An annotated and updated checklist of the opisthobranchs (Mollusca: Gastropoda) from Spain and Portugal (including islands and archipelagos)

J. L. Cervera¹, G. Calado²,³, C. Gavaia²,⁴*, M. A. E. Malaquias²,⁵, J. Templado⁶, M. Ballesteros⁷, J. C. García-Gómez⁸ and C. Megina¹

¹Departamento de Biología
Facultad de Ciencias del Mar y Ambientales
Universidad de Cádiz
Polígono Río San Pedro, s/n
Apdo. 40, E-11510 Puerto Real, Cádiz, Spain.
E-mail: lucas.cervera@uca.es

²Instituto Português de Malacologia
Zoomarine
E. N. 125
km 65 Guia, P-8200-864 Albufeira, Portugal

³Centro de Modelação Ecológica Imar
FCT/UNL
Quinta da Torre
P-2825-114 Monte da Caparica, Portugal

⁴Centro de Ciências do Mar
Faculdade de Ciências do Mar e do Ambiente
Universidade do Algarve
Campus de Gambelas
P-8000-010 Faro, Portugal

⁵Mollusca Research Group
Department of Zoology
The Natural History Museum
Cromwell Road
London SW7 5BD, United Kingdom

⁶Museo Nacional de Ciencias Naturales (CSIC)
José Gutiérrez Abascal 2
E-28006 Madrid, Spain

⁷Departamento de Biología Animal
Facultad de Biología
Universidad de Barcelona
Avda. Diagonal 645
E-08028 Barcelona, Spain

⁸Laboratorio de Biología Marina
Departamento de Fisiología y Zoología
Facultad de Biología
Universidad de Sevilla
Avda. Reina Mercedes 6
Apdo. 1095, E-41012 Sevilla, Spain

*César Gavaia died on 3rd July 2003, in a car accident

Received January 2004. Accepted December 2004
PREFACE

During the last decades, the living systems of our planet had experienced a sharp decline in biological diversity. The consequences of this process are not completely understood, but may have fundamental implications for the future of the biosphere and the wellbeing of the next generations.

To deal with this crisis of planetary proportions we need instruments that allow us to understand the magnitude of the problem and predict its consequences. These tools draw from a comprehensive knowledge of biological diversity, including the evolutionary history and ecology of living organisms. The foundation of this knowledge are the taxonomic inventories of biological diversity and particularly the inventories of species, the basic units of biodiversity.

Precisely at the time in which we are confronting a biodiversity crisis, is when taxonomy is also confronting its own survival crisis. The international scientific community has witnessed a decline in the number of taxonomists at the same time that other biological disciplines are flourishing. Some countries have reacted to the problem by creating scientific programs to promote the training of new taxonomists and the development of taxonomy through the investment of economic resource; PEET (Partenership for Enhacing Expertise in Taxonomy) in the USA is probably the best known. Some political leaders have realized that taxonomy is just too important to let it disappear as a scientific discipline. Unfortunately for some fields of taxonomy these programs come too late and in some cases there are no living experts who can identify organisms of several taxonomic groups.

The field of Malacology in Spain and Portugal, and particularly the study of opisthobranchs in both countries, is one of the most noticeable exceptions to the rule. Thanks to the efforts of a small group of scientific pioneers in the 70s and 80s (Ros, Ortea, García-Gómez, Ballesteros, Talavera, Luque, Cervera, Templado, Urgorri, and others) the Iberian Peninsula has created the most prolific school of opisthobranch specialists in the world. At the present time, there are probably more active opisthobranch researchers in Spain and Portugal than in the rest of the countries together. This effort has also been reflected in a impressive number of publications, doctoral dissertations, and in the description of more than a hundred new species during the last 25 years.
The present monograph constitutes an excellent example of a comprehensive study of the marine diversity in a region with a great biological importance, and it constitutes the culmination of several decades of biological research. This publication has been possible thanks to the work of many and I hope it will become a model to follow in other regions in need of biological inventories.

Ángel Valdés Gallego
Associate Curator of Malacology, Natural History Museum of Los Angeles County; Adjunct Professor, University of Southern California; Research Associate, California Academy of Sciences
An annotated and updated checklist of the opisthobranchs (Mollusca: Gastropoda) from Spain and Portugal (including islands and archipelagos)

J. L. Cervera¹, G. Calado²,³, C. Gavaia²,⁴*, M. A. E. Malaquias²,⁵, J. Templado⁶, M. Ballesteros⁷, J. C. García-Gómez⁸ and C. Megina¹

¹ Departamento de Biología, Facultad de Ciencias del Mar y Ambientales, Universidad de Cádiz, Polígono Río San Pedro, s/n, Apdo. 40, E-11510 Puerto Real, Cádiz, Spain. E-mail: lucas.cervera@uca.es
² Instituto Português de Malacologia, Zoomarine, E.N. 125, km 65 Guia, P-8200-864 Albufeira, Portugal.
³ Centro de Modelação Ecológica Imar. FCT/UNL, Quinta da Torre, P-2825-114 Monte da Caparica, Portugal.
⁴ Centro de Ciências do Mar, Faculdade de Ciências do Mar e do Ambiente, Universidade do Algarve, Campus de Gambelas, P-8000-010 Faro, Portugal.
⁵ Mollusca Research Group, Department of Zoology, The Natural History Museum, Cromwell Road, London, SW7 5BD, United Kingdom.
⁸ Laboratorio de Biología Marina, Departamento de Fisiología y Zoológía, Facultad de Biología, Universidad de Sevilla, Apdo. 1095, Avda. Reina Mercedes 7, E-41080 Sevilla, Spain.

Received January 2004. Accepted December 2004.

ABSTRACT

The present publication is a new annotated and updated checklist of the opisthobranchs (Mollusca, Gastropoda) from the Spanish and Portuguese coasts, including their Atlantic archipelagos (Azores, Madeira, Selvagens and Canary Islands). The bathyal species recorded from the continental shelf of all these areas are also included. Incorporating a review of the literature, 523 species are included on the present checklist, 23 belonging to Architectibranchia, 111 to Cephalaspidea s. s., 14 to Anaspidea, 4 to Acochlidiomorpha, 37 to Thecosomata, 7 to Gymnosomata, 43 to Sacoglossa, 3 to Umbraculoidea, 16 to Pleurobranchoidea and 265 to Nudibranchia: 127 Doridoidea, 42 Dendronotoidea, 9 Arminoidea, and 87 Aeolidoidea. The records these species have been divided into 12 geographic sectors: 1) Spanish coast on the Bay of Biscay; 2) Galicia; 3) mainland coast of Portugal; 4) Andalusian Atlantic coast; 5) Straits of Gibraltar, including Ceuta (northern Africa); 6) Andalusian Mediterranean coast, including Alborán Island; 7) Spanish Levant, from Cape Gata to Catalonia; 8) Catalonia, including the Columbretes Islands; 9) Balearic Islands; 10) Canary and Selvagens Islands; 11) Madeira; and 12) the Azores. The biogeographical relationships among these selected areas are discussed in the present paper’s Conclusions. Taxonomic comments about many of the taxa cited are also included. It is noteworthy that since 1975, a total of 117 specific taxa have been described as new to science in the studied area. Some of them are currently considered synonyms, and others are pending an adequate revision.

Keywords: Opisthobranchs, Iberian Peninsula, Balearic Islands, Macronesia, checklist.

*Obituary note: César Gavaia died tragically on the 3rd of July 2003 in a car accident on his way home after collecting opisthobranchs on the Algarve coast. César was a student of Marine Biology at the University of the Algarve, where he was finishing his BSc thesis on southern Portuguese opisthobranchs. The present catalogue includes some of César’s results, which did not live to see published, and is a modest tribute to his valuable contribution to the study of the diversity and biology of these molluscs.
RESUMEN

Catálogo actualizado de los opistobranquios (Mollusca: Gastropoda) de España y Portugal, incluyendo islas y archipiélagos

Se presenta un nuevo catálogo actualizado y comentado de los opistobranquios (Mollusca, Gastropoda) de España y Portugal, incluyendo sus archipiélagos atlánticos (Azores, Madeira, Salvajes y Canarias). Asimismo, se recogen las referencias relativas a especies batiales halladas en las proximidades de las plataformas continentales de las áreas consideradas. Se citan en total 523 especies, de las cuales 23 son Architectibranchia, 111 Cephalaspidea s. s., 14 Anaspidea, 4 Acochlidiomorpha, 37 Thecosomata, 7 Gymnosomata, 43 Sacoglossa, 3 Umbraculoidea, 16 Pleurobranchioidea y 265 Nudibranchia (127 Doridoidea, 42 Dendronotoidea, 9 Arminioidea y 87 Aeolidoidea). Con el fin de visualizar mejor la distribución geográfica de cada especie, las citas referentes a cada una se han dividido en 12 sectores (1: costas cantábricas, 2: costas gallegas, 3: costas continentales de Portugal, 4: costas atlánticas andaluzas, 5: costas del estrecho de Gibraltar, incluyendo las de Ceuta, 6: costas mediterráneas andaluzas, incluyendo la isla de Alborán, 7: costas del Levante español, desde el cabo de Gata hasta Cataluña, 8: costas catalanas, 9: Baleares, 10: islas Canarias y Salvajes, 11: Madeira, y 12: Azores). Con los datos obtenidos de la distribución de las especies por sectores, se presenta al final del trabajo un análisis biogeográfico. Se ofrecen, además, numerosos comentarios taxonómicos sobre muchos de los taxones mencionados. Cabe destacar que desde 1975 se han descrito en el área considerada 117 taxones nuevos de nivel específico, algunos de los cuales se consideran sinónimos en la actualidad o su validez está pendiente de una adecuada revisión. Todo ello se comenta en el apartado Remarks y en las conclusiones finales.

Palabras clave: Opistobranquios, península Ibérica, islas Baleares, Macaronesia, catálogo.
research on this group's faunistic and taxonomic aspects. As a result of this, a new crop of Ph.D., MSc and Honours theses has been produced (Ávila Escartín, 1993; Álvarez Orive, 1994; Martínez Cueto-Felgueroso, 1995; Valdés, 1996; Malaquias, 1996, 2003; Giménez-Casaldueo, 1997, Aguado, 2000; Megina, 2000; Calado, 2001; Sánchez Tocino, 2003; Grande, 2004). Furthermore, a checklist of opisthobranchs of the Canary Islands was published (Ortea et al., 2001), with 245 species being reported for this archipelago, including many new records. This checklist was updated later by Moro et al. (2003).

This constant inflow of new information, together with the multiple changes incorporated due to taxonomic and phylogenetic revisions in many high-level taxa (Mikkelsen, 1996; Jensen, 1996, 1997; Valdés, 2001, 2002; Valdés and Gosliner, 1999, 2001; Wollscheid and Wägele, 1999; Wägele and Willan, 2000; Wollscheid-Lengeling et al., 2001; Vonnemann et al., in press) or other key opisthobranch taxa (Schrödl and Wägele, 2001; Schrödl, Wägele and Willan, 2001), led us to the elaboration of the present updated checklist.

Naturally, the percentage of papers devoted strictly to taxonomic and faunistic aspects dropped off, but new and more diversified lines of investigation arose, dealing with ecological and other biological aspects of malacology. It is not within the scope of the present checklist to detail all of these publications, but we would like to highlight the field research on opisthobranch chemical defences, since it was a result of the collaboration initiated in the 1980s with the Institute of Biomolecular Chemistry, in Naples, Italy, led by Guido Cimino. As an example, we cite the review papers by Ávila Escartín (1993), Marín et al. (1999), and Marín and Ros (2004), amongst others. In the present work, we only include those publications that feature chorological or taxonomic data.

The geographical range of this checklist is larger than that of the two previous ones. It now includes the Portuguese archipelagos of Selvagens, Madeira, and the Azores, as well as bathyal species recorded close to the continental shelf of the study area.

For each species, references are split by areas, as in the previous checklist by Cervera et al. (1988), but with two new ones corresponding to the Madeira and Azores archipelagos. The Selvagens archipelago was included in the area of the Canary Islands. The idea of splitting the Iberian Portuguese coast into two areas was initially considered, but a recent biogeographical analysis (Calado et al., 2003) based on all the opisthobranch records in that region did not corroborate such a division. Therefore, the defined areas, numbered 1 to 12 (figure 1), are as follows:
1. Spanish coasts of the Bay of Biscay, from the French border to 6° W, near Concha de Arteod (Asturias region).
2. Galicia region and western Asturias, from 6° W to the Portuguese border.
3. Iberian Portuguese coasts.
4. Western Andalusia, from the Portuguese border to Cape Roche, Cadiz.
5. Straits of Gibraltar, from Cape Roche to Punta Chullera, Malaga. We include in this area the records from the Spanish city of Ceuta, on the African side of the Straits.
6. Iberian coasts of the Alborán Sea (eastern Andalusia), from Punta Chullera to Cape Gata, Almería. This area includes Alborán Island and its surrounding shelf.
7. Spanish Levant, from Cape Gata to the southern limit of Catalonia. This area includes the Columbretes Islands.
8. Catalonia, to the French border.
10. Canary and Selvagens Islands.
11. Madeira Islands.
12. Azores Islands.

The criteria chosen to define these areas are arbitrary, especially along coast of the Iberian Peninsula. These divisions were established based on the current knowledge and traditional sampling efforts as reported in some of the works cited above. The data compiled by area were used for a biogeographical analysis presented at the end of the present checklist.

In the high-level taxa, the systematic arrangement followed is based upon the aforesaid recent phylogenetic studies. Nonetheless, one has to accept that such classifications, and the taxonomic rank assigned to each of the high-level taxa, are inevitably provisional until a stable classification of gastropods (and of opisthobranchs) can be established. In this sense, it has not been possible to assign a taxonomic rank to some of the recently proposed high-level taxa within nudibranchs, as Labiostomata, Porostomata or Dexiarchia. Moreover, those groups currently considered to be non-monophyletic are indicated by quotation marks.

Furthermore, we point out the monophyly versus paraphyly of Opisthobranchia, which in the end involves its taxonomical validity. This subject is right now at the core of many scientific discussions. Distinct phylogenetic analyses based both on morphological and molecular characters seem to indicate that opisthobranchs are not monophyletic (e.g., Haszprunar, 1985; Salvini-Plawen and Steiner, 1996; Ponder and Lindberg, 1997; Thöllesson, 1999a; Wollscheid and Wägele, 1999; and Dayrat and Tillier, 2002). In the meantime, we shall continue referring to the Opisthobranchia "group" in the same sense as the term has been used in recent decades, even though in our view, this high-level taxon should be redefined, possibly with the inclusion of other Heterobranchia groups (such as the Siphonarioidea, previously considered basal pulmonates) if its monophyly or taxonomic validity are stretched (Grande et al., 2002, 2004a,b). The main changes adopted here regarding the traditional classification of opisthobranchs into eight/nine orders (see Thompson, 1976, one of the standard classifications) are the split of the classical Cephalaspidea into Cephalaspidea s. s. and Architectibranchia (according to Mikkelsen, 1996, 2002; Wägele, Vonmann and Wägele, 2003; Grande et al., 2004b, among others), and the division of the traditional Notaspidea into Tylodinoidea and Pleurobrancoidea. This last division was proposed by Schmekel (1985) and Salvini-Plawen (1991), and later confirmed by several phylogenetic analyses based on morphological studies (Wägele and Willan, 2000) and molecular data (Wollscheid-Lengeling et al., 2001; Wägele, Vonmann and Wägele, 2003; Grande et al., 2004a,b; Vonmann et al., in press). Although Rhodopemorpha has been considered an order of opisthobranchs since Salvini-Plawen’s research (1991) came to light, none of the species in this group has been found in the geographic area covered by the present checklist.

For lower level taxa, our classification is based on multiple taxonomic and systematic contributions published since 1988. Details on all this information are given in the section Remarks; therefore, many of the taxa listed herein are followed by a reference number between brackets which corresponds to a comment in that section. The list of synonyms is not included. However, when the original name of the listed taxa in each reference is different from the one currently considered as valid, or some confusion with a different taxon may occur, this is noted.
RESULTS

Order ARCHITECTIBRANCHIA Haszprunar, 1985
Family Ringiculidae Meeck, 1862 (1)
Genus Ringicula Deshayes, 1838

**Ringicula auriculata** (Ménard, 1811)
3: De Oliveira (1895), Hidalgo (1917), Nobre (1936).
6: Hidalgo (1917).
8: Hidalgo (1917).
9: Hidalgo (1917).
10: Odhner (1931), Nordsieck (1972), Ortea et al. (2001), Moro et al. (2003).
11: McAndrew (1852), Watson (1897), Nobre (1937), Nordsieck (1972), Nordsieck and García-Talavera (1979).

**Ringicula buccinea** (Brocchi, 1814)
1: Hidalgo (1917).
3: De Oliveira (1895), Hidalgo (1917), Nobre (1936).

**Ringicula nitida** Verrill, 1872
2: Hidalgo (1917), Hernández and Jiménez (1972), Bouche (1975, bathyal).
3: Locard (1897, as *R. leptocheila*, bathyal), Hidalgo (1917), Nobre (1936, as *R. leptocheila*).
4: Hidalgo (1917).

**Ringicula conformis** Monterosato, 1877
4: Hidalgo (1917).
6: Sierra, García and Lloris (1978), Ballesteros et al. (1986).
7: Hidalgo (1917).
8: Altimira (1977b).
9: Hidalgo (1917).

**Ringicula someri** De Folin, 1879

**Ringicula minutula** Locard, 1897
8: Nordsieck (1972).

**Ringicula blancardi** Dautzenberg and Fischer, 1896
1: Ciccone and Savona (1983).
3: Locard (1897, bathyal), Ciccone and Savona (1983).

**Ringicula semistriata** D’Orbigny, 1853

Family Acteonidae D’Orbigny, 1835
Genus *Acteon* Montfort, 1810

**Acteon tornatilis** (Linnaeus, 1758)
3: De Oliveira (1895), Hidalgo (1917), Nobre (1932, as *Acteon augustoi*), Nobre (1936), Wirz-Mangold and Wyss (1958).
7: Hidalgo (1917).
10: Ortea et al. (2001), Moro et al. (2003).
12: Watson (1897), Nobre (1937), Nordsieck and García-Talavera (1979, as A. pusillus), Nordsieck (1972, as Pseudacteon pusillus).

Genus Liocarenus Harris and Burrows, 1891

Liocarenus globulinus (Forbes, 1843)
8: Hidalgo (1917, as Acteon).

Genus Callostracon Hamlin, 1884

Callostracon amabile (Watson, 1883)
11: Nordsieck (1972), Nordsieck and García-Talavera (1979, as C. (Ovacteonina) amabilis), Watson (1883, 1886, both as Acteon), Dautzenberg (1889, as Acteon), Dautzenberg and Fisher (1897, as Acteon), Nordsieck (1972, as Callostracon (Ovacteonina)), Mikkelsen (1995), Malaquias (2001).
12: Watson (1883, 1886, both as Acteon), Dautzenberg (1889, as Acteon), Dautzenberg and Fisher (1897, as Acteon), Nordsieck (1972, as Callostracon (Ovacteonina)), Mikkelsen (1995), Malaquias (2001).

Genus Acteonina D’Orbigny, 1850

Acteonina chariis (Watson, 1883)
12: Watson (1883, 1886, as Acteon), Dautzenberg (1889, as Acteon), Nordsieck (1972, as Callostracon (Ovacteonina)), Mikkelsen (1995), Malaquias (2001).

Genus Tomlinula Strand, 1932

Tomlinula turrita (Watson, 1886)
12: Bouchet (1975, as Mysouffa), Dautzenberg and Fisher (1896, as Acteon grimaldii), Mikkelsen (1995, as Mysouffa), Malaquias (2001, as Mysouffa).
Genus *Inopinodon* Bouchet, 1975

*Inopinodon azoricus* (Locard, 1897)

Family *Amplustridae* Gray, 1847 (6)

Genus *Hydatina* Schumacher, 1817

*Hydatina physis* (Gmelin, 1794) (7)

*Hydatina velum* (Gmelin, 1794) (8)
10: Odhner (1931, as *H. stromfelti*), Duffus and Johnston (1969, as *H. stromfelti*).

Genus *Micromelo* Pilsbry, 1895

*Micromelo undatus* (Bruguière, 1792)

Order *CEPHALASPIDEA* s. s. Mikkelsen, 1996

Family *Diaphanidae* Odhner, 1914

Genus *Diaphana* Brown, 1827

*Diaphana minuta* Brown, 1827
6: Peñas et al. (in press).
8: Altimira (1977b).
11: McAndrew (1852, as *Amphipsydra hyalina*), Nordsieck and García-Talavera (1979, as *Micromelo minuta*).

*Diaphana globosa* (Lovén, 1846) (9)
1: Hidalgo (1917, as *Diaphana hiemalis*).

*Diaphana expansa* Jeffreys, 1864

*Diaphana seguenzae* (Watson, 1886)

*Diaphana flavo* (Watson, 1897)
11: Watson (1897, as *Amphipsydra flavo*), Nobre (1937, as *A. flavo*), Nordsieck and García-Talavera (1979, as *Micromelo flavo*), Schiøtte (1998), Malaquias (2004).

Genus *Colobocephalus* M. Sars, 1870

*Colobocephalus striatulus* (Monterosato, 1874)
1: Hidalgo (1917), Nordsieck (1972, bathyal).
8: Peñas and Giribet (2003, as *Philine striatula*).

Genus *Colpodaspis* M. Sars, 1870

*Colpodaspis pusilla* M. Sars, 1870
6: Peñas et al. (in press).

Genus *Rhinodiaphana* Lemche, 1967

*Rhinodiaphana ventricosa* (Jeffreys, 1865)
6: Peñas et al. (in press).

Family *Retusidae* Thiele, 1926

Genus *Retusa* Brown, 1827

*Retusa truncatula* (Bruguière, 1792)
1: Hidalgo (1917), Ortea (1975-76), Ortea (1977c), Flor et al. (1981), Flor, Llera and Ortea (1982), Borja (1987, as *Cylichna semisulcata* and *R. truncatella*).
Retusa obtusa (Montagu, 1803)
1: Flor, Llera and Ortea (1982).
3: Hidalgo (1917).
7: Hidalgo (1917).
8: Hidalgo (1917).

