INTRODUCTION

The polychaete family Sabellidae Latreille, 1825, commonly known as feather-duster worms, is characterized by a striking, usually colourful radiolar crown that emerges from self-made tubes typically composed of mucus and sediment (Rouse, 2000; Merz, 2015), with the exception of *Glomerula piloseta* (Perkins, 1991), which inhabits calcareous tubes. This family represents one of the most diverse and ubiquitous families worldwide, comprising around 400 species belonging to 39 genera, all marine and benthic with the exception of one freshwater genus (Capa et al. 2014; Capa & Murray, 2015). Sabellids are found in a variety of habitats from the intertidal zone to abyssal depths (Tovar-Hernández, 2009).

The systematics of Sabellidae has been considered in several studies. According to many morphological studies (e.g. Knight-Jones, 1981; Fitzhugh, 1989; Nogueira et al. 2010), Fabriciinae Rioja, 1921 was considered a subfamily of Sabellidae. More recently, however, both morphological and molecular studies consider Fabriciidae as an independent family and the sister clade to Serpulidae Rafinesque, 1815 (Kupriyanova & Rouse, 2008; Capa et al. 2011; Huang et al. 2011). However, the internal relationships of Sabellidae remain unclear, and further studies are needed to better resolve the sabellid phylogeny (Capa et al. 2014).

Fitzhugh (1989) contributed greatly to the systematics of the family with an exhaustive revision. However, some traditional morphological features have been reported as inaccurate for taxonomic purposes in some taxa (e.g. Capa et al. 2010; Capa et al. 2013). Taxonomic revisions for some genera exist (e.g. Knight-Jones & Perkins, 1998; Knight-Jones & Mackie, 2003), but the establishment of the species delimitation of others remains doubtful, such as *Myxicola* with a poorly defined taxonomy (Giangrande et al. 2015) or *Bispira*, which lacks apomorphies (Capa, 2008). Moreover, despite the current knowledge of the family, some species keys still use older, inaccurate descriptions. Thus, greater effort is needed in order to clarify species statuses within some genera.

To date, 19 genera and 40 valid species have been reported from the waters surrounding the Iberian Peninsula and Balearic Islands (Rioja, 1923; Rioja, 1931; Ibáñez, 1973; Campoy, 1979; Campoy, 1982; Martín, 1991; Tena, 1996; López & Tena, 1999; Redondo & San Martín, 1997; Cebeiro et al. 1998; Martínez & Adarraga, 2001; El Haddad et al. 2007; Arias et al. 2013). Based on a large number of Sabellidae samples collected from the westernmost Mediterranean Sea and the north-eastern Atlantic Ocean, including the Cantabrian Sea, we report the species *Amphicorina rovignensis* Mikac, Giangrande & Licciano, 2013*; Dialychone dunerificta* (Tovar-Hernández, Licciano & Giangrande, 2007)*; Dialychone usticensis* (Giangrande, Licciano & Castriota, 2006)*; Euchone* cf. *limnicola* Reish, 1959*; Euchone* cf. *pseudolimnicola* Giangrande & Licciano, 2006*; Megalomma lanigera* (Grube, 1846)*; Parasabella tenuicollaris* (Grube, 1861); and *Parasabella tommasi* (Giangrande, 1994) for the first time in this area. More importantly, we describe a new species of *Bispira* Krøyer, 1856 for the Djibouti Banks area in the Alborán Sea (SW Mediterranean Sea).

MATERIAL & METHODS

Most of the examined material was collected within the framework of the Spanish national project “Fauna Ibérica” from 1989-1996 (see Ramos, 2007), conducted along Spanish Iberian Peninsula coasts of the westernmost Mediterranean Sea (including the Balearic Archipelago) and of the north-eastern Atlantic Ocean (Cantabrian Sea and Gulf of Cádiz). Material deposited in the Invertebrates Collection of the National Museum of Natural History of Madrid (MNCN) from previously published samplings of the same areas were also analysed (see Rioja, 1923; Acero & San Martín, 1986; Redondo & San Martín, 1997; López & Viéitez, 1999), as well as unpublished, occasional samplings (Table 1, Figure 1).

Samples were obtained using a beam trawl, scuba diving or snorkelling. After sampling, specimens were separated from substratum with a 1 mm aluminium sieve. Material was fixed in either 5% neutralized formalin or 70% ethanol and then preserved in 70% ethanol (Templado et al. 1993). Species identification was performed using either a Leica MZ16A stereomicroscope or a Carl Zeiss Photomicroscope III optic microscope, depending on sample size. Material was deposited in the Invertebrates Collection of the MNCN. Number of collected specimens per species is indicated in brackets or after colons after code of MNCN Invertebrates Collection in Results and Comparative Material Examined sections.

Images were captured with a FEI INSPECT scanning electron microscope (SEM) in the Electron and Confocal Microscopy Laboratory or a Leica DFC550 camera attached to a Leica MZ16 stereomicroscope in the “Fauna Ibérica” Laboratory, both located within the MNCN. For SEM, hexamethyldisilazane (HMDS) was used for critical point drying. Briefly, specimens were first dehydrated through an ethanol series, then a hexamethyldisilazane (HMDS)-ethanol series and finally into HMDS for critical point drying (Nogueira et al. 2010). Specimens were air dried then coated with gold. Illustrations were edited using Adobe Photoshop 6.0, Adobe Illustrator CC 2014 and Arc Gis 10.

Comparative material examined

The new reports were compared to the type material of the species when possible, and also with congeners showing morphological resemblance. Furthermore, the new species was compared to the type material of the type species of the genus. Additional relevant material for close areas to the ones herein studied has also been examined when available.

For *Amphicorina rovignensis* Mikac, Giangrande & Licciano, 2013:

A. triangulata López & Tena, 1999: holotype and paratypes (MNCN 16.01/5301: 31), paratypes and additional material (MNCN 16.01/5302: 189), additional material from

Columbretes Islands, westernmost Mediterranean Sea (MNCN 16.01/16703: 5; MNCN 16.01/16705: 1; MNCN 16.01/16707: 3; MNCN 16.01/16708: 1; MNCN 16.01/16709: 4; MNCN 16.01/16710: 10; MNCN 16.01/16711: 8; MNCN 16.01/16712: 5.

For *Bispira primaoculata* sp. nov.:

B. volutacornis (Montagu, 1804): holotype (Natural History Museum 1984.36), additional material from Santander (MNCN 16.01/506: 1).

For *Dialychone dunerificta* (Tovar-Hernández, Licciano & Giangrande, 2007):

D. dunerificta: holotype and paratypes (MNCN 16.01/7369: 149).

For *Dialychone usticensis* (Giangrande, Licciano & Castriota, 2006):

D. usticensis: holotype (MNCN 16.01/10325), paratype (MNCN 16.01/10326: 3).

For *Euchone* cf. *pseudolimnicola* (Giangrande & Licciano, 2006):

E. pseudolimnicola: holotype (MNCN 16.01/10327).

TAXONOMY

Order Sabellida Latreille, 1825

Family Sabellidae Latreille, 1825

Genus *Amphicorina* Claparède, 1864

Amphicorina rovignensis Mikac, Giangrande & Licciano, 2013

(Figure 2a-c)

Amphicorina rovignensis Mikac et al. 2013: 1513-1514, Fig. 2A-F.— Giangrande et al. 2015: 33.

Material examined

Westernmost Mediterranean Sea: L21, MNCN 16.01/16706 (1); L19, MNCN 16.01/16704 (5); MNCN 16.01/16918 (1).

Diagnosis

Crown with three pairs of radioles (Figure 2a, arrows) and a single pair of ventral radiolar appendages. Posterior peristomial ring collar as a triangular, bilobed, ventral projection with entire and distally rounded tips, reduced dorso-laterally (Figure 2a-b). Thoracic uncini acicular, with the main fang distally entire and surmounted by a large tooth located in the middle of its surface (Figure 2c). Large tooth of thoracic uncini followed by three or four rows of unequally sized smaller teeth (Figure 2c). Ventral shields conspicuous (Figure 2a). Pygidial eyespots absent (Figure 2a).

Remarks

Most of the studied specimens are smaller than the holotype described from Sveti Ivan Island in the eastern Mediterranean Sea (Mikac et al. 2013). However, despite the smaller size, the crown length of some specimens exceeds that of the holotype. The number of abdominal chaetigers in studied specimens varies from four to six, while the holotype and paratypes are characterized as having six abdominal chaetigers (Mikac et al. 2013).

Comparisons

Amphicorina rovignensis is very similar to *A. triangulata* which is also present in the Mediterranean Sea. However, they differ in radiole number and posterior peristomial ring length. According to Mikac et al. (2013), *A. rovignensis* has three pairs of radioles and a long posterior peristomial ring (Figure 2a), whereas *A. triangulata* has four pairs of radioles and a shorter posterior peristomial ring.

Specimens of *A. rovignensis* from the Balearic Islands and *A. triangulata* from the Columbretes Islands (westernmost Mediterranean) were morphologically compared by SEM. *Amphicorina rovignensis* has thoracic uncini with a well-developed main fang with an entire tip and a single smaller secondary tooth (Figure 2c) whereas *A. triangulata* has thoracic uncini with a well-developed main fang with a bifid tip and two smaller secondary teeth of decreasing size (Figure 2d-e). However, the original description of *A. triangulata* based on specimens from the Chafarinas Islands describes the species as having thoracic uncini with a well-developed main fang with an entire tip, a single secondary tooth and a distal portion with 2-3 series of smaller teeth.

Distribution

Eastern Mediterranean Sea: Adriatic Sea (Sveti Ivan Island). In the present study, the species’ distribution range is expanded to include the westernmost Mediterranean Sea (Balearic Islands). This represents the first record of the species outside its type locality and marks the westernmost limit of its distribution in the Mediterranean Sea to date.

Ecology

Calcarenitic, rocky bottoms, 5-25 m depth. In the present study, the species’ habitat range is expanded as specimens were found attached to macroalgae assemblages.

Genus *Bispira* Krøyer, 1856

Type species. *Amphitrite volutacornis* Montagu, 1804, designated by Bush (1905).

Diagnosis based on the holotype of the type species

Branchial lobes spiral, forming several whorls. Palmate membrane present, well developed, low. Dorsal basal flanges present. Radiolar flanges present, narrow, extending slightly beyond palmate membrane, absent in the distal part of the radioles.

Radioles with paired, compound eyes of different sizes and positions. Collar of posterior peristomial ring present, with wide mid-dorsal gap, mid-ventral incisions and one pair of ventral lappets overlapping. Superior thoracic notochaetae elongate and narrowly hooded; inferior thoracic notochaetae spine-like. Abdominal neurochaetae spine-like and modified, elongated and narrowly hooded, arranged in C-shaped bundles.

Remarks

The genus *Bispira* comprises 22 species of sabellids (Capa et al. 2014). Together with the genera *Sabella* Linnaeus, 1767; *Branchiomma* Kölliker, 1858; *Pseudobranchiomma* Jones, 1962; *Sabellastarte* Krøyer, 1856 and *Stylomma* Knight-Jones, 1997, it forms a group characterized by the arrangement of abdominal chaetae in a tight spiral or C-shaped pattern and spine-like inferior thoracic chaetae (Knight-Jones & Perkins, 1998; Capa, 2008; Capa et al. 2014; Giangrande et al. 2015).

Little is known about the *Bispira* species in the Mediterranean Sea and northeastern Atlantic Ocean. *Bispira crassicornis* (Sars, 1851), *Bispira mariae* Lo Bianco, 1893, *Bispira viola* Grube, 1863 and *Bispira volutacornis* have been previously recorded for these areas (*e.g.* Knight-Jones & Ergen 1991; Parapar et al. 1996; Çinar & Ergen, 1999). However, according to Knight-Jones & Perkins (1998), specimens identified as *B. crassicornis* collected by Lo Bianco (1893) and Hartmann-Schröder (1977) may be young specimens of *B. mariae* or an undescribed species. *Bispira volutacornis* is the only species of the genus recorded for the Cantabrian Sea in Santander (Rioja, 1917) and the Galician coast (Amoureux, 1972; Parapar, 1996); the other species have not been recorded for the western Mediterranean Sea.

Currently, there are no apomorphies shared by all known *Bispira* species (Capa, 2008). Knight-Jones & Perkins (1998) performed a complete taxonomic revision of the genus, in which they identified the absence of dorsal basal flanges in the crown as the only valid synapomorphy. Other diagnostic characters are shared with members of the aforementioned genera. However, according to Capa (2008) and our observations of the holotype, dorsal basal flanges are present in both *B. volutacornis* and *B. serrata* Capa, 2008. Our observations show dorsal basal flanges are round and short in *B. volutacornis*' holotype, although Capa (2008) described them as L-shaped for specimens from Abereiddy Quarry (Wales).

Most *Bispira* species are characterized by the presence of paired, compound eyes along the radioles and spine-like or modified, elongate and narrowly hooded neurochaetae arranged in a C-shaped to spiral pattern. However, some species lack the paired, compound eyes, and the C-shaped neurochaetae arrangement is also present in the genus *Sabella* Linnaeus, 1767.

We included the new species in the genus *Bispira* for the presence of paired, compound eyes along the radioles, dorsal basal flanges and a C-shaped pattern of neurochaetae as well as all of the mentioned diagnostic characters. Although the branchial lobes are semicircular and not spiral, this character is known to be variable, even within the same species. Nevertheless, the genus requires a comprehensive taxonomic and phylogenetic revision, as also remarked by other authors (Capa, 2008).

