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[REVIEW]

A Taxonomic Catalogue of the Nemerteans (Phylum Nemertea) of Spain and Portugal

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A literature-based taxonomic catalogue of nemerteans (phylum Nemertea) from Spain and Portugal is provided, listing 75 species (12 Palaeonemertea, 24 Pilidiophora, and 39 Hoplonemertea) belonging to 34 genera. This is a low species number compared with the approximately 400 species listed in Europe. This lack of knowledge is mainly due to the low number of researchers interested in the phylum and the well-known taxonomic difficulties of its study. Geographic records are indicated for each species, and for some, comments are included on certain biological and taxonomic aspects.

Key words: checklist, Spain, Portugal, ribbon worms, Nemertea

INTRODUCTION

Misidentification of nemertean species is very common in marine benthic studies, and many specimens collected are identified only at the phylum level (Junoy and Herrera-Bachiller, 2010). Since the first nemertean species was collected off Spain and Portugal, *Euborlasia elizabethae* (McIntosh, 1874), identification has been problematic. McIntosh's species description suggests: "An allied species was dredged by Mr. Jeffreys in the "Porcupine" expedition, 1870, off Cape Finisterre, at a depth of 80 fathoms" (McIntosh, 1873–1874: 194). Only a few species were added to the fauna of these two countries before the end of the 19th century (Langerhans, 1880; Bürger, 1895; Richard and Neuville, 1897), whereas neighboring countries constructed more complete species checklists (e.g. McIntosh, 1873–1874; Joubin, 1890, 1894; Bürger, 1895). A list of these early records of the nemerteans of this area was compiled by Saiz-Salinas (1987).

During the first half of the 20th century, Iberian records of nemerteans were mainly related to the freshwater genus *Prostoma* (Margalef, 1946, 1948). The next records of marine species did not appear until 1980, when Anadón (1980a) recorded nine species from Northern Spain. The number of nemerteans from Spain and Portugal was then raised to 48 in subsequent studies by this author and colleagues (Anadón, 1981a, 1986–1987; Anadón and Lastra, 1986; Vernet and Anadón, 1991a, b, 1994). An additional three new species were described and added to the catalogue in the early 1990s: *Tetrastemma fozensis* Gibson and Junoy, 1991, *Cephalothrix oestrymnica* (Junoy and Gibson, 1991) and *Riseriellus occultus* Rogers et al., 1993 (Gibson and Junoy, 1991; Junoy and Gibson, 1991; Rogers et al., 1993). The number of species has been steadily increasing since, with the main contribution being the study of the nemertean fauna from the Islas Atlánticas de Galicia National Park (Junoy and Herrera-Bachiller, 2010).

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MATERIALS AND METHODS

The geographical range of this catalogue encompasses the land and waters (continental waters and Economic Exclusive Zone) of Spain and Portugal, including the Iberian Peninsula, the archipelagos of Canary Islands, Balearic Islands, Madeira, the Azores and other minor islands (e.g. Cíes, Chafarinas, Alborán). The present catalogue of Spanish and Portuguese nemerteans is largely based on data obtained from the literature and authors' records up until the end of 2014. A search for nemertean photographs on websites specialising in natural history has revealed several accounts of nemertean species. To increase the knowledge of the distribution of these species in Spain and Portugal and to make this information available to the scientific community, these records were collected and codified as follows: Asturnatura.com (AN), Biodiversidadvirtual.org (BV), Visualphotos.com (VP), MCZbase (MCZ:IZ), followed by the number assigned to each photograph on the website. The photographs included from these websites are up to date as of October 2014. Additional details from these records can be found in the links provided in Table 1. Additional information and unpublished records by the authors are included. Locality and information of the habitat (when available) are provided. As phylogenetic studies have consistently shown that many nemertean families are paraphyletic or polyphyletic (e.g. Sundberg et al., 2001, 2009; Thollesson and Norenburg, 2003; Schwartz, 2009; Puerta et al., 2010), this taxonomic category has not been considered.

RESULTS

Checklist of the Spanish and Portuguese nemerteans species

This checklist of nemerteans from Spain and Portugal

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Table 1. List of codes used in the present study and links where the specimen details can be found.

Code	Species	Link	Location
BV22979	*Amphiporus lactifloreus* (Johnston, 1828)	http://www.biodiversidadvirtual.org/insectarium/Amphiporus-lactifloreus-(Johnston-1828)-(2).-cat22979.html	Concha de Artedo beach, Cudillero, Asturias, Spain
AN7254	*Amphiporus lactifloreus* (Johnston, 1828)	http://www.asturnatura.com/fotografia/fauna/amphiporus-lactifloreus/7254.html	Los Chalanos beach, Muros de Nalón, Asturias, Spain
AN9965	*Amphiporus lactifloreus* (Johnston, 1828)	http://www.asturnatura.com/fotografia/fauna-invertebrados/amphiporus-lactifloreus-2/9965.html	Concha de Artedo beach, Cudillero, Asturias, Spain
AN10514	*Baseodiscus delineatus* (Delle Chiaje, 1825)	http://www.asturnatura.com/fotografia/fauna-invertebrados/baseodiscus-delineatus-2/10514.html	El Rinconín, Gijón, Asturias, Spain
AN11422	*Cephalothrix filiformis* (Johnston, 1828)	http://www.asturnatura.com/fotografia/fauna-invertebrados/cephalothrix-filiformis-1/11422.html	El Castiellu beach, Pendueles, Asturias, Spain
AN18201	*Cephalothrix simula* (Iwata, 1952)	http://www.asturnatura.com/fotografia/submarina-fotosub/cephalothrix-simula-3/18201.html	Temperán beach, cangas, Pontevedra, Spain
VP9670542	*Cerebratulus lacteus* (Leydi, 1851)	http://www.visualphotos.com/image/1x9670542/nemertea_milky_ribbon-worm_cerebratulus_lacteus	Galicia, Spain
AN18719	*Cerebratulus marginatus* Renier, 1804	http://www.asturnatura.com/fotografia/submarina-fotosub/cerebratulus-marginatus-1/18719.html	Cangas, Pontevedra, Spain
AN10809	*Emplectonema echinoderma* (Marion, 1873)	http://www.asturnatura.com/fotografia/fauna-invertebrados/emplectonema-echinoderma-2/10809.html	Los Chalanos beach, Muros de Nalón, Asturias, Spain
AN11335	*Emplectonema echinoderma* (Marion, 1873)	http://www.asturnatura.com/fotografia/fauna-invertebrados/emplectonema-echinoderma-1/11335.html	Cape Vilán, Camariñas, A Coruña, Spain
MCZ:IZ:132536	*Leucocephalonemertes aurantiaca* (Grube, 1855)	http://mczbase.mcz.harvard.edu/guid/MCZ:IZ:132536	Cabrera, Balearic Islands, Spain
AN13161	*Lineus acutifrons* Southern, 1913	http://www.asturnatura.com/fotografia/fauna-invertebrados/lineus-acutifrons/13161.html	A Lanzada beach, O Grove, Pontevedra, Spain
AN11454	*Lineus bilineatus* (Renier, 1804)	http://www.asturnatura.com/fotografia/fauna-invertebrados/lineus-bilineatus-2/11454.html	Cape Vilán, Camariñas, A Coruña, Spain
BV156752	*Lineus longissimus* (Gunnerus, 1770)	http://www.biodiversidadvirtual.org/insectarium/lineus-longissimus.-img156752.html	Asturias, Spain
AN11461	*Lineus ruber* (Müller, 1774)	http://www.asturnatura.com/fotografia/fauna-invertebrados/poseidon-ruber-1/11461.html	Cape Vilán, Camariñas, A Coruña, Spain
MCZ:IZ:45841	*Micrura fasciolata* Ehrenberg, 1828	http://mczbase.mcz.harvard.edu/guid/MCZ:IZ:45841	Cabrera, Balearic Islands, Spain
AN14030	*Micrura purpurea* (Dalyell, 1853)	http://www.asturnatura.com/fotografia/fauna-invertebrados/micrura-purpurea-1/14030.html	Peñarrubia beach, Gijón, Asturias, Spain
AN13814	*Oerstedia dorsalis* (Abildgaard, 1806)	http://www.asturnatura.com/fotografia/fauna-invertebrados/oerstedia-dorsalis-1/13814.html	Cangas, Pontevedra, Spain
AN12644	*Prosorhochmus chafarinensis* Frutos, Montalvo and Junoy, 1998	http://www.asturnatura.com/fotografia/fauna/prosorhochmus-chafarinensis-1/12644.html	L´illot del Faradell, Cap de Creus, Girona, Spain
AN12621	*Prosorhochmus claparedii* Keferstein, 1862	http://www.asturnatura.com/fotografia/fauna-invertebrados/prosorhochmus-claparedii-1/12621.html	Las Represas beach, Tapia de Casariego, Asturias, Spain
MCZ:IZ:135369	*Prostoma eilhardi* (Montgomery, 1894)	http://mczbase.mcz.harvard.edu/guid/MCZ:IZ:135369	Santolea dam, Castellote, Teruel, Spain
AN14201	*Punnettia splendida* (Keferstein, 1862)	http://www.asturnatura.com/fotografia/fauna-invertebrados/drepanophorus-spectabilis-1/14201.html	Oia, Pontevedra, Spain

includes 75 species (12 Palaeonemertea, 24 Pilidiophora, and 39 Hoplonemertea) belonging to 34 genera. The bulk of the list represents marine benthic species, one of them being a commensal of the ascidian, *Ciona intestinalis* (Linnaeus, 1767) (*Vieitezia luzmurubeae* Junoy et al., 2010), another a commensal of the bivalve mollusc *Scrobicularia plana* (da Costa, 1778) (*Tetrastemma fozensis* Gibson and Junoy, 1991), and a third is a crustacean parasite (*Carcinonemertes carcinophila* Kölliker, 1845). Three species occur in the marine pelagic zone (*Dinonemertes grimaldii* (Joubin, 1906), *Pelagonemertes joubini* Coe, 1926, and *Pendonemertes levinseni* Brinkmann, 1917). The checklist also includes two terrestrial species, *Argonemertes dendyi* (Dakin, 1915) and *Leptonemertes chalicophora* (Graff, 1879), and one freshwater species *Prostoma eilhardi* (Montgomery, 1894). The checklist along with the distribution and habitat of the species of the present catalogue are shown in Table 2.