Retusa leptoleynema (Brusina, 1865)
9: Ballesteros, Álvarez and Mateo (1986).

Retusa pellucida G. O. Sars, 1878
2: Cadée (1968).
6: Sierra, García and Lloris (1978, as R. truncatula cf. pellucida).

Retusa piriformis Monterosato, 1878

Retusa mammillata (Philippi, 1880) (15)
1: Hidalgo (1917, also as Retusa striatula), Ortea (1977c, as Mamilloretusa), Borja (1987, as Mamilloretusa in the latter work).
2: Sykes (1905, as C. hornesii), Hidalgo (1917), Rolán (1983, as Mamilloretusa), Urgorri and Besteiro (1983).
3: Hidalgo (1917, as R. mammillata and R. striatula, the author also refers the occurrence of this species in southern Spain, although without precise the locality), Nobre (1938-40, as Tornatina mammillata), Malaquías and Morenito (2000).
6: Moreno and Templado (1998), Peñas et al. (in press).
7: Templado et al. (2002).
11: Nordsieck (1972, as Mamilloretusa mammillata), Nordsieck and García-Talavera (1979, as M. mammillata), Malaquías et al. (2001).

Retusa obesa Jeffreys, 1880 (15)

Retusa tornata (Watson, 1880)
11: Watson (1886, 1897, as Utriculus tornatus), Nobre (1937, as Utriculus tornatus), Nordsieck (1972, as Semiretusa tornata), Nordsieck and García-Talavera (1979, as S. tornata), Malaquías et al. (2001).

Retusa mariae (Dautzenberg, 1889)

Retusa leuca (Watson, 1883)
Genus *Retusa* Oberling, 1970


Genus *Cylichnina* Monterosato, 1884

**Cylichnina umbilicata** (Montagu, 1803)

1: Hidalgo (1917), Ortea (1977c, as *Cylichnina*), Flor, Llera and Ortea (1982), Borja (1987, as *Cylichnina subcylin- drica* and *Cylichnina umbilicata*).
3: Hidalgo (1917).
6: Luque (1983, as *Cylichnina subcylin- drica*), Moreno and Templado (1998), Peñas et al. (in press).
7: Hidalgo (1917).
8: Hidalgo (1917), Altimiru (1977b, as *C. subcylin- drica*).
9: Nordsieck (1972, as *C. subcylin- drica*), Ballesteros, Álvarez and Mateo (1986, as *C. subcylin- drica*).
10: Ortea et al. (2001), Moro et al. (2003).
11: Locard (1897), Watson (1897, as *Utriculus nitidula*), Nobre (1937, as *Tornatina umbilicata*), Nordsieck and García-Talavera (1979, as *Cylichnina subcylin- drica*).

**Cylichnina nitidula** (Lovén, 1846)

2: Hidalgo (1917) (as *Retusa*).
3: Hidalgo (1917) (as *Retusa*).
4: Hidalgo (1917)
6: Luque (1983, as *Cylichnina subcylin- drica*), Moreno and Templado (1998), Peñas et al. (in press).
7: Hidalgo (1917).
8: Hidalgo (1917), Altimiru (1977b, as *C. subcylin- drica*).
9: Nordsieck (1972, as *C. subcylin- drica*), Ballesteros, Álvarez and Mateo (1986, as *C. subcylin- drica*).
10: Ortea et al. (2001), Moro et al. (2003).
11: Locard (1897), Watson (1897, as *Utriculus nitidula*), Nobre (1937, as *Utriculus nitidula*), Talavera (1978, as *Retusa nitidula*), Nordsieck and García-Talavera (1979).

**Cylichnina robagliana** (P. Fischer, 1874)

1: Hidalgo (1917, as *Retusa*).

**Cylichnina crebrisculpta** (Monterosato, 1884)

1: Hidalgo (1917).

**Cylichnina canariensis** Nordsieck and García-Talavera, 1979


Genus *Volvulella* Newton, 1891

**Volvulella acuminata** (Bruguère, 1792)

1: Hidalgo (1917, as *Volvula acuminata*), Ortea (1977c, as *Rhizorus acuminatus*), Flor et al. (1981, as *Rhizorus acuminatus*), Borja (1987, as *Rhizorus acuminatus*).
2: Hidalgo (1917), Cadée (1968, as *Rhizorus accuminatus*), Rolán (1983, as *Rhizorus acuminatus*), Urgorri and Besteiro (1983, as *Rhizorus acuminatus*).
3: Hidalgo (1917).
4: Hidalgo (1917).
5: Hidalgo (1917).
6: Hidalgo (1917).
7: Hidalgo (1917).
8: Hidalgo (1917), Altimiru (1975, 1980, as *Rhizorus acuminatus*), Ros (1975, as *Rhizorus acuminatus*).

Genus *Pyrunculus* Pilsbry, 1895

**Pyrunculus ovatus** (Jeffreys, 1870)

1: Pruvot-Fol (1954, as *Retusa ovata*), Bouchet (1975, bathyal).
2: Bouchet (1975, bathyal).
4: Nordsieck (1972), Bouchet (1975).
5: Nordsieck (1972).
6: Moreno and Templado (1998), Peñas et al. (in press).
7: Watson (1886), Dautzenberg (1889), Dautzenberg and Fischer (1896, 1897), Locard (1897), Bouchet (1975), Mikkelsen (1995), Malaquias (2001).

**Pyrunculus hoernesii** (Weinkauff, 1866)

6: Moreno and Templado (1998), Peñas et al. (in press).

**Pyrunculus spretus** (Watson, 1897)

11: Watson (1897, as *Cylichna spreta*), Nobre (1937, as *C. spreta*), Nordsieck and García-Talavera (1979, as *C. spreta*), Malaquias et al. (2002), Malaquias (2004).

Genus *Relichna* Bouchet, 1975

**Relichna simplex** (Locard, 1897)

Family Cylichnidae Rudman, 1978

Genus *Acteocina* Gray, 1847

*Acteocina protracta* (Dautzenberg, 1889)
12: Dautzenberg (1889, as *Tornatina*), Dautzenberg and Fischer (1896, 1897, as *Tornatina*), Mikkelsen (1995), Malaquias (2001).

*Acteocina pusillina* Locard, 1897
1: Nordsieck (1972).

Genus *Cylichna* Lovén, 1846

*Cylichna cylindracea* (Pennant, 1777)
3: De Oliveira (1895), Hidalgo (1917), Nobre (1936).
4: Hidalgo (1917).
10: Nordsieck (1972), Nordsieck and García-Talavera (1979), Ortea et al. (2001), Moro et al. (2003), Rodríguez et al. (2003).
11: McAndrew (1852), Nobre (1895), Locard (1897, as *Tornatina mirabilis*), Nobre (1936, bathyal), Nordsieck (1972).
12: Dautzenberg (1889, as *Cylichna richardi*), Dautzenberg and Fischer (1897, as *Cylichna*), Nordsieck (1972), Mikkelsen (1995), Malaquias (2001).

*Cylichna crossei* (Bucquoy, Dautzenberg and Dolfus, 1886)

*Cylichna richardi* (Dautzenberg, 1889) f
3: Locard (1897, as *Tornatina mirabilis*), Nobre (1936, bathyal), Nordsieck (1972).
12: Dautzenberg (1889, as *Cylichna richardi*), Dautzenberg and Fischer (1897, as *Cylichna*), Nordsieck (1972), Mikkelsen (1995), Malaquias (2001).

*Cylichna prope cylindracea* (De Gregorio, 1890)
10: Nordsieck and García-Talavera (1979), Ortea et al. (2001), Moro et al. (2003), Rodríguez et al. (2003).

*Cylichna piettei* Dautzenberg and Fisher, 1896

*Cylichna chevreuxi* Dautzenberg, 1889

Genus *Scaphander* Montfort, 1810

*Scaphander lignarius* (Linnaeus, 1758)
9: Hidalgo (1917).

*Cylichna alba* (Brown, 1827)
Scaphander punctostriatus (Mighels and Adams, 1842)
3: Locard (1897, bathyal).
8: Ros (1975), Giribet and Peñas (1997).
10: Ortea et al. (2001), Moro et al. (2003).

Scaphander gracilis Watson, 1883

Scaphander nobilis Verrill, 1884

Genus Meloscaphander Schepman, 1913
Meloscaphander imperceptus Bouchet, 1975

Genus Roxania Leach in Gray, 1847
Roxania utriculus (Brocchi, 1814)
1: Bouchet (1975).
3: Hidalgo (1917, as Aty), Nobre (1936, as Bulla), Bouchet (1975), Machado and Fonseca (1997).
6: Sierra, García and Lloris (1978).
7: Hidalgo (1917).
8: Hidalgo (1917), Altímira (1977b).
9: Hidalgo (1917).

Roxania pinguicola (Seguenza, 1879)
1: Nordsieck (1972), Bouchet (1975, as Bulla abyssicola).
3: Locard (1897, as Bulla pinguicola), Nobre (1936, bathyal), Nordsieck (1972, as B. subrotunda).

All authors but Nordsieck (1972) as Bulla pinguicula.

Roxania monterosatoi Dautzenberg and Fischer, 1896

Family Philinidae Gray, 1850
Genus Philine Ascanius, 1772
Philine aperta (Linnaeus, 1767)
4: Hidalgo (1917).
5: Rueda, Salas and Gofas (2000).
10: Moro et al. (2003).
11: McAndrew (1852), Watson (1897), Nobre (1937), Nordsieck and García-Talavera (1979, as P. quadripartita), Linden (1995), Malaquias, Martínez and Abreu (2002).

Philine scabra (O. F. Müller, 1776)
1: Hidalgo (1917).

15
11: Watson (1897), Nobre (1937), Malaquias, Martínez and Abreu (2002).

**Philine punctata** (J. Adams, 1800)
3: Hidalgo (1917), Machado and Fonseca (1997, as *P. cf. punctata*).
6: Peñas et al. (in press).

**Philine catena** (Montagu, 1803)
3: Machado and Fonseca (1997, as *P. cf. catena*).
8: Ros (1975).

**Philine lima** (Brown, 1827)
2: Rolán (1983, refers this species to Galicia Bank, bathyal as *P. cf. lima*).

**Philine quadrata** Wood, 1839
1: Pruvot-Fol (1954, as *Laona*), Ortea (1977c, as *Laona*).

3: Nordsieck (1972, as *Laona*).

**Philine angulata** Jeffreys, 1867
6: Templado and Moreno (1998), Peñas et al. (in press).
10: Moro et al. (2003).

**Philine intricata Montersosato, 1884**
3: Linden (1994).
6: Moreno and Templado (1998), Peñas et al. (in press).

**Philine monterosatosi Vassylière, 1885** (17)
1: Hidalgo (1917), Bouchet (1975, bathyal).
3: Hidalgo (1917), Nordsieck (1972, as *Phillingwynia*).
8: Hidalgo (1917).
11: Nordsieck (1972, as *Phillingwynia monterosati*), Nordsieck and García-Talavera (1979), Malaquias et al. (2001).

**Philine approximans** Dautzenberg and Fischer, 1896

**Philine azorica** Bouchet, 1975

**Philine monilifera** Bouchet, 1975

**Philine rugulosa** Dautzenberg and Fischer, 1896

**Philine calva** Linden, 1995
10: Moro et al. (2003).

**Philine condensa** Linden, 1995
10: Moro et al. (2003).
Philine complanata Watson, 1897

Philine desmotis Watson, 1897

Philine trachyostraca Watson, 1897

Philine iris Tringali, 2001
5: Moreno and Templado (1998, as Philine sp.).
6: Moreno and Templado (1998, as Philine sp.).
7: Moreno and Templado (1998, as Philine sp.).
10: Ortea et al. (2003).

Genus Laona A. Adams, 1865
Laona pruinosa (Clark, 1837)

Family Philinoglossidae Hoffmann, 1833
Genus Philinoglossa Hertling, 1932
Philinoglossa helgolandica Hertling, 1932

Family Gastropteridae Swainson, 1840
Genus Gastropteron Koose, 1813
Gastropteron rubrum (Rafinesque, 1814)
1: Bouchet (1975), Ortea (1977c).
2: Ros (1975).
4: Templado et al. (1993b).
5: Templado et al. (1993b).
8: Ávila Escartín (1993).
All records except that of Bouchet (1975) are referred to G. meckeli.

Family Aglajidae Renier, 1807
Genus Aglaja Renier, 1807
Aglaja tricolorata Renier, 1807
4: Martínez et al. (1993), Cervera (unpubl. data).

Genus Chelidonia Rudman, 1978
Chelidonia africana Pruvot-Fol, 1953
3: Gavaia et al. (2004).
6: Ballesteros et al. (1986, as C. italica).

Chelidonia leopoldoi Ortea, Moro and Espinosa, 1996

Genus Odontoaglaja Rudman, 1978
Odontoaglaja sabadiega (Ortea, Moro and Espinosa, 1996)
10: Moro et al. (2003), Ortea, Moro and Espinosa (2003).
11: Ortea, Moro and Espinosa (1996, as Chelidonia).

Genus Melanochlamyds Cheeseman, 1881
Melanochlamyds maderense (Watson, 1897)

Melanochlamyds wildpretti Ortea, Bacallado and Moro, 2003
10: Ortea, Bacallado and Moro (2003).
Genus *Philinopsis* Pease, 1860

*Philinopsis depicta* (Renier, 1807) (20)
3: Calado (unpubl. data).
4: Templado et al. (1993b).
7: Marín and Ros (1987, as *Aglaja*), Martínez et al. (1993).
8: Ros (1975, as *Doridium carnosum*), Moreno and Templado (1998).

*Aglajidae incerta sedis*

*Doridium? laurentianum* Watson, 1897 (21)

Family *Runcinidae* H. and A. Adams, 1854

Genus *Runcina* Forbes and Hanley, 1853

*Runcina coronata* (Quatrefages, 1844) (22)
4: García-Gómez, et al. (1986, as *R. aurata*), Templado et al. (1993a).
12: Gosliner (1990), Mikkelsen (1995), Ávila (2000), Malaquias (2001), Ávila et al. (in press, as *R. cf. adriatica*).

*Runcina falciforme* Ortea, Rodríguez and Valdés, 1990

*Runcina palzera* Ortea, Rodríguez and Valdés, 1990
10: Ortea et al. (2001), Moro et al. (2003).

*Runcina macrodenticulata* García, García-Gómez and López de la Cuadra, 1990 (20)

*Runcina bahiensis* Cervera, García-Gómez and García, 1991

*Runcina genciana* Ortea and Nicieza, 1999

*Runcina hidalgoensis* Ortea and Moro, 1999
10: Ortea and Moro (1999), Ortea et al. (2001), Moro et al. (2003).


*Runcina africana* Pruvot-Fol, 1953
10: Ortea et al. (2001), Moro et al. (2003).

*Runcina ferruginea* Kress, 1977
1: Ortea and Moro (1999).

*Runcina adriatica* Thompson, 1980 (23)

12: Gosliner (1990), Mikkelsen (1995), Ávila (2000), Malaquias (2001), Ávila et al. (in press, as *R. cf. adriatica*).
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Full Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gosliner (1990), Mikkelsen (1995), Ávila (2000)</td>
<td></td>
<td>(all these authors referred to this species as <em>Runcina</em> sp.), Ortea and Moro (1999), Malaquías (2001).</td>
</tr>
<tr>
<td>Ortea and Moro (1999), Ávila et al. (1998), Malaquías and Abreu (2002)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2005), Wirtz and Debelius (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro (1999), Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea and Moro, 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ortea et al. (2001), Moro et al. (2003).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Haminoea navicula (Da Costa, 1778) (30)
6: Peñas et al. (in press).
11: Watson (1897, as Bulla (Haminoea) hydatis), Nobre (1937, as Haminoea hydatis), Nordsieck and García-Talavera (1979, as Haminoea hydatis).

Haminoea orbignyana (Férussac, 1822)
3: Hidalgo (1917, as H. elegans), Nobre (1938-40, as H. elegans), Malaquias (2003), Malaquias et al. (2004), Malaquias and Sprung (in press), Malaquias and Cervera (in press).
6: Ballesteros et al. (1986).
8: Ballesteros (1984a, as H. navicula).

Haminoea elegans Leach, 1852 (31)
10: Ortea et al. (2001), Moro et al. (2003).

Haminoea orteai Talavera, Murillo and Templado, 1987
6: Ballesteros et al. (1986).

Haminoea callidegenita Gibson and Chia, 1989
4: Cervera (unpubl. data).
5: Álvarez Orive (1994).

Haminoea templadoi García, Pérez-Hurtado and García-Gómez, 1991

Haminoea exigua Schaefer, 1992
7: Schaefer (1992), Templado et al. (1993a).

Genus Atys Montfort, 1810

Atys blainvilliana (Récluz, 1843)
8: De Sama (1916).

Atys jeffreysi Weinkauff, 1866
6: Peñas et al. (in press).
8: Altimira (1977b).
10: Ortea et al. (2001), Moro et al. (2003).
11: Nobre (1889, 1937, as Roxaniella jeffreysi), Watson (1897), Nordsieck and García-Talavera (1979, as A. (Roxaniella) jeffreysi).

Atys macandrewi Smith, 1872
10: Odhner (1931), Nordsieck (1972), Nordsieck and García-Talavera (1979), Ortea et al. (2001),
Genus *Weinkauffia* Monterosato, 1884

*Weinkauffia turgidula* (Forbes, 1843)


7: Templado et al. (2002).

10: Odhner (1931), Nordsieck (1972), Ortea et al. (2001), Moro et al. (2003).

11: Watson (1897, as *Scaphander (Weinkauffia) diaphana*), Nobre (1937, as *Scaphander (Weinkauffia) diaphana*), Nordsieck and García-Talavera (1979, as *Weinkauffia semistriata*), Malaquias et al. (2001, as *Scaphander (Weinkauffia) diaphana*).

Genus *Cylichnium* Dall, 1908 (32)

*Cylichnium africanum* (Locard, 1897)
1: Locard (1897, as *Cylichna fischeri*), Bouchet (1975, bathyal).


12: Watson (1883, 1886, both as *Utriculus*), Dautzenberg (1889, as *Tornatina*), Dautzenberg and Fischer (1886, 1897, both as *Utriculus*), Nordsieck (1972), Mikkelsen (1995, as *Cylichna oliviformis*), Malaquias (2001, as *Cylichna oliviformis*).

Haminoeidae incerta sedis

*Weinkauffia ? semistriata* (Réquien, 1848) (30)

7: Hidalgo (1917, as *Atys diaphana*), Templado (1984).


Order ANASPIDEA Fischer, 1883

Family Akeridae Odhner, 1922 (36)

Genus *Akera* Müller, 1776

*Akera bullata* Müller, 1776


8: Altimira (1977b).


10: Ortea et al. (2001), Moro et al. (2003).

11: Watson (1897, as *Acera bullata*), Nobre (1937, as *Acera bullata*), Ledoyer (1967, as *Acera bullata*).


Family Aplysiidae Lamarck, 1809

Genus *Aplysia* Linnaeus, 1767

*Aplysia depilans* Gmelin, 1791


Aplysia fasciata Poiret, 1789
4: Cervera (unpubl. data).

Aplysia dactylomela Rang, 1828

Aplysia punctata Cuvier, 1803

Aplysia juliana Quoy and Gaimard, 1832

Aplysia morio Verrill, 1901
10: Ortea et al. (2001), Moro et al. (2003).

Aplysia parvula Guiding in Mörch, 1863 (35)


11: Wirtz (1967, as Phyllaplysia depressa), Wirtz (1995a,b), Malaquias and Cervera (unpubl. data).

Family Notarchidae Eales and Engel, 1935
Genus Notarchus Cuvier, 1817

Notarchus punctatus Philippi, 1836
8: Ros (1975).

10: Ortea et al. (2001), Moro et al. (2003).

Genus Stylocheilus Gould, 1852

Stylocheilus striatus (Quoy and Gaimard, 1832)

11: Wirtz (pers. comm.).


Order ACOCHLIDIOMORPHA Salvini-Plawen, 1983
Family Hedylopsidae Odhner, 1952
Genus Hedylopsis Thiele, 1931

Hedylopsis spiculifera (Kowalevsky, 1901)
2: Urgorri and Besteiro (1983), Arnaud et al. (1986).

3: Calado et al. (1999).

7: Salvini-Plawen and Templado (1990).


Family Asperinidae Rankin, 1979
Genus Asperina Rankin, 1979

Asperina loricata (Swedmark, 1968)
2: Arnaud et al. (1986).

Family Microhedylidae Hertling, 1930
Genus Unela Marcus, 1953

Unela glandulifera (Kowalevsky, 1901)
2: Urgorri and Besteiro (1983, as Unela odhneri), Arnaud et al. (1986).
7: Salvini-Plawen and Templado (1990).

**Genus Pontohedyle** Golikov and Starobogatov, 1972

*Pontohedyle milaschewitchii* (Kowalevsky, 1901)
2: Salvini-Plawen (pers. comm).
7: Salvini-Plawen and Templado (1990).

Order THECOSOMATA Blainville, 1824
Suborder EUTHECOSOMATA Meisenheimer, 1905
Family Cavoliniidae D’Orbigny, 1842

**Genus Cavolinia** Abildgaard, 1791

*Cavolinia tridentata* (Förskal, 1775)
3: Nobre (1938-40).
6: Rampal (1968).
7: Hidalgo (1917).
8: Hidalgo (1917).
9: Hidalgo (1917).
10: Odhner (1931), Ortea et al. (2001), Moro et al. (2003).

*Cavolinia inflexa* (Lesueur, 1813)
1: Rampal (2002).
3: Locard (1897, as *C. trispinosa*), Nobre (1938-40, bathyal), Rampal (2002).
6: Rampal (1968), Templado et al. (1986), Peñas et al. (in press).
8: Tomás (1909), De Chia (1911-1913), Altimira (1977b).
9: Hidalgo (1914), Rampal (1963), Altimira (1972b).