Bispira primaoculata **sp. nov.**

(Figures 3-4)

Material examined

Spain, Mediterranean Sea (Alborán Sea). Holotype: L9, MNCN 16.01/16651. Paratypes: L9, MNCN 16.01/16652 (1); MNCN 16.01/16653 (1); MNCN 16.01/16654 (1).

Diagnosis

Branchial lobes semicircular. Axial skeleton of six vacuolated cells in cross section. Dorsal basal flanges rounded and long. One to three pairs of compound eyes present per radiole, appearing at the dorsal-most pair of radioles, and maintaining until at least the ninth pair of dorsal radioles. Compound eyes mainly distributed in the distal part of the crown. First segment maximally twice as long as the following one. Abdominal neurochaetae spine-like in anterior chaetigers, spine-like and modified, elongate and narrowly hooded in posterior chaetigers, arranged in C-shaped bundles.

Description (based on holotype; measurements indicated in parentheses are from the paratypes)

Body with 8 (9) thoracic and 40 (43) abdominal chaetigers (Figure 10a). Total thorax-abdomen length 20 (23) mm. Maximum width (3) 4 mm throughout most of the trunk, progressively tapering towards the posterior end (Figure 3a). Trunk slightly flattened dorso-ventrally. Tube thin-walled, soft, greyish, composed of protean mucus and sandy sediment.

Total branchial crown length 17 (15-26) mm. Branchial lobes semicircular, with ventral margins slightly turned towards the mouth. Each branchial lobe with 17 (15-16) fully developed radioles (Figure 3a). Radiolar skeleton axis composed of six longitudinal rows of vacuolated, quadrangular or sub-quadrangular cells (Figure 3b). Palmate membrane present, well developed, low, extending along two-thirds the length of the radioles. Dorsal basal flanges present, long and rounded (Figure 4a-b). Radiolar flanges present, narrow (Figure 3c), extending beyond the palmate membrane, absent in the distal-most part of the radioles. Skeleton in radiolar flanges absent. Radiolar tips long, filiform. Pinnules also long and filiform (Figure 3c). Radioles with pigmented bands and one to three pairs of compound eyes (Figures 3a,c and 4c). Radiolar eyes present, appearing in the dorsal-most pair of radioles and maintaining to at least the ninth pair of dorsal radioles, sometimes absent in latero-ventral radioles. Radiolar eyes mainly present in the distal part of the crown (Figure 3a), arranged in bands though placed at different levels in given pair, slightly protruding to the axial skeleton (Figures 3c and 4c). Dorsal lips tapered, triangular and erect (Figure 3d), fused each by palmate membrane to dorso-lateral radioles. Dorsal radiolar and pinnular appendages present (Figure 3d). Ventral lips triangular, with slightly pointed tips, low, about one-quarter of dorsal lip length (Figure 3d). Ventral sacs and parallel lamellae present, protruding outside the crown (Figure 3f).

Anterior peristomial ring and junction between branchial lobes and thorax visible dorsal and dorso-laterally, not completely concealed by the collar (Figure 3e). Ventral margins of the collar of posterior peristomial ring higher than dorsal ones, giving the collar an oblique appearance in lateral views. Collar margins smooth (Figure 3e-f), with a pair of ventro-lateral incisions (Figure 3f, in arrows). Mid-dorsal collar margins widely separated, forming a broad gap, arising near the posterior margin of the first segment (Figure 3e). Dorsal pockets absent. Mid-ventral collar margins forming a pair of prominent but short ventral lappets, distally rounded, not overlapping medially (Figure 3f). Midline margins of ventral lappets involute to form small ventral pockets. Collar chaetae arranged in two transversal rows of elongate, narrowly hooded chaetae, with superior chaetae longer and wider than inferior ones. Thoracic chaetigers rectangular, about five times wider than long, not biannulated (Figure 3a,e-f). First segment at most twice as long as following ones (Figure 3f). Interramal eyespots inconspicuous after fixation of material. Thoracic ventral shields conspicuous, rectangular and decreasing in width towards the posterior thoracic chaetigers (Figure 3f), except the first shield, which is W-shaped on anterior margin (Figure 3f). Gaps between tori and ventral shields present from second chaetiger (Figure 3f). Faecal groove conspicuous. Thoracic notopodia slightly prominent, quadrangular and distally rounded. Notochaetae with a single, transversal row of elongate, narrowly hooded superior chaetae and three transversal rows of spine-like inferior chaetae (Figures 3g and 4d-g). Spine-like chaetae twice as thick as the previous width at knee region, with posterior region of the knee as long as knee region's width (Figures 3g and 4d-e). Neuropodial uncini avicular, with a short, curved and slender neck, long handle and a well-developed, rounded breast (Figures 3h and 4h). Neuropodial uncini with main fang surmounted by 7-8 rows of secondary teeth equally sized (Figures 3h and 4h). Main fang not extending beyond breast in lateral view (Figure 3h). Companion chaetae present, with teardrop-shaped and slightly asymmetrical membranes (Figures 3h and 4i).

Abdominal chaetigers similar in shape to thoracic ones, shorter (Figure 3a). Abdominal ventral shields medially divided by faecal groove, similar to thoracic ones. Notopodial uncini as thoracic ones, without companion chaetae. Neuropodia erect, forming conical, elevated lobes. Neurochaetae of anterior abdomen in a single, transversal row of spine-like chaetae, arranged in a C-shaped pattern. Spine-like chaetae with a narrow knee region, slightly wider than shaft, with the distal region much longer than knee's width (Figure 3i). Neurochaetae of posterior abdomen (Figure 4j-k) with a superior group of modified, elongate, narrowly hooded chaetae (Figure 4j-k), and an inferior group of spine-like chaetae similar to those from anterior abdomen, arranged in a C-shaped pattern. Pygidium bilobed (Figure 3j).

Comparisons

Although soft-bodied organisms are differently affected by fixation procedures, the direct fixation with ethanol is one of the best methodologies to preserve the real shape of the species (Costa-Paiva et al. 2007). Furthermore, in polychaetes, the length of the first chaetiger, together with the length of the pygidium, seems to be valuable to potentially discriminate among populations and species (Costa-Paiva et al. 2007), so this character is herein considered as valid to morphologically compare the species of *Bispira*.

Bispira primaoculata sp. nov. is characterized by having short thoracic tori, forming a broad gap between them and ventral shields. This character is also shared with the species *Bispira brunnea* (Treadwell, 1917), *B. crassicornis*, *B. elegans* (Bush, 1905), *B. fabricii* (Krøyer, 1856), *B. guinensis* (Augener, 1918), *B. klautae* Costa-Paiva & Paiva, 2007, *B. manicata* (Grube, 1878), *B. melanostigma* (Schmarda, 1861), *B. monroi* (Hartman, 1961), *B. oatesiana* (Benham, 1927), *B. paraporifera* Tovar-Hernández & Salazar-Vallejo, 2006, *B. porifera* (Grube, 1878), *B. secusolutus* (Hoagland, 1920), *B. serrata*, *B. viola* and *B. wireni* (Johansson, 1922). Other *Bispira* species have longer thoracic tori indenting the ventral shields.

Bispira primaoculata sp. nov. has one to three pairs of compound eyes per radiole that are distributed in bands mainly in the distal part of the crown. Among the other species having short thoracic tori forming a broad gap between them and ventral shields, only *B. melanostigma* and *B. manicata* have a similar number and arrangement of radiolar eyes as *B. primaoculata* sp. nov. However, in *B. melanostigma,* the collar covers the junction between the crown and thorax laterally, the radiolar skeleton is composed of eight to ten rows of kidney-shaped cells and the ventral lappets overlap medially, whereas in *B. primaoculata* sp. nov. the collar does not reach the crown-thorax junction laterally, the radiolar skeleton is composed of six rows of quadrangular or sub-quadrangular cells and the ventral lappets do not overlap medially. In *B. manicata*, radiolar flanges are present beyond the pinnules (see Figure 15B of Knight-Jones and Perkins, 1998 and Figure 5H in Capa, 2008), the radiolar skeleton is composed of four rows of quadrangular or sub-quadrangular cells and dorsal lips are fused to the dorsal-most pair of radioles. In contrast, in *B. primaoculata* sp. nov., radiolar flanges are not present beyond the pinnules, the radiolar skeleton is composed of six rows of quadrangular or sub-quadrangular cells and dorsal lips are fused to the dorso-lateral radioles.

Furthermore, *Bispira primaoculata* sp. nov. has dorsal basal flanges, which are present in only two other species: *B. volutacornis* and *B. serrata* (though they may have been overlooked in other species). However, as previously mentioned, *B. volutacornis* has branchial lobes forming spirals and numerous pairs of randomly placed compound radiolar eyes, and *B. serrata* is characterized by having six pairs of compound radiolar eyes. Also, *B. serrata* has distally serrated radiolar flanges, a unique feature of this species, which further differentiates it from *B. primaoculata* sp. nov.

The species found nearest to the type locality of *Bispira primaoculata* sp. nov. are *B. viola, B. mariae, B. volutacornis* and *B. polyomma.* However, they can be easily distinguished morphologically. In *B. viola* and *B. primaoculata* sp. nov., the collar does not reach the junction between crown and thorax, but in the latter it covers the anterior peristomial ring, while in the former does not cover it. In *B. primaoculata* sp. nov., the first segment is twice as long as the following one, whereas in *B. viola* the first segment is three times longer than the following one. *Bispira primaoculata* sp. nov. has one to three pairs of compound eyes appearing at the dorsal-most pair of radioles, while *B. viola* lacks of radiolar eyes or has very tiny compound eyes in the fifth to ninth dorsal-most pairs of radioles. *B. primaoculata* sp. nov. is characterized by having spine-like neurochaetae in the anterior abdomen and spine-like and modified, elongate, narrowly hooded neurochaetae in the posterior abdomen, whereas *B. viola* only has spine-like neurochaetae in both anterior and posterior abdomen. *Bispira viola* is characterized by having coloured bands of pigment along the body that are absent in *B. primaoculata* sp. nov. Finally, the habitat of *B. viola* and *B. primaoculata* sp. nov. are also very different: the former usually lives in hard bottoms at shallow waters, up to 20 m depth, whereas the latter has been found living in muddy and sandy bottoms almost up to 300 m depth.

Bispira primaoculata sp. nov. can be distinguished from *Bispira mariae* in having semicircular branchial lobes, slightly involuted towards the mouth, whereas in *B. mariae* the branchial lobes form spirals. In *B. primaoculata* sp. nov., the collar does not reach the crown-thorax junction laterally but covers it in *B. mariae*. In *B. primaoculata* sp. nov., the first segment is at most twice as long as the following one, whereas in *B. mariae,* it is the same length as the following one. In *B. primaoculata* sp. nov. there are one to three pairs of radiolar eyes mainly distributed in the distal part of the crown, whereas *B. mariae* has a few pairs of radiolar eyes mainly distributed in the proximal part of the crown. Finally, *B. primaoculata* sp. nov. has gaps between the tori and ventral shields which are absent in *B. mariae.*

Bispira primaoculata sp. nov. can also be distinguished from the type species *Bispira volutacornis*. *Bispira primaoculata* sp. nov. has semicircular branchial lobes, slightly involuted towards the mouth, whereas *B. volutacornis* has branchial lobes that form spirals with several whorls. In terms of radiolar eyes, *B. primaoculata* sp. nov. has one to three pairs mainly distributed in the distal part of the crown while *B. volutacornis* has several pairs randomly placed all over the crown. The first segment is twice as long as the following one in *B. primaoculata* sp. nov. while longer than, but not twice as long as, the following one in *B. volutacornis*. In *B. primaoculata* sp. nov., the collar does not cover the crown-thorax junction laterally but does so in *B. volutacornis*. The ventral lappets do not overlap in *B. primaoculata* sp. nov. but do in *B. volutacornis*. Finally, there are gaps between tori and ventral shields in *B. primaoculata* sp. nov., which are absent (or if present, are only in the three first segments) in *B. volutacornis*.

Additionally, *Bispira polyomma* is characterized by having long thoracic tori indenting the ventral shields, blackish pigment present on thoracic tori, interior part of ventral lappets in collar and bases of dorsal lips and pinnular appendages, about 6-8 pairs of compound eyes on each radiole, an axial skeleton composed of four transverse rows of cells, first segment as long as the following ones and abdominal neurochaetae composed of elongate, narrowly hooded and spine-like chaetae. However, *B. primaoculata* sp. nov. has short thoracic tori leaving a broad gap between them and ventral shields, three pairs of compound eyes sometimes missing in ventro-lateral radioles, an axial skeleton composed of six transverse rows of cells, first segment twice as long as the following ones, abdominal neurochaetae composed of modified, elongate, narrowly hooded and spine-like chaetae, and lacks of blackish pigment.

Distribution

Spain: La Herradura Seamount (Djibouti Banks area), Alborán Sea (westernmost Mediterranean Sea).

Etymology

The name refers to the presence of paired compound eyes, appearing at the level of the dorsal-most pair of radioles.

Ecology

Muddy sand; 288-297 m depth.

Genus *Dialychone* Claparède, 1870

Dialychone dunerificta (Tovar-Hernández, Licciano & Giangrande, 2007)

(Figure 5)

Chone dunerificta Tovar-Hernández, Licciano & Giangrande, 2007: 329-331, Fig. 7. *Dialychone dunerificta*. Selim et al. 2012: 112; Giangrande et al. 2015: 34.

Material examined

Cantabrian Sea: L1, MNCN 16.01/16920 (1); L2, MNCN 16.01/16701 (1); L4, MNCN 16.01/16699 (8).

