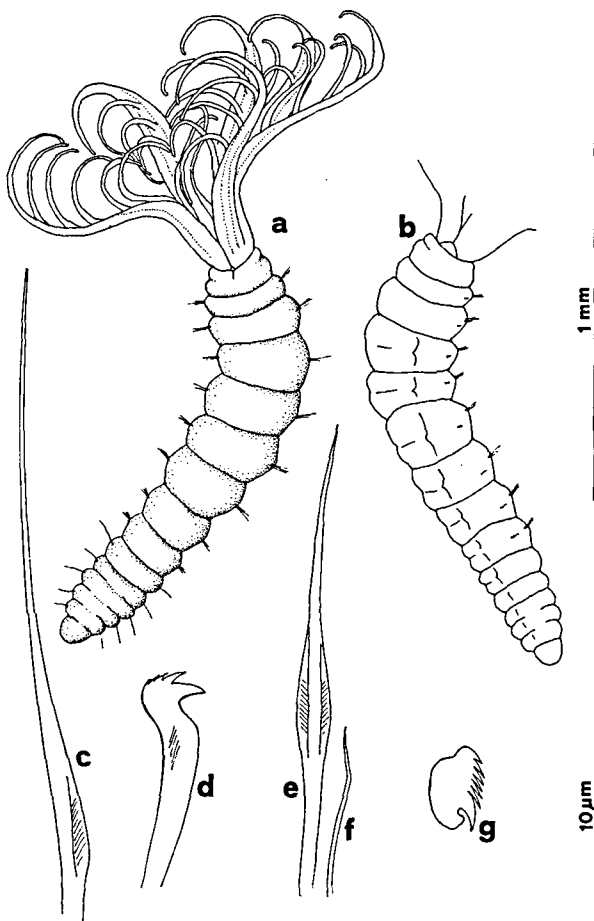


Fig. 1 - *Amphicorina grabamensis*. a, entire worm, dorsal view; b, entire worm, ventral view; c, abdominal neurochaeta; d, thoracic uncinus; e, superior thoracic notochaeta; f, thoracic notochaeta bayonet type; g, abdominal uncinus.

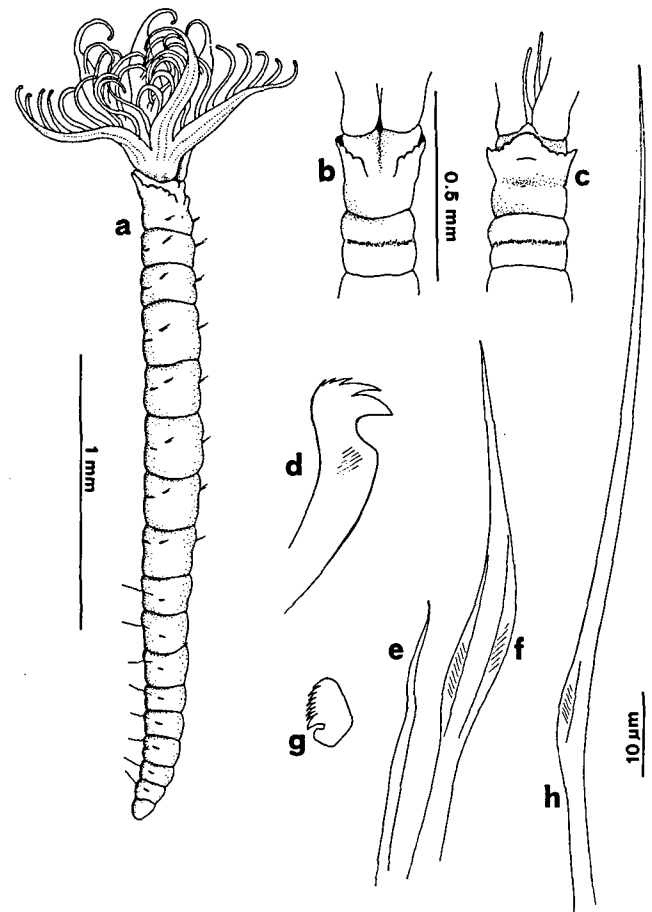


Fig. 2 - *Amphicorina persinosa*. a, entire worm; b, anterior end, dorsal view; c, anterior end ventral view; d, thoracic uncinus; e, thoracic notochaeta bayonet type; f, superior thoracic notochaeta; g, abdominal uncinus; h, abdominal neurochaeta.

having a collar as a ventral fold: i.e., *A. alata*, *A. parvula*, *A. neglecta*, *A. gracilis*, and *A. minuta*. Among these, *A. alata* and *A. parvula* differ from *A. grabamensis* in being larger species, without a strong anterior tooth in the abdominal uncini. *A. neglecta* instead has four radioles, and up to ten abdominal uncini per row. *Amphicorina minuta* and *A. gracilis* are more similar in size to *A. grabamensis*, but *A. minuta* has only two radioles on each side, and larger thoracic neurochaetae, whilst *A. gracilis* has up to eight abdominal chaetigers, and abdominal uncini with a small anterior tooth.