*Cavolinia uncinata* (Rang, 1829)
8: Ballesteros (unpubl. data).

*Cavolinia flava* (D’Orbigny, 1836)  

6: Rampal (1968, 2002).
8: Hidalgo (1917).
11: Rampal (2002).
All records except those of Rampal (2002) are referred to *C. gibbosa*.

*Cavolinia globulosa* Rang, 1845
10: Odhner (1931), Ortea et al. (2001), Moro et al. (2003).

**Genus Diacria** Gray, 1847

*Diacria quadridentata* (Lesueur, 1821)
6: Rampal (1968).

*Diacria trispinosa* (Lesueur, 1821)  
3: Hidalgo (1917), Locard (1897, as *Calcolinia trispinosa*, bathyal), Nobre (1938-40), Rampal (2002).
5: Hidalgo (1917).
6: Rampal (1968, 2002), Templado et al. (1986), Peñas et al. (in press).

*Diacria atlantica* Dupont in Bontes and Van der Spoel, 1998

*Diacria rubecula* Bontes and Van der Spoel, 1998

**Genus Clio** Linnaeus, 1767

*Clio pyramidata* Linnaeus, 1767
2: Hidalgo (1917, as *Cleodora*), Rolán (1983), Urgorri and Besteiro (1983).
3: Locard (1897, bathyal), Hidalgo (1917).
5: Hidalgo (1917).
Genus *Hyalocylis* Folin, 1875

**Hyalocylis striata** (Rang, 1828)


Genus *Styliola* Blainville, 1827

**Styliola subula** (Quoy and Gaimard, 1827)

3: Locard (1897, as *S. subulata*, bathyal).
6: Rampal (1968), Sánchez-Moyano et al. (2000).
7: Hidalgo (1917).
8: Ros (1976a).

Genus *Cuvierina* Boas, 1886

**Cuvierina columnella** (Rang, 1827)

3: Locard (1897, as *Cuvierina*).
7: Hidalgo (1917).
8: Ros (1976a).

Genus *Diacavolinia* Van der Spoel, 1987

**Diacavolinia limbata** (D’Orbigny, 1836) (sensu lato)

6: Rampal (1968).
8: Hidalgo (1917).

All records except those of Van der Spoel, Bleeker and Kobayasi (1993), Ortea et al. (2001) and Moro et al. (2003).
**Diacavolinia constricta** Van der Spoel, Bleeker and Kolayashi, 1993

**Diacavolinia deshayesi** Van der Spoel, Bleeker and Kolayashi, 1993

**Diacavolinia atlantica** Van der Spoel, Bleeker and Kolayashi, 1993

**Family Limacinidae** Gray, 1840

**Genus Limacina** Bosc, 1817

**Limacina helicina** (Phipps, 1774)
1: Hidalgo (1917).
3: Nordsieck (1972, as *Spiratella*).

**Limacina retroversa** (Fleming, 1823)
6: Peñas et al. (in press).

**Limacina bulimoides** (D’Orbigny, 1836)
3: Rampal (1968, as *Spiratella*).

**Limacina inflata** (D’Orbigny, 1836)
6: Rampal (1968), Vives, Santamaría and Trepat (1975), Peñas et al. (in press).
8: Ros (1976a).
9: Rampal (1963), Riera and Blasco (1967).

All records except those of Rolán (1983) and Ortea et al. (2001), as *Spiratella*.

**Limacina lesueurii** (D’Orbigny, 1836)
1: Nordsieck (1972).
6: Rampal (1963, 1968), Peñas et al. (in press).
The records from areas 1 and 6 as *Spiratella*.

**Limacina trochiformis** (D’Orbigny, 1836)
6: Rampal (1968), Vives, Santamaría and Trepat (1975), Peñas et al. (in press).
All records as *Spiratella*, except those of Ortea et al. (2001) and Moro et al. (2003).

**Suborder PSEUDOTHECOSOMATA** Meisenheimer, 1905

**Family Cymbuliidae** Cantraine, 1841

**Genus Cymbulia** Péron and Lesueur, 1810

**Cymbulia peroni** Blainville, 1827
1: Martínez, Rodríguez and Rodríguez (1993).
2: Vayssière (1915).
7: Vayssière (1902), García Raso et al. (1992).
8: Ros (1975).

**Cymbulia parvidentata** Pelseneer, 1888

**Genus Corolla** Dall, 1871

**Corolla ovata** (Quoy and Gaimard, 1832)

**Family Desmopteridae** Chun, 1889

**Genus Desmopterus** Chun, 1889

26

**Checklist of opisthobranchs from Spain and Portugal**

J. L. Cervera et al.

Desmopterus cirroptera (Gegenbaur, 1855)

Desmopterus papilio Chun, 1889

Desmopterus papilio (Chun, 1889)

Family Peraclidae Tesch, 1913
Genus Peracle Forbes, 1844
Peracle reticulata (D’Orbigny, 1836)
3: Hidalgo (1917, as Peraclis).
6: Rampal (1968), Peñas et al. (in press).

Peracle bispinosa (Pelseneer, 1888)
3: Locard (1897, as P. diversa, bathyal).
6: Rampal (1968).

Peracle triacantha (Fischer, 1882)
6: Hidalgo (1917, as Peraclis).

Order GYMNOSOMATA Blainville, 1894
Family Pneumodermatidae Latreille, 1825
Genus Pneumoderma Perón and Lesueur, 1910
Pneumoderma mediterraneum Van Beneden, 1836
8: Pruvot-Fol (1924).

Pneumoderma violaceum (D’Orbigny, 1836)
2: Vayssière (1902).
7: Pruvot-Fol (1924).
8: Pruvot-Fol (1924).
9: Pruvot-Fol (1924).
10: Odlíner (1931), Ortea et al. (2001), Moro et al. (2003). All records, except those of Ortea et al. (2001) and Moro et al. (2003) as Pneumoderma atlanticum.

Family Clionidae Oken, 1815
Genus Clione Pallas, 1774
Clione limacina (Phipps, 1773)
8: Ballesteros (unpubl. data).

Clione limacina (Phipps, 1773)
8: Ballesteros (unpubl. data).

Genus Paracline Tesch, 1903
Paracline longicaudata (Souleyeti, 1840)
9: Pruvot-Fol (1924).

Family Notobranchaeidae Pelseneer, 1886
Genus Notobranchaea Pelseneer, 1886
Notobranchaea hjorti (Bonnevie, 1913)

Notobranchaea bleekerae Van der Spoel and Pafort (1985)

Genus Schleschia Strand, 1932
Schleschia tetrabranchiata (Bonnevie, 1913)

Order SACOGLOSSA Von Ihering, 1876 (41)
Suborder OXYNOACEA H. Adams and A. Adams, 1854
Family Volvatellidae Pilsbry, 1895
Genus Ascobulla Marcus, 1972
Ascobulla fragilis (Jeffreys, 1856)
6: Ballesteros et al. (1986).
7: Hidalgo (1917, as Cylindrobulla), Templado, Talavera and Murillo (1983, as Cylindrobulla), Murillo, Templado and Talavera (1985, as Cylindrobulla), Marín and Ros (1988).
11: Watson (1897, as Cylindrobulla), Nobre (1937, as Cylindrobulla), Nordsiack and García-Talavera (1979, as Cylindrobulla), Malaquias et al. (2001).

Family Oxynoidae H. Adams and A. Adams, 1854
Genus Oxynoe Rafinesque, 1819
Oxynoe olivacea Rafinesque, 1819
9: Bucquoy, Dautzenberg and Dollfus (1886), Hidalgo (1917), Nordsiack (1972).

Oxynoe benchijigua Ortea, Moro and Espinosa, 1999 (42)
10: Ortea, Moro and Espinosa (1999), Ortea et al. (2001), Moro et al. (2003).
Genus Lobiger Krohn, 1847

Lobiger serradifalci (Calcara, 1840)
5: García Gómez (2002).
9: Hidalgo (1917).

Suborder PLAKOBRANCHACEA Rang, 1829
Superfamily PLAKOBRANCHOIDEA Rang, 1829
Family Plakobranchidae Rang, 1829 (= Elysiidae Forbes and Hanley, 1851)
Genus Elysia s. l. Risso, 1818 (43)

Elysia viridis (Montagu, 1804)
1: Ortea (1977a,c).
6: Ballesteros et al. (1986), Sánchez Tocino, Ocaña and García (2000a), Ocaña et al. (2000).

Elysia timida (Risso, 1818)
5: García Gómez (2002).
6: Ocaña et al. (2000).


Elysia ornata (Swainson, 1840)

Elysia flava Verrill, 1901
7: Ballesteros et al. (1986).
8: Ballesteros (unpubl. data).

Elysia papillosa Verrill, 1901

Elysia subornata Verrill, 1901
11: Ortea, Moro and Espinosa (1997, as Elysia cause).

Elysia translucens Pruvot-Fol, 1957 (46)

Elysia fezi Vilella, 1968 (45)
8: Vilella (1968).

Elysia margaritae Fez, 1974 (46)
7: De Fez (1974).

Elysia gordanae Thompson and Jaklin, 1988 (46)
Genus *Thuridilla* Bergh, 1872 

*Thuridilla hopei* (Vérany, 1853) 
4: Cervera and García-Gómez (1986). 

10: Ortea, Luque and Templado (1988, as *Elysia*), Ortea, Moro and Espinosa (1997), Ortea et al. (1998, 2001, 2003), Pérez-Sánchez and Moreno (1990, as *T. hopei*). 
11: Wirtz (1999, as *Elysia*). 

Family *Boselliidae* Marcus, 1982 

Genus *Bosellia* Trinchese, 1891 

*Bosellia mimetica* Trinchese, 1891 
8: Altava and Traveset (1985). 

*Bosellia leve* Fernández-Ovies and Ortea, 1986 

Genus *Caliphylla* A. Costa, 1867 

Family *Cyerceidae* H. Adams and A. Adams, 1854 

Genus *Aplysiopsis* Deshayes, 1853 

*Aplysiopsis elegans* (Deshayes, 1854) 

*Aplysiopsis formosa* Pruvo-Fol, 1953 
4: Cervera (unpubl. data). 

Genus *Cyerce* Bergh, 1871 

*Cyerce antillensis* Engel, 1927 
11: Wirtz (pers. comm.). 

Superfamily LIMAPONTIOIDEA Gray, 1847 

Family *Polybranchiidae* O’Donoghue, 1929 (= *Caliphyllidae* Thiele, 1931) 

Genus *Polybranchia* Pease, 1860 

*Polybranchia viridis* (Deshayes, 1857) 

*Polybranchia borgnini* (Trinchese, 1896) 

Genus *Caliphylla* A. Costa, 1867 

*Caliphylla mediterranea* A. Costa, 1867 

Genus *Cyerce* Bergh, 1871 

*Cyerce antillensis* Engel, 1927 
11: Wirtz (pers. comm.). 

Family *Hermaeidae* H. Adams and A. Adams, 1854 

Genus *Aplysiopsis* Deshayes, 1853 

*Aplysiopsis elegans* (Deshayes, 1854) 

*Aplysiopsis formosa* Pruvo-Fol, 1953 
4: Cervera (unpubl. data). 

Genus *Hermaea* Lovén, 1844 

*Hermaea bifida* (Montagu, 1815) 
4: Cervera, García-Gómez and Ortea (1991, as *H. boucettii*). 
8: Ballesteros (unpubl. data).
*Hermaea cruciata* A. A. Gould, 1870

*Hermaea paucicirra* Pruvot-Fol, 1953
1: Ortea (1977a,c).
3: Calado et al. (1999).
8: Ballesteros (1980b).
10: Ortea et al. (2003).

Genus *Hermaeopsis* A. Costa, 1869 (51)

*Hermaeopsis variopicta* A. Costa, 1869
1: Martínez et al. (1990).
2: Ortea (1977a,c), Urgorri and Besteiro (1983).
4: Cervera (unpubl. data).
9: Ballesteros and Templado (1996, as *Hermaea*).
All published records, except Calado et al. (2003) as *Hermaea*.

Family Limapontiidae Gray, 1847 (= Stiligeridae Iredale and O’Donoghue, 1923) (50)

Genus *Stiliger* Ehrenberg, 1831

*Stiliger ilerae* Ortea, 1981

Genus *Limapontia* Johnston, 1836

*Limapontia capiata* O. F. Müller, 1774
1: Ortea (1977a,c, as *Limapontia nigra*).

*Limapontia senestra* (Quatrefages, 1844)
1: Ortea (1977c, as *Acteonia corrugata*), Ortea (1977a, as *A. senestra*).

Genus *Calliopaea* D’Orbigny, 1837

*Calliopaea bellula* D’Orbigny, 1837
10: Ortea et al. (1998).

Genus *Ercolania* s. l. Trinchese, 1872 (52)

*Ercolania viridis* (A. Costa, 1866)

*Ercolania funerea* (A. Costa, 1867)

*Ercolania siottii* Trinchese, 1872

*Ercolania coerulea* Trinchese, 1892

*Ercolania lozanoi* Ortea, 1981
4: Cervera (unpubl. data).

Genus *Placida* Trinchese, 1876 (50) (53)

*Placida dendritica* (Alder and Hancock, 1843)
1: Ortea (1977a,c, as *Hermaea*).
2: Urgorri and Besteiro (1983, as *Hermaea*), Trigo and Otero (1987, as *Hermaea*).
9: Ballesteros and Templado (unpubl. data).
11: Wirtz (1999, as *P. cf. dendritica*).

*Placida tardyi* (Trinchese, 1873) (54)
3: Calado et al. (2003).

*Placida brevicornis* (A. Costa, 1876)

*Placida cremoniana* Trinchese, 1892
6: Ballesteros et al. (1986), García Raso et al. (1992), Ocaña et al. (2000).
8: Ballesteros (1980b, as *Hermaea*).
9: Ballesteros, Álvarez and Mateo (1986).

*Placida verticalis* Ortea, 1981 (55)
1: Ortea (1977a,c, as *Hermaea viridis*).
3: Calado et al. (2003).
11: Malaquias (unpubl. data).

Genus *Costasiella* Pruvo-Fol, 1951

*Costasiella virescens* Pruvo-Fol, 1951

Order UMBRACULACEA Dall, 1889 (56) (57)

Family Tylodinidae Gray, 1847
Genus *Tylodina* Rafinesque, 1814 (58)

*Tyloidea perversa* (Gmelin, 1791)
3: Calado and Urgorri (1999), Calado et al. (1999).
5: García-Gómez et al. (1989).
6: Templado et al. (1993b), Ocaña et al. (2000), Peñas et al. (in press).

Genus Anidolyta Willan, 1987 (59)

*Anidolyta duebenii* Lovén, 1846 (59)
3: Sykes (1905, as *Tylodinella duebeni*), Pruvo-Fol (1954, as *T. duebeni*), Nordsieck (1972, as *T. duebeni*).
6: Peñas et al. (in press).

Family Umbraculidae Dall, 1889
Genus *Umbraculum* Schumacher, 1817 (60)

*Umbraculum umbraculum* (Lightfoot, 1786) (60)
3: Hidalgo (1917), Nobre (1932, as *U. mediterraneum*).
4: Hidalgo (1917, as *U. mediterraneum*).
5: García Gómez (unpubl. data).
7: Hidalgo (1917), Templado, Talavera and Murillo (1983, as *U. mediterraneum*).
8: Hidalgo (1917), Templado, Talavera and Murillo (1983, as *U. mediterraneum*).
10: Odhner (1931, as *U. mediterraneum*), Pérez-Sánchez and Moreno (1990, as *U. mediterraneum*), Ortea et al. (2001, 2003), Moro et al. (2003).


Superorder NUDIPLEURA Wägele and Willan, 2000

Order PLEUROBRANCHACEA Férussac, 1822

Family Pleurobranchidae Férussac, 1822

Subfamily Pleurobranchinae Férussac, 1822

Tribe Pleurobranchini Férussac, 1822

Genus *Pleurobranchus* Cuvier, 1805

*Pleurobranchus membranaceus* (Montagu, 1815)

1: Hidalgo (1917, as *Oscanius tuberculatus*), Ávila Escartín (1993).

3: De Oliveira (1895), Hidalgo (1917), Nobre (1932, as *O. membranaceus*), Marqués et al. (1982).

5: Cervera (unpubl. data).


8: Maluquer, J. (1907), Maluquer M. (1906-1909, 1912), Ros (1975, 1978b, both as *Oscanius*).


11: Malaquias (unpubl. data).

*Pleurobranchus testudinarius* (Cantraine, 1836)

4: Templado et al. (1993b).


7: Templado (1982b, as *Susania*).

8: Ros (1975, 1978b, as *Susania*).

9: Ros and Gili (1985), Ballesteros (1998) (both as *Susania*).

10: Ortea et al. (2001), Moro et al. (2003), Wirtz and Debelius (2003).

11: Hidalgo (1917, as *Pleurobranchus*).

10: Ortea et al. (2001).

11: Watson (1897, as *Pleurobranchus testudinarius*), Nobre (1937).

12: Bergh (1892, 1899, both as *Pleurobranchus plumula*), Malaquias (2001).

*Berthella plumula* (Montagu, 1803)

1: Hidalgo (1917, as *Pleurobranchus*), Ortea (1977c, as *Susania testudinaria*), Ávila Escartín (1993).


6: Sánchez Tocino, Ocaña and García (2000a), Peñas et al. (in press).


9: Hidalgo (1917, as *Pleurobranchus*).

10: Ortea et al. (2001).

11: Watson (1897, as *Pleurobranchus testudinarius*), Nobre (1937).

12: Bergh (1892, 1899, both as *Pleurobranchus plumula*), Malaquias (2001).

*Berthella aurantiaca* (Risso, 1818)

1: Hidalgo (1917, as *Pleurobranchus aurantiacus*), Ros (1975, 1978b), Ortea (1977c, as *Bouvieria*), Ávila Escartín (1993).


6: Ocaña et al. (2000).


8: Maluquer, J. (1907), Maluquer, M. (1906-1909, 1912, all as *Pleurobranchus*), Ros (1975, 1978b), Altimira, Huelin and Ros (1981, as *Bouvieria*).
12: Bergh (1892, as *Pleurobranchus aurantiacus*), Malaquías (2001).

**Berthella stellata** (Risso, 1826)
1: Ortea (1977c, as *B. plumula*), Ávila Escartín (1993).
2: Fernández-Ovies (1981, as *B. plumula*).
9: Ros and Gili (1985, as *B. cf. stellata*), Ballesteros, Álvarez and Mateo (1986).
11: Malaquías (unpubl. data).

**Berthella ocellata** (Delle Chiaje, 1828)
4: Templado *et al.* (1993b, as *Berthella cf. ocellata*).
6: Sánchez Tocino, Ocaña and García (2000a), Peñas *et al.* (in press, as *Berthella cf. ocellata*).
8: Ros (1975, 1978b, as *Bouvieria*).
9: Templado (1982a), Ros and Gili (1985, as *Berthella cf. ocellata*).

**Berthella sideralis** Lovén, 1846
1: Bouchet (1977, bathyal).

**Berthella dautzenbergi** Watson, 1897
11: Watson (1897, as *Pleurobranchus dautzenbergi*), Nobre (1937, as *P. dautzenbergi*), Nordsieck and García-Talavera (1979, as *Bouvieria dautzenber- gi*), Malaquías (2004).

**Berthella africana** (Pruvot-Fol, 1953)

**Berthella canariensis** Cervera *et al.*, 2000

Genus **Berthellina** Gardiner, 1936

**Berthellina edwardsi** (Vayssière, 1897) *(a)*
1: Gofas (unpubl. data).
4: Cervera and García (1986, as *Berthellina sp.*), Templado *et al.* (1993b, as *Berthellina sp.*), Cervera, García-Gómez and Megina (2000).
5: Cervera (unpubl. data).
7: Ballesteros *et al.* (1986, as *Berthella aurantiaca*), Templado *et al.* (2002).
9: Lacaze-Duthiers (1859, as *Pleurobranchus aurantiacus*).

**Subfamily Pleurobranchaeinae** Pilsbry, 1896

Genus **Pleurobranchaea** Meckel in Leue, 1813

**Pleurobranchaea meckelii** (Blainville, 1825) *(b)*
5: Cervera (unpubl. data).
9: Vayssière (1901, 1902).
Onchidoris sparsa (Alder and Hancock, 1846)
1: Ortea (1979d).
8: Ballesteros (1984b).

Onchidoris inconspicua (Alder and Hancock, 1851)
2: Ortea and Ballesteros (1982).

Onchidoris albonigra (Pruvot-Fol, 1951)

Onchidoris reticulata Ortea, 1979

Onchidoris cervinoi Ortea and Urgorri, 1979 (67)
1: Ortea (1977c, as Adalaria proxima), Ortea and Urgorri (1979a).

Onchidoris tridactila Ortea and Ballesteros, 1982
1: Ortea and Ballesteros (1982).

Genus Acanthodoris Gray, 1850

Acanthodoris pilosa (Abilgaard, 1789) (68)
1: Thorson (1965).

Genus Diaphorodoris Iredale and O’Donoghue, 1923

Diaphorodoris luteocincta (Sars, 1870)
7: Ballesteros et al. (1986), Marín and Ros (1987).
10: Ortea et al. (2001), Moro et al. (2003).
All records before 1988, except those of Ballesteros et al. (1986) and Marín and Ros (1987), are referred to the variety alba of this species.

**Diaphorodoris papillata** Portmann and Sandmeier, 1960

**Family Goniodorididae H. and A. Adams, 1854**

**Genus Goniodoris** Forbes and Goodsir, 1839

**Goniodoris nodosa** (Montagu, 1808)
1: Ortea (1977c).

**Goniodoris castanea** Alder and Hancock, 1845
1: Ortea (1977c).
11: Malaquías (unpubl. data).

**Genus Ancula** Lovén, 1846

**Ancula gibbosa** (Risso, 1818)
1: Ortea (1977c).

**Genus Trapania** Pruvo-Fol, 1931

**Trapania tartanella** (Ihering, 1885)
1: Ortea et al. (1989), Templado et al. (1993a).

**Trapania lineata** Haefelfinger, 1960
5: Sánchez Santos (unpubl. data).

---

**Okenia mediterranea** (Ihering, 1886)
3: Calado et al. (2003).

**Okenia zoobotryon** (Smallwood, 1910)

**Okenia cupella** (Vogel and Schultz, 1970)

**Okenia elegans** (Leuckart, 1828)
5: Sánchez-Santos (unpubl. data).
8: Ballesteros (unpubl. data).

**Okenia hispanica** Valdés and Ortea, 1995
6: Templado et al. (1993b, as *Okenia* sp.), Valdés and Ortea (1995), Villena et al. (1997), Peñas et al. (in press).