Additional material

Material previously identified as *Chone duneri*. Northeastern Atlantic Ocean: L7, MNCN 16.01/9259 (1). Westernmost Mediterranean Sea: L8, MNCN 16.01/8761 (1), MNCN 16.01/8771 (1), MNCN 16.01/8789 (1), MNCN 16.01/8803 (1); L12, MNCN 16.01/5526 (1), MNCN 16.01/5527 (1), MNCN 16.01/5528 (5), MNCN 16.01/5529 (8), MNCN 16.01/5530 (2); L14: MNCN 16.01/2609 (1).Material previously identified as *Chone infundibuliformis*. Westernmost Mediterranean Sea: L11, MNCN 16.01/9255 (2).

Diagnosis

Radiolar tips long (Figure 5a). Palmate membrane about three-quarters of crown length. Dorsal lips triangular and elongated (Figure 5b). Several pairs of ventral radiolar appendages present (Figure 5b). Insertion of the crown exposed beyond collar (Figure 5c). Anterior peristomial ring lobe also exposed, distally bilobed (Figure 5d). Dorsal pockets of the collar not developed. Paleate chaetae with medium-sized mucro (Figure 5e). Pygidium rounded, without pygidial cirrus (Figure 5c). Staining pattern uniform, except the collar segment which is darker laterally, the ventral collar shield and the anterior end of collar that remain unstained and the abdominal posterior region that possesses dark glandular spots.

Remarks

The morphology of studied specimens generally agrees with the description of specimens from the Tyrrhenian Sea (western Mediterranean) and Canary Islands (southeast Atlantic). However, there are differences in size, number of chaetigers, and crown characters. The studied specimens display greater variability in body length and width, and crown length as well, having larger and smaller sizes than those from the Tyrrhenian Sea and the Canary Islands. The studied specimens also have significantly more abdominal chaetigers (up to 45). Other notable morphological differences include a low palmate membrane that is one-third the length of radioles (about two-thirds in type material), broad radiolar flanges (as wide as the radiolar axis in type material) and well-developed dorsal pockets of the collar (Figure 5c) (absent in type material).

Comparisons

According to Tovar-Hernández et al. (2007) and this study, some specimens previously identified as *Chone duneri* Malmgren, 1867 from the Mediterranean Sea and Atlantic Ocean correspond to *Dialychone dunerificta*. Both species have long radiolar tips and when treated with methyl green, the same staining pattern. However, they differ in dorsal lips shape and abdominal uncini morphology. In *C. duneri*, the dorsal lips are low and rounded, and anterior and posterior abdominal uncini have a similar shape, varying only in size. In *D. dunerificta*, the dorsal lips are filiform and erect (Figure 5b), and anterior (Figure 3f) and posterior (Figure 3g) abdominal uncini have different shapes. Thus, secondary teeth occupy less than half of the main fang length in anterior abdominal uncini and three-quarters of the main fang length in posterior abdominal uncini. The current distribution of *C. duneri* is considered to be restricted to the Arctic Ocean (Tovar-Hernández et al. 2007).

Distribution

Mediterranean Sea (Tyrrhenian Sea, Egyptian coast) and north-eastern (British Islands) and south-eastern (Canary Islands) Atlantic Ocean. Here, the species is reported for the first time for the Cantabrian Sea (Cape Peñas, Ondárroa and San Sebastián), the north-eastern Atlantic Ocean (Gulf of Cádiz) and the westernmost Mediterranean Sea (Cape Punta Torrox, Chafarinas Islands, Alborán Island, and from Cape San Antonio to Valencia Port passage).

Ecology

Sandy bottoms, 5-126 m depth. In the present study, the species' habitat range is expanded to include *Posidonia oceanica* (Linnaeus) Delile meadows and depths up to 143 m.

Dialychone usticensis (Giangrande, Licciano & Castriota, 2006)

(Figure 6)

Chone usticensis Giangrande, Licciano & Castriota, 2006: 53-57, Figs. 2-4. Tovar-Hernández et al. 2007: 335-336, Fig. 11.

Dialychone usticensis. Tovar-Hernández, 2008: 2219; Selim et al. 2012: 112; Mikac et al. 2013: 1517.

Material examined

Westernmost Mediterranean Sea, material previously identified as *Chone filicaudata*. L12, MNCN 16.01/5524 (1); L15, MNCN 16.01/4284 (1).

Diagnosis

Palmate membrane less than half of radiolar length (Figure 6a). Radiolar flanges narrow (Figure 6a). Dorsal lips pointed, longer than wide (Figure 6b). Ventral radiolar appendages present (Figure 6b). Insertion of the crown not exposed beyond collar (Figure 6c-d). Dorsal pockets of the collar not developed (Figure 6c). Anterior peristomial ring lobe not exposed beyond collar, unilobed (Figure 6c). Paleate chaetae with long mucro (Figure 6e). Pygidial cirrus present (Figure 6c,f). Staining pattern uniform along thoracic and abdominal segments (quickly lost on posterior end), except the unstained distal half of the collar and the ventral collar shield, and the presence of several small dark glandular spots and two bigger dark spots on the dorsum of the collar segment.

Remarks

The morphology of the studied specimens from the westernmost Mediterranean Sea corresponds well with the original species description. The only remarkable difference is size: studied specimens are shorter and narrower, and have less abdominal chaetigers and pairs of radioles on the crown.

Comparisons

Here, we consider that specimens previously identified as *Paradialychone filicaudata* (Southern, 1914) from the westernmost Mediterranean Sea and deposited at the MNCN collection actually represent specimens of *Dialychone usticensis*. Both species have a pygidial cirrus, but can easily be distinguished from each other. In *P. filicaudata*, the anterior peristomial ring lobe is bilobed, radiolar flanges are present along the entire length of the radioles, including the tips, the palmate membrane extends about three-quarters of the radiole length and anterior abdominal uncini have unequally sized secondary teeth. In *D. usticensis*, the anterior peristomial ring is unilobed (Figure 6c), radiolar flanges are present proximally on the radioles but absent at the tips, the palmate membrane extends about half of the radiole length (Figure 6a) and anterior abdominal uncini have equally sized secondary teeth (Figure 6g) (Giangrande et al. 2006). The staining pattern of *D. usticensis* is characterized by having the distal half of the collar segment and the ventral collar shield uncoloured, and several dark spots on the dorsum of the collar segment, whereas the staining pattern of *P. filicaudata* is completely uniform. The current distribution of *P. filicaudata* appears to be restricted to the north Atlantic Ocean (Tovar-Hernández et al. 2007).

Distribution

Mediterranean Sea (Thyrrenian Sea, Adriatic Sea, Egypt coasts) and south-eastern Atlantic Ocean (Canary Islands). *Dialychone usticensis* is reported for the first time for the westernmost Mediterranean Sea (Chafarinas Islands and Valencian coasts)

Ecology

Soft bottoms composed of sand, biogenic and volcanic particles andred calcareous algae, and mixed soft bottoms with rhodolits and silty sand; 31-63 m depth.

Genus *Euchone* Malmgren, 1866

Euchone* cf. *limnicola Reish, 1959

(Figure 7)

Euchone limnicola Reish, 1959: 717-719, Figs. 1-5. Hartman, 1966: 203-204, Pl. 6, Figs. 7-10; Hayes et al. 2005: 15; Çinar, 2013: 1265.

Material examined

Cantabrian Sea. L1, MNCN 16.01/16702 (8); L3, MNCN 16.01/16700 (2).

Diagnosis

Radiolar tips long (Figure 7a-b). Palmate membrane present, about two thirds of the crown length (Figure 7b). Radiolar flanges present (Figure 7b). Margin of collar smooth (Figure 7a,c). Anterior peristomial ring lobe not exposed beyond collar (Figure 7a), triangular and bilobed. Ventral incision of the collar absent (Figure 7a). Ventral shields conspicuous. Paleate chaetae with long mucro (Figure 7d). Thoracic uncini acicular with main fang surmounted by three to four rows of teeth of equal size (Figure 7e). Pre-pygidial depression only defined by a distinct anterior ridge, with eight to ten chaetigers (Figure 7a,f).

Remarks

Reish (1959) originally described *Euchone limnicola* based on specimens from California; Hartman (1966) later re-described the species using the type material. The studied specimens from the Cantabrian Sea correspond well with both descriptions, except they are shorter in size, have less radioles and vary in the number of abdominal (10-12) and pre-pygidial depression (8-10) chaetigers. The Pacific specimens have 18 abdominal and 10 pre-pygidial depression chaetigers. In addition, the Cantabrian Sea specimens studied here present features not described in previous descriptions, including a filiform, elongated dorsal lips with a rounded base, low and small ventral lips and dorsal radiolar appendages (Figure 7b).

Comparisons

Euchone limnicola is similar to *E. pseudolimnicola* Giangrande & Licciano, 2006 (see below and Figure 8). Both species present a pre-pygidial depression without lateral wings that is only defined by a distinct anterior ridge (Figures 7a,f and 8c,f). However, *E. limnicola* has a smooth collar without a ventral incision (Figure 7a), a palmate membrane that reaches two-thirds of radiolar length (Figure 7b), conspicuous ventral shields and thoracic uncini with three to four rows of equally sized secondary teeth above the main fang (Figure 7e). In contrast, *E. pseudolimnicola* has a crenulated collar with a small ventral incision (Figure 8b-c), a palmate membrane that reaches one half of radiolar length, inconspicuous ventral shields and unequally sized secondary teeth (Figure 8e).

Euchone limnicola has been reported as an alien species in different localities of southern Australia (e.g. Wilson et al. 1998; Currie & Parry, 1999; Hewitt et al. 2004), New Zealand (Inglis et al. 2006), United Kingdom (Cochrane, 2000; Foster-Smith, 2000) and France (Guyonnet & Borg, 2015), always in harbour areas with a fairly high degree of contamination and degradation, up to 24 m depth, in sandy and muddy bottoms. However, the localities of the Cantabrian Sea (north of Ondárroa and San Sebastián) where the species was found correspond to natural areas up to 153 m depth, which highlights. This could indicate *E.* cf. *limnicola* actually is a different taxon. Nevertheless, both localities possess harbours that could be the origin of an invasive process. Thus, more efforts and samplings on Ondárroa and San Sebastián harbours would clarify the status of the present taxon.

Distribution

Pacific Ocean (California), eastern Atlantic Ocean (British Islands and France), Australia and New Zealand. Here, it is reported for the first time for the Cantabrian Sea (Ondárroa and San Sebastián).

Ecology

Estuaries and harbour areas, in sandy and muddy bottoms. *Euchone limnicola* tolerates copper pollution, and may be an indicator of high copper conditions. In introduced areas it forms dense and stable populations, competing with native species for natural resources. However, its grade as a potential hazard is low due to its small impact and invasive processes (Neira et al. 2014). In the present study, the species was found in muddy bottoms at depths of 129-143 m.

Euchone* cf. *pseudolimnicola Giangrande & Licciano, 2006

Euchone pseudolimnicola Giangrande & Licciano, 2006: 1307-1309, Fig. 3.

(Figure 8)

Material examined

Westernmost Mediterranean Sea: L13, MNCN 16.01/16661 (1).

Additional material

Westernmost Mediterranean Sea: Material previously identified as *Chone duneri*. L15, MNCN 16.01/2610 (8).

Diagnosis

Radiolar tips long (Figure 8a). Palmate membrane present and about half of the crown length. Radiolar flanges present. Collar crenulated (Figure 8b-c). Anterior peristomial ring lobe not exposed beyond collar, triangular and unilobed (Figure 8b). Ventral incision of the collar present (Figure 8c). Ventral shields inconspicuous. Paleate chaetae with long mucro (Figure 8d). Thoracic uncini acicular with main fang surmounted by four rows of teeth unequal-sized (Figure 8e). Pre-pygidial depression only defined by a distinct anterior ridge, with nine chaetigers (Figure 8c,f). Pygidial cirrus present (Figure 8c,f).

Remarks

The morphology of the studied specimens is very similar to the holotype description. However, they are longer and wider, with longer crowns and a larger number of abdominal chaetigers (up to 41). Furthermore, they have ventral sacs (Figure 8b-c) and parallel lamellae, features not mentioned in the original description, and up to 11 pairs of ventral radiolar appendages of increasing length (the holotype has only four pairs). The last differences lead us to report the taxon as *Euchone* cf. *pseudolimnicola*.

Distribution

Mediterranean Sea (Tyrrhenian and Adriatic Seas). The range distribution of the species is expanded to include the westernmost Mediterranean Sea (Hormigas Islands and Cape San Antonio to Port of Valencia passage), marking the westernmost limit of its Mediterranean Sea distribution.

Ecology

Soft bottoms composed of sand, biogenic and volcanic particles and red calcareous macroalgae; 5-50 m depth.

Genus *Megalomma* Johansson, 1925

Megalomma lanigera (Grube, 1846)

(Figure 9)

Sabella lanigera Grube, 1846: 51-53, Pl. 2, Fig. 1.

Branchiomma vesiculosum neapolitana Claparède, 1868: 164-166, Pl. 22, Fig. 5.

Branchiomma köllikeri Claparède, 1869: 163-164, Pl. 22, Fig. 4.

Megalomma lanigera. Giangrande & Licciano, 2008: 209-213, Figs. 2-4 and 5C-D;Tovar-Hernández & Carrera-Parra, 2011: 37-39, Fig. 15; Giangrande et al. 2012: 288-289, Figs. 7-10; Giangrande et al. 2014: 38, Fig. 1E, 2E and 4C; Giangrande, Licciano & Wasson 2015: 12; Wasson & Sheehan, 2016: 282-283, Fig. 1A-B.