Amphicorina persinosa (Ben-Eliahu, 1975)

Oriospsis eimeri persinosa Ben-Eliahu, 1975; San Martin *et al.*, 1994.

Material examined

Ben-Eliahu's material from BMNH: holotype and paratypes (20 specimens).

Adriatic coasts: Gargano, four specimens, 1 m depth, on hard substrate, February 1997; Brindisi, six specimens, 3 m depth, on hard substrate, July 1987.

Redescription

Complete mature female with eight thoracic and eight abdominal chaetigers. Total length 2.5 mm, crown 0.8 mm. Crown with three pairs of radioles with lateral flanges fused basally, forming low palmate membrane (Fig. 2a), with pinnules all ending at the same height, and one pair of ventral radiolar appendages (Fig. 2c). Anterior peristomial ring high, not covered by posterior peristomial ring collar (Figs 2b, c; 3a), collar oblique, laterally crenulate, fused to the ventral projection of anterior peristome. Glandular ridge visible on second chaetiger (Fig. 2b, c).

Superior thoracic notochaetae elongate, narrowly hooded (Fig. 2f), six per fascicle. Inferior thoracic notochaetae bayonet type (Fig. 2e) from chaetigers 2 to 4, eight per fascicle. Thoracic uncini with three-four rows of teeth above main fang (Fig. 2d). Abdominal uncini quadrangular (Fig. 2g) with six-seven rows of teeth above larger anterior tooth. Up to nine uncini per fasci-