---

**Genus Okenia** Menke, 1846

**Okenia aspersa** Alder and Hancock, 1845
Genus **Trapania** Haeffling, 1960

4: Cervera and García-Gómez (1989c).

**Trapania pallida** Kress, 1968


**Trapania orteai** García-Gómez and Cervera in Cervera and García-Gómez, 1989

3: Gavaia et al. (2004).

**Trapania hispalensis** Cervera and García-Gómez, 1989

2: Martínez et al. (1990).
6: Templado et al. (1993b, as *T. cf. hispalensis*), Sánchez Tocino, Ocaña and García (2000a, Ocaña et al. (2000).

**Trapania luciei** Ortea, 1989

10: Moro, Ortea and Bacallado (1997), Moro et al. (2003), Ortea et al. (2001).

Genus **Bermudella** Odhner, 1941

**Bermudella polycerelloides** Ortea and Bouchet, 1983


Family **Polyceridae** Alder and Hancock, 1845

Genus **Limacia** O. F. Müller, 1781

**Limacia clavigera** (O. F. Müller, 1776)

4: Cervera (unpubl. data).

Genus **Polycera** Cuvier, 1817

**Polycera quadrilineata** (O. F. Müller, 1776)

8: Ros (1975), Ballesteros (1985).

**Polycera dubia** Sars, 1829
8: Vilella (1994, as *Palio espagnoli* n. sp.).

**Polycera elegans** Bergh, 1894
5: Ballesteros (unpubl. data).
8: Ballesteros (unpubl. data).

**Polycera fucensis** Lemche, 1929
1: Martínez et al. (1990).

**Polycera hedgpethi** Marcus, 1964
1: Caballer and Ortea (2002).

**Polycera aurantiomarginata** García-Gómez and Bobo, 1984
3: Gavaia et al. (2004).

**Genus Thecacera** Fleming, 1828

**Thecacera pennigera** (Montagu, 1815)
3: Gavaia et al. (2004).

**Genus Plocamopherus** Leuckart, 1828

**Plocamopherus maderae** (Lowe, 1842)

**Genus Crimora** Alder and Hancock, 1862

**Crimora papillata** Alder and Hancock, 1862
1: Ros (1975).
4: Cervera (unpubl. data).
Genus *Roboastra* Bergh, 1877

*Roboastra europaea* García-Gómez, 1985


8: Pola, Cervera and Gosliner (in press).

11: Pola, Cervera and Gosliner (in press).

Genus *Polycerella* Verrill, 1880

*Polycerella emertoni* Verrill, 1880


Genus *Kaloplocamus* Bergh, 1880

*Kaloplocamus ramosus* (Cantraine, 1835)


6: Templado et al. (1993b), Peñas et al. (in press).


8: Ros (1975).


11: Malaquías (unpubl. data).


*Kaloplocamus atlanticus* (Bergh, 1892)


12: Bergh (1892, 1899, both as *Euoplocamus atlanticus*), Nordsieck (1972, as *Kaloplocamus ramosus*), Malaquías (2001).

Genus *Tambja* Burn, 1962

*Tambja ceutae* García-Gómez and Ortea, 1988


11: Malaquías et al. (2001).


*Tambja marbellensis* Schick and Cervera, 1998


5: Sánchez-Santos (unpubl. data).


Family Aegiridae Fischer, 1883

Genus *Aegires* Lovén, 1844

*Aegires punctilucens* (D’Orbigny, 1837)


5: García-Gómez et al. (1989).


8: Ballesteros (unpubl. data).

9: Ballesteros, Álvarez and Mateo (1986, as *A. punctilucens leuckarti*).

*Aegires leuckarti* Vérany, 1853

5: García-Gómez et al. (1989).

6: Ballesteros et al. (1986, as *A. punctilucens*), Sánchez Tocino, Ocaña and García (2000a), Ocaña et al. (2000).


8: Ballesteros (unpubl. data).

9: Ballesteros, Álvarez and Mateo (1986, as *A. punctilucens leuckarti*).

*Aegires sublaevis* Odhner, 1931

J. L. Cervera et al.


11: Malaquías et al. (2001).


*Aegires palensis* Ortea, Luque y Templado, 1999


7: Ortea, Bacallado y Pérez Sánchez (1990), Templado et al. (1993a).

“CRYPTOBRANCHIA” Fischer, 1883

LABIOSTOMATA Valdés, 2002

Family Chromodorididae Bergh, 1891

Genus *Glossodoris* Ehrenberg, 1831

*Glossodoris edmundsi* Cervera, García-Gómez y Ortea, 1989


9: Ros (1981b, as *G. gracilis*), Ballesteros (1981a, as *G. gracilis*), Dekker (1986).

*Hypselodoris picta* (Schultz, 1836)


3: Calado et al. (1999)


10: Odhner (1931), Pruvot-Fol (1954), Nordsieck (1972), Altimira y Ros (1979), Ortea and...
Hypselodoris orsinii (Verany, 1846) 83
7: Templado, Talavera and Murillo (1983, as H. coelestis), Templado et al. (2002), Ballesteros (1985, as H. coelestis), Ballesteros et al. (1986, as H. coelestis).

Hypselodoris fontandraui (Pruvot-Fol, 1951) 85
3: Calado et al. (2003).

Hypselodoris bilineata (Pruvot-Fol, 1953)
8: Ávila Escartín (1993).

Hypselodoris cantabrica Bouchet and Ortea, 1980
2: Bouchet and Ortea (1980).
Hypselodoris malacitana Luque, 1986
5: Sánchez-Santos (pers. comm.).

Hypselodoris tricolor (Cantraine, 1835) / Hypselodoris midatlantica Gosliner, 1990 (84)

Chromodoris Purpurea (Laurillard, 1831) (85)
4: Cervera and García-Gómez (1986).

Genus Chromodoris Alder and Hancock, 1855

Chromodoris luteorosea (Rapp, 1827) (85)
2: Ortea (1977c, as Glossodoris).

C. Krohni (Vérany, 1846) (85)
1: Ros (1975, as Glossodoris), Ávila Escartín (1993).
4: Cervera and García-Gómez (1986).
8: Ros (1975, 1978b, both as Glossodoris), Ros and Altimira (1977, as Glossodoris), Ballesteros (1985).
10: Ortea et al. (2001), Moro et al. (2003).

Chromodoris luteopunctata (Gantès, 1962) (86)
5: García-Gómez et al. (1989).
All these records as C. rodomaculata.

Chromodoris britoi Ortea and Pérez, 1983 (87)
7: Templado, Talavera and Murillo (1983), Templado et al. (2002), Ballesteros et al. (1986).
8: Cervera et al. (1988).

Chromodoris goslineri Ortea and Valdés in Ortea, Valdés and García-Gómez, 1996

Genus Cadlina Bergh, 1878 (88)

Cadlina laevis (Linnaeus, 1767)
2: Ortea (1977c).

Cadlina pellucida (Risso, 1826)
2: Ortea (1977c).
4: Megina (unpubl. data).
7: Fez (1974, as Archidoris).
9: Ros (1985b).

Family Dorididae Rafinesque, 1815 (89)

Genus Doris Linnaeus, 1758

Doris verrucosa Linnaeus, 1758
4: Megina (unpubl. data).
7: Fez (1974, as Archidoris).
9: Ros (1985b).
Doris pseudoargus Rapp, 1827
1: Ortea (1977c, as Archidoris tuberculata), Ávila Escartín (1993, as A. tuberculata).
3: De Oliveira (1895, as A. tuberculata), Nobre (1932, as A. tuberculata), Calado et al. (1999, as A. pseudoargus).
8: Ros (1975, as A. tuberculata), Ballesteros (1985, as A. tuberculata).

Doris bertheloti (D’Orbigny, 1839)

Doris ocelligera (Bergh, 1881)
7: Templado, Talavera and Murillo (1983), Ballesteros et al. (1986), Gavagnin et al. (2002).

Doris sticta (Iredale and O’Donoghue, 1923)
1: Cervera et al. (1988, as D. maculata).
3: Gavaia et al. (2004), Calado et al. (2003, as D. cf. sticta).
5: García-Gómez (1987, as D. maculata).
8: Ballesteros (1985, as D. maculata).
11: Malaquias (unpubl. data).

Family Discodorididae Bergh, 1891
Jorunna tomentosa (Cuvier, 1804)
1: Ortea (1977c).
3: De Oliveira (1895, as J. johnstoni), Hidalgo (1916, as J. johnstoni), Nobre (1932, as J. johnstoni), García-Gómez et al. (1991), Machado and Fonseca (1997, as J. johnstoni), Calado et al. (1999, 2003), Malaquias and Morenito (2000).
4: Camacho and Gosliner (pers. comm.).
6: Ocaña et al. (2000), Peñas et al. (in press).
10: Ortea et al. (2001), Moro et al. (2003).

Jorunna onubensis Cervera, García-Gómez and García, 1986
10: Ortea et al. (2001), Moro et al. (2003), Wirtz and Debelius (2003).

Discodoris edwardsi Vayssière, 1902

Discodoris rubens Vayssière, 1919

Discodoris ? rosi Ortea, 1979 (95)
8: Cervera et al. (1988).

Genus Thordisa Bergh, 1877

Thordisa filix Pruvot-Fol, 1951
8: Cervera et al. (1988).

Thordisa azmanii Cervera and García-Gómez, 1989 (96)
1: Ortea and Martínez (1990, as T. diuda).

Genus Platydoris Bergh, 1877

Platydoris argo (Linnaeus, 1767)
4: Templado et al. (1993b).

**Platydoris stomascuta** Bouchet, 1977 (97)


Genus *Rostanga* Bergh, 1879

**Rostanga rubra** (Risso, 1818) (98)

1: Hidalgo (1916).
8: Ros (1975).
10: Ortea et al. (2001), Moro et al. (2003), Wirtz and Debelius (2003).

Genus *Peltodoris* Bergh, 1880 (99)

**Peltodoris punctifera** (Abraham, 1877)

11: Wirtz (1999, as *Discodoris*).

**Peltodoris atromaculata** Bergh, 1880

1: Ros (1975).
3: Gavaia et al. (2004).

Genus *Paradoris* Bergh, 1884

**Paradoris indecora** Bergh, 1881

4: Cervera (unpubl. data).
8: Ballesteros (unpubl. data).

Paradoris ceneris Ortea, 1995

Paradoris inversa Ortea, 1995

Paradoris mollis Ortea, 1995

Genus Baptodoris Bergh, 1884

Baptodoris cinnabarina Bergh,1884 (106)
1: Bouchet (1977, bathyal, as Platydoris maculata).
5: Sánchez-Santos (pers. comm.)

Baptodoris perezi Llera and Ortea in Ortea, Pérez and Llera, 1982 (104)
4: Cervera et al. (1986).
6: Cervera et al. (1986).

Geitodoris pusae (Marcus, 1955) (106)
11: Malaquias and Cervera (unpubl. data).

Geitodoris portmanni (Schmekel, 1972)
7: Marín and Ros (1987, as Carryodoris).
8: Cervera et al. (1988).

Geitodoris bonosi Ortea and Ballesteros, 1981
8: Ballesteros (unpubl. data)

Geitodoris perfossa Ortea, 1990
10: Ortea (1990), Ortea et al. (2001), Moro et al. (2003).

Genus Taringa Marcus, 1955 (106)

Taringa millegrana (Alder and Hancock, 1854) (105)

Taringa oleica Ortea, Pérez and Llera, 1982
**Taringa ascitica** Ortea, Pérez and Llera, 1982

**Taringa tritorquis** Ortea, Pérez and Llera, 1982

**Taringa bacalladoi** Ortea, Pérez and Llera, 1982

**Taringa faba** Ballesteros, Llera and Ortea, 1985

**Genus Thorybopus** Bouchet, 1977

**Thorybopus lophatus** Bouchet, 1977

**LABIOSTOMATA incerta sedis**

**Genus Carminodoris** Bergh, 1889 (106)

**Carminodoris ? boucheti** Ortea, 1979 (106)
5: Sánchez-Santos (pers. comm.).

**Carminodoris ? spinobranchialis** Ortea and Martínez, 1992 (106)

**POROSTOMATA Bergh, 1878**

**Family Phyllidiidae Rafinesque, 1814**

**Genus Phyllidia** Cuvier, 1797

**Phyllidia flava** (Aradas, 1847) (107)
10: Ortea et al. (2001), Moro et al. (2003), Wirtz and Debelius (2003).
All records, except those from the region 10, as *P. rolandiae* (Pruvot-Fol, 1954) or *P. Pulitzeri* (Pruvot-Fol, 1954).

**Genus Phyllidiopsis** Bergh, 1875

**Phyllidiopsis berghi** (Vayssière, 1902)

**Phyllidiopsis baiyi** (Bouchet, 1983) (108)
5: García-Gómez (1987, as *Fryeria baiyi*).
6: Valdés and Gosliner (1999), Peñas et al. (in press).
7: Cervera et al. (1988).

**Phyllidiopsis bouchei** Valdés and Ortea, 1996

**Genus Reticulidia** Brunckhorst, 1990

**Reticulidia gofasi** Valdés and Ortea, 1996

**Family Dendrodorididae O’Donoghue, 1924**

**Genus Dendrodoris** Ehrenberg, 1831

**Dendrodoris limbata** (Cuvier, 1804) (109) (110)
3: De Oliveira (1895, as *Doriopsis*), Nobre (1932, as *Doriopsis*), García-Gómez et al. (1991), Calado et al. (1999, 2003).

**Dendrodoris grandiflora** (Rapp, 1827) (109) (110)
3: De Oliveira (1895, as *Doriopsis*), Nobre (1932, as *Doriopsis*).
Checklist of opisthobranchs from Spain and Portugal


1: Pérez-Sánchez and Moreno (1990, as Genus *Doriopsilla* *areolata*).

2: ? Bergh (1892, as *Genus Doriopsilla*).


8: Ros (1975, as *D. pusilla*), Ballesteros and Ortea (1980, as *D. evanae*), Ballesteros (1985, as *D. evanae*), Valdés and Ortea (1997).


**Dendrodoris herytra** Valdés and Ortea in Valdés, Ortea, Ávila and Ballesteros, 1996 (111)

1: Ávila Escartín (1993, as *D. grandiflora*).

2: Ortea (1977c, as *D. limbata* and *D. grandiflora*), Rolán, Otero and Rolán-Álvarez (1989, as *D. grandiflora*), Valdés et al. (1996).


4: Valdés et al. (1996), Cervera (unpubl. data).


6: Valdés et al. (1996).


Genus *Doriopsilla* Bergh, 1880

**Doriopsilla aerola*ta Bergh, 1880 (111)


8: Ros (1975, as *D. pusilla*), Ballesteros and Ortea (1980, as *D. evanae*), Ballesteros (1985, as *D. evanae*), Valdés and Ortea (1997).


**Doriopsilla pelseneeri** Oliveira, 1895 (112)

1: Ballesteros and Ortea (1980).


4: Templado et al. (1993b).

5: García-Gómez et al. (1989).


8: Pruvot-Fol (1954, as *Dendrodoris minima*), Cervera et al. (1988).

DEXIARCHIA Schrödl, Wägele and Willan, 2001 (113)

Suborder CLADOBRANCHIA Willan and Morton, 1984 (114)

“DENDRONOTINA” Sars, 1878

Family Tritoniidae Lamarck, 1809

Genus Tritonia Cuvier, 1803

**Tritonia hombergi** Cuvier, 1803

7: Hidalgo (1916).
8: Ros (1975).

**Tritonia plebeia** Johnston, 1828
3: Nobre (1938-40, as *Candiella plebeia*), Calado et al. (1999).
8: Ros (1975).

**Tritonia manicata** Deshayes, 1853
1: Ortea (1977a,b), Fernández-Ovies (1981). All as *Duvaucelia*.
3: De Oliveira (1895), Hidalgo (1916), Nobre (1932) (all these as *T. moesta*), García-Gómez et al. (1991a), Calado et al. (1999, 2003).
4: Cervera and García (1986).
9: Templado (1982a), Ballesteros, Álvarez and Mateo (1986). Both records as *Duvaucelia*.

**Tritonia** (Tritonidoxa) *griegi* Odhner, 1922

**Tritonia striata** (Haefelfinger, 1963)
5: Sánchez Santos (unpubl. data).
9: Wirtz and Debelius (2003), Ballesteros and Templado (unpubl. data). Records before 1985 as *Duvaucelia*.

**Tritonia nilsodhneri** Marcus, 1983
Almost all records as *Duvaucelia* or *Tritonia odhneri*.

**Genus Marionia** Vayssière, 1877

**Marionia blainvillea** (Risso, 1818)
3: De Oliveira (1895), Hidalgo (1916), Nobre (1932) (all these records as *M. quadrilatera*), Calado and Urgorri (1999), Calado et al. (1999), Wirtz and Debelius (2003).
4: Vayssière (1913), Hidalgo (1916).
6: Templado et al. (1986), Sánchez Tocino, Ocaña and García (2000a), Peñas et al. (in press).
7: Templado, Talavera and Murillo (1983), Templado et al. (2002), Ballesteros et al. (1986).
8: Ros (1975).
9: Ballesteros, Álvarez and Mateo (1986).

**Genus Tritoniopsis** Eliot, 1905

**Tritoniopsis cincta** (Pruvot-Fol, 1937)

**Family Scyllaeidae** Fischer, 1883

**Genus Scyllaea** Linnaeus, 1758

**Scyllaea pelagica** Linnaeus, 1758
1: Hidalgo (1916).
3: Hidalgo (1916).

**Genus Scyllaea** Linnaeus, 1758

**Scyllaea pelagica** Linnaeus, 1758
1: Hidalgo (1916).
3: Hidalgo (1916).
Family Hancockiidae MacFarland, 1923
Genus Hancockia Gosse, 1877

Hancockia uncinata (Hesse, 1872)
5: García-Gómez et al. (1989).
9: Ballesteros (unpubl. data).

Family Lomanotidae Bergh, 1892
Genus Lomanotus Vérany, 1844

Lomanotus marmoratus (Alder and Hancock, 1845)
8: Ballesteros (unpubl. data).

Lomanotus barlettai García-Gómez, López González and García, 1990
6: Templado et al. (1993b).

Family Tethyidae Alder and Hancock, 1855
Genus Tethys Linnaeus, 1767

Tethys fimbria Linnaeus, 1767
4: Templado et al. (1993b).
8: Pruvot (1897, 1901), Maluquer (1907), Maluquer (1906-1909), Ros (1975, as Fimbria).
10: McAndrew (1852, as Fimbria), Ortea et al. (2001), Moro et al. (2003).

Family Phylliroidae Férussac, 1821
Genus Phylliroe Péron and Lesueur, 1810

Phylliroe atlantica Bergh, 1871
10: Odhner (1931), Ortea et al. (2001), Moro et al. (2003).
11: Bergh (1899).

Phylliroe bucephala Péron and Lesueur, 1810

Genus Cephalopyge Hanel, 1905

Cephalopyge trematoides (Chun, 1889)
10: Odhner (1931), Ortea et al. (2001), Moro et al. (2003).

Family Dendronotidae Sars, 1878
Genus Dendronotus Alder and Hancock, 1845

Dendronotus frondosus (Ascanius, 1774)
1: Hidalgo (1916, as D. arborescens).

Family Dotoidae Gray, 1853
Genus Doto Oken, 1815

Doto coronata (Gmelin, 1791)

Doto pinnatifida (Montagu, 1804)
**Doto fragilis** (Forbes, 1838)

**Doto pygmaea** Bergh, 1871

**Doto rosea** Trinchese, 1881
4: Cervera (unpubl. data).

**Doto paulinae** Trinchese, 1881
8: Ballesteros (1985, as *D. cf. paulinae*).

**Doto cinerea** Trinchese, 1881
6: Ballesteros et al. (1986).
9: Templado (1982a, as *Doto sp.*).

**Doto floridicola** Simroth, 1888
7: Templado (1982b).
10: Ortea et al. (2005), Ortea, Caballer and Moro (2003).

**Doto pita** Marcus, 1955

**Doto doerga** Marcus and Marcus, 1963

**Doto dunnei** Lemche, 1976
1: Ortea and Urgorri (1978).

**Doto millbayana** Lemche, 1976

**Doto eireana** Lemche, 1976

**Doto tuberculata** Lemche, 1976

**Doto acuta** Schmekel and Kress, 1977

**Doto arteoi** Ortea, 1978
1: Ortea (1978b).
2: Ortea (1978b).

**Doto lemchei** Ortea and Urgorri, 1978
1: Ortea and Urgorri (1978).
3: Calado et al. (1999).
**Doto oblicua** Ortea and Urgorri, 1978  

**Doto verdicioi** Ortea and Urgorri, 1978  

**Doto fluctifraga** Ortea and Pérez, 1982  

**Doto furva** García-Gómez and Ortea, 1983  
12: Calado (2002), Wirtz and Debelius (2003, as *D. fluctifraga*).

**Doto ungis** Ortea and Rodríguez, 1989  
6: Ortea and Rodríguez (1989), Templado et al. (1993a,b).

**Doto escatilari** Ortea, Moro and Espinosa, 1997  

Genus *Heterodoris* Verrill and Emerton in Verrill, 1882  
1: Bouchet (1977, bathyal).