Taxonomic catalogue of the Spanish and Portuguese nemerteans species

Phylum **NEMERTEA**

Class **PALAEONEMERTEA** Hubrecht, 1879

Genus ***Carinina*** Hubrecht, 1855

Carinina ochracea Sundberg et al., 2009

Carinina ochracea: **Alfaya et al.** (2014), p. 150, tab. 2; La Ermita, Villaviciosa Estuary, Asturias, Spain; **Fernández-Álvarez et al.** (2015), pp. 590–595; intertidal region in

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Table 2. Spanish and Portuguse nemerteans: checklist, distribution and habitat.

Species	Distribution	Habitat
Carinina ochracea Sundberg, Chernyshev, Kajihara, Kånneby and Strand, 2009	Iberian Atlantic	Marine benthic
Cephalothrix bipunctata Bürger, 1892	Iberian Mediterranean	Marine benthic
Cephalothrix filiformis Johnston, 1828	Iberian Atlantic	Marine benthic
Cephalothrix linearis (Rathke, 1799)	Macaronesia	Marine benthic
Cephalothrix oestrymnica (Junoy and Gibson, 1991)	Iberian Atlantic	Marine benthic
Cephalothrix rufifrons (Johnston, 1837)	Iberian Atlantic	Marine benthic
Cephalothrix simula (Iwata, 1952)	Iberian Atlantic and Mediterranean	Marine benthic
Tubulanus annulatus (Montagu, 1804)	Iberian Atlantic and Mediterranean	Marine benthic
Tubulanus banyulensis (Joubin, 1890)	Iberian Atlantic and Mediterranean	Marine benthic
Tubulanus nothus (Bürger, 1892)	Iberian Atlantic	Marine benthic
Tubulanus polymorphus Renier, 1804	Iberian Atlantic	Marine benthic
Tubulanus superbus (Kölliker, 1845)	Iberian Atlantic and Mediterranean	Marine benthic
Baseodiscus delineatus (Delle Chiaje, 1825)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Cerebratulus aerugatus Bürger, 1892	Iberian Atlantic	Marine benthic
Cerebratulus fuscus (McIntosh, 1874)	Iberian Atlantic and Mediterranean	Marine benthic
Cerebratulus lacteus (Leydi, 1851)	Iberian Atlantic	Marine benthic
Cerebratulus marginatus Renier, 1804	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Cerebratulus roseus (Delle Chiaje, 1841)	Iberian Atlantic	Marine benthic
Euborlasia elizabethae (McIntosh, 1874)	Iberian Atlantic	Marine benthic
Leucocephalonemertes aurantiaca (Grube, 1855)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Lineus acutifrons Southern, 1913	Iberian Atlantic	Marine benthic
Lineus bilineatus (Renier, 1804)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Lineus grubei (Hubrecht, 1879)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Lineus hubrechti (Langerhans, 1880)	Macaronesia	Marine benthic
Lineus longissimus (Gunnerus, 1770)	Iberian Atlantic	Marine benthic
Lineus mcintoshii (Langerhans, 1880)	Macaronesia	Marine benthic
Lineus ruber (Müller, 1774)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Lineus viridis (Müller, 1774)	Iberian Atlantic and Mediterranean	Marine benthic
Micrura dellechiajei (Hubrecht, 1879)	Iberian Mediterranean	Marine benthic
Micrura fasciolata Ehrenberg, 1828	Iberian Atlantic and Mediterranean	Marine benthic
Micrura purpurea (Dalyell, 1853)	Iberian Atlantic and Mediterranean	Marine benthic
Notospermus geniculatus (Delle Chiaje, 1828)	Iberian Mediterranean. Macaronesia	Marine benthic
Ramphogordius lacteus Rathke, 1843	Iberian Atlantic and Mediterranean	Marine benthic
Ramphogordius sanguineus (Rathke, 1799)	Iberian Atlantic and Mediterranean	Marine benthic
Riseriellus occultus Rogers, Junoy, Gibson and Thorpe, 1993	Iberian Atlantic	Marine benthic
Valencinia longirostris Quatrefages, 1846	Iberian Atlantic and Macaronesia	Marine benthic
Amphiporus allucens Bürger, 1895	Iberian Mediterranean	Marine benthic
Amphiporus lactifloreus (Johnston, 1828)	Iberian Atlantic and Mediterranean	Marine benthic
Argonemertes dendyi (Dakin, 1915)	Iberian Peninsula. Macaronesia	Terrestrial
Carcinonemertes carcinophila (Kölliker, 1845)	Iberian Atlantic	Marine benthic, parasite of crustaceans
Emplectonema echinoderma (Marion, 1873)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Emplectonema gracile (Johnston, 1837)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Emplectonema neesii (Örsted, 1843)	Iberian Atlantic	Marine benthic
Leptonemertes chalicophora (Graff, 1879)	Iberian Peninsula. Macaronesia	Terrestrial
Nemertopsis bivittata (Delle Chiaje, 1841)	Iberian Atlantic and Mediterranean	Marine benthic
Nemertopsis flavida (McIntosh, 1874)	Iberian Atlantic and Mediterranean	Marine benthic
Oerstedia dorsalis (Abildgaard, 1806)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Ototyphlonemertes brunnea Bürger, 1895	Iberian Mediterranean	Marine benthic
Ototyphlonemertes duplex Bürger, 1895	Iberian Mediterranean	Marine benthic
Ototyphlonemertes macintoshi Bürger, 1895	Iberian Atlantic	Marine benthic
Ototyphlonemertes pallida (Keferstein, 1862)	Iberian Atlantic	Marine benthic
Prosorhochmus chafarinensis Frutos, Montalvo and Junoy, 1998	Iberian Mediterranean	Marine benthic
Prosorhochmus claparedii Keferstein, 1862	Iberian Atlantic and Mediterranean	Marine benthic
Prostoma eilhardi (Montgomery, 1894)	Iberian Peninsula	Freshwater
Psammamphiporus elongatus (Stephenson, 1911)	Iberian Atlantic	Marine benthic
Tetranemertes antonina (Quatrefages, 1846)	Iberian Mediterranean	Marine benthic
Tetrastemma candidum (Müller, 1774)	Iberian Mediterranean. Macaronesia	Marine benthic
Tetrastemma coronatum (Quatrefages, 1846)	Iberian Atlantic. Macaronesia	Marine benthic
Tetrastemma flavidum Ehrenberg, 1828	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Tetrastemma fozensis Gibson and Junoy, 1991	Iberian Atlantic	Marine benthic, commensal of *Scrobicularia plana*
Tetrastemma herouardi (Oxner, 1908)	Iberian Atlantic	Marine benthic
Tetrastemma longissimum Bürger, 1895	Iberian Atlantic. Macaronesia	Marine benthic
Tetrastemma melanocephalum (Johnston, 1837)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Tetrastemma quadristriatum Langerhans, 1880	Macaronesia	Marine benthic
Tetrastemma unicolor (Hubrecht, 1879)	Macaronesia	Marine benthic
Tetrastemma vermiculus (Quatrefages, 1846)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Tetrastemma vittigerum (Bürger, 1904)	Iberian Mediterranean	Marine benthic
Vieitezia luzmurubeae Junoy, Andrade and Giribet, 2010	Iberian Atlantic	Marine benthic, commensal of *Ciona* and other ascidians
Zygonemertes virescens (Verrill, 1879)	Iberian Atlantic and Mediterranean. Macaronesia	Marine benthic
Drepanogigas albolineatus (Bürger, 1895)	Iberian Mediterranean. Macaronesia	Marine benthic
Drepanophorus spectabilis (Quatrefages, 1846)	Iberian Atlantic and Mediterranean	Marine benthic
Paradrepanophorus crassus (Quatrefages, 1846)	Iberian Atlantic. Macaronesia	Marine benthic
Dinonemertes grimaldii (Joubin, 1906)	Macaronesia	Marine pelagic
Pelagonemertes joubini Coe, 1926	Macaronesia	Marine pelagic
Pendonemertes levinseni Brinkmann, 1917	Iberian Atlantic	Marine pelagic

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clean sand, La Ermita, Villaviciosa Estuary, Asturias, Spain.

Genus ***Cephalothrix*** Örsted, 1843

Cephalothrix bipunctata Bürger, 1892

(Fig. 1A)

Cephalothrix bipunctata: **Kvist et al.** (2014), p. 291, tab. 1; Embarcadero Beach, Los Escullos, Almería, Spain.

Remarks. This is the second record of the species after its description by Bürger (1892).

Cephalothrix filiformis (Johnston, 1828)

Procephalothrix filiformis: **Vernet and Anadón** (1991a), p. 49; in sand, Patos Beach, Nigrán, Pontevedra, Spain; in very coarse sand, beneath boulders, Aramar Beach, Luanco, Asturias, Spain; in sand, beneath boulders, near Piles Estuary, Gijón, Asturias, Spain; in sandy and muddy bottom, beneath boulders, Villaviciosa Estuary, Asturias, Spain; **Vernet and Anadón** (1991b), p. 92; in sand, Patos Beach, Nigrán, Pontevedra, Spain; in very coarse sand, beneath boulders, Aramar Beach, Luanco, Asturias, Spain; in sand, beneath boulders, near Piles Estuary, Gijón, Asturias, Spain; in sandy and muddy bottom, beneath boulders, Villaviciosa Estuary, Asturias, Spain.

Cephalothrix cf. *filiformis*: **Alfaya et al.** (2014), p. 149; Muros de Nalón, Asturias, Spain; Tapia de Casariego, Asturias, Spain.

Cephalothrix filiformis: **Fernández-Álvarez and Machordom** (2014), table on p. 37; Muros de Nalón, Asturias, Spain; Tapia de Casariego, Asturias, Spain; **Fernández-Álvarez** (2015); among *Corallina officinalis*, Las Represas Beach, Tapia de Casariego, Asturias, Spain; among *Corallina officinalis*, Los Chalanos Beach, Muros de Nalón, Asturias, Spain; in gravel under stone, inside a mucosal tube made of coarse sand, El Castiellu Beach, Pendueles, Asturias, Spain.

Additional new records. This species has also been recorded in El Castiellu Beach, Pendueles, Asturias, Spain (AN11422).



Fig. 1. Live habitus of selected specimens. **(A)** *Cephalothrix bipunctata* Bürger, 1892. **(B)** *Cephalothrix simula* (Iwata, 1952). **(C)** *Baseodiscus delineatus* (Delle Chiaje, 1825). **(D)** *Cerebratulus fuscus* (McIntosh, 1874). **(E)** *Euborlasia elizabethae* (McIntosh, 1874). **(F)** *Leucocephalonemertes aurantiaca* (Grube, 1855).