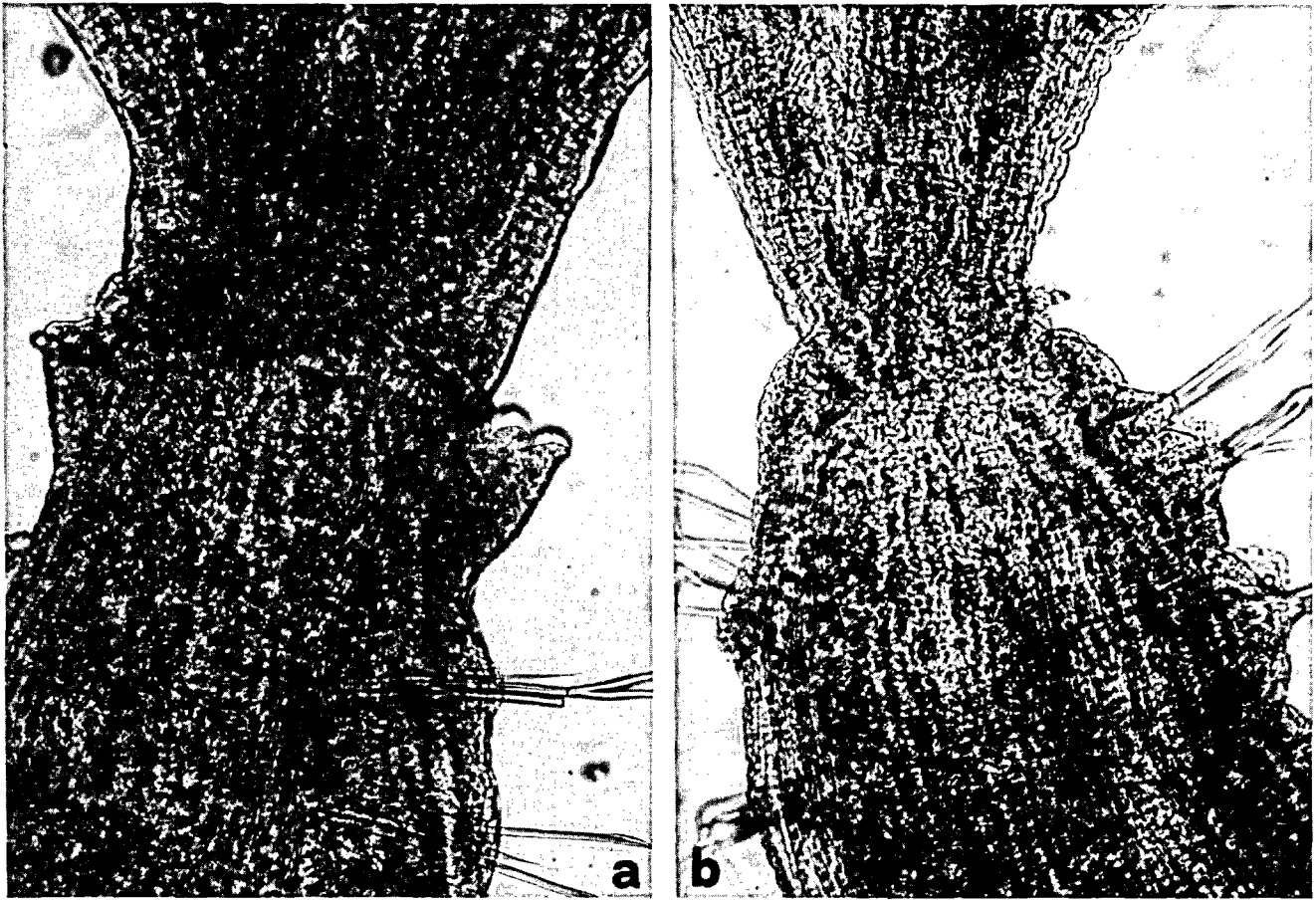


Fig. 3 - Light microscope photographs of the anterior end of *A. persinosa* (a) and *A. grabamensis* (b).

cle. Abdominal neurochaetae elongate and hooded (Fig. 2h), three per fascicle.

Oocytes in chaetigers 2-7.

Remarks

The above description does not agree well with the original one from Ben Eliahu (1975) from the eastern basin of the Mediterranean. First of all, it appears more slender, and with a more evident base of the crown not covered by the collar, but this could be due to different preservation. The main difference is, however, in the number of radioles, for which the author reports five pairs. From the examination of material from type locality (holotype and paratypes), which is in very poor condition, it is difficult to confirm this diagnosis, because the few specimens in which it was possible to examine this character, have three pairs of radioles. Also in the description from San Martin *et al.* (1994) of material from Cuba, the authors refer to three pairs of radioles. Therefore, we consider *A. persinosa* as having three pairs of radioles. This taxon was described as a sub-species of *A. eimeri*, but in our opinion it must be considered a different species. This assumption is based especially on the shape of the collar, which is the main feature distinguishing this taxon from most of the other

species of the genus with a crenulate collar: *A. denticollis*, *A. cincta*, *A. eimeri*, *A. eimeri australis*, *A. tristanensis*, and *A. anneae*, all not having a oblique collar covering the anterior peristome both laterally and ventrally, and *A. busseltonensis* having an oblique collar but crenulate only ventrally. In addition, except for *A. anneae*, most of these species have more than three radioles on each side of the crown.

The species is known from the Mediterranean Sea and Cuba.

Amphicorina sp.

Material examined

Eight specimens from Otranto, 1 m depth on hard bottom, February 1997.

Description

Complete specimens with eight thoracic and four abdominal chaetigers. Total length 2.5 mm, crown 0.5 mm. Crown with three pairs of radioles, with lateral flanges (Fig. 4a) fused basally, forming low palmate membrane, with pinnules all ending at same height, and with one pair of ventral radiolar appendages. Anterior peristomial