Family Madrellidae Preston, 1911  
Genus *Madrella* Alder and Hancock, 1864  

**Madrella aurantiaca** Vayssiére, 1902  

Family Proctonotidae Gray, 1853  
Genus *Janolus* Bergh, 1884  

**Janolus cristatus** Delle Chiaje, 1841  
1: Hidalgo (1916), Fernández-Ovies (1981, as *Antiopella cristata*).  
2: Urgorri and Besteiro (1983, 1984, both records as *Antiopella*).  
4: Cervera and García (1986).  

*Janolus hyalinus* (Alder and Hancock, 1854)
1: Ortea (1978a).

*Janolus faustoi* Ortea and Llera, 1988
11: Malaquias (unpubl. data).

“AEOLIDINA” Odhner, 1934

*Family Flabellinidae* Bergh, 1889

*Genus Flabellina* Voigt, 1834

*Flabellina affinis* (Gmelin, 1791)

Many of all these records are referred as *Coryphella pedata*, except Nobre (1932) that refers as *C. landsburgii*.

*Flabellina pedata* (Montagu, 1815)

All records before 1988 and that of Calado *et al.* refer to *Coryphella*.

*Flabellina pellucida* (Alder and Hancock, 1843)

All records referred as *Coryphella*.

*Flabellina gracilis* (Alder and Hancock, 1844)
1: Hidalgo (1916, as *Coryphella*).

*Flabellina lineata* (Lovén, 1848)
8: Ros (1975), Ballesteros (1985).

All records before 1988 and that of Calado *et al.* refer to *Coryphella*.
**Genus Flabellina** (Ev. Marcus and Er. Marcus, 1963)

10: Ortea, Caballer and Moro (2004, as Coryphella).

**Flabellina babai** Schmekel, 1972

4: Megina (unpubl. data).
8: Wirtz and Debelius (2003), Ballesteros (unpubl. data).

**Flabellina baetica** García-Gómez, 1984

4: Megina (unpubl. data).

**Flabellina insolita** García-Gómez and Cervera, 1989


**Flabellina ischitana** Hirano and Thompson, 1990

8: Ballesteros (unpubl. data).

**Genus Calmella** Eliot, 1906

**Calmella cavolini** (Vérany, 1846)


**Family Piseinotecidae** Edmunds, 1970

Genus Piseinotecus Marcus, 1955

**Piseinotecus sphaeriferus** (Schmekel, 1965)

10: Ortea et al. (2003).

**Piseinotecus gabinierei** (Vicente, 1975)


**Piseinotecus gaditanus** Cervera, García-Gómez and García, 1987

10: Ortea et al. (2003).

**Family Facelinidae** Bergh, 1889

**Genus Favorinus** Gray, 1850

**Favorinus branchialis** Rathke, 1806

4: Cervera (unpubl. data).
6: Ballesteros et al. (1986), Ocaña et al. (2000).
8: Ros (1975), Ballesteros (1985).
11: Wirtz (unpubl. data).

**Favorinus ghanensis** Edmunds, 1968


**Favorinus biliarus** Lemche and Thompson, 1974

3: Gavaia et al. (2004).

**Favorinus vitreus** Ortea, 1982

7: Templado (1982b).

Genus Facelina Alder and Hancock, 1855

**Facelina annulicornis** (Chamusso and Eisenhart, 1821) (122)
1: Ortea (1977c, as *F. punctata*).
3: De Oliveira (1895), Hidalgo (1916), Nobre (1932) (all these records as *F. punctata*), Calado et al. (1999, 2003).
10: Moro et al. (1995, 2003), Ortea et al. (2001), Wirtz and Debelius (2003, as *F. auriculata*).

**Facelina rubrovittata** (A. Costa, 1866)
4: Cervera and García (1986).
5: García-Gómez et al. (1989).
8: Ballesteros (1985, as *Acanthopsole*).
9: Ballesteros (1981a, 1985, as *Acanthopsole*).

**Facelina quatrefagesi** (Vayssière, 1888)
2: Ortea (1977c).

**Facelina variegata** De Oliveira, 1895
3: De Oliveira (1895), Hidalgo (1916), Nobre (1932).

**Facelina schwobi** (Labbé, 1923)
8: Ballesteros et al. (1993).

**Facelina fusca** Schwabe, 1948
8: Ballesteros et al. (1993).

**Facelina dubia** Pruvo-Fol, 1948
8: Ballesteros et al. (1993).

**Facelina fusc** Schmekel, 1966
8: Ros (1975, as *F. cf. fusca*).

Genus Phidiana Gray, 1850

**Phidiana lynceus** Bergh, 1867
10: Ortea et al. (2001), Moro et al. (2003).

Genus Cratena Bergh, 1864

**Cratena peregrina** (Gmelin, 1791)
5: García-Gómez et al. (1989).
Genus *Caloria* Trinchese, 1888

*Caloria elegans* (Alder and Hancock, 1845)


9: Ballesteros (1981a, as *C. maculata*), Ballesteros, Álvarez and Mateo (1986), Wirtz and Debelius (1986).


Genus *Learchis* Bergh, 1896

*Learchis poica* Marcus and Marcus, 1960

11: Cervera and Malaquias (unpubl. data).

12: Moro (com. pers.).

Genus *Facelinopsis* Pruvot-Fol, 1954

*Facelinopsis marioni* (Vayssière, 1888)

4: Megina (unpubl. data).


*Dondice occidentalis* (Engel, 1925)


Genus *Antonietta* Schmekel, 1966

*Antonietta luteorufa* Schmekel, 1966


Genus *Dicata* Schmekel, 1967

*Dicata odhneri* Schmekel, 1967


8: Ballesteros (unpubl. data).

12: Gosliner (pers. comm.).

Genus *Pruvotfolia* Tardy, 1969

*Pruvotfolia pselliotes* (Labbé, 1923)


4: Cervera and García (1986).
Genus Babakina Roller, 1972

Babakina anadoni (Ortea, 1979)
1: Ortea (1979c, as Rioselleolis).
3: Calado (unpubl. data).
4: Megina (unpubl. data).

Genus Algarvia García-Gómez and Cervera, 1989

Algarvia alba García-Gómez and Cervera, 1989

Family Aeolidiidae D’Orbigny, 1834
Genus Aeolidia Cuvier, 1798

Aeolidia papillosa (Linnaeus, 1761)

Genus Spurilla Bergh, 1864

Spurilla neapolitana (Delle Chiaje, 1823)
9: Ballesteros, Álvarez and Mateo (1986).

Genus Aeolidiella Bergh, 1867

Aeolidiella alderi (Cocks, 1852)
1: Ortea (1977c), Ballesteros (1980a).
4: Cervera and García (1986).

Some records after 1992 as A. soemmeringii.

Aeolidiella glauca (Alder and Hancock, 1845)

Aeolidiella sanguinea (Normann, 1877)
5: García-Gómez et al. (1989).

_Aeolidiella indica_ Bergh, 1888 (138)


_Genus Cerberilla_ Bergh, 1873

*Cerberilla bernadettae* Tardy, 1965

2: Urgorri (pers. comm.).
4: Cervera (unpubl. data).

_Genus Berghia_ Trinchese, 1877 (129)

*Berghia caerulescens* (Laurillard, 1830)

1: Ros (1975).
3: Calado et al. (1999, as *Spurilla*).
5: García-Gómez (1983, 2002, as *Spurilla*), García-Gómez and Thompson (1990, as *Spurilla*).

*Berghia verrucicornis* (Costa, 1867)

3: García-Gómez et al. (1991, as *Spurilla*).
4: Cervera and García-Gómez (1986, as *S. verrucicornis*), García-Gómez and Thompson (1990, as *Spurilla*).
5: García-Gómez (1983, 2002, as *Spurilla*), García-Gómez and Thompson (1990, as *Spurilla*).
6: Ballesteros et al. (1986), Sánchez-Tozino, Ocaña and García (2000a), Ocaña et al. (2000).

*Berghia columbina* (García-Gómez and Thompson, 1990)

3: Calado et al. (1999).
4: García-Gómez and Thompson (1990), Templado et al. (1993a) (both records as _S. columbina_).
10: Ortea et al. (2001), Moro et al. (2003).

_Genus Limenandra_ Haefelfinger and Stamm, 1958

*Limenandra nodosa* Haefelfinger and Stamm, 1958 (131)


All records from this area as _Baeolidia_.

_Family Eubranchidae_ Odhner, 1934

_Genus Eubranchus_ Forbes, 1838

*Eubranchus tricolor* Forbes, 1838 (132)


*Eubranchus pallidus* (Alder and Hancock, 1842)

8: Ballesteros (1985, as _E. cf. vittatus_).

*Eubranchus farrani* (Alder and Hancock, 1844)

4: Cervera and García-Gómez (1986).
5: García-Gómez et al. (1989).
10: Ortea et al. (2001), Moro et al. (2003), Wirtz and Debelius (2003).

*Eubranchus farrani* (Alder and Hancock, 1844)

4: Cervera and García-Gómez (1986).
5: García-Gómez et al. (1989).
10: Ortea et al. (2001), Moro et al. (2003), Wirtz and Debelius (2003).
**Eubranchus cingulatus** (Alder and Hancock, 1847) (133)
5: García-Gómez et al. (1989).

**Eubranchus exiguus** (Alder and Hancock, 1848)
1: Ortea (1975-76).

**Eubranchus doriae** (Trinchese, 1874) (133)

**Eubranchus arci** Ortea, 1979-80

**Eubranchus prietoi** Llera and Ortea, 1981

**Eubranchus linensis** García-Gómez, Cervera and García, 1990 (133)
2: Urgorri (pers. comm.).

**Eubranchus leopoldoi** Caballer, Ortea and Espinosa, 2001
10: Ortea, Caballer and Moro (2002a), Moro et al. (2003).

**Eubranchus telesforoi** Ortea, Caballer and Bacallado, 2002
10: Ortea et al. (2002).

**Eubranchus vascoi** Ortea, Caballer and Moro, 2002
12: Ortea et al. (2002).

**Family Pseudovermidae** Thiele, 1931

**Genus Pseudovermis** Périaslavzeff, 1891

**Pseudovermis artabrensis** Urgorri, Cobo and Besteiro, 1991

**Family Calmidae** Iredale and O’Donoghue, 1923

**Genus Calma** Alder and Hancock, 1855

**Calma glaucoides** (Alder and Hancock, 1854) (134)
4: Cervera (unpubl. data).
8: Ballesteros (unpubl. data).

**Calma gobioophaga** Calado and Urgorri, 2002 (134)
3: Calado and Urgorri (2002).
7: Templado, Talavera and Murillo (1987, as *C. glaucoides*).

**Family Glaucidae** Menke, 1828

**Genus Glaucus** Forster, 1777

**Glaucus atlanticus** Forster, 1777
9: Hidalgo (1916), Bofill and Aguilar-Amat (1924).
11: Bergh (1899).

**Family Tergipedidae** Thiele, 1931 (135)

**Genus Tergipes** Cuvier, 1805

**Tergipes tergipes** (Forskal, 1775)
4: Cervera (unpubl. data).

**Genus Cuthona** Alder and Hancock, 1855 (136)

**Cuthona caerulea** (Montagu, 1804)
3: De Oliveira (1895), Hidalgo (1916), Nobre (1932) (all the above records as Amphorina), García-Gómez et al. (1991), Calado et al. (1999, 2003).
8: Ros (1975, 1978b, 1985a, all records as Trinchesia aurantia), Ros and Altimira (1977, as Trinchesia), Ballesteros (1985).
Many records before 1985 as Trinchesia caerulea.

Cuthona foliata (Forbes and Good sir, 1838)
1: Ortea (1977c, as Trinchesia).
8: Ballesteros (unpubl. data).

Cuthona amoena (Alder and Hancock, 1845)
1: Ortea (1977c, as Cratenopsis).
3: Calado et al. (2003).

Cuthona pallida (Elliot, 1906)
7: Marín and Ros (1987a, as C. miniostriata).
8: Ros (1975, as Trinchesia cf. miniostriata).

Cuthona genovae (O’Donoghue, 1929)
1: Ortea (unpubl. data).
4: Cervera and García (1986).
6: Ballesteros et al. (1986), Sánchez Tocino, Ocaña and García (2000a).
Genus *Catriona* Winckworth, 1941 (136)

*Catriona gymnota* (Couthouy, 1838)
1: Ortea (1977c), Fernández-Ovies (1981, as *Trinchesia aurantia*).
2: Urgorri and Besteiro (1983, 1984, both as *Cuthona gymnota*).
4: Cervera and García (1986).

*Catriona maua* (Marcus and Marcus, 1960)
4: Cervera (unpubl. data).

Genus *Tenellia* A. Costa, 1866

*Tenellia adspersa* (Nordmann, 1845)
4: Cervera (unpubl. data).
7: Marín and Ros (1987, as *Tenellia pallida*).

Family Fionidae Alder and Hancock, 1855

*Genus Fiona* Alder and Hancock, 1851

*Fiona pinnata* (Eschscholtz, 1831)
8: Ros (1975).

**Family Embletoniidae** Schmekel, 1970 (137)

*Genus Embletonia* Alder and Hancock, 1851

*Embletonia pulchra* Alder and Hancock, 1851
7: Templado, Talavera and Murillo (1987, as *E. pulchra faurei*), Marín and Ros (1987a, as *E. pulchra faurei*).
8: Ballesteros (1985, as *E. pulchra faurei*).

**REMARKS**

(1) According to Malaquias, Martínez and Abreu (2002), the family Ringiculidae is poorly known, since most of the systematic work has been focused on shells only, which are very similar among species. As a result, the taxonomy of the northeast Atlantic species is confusing, and therefore it is very difficult to confidently recognise the different species. A revision of the Atlantic Ringiculidae is required, and since it is not yet available, we decided to keep all the names included in the previous catalogue (Cervera *et al*., 1988).

(2) Ciccone and Savona (1982) pointed out that *Ringicula nitida* and *Ringicula leptochela* are both valid species, the former inhabiting the Atlantic Ocean and the latter the Mediterranean Sea. Therefore, the reference to *R. leptochela* off the Portuguese coasts by Nobre (1936) must be regarded as a misidentification of *R. nitida*. We also considered the species *R. pulchella* Morelet, 1880 as a synonym of *R. nitida*, based on the opinion of Bouchet, as noted in Platts (1985).

(3) Ciccone and Savona (1982) highlighted the possibility that *Ringicula minutula* could be a synonym of *Ringicula conformis*.

(4) The presence of *Japonacteon pusillus* in Azores was quoted by Bouchet (1975) with uncertainty. The subsequent references by Mikkelsen (1995) and Malaquias (2001) were based on Bouchet (1975). This species was referred to in the previous catalogue as *Japonacteon pusillus* (Forbes, 1944).

(5) *Callistracon merki* was described by Dall (1889) under the genus name *Ovulacteon*.

(6) In the previous catalogue (Cervera *et al*., 1988), this family was under the name Hydatinidae Pilsbry, 1893, which is a synonym of Amplustridae Gray, 1847.
(7) Although *Hydaticina physis* (Gmelin, 1794) is considered by some authors a synonym of *Hydaticina vesicularia* (Solander, 1786), we decided to maintain the former name. This name is more widely used, and until a revision of the family Amphustridae is available, no conclusive statements can be made. In many other groups of cephalaspideans, the majority of the systematic work has been concentrated only on the shells, which are very much similar between different species. Wirtz (1995b) shows an image of a live specimen of *H. physis* from the Canary Islands. The reference to the Madeira archipelago is made on the basis of a shell housed in the collections of the Museo Municipal do Funchal (História Natural).

(8) As pointed out in the previous remark, considerable confusion surrounds the genus *Hydaticina*. Since no systematic revision is yet available, we decided to maintain all names listed in the previous catalogue (Cervera et al., 1988).

(9) *Diaophana globosa* was recorded in the previous catalogue (Cervera et al., 1988) under the name *Diaophana hiemalis* (Couthouy, 1839).

(10) Nordsieck (1972) considered *Retusa pellucida* a form of *R. truncatula*.

(11) Nordsieck (1972) described the new genus *Mamillotrema* to include the species *Retusa mmillata*. However, this genus is not well supported, and several authors (e.g. Lemche, 1948) have even considered this species a synonym of *Retusa truncatula*.

(12) *Retusa obesa* is a problematic taxon, requiring further study to clarify its taxonomic status.

(13) *Retusa multisquadrata* is a problematic species, requiring further study to clarify its taxonomic status.

(14) In the past, *Cylichnina umbilicata* has often been cited in the literature under the name *Cylichnina subcylindrica* (Brown, 1827). Cervera et al. (1988) recorded it as *Retusa umbilicata* (Montagu, 1803) in agreement with Aartsen, Menkhorst and Gittenberger (1984). The valid name in current use is *Cylichnina umbilicata* (Montagu, 1803), and it is therefore adopted here.

(15) Nordsieck (1972) described the genus *Mamillocylichina* to include both species *Cylichnina richardi* and *Cylichnina mirabilis*. However, no justification was given to create this new genus, and therefore this generic designation is not used in the present catalogue.

(16) In the previous catalogue (Cervera et al., 1988), *Roxania pinguicola* and *Bulla pinguicola* were considered two different species, and *Bulla subrotunda* Jeffreys, 1873, together with *Bulla abyssicola* Dall, 1887, were listed as synonyms of the latter. Although the taxonomic status of these species and their synonymy still needs to be fully assessed, we follow the current trend that includes *B. pinguicola* in the genus *Roxania*.

(17) Nordsieck (1972) assigned *Philine montenosatoi* to a new genus, *Phillingwynia*. However, no anatomical data were provided to support the change, and further studies are required to assess whether or not this genus is valid.

(18) *Chelidonura africana* was originally described based on specimens belonging to at least two different species, which has caused enormous confusion and controversy over the years. In the earlier catalogue (Cervera et al., 1988), this species was designated under the name *Chelidonura italic* Sordi, 1981 and a comprehensive remark concerning the taxonomic and nomenclatural problematic of the western Mediterranean species of the genus *Chelidonura* was included. Recently, Martínez, Malaquias and Cervera (2002) proposed the designation of a neotype for *C. africana*, and considered *C. italic* as a junior synonym of this species.

(19) Ortea, Moro and Espinosa (1996) attributed this species to the genus *Chelidonura* on the basis of its external anatomy only. Some years later, these same authors (Ortea, Moro and Espinosa, 2003) transferred this species to the genus *Odontoaeglaja* Rudman, 1978 based on the presence of a radula. Nevertheless, Gosliner (pers. comm.) suggests that a re-assessment of the phylogenetic relationships between both genera should be carried out, considering the presence of radula in another undescribed *Chelidonura* from Southern Africa (Gosliner, 1987, p. 43, fig. 13; 1994b, p. 280, fig. 18).

(20) Gosliner (1980) transferred the species *Aglaja depicta* to the genus *Philinopsis* due to the fact that the body form, shell, penis, pharynx, mucous gland and gonoduct are identical to those described for members of the genus *Philinopsis*.

(21) *Doridium laurentianum* is an incertae sedis taxon. This species was originally described based on four dredged shells, of which two were lost (Watson, 1897). The remaining two are untraceable, and the species was never illustrated by the author (Malaquias, 2004).

(22) As Schmekel and Cappellato (2002) stated, the taxonomic history of *Runcina coronata* and its name is complex, mainly due to the existence of several dark *Runcina* species in the Eastern Atlantic and Mediterranean Sea that are very similar to each other. These are the case of *Runcina ornata* Quatrefages, 1844, *Runcina calaritana* Colosi, 1915, *Runcina aurata* García, López, Luque and Cervera, 1986, *Runcina avellana* Schmekel and Cappellato, 2001 and *Runcina rotunda* Schmekel and Cappellato, 2002.

(23) The descriptions of *R. ornata* and *Runcina macrodenticulata* included in Cervera, García-Gómez and García (1991) are based on the specimens described in García *et al.* (1986) and García, García-Gómez and López de la Cuadra (1990), respectively.
The occurrence of *Runcina capreensis* on the Iberian Peninsula is doubtful. According to Schmekel and Cappellato (2002), *R. capreensis* (from Capri, Italy) was never found again after its original description. However, several records of this species on the Iberian coast can be found in the literature. These references are either names included on faunistic lists, or the result of identifications based on external morphology only, which is meaningless to discriminate confidently amongst many of the *Runcina* species.

We believe that the name *Runcina adriatica* has been used in the eastern Atlantic to name specimens belonging indeed to more than one species. For example, Malaquias and Calado (1997) cited several specimens from the Selvagens Islands as *Runcina adriatica* Thompson, 1980. However, a subsequent review of this material shows that this could have been a misidentification, and the specimens might belong indeed to a different species.

Much confusion surrounds the family Bullidae, and the identity of most of the species remains doubtful. A revision in order to clarify the systematics of this family in the Atlantic is required. Since no studies are yet available, we decided to keep all but one (*B. pinguicola* transferred in this catalogue to the genus *Roxania* – see remark 16) the species quoted in the previous catalogue.

Hidalgo (1917) cited the species *Bulla nigeriana* Pilsbry, 1893 in the same localities as *Bulla striata* Bruguière, 1792. This is probably the result of a misidentification, and here we consider *B. nigeriana* as a synonym of *B. striata*. The same criterion has already been followed by Cervera et al. (1988). Notable differences were observed between different populations of *B. striata* in the Mediterranean Sea, and several species have been reported in this area.

According to Bouchet (1975), anatomical studies are required to clarify the generic status of this species.

Hidalgo (1917) cited *Haminoea hydatis* along the Iberian coast and Balearic Islands, and considered *Haminoea navicula* a synonym of the former species. Both species are valid (Talavera, Murillo and Templado, 1987), and it is not possible to determine which one Hidalgo was dealing with (maybe even both). Therefore, the citations by Hidalgo (1917) are not included in this catalogue. Misidentifications between both species are common in the literature. Monterosato (1923: 1317, fig. 16) has described the species *H. hydatis* cf. *cymoelium* based on a single shell collected in Bengasi, Libya, Mediterranean Sea. Nordsieck (1972) elevated this form to the status of subspecies, and Piani (1980) later included it on the checklist of valid Mediterranean species. However, Oliverio and Tringali (2001), after a revaluation of the type specimens described by Monterosato, pointed out that the holotype of *H. cymoelium* may be, in fact, a shell of *H. hydatis* (see Oliverio and Tringali, 2001, p. 30, fig. 45 for an illustration of the holotype). More details are given in Malaquias and Cervera (in press).