Cephalothrix linearis (Rathke, 1799)

Cephalothrix linearis: **Langerhans** (1880), p. 137; on algae, Madeira, Portugal; **Bürger** (1895), pp. 538–539, tab. 11, fig. 20; Madeira, Portugal.

Cephalothrix oestrymnica (Junoy and Gibson, 1991)

Procephalothrix oestrymnicus: **Junoy and Gibson** (1991), pp. 185–194, figs. 1–10, tab.1; under boulders in coarse sand, intertidal, Ensenada de Aguadulce, Foz, Lugo, Spain.

Cephalothrix oestrymnica: **Junoy and Herrera-Bachiller** (2010), p. 315, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain.

Additional new records. This species has also been recorded in Punta del Castro, Foz, Lugo, Spain and O Carreiro, Aguiño, A Coruña, Spain (authors' records).

Cephalothrix rufifrons (Johnston, 1837)

Cephalothrix rufifrons: **Anadón** (1980a), pp. 338–339; Feitales Beach, Nigrán, Pontevedra, Spain; **Vernet and Anadón** (1991a), pp. 48–49; Feitales Beach, Nigrán, Pontevedra, Spain; **Junoy and Herrera-Bachiller** (2010), pp. 315–316, fig. 2D, tab. 2; Islas Atlánticas de Galicia National Park, Spain; **Leasi and Norenburg** (2014), p. 9, fig. 2; Spain.

Cephalothrix simula (Iwata, 1952)

(Fig. 1B)

Cephalothrix fasciculus: **Fernández-Álvarez** (2015), clade 11, figs. 2A, 3, tab. S1; among *Corallina officinalis* and mud, San Vicente do Mar, O Grove, Pontevedra, Spain; in rocks and *Lithophyllum tortuosum*, Las Represas Beach, Tapia de Casariego, Asturias, Spain; in sand under rocks, Los Chalanos Beach, Muros de Nalón, Asturias, Spain; in *Lithophyllum tortuosum*, Aramar Beach, Luanco, Asturias, Spain; among *Corallina officinalis* and detritus, Islares Beach, Castro-Urdiales, Cantabria, Spain.

Cephalothrix cf. *simula*: **Fernández-Álvarez and Machordom** (2013), pp. 599–605, tab. 1; San Vicente do Mar, O Grove, Pontevedra, Spain; Las Represas Beach, Tapia de Casariego, Asturias, Spain; Los Chalanos Beach, Muros de Nalón, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; Islares Beach, Castro-Urdiales, Cantabria, Spain; Colera Harbor, Colera, Girona, Spain; Faradell Islet, Cap de Creus, Girona, Spain; **Alfaya et al.** (2014), p. 150, tab. 2; Las Represas Beach, Tapia de Casariego, Asturias, Spain; Faradell Islet, Cap de Creus, Girona, Spain; **Fernández-Álvarez and Machordom** (2014), pp. 34–37, figs. and text, table on p. 37; San Vicente do Mar, O Grove, Pontevedra, Spain;

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Las Represas Beach, Tapia de Casariego, Asturias, Spain; Los Chalanos Beach, Muros de Nalón, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; Islares Beach, Castro-Urdiales, Cantabria, Spain; Colera harbor, Colera, Girona, Spain.

Cephalothrix simula: **Leasi and Norenburg** (2014), pp. 10–12, fig. 2; Mediterranean waters, Spain; Atlantic Ocean, Spain.

Additional new records. This species has also been recorded in Temperán Beach, Cangas, Pontevedra, Spain (AN18201); A Coruña, Spain; Castellón, Spain; Asturias, Spain; Alicante, Spain; Murcia, Spain and Almería, Spain (authors' records).

Genus ***Tubulanus*** Renier, 1804

Tubulanus annulatus (Montagu, 1804)

Tubulanus annulatus: **Anadón** (1980a), pp. 339–340; Concha de Artedo Beach, Cudillero, Asturias, Spain; **Anadón** (1981b), p. 44; Concha de Artedo Beach, Cudillero, Asturias, Spain; **Vernet and Anadón** (1991a), p. 49; beneath boulders, Concha de Artedo Beach, Cudillero, Asturias, Spain; sampled from 66 m in very fine sand, continental shelf off Asturias, Spain; **García Raso et al.** (1992), p. 229; Cabo de Gata, Almería, Spain; **Templado and Calvo** (2006), p. 189; Alborán Island, Almería, Spain.

Additional new records. This species has also been recorded in A Coruña, Spain (authors' records).

Tubulanus banyulensis (Joubin, 1890)

Tubulanus banyulensis: **Junoy and Herrera-Bachiller** (2010), p. 323, fig. 2C, tab. 2; Sálvora Island, A Coruña, Spain; Ons Island, Pontevedra, Spain; **Fernández-Álvarez and Díaz Álvarez** (2012a); Las Represas Beach, Tapia de Casariego, Asturias, Spain; **Fernández-Álvarez and Machordom** (2014), pp. 34–37, table on p. 37; Colera harbor, Colera, Girona, Spain; Las Represas Beach, Tapia de Casariego, Asturias, Spain; **Alfaya et al.** (2014), tab. 2; Colera Harbor, Colera, Girona, Spain; Las Represas Beach, Tapia de Casariego, Asturias, Spain; **Fernández-Álvarez** (2015), tab. S1, fig. S2; Colera Harbor, Colera, Girona, Spain; Las Represas Beach, Tapia de Casariego, Asturias, Spain.

Additional new records. This species has also been recorded in Pontevedra, Spain; and A Coruña, Spain (authors' records).

Tubulanus nothus (Bürger, 1892)

Tubulanus nothus: **Fernández Iglesias** (2012), Oia, Pontevedra, Spain; **Fernández-Álvarez and Fernández Iglesias** (2012), Oia, Pontevedra, Galicia, Spain.

Tubulanus polymorphus Renier, 1804

Tubulanus polymorphus: **Martínez et al.** (2007), p. 101, tab. VII; Stations J3, J7, J10, J11, I2, I3, I5, I8, I9, G2, G6, G7, G10, Z3, Z5, Z6, Z7, continental shelf off Guipuzcoa, Spain.

Additional new records. This species has also been recorded in A Coruña, Spain (authors' records).

Tubulanus superbus (Kölliker, 1845)

Tubulanus superbus: **Junoy and Herrera-Bachiller** (2010), p. 323, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain.

Additional new records. This species has also been recorded in Castellón, Spain; and A Coruña, Spain (authors records).

Class **PILIDIOPHORA** Thollesson and Norenburg, 2003

Genus ***Baseodiscus*** Diesing, 1850

Baseodiscus delineatus (Delle Chiaje, 1825)

(Fig. 1C)

Baseodiscus curtus: **Ocaña Martín et al.** (2000), p. 161, photo 162; Cerro Gordo, Granada, Spain.

Baseodiscus delineatus: **Vernet and Anadón** (1991a), p. 49; in sand, beneath cobbles and boulders, near Piles Estuary, Gijón, Asturias, Spain; **Vernet and Anadón** (1991b), p. 92; in sand, beneath cobbles and boulders, near Piles Estuary, Gijón, Asturias, Spain; **Wirtz** (2009), p. 46; Madalena, Pico Island, Azores, Portugal.

Eupolia delineata: **Bürger** (1895), pp. 600–601, tab. 4, figs. 6, 8, 14; Faro, Portugal.

Additional new records. This species has also been recorded in El Rinconín, Gijón, Asturias, Spain (AN10514), the Canary Islands, Spain; Almería, Spain; Alicante, Spain; Murcia, Spain; the Strait of Gibraltar, Ceuta, Spain and A Coruña, Spain (authors' records).

Genus ***Cerebratulus*** Renier, 1804

Cerebratulus aerugatus Bürger, 1892

Remarks and additional new records. This species has been recorded in Punta Almina in the Strait of Gibraltar, Ceuta, Spain (authors' record). It is the first record for the species in Spanish and Portuguese waters, having been previously recorded from Naples (Italy) (Bürger, 1892, 1895, 1904), Saldanha Bay (South Africa) (Wheeler, 1934), and Humlesäcken and Tjärnö (Sweden) (Sundberg et al., 2007, 2010).

Cerebratulus fuscus (McIntosh, 1874)

(Fig. 1D)

Cerebratulus fuscus: **Bürger** (1895), pp. 674–675, tab. 6, figs. 9, 19; Portugal; **Vernet and Anadón** (1991a), pp. 49–50; sampled from 66 m and 106 m in very fine sand, continental shelf off Asturias, Spain.

Micrura fusca: **McIntosh** (1873–1874), pp. 196–197, pl. VI, fig. 3; dredged from 1450 m, coast of Portugal.

Additional new records. This species has also been recorded in the Menorca Channel, Balearic Islands, Spain; Murcia, Spain; the Strait of Gibraltar, Ceuta, Spain and A Coruña, Spain (authors' records).

Cerebratulus lacteus (Leydi, 1851)

Micrura lactea: **Vernet and Anadón** (1991a), p. 52; sampled from 586 m in silt, continental shelf off Asturias, Spain.

Additional new records. This species has also been recorded in Galicia, Spain (VP9670542).

Cerebratulus marginatus Renier, 1804

Cerebratulus marginatus ?: **Anadón** (1981a), p. 224; Santander, Cantabria, Spain.

Cerebratulus marginatus: **Langerhans** (1880), p. 137;

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Madeira, Portugal; **Bürger** (1895), pp. 660–663, tab. 6, fig. 1; Madeira, Portugal; **Anadón** (1980a), pp. 342–343; Puntal Beach, Villaviciosa Estuary, Asturias, Spain; Foz Beach, Navia, Pontevedra, Spain; **Anadón** (1981b), p. 43, fig. 3; Puntal Beach, Villaviciosa Estuary, Asturias, Spain; **Anadón** (1981a), p. 223; Santander, Cantabria, Spain; **Rodríguez Castelo and Mora** (1984), p. 21, tab. 2; Ría de Pontevedra, Pontevedra, Spain; **Planas et al.** (1984), p. 166; Ensenada de Campelo, Pontevedra, Spain; **Vernet and Anadón** (1991a), p. 50; Foz Beach, Navia, Pontevedra, Spain; Villaviciosa Estuary, Asturias, Spain; in shelly sand and gravel, El Camello Beach, Santander, Cantabria, Spain; continental shelf off Asturias, Spain; **García Raso et al.** (1992), pp. 43, 229; Cabo de Gata, Almería, Spain; **Junoy and Herrera-Bachiller** (2010), p. 316, fig. 2F, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Alfaya et al.** (2014), tab. 2; Villaviciosa Estuary, Asturias, Spain.