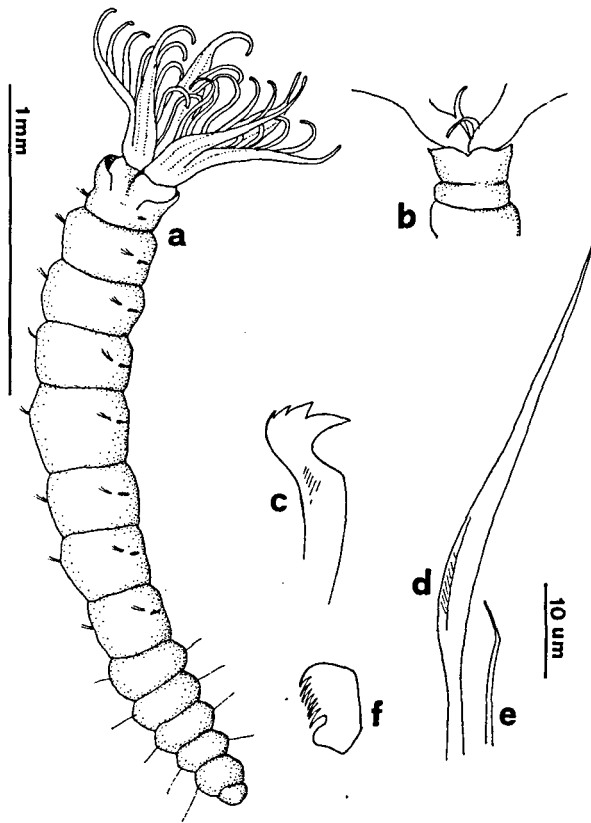


Fig. 4 - *Amphibicorina* sp. a, entire worm, dorsal view; b, anterior end, ventral view; c, thoracic uncinus; d, superior thoracic notochaeta; e, thoracic notochaeta bayonet type; f, abdominal uncinus.

ring covered by posterior peristomial ring collar only ventrally (Fig. 4a, b). Collar high, smooth, complete with small notch ventrally, and wide gap dorsally (Fig. 4a, b). Glandular ridge not visible on second chaetiger.

Superior thoracic notochaetae elongate, narrowly hooded (Fig. 4d), four per fascicle. Inferior thoracic notochaetae bayonet (Fig. 4e), four per fascicle. Thoracic uncini with three rows of teeth above main fang (Fig. 4c), five per fascicle. Abdominal uncini quadrangular (Fig. 4f), with seven rows of teeth above slightly larger anterior tooth. Up to seven uncini per fascicle. Abdominal neurochaetae elongate and hooded, two per fascicle.

Remarks

The taxon corresponds quite well to *A. mobilis*, a species described by Rouse (1990) for Australian material, especially in the shape of the collar. Rouse reports a maximum number of five abdominal chaetigers, with smaller specimens having four. This agrees with our material, which is larger and has five chaetigers; however, the maximum size found for Australian material was 1.3 mm, against 2.5 mm of our material. In addition, our material is in very poor condition, with only one specimen with tentacular crown; therefore, before extending

the range of *A. mobilis*, or creating a new taxon, the examination of additional material is needed.

Amphicorina pectinata (Banse, 1957)

Oriopsis alata pectinata Banse, 1957; Giangrande, 1989

Material examined

Eight specimens from the Bay of Calvi (northern Corsica), hard bottom, 1 m depth, 1985. Four specimens from Nerja (Spain) hard bottom, coralligenous formation, 1983.

Redescription

The following description refers to specimens from the Bay of Calvi. Specimens with eight thoracic and seven abdominal chaetigers (Fig. 5a), total length 4.5 mm, crown 1 mm. Crown with four pairs of radioles with lateral flanges, with pinnules ending at same height, and with two pairs of ventral radiolar appendages. Collar absent, ventral apex of the anterior peristome tall, bifurcate and not hidden by groove (Fig. 5a). Glandular ridge not visible on second chaetiger.

Superior thoracic notochaetae short, widely hooded (Fig. 5c), four-five per fascicle. Inferior thoracic notochaetae bayonet in chaetigers 2-8 (Fig. 5d), five-six per fascicle. Thoracic uncini with three rows of teeth above main fang (Fig. 5e). Abdominal uncini quadrangular (Fig. 5f) with six rows of teeth above much larger anterior tooth. Up to 20 uncini per fascicle. Abdominal neurochaetae elongate and hooded, two-three per fascicle.

Remarks

The taxon was described by Banse (1957) as a subspecies of *A. alata*, but, in our opinion, the difference between the typical form *A. alata* and *A. alata pectinata*, based both on the original descriptions and on Mediterranean specimens, lies in important morphological features, such as the shape of abdominal uncini and of thoracic notochaetae, often used as diagnostic features at species level: it is thus suggested that the subspecies *A. alata pectinata* could be considered a valid species, under the name of *A. pectinata*.

The specimens from the Mediterranean Sea correspond to Banse's description (1957) from New Zealand, but Mediterranean specimens are longer and with higher numbers of abdominal uncini (total length of Mediterranean specimens ranges from 2.5 to 6 mm, crown included, measuring 1/4 of the entire worm, while abdominal uncini range from 11 to 23 per torus).