Hidalgo (1917) has considered *H. navicula* a synonym of *H. hydatis*. Since both species are valid (Talavera, Murillo and Templado, 1987) and it is impossible to know which one Hidalgo was dealing with (maybe even both), we decide to exclude Hidalgo’s records from this catalogue. The confusion in the literature as a result of misidentifications between both species is often common and we recommend caution in the use of such references. More details are given in Malaquias and Cervera (in press).

Several reports refer the presence of *Haminoea elegans* in the East Atlantic, from Gabon to Mauritania, the Canary Islands, Portugal, the British Isles and the Mediterranean Sea (Leach, 1852; Nobre, 1938-40; Nicklès, 1947; Nicklès, 1950; Marche-Marchad, 1958; Nordsieck and Garcí-Talavera, 1979; Bernard, 1984; Sabelli, Gianuzzi-Sabelli and Bedulli, 1990). Nevertheless, all of these reports must be regarded as doubtful, since they were based only on shells. Martínez and Ortea (1997), after studying live specimens from Congo and São Tomé and Príncipe, concluded that they belong to *H. elegans*, and emphasise that this species should be at least present in the equatorial belt. However, the type locality of this species is the south of the British Isles, and the specimens studied by Martínez and Ortea (1997) are likely to be something different. The true *H. elegans* may probably be a synonym of either *H. navicula* or *H. hydatis*. Further studies are required to clarify the status of this species.

Several authors had included the genus *Clylichnium* in the family Atyidae (e.g. Thiele, 1931; Nordsieck, 1972). Bouchet (1975) based on anatomical features, transferred this genus to Scaphandridae, where it was included by Cervera et al. (1988). Presently, the genus *Clylichnium* Dall, 1908 is considered part of the family Haminoeidae Pilsbry, 1893 in the same localities as *B. striata* Bruguière, 1792. The
According to Gosliner (pers. comm.), this species does not belong to

Some authors considered the genus

According to Rampal (2002), Cavolinia flava and Cavolinia gibbosa are different species, the former distributed in temperate Atlantic waters, and the later restricted to the South Atlantic.

The records of Diacria trispinosa may be interpreted with caution after the review of Bontes and Van der Spoel (1998).

Rampal (2002) considers Creseis conica a different species from Creseis virgula. The latter is mainly distributed in the Indo-Pacific, whereas all records form the North Atlantic belong to the former.

All previous records of Cavolinia longinastris should be reconsidered after the review of Van der Spoel, Bleeker and Kobayasi (1993).

Jensen (1992b) discussed the use of Ascoglossa versus Sacoglossa, arguing for the use of the latter name rather than the former.

According to Gosliner (pers. comm.), this species could be Oxynoe antillarum Mörch, 1863.

Phylogenetic analyses conducted by Gosliner (1995), Jensen (1996), and Mikkelsen (1998) show the genus Elysia to be a paraphyletic clade. For this reason, as suggested by Gosliner (1995), Elysiaella, Pattyclysea, Tridachia and Tridachella should be united with Elysia to maintain generic monophyly.

Elysia translucens was considered a junior synonym of Elysia viridis until Bouchet (1984) confirmed its validity; this is probably why there is a scarciy of records of this common species.

Bouchet (1984) considers that, if the description of Elysia fezi is correct, it should be considered as valid, even though it has not been collected again. If so, it would be the largest Mediterranean species of Elysia (44 mm), characterised by having radular teeth with a tricuspid anterior edge. After its description, this species has not been collected, although the opisthobranch populations of its type locality, Cubellas, have been very frequently sampled by several local experts during more than twenty years, one of them (Ballesteros) co-author of the present checklist.

Several authors have synonymised Elysia marginatae with other species of Elysia. Thus, Thompson and Jaklin (1988) considered it as a junior synonym of Elysia timida, without any justification, whereas Bouchet (1984) considered it a junior synonym of E. viridis, also providing no arguments. However, Ortea et al. (1998), discussing Canary Islands E. timida specimens, considered E. marginatae a valid species; moreover, they proposed that Elysia gordanae should be considered a junior synonym. Regarding this last statement, we have to point out that E. gordanae has a serrated edge to its radular teeth, and rounded edges of the parapodia, with small white protuberances, which have not been mentioned for E. marginatae. This leads us to consider both species to be different. Our conclusion is that E. marginatae is a valid species, because of its unique colour pattern, large size, and smooth radular teeth. Nevertheless, the lack of additional specimens with this morphology collected since its original description in 1962, even though the eastern Iberian coasts have been intensively studied over the last three decades by several authors, and the lack of data about the size of the radular teeth, suggests that some doubts about its true taxonomic identity still exist.

Some authors considered the genus Thuridilla as a junior synonym of Elysia (Thompson, 1981; Gascoigne, 1985; Thompson and Jaklin, 1988). However, recent phylogenetic analyses of the genus (Gosliner, 1995) and of Sacoglossa (Jensen, 1996, 1998; Mikkelsen, 1998) have eliminated any doubts regarding its validity.

According to Gosliner (pers. comm.), this species does not belong to Bosellia, but Elysia. This author states that it highly resembles E. pusilla (Bergh, 1872).

The monophyly of Polybranchiidae currently has weak support (Jensen, 1996; Mikkelsen, 1998). Nevertheless, Jensen (1996) proposed retaining it, considering that the fact most genera are poorly described anatomically, and also that monophyly could be ‘forced’ without seriously disrupting the other monophyletic groups.

Thompson (1988a) considered Hermaea to be a member of the family Stiligeridae, and considered Placida as a subgenus of the former. However, recent phylogenetic analyses by Jensen (1996, 1997) and Mikkelsen (1998) have validated the family Hermaeidae, in which Hermaea is included, and concluded that Stiligeridae Iredale and O’Donoghue, 1925 is a junior synonym of Limaponididae Gray, 1847.

Jensen (1996, 1997) discussed the validity of the genus Hermaeopsis with regard to the genus Hermaea. Furthermore, this author indicated that it has to be considered within the family Hermaeidae. The phylogenetic analysis of Mikkelsen (1998) supports this view.

Jensen (1996) noted the probable non-monophyly of Escolania and indicated that it may have to be split. Nevertheless, she retains the genus as Escolania, and we follow this approach here.
et al. (1988) and Cervera, García-Gómez and Ortea (1991) mistakenly stated that Placida was dated in 1877-1879. These authors follow the statement by Trinches (1893) indicating that this name was used for the first time in the monograph Aeolidiidae et famiglie affini del Porto di Genova (1877-1879) to replace Laura Trinches, 1873, since this name was predated by Laura Lacaze-Duthiers, 1865 (type-species: Laura gerardiae Lacaze-Duthiers, 1865, Comptes rendus hebdomadaires des séances de l’Académie des Sciences, 61: 838-841). Nevertheless, the proposal for this change appears on p. 84 of Rendiconto delle Sessioni della Reale Accademia delle Scienze dell’Istituto di Bologna of 1876. Therefore, Placida would have to be dated in 1876.

Placida tardyi Trinches, 1873 and Placida viridis Trinches, 1873 were considered synonyms on the basis of the paper by Gascoigne and Sordi (1980). However, Cervera et al. (1988) provided arguments to retain both names as separate species. On the Iberian coast, P. viridis has been recorded both for the Mediterranean (Ros and Altimira, 1977; Ros, 1978b, 1985a; Templado, Talavera and Murillo, 1987; Marín and Ros, 1987, 1990), and the Atlantic (Ortea, 1977a, quoted as Hermaea viridis). However, most of these references only provide the name of the species without any kind of additional information which would make possible a comparison with the original description or any other references. Ortea (1977a) gives a few anatomical and colour pattern characteristics, although the figure referred to this species cited by this author (illus. 3, fig. 5) is based on the original figure by P. tardyi (Trinches, 1877-79; tab. XV, fig. 1). On the other hand, the description by Marín and Ros (1987) of a single specimen does not match the description by Trinches (1873). For this reason, we prefer to omit the Iberian records of P. viridis from the present catalogue until more detailed records can confirm the existence of this species on Iberian coasts.

García-Gómez (1987), Cervera et al. (1988), Sánchez Tocino, Ocaña and García (2000a), and Sánchez-Moyano et al. (2000) spelt incorrectly the name of this species as Placida verticillata, rather than Placida verticillata. Willan and Burn (2003) invoke the ICZN (1999, Article 23.9.2) to maintain Umbraculoidea Dall, 1889 as a nomen protectum instead of Tylodinoidea Gray, 1847.

Schmekel (1985) states that all characters defining Notaspidea are plesiomorphies, and Tylodinoidea as well. Wägele and Willan (2000) provide an exhaustive phylogenetic analysis of the Nudibranchia, and one of their main conclusions is that Pleurobranchoidea is its sister group. These authors introduce the taxon Nudipleura, including both Nudibranchia and Pleurobranchoidea. This new taxon has been confirmed by subsequent phylogenetic analyses based on morphological (Wägele and Klussmann-Kolb, 2005) and molecular data (Wollscheid-Lengeling et al., 2001; Wägele, Vonnemann and Wägele, 2003; Grande et al, 2004a,b; Vonnemann et al., in press). Obviously, Notaspidea therefore becomes a non-monophyletic taxon.

Valdés (2001) and Willan and Burn (2003) give detailed accounts of the publication date, authorship and type species of Umbraculum and Tylodina.

Willan (1987a) discussed the taxonomic identity of the genus Tylodinella Mazzarelli, 1898, rendering it not valid. He proposed the new name Anidolyta to include the species Anidolyta duebenii Lovén, 1846 and A. spongotheras (Bertsch, 1980). Nevertheless, Warén and Di Paco (1997) suggested three hypotheses regarding the taxonomic identity of Tylodinella, without favouring any of them. In one of these hypotheses, Tylodinella would be a senior synonym of Anidolyta. Platts (1985) pointed out that the species name of A. duebenii has to be spelt with a double ‘’y’’ at the end, even though in most references it appears with only one.

Many authors have considered this genus to be monotypic (Burn, 1959; Rehder, 1980; Boss, 1982; Willan, 1987a, 1998), although some others, such as Thompson (1970), considered it bitypic. Valdés and Lozouet (2000), although leaving this controversy open, consider it difficult to accept the current existence of a single circumtropical species based on palaeo-ontological data. Nevertheless, they use the name of Umbraculum umbraculum, which is that of the monotypic hypothesis. Willan and Burn (2003) also leave this issue open. In the present paper, we have followed the former of these hypotheses.

Berthella aurantiaca has been misidentified as a species of Berthella Gardiner, 1936 due to its similar coloration (see Lacaze-Duthiers, 1859; Thompson, 1977; Templado, 1982c, 1984; Ballesteros et al., 1986). For this reason, many of its records having no internal anatomical data should be reviewed. Some conspicuous internal differences (size and placement of the shell, jaw elements, radular teeth, midgut gland development and penial gland) between Berthella aurantiaca and Berthella species avoid a potential misidentification.

Six species of Berthella are currently considered valid (Burn, 1962; Willan, 1987a). However, investigation started by Cervera (1988) on this genus revealed the need for an extensive review. Such a review is currently being conducted by Cervera, Gosliner and García-Gómez (in preparation). Our data lead us to confirm that the specimens of Berthella recorded within the geographical context of the present paper do not belong to Berthella cit-
Marcus and Gosliner (1984) described two new species of *Atellina edwardsii* (earlier known as *Berthellina edwardsii*) from the Azores. One year later, this author provided a more detailed description of the species (Vayssière, 1898) in his monograph on pleurobranchids, including one additional specimen from the Cape Verde Islands. The latter description, although detailed, overlooks some important elements useful for comparisons with other species. Nevertheless, our data on the internal anatomy of specimens from the Iberian coast, as well as the Canary, Madeira and Azores archipelagos, match those of *B. edwardsii* and those described in the Lacaze-Duthiers’ (1859) monograph (as *Pleurobranchus aurantiacus*). Thus, we consider all the above specimens to belong to *B. edwardsii*, provisionally. To elucidate whether *B. edwardsii* and *Atellina engeli* Gardiner, 1936 are conspecific is still an unresolved issue. Some authors, such as Edmunds and Thompson (1972), Thompson (1976, 1988b) and Cattaneo-Vietti (1986), assume that *B. citrina* and *B. engeli* are synonyms; others (Willan, 1983, 1984) do not agree. Our data support the latter point of view.

Marcus and Gosliner (1984) described two new species of *Pleurobranchaea* from the Mediterranean, *Pleurobranchaea notmei* and *Pleurobranchaea vayssierei*, which are considered junior synonyms of *Pleurobranchaea mekelii*, according to the criteria of Cervera and García-Gómez (1988). Bergh (1892) describes *Pleurobranchaea morosa*, but Marcus and Gosliner (1984) do not include this species in their review of the subfamily, since it is ‘insufficiently described’.

The monophyly of Nudibranchia is controversial (Wägele, Vonnemann and Wägele, 2003). Although it is supported by recent morphological and molecular phylogenetic analyses (Wägele and Willan, 2000; Wollscheid and Wägele, 1999; Wollscheid-Lengeling et al., 2001; Vonnemann et al., 2005), it is rejected by others (Minichev, 1970; Schmekel, 1985; Thöllesson, 1999b; Grande et al., 2004a,b). Despite strong evidence of the paraphyly of Nudibranchia as presented by Grande et al. (2004a,b), we prefer to retain this taxon until a stable classification of Opisthobranchia is accepted.

Recent studies support the non-monophyly of Phanerobranchia (Thöllesson, 1999a; Wollscheid and Wägele, 1999; Wollscheid-Lengeling et al., 2001; Valdés, 2002; Wägele, Vonnemann and Wägele, 2003; Grande et al., 2004a,b; Fahey and Gosliner, 2004), although an in-depth phylogenetic analysis of this taxon is still lacking.

This record is considered doubtful.

According to ICZN article 32.5.2.1, the correct specific name of this species should be *cervinoi* instead of *cervinioi*.

The record of *Acanthodoris pilosa* from the Straits of Gibraltar needs to be confirmed. Sánchez Santos (unpubl. data) has collected two specimens similar in external appearance to that collected by García Gómez (1987, 2002), but they do not fit the original description of this species. No data on the internal anatomy of the specimens from southern Iberian Peninsula are known.

Valdés and Ortea (1995) consider *Okenia aspersa* a junior synonym of *Okenia quadricornis* (Montagu, 1815). However, ICZN opinion 1.014 (1974) has invalidated this last name in favour of *O. aspersa*.

Figure captions of *Trapania ortea* and *Trapania hispalensis* are switched erroneously in García-Gómez (2002).

At present, there is not an agreement on the genera that should be included in this family, since the internal phylogenetic relationships are still not clearly understood (Rudman, 1998). Many authors now restrict the Polyceridae to a few allied genera (Odhner, 1941), and thus consider Notodorididae, Triphididae, Nembrithidae, and Gymnodorididae to be distinct families. Burn (1967) suggested that the family should comprise the four subfamilies Kalinginae, Triophinae, Polycerinae, and Nembrothinae, and that notodorids and gymnodorids should be placed in separate subfamilies. This view is also adopted by Rudman (1998) and followed in the present paper. Recent phylogenetic analysis regarding this issue has been inconclusive (Thöllesson, 1999a; Wägele and Willan, 2000; Wollscheid and Wägele, 1999; Wägele, Vonnemann and Wägele, 2003). Recently, the phylogenetic analysis carried out by Fahey and Gosliner (2004) led to *Notodoris Bergh, 1875 being considered a junior synonym of Aegires Lovén, 1844; consequently, Notodorididae is now considered a synonym of Aegiridae (see remark 74 for the correct spelling of the family name). Given such analysis, the only polycerid included (*Polycera*) does not fit within the Aegiridae, nor appear as a sister group. Because this situation has yet to be fully clarified, no splitting subfamilies have been considered in the present paper.

Rudman (2003b) point out the possibility that *Polycera aurantiomarginata* is a junior synonym of *Polycera chilluna* Marcus, 1961 from North Carolina, a species that was overlooked by García-Gómez and Bobo (1984), on the basis of a photo of a living specimen of *Polycera* attributed to the species by Marcus (1961). However, the description of this species is based on a single preserved specimen. Therefore, and until a detailed study can solve this question, we prefer to retain *P. aurantiomarginata* as a valid species from the eastern Atlantic.

The genus *Kaloplocamus* Bergh, 1880 is poorly known. All species were described between 1835 and 1955, except *Kaloplocamus filosus* (Cattaneo-Vietti and Sordi, 1988). Most of these species have only been reported when origi-
nally described and not reported again since. Because several generic names have been attributed to this genus, a review is still needed (Vallés, 2002). Vallés, Valdés and Ortea (2000) considered Kalocampeus atlanticus (Bergh, 1893) a separate species from Kalocampeus ramosus. However, these authors stated that the two studied specimens of Kalocampeus from the Azores fit exactly with the external description of K. ramosus by Cantraine (1835), and considered both species to be synonyms. However, we believe that Vallés, Valdés and Ortea (2000) do not give strong arguments to support this point of view, and therefore we prefer to retain both names separately as valid.

Willan (2000) discussed in detail the correct spelling of the family name, Aegridae.

Fahey and Gosliner (2004) have discussed the possible co-specificity of Aegires punctilucens and Aegires leuckarti. Data on the internal anatomy of the original material is lacking, and these authors had no access to this material. Therefore, following the proposal of Schmekel and Portman (1982) to separate subspecies, they propose maintaining A. punctilucens from the Mediterranean Sea as a separate species from A. leuckarti and Aegires albopunctatus MacFarland, 1905.

Fahey and Gosliner (2004) point out the possibility that Aegires palensis might be a junior synonym of A. leuckarti. However, they retain this species until additional comparative material for both taxa can be collected and examined.

Valdés (2002a) carried out a phylogenetic analysis and a systematic review of the cryptobranch dorids, and introduced the taxon Labiostomata for the radula-bearing cryptobranch dorids. The genera included in this taxon have buccal armature, as well.

Rudman (2003a) considers Glossodoris edmundsi as a junior synonym of Glossodoris ghanensis Edmunds, 1968, although he does not exclude the possibility of a case of mimicry.

Ortea, Valdés and García-Gómez (1996) carried out a review of the Atlantic blue chromodorids. These authors gave the list of synonyms for each species, and introduced several new specific and subspecific taxa.

Until the first half of the 1980s, Hypselodoris villafranca was recorded in many papers as Hypselodoris gracilis. In some older papers, it was also attributed to the genera Chromodoris or Glossodoris.

In the past, Hypselodoris picta has often been attributed to the genera Chromodoris and Glossodoris. On the other hand, before the paper by Ortea, Valdés and García-Gómez (1996), this species was usually attributed specific names such as valenciennesi, elegans or webbi, even villafranca, as in Fez (1974). Ortea, Valdés and García-Gómez (1996) established several subspecies within this species, some of them distributed in one or several of the areas considered in the present paper (H. picta picta, H. picta webbi, H. picta azorica). However, these subspecies are based on colour differences only, and to date no genetic or molecular studies have been conducted to confirm or reject them. Bertsch (1997) presents strong criticism, advising caution regarding these subspecies and some of the new species proposed by the above authors.

Before Ortea, Valdés and García-Gómez (1996), this species was usually recorded as Hypselodoris coelitis.

Hypselodoris fontandraui has been also called Hypselodoris messensis, and has sometimes been attributed to the genus Glossodoris.

Hypselodoris midatlantica was attributed to the genus Glossodoris in the past. The specific name of the species (midatlantica vs. tricolor) remains controversial today. For more details, see Gosliner (1999). Ortea, Valdés and García-Gómez (1996), Bertsch (1997), and Gosliner and Johnson (1999). In the present paper, we use both names, pending a definitive decision.

In the past, this species has been frequently attributed to the genus Glossodoris.

Chromodoris luteopunctata was described from specimens collected at Temara (Moroccan coast) by Gantès (1962). We consider Chromodoris rodomauculata Ortea and Valdés, 1991 to be a junior synonym of C. luteopunctata, since the colour differences used to establish the former are very weak. In fact, Valdés currently agrees with our view (pers. comm.).

Gosliner (1990) considered Chromodoris britoi a junior synonym of Chromodoris clenchi (Russell, 1935). Later, Ortea, Valdés and Espinosa (1994) reviewed the species included in the C. clenchi colour group, and determined that C. clenchi, Chromodoris neona (Marcus, 1955), Chromodoris binza Marcus and Marcus, 1963 and Chromodoris britoi Ortea and Pérez, 1983 are different species. However, Valdés (2000) presented a different view, one considering C. binza and C. britoi to be probably conspecific. A molecular study of specimens from both sides of the Atlantic is needed to resolve this issue.

The genus Cadlina was considered a member of the family Cadlinidae. Rudman (1984), after his review of the Indo-Pacific Chromodorididae genera, stated that Cadlina is a basal genus within this family. However, recent phylogenetic analyses based on nuclear (Thöllesson, 2000) and mitochondrial (Grande et al., 2004a,b) genes provide evidence to exclude Cadlina from Chromodorididae. A recent paper presenting phylogenetic analysis based on


67
the 16S rDNA gene (Wilson and Lee, in press) supports a very close relationship with Chromodoris. However, only Actinocyclus, Cadilinella, Cadina and Chromodoris were considered in this study, which therefore does not provide strong evidence regarding the inclusion (or not) of Cadina within Chromodorididae.

(89) In the phylogenetic analysis of the cryptobranch dorids carried out by Valdés (2002a), the author established the synonymy at family level within this group. Thus, Archidorididae Bergh, 1891 and Aldisidae Odhner, 1939 are now considered junior synonyms of Dorididae Rafinesque, 1815. On the other hand, Kentrodorididae Bergh, 1891, Platydididae Bergh, 1891, Baptochorididae Odhner, 1926, Rostangidae Pruvot-Fol, 1951, Geitodorididae Odhner, 1968 and Taringidae Odhner, 1968 (among others) would be junior synonyms of Discodorididae Bergh, 1891.