Additional new records. This species has also been recorded in Cangas, Pontevedra, Spain (AN18719).

Cerebratulus roseus (Delle Chiaje, 1841)

Cerebratulus roseus: **Langerhans** (1880), p. 138; Madeira, Portugal; **Anadón** (1986–1987), pp. 41–42; Puntal Beach, Villaviciosa Estuary, Asturias, Spain; **Vernet and Anadón** (1991a), pp. 50–51, fig. 3; Villaviciosa Estuary, Asturias, Spain; continental shelf off Asturias, Spain.

Genus ***Euborlasia*** Vaillant, 1890

Euborlasia elizabethae (McIntosh, 1874)

(Fig. 1E)

Borlasia elizabethae: **McIntosh** (1873–1874), pp. 193–194, pl. VII, figs. 1–2; dredged from 146 m, Cape Finisterre, A Coruña, Spain.

Remarks and additional new records. This species has also been recorded in Cangas, Pontevedra, Spain (authors' records). Despite its big size, this species was not registered in more than a century. The lack of additional records suggests that the species is very uncommon.

Genus ***Leucocephalonemertes*** Cantell, 1996

Leucocephalonemertes aurantiaca (Grube, 1855)

(Fig. 1F)

Micrura aurantiaca: **Riedl** (1959), p. 538; Getaria, Bizkaia, Spain; **Anadón** (1981a), pp. 219–221, fig. 1; Aramar Beach, Luanco, Asturias, Spain; **Anadón** (1981b), p. 43, figs. 1–2; Asturias, Spain; **Lombas and Anadón** (1985), p. 114, tab. II; Aramar Beach, Luanco, Asturias, Spain; **Vernet and Anadón** (1991a), p. 52; in crevices, beneath boulders, Aramar Beach, Luanco, Asturias, Spain; **Strand** (2002), p. 102, tab. 2; Porto Pim, Horta, Faial, Azores, Portugal.

Additional new records. This species has also been recorded in Murcia, Spain; Balearic Islands, Spain (MCZ:IZ:132536); Alicante, Spain; Girona, Spain; the Strait of Gibraltar, Ceuta, Spain and Pontevedra, Spain (authors' records).

Genus ***Lineus*** Sowerby, 1806

Lineus acutifrons Southern, 1913

Lineus acutifrons: **Junoy and Herrera-Bachiller** (2010), pp. 316–317, fig. 2J, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Puerta et al.** (2010), pp. 2363–2378; Frouxeira Beach, Valdoviño, A Coruña, Spain; Ladeira Beach, Corrubedo, A Coruña, Spain; A Lanzada Beach, O Grove, Pontevedra, Spain; América Beach, Nigrán, Pontevedra, Spain; **Andrade et al.** (2012), p. 157, tab. 1; Ladeira Beach, Corrubedo, A Coruña, Spain.

Additional new records. This species has also been recorded in A Lanzada Beach, O Grove, Pontevedra, Spain (AN13161) and A Coruña, Spain (authors' records).

Lineus bilineatus (Renier, 1804)

(Fig. 2A)

Cerebratulus bilineatus: **Langerhans** (1880), p. 137; Madeira, Portugal.

Lineus bilineatus: **Bürger** (1895), pp. 631–633, tab. 5, fig. 15; Madeira, Portugal; **Anadón** (1980a), p. 342; associated with *Diopatra neapolitana*, Puntal Beach, Villaviciosa Estuary, Asturias, Spain; **Vernet and Anadón** (1991a), p. 50; in sandy and muddy bottom and in empty tubes of *Diopatra neapolitana*, Villaviciosa Estuary, Asturias, Spain; **Junoy and Herrera-Bachiller** (2010), p. 317, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Alfaya et al.** (2014), tab. 2; Colera, Girona, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Colera, Girona, Spain.

Additional new records. This species has also been recorded in Cape Vilán, Camariñas, A Coruña, Spain (AN11454).



Fig. 2. Live habitus of selected specimens. **(A)** *Lineus bilineatus* (Renier, 1804). **(B)** *Lineus grubei* (Hubrecht, 1879). **(C)** *Micrura fasciolata* Ehrenberg, 1831. **(D)** *Micrura purpurea* (Dalyell, 1853). **(E)** *Notospermus geniculatus* (Delle Chiaje, 1828).

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Lineus grubei (Hubrecht, 1879)
(Fig. 2B)

Cerebratulus grubei: **Langerhans** (1880), p. 138; Madeira, Portugal.

Additional new records. This species has also been recorded in Los Chalanos Beach, Muros de Nalón, Asturias, Spain and in the Strait of Gibraltar, Ceuta, Spain (authors' records).

Lineus hubrechti (Langerhans, 1880)

Cerebratulus hubrechti: **Langerhans** (1880), p. 138; Madeira, Portugal.

Lineus longissimus (Gunnerus, 1770)

Lineus marinus: **Maluquer** (1917), p. 221; Santander, Cantabria, Spain; **Rioja** (1917), pp. 491, 494; near Piles Estuary, Gijón, Asturias, Spain; **Anadón** (1981a), p. 224; Santander, Cantabria, Spain.

Lineus longissimus: **Bürger** (1895), p. 631; Spain; **Anadón** (1980a), p. 340; near Piles Estuary, Gijón, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; Areas Fofas Beach, Nigrán, Pontevedra, Spain; Patos Beach, Nigrán, Pontevedra, Spain; Los Feitales Beach, Nigrán, Pontevedra, Spain; **Anadón** (1980b), p. 114, tab. 1; Areas Fofas Beach, Nigrán, Pontevedra, Spain; **Anadón** (1981b), p. 43; Luanco, Asturias, Spain; Verdicio, Asturias, Spain; Gijón, Asturias, Spain; Villaviciosa, Asturias, Spain; **Vernet and Anadón** (1991a), p. 51; in sand, beneath boulders, Areas Fofas Beach, Nigrán, Pontevedra, Spain; associated with *Sabellaria alveolata*, Patos Beach, Nigrán, Pontevedra, Spain; in crevices, beneath boulders and *Gelidium latifolium*, rocky shore in Aramar, Luanco, Asturias, Spain; beneath boulders, near Piles Estuary, Gijón, Asturias, Spain; in shelly sand and gravel, El Camello Beach, Santander, Cantabria, Spain; **Rogers et al.** (1993), p. 220, fig. 1; in mud banks or among roots of *Spartina* sp., Foz Estuary, Lugo, Spain; **Sundberg and Strand** (2007), p. 118, tab. 1; among coralline algal turfs, Foz Estuary, Foz, Lugo, Spain; **Kensler** (1965), list on p. 856; Cabo Carvoeiro, Ericeira, Cascais, Cabo de Espichel, Cabo de Sines, Sagres and Albufeira, Portugal; **Menéndez Valderrey** (2004); Concha de Artedo Beach, Cudillero, Asturias, Spain; **Junoy and Herrera-Bachiller** (2010), p. 317, fig. 2I, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Alfaya et al.** (2014), tab. 2; Las Represas Beach, Tapia de Casariego, Asturias, Spain; **Fernández-Álvarez and Machordom** (2014), pp. 34–37, figs. and text, table on p. 37; San Vicente do Mar, O Grove, Pontevedra, Spain; Tapia de Casariego, Asturias, Spain; Muros de Nalón, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain.

Additional new records. This species has also been recorded in Asturias, Spain (BV156752); the Strait of Gibraltar, Ceuta, Spain and A Coruña, Spain (authors' records).

Lineus mcintoshii (Langerhans, 1880)

Cerebratulus mcintoshii: **Langerhans** (1880), p. 138; Madeira, Portugal.

Lineus ruber (Müller, 1774)

Lineus obscurus: **Langerhans** (1880), p. 137; Madeira, Portugal.

Lineus gesserensis: **Bürger** (1895), pp. 622–623; Madeira, Portugal; **Kensler** (1964), list on p. 954; no specific locality, between Collioure, France and Punta Cañones, Girona, Spain.

Lineus ruber: **Anadón et al.** (1982), pp. 689,700,703,704, tabs. II,V,VI, fig. 5; San Cibrao, Cervo, Lugo, Spain; **Polo et al.** (1982), p. 347; San Cibrao, Cervo, Lugo, Spain; **Vernet and Anadón** (1991a), p. 52; in very coarse sand, beneath boulders, Bañugues Beach, Luanco, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; **Vernet and Anadón** (1991b), p. 92; in very coarse sand, beneath boulders, Bañugues Beach, Luanco, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; **Alfaya et al.** (2014), tab. 2; Cape Vilán, Camariñas, A Coruña, Spain.

Poseidon ruber: **Junoy and Herrera-Bachiller** (2010), pp. 320–321, fig. 2E–L, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain.

Additional new records. This species has also been recorded in Cape Vilán, Camariñas, A Coruña, Spain (AN11461) and the Strait of Gibraltar, Ceuta, Spain (authors' records).

Lineus viridis (Müller, 1774)

Lineus viridis: **Anadón** (1980a), pp. 341–342; Areas Fofas Beach, Nigrán, Pontevedra, Spain; Patos Beach, Nigrán, Pontevedra, Spain; **Anadón** (1981b); Galicia, Spain; **Strand** (2002), p. 102, tab. 2; Porto da Feteira, Feteira, Faial, Azores, Portugal; Madalena Harbor, Madalena, Pico, Azores, Portugal.

Poseidon viridis: **Junoy and Herrera-Bachiller** (2010), pp. 320–321, fig. 2L, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Fernández-Álvarez** (2013), Las Represas Beach, Tapia de Casariego, Asturias, Spain.

Remarks. Some of the specimens recorded by Anadón as *L. viridis* are now considered to be *R. occultus* (Anadón, pers. comm.).

Genus ***Micrura*** Ehrenberg, 1831

Micrura dellechiajei (Hubrecht, 1879)

Micrura dellechiajei: **Junoy and Herrera-Bachiller** (2012), pp. 424–426; Menorca Channel, Balearic Islands, Spain; Alborán Sea, Almería, Spain; **Kvist et al.** (2014), p. 291, tab. 1; Alborán Island, Almería, Spain.