In addition, Rouse (1990) described another species, *A. brevicollaris*, very similar to *A. alata pectinata*, the only difference between the two being the number of abdominal chaetigers: *A. brevicollaris* is a small species with seven abdominal chaetigers, while *A. pectinata* can reach seven abdominal chaetigers only in much larger specimens.

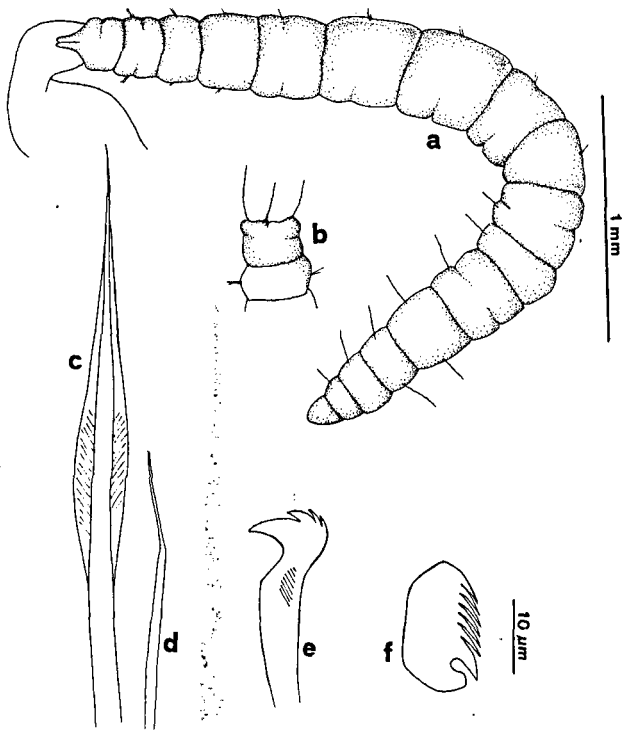


Fig. 5 - *Amphicorina pectinata*. a, entire worm, ventral view; b, anterior end, dorsal view; c, superior thoracic notochaeta; d, thoracic notochaeta bayonet type; e, thoracic uncinus; f, abdominal uncinus.

Amphicorina armandi Claparède, 1864

- Fabricia (Amphicorina) armandi* Claparède, 1864
- Amphicorina cursoria* Iroso, 1921
- Oridia armandi* Fauvel, 1927
- Oriopsis armandi* Banse, 1957; Fitzhugh, 1989

Material examined

Ligurian Sea: 60 specimens from Portofino, 1 m depth, hard bottom, 1980. Tyrrhenian Sea: 15 specimens from Ischia Island, Naples, 2 m depth, hard bottom, 1980. Capraia Island, Leghorn, 1 m depth, 1986; 13 specimens, from the Bay of Calvi (Corsica) 1986. Adriatic coast: 5 specimens from Brindisi, hard bottom, 1 m depth, February 1997.

Redescription

The present description regards material from Brindisi (Adriatic Sea), the best preserved one, from the first author's collection. Complete specimens with eight thoracic and 11 abdominal chaetigers (Fig. 6a), total length 2.8 mm, crown 0.8 mm. Crown with three pairs of radioles with lateral flanges (Fig. 6a), fused basally and forming a low palmate membrane, with pinnules ending at same height, and with one pair of ventral radiolar appendages. Anterior peristomial ring covered by posterior peristomial ring collar. Collar slightly higher ventrally, with gap dorsally, and smooth margin (Fig. 6b, c). Glandular ridge not visible on second chaetiger.