Material examined

Northeast Atlantic Ocean: L5, MNCN 16.01/16650 (1); L6, MNCN 16.01/16647 (1), MNCN 16.01/16648 (1), MNCN 16.01/16649 (1).*Additional material*

Cantabrian Sea (Cantabria), material identified as *Megalomma vesiculosum:* MNCN 16.01/533 (1). Cantabrian Sea (Santander): MNCN 16.01/535 (1). Westernmost Mediterranean Sea (Málaga): MNCN 16.01/532 (1). Westernmost Mediterranean Sea (Balearic Islands): MNCN 16.01/14809 (1).

Diagnosis

Dorsal-most pair of radioles bearing large, oval compound eyes, and a very short tip (Figure 9a). Most of the remaining radioles with smaller rounded eyes, and a longer tip (Figure 9b), the other ones without eyes (Figure 9c). Ventral lips with parallel lamellae and ventral sacs. Dorsal margin of the collar fused to the faecal groove forming two folded deep pockets that extend to the first chaetiger (Figure 9d-e). Collar higher ventrally with highly developed lappets (Figure 9f). Inferior thoracic notochaetae broadly hooded, with hoods as long as 8-10 times maximum width and maximum width 1.3-1.5 width of shaft(Figure 9g).

Remarks

Giangrande and Licciano (2008) re-described the species based on the type material. The specimens studied here correspond well with that description, also showing intra-specimen variation in compound eye morphology and radiolar tip length. In a dorsal to ventral progression, compound eye size decreases and shape varies from rounded to ellipsoidal while radiolar tip length increases (Figure 9a-c). Furthermore, the length of the dorsal lappets of the collar varies: in some specimens, the collar has long dorsal lappets that extend beyond the collar's lateral margin, while in others they are at the same level as the lateral margins Figure 9d-e).

The species' tube was also observed: it was typical of the genus, with gravel of different sizes (Figure 9h). The photograph of a live specimen (taken by Dr. Diego Moreno, from Fauna Ibérica project) showed that the crown has a pale whitish colour with up to four pairs of pale orange bands per radiole (Figure 9i).

Comparisons

The additional material previously identified as *Megalomma vesiculosum* (Montagu, 1815) from the Cantabrian and westernmost Mediterranean Seas are poorly preserved. Therefore, identifications could not be confirmed, with the exception of one specimen from the Cantabrian Sea (Santander) that we re-identified as *Megalomma lanigera*. Notably, Rioja (1923, 1931) described *M. vesiculosum* from these areas; however, his specimens all likely correspond to *M. lanigera* as they have well developed dorsal lappets covering the junction between the crown and thorax. Given the taxonomic confusion between the two species, it is likely that only *M. lanigera* is present in the Cantabrian and western Mediterranean Seas, but a further revision with additional material is needed to confirm this hypothesis.

Identifications of *Megalomma vigilans* (Claparède, 1869) from the Cantabrian and westernmost Mediterranean Seas were based on the presence of empty tubes (Rioja, 1923; 1931). However, tube traits are not taxonomic characters that can be used to differentiate *Megalomma* species. Thus, such identifications must not be considered as valid.

Distribution

Mediterranean Sea (Tyrrhenian Sea, Adriatic Sea, Ionian Sea, Aegean Sea) and north-eastern Atlantic Ocean (British Islands). In the present study, the species' distribution range is expanded to include the Atlantic waters of the Iberian Peninsula (Galicia).

Ecology

Rocky, sandy and muddy bottoms, as an epibiont of sponges, coralline red algae and *Posidonia oceanica*; 0.5-7.0 m depth. The Atlantic Ocean specimens were found living at depths of 151-159 m.

Genus *Parasabella* Bush, 1905

Parasabella tenuicollaris (Grube, 1870)

(Figure 10)

Sabella tenuicollaris Grube, 1870: 67-68.

Demonax tenuicollaris. Giangrande, 1990: 159, 170; Knight-Jones & Ergen, 1991: 851, Fig. 7; Giangrande, 1994: 232-233, Figs. 7-8; Çinar & Ergen, 1998: 173; Çinar & Ergen, 1999: 53; Giangrande et al. 2004: 88; Çinar, 2005: 151.

Parasabella tenuicollaris. Tovar-Hernández & Harris, 2010: 15.

Material examined

Cantabrian Sea: L4, MNCN 16.01/16665 (2). Westernmost Mediterranean Sea: L10, MNCN 16.01/16663 (1); L16, MNCN 16.01/16664: (2); L18, MNCN 16.01/16666 (1); L20, MNCN 16.01/16662 (1).

Diagnosis

Radiolar eyes absent. Collar up to three times longer than anterior peristomial ring, oblique (Figure 10a-c). Radiolar tips short and rounded, with parallel sides. Glandular shields constant in width, the first one with a medial incision on anterior margin, indented by thoracic tori. Inferior thoracic notochaetae broadly hooded, with hoods as long as 5-6 times maximum width and maximum width 2.0-2.3 width of shaft (Figure 10d). Thoracic uncini with handle 2.0-2.2 length of main fang and a distance of breast to main fang equal to main fang’s length. Pygidial eyespots absent.

Remarks

Grube’s description based on specimens from the Adriatic Sea is brief and syntypes are poorly preserved (Knight-Jones & Ergen, 1991). Knight-Jones and Ergen (1991) and Giangrande (1994) re-described the species based on specimens from the Aegean Sea and the Adriatic Sea respectively. The morphology of the specimens studied here is very similar to those descriptions; however, they are larger in size and have more abdominal chaetigers (up to 130). Crowns were detached in all studied specimens.

Comparisons

Parasabella tenuicollaris is similar to *P. langerhansi* (Knight-Jones, 1983) from the Mediterranean Sea and Atlantic Ocean. However, they can be distinguished by collar height, radiolar tip length and chaetae morphology. In *P. tenuicollaris*, the collar is up to three times longer than the anterior peristomial ring (Figure 10a-c) and radiolar tips are short. In *P. langerhansi,* the collar has approximately the same length than the anterior peristomial ring, and radiolar tips are long (Giangrande, 1994). In *P. tenuicollaris* the inferior thoracic notochaetae have hoods as long as 5-6 times maximum width and maximum width 2.0-2.3 width of shaft, whereas those of *P. langerhansi* have hoods as long as 3-4 times maximum width and maximum width 1.5-2.0 width of shaft.

Distribution

Eastern Mediterranean Sea (Aegean Sea, Adriatic Sea and northern Cyprus). In the present study, the species’ distribution range is expanded to include the westernmost

Mediterranean Sea and Atlantic Ocean. These localities mark the north-westernmost limit of its distribution to date.

Ecology

Muddy sand with macroalgae assemblages, rocky bottoms and *Posidonia oceanica* beds; 0-38 m. depth.

Parasabella tommasi (Giangrande, 1994)

(Figure 11)

Demonax tommasi Giangrande, 1994: 230, Figs. 1-2; Giangrande et al. 2003: 1112.
Parasabella tommasi. Tovar-Hernández & Harris, 2010: 16.

Material examined

Westernmost Mediterranean Sea: L17, MNCN 16.01/16667 (1).

Diagnosis

Radioles with irregularly arranged black spots on the surface (Figure 11a-b). Collar up to two times longer than anterior peristomial ring, oblique. Radiolar tips short and thin, with parallel sides (Figure 11a-b). Radiolar skeleton axis composed of four rows of quadrangular cells. Dorsal lips fused to dorsal-most pair of radioles, erect, triangular and slender (Figure 11c), about 1/5 length of radioles. Pinnular appendages present (Figure 11c). First glandular shield wider than following ones, with a medial incision on anterior margin, all of them indented by thoracic tori. Inferior thoracic notochaetae broadly hooded, with hoods as long as 4-6 maximum width and maximum width 1.5 width of shaft (Figure 11d). Thoracic uncini with handle 1.5-2.0 length of main fang and a distance of breast to main fang 0.8 main fang’s length. Pygidial eyespots absent.

Remarks

The morphology of the studied specimen from the Balearic Islands is similar to the holotype from the Adriatic Sea, differing in size and number of thoracic chaetigers and radioles. The Balearic specimen is longer and wider, with 8 thoracic (the holotype has 7) and 70 abdominal chaetigers. The crown of this specimen is also longer and has a larger number of radioles.

Comparisons

Parasabella tommasi can be easily distinguished from other species of the genus present in the Mediterranean Sea by the presence of radiolar surface dark spots (Figure 11a-b).

Distribution

Mediterranean Sea (Tyrrhenian and Adriatic Seas). In the present study, the species' distribution range is expanded to include the Balearic Islands. This locality marks the westernmost limit of its distribution in the Mediterranean Sea to date.

Ecology

Hard substratum with algal covering; 5-25 m depth.

DISCUSSION

Rioja (1923) published the last systematic study of sabellids from Iberian Peninsula waters in which he recorded 14 species: 9 found in both Atlantic and Mediterranean waters, 4 exclusively in the Atlantic Ocean and 1 exclusively in the Mediterranean Sea. However, Fauvel (1927) considered two of those species, *Myxicola parasites* Quatrefages, 1866 and *Myxicola steenstrupi* Krøyer, 1856 subjective synonyms of *Myxicola infundibulum* (Montagu, 1808). Furthermore, the report of *Megalomma vigilans* in these areas is no longer considered valid as it was based on empty tubes, a character that cannot be used to identify species.

Since Rioja (1923), several taxonomic studies, taken together, have increased the number of valid sabellid species to 40 for the Iberian Peninsula and Balearic Archipelago waters (Rioja, 1923; Rioja, 1931; Ibáñez, 1973; Campoy, 1979; Campoy, 1982; Martín, 1991; Tena, 1996; López & Tena, 1999; Redondo & San Martín, 1997; Cebeiro et al. 1998; Martínez & Adarraga, 2001; El Haddad et al. 2007; Arias et al. 2013). Here, we contribute new knowledge for the group in these regions by reporting four species for the first time for the westernmost Mediterranean Sea, two for the Iberian Peninsula Atlantic waters and two shared by both areas. This represents a 17% and 26% increase in knowledge of sabellids species present in the Atlantic and Mediterranean waters surrounding the Iberian Peninsula and Balearic Archipelago respectively.

Sabellids, as with other tubiculous polychaetes, use photoreceptors as optical alarm systems, withdrawing into their tubes when potential predators are detected (Nilsson, 1994; Bok et al. 2016). Although sunlight reaches the mesopelagic zone (150-1000 m), it becomes increasingly dimmer and bluer with depth and varies between seas and oceans (Warrant & Locket, 2004). Interestingly, specimens of the newly described species, *Bispira primaoculata* sp.nov., were found at depths of approximately 300 m, yet have numerous compound radiolar eyes. It is likely that the radiolar eyes of *B. primaoculata* sp. nov. are adapted for the light present at such depths or are vestige of its evolutionary history. A detailed analysis of eye morphology and function may provide insight into this question.

In this study, valuable information about several taxonomic features of different sabellid' species is also provided. Particularly noteworthy is the observed high level of intraspecific variability in the length and shape of the dorsal collar lappets in *Megalomma lanigera.* This example highlights how some morphological structures used to differentiate species can, depending on the degree of deformation or preservation condition, hamper species identifications by masking the true morphology of the species. This case of intraspecific variability was also observed by Giangrande et al. (2012) for specimens from the Faro coastal lake (Ionian Sea). It remains to be seen if morphological variability truly characterizes this species or if the observed variability is entirely due to issues related to specimen deformation and preservation. Capa et al. (2010) considered that traditional features used to distinguish *Sabellastarte* Krøyer, 1856 species are heavily dependent on development, growth and regeneration. Furthermore, Capa et al. (2013) found that the traditional morphological features used for *Branchiomma* Kölliker, 1858 species are inaccurate for taxonomic purposes and that a comprehensive study of morphological features is needed to assess the status of certain species. As more descriptive studies of Sabellidae genera are reported, better morphological (and possibly molecular) characters will be defined for taxonomic and systematic analyses of this incredibly diverse family.

REFERENCES

Acero MI, San Martín G. 1986. Poliquetos epibiontes del primer horizonte de algas fotófilas en las provincias de Cádiz y Málaga. Estudio faunístico comparado. Boletín de la Real Sociedad Española de Historia Natural (Biología) 82 (1-4): 05-24.

Amoureux L. 1972. Annélides Polychètes recueillies sur les pentes du talus continental, au large de la Galice (Espagne). Campagnes 1967 et 1968 de la “Thalassa”. Cahiers de Biologie Marine 13:63-89.

Arias A, Giangrande A, Gambi MC, Anadón N. 2013. Biology and new records of the invasive species *Branchiomma bairdi* (Annelida: Sabellidae) in the Mediterranean Sea. Mediterranean Marine Science 14 (1): 162-171.

Bok MJ, Capa M, Nilsson D. 2016. Here, there and everywhere: the radiola reyes of fan worms (Annelida, Sabellidae). Integrative and Comparative Biology 56 (5): 784-795.

Bush KJ. 1905. Tubicolous Annelids of the tribes Sabellides and Serpulides from the Pacific Ocean. Harriman Alaska Expedition 12:169-346.

Campoy A. 1979. Lista de especies de Anélidos Poliquetos conocidas de las costas de la península Ibérica. Investigación Pesquera 43 (3): 737-766.

Campoy A. 1982. Fauna de España. Fauna de Anélidos Poliquetos de la península Ibérica (II). Publicaciones de Biología de la Universidad de Navarra Serie Zoología 7: 001-781.