Micrura fasciolata Ehrenberg, 1831
(Fig. 2C)

Micrura fasciolata: **Vernet and Anadón** (1991a), p. 52; sampled from 150 m in very coarse sand and boulders, continental shelf off Asturias, Spain; **Fernández-Álvarez** (2012); Girona, Spain; **Alfaya et al.** (2014), tab. 2; Faradell Islet, Cap de Creus, Girona, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Faradell Islet, Cap de Creus, Girona, Spain.

Additional new records. This species has also been recorded in the Menorca Channel, Balearic Islands, Spain; Cabrera, Balearic Islands, Spain (MCZ:IZ:45841);

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Alborán Sea, Almería, Spain and A Coruña, Spain (authors' records).

Micrura purpurea (Dalyell, 1853)
(Fig. 2D)

Micrura purpurea: **Anadón** (1986–1987), pp. 42–43; Aramar Beach, Luanco, Asturias, Spain; **Vernet and Anadón** (1991a), p. 53; in crevices, beneath boulders, with *Gelidium latifolium*, Aramar Beach, Luanco, Asturias, Spain; **Junoy and Herrera-Bachiller** (2010), p. 317, fig. 2H, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Alfaya et al.** (2014), p. 149; Los Chalanos Beach, Muros de Nalón, Asturias, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Muros de Nalón, Asturias, Spain.

Additional new records. This species has also been recorded Peñarrubia Beach, Gijón, Asturias, Spain (AN14030); the Alborán Sea, Almería, Spain; the Strait of Gibraltar, Ceuta, Spain and A Coruña, Spain (authors' records).

Genus ***Notospermus*** Huschke, 1830
Notospermus geniculatus (Delle Chiaje, 1828)
(Fig. 2E)

Lineus geniculatus: **Ramos** (1985), p. 143; Tabarca Island, Alicante, Spain; **Riser** (1991), p. 434; Canary Islands, Spain; **Calvín Calvo** (1995), pp. 111, 341–342; Mediterranean Spanish waters, Spain.

Notospermus geniculatus: **Templado and Calvo** (2006), p. 189; Alborán Island, Almería, Spain; **Kvist et al.** (2014), p. 291, tab. 1; Cabrera, Balearic Islands, Spain.

Additional new records. This species has also been recorded in Fuerteventura, Canary Islands, Spain; Alborán Sea, Almería, Spain and the Strait of Gibraltar, Ceuta, Spain (authors' records).

Genus ***Ramphogordius*** Rathke, 1843
Ramphogordius lacteus Rathke, 1843

Lineus lacteus: **Anadón** (1980a), pp. 340–341; associated with *Sabellaria alveolata* and *Lineus viridis*, Patos Beach, Nigrán, Pontevedra, Spain; **Anadón** (1980b), p. 112, tab. 1; associated with *Sabellaria alveolata* and *Lineus viridis*, Patos Beach, Nigrán, Pontevedra, Spain; **Anadón** (1981b), p. 44; Galicia, Spain; **Anadón and Lastra** (1986), p. 217; Vigo Estuary, Pontevedra, Spain; **Vernet and Anadón** (1991a), pp. 50–51; in pebble, beneath cobbles and boulders, Los Feitales Beach, Nigrán, Pontevedra, Spain; inside the *Sabellaria alveolata* reefs, Patos Beach, Nigrán, Pontevedra, Spain; **Vernet and Anadón** (1994), pp. 417–422; under cobbles and boulders, Los Feitales Beach, Nigrán, Pontevedra, Spain; inside *Sabellaria alveolata* reefs, Patos Beach, Nigrán, Pontevedra, Spain.

Ramphogordius lacteus: **Fernández-Álvarez and Machordom** (2014), table on p. 37; Muros de Nalón, Asturias, Spain; **Herrera-Bachiller and Junoy** (2014), pp. 1–2; Embarcadero Beach, Los Escullos, Almería, Spain.

Additional new records. This species has also been recorded in A Coruña, Spain (authors' records).

Ramphogordius sanguineus (Rathke, 1799)

Lineus sanguineus: **Vernet and Anadón** (1991a), p. 52; in pebble, beneath cobbles and boulders, Los Feitales Beach, Nigrán, Pontevedra, Spain; in very coarse sand, beneath boulders, Bañugues Beach, Luanco, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; **Vernet and Anadón** (1991b), p. 92; in pebble, beneath cobbles and boulders, Los Feitales Beach, Nigrán, Pontevedra, Spain; in very coarse sand, beneath boulders, Bañugues Beach, Luanco, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; **Runnels** (2013), p. 31; Armintza, Bizkaia, Spain.

Ramphogordius sanguineus Girard, 1853: **Schwartz** (2009), p. 277; Armintza, Bizkaia, Spain.

Ramphogordius sanguineus: **Junoy and Herrera-Bachiller** (2010), p. 321, fig. 2M, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Alfaya et al.** (2014), tab. 2; Colera harbor, Colera, Girona, Spain; **Fernández-Álvarez and Machordom** (2014), pp. 34–37, figs. and text, table on p. 37; San Vicente do Mar, O Grove, Pontevedra, Spain; Las Represas Beach, Tapia de Casariego, Asturias, Spain; Los Chalanos Beach, Muros de Nalón, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; Islares Beach, Castro-Urdiales, Cantabria, Spain; Colera Harbor, Colera, Girona, Spain.

Additional new records. This species has also been recorded in A Coruña, Spain (authors' records).

Genus ***Riseriellus*** Rogers et al., 1993
Riseriellus occultus Rogers et al., 1993

Lineus gesserensis: **Anadón** (1974), p. 76, figs. 1–23; associated with *Sabellaria alveolata*, Areas Fofas Beach, Nigrán, Pontevedra, Spain; Patos Beach, Nigrán, Pontevedra, Spain.

Lineus viridis: **Anadón** (1980b), p. 112, tab. 1; associated with *Sabellaria alveolata*, Patos Beach, Nigrán, Pontevedra, Spain; Areas Fofas Beach, Nigrán, Pontevedra, Spain.

Riseriellus occultus: **Rogers et al.** (1993), pp. 219–238, figs. 1–5; in mud banks or among *Spartina* roots, Foz Estuary, Foz, Lugo, Spain; **Montalvo et al.** (1996), p. 84; in consolidated mud among roots of *Spartina* sp. and in muddy sands with *Zostera noltii*, Foz Estuary, Foz, Lugo, Spain; **Montalvo et al.** (1998a), p. 248; in consolidated mud among roots of *Spartina* sp. and in muddy sands with *Zostera noltii*, Foz Estuary, Foz, Lugo, Spain; **Montalvo et al.** (1998b), p. 122; in consolidated mud among roots of *Spartina* sp. and in muddy sands with *Zostera noltii*, Foz Estuary, Foz, Lugo, Spain; **Junoy et al.** (2000), p. 236; in consolidated mud among roots of *Spartina* sp. and in muddy sands with *Zostera noltii*, Foz Estuary, Foz, Lugo, Spain; **Sundberg and Strand** (2007), p. 118, tab. 1; Foz Estuary, Foz, Lugo, Spain.

Remarks and additional new records. In the early works of Anadón (1974, 1976) this species was identified as *L. gesserensis*. Later, the same specimens were referred to as *L. viridis* (Anadón, 1980b). However, these specimens should be identified as *R. occultus* (N. Anadón, pers. comm.). This species has also been recorded in A Pobra do Caramiñal, A Coruña, Spain (authors' records).

Genus ***Valencinia*** Quatrefages, 1846
Valencinia longirostris Quatrefages, 1846

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Valencinia longirostris: **Langerhans** (1880), p. 137; Madeira, Portugal; **Bürger** (1895), pp. 609–612, tab. 4, figs. 15, 38; Madeira, Portugal; **Vernet and Anadón** (1991a), p. 53; sampled from 106 m in very fine sand, continental shelf off Asturias, Spain.

Class **HOPLONEMERTEA** Hubrecht, 1879
Subclass **MONOSTILIFERA** Brinkmann, 1917
Genus ***Amphiporus*** Ehrenberg, 1831
Amphiporus allucens Bürger, 1895

Amphiporus allucens: **Bilecenoglu et al.** (2013), pp. 464–465, fig. 2; Cabo de Gata National Park, Almería, Spain; **Fernández-Álvarez and Alfaya** (2014), p. 38; Cabo de Gata National Park, Almería, Spain.

Amphiporus lactifloreus (Johnston, 1828)

Amphiporus lactifloreus: **Kensler** (1964), list on p. 954; no specific locality, between Collioure, France and Punta Cañones, Girona, Spain; **Kensler** (1965), list on p. 856; Cabo Carvoeiro, Ericeira, Cascais, Cabo de Espichel, Cabo de Sines, Sagres and Albufeira, Portugal; Cabo Trafalgar, Tarifa, Gibraltar, Fuengirola, Almuñecar and Almería, Spain; **Anadón** (1981a), pp. 221–222, fig. 1; Gijón, Asturias, Spain; **Vernet and Anadón** (1991a), p. 53; in very coarse sand, beneath boulders, Aramar Beach, Luanco, Asturias, Spain; in sand, beneath boulders, near Piles Estuary, Gijón, Asturias, Spain; **Vernet and Anadón** (1991b), pp. 92–93; in very coarse sand, beneath boulders, Aramar Beach, Luanco, Asturias, Spain; in sand, beneath boulders, near Piles Estuary, Gijón, Asturias, Spain; **Alfaya et al.** (2014), tab. 2; Los Chalanos Beach, Muros de Nalón, Asturias, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Muros de Nalón, Asturias, Spain.

Additional new records. This species has also been recorded in Los Chalanos Beach, Muros de Nalón, Asturias, Spain (AN7254) and Concha de Artedo Beach, Cudillero, Asturias, Spain (AN9965, BV22979).

Genus ***Argonemertes*** Moore and Gibson, 1981
Argonemertes dendyi (Dakin, 1915)

Geonemertes dendyi: **Moore and Moore** (1972), pp. 33–34, fig. 2; Nordeste, São Miguel Island, Azores Islands, Portugal; Lagoa do Congro, São Miguel Island, Azores Islands, Portugal.

Nemertean A: **Mateos and Giribet** (2008), pp. 235–241, tabs. 1–2, figs. 2–3; Fragas do Eume Natural Park, Pontedeume, A Coruña, Spain.

Remarks. *Argonemertes* is a terrestrial genus. According to Mateos and Giribet (2008), the individuals collected in their work were assigned to three morphospecies (A, B, and C) on the basis of external morphology, pigmentation and eye number and disposition. Under these criteria, morphospecies A strongly resembled *A. dendyi* (Dakin, 1915). We assume that Nemertean A is *A. dendyi*.