(90) Valdés (2002a) concludes that the genus Archidoris Bergh, 1878 is a junior synonym of Doris.

(91) Valdés (2002a) points out that Doris sticta is probably a synonym of Doris eubalia P. Fischer, 1872. Moreover, Valdés and Fahey (in press) recently concluded that the overlooked name Glossodoris dorignyi J. E. Gray in M. E. Gray, 1850 is a senior synonym of D. sticta. However, these authors retain this name as valid in applying article 25.9.2. of the ICZN.

(92) Ortea, Pérez Sánchez and Llera (1982) described two new species of Aldisa from the Canary Islands, Aldisa smaragdina and Aldisa explota. The former has been subsequently recorded in different areas around the Iberian Peninsula (Atlantic and Mediterranean), as well as off Madeira and the Azores. However, Millen and Gosliner (1985) considered A. smaragdina to be a synonym of Aldisa binotata Pruvot-Fol, 1953, and A. explota to be a synonym of Aldisa baryvalensis Pruvot-Fol, 1951. García et al. (1986) presented a detailed comparison of all these species, confirming their validity.

(93) According to Valdés (pers. comm.), Discodoris confusa could be a junior synonym of Discodoris maculosa, but this should be confirmed. For this reason, we prefer to retain both names as valid in the present paper.

(94) Cervera, García-Gómez and García (1985) and Ortea (1990) redescribed Geitodoris planata based on specimens collected from southern mainland Spain and the Canary Islands. These authors considered this species to be different from Archidoris stellifera Vassylié, 1904 due to differences in their radular morphology. Cervera, García-Gómez and García (1985) indicated that the confusion existing in the literature up to 1985 should lead to a revision of the records for both species. Perrone (1987) redescribed A. stellifera from Italy (as Discodoris) and confirmed the absence of jaws, the presence of hooked radular teeth, and also of caryophyllidia. With this information in hand, Valdés (2002a) states that A. stellifera should be placed in a genus of caryophyllidia-bearing dorids, and that it is different from G. planata. A. stellifera has often been assigned to Discodoris over the past two decades.

(95) After the phylogenetic and systematic revision of the cryptobranch dorids by Valdés (2002a), it is obvious that Discodoris rosii should be removed from the genus Discodoris. Dayrat and Gosliner (2005) transfer this species to the genus Rostanga, stating that the clade Rostanga + ‘D.’ rosii is supported by having elongate, slender lateral teeth (all radular teeth or only part). However, these authors overlooked the phylogenetic analysis of Rostanga carried out by Garovoy, Valdés and Gosliner (2001). These authors build a data matrix based on 15 characters, 9 of these involving the radular teeth. According to their analysis, this genus is supported by three synapomorphies, although two of them appear in other cryptobranch genera. However, only the Rostanga species have the cusp of innermost lateral teeth of the radula characteristically folded inwards relative to the base of the teeth. This last feature is not present in ‘D.’ rosii and is not considered in the phylogenetic analysis by Dayrat and Gosliner (in press). On the other hand, these authors consider ‘D.’ rosii to have labial armature, and that the presence of this feature is an apomorphic condition. However, we consider that the presence of labial armature is a plesiomorphic condition (see also Garovoy, Valdés and Gosliner, 2001, and Valdés, 2002b), and specimens from different localities around the Iberian Peninsula (coasts from Granada, Straits of Gibraltar and southern Portugal) lack labial armature. For this reason, we prefer not to re-allocate this species into another known genus before re-analysing the case again.

(96) Ortea and Martínez (1990) and Ortea and Cabrera (1999) considered Thordisa azmanii a junior synonym of Thordis diana Marcus, 1955. This last species was described from a single specimen from Brazil, and has not been recorded again since. According to the above authors, it would be an amphiatlantic species. However, Chan and Gosliner (in press) and Chan (in press) review the species of this genus, as well as their phylogenetic relationships, and confirm the validity of T. azmanii.

(97) Dorgan, Valdés and Gosliner (2002) comment that the reproductive system of Platydoris stomascuta is similar to other species of Baptochoris, and therefore it must be included in this genus. However, Fischer and Cervera (in press) point out that Bouchet (1977) does not describe radular teeth with denticles in this species, and they do not consider it as a true Baptochoris. As Fischer and Cervera (2005) state, a redescriptions of this species would be necessary before removing it from Platydoris, and we follow this criterion in the present paper.
et al. J. L. Cervera

(98) Although García (1986b) retained Rostanga perspicillata Bergh, 1881 as a valid name, Schmekel and Portmann (1982), Thompson and Brown (1984), Rudman and Avern (1989), Valdés and Gosliner (2001), and Garovoy, Valdés and Gosliner (2001) agree in considering this name to be a junior synonym of Rostanga rubra (Risso, 1818).

(99) Thompson (1975) synonymised Peltodoris with Discodoris, and few authors followed Thompson’s authority during some years, including some of the authors of the present paper. However, after the recent phylogenetic analyses of the cryptobranch dorids genera by Valdés (2002a), it is now clear that both genera are valid and belong to two different clades.

(100) Dorgan, Valdés and Gosliner (2002) reviewed the genus Platydoris as well as its phylogenetic relationships, and concluded that Platydoris maculata Bouchet, 1977 is a junior synonym of Batptodoris cinnabarina Bergh, 1884.

(101) Ballesteros and Valdés (1999) stated that the generic status of Batptodoris penezi is unclear. According to the description of this species, these authors indicated that it probably belongs to a different genus of the Discodorididae.

(102) Valdés (2002a) has given a detailed discussion on the taxonomic status of Carryodoris Vayssière, 1919 and Verrillia Ortea and Ballesteros, 1981, concluding that both should be considered junior synonyms of Geitodoris.

(103) Ortea, Luque and Templado (1988) transferred this species from the genus Discodoris to Geitodoris based on its radula and buccal armature. This was confirmed by Ortea (1990).

(104) Valdés and Gosliner (2001), after providing an historical account of the genera Aporodoris Ihering, 1886 and Taringa Marcus, 1955, conclude that both are synonyms. Although the former is the older name, these authors prefer to displace the name Aporodoris (nomen oblitum) for its junior synonym Taringa (nomen protectum), under the provisions of article 23.9.2 of the new version of the Code (ICZN, 1999).

(105) Valdés and Gosliner (2001) examined the type material of Doris millegrana Alder and Hancock, 1834 and compared it with the descriptions of Taringa fanbensis Ortea and Martínez, 1992 and Taringa tarifaensis García-Gómez, Cervera and García-Martín, 1993. They conclude that the three names are synonyms. These authors attribute this species to the genus Taringa.

(106) Thompson (1975) and Gosliner and Behrens (1998) maintained that Carminodoris Bergh, 1889 should be considered a junior synonym of Hoplodoris Bergh, 1880. However, Valdés (2002a) stated that most of the Indo-Pacific species assigned to Carminodoris should probably be transferred to Hoplodoris, whereas the Atlantic species Carminodoris boucheti Ortea, 1979 and Carminodoris spinobranchialis Ortea and Martínez, 1992 fit the original description of the genus Carminodoris. This author also pointed out that the main problem involved in determining the phylogenetic relationships of Carminodoris is the true identity of its type species, i.e. Carminodoris mauritiana Bergh, 1889, not collected after the original description. Thus, all the diagnostic features of the genus, except the penial hooks and the denticulate outermost lateral teeth, are present in the type species of Discodoris. According to Valdés, these differences can be attributed to specific variations, but further detailed study, including anatomical investigations of C. mauritiana, is needed before a definitive synonymy can be proposed. Fahey and Gosliner (2003) then provided a detailed study on the identity of both genera and, after a phylogenetic analysis, concluded that Carminodoris and Hoplodoris are synonyms. They consider C. mauritiana and Hoplodoris desmoparypha Bergh, 1880 (type species of Hoplodoris), as well as Carminodoris grandiflora (Pease, 1860), to be conspecific. However, Dayrat and Gosliner (in press) subsequently disagreed with this view, based on anatomical data regarding the accessory vestibular spine, and therefore they retain both genera as separate. Nevertheless, Fahey and Gosliner (2003) and Dayrat and Gosliner (in press) do not include C. boucheti or C. spinobranchialis in their discussions on Carminodoris versus Hoplodoris, since these authors do not consider either species to be a member of either of these genera, regardless of whether they are synonyms (Gosliner, pers. comm.). Thus, other genus/genera should be found to accommodate both species.


(108) Phyllidiopsis bensi was originally placed in the genus Fryeria (Bouchet, 1983; Brunckhorst, 1993). However, Valdés and Gosliner (1999) pointed out that the external and internal features of this species fit with that of the genus Phyllidiopsis. On the other hand, Yonow (1986) considered the genus Fryeria to be a junior synonym of Phyllidia, and proposed the new genus Rofria for those species having the anus placed ventrally. However, Gosliner and Behrens (1988) did not agree with this proposal, since they found some intraspecies variability in this character. Valdés and Gosliner (1999) set forth the possibility that members of the genus Phyllidia with a ventral anus could form a monophyletic subclade, adding that only a phylogenetic study of this genus could shed additional light.
on this matter. Nevertheless, according to these authors, little taxonomic importance can be attributed to a feature that has changed so many times over the course of dorid evolution, and which can be variable within the same species, as shown by Gosliner and Behrens (1988). Thus, Valdés and Gosliner (1999) consider Fryeria and Reyfria to be junior synonyms of Phyllidia.

(109) Valdés et al. (1996) considered Dendrodoris linguoida Pruvo-Fol, 1951 a junior synonym of Dendrodoris limbata, as well as Dendrodoris longula Pruvo-Fol, 1951 and Dendrodoris pseudorubra Pruvo-Fol, 1951, to be nomina dubia. According to Valdés (pers. comm.), Dendrodoris inornata could be either D. limbata or Dendrodoris grandiflora, although it resembles the latter more.

(110) Valdés et al. (1996) pointed out that all records from northern Spain under the names D. limbata and D. grandiflora must be referred to as D. herytra. According to these authors, the record from the Cies Islands (northwestern Spain) under the name D. grandiflora (Rolán, Otero and Rolán-Álvarez, 1989) also appears to belong to D. herytra. Following Valdés et al. (1996), we cannot confirm whether the D. limbata record by Bergh (1892) from the Azores belongs to D. herytra.

(111) Valdés and Ortea (1997) considered Doriopsilla pusilla Pruvo-Fol, 1951 and Doriopsilla evanae Ballesteros and Ortea, 1989 to be junior synonyms of Doriopsilla arenola. These authors also proposed the existence of three subspecies within D. arenola. In the geographic area covered by the present paper, only the subspecies D. arenola arenola is found.

(112) Valdés et al. (1996) pointed out that Dendrodoris racemosa Pruvo-Fol, 1951 and Dendrodoris minima Pruvo-Fol, 1951 should be considered junior synonyms of Doriopsilla pelsenera De Oliveira, 1895.

(113) Schrödl, Wägele and Willan (2001) proposed that the taxon Dexiarchia join the Doriopsidae and the Cladobranchia in a higher level grouping. The presence of aliform jaws is a confirmed autapomorphy, whereas some other potential autapomorphies have yet to be confirmed by future cladistic analysis.

(114) The taxon Cladobranchia (containing Dendronotina plus Aeolidina and 'Arminiina') was proposed by Willan and Morton (1984). Recent phylogenetic analyses based on morphological and molecular data (Wägele and Willan, 2000; Schrödl, Wägele and Willan, 2001; Wägele, Vonnenmann and Wägele, 2003; Grande et al., 2004a,b; Vonneman et al., in press) where some autapomorphies are highlighted, strongly support this grouping.

(115) Luque (1983, 1986) and Templado, Talavera and Murillo (1987) pointed out that under the name Tritonia manica there are two clearly distinct forms, one Atlantic and the other Mediterranean. Both forms can be sympatric in some regions of southeastern Spain. A further detailed study on these populations could lead to the conclusion that they are separate species. If that were the case, the Mediterranean species should be named Tritonia moesta (Bergh, 1884).

(116) The name Tritonia odhneri (Tardy, 1963) had already been used to designate Tritonia nilsodhneri Marcus, 1959, a species from the Chilean coast. Marcus (1983) assigns the new denomination Tritonia nilsodhneri to the species described by Tardy.

(117) Phylogenetic analysis by Wägele and Willan (2000) has shown that Arminoidea represents an amalgam of heterogeneous families. No synapomorphy is known to unite all the families attributed to 'Arminoidea’. This idea is backed up by some molecular analyses (Thöllesson, 1999b; Wägele, Vonnemann and Wägele, 2003). Miller and Willan (1986) have extensively reviewed the nomenclatural history of this family. Up to six different names have been attributed to it, and they concluded that the correct family name should be Zephyrinidae Iredale and O’Donoghue, 1923, and not Janolidae, a denomination more commonly used in recent European literature. However, according to the law of priority, the correct name for the family is Proctonotidae Gray, 1853.

(119) Because of the difficulty in clearly defining the genera Janolus and Antiopella, Gosliner (1981) synonymised them, with the former name prevailing.

(120) Gosliner and Griffiths (1981) pointed out the occurrence of species including characteristics of both Flabellina and Coryphella. Therefore, no such generic division is necessary, and the generic name Coryphella Gray, 1850 is considered a junior synonym of Flabellina Voigt, 1834. This proposal was confirmed by phylogenetic analyses by Gosliner and Kuzirian (1990) and Gosliner and Willan (1991). Nevertheless, some authors do not agree with this view, and prefer to retain Coryphella (e.g. Ortea, Caballer and Moro, 2004).

(121) Flabellina pelucida is a coldwater Atlantic species, whose presence in the Mediterranean has yet to be confirmed.

(122) Thompson and Brown (1984) argued that Facelina punctata is a junior synonym of Facelina annulicornis.

(123) Eolis drummondii (Thompson, 1843) has been traditionally considered a junior synonym of Eolis curta Alder and Hancock, 1843 (Thompson and Brown, 1984). More recently, the latter name has been called a synonym of Facelina botonienesis (but see Brown, 1981; Thompson and Brown, 1984). According to Thompson and Brown (1984), the description of Eolis auricularia Müller, 1776 could correspond to Eolis connata, E. curta, or both. The doubt will
remain, since type material of these taxa is presumably lost, and both E. coronata and E. curta are found in the type locality of E. auricularia. These authors also point out that Forbes and Good sir (1839) were the ones who first applied a valid specific name (coronata) to specimens attributed to this species, which is similar to, but different from, E. curta.

(124) Burn and Narayan (1970) and Gosliner (1979) considered Leachris to be a junior synonym of Caloria, since they saw no clear distinction between the two genera. However, we prefer to retain both names, pending a phylogenetic analysis including both genera.

(125) Dondice banyulensis was transferred to the genus Godiva by Edmunds (1964), considering the generic diagnosis included in the original description by Macnae (1954). Later, Willan (1987b) confined the genus Godiva to those species having penial spines. Eight species are then excluded, Godiva banyulensis among them. The generic name Dondice is readopted in the present paper.

(126) Ortea and Moro (1997) suggested that the generic name Rolandia Pruvot-Fol, 1951 should be replaced by Pruvofolia Tardy, 1969, since the former is preceded by Rolandia Lacaze-Duthiers, 1890, an octocorallian genus.

(127) According to Gosliner (1990), Risellevolis anadoni Ortea, 1979 is likely to be a junior synonym of Babakina festiva (Roller, 1972), since the former was described from a single specimen and its known morphology is strikingly similar to the latter. However, later records from the northern and southern Iberian Peninsula, as well as the Canary Islands, have led us to retain this species pending a review of the genus.

(128) According to Rudman (1982), the genus Berghia Trinches, 1877 should be regarded as a junior synonym of Sparilla Bergh, 1864. This criterion was followed in the previous catalogue (Cervera et al., 1988) and in a subsequent publication (García-Gómez and Thompson, 1990), in which Berghia columbina was described (as Sparilla). Nevertheless, other authors continue to accept both genera as valid. A detailed phylogenetic study of the Aeolidiidae is thus needed in order to untangle this situation. Until then, we prefer to continue using both names.

(129) Although some authors still consider Sparilla sargassicola Bergh, 1861 to be valid (e.g. Ortea et al., 2001; Moro et al., 2003), most now consider it a junior synonym of Sparilla neapolitana. On the other hand, García and Cervera (1985) established Sparilla vossii on the basis of its denticulate masticatory jaws. However, we consider that a review of the genus in the Atlantic Ocean is needed to confirm the validity of these names.

(130) Miller (2001) established the genus Antaeolidiella to accommodate Aeolidiella indica, since its cerata arrangement and the shape of the oral glands are not consistent with Aeolidiella, nor with any other aeolid genera. A phylogenetic analysis of the genera of Aeolidiidae, including this species, is needed to confirm the validity of Miller’s proposal. In the meantime, we prefer to consider this species within Aeolidiella.

(131) Gosliner (1979) considered the genus Limenandra Haelfinger and Stamm, 1958 to be a junior synonym of Baeolidia. This opinion has been accepted by most authors, although Schmekel and Portmann (1982) continued to use the former name. In a recent review of the family Aeolidiidae from New Zealand, Miller (2001) argues that the genus Limenandra should be retained. Therefore, we decided to maintain both names until a phylogenetic study of this family can resolve the matter.

(132) The specimen recorded from the Straits of Gibraltar under the name Eubranchus tricolor by García-Gómez (1987) corresponds to one of the two specimens from a species later described as Eubranchus linensis (García-Gómez, Cervera and García, 1990).

(133) Picton (in Platts, 1985) suggested that Eubranchus vitattus may not be a valid species, and may be synonymous with Eubranchus cingulatus. On the other hand, according to Wilson and Picton (1983), the illustrations presented by Edmunds and Kress (1969) and Schmekel and Portmann (1982) for E. cingulatus belong to another species, Eubranchus dorai. If this is the case, E. cingulatus would be a strictly Atlantic species, and specimens recorded by Templado, Talaver and Murillo (1983) from Cabo de Palos (southeastern Spain) would belong to E. dorai. Nevertheless, a large specimen (15 mm) was collected at Cape Gata (southeastern Spain) (Templado, unpubl. data), which matches the illustration by Lemche (in Just and Edmunds, 1985, pl. 46) of what these authors consider the true E. cingulatus. However, Picton and Morrow (1994) and Picton (2002) consider that the so-called E. cingulatus in the United Kingdom is a junior synonym of E. vitattus, according to the law of priority. Moreover, Picton and Morrow (1994) included an undescribed species of this genus (Eubranchus sp. ‘X’), formerly identified as E. vitattus, which could match up with the so-called E. cingulatus of Just and Edmunds (1985). Further studies on internal anatomy, as well as molecular research, should be carried out on Iberian and other European specimens before a conclusive decision is made.

(134) Until very recently, the genus Calma had only one representative, Calma gobioophaga. In their review, Calado and Urgorri (2002) consider the sympatric existence of two sibling species, which have different ecological niches in the adult phase. Their analysis of previously published data leads to the attribution of some former records to the new species, Calma gobioophaga.
CONCLUSIONS

As a result of the bibliographical compilation carried out for the elaboration of this new checklist, we have found 523 species of opisthobranchs recorded for the study area, 23 belonging to Archipectibranchia, 111 to Cephalaspidea ss., 14 to Anaspidea, 4 to Acochlidiomorpha, 37 to Thecosomata, 7 to Gymnosomata, 43 to Sacoglossa, 3 to Umbraculoidea, 16 to Pleurobranchoidea, and 265 to Nudibranchia (127 Doridina, 42 Dendronotina, 9 Arminina, and 87 Aeolidina). This means a large increase (134 species more) compared with the previous checklist by Cervera et al. (1988, included 389 species) (see table I), due, in part, to the extension of the study area to the Azores, Madeira and Selvagens archipelagos. It is also noteworthy that 644 bibliographic references are mentioned throughout the text, most of them containing data on the opisthobranch fauna of the areas covered by the present checklist. The others are papers focused on different taxonomic, systematic, or phylogenetic aspects, which have been used to elaborate the present list. About 275 of these references are subsequent to the previous checklist (published 1989 - 2005).

The European Register of Marine Species (ERMS) (Costello, Emblow and White, 2001), which includes all the living marine organisms recorded in the Mediterranean and Black Seas and off the Atlantic and African coasts from the North Pole to the parallel 26° N, encompasses 664 opisthobranch species. Therefore, the 523 opisthobranchs recorded in our study area represent 78.9 % of the known European and North African species. This shows, on one hand, the high degree of biodiversity existing in this area and, on the other hand, the noteworthy level of knowledge regarding its opisthobranch fauna. The comparison of the number of species by higher taxa between the current checklist and that from Costello, Emblow and White (2001) (see table I) is indicative of the existing level of knowledge for each of them in study area: very high in almost all them, but still having some gaps, such as those concerning Gymnosomata and Acochlidiomorpha. This indicates, clearly, the scarcity of studies on the opisthobranch fauna of the planktonic and interstitial habitats, indicating that such research should be intensified in the near future. For Pleurobranchoidea, the explanation of why there are more species on our checklist that of the ERMS, which includes our study area, is that the latest version does not include two species recently described or recorded for the Canary, Selvagens and Madeira archipelagos: Pleurobranchus garciagomezi Cervera, Cattaneo-Vietti and Edmunds, 1996 and Berthella canariensis Cervera, Gosliner, García-Gómez and Ortea, 2000.