Capa M. 2008. The genera *Bispira* Krøyer, 1856 and *Stylomma* Knight-Jones, 1997 (Polychaeta, Sabellidae): systematic revision, relationships with close related taxa and new species from Australia. Hydrobiologia 596:301-327.

Capa M, Bybee DR, Bybee SM. 2010. Establishing species and species boundaries in *Sabellastarte* Krøyer, 1856 (Annelida: Sabellidae): an integrative approach. Organisms Diversity & Evolution 10(5):351-371.

Capa M, Giangrande A, Nogueira JMM, Tovar-Hernández MA. 2014. Sabellidae Latreille, 1825. In: Purschke G, Westhelde, editors. The Handbook of Zoology Online. Volume 9: Annelida. Berlin: De Gruyter, 42 pages.

Capa M, Hutchings P, Aguado MA, Bott NJ. 2011. Phylogeny of Sabellidae (Annelida) and relationships with other taxa inferred from morphology and multiple genes. Cladistics 27: 449-469.

Capa M, Murray A. 2015. A taxonomic guide to the fanworms (Sabellidae, Annelida) of Lizard Island, Great Barrier Reef, Australia, including new species and new records. Zootaxa 4019 (1): 098-167.

Capa M, Pons J, Hutchings P. 2013. Cryptic diversity, intraspecific phenetic plasticity and recent geographical translocations in *Branchiomma* (Sabellidae, Annelida). Zoologica Scripta 42(6):637-655.

Cebeiro A, Martínez J, Aguirrezabalaga F. 1998. Presencia de *Desdemona ornata* Banse, 1957 (Polychaeta, Sabellidae) en las costas de la península Ibérica, golfo de Vizcaya. Munibe (Ciencias Naturales) 50: 37-41.

Çinar ME. 2005. Polychaetes from the coast of northern Cyprus (eastern Mediterranean Sea), with two new records for the Mediterranean Sea. Cahiers de Biologie Marine 46:143-159.

Çinar ME. 2013. Alien polychaete species worldwide: current status and their impacts. Journal of the Marine Biological Association of the United Kingdom 93(5):1257-1278.

Çinar ME, Ergen Z. 1998. Polychaetes associated with the sponge *Sarcotragus muscarum* Schmidt, 1864 from the Turkish Aegean coast. Ophelia 48(3):167-183.

Çinar ME, Ergen Z. 1999. A preliminary study on Polychaete fauna of the Marmaris Bay (Southern Aegean Sea). Istanbul University Journal of Aquatic Products Special Issue 1:47-59.

Claparède E. 1868. Les Annélides Chétopodes du Golfe de Naples. Mémoires de la Société de Physique et d’Histoire Naturelle de Genève 19:313-584.

Claparède E. 1869. Les Annélides Chétopodes du Golfe de Naples. Second partie. Mémoires de la Société de physique et d’Histoire Naturelle de Genève 20:001-225.

Cochrane SJ. 2000. Taxonomy and systematics of selected marine soft-bottom fan worms (Polychaeta: Sabellidae: Sabellinae). Doctoral Thesis. University of St Andrews, United Kingdom. 296 pages.

Costa-Paiva EM, Paiva PC, Klautau M. 2007. Anaesthetization and fixation effects on the morphology of sabellid polychaetes (Annelida: Polychaeta: Sabellidae). Journal of the Marine Biological Association of the United Kingdom 87:1127-1132.

Currie DR, Parry GD. 1999. Changes to benthic communities over 20 years in Port Phillip Bay, Victoria, Australia. Marine Pollution Bulletin 38(1):36-43.

El Haddad M, Capaccioni-Azzati R, García-Carrascosa AM. 2007. *Branchiomma luctuosum* (Polychaeta: Sabellidae): a non-indigenous species at Valencia Port (western Mediterranean Sea, Spain). Biodiversity Records 1:1-8.

Fauvel P. 1927. Faune de France 16 - Polychètes Séndetaires et addenda aus errantes, archiannelides, myzostomaires. Paris: Lechevalier. 494 pages.

Fitzhugh K. 1989. A systematic revision of the Sabellidae-Caobangiidae-Sabellongidae complex (Annelida: Polychaeta). Bulletin of the American Museum of Natural History 192: 001-104.

Foster-Smith J. 2000. The marine fauna and flora of the Cullercoats District: marine species records for the north east coast of England. 1. United Kingdom: Penshaw Press. 562 pages.

Giangrande A. 1990. Censimento dei Policheti dei Mari Italiani: Sabellidae Malmgren, 1867. Atti della Società Toscana di Scienze Naturali Memorie Serie B 96:153-189.

Giangrande A. 1994. The genus *Demonax* (Polychaeta, Sabellidae) in the Mediterranean Sea, with description of *D. tommasi* n. sp. Bolletino di Zoologia 61(3):229-233.

Giangrande A, Caruso LPG, Mikac B, Licciano M. 2015. The genus *Megalomma* (Annelida: Sabellidae) in the Mediterranean Sea, with description of two new species from Italian and Croatian coasts. Italian Journal of Zoology 82(4):01-14.

Giangrande A, Cosetino A, Lo Presti C, Licciano M. 2012. Sabellidae (Annelida) from the Faro coastal lake (Messina, Ionian Sea), with the first record of the invasive species *Branchiomma bairdi* along the Italian coast. Mediterranean Marine Science 13(2):283-293.

Giangrande A, Delos AL, Fraschetti S, Musco L, Licciano M, Terlizzi A. 2003. Polychaete assemblages along a rocky shore on the South Adriatic coast (Mediterranean Sea): patterns of spatial distribution. Marine Biology 143:1109-1116.

Giangrande A, Delos AL, Musco L, Licciano M, Pierri C. 2004. Polychaete assemblages of rocky shore along the South Adriatic coast (Mediterranean Sea). Cahiers de Biologie Marine 45:85-95.

Giangrande A, Licciano M. 2006. The genus *Euchone* (Polychaeta, Sabellidae) in the Mediterranean Sea, addition of two new species and discussion on some closely related taxa. Journal of Natural History 40(21-22):1301-1330.

Giangrande A, Licciano M. 2008. Revision of the species of *Megalomma* (Polychaeta, Sabellidae) from the Mediterranean Sea, with the description of *M. messapicum* n. sp. Italian Journal of Zoology 75(2):207-217.

Giangrande A, Licciano M, Castriota L. 2006. Description of *Chone usticensis* sp. nov. (Polychaeta, Sabellidae) from the Mediterranean Sea. Zootaxa 1168:51-58.

Giangrande A, Licciano M, Schirosi R, Musco L, Stabili L. 2014. Chemical and structural defensive external strategies in six sabellid worms (Annelida). Marine Ecology 35:36-45.

Giangrande A, Licciano M, Wasson B. 2015. Guide to identification of Sabellidae and Fabriciidae (Polychaeta) in north east Atlantic and Mediterranean waters. Letchworth: NMBAQC 2014 taxonomic workshop, Dove Marine Laboratory Press. 91 pages.

Grube E. 1846. Beschreibungen neuer oder weniger bekannter Anneliden. Erster Beitrag. Archive für Naturgerschichte 12:45-59.

Grube E. 1870. Neue arten der gattung *Sabella*. Schlesische Gesellschaft für Vaterländische Cultur Breslau Jahresbericht 48:67-86.

Guyonnet B, Borg D. 2015. Premier signalement de l’espèce introduite *Euchone limnicola* Reish, 1959 (Polychaeta: Sabellidae) sur les côtes françaises de la Mer du Nord (Grand Port Maritime de Dunkerque). An aod – les cahiers naturalistes de l’Observatoire marin 4(2):15-23.

Hartman O. 1959. Catalogue of the polychaetous Annelids of the world. Parts 1 & 2. Occasional Papers of the Allan Hancock Foundation 23:001-628.

Hartman O. 1966. Quantitative survey of the benthos of San Pedro Basin, Southern California. Part II. Final results and conclusions. Allan Hancock Pacific Expeditions 19(2):187-456.

Hartmann-Schröder G. 1977. Polychaeten aus dem Sublitoral und Bathyal vor der portugiesischen und marokkanischen Küste Auswertung der Fahrt 8 (1967) von F.S. “Meteor”. “Meteor” Forschungsergebnisse Reihe D Biologie 26:65-99.

Hayes K, Sliwa C, Migus S, McEnnulty F, Dunstan P. 2005. National priority pests: Part II. Ranking of Australian marine pests. Parkes: CSIRO Marine Research Press. 94 pages.

Hewitt CL, Campbell ML, Thresher RE, Martin RB, Boyd S, Cohen BF, et al. 2004. Introduced and cryptogenic species in Port Phillip Bay, Victoria, Australia. Marine Biology 144:183-202.

Huang D, Fitzhugh K, Rouse GW. 2011. Inference of phylogenetic relationships within Fabriciidae (Sabellida, Annelida) using molecular and morphological data. Cladistics 27: 356-379.

Ibáñez M. 1973. Catálogo de los Anélidos Poliquetos citados en las costas españolas. Cuadernos de Ciencias Biológicas 2 (2): 121-140.

Inglis G, Gust N, Fitridge I, Floerl O, Woods C, Hayden B, Fenwick G. 2006. Port of Gisborne. Baseline survey for non-indigenous marine species. Technical paper Nº2005/11, Research Project ZBS20000/04. Biosecurity New Zealand, Ministry of Primary Industries. 56 pages.

Knight-Jones P. 1981. Behaviour, setal inversion and phylogeny of Sabellida (Polychaeta). Zoologica Scripta 10: 183-202.

Knight-Jones P. 1997. Two new species of *Megalomma* (Sabellidae) from Sinai and New Zealand with redescriptions of some types and a new genus. Bulletin of Marine Science 60(2):313-323.

Knight-Jones P, Ergen Z. 1991. Sabelliform Polychaetes, mostly from Turkey's Aegean coast. Journal of Natural History 25(4):837-858.

Knight-Jones P, Mackie ASY. 2003. A revision of Sabellastarte (Polychaeta: Sabellidae). Journal of Natural History 37 (19): 2269-2301.

Knight-Jones P, Perkins TH. 1998. A revision of *Sabella*, *Bispira* and *Stylomma* (Polychaeta: Sabellidae). Zoological Journal of the Linnean Society 123:385-467.

Krøyer H. 1856. Meddelelser af en Afhandling Ormeslaegten Sabella Linn., isaer med Hensyn til dens nordiske Arter. Oversigt over det Kongelige Danske videnskabernes selskabs forhandlinger 1856:01-36.

Kupriyanova EK, Rouse GW. 2008. Yet another example of paraphyly in Annelida: molecular evidence that Sabellidae contains Serpulidae. Molecular Phylogenetics and Evolution 46: 1174-1181.

Lo Bianco S. 1893. Gli Annelidi tubicoli nel Golfo di Napoli. Atti della Real Accademie della Scienze fisiche e matematique Serie 2 5(44):01-97.

López E, Tena J. 1999. A new species of *Amphicorina* (Polychaeta: Sabellidae: Sabellinae) from the Chafarinas Islands (Western Mediterranean). Cahiers de Biologie Marine 40:329-335.

López E, Viéitez JM. 1999. Polychaete assemblages on non-encrusting infralittoral algae from the Chafarinas Islands (SW Mediterranean). Cahiers de Biologie Marine 40: 375-384.

Martín D. 1991. Macroinfauna de una Bahía Mediterránea. Estudio de los Niveles de Organización de las Poblaciones de Anélidos Poliquetos. Doctoral Thesis. University of Barcelona, Spain: Department of Ecology. 456 pages.

Martínez J, Adarraga I. 2001. Nuevas citas de Anélidos Poliquetos y de un anfípodo marino en la península Ibérica. Boletín de la Real Sociedad Española de Historia Natural Sección Biología 96 (3-4): 137-150.

Merz RA. 2015. Textures and traction: how tube-dwelling polychaetes get a leg up. Invertebrate Biology 134(1):61-77.

Mikac B, Giangrande A, Licciano M. 2013. Sabellidae and Fabriciidae (Polychaeta) of the Adriatic Sea with particular retrospect to the Northern Adriatic and the desctiption of two new species. Journal of the Marine Biological Association of the United Kingdom 93(6):1511-1524.

Montagu G. 1804. Description of several marine animals found on the south coast of Devonshire. Transactions of the Linnean Society of London 7:61-85.

Neira C, Levin LA, Mendoza G, Zirino A. 2014. Alteration of benthic communities associated with copper contamination linked to boat moorings. Marine Ecology 35:46-66.

Nilsson D. 1994. Eyes as optical alarm systems in fan worms and ark clams. Philosophical Transactions: Biological Sciences 346:195-212.

Nogueira JMM, Fitzhugh K, Silva-Rossi MC. 2010. A new genus and new species of fan worms (Polychaeta: Sabellidae) from Atlantic and Pacific Oceans – the formal treatment of taxon names as explanatory hypotheses. Zootaxa 2603: 01-52.

Parapar J, Besteiro C, Urgorri V. 1996. Inventario dos Poliquetos de Galicia (Annelida: Polychaeta). Cadernos da Área de Ciencias Biolóxicas (Inventarios) do Seminario de Estudos Galegos 16:001-178.

Perkins TH. 1991. *Calcisabella piloseta*, a new genus and species of Sabellinae (Polychaeta: Sabellidae). Bulletin of Marine Science 48 (2): 261-267.

Ramos MA. 2007. El estudio de la fauna ibérica. ARBOR Ciencia, Pensamiento y Cultura 183:771-792.