Genus ***Carcinonemertes*** Coe, 1902
Carcinonemertes carcinophila (Kölliker, 1845)

Carcinonemertes carcinophila: **Junoy and Herrera-Bachiller** (2010), pp. 314–315, fig. 2K, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain

Remarks. This species, parasitizing different crustaceans, appears uncommon in Spanish and Portuguese waters. Only one specimen was observed on a female of *Xantho hydrophilus* (Herbst, 1790) after examination of a large set of crabs (authors' data).

Genus ***Emplectonema*** Stimpson, 1857
Emplectonema echinoderma (Marion, 1873)

Nemertes echinoderma: **Langerhans** (1880), p. 140; Madeira, Portugal.

Eunemertes echinoderma: **Bürger** (1895), pp. 545–546, tab. 2, figs. 3,11; Madeira, Portugal.

Emplectonema echinoderma: **Vernet and Anadón** (1991a), p. 53; in sand, beneath boulders, Bañugues Beach, Luanco, Asturias, Spain; **Vernet and Anadón** (1991b), p. 93; in sand, beneath boulders, Bañugues Beach, Luanco, Asturias, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Muros de Nalón, Asturias, Spain.

Additional new records. This species has also been recorded in Los Chalanos Beach, Muros de Nalón, Asturias, Spain (AN10809); Cape Vilán, Camariñas, A Coruña, Spain (AN11335); Almería, Spain; Alicante, Spain; and Alborán Sea, Almería, Spain (authors' records).

Emplectonema gracile (Johnston, 1837)
(Fig. 3A)

Nemertes gracilis: **Langerhans** (1880), p. 140; Madeira, Portugal.



Fig. 3. Live habitus of selected specimens. **(A)** *Emplectonema gracile* (Johnston, 1837). **(B)** *Emplectonema neesii* (Örsted, 1843). **(C)** *Nemertopsis bivittata* (Delle Chiaje, 1841). **(D)** *Zygonemertes virescens* (Verrill, 1879). **(E)** *Tetranemertes antonina* (Quatrefages, 1846). **(F)** *Drepanophorus spectabilis* (Quatrefages, 1846). **(G)** *Paradrepanophorus crassus* (Quatrefages, 1846).

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Eunemertes gracilis: **Bürger** (1895), pp. 543–544, tab. 2, fig. 1, tab. 29, fig. 3; Madeira, Portugal.

Emplectonema gracilis: **Román and Pérez** (1979), p. 12, tab. 3; ría de Arousa, Pontevedra, Spain.

Emplectonema gracile: **Kensler** (1964), list on p. 954; no specific locality, between Collioure, France and Punta Cañones, Girona, Spain; **Kensler** (1965), list on p. 856; Cabo Carvoeiro, Ericeira, Cascais, Cabo de Espichel, Cabo de Sines, Sagres and Albufeira, Portugal; Cádiz, Cabo Trafalgar, Tarifa, Gibraltar, Fuengirola, Almuñecar and Almería, Spain; **Vernet and Anadón** (1991a), p. 54; among *Corallina officinalis*, rocky shore in Aramar, Luanco, Asturias, Spain; among *Mytillus edulis*, El Camello Beach, Santander, Cantabria, Spain; **Vernet and Anadón** (1991b), p. 93; among *Corallina officinalis*, rocky shore in Aramar, Luanco, Asturias, Spain; among *Mytillus edulis*, El Camello Beach, Santander, Cantabria, Spain; **Junoy and Herrera-Bachiller** (2010), p. 316, fig. 2G, J, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Alfaya et al.** (2014), tab. 2; Faradell Islet, Cap de Creus, Girona, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; San Vicente do Mar, O Grove, Pontevedra, Spain; Tapia de Casariego, Asturias, Spain; Muros de Nalón, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; Islares Beach, Castro-Urdiales, Cantabria, Spain; Colera, Girona, Spain.

Additional new records. This species has also been recorded in Lugo, Spain; the Strait of Gibraltar, Ceuta, Spain; and Huelva, Spain (authors' records).

Emplectonema neesii (Örsted, 1843)
(Fig. 3B)

Emplectonema neesii: **Herrera-Bachiller et al.** (2014), pp. 1–3, fig.1, tab. 1; among the byssus threads of *Mytillus galloprovincialis*, Ribeira's marina, Ribeira, A Coruña, Spain.

Genus ***Leptonemertes*** Girard, 1893
Leptonemertes chalicophora (Graff, 1879)

Geonemertes chalicophora: **Moore and Moore** (1972), pp. 31–36, figs. 1–3; Ribeiro Seco, Madeira, Portugal; Boca da Encumeada, Madeira, Portugal; collected by Brinck and Dahl, Casa das Queimadas, Madeira, Portugal; collected by Brinck, El Lomo del Marqués, Tenerife Island, Canary Islands, Spain; Ribeira Quente, São Miguel Island, Azores Islands, Portugal; Furnas, São Miguel Island, Azores Islands, Portugal; Povoaçao, São Miguel Island, Azores Islands, Portugal; Nordeste, São Miguel Island, Azores Islands, Portugal; collected by Brinck and Dahl, Ribeira dos Flamengos, Horta, Faial Island, Azores Islands, Portugal; collected by Brinck and Dahl, Porta da Boca da Ribeira, Ribeirinha, Faial Island, Azores Islands, Portugal; collected by Brinck and Dahl, Central Plateau, Flores Island, Azores Islands, Portugal; collected by Brinck and Dahl, Caldeira comprida, Flores Island, Azores Islands, Portugal; **Bacallado** (1984), pp. 90–91; Tenerife Island, Canary Islands, Spain; Gomera Island, Canary Islands, Spain; La Palma Island, Canary Islands, Spain.

Nemertean B: **Mateos and Giribet** (2008), pp. 235–241, tabs. 1–2, figs. 2–3; Fragas do Eume Natural Park, Pontedeume, A Coruña, Spain; Serra del Corredor, Can Rimbles creek river forest, Canyamars, Barcelona, Spain; Serra del Corredor, Canyamars creek river forest, Canyamars, Barcelona, Spain; Montseny Natural Park, Tordera river forest, Montseny, Barcelona, Spain.

Remarks. *Leptonemertes* is a terrestrial genus. According to Mateos and Giribet (2008), the individuals collected in their work were assigned to three morphospecies (A, B, and C) on the basis of external morphology, pigmentation and eye number and disposition. Under these criteria, morphospecies B resembled *Leptonemertes chalicophora* (Graff, 1879) while morphospecies C was similar to depigmented *L. chalicophora*. We assume that Nemertean B is *L. chalicophora*.

Genus ***Nemertopsis*** Bürger, 1895
Nemertopsis bivittata (Delle Chiaje, 1841)
(Fig. 3C)

Eunemertes peronea: **Kensler** (1964), list on p. 954; no specific locality, between Collioure, France and Punta Cañones, Girona, Spain; **Kensler** (1965), list on p. 856; Cabo Carvoeiro, Ericeira, Cascais, Cabo de Espichel, Cabo de Sines, Sagres and Albufeira, Portugal; Cádiz, Cabo Trafalgar, Tarifa, Gibraltar, Fuengirola, Almuñecar and Almería, Spain.

Nemertopsis bivittata: **Junoy and Herrera-Bachiller** (2010), p. 317, fig. 2A, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Tapia de Casariego, Asturias, Spain; Muros de Nalón, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; Islares Beach, Castro-Urdiales, Cantabria, Spain; Colera, Girona, Spain.

Nemertopsis cf. *bivittata*: **Alfaya et al.** (2014), tab. 2; Faradell Islet, Cap de Creus, Girona, Spain.

Additional new records. This species has also been recorded in the Chafarinas Islands, Spain and the Strait of Gibraltar, Ceuta, Spain (authors' records).

Nemertopsis flavida (McIntosh, 1874)

Nemertopsis flavida: **Junoy and Herrera-Bachiller** (2010), pp. 317–320, fig. 2B, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain.

Additional new records. This species has also been recorded in Alicante, Spain; Valencia, Spain; A Coruña, Spain and the Strait of Gibraltar, Ceuta, Spain (authors' records).

Genus ***Oerstedia*** Quatrefages, 1846
Oerstedia dorsalis (Abildgaard, 1806)

Oerstedia dorsalis: **Riedl** (1959), p. 565; Madeira, Portugal; Getaria, Bizkaia, Spain; **Junoy and Gibson** (1992), pp. 169–172; Ensenada de Aguadulce, Foz, Lugo, Spain; **Strand and Sundberg** (2005a), pp. 147–149, tab. 2, figs. 1–2; Faial, Azores, Portugal; **Sundberg et al.** (2009), pp. 558–565, figs. 1, 3, 4, tabs. 1–3; Azores Islands, Portugal; Cádiz, Spain; Blanes, Girona, Spain; Ferrol, A Coruña, Spain; **Junoy and Herrera-Bachiller** (2010), p. 320, fig. 3H, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Fernández-Álvarez and**

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Díaz Álvarez (2012b); Las Represas Beach, Tapia de Casariego, Asturias, Spain; **Alfaya et al.** (2014), tab. 2; Colera harbor, Colera, Girona, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Colera, Girona, Spain.

Additional new records. This species has also been recorded in Cangas, Pontevedra, Spain (AN13814) and the Strait of Gibraltar, Ceuta, Spain (authors' records).

Genus ***Ototyphlonemertes*** Diesing, 1863

Ototyphlonemertes brunnea Bürger, 1895

Ototyphlonemertes brunnea: **Envall and Norenburg** (2001), p. 161, appendix 2; Barcelona, Spain.

Ototyphlonemertes duplex Bürger, 1895

Ototyphlonemertes duplex: **Herrera-Bachiller and Junoy** (2014), pp. 1–4, figs. 1–2; Embarcadero Beach, Los Escullos, Almería, Spain.

Ototyphlonemertes macintoshi Bürger, 1895

Ototyphlonemertes macintoshi: **Andrade et al.** (2012), p. 158, tab. 1; Mindelo, Vila do Conde, Porto, Portugal.

Ototyphlonemertes pallida (Keferstein, 1862)

Ototyphlonemertes pallida: **Kvist et al.** (2014), p. 291, tab. 1; Mindelo, Vila do Conde, Porto, Portugal.