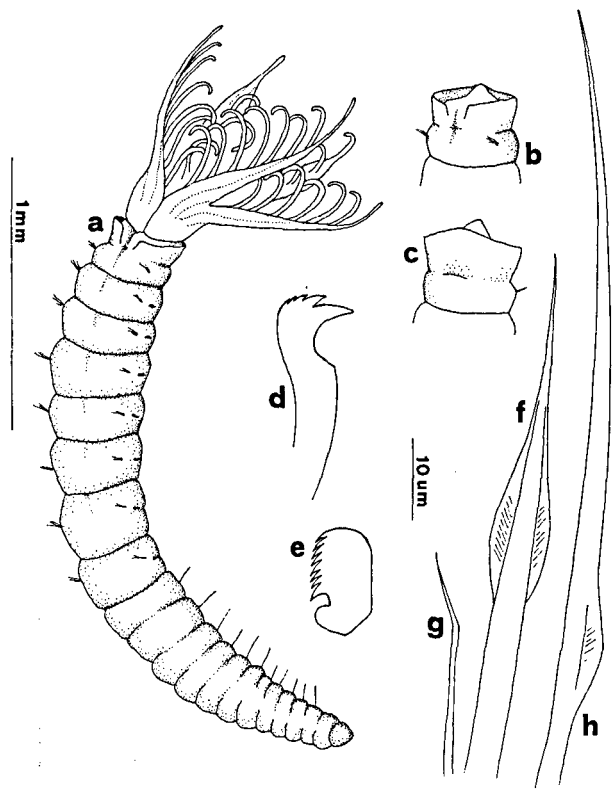


Fig. 6 - *Amphicorina armandi*. a, entire worm; b, anterior end, dorsal view; c, anterior end, ventral view; d, thoracic uncinus; e, abdominal uncinus; f, thoracic notochaeta bayonet type; g, superior thoracic notochaeta; h, abdominal neurochaeta.

Superior thoracic notochaetae elongate, with a large hood (Fig. 6f), four-five per fascicle. Inferior thoracic notochaetae bayonet type (Fig. 6g), three per fascicle. Thoracic uncini with three rows of teeth above the main fang (Fig. 6d), five per fascicle. Abdominal uncini quadrangular (Fig. 6e), with eight-nine rows of teeth above slightly larger anterior tooth; up to seven uncini per fascicle. Abdominal neurochaetae elongate and hooded (Fig. 6h), two per fascicle.

Remarks

Features of our specimens correspond well with the descriptions of Claparède (1864), Fauvel (1927), and Banse (1957), in having a developed and smooth collar with a wide dorsal gap (see also Fitzhugh, 1989, Fig. 17). Size varies from 2 to 3 mm, and abdominal uncini from five to seven in number.

Amphicorina eimeri (Langerhans, 1880)

- Oria eimeri* Langerhans, 1880
- Oriopsis eimeri* Banse, 1957; Day, 1967; Gambi *et al.*, 1983

Material examined

Tyrrhenian Sea: 424 specimens from Ischia Island (Naples), hard bottom, 1-3 m depth, 1983; 78 specimens

from Ponza Island, hard bottom, 5 m depth, 1990; Adriatic Sea: 20 specimens from Brindisi, hard bottom, 3 m depth, 1987.

A description of this species from Mediterranean specimens (Ischia) is already available in Gambi *et al.* (1983). All the specimens examined corresponded very well with descriptions by Langerhans (1880), Banse (1957) and Day (1967). The high variability in the number of abdominal chaetigers with respect to the size of individuals (Gambi *et al.*, 1983) is remarkable.

DISCUSSION

Examination of available *Amphicorina* material has shown the presence of at least five taxa in the Mediterranean basin, although these results come especially from material collected only along the Italian coast. Additional material from other Mediterranean zones, especially of specimens identified as *A. armandi*, may well show that other *Amphicorina* species occur there. The finding in the Mediterranean Sea of the New Zealand species *A. pectinata*, connecting the polychaetofauna of the southern hemisphere with that of the Mediterranean Sea, appears very singular, insofar that only the Sabellidae are concerned; another Austral species, *Desdemonia ornata* (Lardicci & Castelli, 1986), had already been found in the Mediterranean. However, it is also possible that the Mediterranean specimens belong to a species different from *A. pectinata*, even if, at present, the difference found in Mediterranean material does not appear to justify the erection of a different taxon.

As already reported for the sub-species *A. alata pectinata* (Banse, 1957), and *A. eimeri persinosa* (Ben-Eliahu, 1975), also *A. eimeri australis* (Hartmann-Schröder, 1986), markedly differing from *A. eimeri*, should be considered as valid species. This is shown by the differences reported in Table I among *A. eimeri* and the two taxa previously considered as sub-species: often the differences are larger than those existing among different species, with the only shared feature being the presence of a crenulate collar, a character present in many other species of *Amphicorina*.

The genus *Amphicorina* needs further revision. Careful examination of type species, and fresh material from type areas will allow study of the detail of the internal branchial crown, shape of dorsal and ventral lips, and especially reproductive features (Rouse, 1990, 1992, 1994), difficult when examining preserved material, but even at this stage there is some evidence for *Amphicorina* to be separated into more than one genus. In particular, the knowledge of reproductive features of the species is stressed here in order to clarify some problems within this genus. As an example, Rouse (1992) report different reproductive features in *A. dentata* compared to other examined congeneric species, and this is in accordance with the morphology of abdominal uncini in this taxon different from that typical of *Amphicorina* genus.

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