Redondo MS, San Martín G. 1997. Anélidos Poliquetos de la costa comprendida entre el cabo de San Antonio y el puerto de Valencia (Mediterráneo occidental). Publicaciones Especiales del Instituto Español de Oceanografía 23: 225-233.

Reish DJ. 1959. A new species of Sabellidae (Annelida, Polychaeta) from southern California. Annals & Magazine of Natural History Series 13 2:717-719.

Rioja E. 1917. Datos para el conocimiento de la fauna de Anélidos Poliquetos del Cantábrico. Trabajos del Museo Nacional de Ciencias Naturales Serie Zoológica 29:001-111.

Rioja E. 1923. Estudio sistemático de las especies ibéricas del suborden Sabelliformia. Trabajos del Museo Nacional de Ciencias Naturales Serie Zoológica 48:001-149.

Rioja E. 1931. Estudio de los Poliquetos de la península Ibérica. Memorias de la Academia de Ciencias Exactas, Físicas y Naturales de Madrid 2: 001-471.

Rouse, G.W. (2000) Family Sabellidae. *In:* Beesley, P.L., Ross, G.J.B. & Glasby, C.J. (Eds.), *Polychaetes & Allies: the southern synthesis. 4A (Polychaeta, Myzostomida, Pogonophora, Echiura, Sipuncula).* CSIRO Press, Canberra, pp. 180–184.

Selim SA, Rzhavsky AV, Britayev TA. 2012. *Dialychone* and *Paradialychone* (Polychaeta: Sabellidae) from the Mediterranean Coast of Egypt with description of *Dialychone egyptica* sp. n. Invertebrate Zoology 9(2):105-114.

Southern R. 1914. Clare Island Survey. Archiannelida and Polychaeta. Proceedings of the Royal Irish Academy 31(47):1-160

Templado J, Guerra A, Bedoya J, Moreno D, Remón JM, Maldonado M, et al. 1993. Fauna marina circalitoral del sur de la península Ibérica. Madrid: Museo Nacional de Ciencias Naturales CSIC Press. 117 pages.

Tena J. 1996. Faunística y Ecología de los Anélidos Poliquetos de los Fondos de Sustrato Duro del Archipiélago de las Chafarinas (S.W. Mar de Alborán). Thesis Doctoral. University of Valencia, Spain: Department of Animal Biology. 455 pages.

Tovar-Hernández MA. 2009. Sabellidae Latreille, 1825. Chapter 42 in: de León-González JA, Bastida-Zavala JR, Carrera-Parra LF, García-Garza ME, Peña-Rivera A, Salazar-Vallejo SI, Solís-Weiss V, editors. Poliquetos (Annelida: Polychaeta) de México y América Tropical. Monterrey: University of Nuevo México Press, p 489-520.

Tovar-Hernández MA, Carrera-Parra LF. 2011. *Megalomma* Johansson, 1925 (Polychaeta: Sabellidae) from America and other world-wide localities, and phylogenetic relationships within the genus. Zootaxa 2861:01-71.

Tovar-Hernández MA, Harris LH. 2010. *Parasabella* Bush, 1905, replacement name for the polychaete genus *Demonax* Kinberg, 1867 (Annelida, Polychaeta, Sabellidae). Zookeys 60:13-19.

Tovar-Hernández MA, Licciano M, Giangrande A. 2007. Revision of *Chone* Krøyer, 1856 (Polychaeta: Sabellidae) from the eastern central Atlantic and Mediterranean Sea with descriptions of two new species. Scientia Marina 71(2):315-338.

Tovar-Hernández MA, Salazar-Vallejo SI. 2006. Sabellids (Polychaeta: Sabellidae) from the Grand Caribbean. Zoological Studies 45(1): 24-66.

Warrant EJ, Locket NA. 2004. Vision in the deep sea. Biological Reviews 79:671-712.

Wasson B, Sheehan E. 2016. The first records of *Megalomma lanigera* (Polychaeta: Sabellidae) from British waters. Cahiers de Biologie Marine 57(3):281-283.

Wilson RS, Heislers S, Poore GCB. 1998. Changes in benthic communities of Port Phillip Bay, Australia, between 1969 and 1995. Marine & Freshwater Research 49:847-861.

Table 1. Data related to the location sites of the studied material, including expedition, locality, geographical coordinates, habitat and depth. The code is used for practical purposes along the manuscript and map figure.

Expedition	Code	Ocean / Sea	Locality	Latitude	Longitude	Habitat	Depth (m)
FAUNA II	L1	Cantabrian Sea	N San Sebastián (Basque Country)	43º29’33.59’’N	2º01’34.80’’W	Muddy bottom	135-143
FAUNA II	L2	Cantabrian Sea	N San Sebastián (Basque Country)	43º22’35.40’’N	2º03’42.00’’W	Muddy bottom	104-107
FAUNA II	L3	Cantabrian Sea	N Ondárroa (Basque Country)	43º27’14.40’N	2º23’25.20’’W	Muddy bottom	129-132
FAUNA II	L4	Cantabrian Sea	NW Cape Peñas (Asturias)	43º43’43.20’’N	5º56’58.20’’W	Shelly and muddy sand	119-122
FAUNA II	L5	Atlantic Ocean	W Cape Prior (Galicia)	43º35’34.80’’N	8º34’16.80’’W	Muddy sand	151-152
FAUNA II	L6	Atlantic Ocean	NW Sisargas Islands (Galicia)	43º25’43.80’’N	8º59’45.60’’W	Muddy bottom	157-159
Sampling of Acero & San Martín (1986)	L7	Atlantic Ocean	Sancti-Petri Island (Andalucía)	36º22’48.06’’N	6º13’12.63’’W	Muddy sand with the macroalgae *Stypocaulon scoparium*	Intertidal zone
Unpublished sampling	L8	Mediterranean Sea	Cape Punta de Torrox (Andalucía)	36º43’27.89’’N	3º57’17.39’’W	Unknown	Unknown
FAUNA I	L9	Mediterranean Sea	Herradura Seamount, SW Cape Sacratif (Andalucía)	36º10’51.00’’N	3º44’09.00’’W	Muddy sand	288-297
FAUNA IV	L10	Mediterranean Sea	Alborán Island (Andalucía)	35º56’30.00’’N	3º01’37.20’’W	Rocky bottom	15
Unpublished sampling	L11	Mediterranean Sea	Alborán Island (Andalucía)	35º56’20.07’’N	3º02’08.57’’W	*Posidonia oceanica* meadows	Unknown
Sampling of López & Viéitez (1999)	L12	Mediterranean Sea	Chafarinas Islands (Melilla)	35º10' 33" N - 35º11’09’’N	02º24' 57" W - 02º26’32’’W	Seagrass and macroalgae meadows with calcareous concretions	0-25
FAUNA IV	L13	Mediterranean Sea	Hormigas Islands (Murcia)	37º39’53.40’’N	0º38’07.20’’W	Rocky and detritus bottom	20-47
Sampling of Redondo & San Martín (1997)	L14	Mediterranean Sea	Cape San Antonio to Valencia Port passage (Valencia)	38º43’39.56’’N - 39º26’53.11’’N	0º15’49.47’’E - 0º19’00.94’’W	Photophilic and precoraligenous macroalgae assemblages, fine sand and muddy bottoms	5-50
Unpublished sampling	L15	Mediterranean Sea	La Almarda and Corinto Beaches (Valencia)	39º40’46.20’’N	0º12’02.25’’W	Sandy bottoms	7-8
FAUNA IV	L16	Mediterranean Sea	E Piedra Joaquín Island (Columbretes Archipelago)	39º52’40.80’’N	0º40’13.80’’ E	Rocky bottom	23
FAUNA III	L17	Mediterranean Sea	Cape Galera, W Espardell Island (Balearic Islands)	38º47’54.00’’N	1º28’57.00’’E	Unknown	3-35
FAUNA III	L18	Mediterranean Sea	E Cape Martinet, Ibiza Island (Balearic Islands)	38º54’04.20’’N	1º31’08.40’’E	Muddy bottom	55-56
FAUNA III	L19	Mediterranean Sea	Cape Jova, Majorca Island (Balearic Islands)	39º38’30.00’’N	2º25’07.80’’ E	Photophilic macroalgae assemblages	10
FAUNA III	L20	Mediterranean Sea	NE Cape Pera, Majorca Island (Balearic Islands)	39º46’05.40’’N	3º32’02.40’’ E	Rocky, detritus bottom	58-59
FAUNA III	L21	Mediterranean Sea	Cape Font, Minorca Island (Balearic Islands)	39º49’24.00’’ N	4º12’15.00’’ E	Unknown	18

ILLUSTRATIONS

Figure 1. Location of samples.

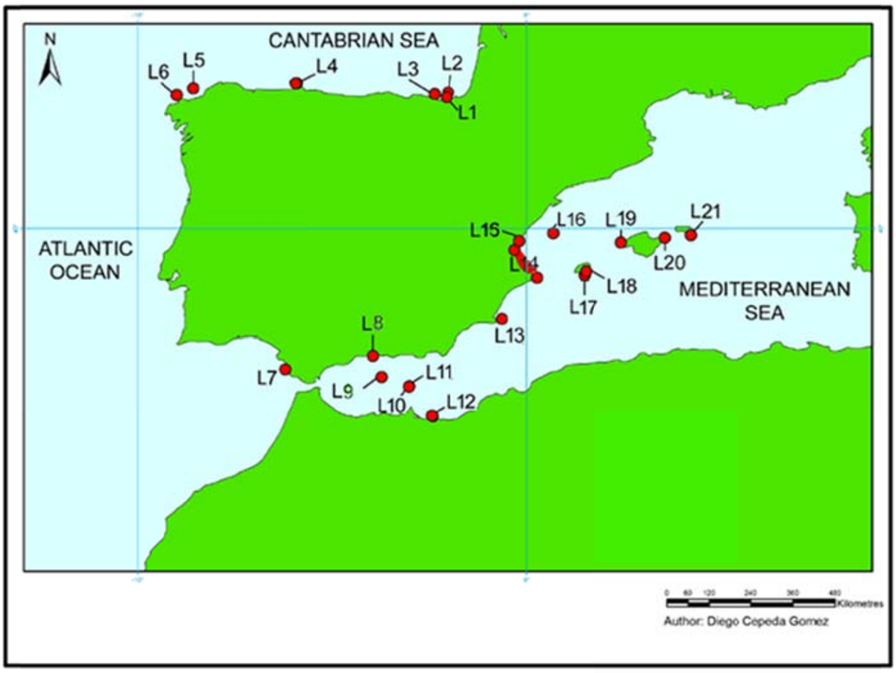

Figure 2. A-C: *Amphicorina rovignensis*. D-E: *Amphicorina triangulata*. A: Anterior and posterior body, ventral view (arrows indicate the radioles of the same lobe). B: Anterior body, dorsal view. C: Thoracic uncinus of second chaetiger. D: Thoracic uncinus of anterior thorax (arrow indicates the enlarged, thickened secondary tooth). E: Main fang of the same thoracic uncinus. Scales: A-B 250 µm; C 2 µm; D 2.5 µm; E 1 µm.

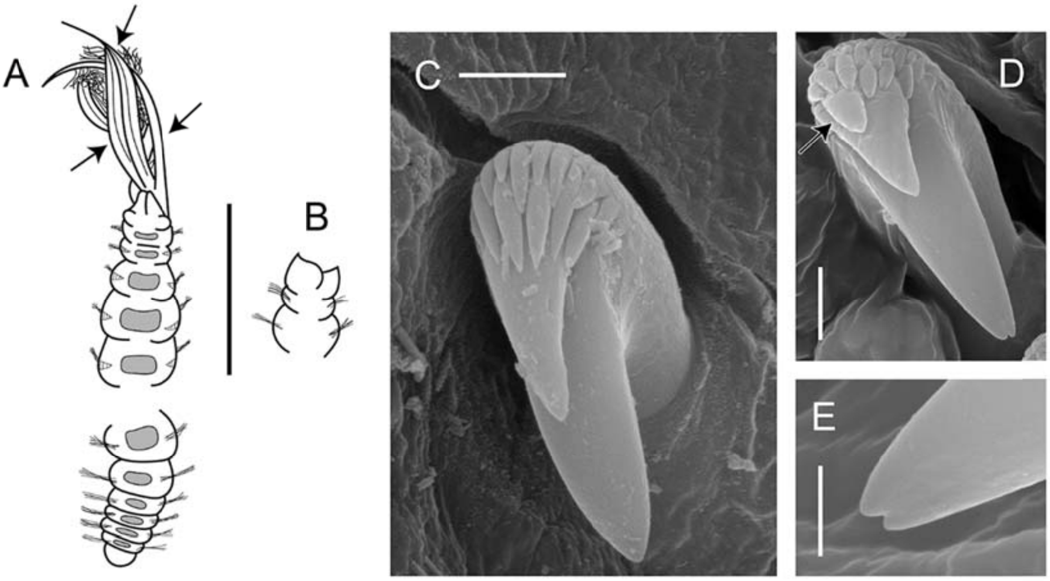

Figure 3. Holotype MNCN 16.01/16651 of *Bispira primaoculata* sp. nov. A: Entire body, dorsal view. B: Radiolar skeleton at the base of the radiole in cross section. C: Radiole. D: Crown appendages. E: Anterior body, dorsal view. F: Anterior body, ventral view. G: Thoracic notochaetae. H: Thoracic uncinus and companion chaeta. I: Abdominal spine-like notochaeta. J: Posterior body, ventral view. cc: companion chaeta, ce: compound eye, dl: dorsal lip, dra: dorsal radiolar appendage, nhc: narrowly hooded chaeta, p: pinnule, rf: radiolar flange, rs: radiolar skeleton, slc: spine-like chaeta, tu: thoracic uncinus, vl: ventral lip. Scales: A 1 cm; B, G-I 100 µm; C 500 µm; D, J 1.7 mm; E-F 2.5 mm.