Genus ***Prosorhochmus*** Keferstein, 1862

Prosorhochmus chafarinensis Frutos et al., 1998

Prosorhochmus chafarinensis: **Frutos et al.** (1998), pp. 293–298, figs. 1–3; among the encrusting alga *Lithophyllum lichenoides*, Isabel II Island, Chafarinas Islands, Spain; **Alfaya et al.** (2014), tab. 2; Colera harbor, Colera, Girona, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Colera, Girona, Spain.

Additional new records. This species has also been recorded in Faradell Islet, Cap de Creus, Girona, Spain (AN12644) and the Strait of Gibraltar, Ceuta, Spain (authors' records).

Prosorhochmus claparedii Keferstein, 1862

Prosorhochmus claparedi: **Kensler** (1964), list on p. 954; no specific locality, between Collioure, France and Punta Cañones, Girona, Spain.

Prosorhochmus claparedii: **Anadón** (1980a), pp. 343–344; over *Patella intermedia* in rocky shore, Ría de San Esteban, San Esteban de Pravia, Asturias, Spain; **Vernet and Anadón** (1991a), p. 54; in pebble, beneath cobbles and boulders, Los Feitales Beach, Nigrán, Pontevedra, Spain; in rocky shore, San Esteban de Pravia, Asturias, Spain; **Maslakova and Norenburg** (2008), p. 1222, tab. 1; Armintza, Bizkaia, Spain; **Junoy and Herrera-Bachiller** (2010), p. 321, fig. 3A, tab. 2; Punta Corveiro, Cortegada Island, Villagarcía de Arousa, Pontevedra, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Muros de Nalón, Asturias, Spain; Tapia de Casariego, Asturias, Spain.

Additional new records. This species has also been recorded in Las Represas Beach, Tapia de Casariego, Asturias, Spain (AN12621); Cantabria, Spain and A Coruña, Spain (authors' records).

Genus ***Prostoma*** Dugès, 1828

Prostoma eilhardi (Montgomery, 1894)

Prostoma eilhardi: **Rallo** (1980); Ebro river, Puente Arenas, Valdivielso, Burgos, Spain; **Gamo** (1986), pp. 373–375; Henares and Torote rivers, Alcalá de Henares, Madrid, Spain; **Giribet and Carranza** (1994), pp. 170–172; Riera de Calders, Bages region, Barcelona, Spain; pond in the Palau Reial gardens, Barcelona, Spain; **Mateos and Giribet** (2008), pp. 235–241, tab. 2, fig. 2; Barcelona, Spain.

Prostoma cf. *graecense*: **Alfaya et al.** (2014), tab. 2; Laguna Blanca, Villahermosa, Ciudad Real, Spain.

Remarks and additional new records. *Prostoma* is a freshwater genus; both *P. clepsinoides* and *P. graecense* have been cited in the Iberian Peninsula by Margalef (1946, 1948, 1955) and Alfaya et al. (2014), but after the discussion of Giribet and Carranza (1994), only *P. eilhardi* can be considered as valid. This species has also been recorded in Santolea dam, Castellote, Teruel, Spain (MCZ:IZ:135369).

Genus ***Psammamphiporus*** Gibson, 1989

Psammamphiporus elongatus (Stephenson, 1911)

Psammamphiporus elongatus: **Herrera-Bachiller et al.** (2008), pp. 43–50, figs. 2–4, tab. 2; Altar Beach, Foz, Lugo, Spain; Esteiro Beach, Viveiro, Lugo, Spain; San Román Beach, Viveiro, Lugo, Spain; Frouxeira Beach, Valdoviño, A Coruña, Spain; Baldaio Beach, Carballo, A Coruña, Spain; Seiruga Beach, Barizo, A Coruña, Spain; Traba Beach, Laxe, A Coruña, Spain; Carnota Beach, Carnota, A Coruña, Spain; Louro Beach, Louro, A Coruña, Spain; Xuño Beach, Xuño, A Coruña, Spain; Ladeira Beach, Corrubedo, A Coruña, Spain; A Lanzada Beach, O Grove, Pontevedra, Spain; América Beach, Nigrán, Pontevedra, Spain; **Junoy and Herrera-Bachiller** (2010), p. 321, figs. 2G, 3I, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Andrade et al.** (2012), p. 158, tab. 1; intertidal in fine sand, Vilar Beach, Corrubedo, Ribeira, A Coruña, Spain.

Genus ***Tetranemertes*** Chernyshev, 1992

Tetranemertes antonina (Quatrefages, 1846)

(Fig. 3E)

Tetranemertes antonina: **Kvist et al.** (2014), p. 291, tab. 1; Alborán Island, Almería, Spain.

Additional new records. This species has also been recorded in the Strait of Gibraltar, Ceuta, Spain (authors' records).

Genus ***Tetrastemma*** Ehrenberg, 1831

Tetrastemma candidum (Müller, 1774)

Tetrastemma candidum: **Bürger** (1895), p. 586, tab. 3, figs. 13, 19; Madeira, Portugal; **Leasi and Norenburg** (2014), fig. 4; Atlantic waters, Spain; Azores Islands, Portugal.

Tetrastemma sp.: **Kvist et al.** (2014), p. 291, tab. 1, fig. 2M; Cabrera, Balearic Islands, Spain.

Additional new records. This species has also been recorded in the Strait of Gibraltar, Ceuta, Spain (authors'

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records).

Tetrastemma coronatum (Quatrefages, 1846)

Tetrastemma coronatum: **Riedl** (1959), p. 557; Madeira, Portugal; Getaria, Bizkaia, Spain; **Strand** (2002), p. 102, tab. 2; Porto da Feteira, Feteira, Faial, Azores, Portugal; **Strand and Sundberg** (2005a), pp. 147–150, tab. 2, figs. 1–2; Faial, Azores, Portugal; **Strand and Sundberg** (2005b), pp. 204–206, tabs. 1, 3, figs. 1, 3–5; Faial, Azores, Portugal; **Leasi and Norenburg** (2014), p. 3, fig. 4; Azores, Portugal.

Additional new records. This species has also been recorded in the Strait of Gibraltar, Ceuta, Spain (authors' records).

Tetrastemma flavidum Ehrenberg, 1831

Tetrastemma flavidum: **Langerhans** (1880), p. 139; Madeira, Portugal; **Joubin** (1894), p. 158; Cap de Creus, Girona, Spain; **Bürger** (1895), p. 585; tab. 3, figs. 3, 20; Madeira, Portugal; **Riedl** (1959), pp. 559–560; Madeira, Portugal; Getaria, Bizkaia, Spain; Cap de Creus, Girona, Spain; **Strand and Sundberg** (2005b), pp. 204–206, tabs. 1, 3, figs. 1, 3–5; Cádiz, Spain.

Additional new records. This species has also been recorded in the Strait of Gibraltar, Ceuta, Spain (authors' records).

Tetrastemma fozensis Gibson and Junoy, 1991

Tetrastemma fozensis: **Gibson and Junoy** (1991), pp. 225–240; Foz Estuary, Lugo, Spain; **Thiel and Francés Zubillaga** (1998), p. 258; Santoña Estuary, Santoña, Cantabria, Spain; Oriñón Estuary, Castro Urdiales, Cantabria, Spain; Plentzia Estuary, Plentzia, Bizkaia, Spain, Guernika-Lumo, Bizkaia, Spain, Hendaye Estuary, Hondarribia, Gipuzkoa, Spain; **García-Pérez and Anadón** (2004), pp. 581–586; Villaviciosa Estuary, Asturias, Spain; **Junoy and Herrera-Bachiller** (2010), pp. 321–322, tab. 2, fig. 3D; Punta Corveiro, Cortegada Island, Villagarcía de Arousa, Pontevedra, Spain; **Alfaya et al.** (2014), tab. 2; Villaviciosa Estuary, Asturias, Spain.

Remarks and additional new records. This species has been observed as both free-living and symbiotic in the mantle cavity of the bivalve *Scrobicularia plana*. This species has also been recorded in Combarro, Pontevedra, Spain (authors' records).

Tetrastemma herouardi (Oxner, 1908)

Tetrastemma herouardi: **Junoy and Herrera-Bachiller** (2010), p. 322, tab. 2, fig. 3F; Islas Atlánticas de Galicia National Park, Galicia, Spain.

Additional new records. This species has also been recorded in the Strait of Gibraltar, Ceuta, Spain (authors' records).

Tetrastemma longissimum Bürger, 1895

Tetrastemma sp.: **Alfaya et al.** (2014), tab. 2; Lobadiz Beach, Ferrol, A Coruña, Spain.

Tetrastemma longissimum: **Vernet and Anadón** (1991a), p. 54; in shelly sand and gravel, El Camello Beach, Santander, Cantabria, Spain; **Vernet and Anadón** (1991b), p. 93; in shelly sand and gravel, El Camello Beach, Santander, Cantabria, Spain; **Strand** (2002), p. 102, tab. 2; Madalena harbor, Madalena, Pico, Azores, Portugal; **Strand and Sundberg** (2005a), pp. 147–150, tab. 2, figs. 1–2; Pico, Azores, Portugal; **Strand and Sundberg** (2005b), pp. 204–206, tabs. 1, 3, figs. 1, 3–5; Pico, Azores, Portugal; **Leasi and Norenburg** (2014), fig. 4; Azores, Portugal.

Tetrastemma melanocephalum (Johnston, 1837)

Tetrastemma melanocephalum: **Langerhans** (1880), p. 139; Madeira, Portugal; **Bürger** (1895), pp. 581–582, tab. 3, figs. 4, 10; Madeira, Portugal; **Richard and Neuville** (1897), p. 81; Alborán Island, Almería, Spain; **Kensler** (1964), list on p. 954; no specific locality, between Collioure, France and Punta Cañones, Girona, Spain; **Kensler** (1965), list on p. 856; Cabo Carvoeiro, Ericeira, Cascais, Cabo de Espichel, Cabo de Sines, Sagres and Albufeira, Portugal; Cádiz, Cabo Trafalgar, Tarifa, Gibraltar, Punta Chullera, Fuengirola, Almuñecar and Almería, Spain; **Anadón** (1981a), pp. 222–223, fig. 2b; El Camello Beach, Santander, Cantabria, Spain; over *Gelidium latifolium*, Aramar Beach, Luanco, Asturias, Spain; **Anadón** (1988), p. 28; Cape Peñas, Asturias, Spain; **Vernet and Anadón** (1991a), p. 54; in crevices, beneath boulders and *Gelidium latifolium*, Aramar Beach, Luanco, Asturias, Spain; **Arias and Drake** (1994), p. 156, tab. 3; Bay of Cádiz, Cádiz, Spain; **Strand and Sundberg** (2005a), pp. 147–150, tab. 2, figs. 1–2; Blanes, Girona, Spain; Galicia, Spain; **Strand and Sundberg** (2005b), pp. 204–206, tabs. 1, 3, figs. 1, 3–5; Blanes, Girona, Spain; **Junoy and Herrera-Bachiller** (2010), p. 322, fig. 3E, tab. 2; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Alfaya et al.** (2014), tab. 2; Lobadiz Beach, Ferrol, A Coruña, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; San Vicente do Mar, O Grove, Pontevedra, Spain; Tapia de Casariego, Asturias, Spain; Muros de Nalón, Asturias, Spain; Aramar Beach, Luanco, Asturias, Spain; Islares Beach, Castro-Urdiales, Cantabria, Spain; Colera, Girona, Spain; **Leasi and Norenburg** (2014), pp. 10–13, fig. 4; Mediterranean waters, Spain.