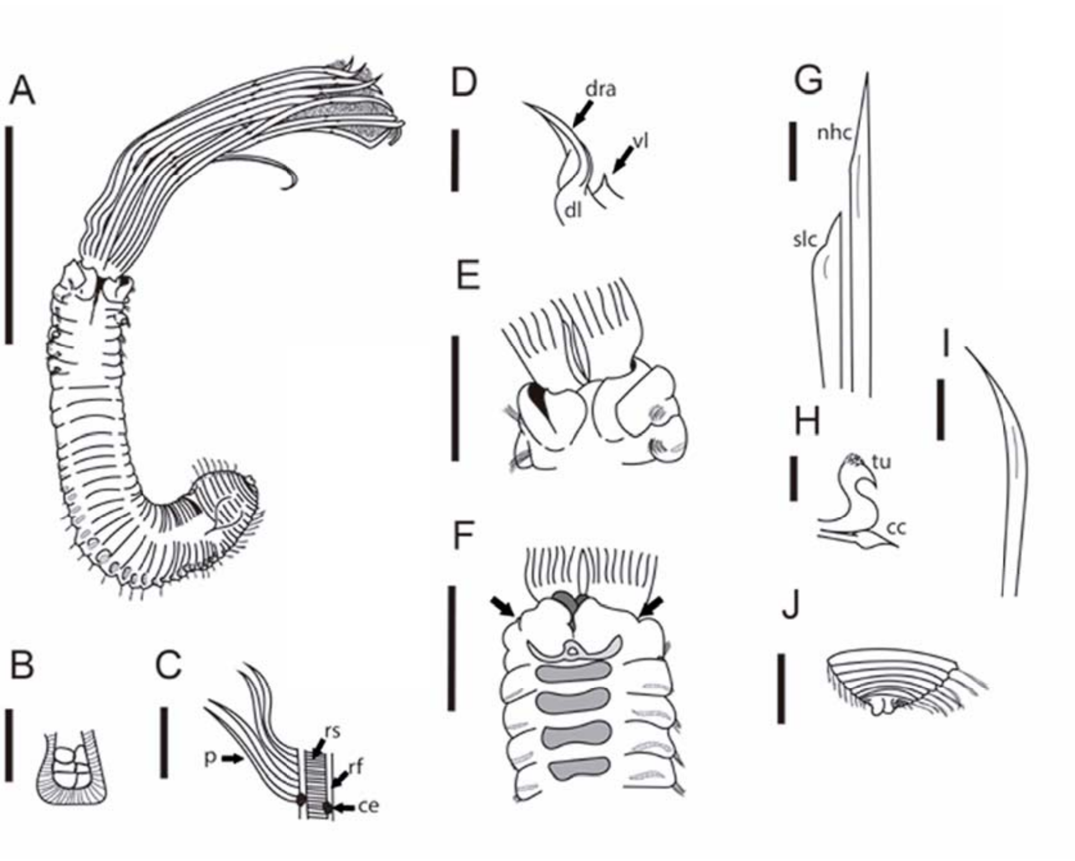

Figure 4. *Bispira primaoculata* sp. nov. A Holotype (MNCN 16.01/16651), B-K Paratype MNCN 16.01/16653. A: Dorsal basal flanges. B: Same. C: Compound radiolar eyes. D: Inferior thoracic spine-like chaetae. E: Same. F: Detail of a thoracic spine-like chaeta. G: Thoracic elongate, narrowly hooded chaetae. H: Thoracic uncini. I: Thoracic companion chaetae. J: Anterior abdominal neurochaetae. K: Posterior abdominal modified, elongate, narrowly hooded chaetae. Scales: A 1 mm; B 500 µm; C 200 µm; D 50 µm; E, H 40 µm; F 10 µm; G, J-K 100 µm; I 30 µm.

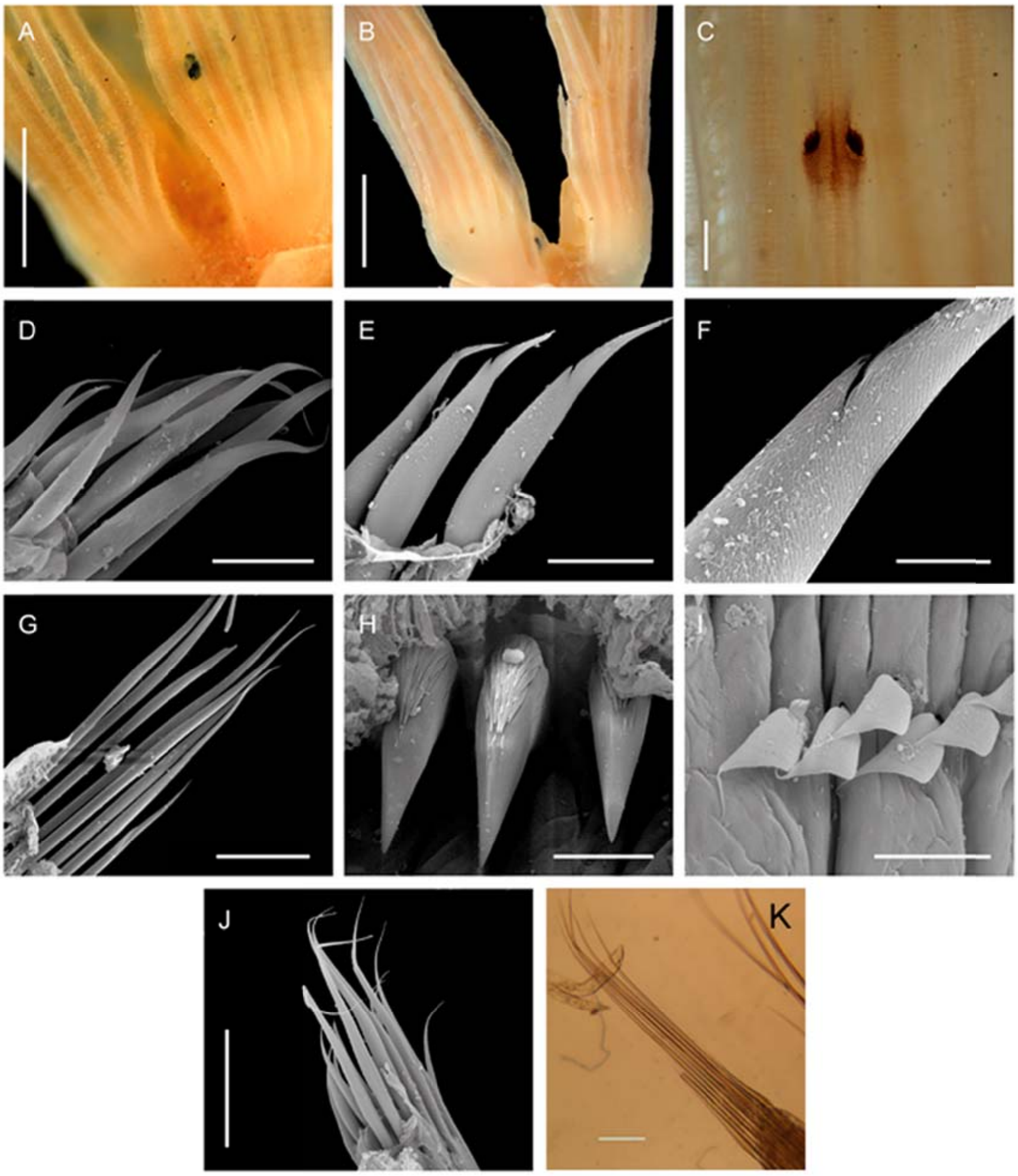

Figure 5. *Dialychone dunerificta.* A: Radiolar tip. B: Crown appendages. C: Anterior and posterior body, dorsal view. D: Anterior body, ventral view. E: Thoracic inferior paleate chaetae. F: Anterior abdominal uncinus. G: Posterior abdominal uncinus. aprl: anterior peristomial ring lobe, dl: dorsal lip, gr: glandular ridge, vl: ventral lip, vra: ventral radiolar appendage. Scales: A-B 1 mm; C-D 2 mm; E 50 µm; F-G 15 µm.

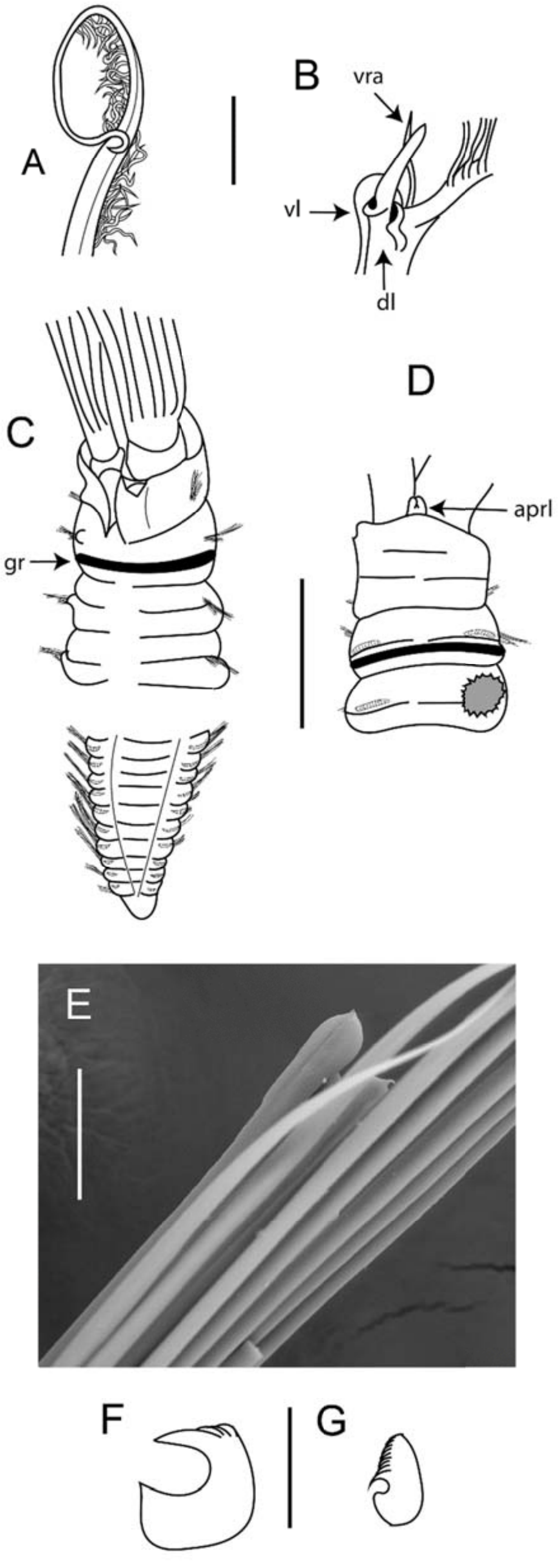

Figure 6. *Dialychone usticensis.* A: Radioles and palmate membrane. B: Crown appendages. C: Anterior and posterior body, dorsal view. D: Anterior body, ventral view. E: Inferior thoracic paleate chaetae. F: Pygidial cirrus. G: Anterior abdominal uncini. Aprl: anterior peristomial ring lobe, dl: dorsal lip, gr: glandular ridge, pm: palmate membrane, rf: radiolar flange, vl: ventral lip, vra: ventral radiolar appendage. Scales: A-D 1 mm; E 25 µm; F 50 µm; G 5 µm.