Additional new records. This species has also been recorded in the Strait of Gibraltar, Ceuta, Spain (authors' records).

Tetrastemma quadristriatum Langerhans, 1880

Tetrastemma quadristriatum: **Langerhans** (1880), p. 139; Madeira, Portugal.

Tetrastemma unicolor (Hubrecht, 1879)

Oerstedia unicolor: **Langerhans** (1880), p. 140; Madeira, Portugal.

Tetrastemma unicolor: **Bürger** (1895), pp. 578–579; Madeira, Portugal.

Tetrastemma vermiculus (Quatrefages, 1846)

Tetrastemma vermiculatum: **Langerhans** (1880), p. 139; Madeira, Portugal.

Tetrastemma vermiculus: **Bürger** (1895), pp. 589–590, tab. 3, figs. 17–18; Madeira, Portugal; **Riedl** (1959), p. 563;

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Madeira, Portugal; **Junoy and Gibson** (1992), pp. 169–172; Ensenada de Aguadulce, Foz, Lugo, Spain; **Strand and Sundberg** (2005a), pp. 147–150, tab. 2, figs. 1–2; Cádiz, Spain; **Strand and Sundberg** (2005b), pp. 204–206, tabs. 1, 3, figs. 1, 3–5; Cádiz, Spain; **Junoy and Herrera-Bachiller** (2010), p. 322, tab. 2, fig. 3C; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Leasi and Norenburg** (2014), pp. 10, 13, fig. 4; Mediterranean waters, Spain.

Additional new records. This species has also been recorded in the Strait of Gibraltar, Ceuta, Spain (authors' records).

Tetrastemma vittigerum (Bürger, 1904)

Tetrastemma vittigera: **Kvist et al.** (2014), p. 291, tab. 1, fig. 2I; Cabrera, Balearic Islands, Spain.

Genus ***Vieitezia*** Junoy et al., 2010

Vieitezia luzmurubeae Junoy et al., 2010

Tetrastemma vittigerum: **Junoy and Herrera-Bachiller** (2010), p. 322, tab. 2, fig. 2B; Islas Atlánticas de Galicia National Park, Galicia, Spain.

Vieitezia luzmurubeae: **Junoy et al.** (2011), pp. 616–629, tabs. 1–2, figs. 1–2; inside *Phallusia mamillata*, Catía Beach rocks, Aguiño, A Coruña, Spain; from mussel raft, Ría de Arousa, Pontevedra, Spain; from algae, Abra Beach, Pontevedra, Spain; from gravel and shell sediment, Faro Island, Cíes Islands, Pontevedra, Spain; from algae and sediment, Pedra dos Bois, Sálvora Island, A Coruña, Spain; **Andrade et al.** (2012), p. 159, tab. 1; collected by Junoy, inside the tunicate *Ciona intestinalis* from a mussel raft, Ría de Arousa, Pontevedra, Spain; **Alfaya et al.** (2014), tab. 2; Cape Vilán, Camariñas, A Coruña, Spain; Lobadiz Beach, Ferrol, A Coruña, Spain.

Additional new records. This species has also been recorded in the Strait of Gibraltar, Ceuta, Spain (authors' records).

Genus ***Zygonemertes*** Montgomery, 1897

Zygonemertes virescens (Verrill, 1879)

(Fig. 3D)

Zygonemertes virescens: **Strand** (2002), p. 102, tab. 2; Porto Pim, Horta, Faial, Azores, Portugal; Porto da Feteira, Feteira, Faial, Azores, Portugal; Madalena harbor, Madalena, Pico, Azores, Portugal; **Strand and Sundberg** (2005a), pp. 148–150, tab. 2, figs. 1–2; Cádiz, Spain.

Additional new records. This species has also been recorded in Pontevedra, Spain; Murcia, Spain; Alicante, Spain; and the Strait of Gibraltar, Ceuta, Spain (authors' records).

Subclass **POLYSTILIFERA** Brinkmann, 1917

Order **REPTANTIA** Brinkmann, 1917

Genus ***Drepanogigas*** Stiasny-Wijnhoff, 1926

Drepanogigas albolineatus (Bürger, 1895)

Drepanogigas albolineatus: **Templado and Calvo** (2006), p. 189; Alborán Island, Almería, Spain; **Wirtz** (2006), pp. 75–76, fig. 1; on sandy bottom during a night dive, Caniçal, Madeira, Portugal.

Genus ***Drepanophorus*** Hubrecht, 1874

Drepanophorus spectabilis (Quatrefages, 1846)

(Fig. 3F)

Drepanophorus spectabilis: **Andrade et al.** (2012), p. 157, tab. 1, fig. 1f, g; collected by Giribet and Rouse, under rocks, Punta Santa Anna, Blanes, Girona, Spain; **Alfaya et al.** (2014), p. 150, tab. 2; Colera, Girona, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Colera, Girona, Spain.

Remarks and additional new records. The external appearance of *D. spectabilis* is very similar to *Punnetia splendida*, an species that according to Stiasny-Wijnhoff (1934) is not found further south than the English Channel. Future genetic studies may reveal the real identity of these Polystilifera species with similar colour pattern. This species has also been recorded in Oia, Pontevedra, Spain (AN14201) and the Strait of Gibraltar, Ceuta, Spain (authors' records).

Genus ***Paradrepanophorus*** Stiasny-Wijhoff, 1926

Paradrepanophorus crassus (Quatrefages, 1846)

(Fig. 3G)

Cerebratulus assimilis: **Langerhans** (1880), p. 138; Madeira, Portugal.

Drepanophorus crassus: **Bürger** (1895), pp. 572–574, tab. 3, figs. 25, 32; Madeira, Portugal; **Anadón** (1980a), p. 344; Aramar Beach, Luanco, Asturias, Spain; **Anadón** (1981b), pp. 42, 44, photo 3; Asturias, Spain.

Paradrepanophorus crassus: **Vernet and Anadón** (1991a), p. 55; in crevices, beneath boulders and *Gelidium latifolium*, Aramar Beach, Luanco, Asturias, Spain; **Junoy and Herrera-Bachiller** (2010), p. 320, tab. 2, fig. 3L; Islas Atlánticas de Galicia National Park, Galicia, Spain; **Andrade et al.** (2012), p. 158, tab. 1; under stones, Ribeira, A Coruña, Spain; **Alfaya et al.** (2014), tab. 2; Colera, Girona, Spain; **Fernández-Álvarez and Machordom** (2014), table on p. 37; Colera, Girona, Spain.

Order **PELAGICA** Brinkmann, 1917

Genus ***Dinonemertes*** Laidlaw, 1906

Dinonemertes grimaldii (Joubin, 1906)

Planktonemertes grimaldii: **Joubin** (1906), pp. 4–9, figs. 1–5; out of Villafranca, Azores, Portugal.

Dinonemertes grimaldii: **Brinkmann** (1917), pp. 53–55; pelagic, between 0–3000 m, "Princesse Alice" Expedition, Azores, Portugal.

Genus ***Pelagonemertes*** Moseley, 1875

Pelagonemertes joubini Coe, 1926

Pelagonemertes joubini: **Hernández Martín and Gibson** (2000), pp. 1–12, pl. 1. fig. 2; trawled from a depth of 1000 m., Morrojable, Fuerteventura, Canary Islands, Spain.

Genus ***Pendonemertes*** Brinkmann, 1917

Pendonemertes levinseni Brinkmann, 1917

Pendonemertes levinseni: **Brinkmann** (1917), pp. 17–21, text-figs. 2–4, pl. IV, figs. 15–22, pl. V, figs. 1–3; pelagic, from a depth of 2260 m., "Michael Sars" Expedition, Station 25B, Portugal.

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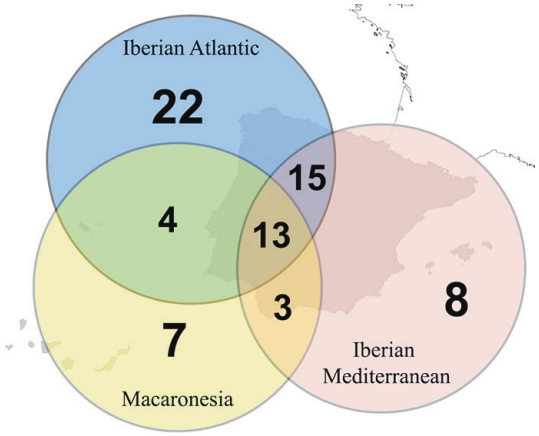


Fig. 4. Number of marine nemertean species in Iberian Atlantic, Macaronesia and Iberian Mediterranean.

CONCLUSION

Except for two terrestrial and one freshwater species, the bulk of this nemertean catalogue is comprised of marine species. There are more nemertean studies along the Iberian Atlantic than the other two areas considered in this study, the Spanish Mediterranean and Macaronesia. Thus, a large percentage of known marine species occur in the Iberian Atlantic (54 species, 75% of marine species listed). In the Iberian Mediterranean and Macaronesia, 39 (54%) and 27 (37%) species are found respectively. As shown in Fig. 4, the Iberian Atlantic and Mediterranean coast have 28 species in common.

The diversity of Spanish and Portuguese nemerteans appears low compared to the nemertean fauna of other European habitats, likely due to the small number of studies conducted to date. Future nemertean taxonomic studies will almost certainly aid in raising the known number of species, and therefore also increase our understanding of the true diversity of this group of invertebrates.

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