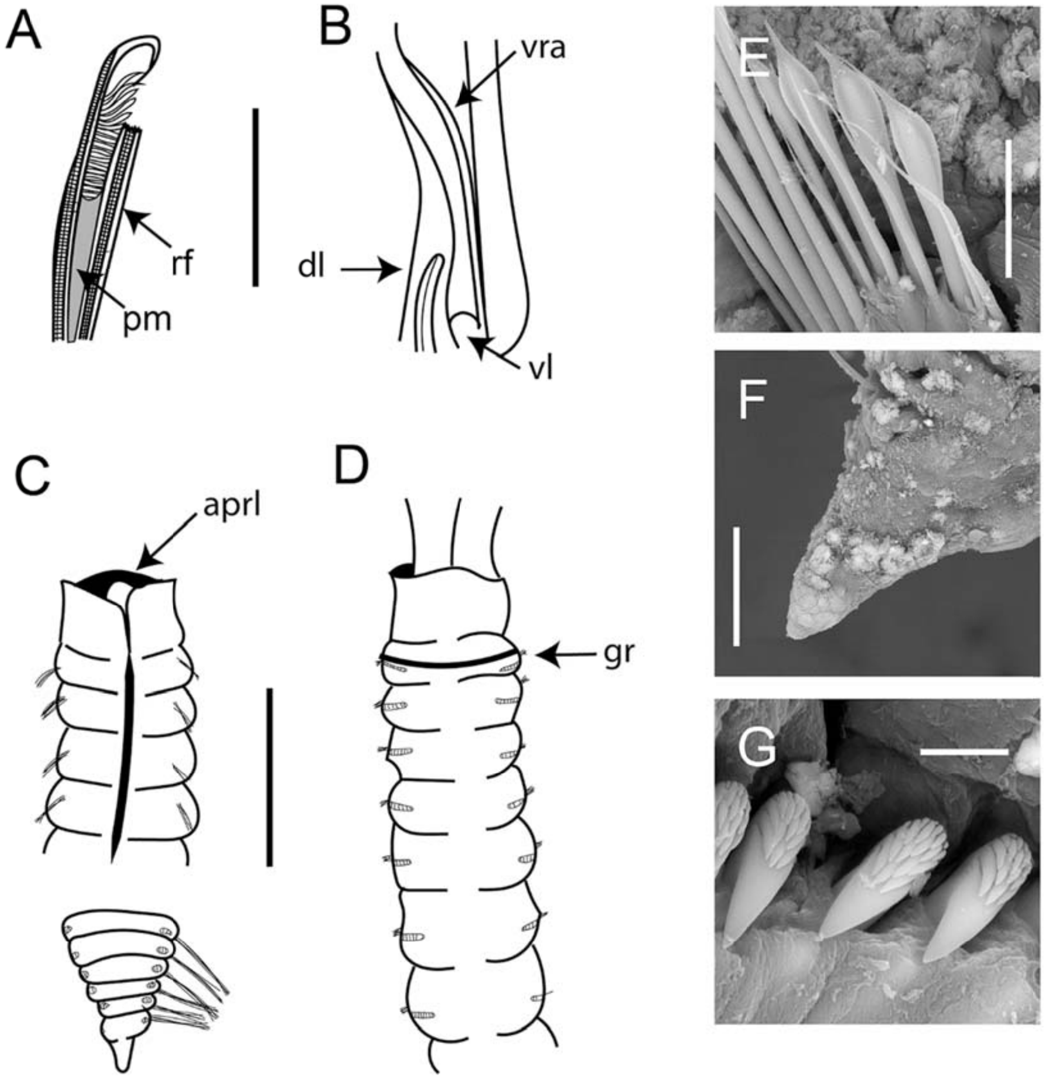

Figure 7. *Euchone* cf. *limnicola.* A: Entire body, ventral view. B: Crown appendages and radiole. C: Anterior body, dorsal view. D: Inferior thoracic paleate chaeta. E: Thoracic uncini. F: Posterior body, lateral view. dl: dorsal lip, dra: dorsal radiolar appendage, gr: glandular ridge, pm: palmate membrane, rf: radiolar flange, vl: ventral lip, vra: ventral radiolar appendage. Scales: A 1 mm; B-C, F 500 µm; D 25 µm; E 10 µm.

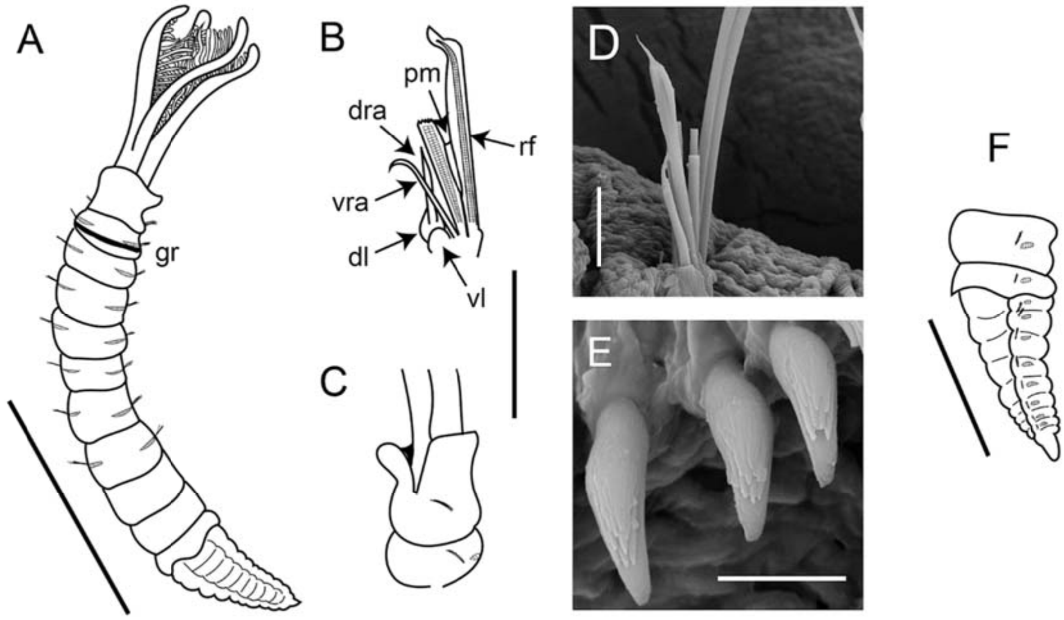

Figure 8. *Euchone* cf. *pseudolimnicola.* A: Radiolar tip. B: Anterior body, dorsal view. C: Anterior and posterior body, ventral view. D: Inferior thoracic paleate chaetae. E: Thoracic uncini. F: Posterior body, lateral view. aprl: anterior peristomial ring lobe, vs: ventral sac. Scales: A-C, F 1 mm; D 50 µm; E 20 µm.

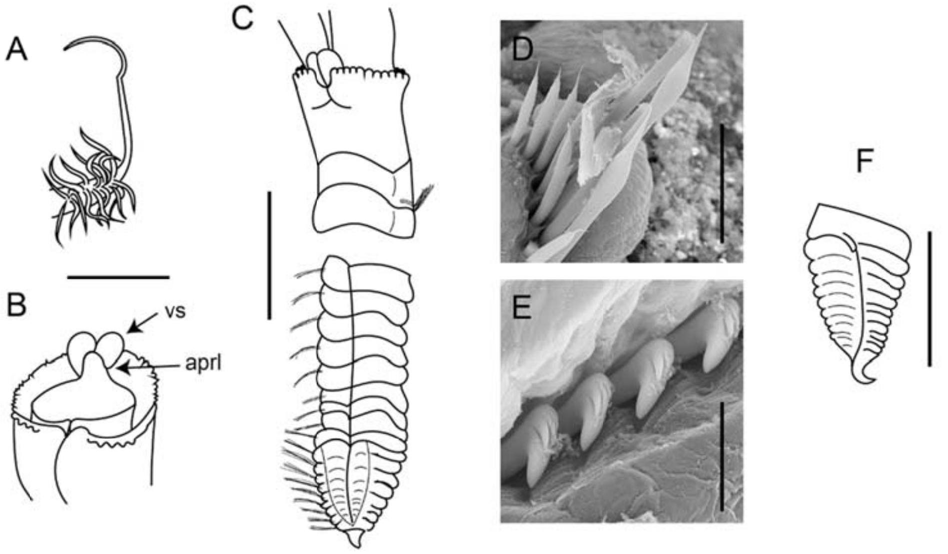

Figure 9. *Megalomma lanigera*. A: Compound eye and radiolar tip of dorsalmost radiole. B: Compound eye and radiolar tip of lateral radiole. C: Radiolar tip of second dorsalmost radiole. D: Dorsal collar lappets. E: Same. F: Ventral collar lappets. G: Thoracic notochaetae. H: Tube. I: Crown of an alive specimen. Scales: A-C 500 µm; D-E,F 3 mm; G 300 µm.

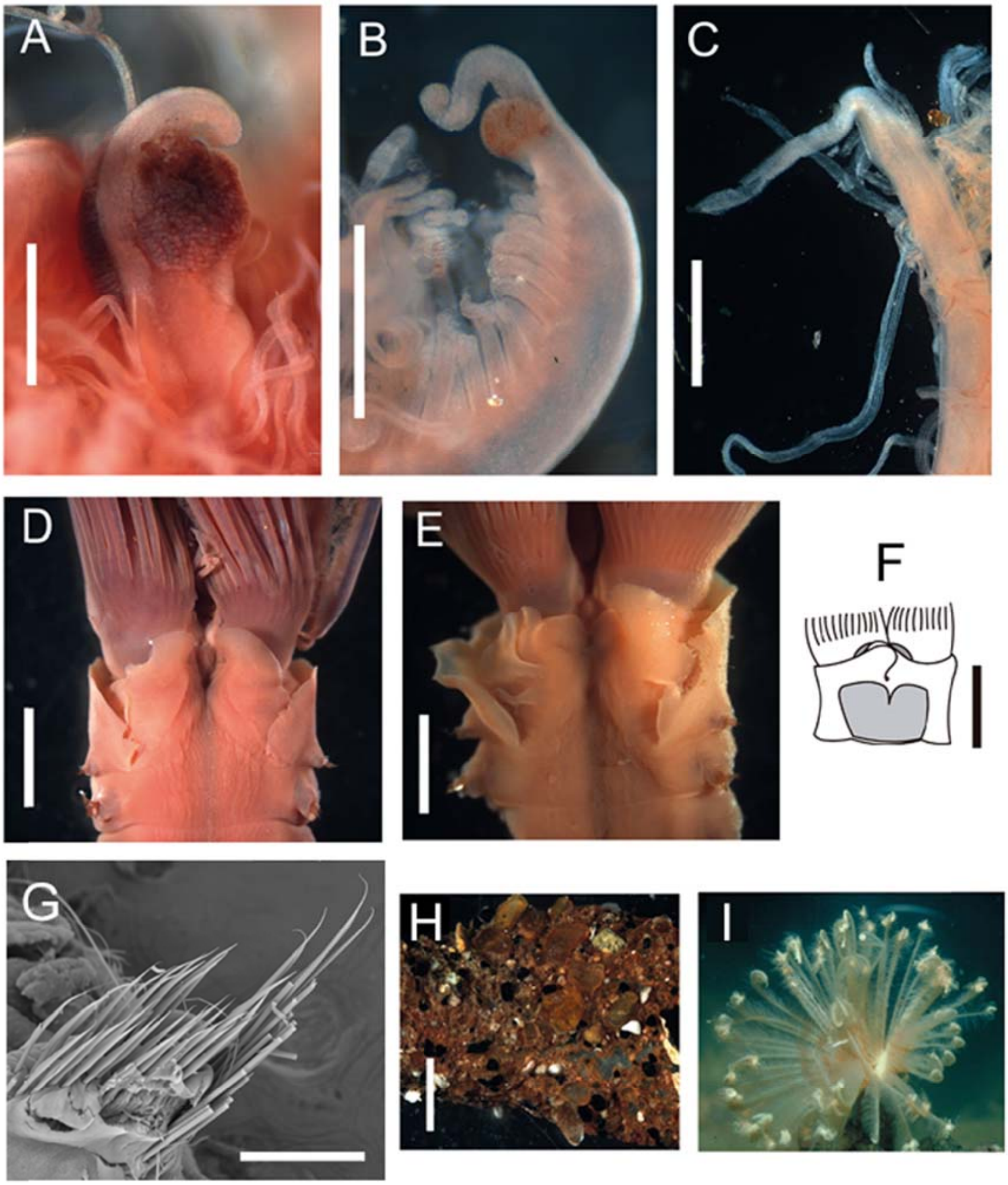

Figure 10. *Parasabella tenuicollaris.* A: Anterior body, dorsal view. B: Anterior body, ventral view. C: Anterior body, dorsal view. D: Inferior thoracic broadly hooded chaetae. apr: anterior peristomial ring, cppr: collar of posterior peristomial ring. Scales: A-C 1 mm; D 100 µm.

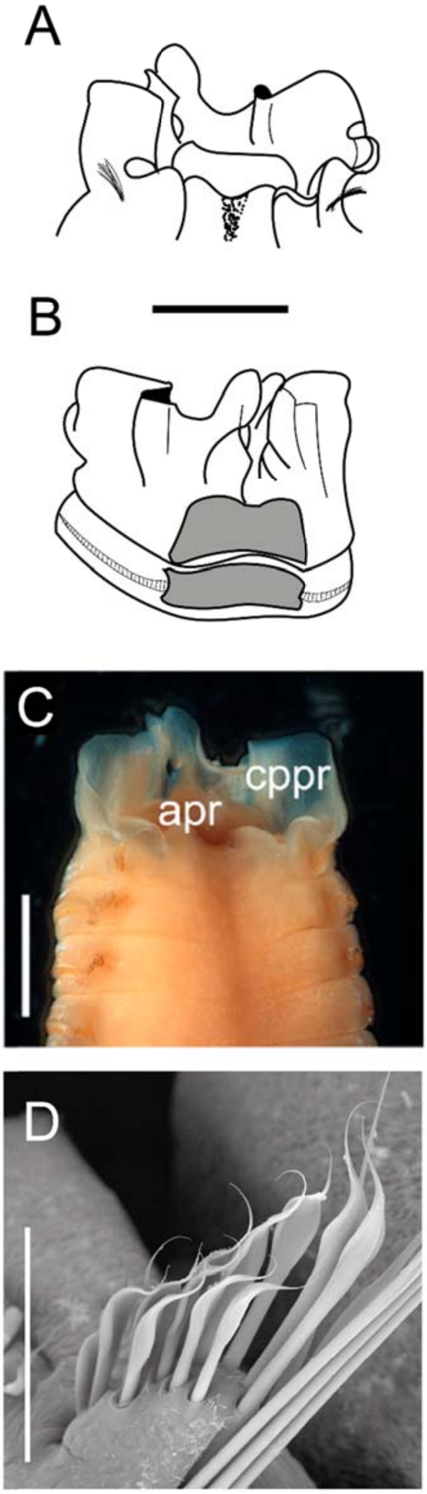

Figure 11. *Parasabella tommasi.* A: Radiole. B: Anterior body, lateral view. C: Crown appendages. D: Inferior thoracic broadly hooded chaetae. dl: dorsal lip, dpa: dorsal pinnular appendage, dra: dorsal radiolar appendage, vl: ventral lip. Scales: A 500 µm; B 1.5 mm; C 1 mm; D 50 µm.