Also remarkable is the high number of new species described since 1975 in our study area, 117 (nearly 20% of the whole), of which 53 are from the Canary Islands. Some of these species are currently considered junior synonyms of other taxa after several global taxonomic revisions of different groups (see the Remarks section). These specific taxa described as new and...
synonymised later include: *Runcina aurata* García-Gómez, López, Luque and Cervera, 1986 (synonym of *R. coronata* (Quatrefages, 1844)), *Platydoris maculata* Bouchet, 1977 (synonym of *Baptodoris cinnabarina* (Bergh, 1884)), *Chromodoris rodomaculata* Ortea and Valdés, 1991 (synonym of *C. luteopunctata* Gantès, 1962), *Taringa fanabensis* Ortea and Martínez, 1992 and *T. tarifaensis* García-Gómez, Cervera and García-Martín, 1993 (synonyms of *T. millegrana* (Alder and Hancock, 1854)), and *Doriopsilla evanae* Ballesteros and Ortea, 1980 (synonym of *Doriopsilla areolata* Bergh, 1880). Although it has been suggested that other species are also synonyms, these cases are not generally accepted, and the study of additional material is needed. Thus, *Chromodoris britoi* Ortea and Pérez, 1983 could be a junior synonym of *Chromodoris binza* Marcus and Marcus, 1963; *Polycera aurantiomarginata* García-Gómez, Cervera and Bobo, 1984 could be a junior synonym of *Polycera chilluna* Marcus, 1961; *Discodoris confusa* Ballesteros, Llera and Ortea, 1985 could be a junior synonym of *Discodoris maculosa* Bergh, 1884; *Glossodoris edmundsi* Cervera, García-Gómez and Ortea, 1989 could be a junior synonym of *Glossodoris ghanensis* Edmunds, 1968; and *Oxynoe benchijigua* Ortea, Moro and Espinosa, 1999 could be a junior synonym of *Oxynoe antillarum* Mörch, 1863. Moreover, we consider the three new species described by Vilella (1994) (*Palio espagnolii*, *Cadlina boscai* and *Dendrodoris kessneri*) to be probable synonyms of *Polycera dubia* (Sars, 1829), *Cadlina laevis* (Linnaeus, 1767), and *Dendrodoris limbata* (Cuvier, 1804), respectively. In all three of these cases, the species descriptions are based on a single specimen, the museum or institution where the specimens are housed are not specified, a comparison with close species of the same region is not given, and some important references are overlooked. Furthermore, several species of cephalaspid (about 20) are only known from old literature, and their true identity should be reviewed.

From the 523 species recorded, 49 of them are planktonic and 474 are benthonic, of which 441 are littoral species and only 33 are bathyal species (most of them studied by Bouchet, 1975, 1997, more than thirty years ago). Therefore, whilst the littoral opisthobranchs have been intensively studied in the geographic area covered in the present paper, the deep-sea species remain poorly known. Study of the opisthobranchs from the bathyal bottoms throughout this geographic area should be also intensified in the near future.

Concerning geographical distribution, the number of species recorded in each of the 12 areas or regions considered is presented in table II. These numbers may be considered as indicative of the diversity of species in each of the regions, but they are also influenced by the level of available

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCHITECTIBRANCHIA</td>
<td>13</td>
<td>19</td>
<td>23</td>
<td>31</td>
</tr>
<tr>
<td>CEPHALASPIDA</td>
<td>70</td>
<td>76</td>
<td>111</td>
<td>123</td>
</tr>
<tr>
<td>ANASPIDEA</td>
<td>10</td>
<td>9</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>ACOCHLIDIOMORPHA</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>THECOSONOMATA</td>
<td>28</td>
<td>28</td>
<td>37</td>
<td>39</td>
</tr>
<tr>
<td>GYMNOSONOMATA</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>RHODOPEMORPHA</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>SACCOGLOSSA</td>
<td>16</td>
<td>33</td>
<td>43</td>
<td>47</td>
</tr>
<tr>
<td>UMBRACULACEA</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>PLEUROBRANCHACEA</td>
<td>9</td>
<td>8</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>NUDIBRANCHIA</td>
<td>104</td>
<td>209</td>
<td>265</td>
<td>354</td>
</tr>
<tr>
<td>Doridina</td>
<td>52</td>
<td></td>
<td>127</td>
<td>178</td>
</tr>
<tr>
<td>Dendronotina</td>
<td>16</td>
<td>33</td>
<td>42</td>
<td>58</td>
</tr>
<tr>
<td>Arminina</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>Aeolidina</td>
<td>33</td>
<td>63</td>
<td>87</td>
<td>117</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>258</strong></td>
<td><strong>389</strong></td>
<td><strong>523</strong></td>
<td><strong>664</strong></td>
</tr>
</tbody>
</table>
knowledge, which is obviously not the same for all areas. For example, there is a remarkably high number of species registered in certain regions, such as the Canary Islands (252 species), Portuguese mainland (213 species), and the Straits of Gibraltar, eastern Andalusia, Spanish Levant and Catalonia (more than 170 species each of them). Table III includes the complete list of the species recorded, indicating the distribution of each one over the 12 different geographical areas, in order to give a general picture of their geographic distribution range.

As explained above, the criteria used to define these areas have been more or less arbitrary. In order to explore the true biogeographical relationships between these areas, a cluster analysis was performed using each area as an OTU (Operational Taxonomic Unit) and all the species (n = 511, excluding the doubtful records) were included in the data matrix using simply presence/absence (1/0) in the 12 areas. Jaccard’s index (Sneath and Sokal, 1973) was used to build the triangular distance matrix. The data were subsequently amalgamated using Ward’s method (Ward, 1963). The hierarchical tree obtained is shown in figure 2. The same procedure was used for a smaller data matrix where species that occurred in only one area (poorly known, recently described, etc.) were removed (n = 349). The tree obtained (not shown) is very similar.

The cluster analysis clearly distinguishes three separate groups (figure 2): Atlantic coast, Mediterranean coast, and the Atlantic islands. The first two groups are more closely related to each other than to the third one, probably due to the presence in the latter of many amphiatlantic and Mauritanian species. Nevertheless, care should be exercised in this interpretation, due to the scarcity of data available from the African coast. Despite slightly different approaches, the same general pattern of division was obtained in analyses involving other marine invertebrate groups, such as sponges (Carballo, Naranjo and García-Gómez, 1997), tunicates (Naranjo, Carballo and García-Gómez, 1998), and cheilostomatous bryozoans (López de la Cuadra and García-Gómez, 1994). In our case, the area corresponding to the Straits of Gibraltar (area 5) clearly appears grouped together with the Mediterranean cluster. The same pattern is observed in tunicates (Naranjo, Carballo and García-Gómez, 1998).

Nevertheless, data from sponges (Carballo, Naranjo and García-Gómez, 1997) reveal more affinities of the Straits’ poriferan fauna with the Mauritanian region, which in our case is represented by the Canary and Selvagens Islands (area 10) and the Madeira archipelago (area 11), whereas a balanced affinity between Atlantic and Mediterranean fauna is obtained for this area in bryozoans (López de la Cuadra and García-Gómez, 1994).

On the other hand, the record of Bursatella leachi in the Balearic Islands constitutes the first known lessepsian mollusc that has reached the westernmost area of the Mediterranean. To date, this species was only known from the eastern and central Mediterranean (Zenetos et al., 2003).

Table II: Detail of the number of recorded species of each one of the different opisthobranch orders from each geographical area.

<table>
<thead>
<tr>
<th>Higher taxa</th>
<th>Geographical areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>ARCHITECTIBRANCHIA</td>
<td>8</td>
</tr>
<tr>
<td>CEPHALASPIDEA</td>
<td>35</td>
</tr>
<tr>
<td>ANASPIDEA</td>
<td>5</td>
</tr>
<tr>
<td>ACOCHLIDIOMORPHA</td>
<td>-</td>
</tr>
<tr>
<td>THECOSOMATA</td>
<td>5</td>
</tr>
<tr>
<td>GYMNOBOSOMATA</td>
<td>-</td>
</tr>
<tr>
<td>SACOGLOSSA</td>
<td>8</td>
</tr>
<tr>
<td>UMBRACULOIDEA</td>
<td>-</td>
</tr>
<tr>
<td>PLEUROBRANCHOIDEA</td>
<td>7</td>
</tr>
<tr>
<td>NUDIBRANCHIA</td>
<td>90</td>
</tr>
<tr>
<td>Doridina</td>
<td>49</td>
</tr>
<tr>
<td>Dendronotina</td>
<td>18</td>
</tr>
<tr>
<td>Arminina</td>
<td>3</td>
</tr>
<tr>
<td>Aeolidina</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>154</td>
</tr>
</tbody>
</table>
### Table III. Known distribution of the recorded species throughout the different geographical areas

<table>
<thead>
<tr>
<th>Order ARCHITECTIBRANCHIA</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Ringiculidae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringicula auriculata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringicula buccinea</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringicula nitida</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringicula conformis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringicula someri</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringicula minuta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringicula blanchardi</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringicula semistriata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Acteonidae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acteon tornatilis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acteon monterosatoi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acteon incisus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crenulabrum exilis</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pseudacteon luteofasciatus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japonacteon pusillus</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locarenus globulinus</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callostracon amabile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Callostracon meeki</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acteonina charis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomlinula turrita</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inopinodon azoricus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Amplustridae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydatina physis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydatina velum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micromelo undatus</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order CEPHALASPIDEA s. s.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Diaphanidae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diaphana minuta</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diaphana globosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diaphana expansa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diaphana seguenzae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diaphana flavus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colobocephalus striatulus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colpodaspis pusilla</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhinodiaphana ventricosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Retusidae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa truncatula</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa obtusa</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa leptonelema</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa pellucida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa pariformis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa mammillata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa obesa</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa tornata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa mariae</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa leuca</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retusa multiquadrata</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichnina umbilicata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichnina nitidula</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichnina robusta</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichnina cuneifrons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
<td>Column 6</td>
<td>Column 7</td>
<td>Column 8</td>
<td>Column 9</td>
<td>Column 10</td>
<td>Column 11</td>
<td>Column 12</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Cylichnina canariensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichnina tenerifensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Volvulella acuminata</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pyrunculus ovatus</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Pyrunculus hoernesii</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pyrunculus spretus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relichna simplex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
</tbody>
</table>

**Family Cylichnidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
<th>Column 8</th>
<th>Column 9</th>
<th>Column 10</th>
<th>Column 11</th>
<th>Column 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acteocina protracta</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acteocina pusillina</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichna cylindracea</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichna alba</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichna crossei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichna richardi</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichna propycylindracea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichna piettei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylichna chevreuxi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scanphander lignarius</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scaphander punctostriatus</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scaphander gracilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scaphander nobilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meloscanphander imperceptus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roxania isticulus</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roxania pinguiscola</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roxania monterosatoi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Philinidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
<th>Column 8</th>
<th>Column 9</th>
<th>Column 10</th>
<th>Column 11</th>
<th>Column 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philina aperta</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina scabra</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina punctata</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina calena</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina lima</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina quadrata</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina angulata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina intricata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Philina monterosatoi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina approximans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina azorica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina monilifera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina rugulosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina calos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina condensa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina complanata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina desmotis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina trachyostraca</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philina iris</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laona pruinosa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Philinoglossidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
<th>Column 8</th>
<th>Column 9</th>
<th>Column 10</th>
<th>Column 11</th>
<th>Column 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philinoglossa helgolandica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Gastropteridae**

<table>
<thead>
<tr>
<th>Species</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
<th>Column 8</th>
<th>Column 9</th>
<th>Column 10</th>
<th>Column 11</th>
<th>Column 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastropteron meckeli</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Aglajidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
<th>Column 8</th>
<th>Column 9</th>
<th>Column 10</th>
<th>Column 11</th>
<th>Column 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aglaja tricolorata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chelidonura africana</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chelidonura leopoldi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table III (continued)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odontoaglaja sabadiega</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melanochlamys maderense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melanochlamys wildpretti</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philinopsis picta</td>
<td></td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doryidium laurentianum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Runcinidae**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Runcina cornata</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina ornata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina capensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina africana</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina ferruginea</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina adriatica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina falciforme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina paupera</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina macrodenticulata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina bahiensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina genciana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina kidalgensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina medanensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runcina palominoi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Bullidae**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulla striata</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulla amygdala</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulla semilaevis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulla mobilii</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulla millepunctata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Haminoeidae**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haminoea hydatis</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haminoea navicula</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haminoea orbignyana</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haminoea elegans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haminoea ortei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haminoea calidicenita</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haminoea templadoi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haminoea exigua</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atys blainvilliana</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atys jeffreysi</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atys macandrewi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weinkauffia turgidula</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clylichnium africanum</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clylichnium oliviformae</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weinkauffia (?) semistriata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Order ANASPIDEA**

**Family Akeridae**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akeria bullata</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Aplysiidae**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aplysia depilans</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aplysia fasciata</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aplysia punctata</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aplysia dactylomela</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aplysia juliana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aplysia moria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table III (continued)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td><strong>Aplysia parvula</strong></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bursatella leachi</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td><strong>Family Dolabrideridae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Petalifera petalifera</em></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Petalifera ramosa</em></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Dolabrifera dolabriformis</em></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Notarchidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Notarchus punctatus</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Stylocheilus striatus</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Order ACOCHLIDIOMORPHA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Hedylopidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Hedylopus spiculifera</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Family Asperinidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Asperina loricata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Family Microhedylidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Unela glandulifera</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Pontoheyle milaschewitchii</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Order THECOSOMATA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Suborder EUTHECOSOMATA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Cavoliniidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Cavolina tridentata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Cavolina infausta</em></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Cavolina uncinita</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Cavolina flavida</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Cavolina globulosa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Diacria quadridentata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Diacria trispinosa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Diacria atlantica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Diacria rubecula</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Clio pyramidata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Clio cuspilata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Clio recurva</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Clio polita</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Creseis acicula</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Creseis conica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Hyalocylis striata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Stylola subula</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Cuvierina columnella</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Cuvierina spoeci</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Diacovolina limbatis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Diacovolina constricta</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Diacovolina deshayesi</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><em>Diacovolina antarctica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Family Limacinidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Limacina helicina</em></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Limacina retroversa</em></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Limacina bulimoides</em></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Limacina inflata</em></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Limacina lesueurii</em></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Limacina trochiformis</em></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table III (continued)

<table>
<thead>
<tr>
<th>Suborder PSEUDOTHECOSOMATA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family Cymbulidae</strong></td>
</tr>
<tr>
<td>Cymbulia peroni</td>
</tr>
<tr>
<td>Cymbulia parvidentata</td>
</tr>
<tr>
<td>Corolla ovata</td>
</tr>
<tr>
<td><strong>Family Desmopteridae</strong></td>
</tr>
<tr>
<td>Desmopterus cirroptera</td>
</tr>
<tr>
<td>Desmopterus papilio</td>
</tr>
<tr>
<td><strong>Family Peracidae</strong></td>
</tr>
<tr>
<td>Peracle reticulata</td>
</tr>
<tr>
<td>Peracle bispinosa</td>
</tr>
<tr>
<td>Peracle triacantha</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order GYMNOSOMATA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family Pneumodermatidae</strong></td>
</tr>
<tr>
<td>Pneumoderma mediterraneum</td>
</tr>
<tr>
<td>Pneumoderma violaceum</td>
</tr>
<tr>
<td><strong>Family Clionidae</strong></td>
</tr>
<tr>
<td>Clione limacina</td>
</tr>
<tr>
<td>Parachionella longicaudata</td>
</tr>
<tr>
<td><strong>Family Notobranchaeidae</strong></td>
</tr>
<tr>
<td>Notobranchaea hjorti</td>
</tr>
<tr>
<td>Notobranchaea bleekerae</td>
</tr>
<tr>
<td>Schleschia tetrabarnchiata</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order SACOGLOSSA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Suborder OXYNOACEA</strong></td>
</tr>
<tr>
<td><strong>Family Volvatellidae</strong></td>
</tr>
<tr>
<td>Ascobulla fragilis</td>
</tr>
<tr>
<td><strong>Family Oxynoidae</strong></td>
</tr>
<tr>
<td>Oxynoe olivacea</td>
</tr>
<tr>
<td>Oxynoe benchijigga</td>
</tr>
<tr>
<td>Lobiger serradifalci</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suborder PLAKOBRANCHACEA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family Plakobranchiidae</strong></td>
</tr>
<tr>
<td>Elysia viridis</td>
</tr>
<tr>
<td>Elysia timida</td>
</tr>
<tr>
<td>Elysia ornata</td>
</tr>
<tr>
<td>Elysia flavata</td>
</tr>
<tr>
<td>Elysia papillosa</td>
</tr>
<tr>
<td>Elysia rubornata</td>
</tr>
<tr>
<td>Elysia translucens</td>
</tr>
<tr>
<td>Elysia fagi</td>
</tr>
<tr>
<td>Elysia margaritae</td>
</tr>
<tr>
<td>Elysia gordonae</td>
</tr>
<tr>
<td>Thuridilla hopei</td>
</tr>
<tr>
<td>Thuridilla picta</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Family Bosellidae</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bosellia mimetica</td>
</tr>
<tr>
<td>Bosellia leve</td>
</tr>
</tbody>
</table>
#### Table III (continued)

<table>
<thead>
<tr>
<th>Family Polybranchiidae</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polybranchia viridis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polybranchia borgiani</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calyphilla mediterranea</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyerce antillensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Hermaeidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polybranchia viridis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polybranchia borgiani</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calyphilla mediterranea</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cyerce antillensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Limapontiidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placidia dendritica</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placidia tardyi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placidia brevicornis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placidia cremoniana</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placidia verticilata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costasiella virescens</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Order UMBRACULACEA**

**Family Tylodinidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tylodina percorsa</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anidolyta dubensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Umbraculidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Umbraculum umbraculum</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Superorder NUDIPLEURA**

**Order PLEUROBRANCHACEA**

**Family Pleurobranchidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleurobranchus membranaceus</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleurobranchus testudinarius</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleurobranchus aerolatus</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleurobranchus bowei</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleurobranchus garciogomezi</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Berthella pluvialis**

<table>
<thead>
<tr>
<th>Species</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berthella planula</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berthella aurantiaca</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berthella stellata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berthella stellaris</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berthella canariensis</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berthella dautzenbergi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berthella australis</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berthella garciogomezi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berthella garcifera</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berthella mehelii</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berthella morosa</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The table continues with more species and their respective contributions.
Table III (continued)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Order NUDIBRANCHIA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Suborder ANTHOBRANCHIA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Infraorder DORIDINA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“PHANEROBRANCHIA”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Corambidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Corambe testudinaria</em></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Onchidorididae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Adalaria proxima</em></td>
<td>±?</td>
<td>±?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Onchidoris neapolitana</em></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Onchidoris depressa</em></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Onchidoris pusilla</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Onchidoris sparsa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Onchidoris inconspicua</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Onchidoris albonigra</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Onchidoris reticulata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Onchidoris cerviñoi</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Onchidoris tridactila</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Acanthodoris palosa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Diaphorodoris luteocincta</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Diaphorodoris papillata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Goniodorididae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Goniodoris nodosa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Goniodoris castanea</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Okenia aspersa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Okenia mediterranea</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Okenia zoobotryon</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Okenia cupella</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Okenia elegans</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Okenia hispanica</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Ancula gibosa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trapania tinctella</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trapania lineata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trapania maculata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trapania pallida</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trapania ortoi</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trapania hispalensis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trapania luquei</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Trapania sanctitectrensis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Bermudella polycerelloides</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Polyceridae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Lamacea clavigera</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Polycera quadrilineata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Polycera dubia</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Polycera degans</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Polycera faroensis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Polycera hedgtheti</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Polycera aurantiomarginata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Thecera pennigera</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Placomopherus maderae</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Crimora papillata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Roboastra europea</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Polycerella ermontis</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Kalophacamus ramosus</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Kalophacamus atlanticus</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table III (continued)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tambja ceutae</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tambja marbellensis</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Aegiridae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aegires punctilucens</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aegires leucherti</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aegires sublaevis</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aegires palensis</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>“CRYPTOBRANCHIA”</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LABIOSTOMATA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Chromodorididae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glossodoris edmundsi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypselodoris villasfranca</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypselodoris picta</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypselodoris orsinii</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypselodoris fontandrai</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypselodoris bitinata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypselodoris canadriaca</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypselodoris malacitana</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypselodoris tricolor/midatlantica</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromodoris luteorea</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromodoris purpurea</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromodoris krohni</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromodoris luteopunctata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromodoris britoi</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromodoris goslineri</td>
<td></td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadlina laevis</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadlina pellucida</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Dorididae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doris verrucosa</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doris pseudoargus</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doris bertheloti</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doris ocelligera</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doris sticta</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doris (?) alboranica</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aldisa zetlandica</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aldisa berghs</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aldisa banyulensis</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aldisa smaragdina</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aldisa expleta</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Discodorididae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jorunna tomentosa</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jorunna onubensis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discodoris maculosa</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discodoris stellifera</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discodoris tristis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discodoris edwardsi</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discodoris rubens</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discodoris (?) rosai</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discodoris confusa</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thordisa filix</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thordisa azmanii</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platydoris stomastrica</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Platydoris argo</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restangia rubra</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

82

Table III (continued)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peltodoris punctifera</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peltodoris atromaculata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paradoris indecora</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paradoris ceneris</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paradoris mollis</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beptodoris cinnabarina</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beptodoris perezi</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geitodoris planata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geitodoris pusae</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geitodoris portmanni</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geitodoris bonasi</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geitodoris bacalladoi</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geitodoris perforata</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taringa millegrana</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taringa oleca</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taringa asctica</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taringa tritonquis</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taringa bacalladoi</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taringa faba</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thorrybopus lophatus</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LABIOSTOMATA incerta sedis

| Carminodoris ? boucheti | + | + |   |   |   |   |   |   |   |    |    |    |
| Carminodoris ? spinobranchnalis| + |   |   |   |   |   |   |   |   |    |    |    |

POROSTOMATA

Family Phyllidiidae

| Phyllidia flavo   | + | + | + | + | + | + | + | + | + |    |    |    |
| Phyllidiopsis berghi | + |   |   |   |   |   |   |   |   |    |    |    |
| Phyllidiopsis batesi | + | + | + | + | + | + | + | + | + |    |    |    |
| Phyllidiopsis boucheti | + |   |   |   |   |   |   |   |   |    |    |    |
| Reticulidia gofasi | + |   |   |   |   |   |   |   |   |    |    |    |

Family Dendrodorididae

| Dendrodoris lambata | + | + | + | + | + | + | + | + | + |    |    |    |
| Dendrodoris gradiflora | + | + | + | + | + | + | + | + | + |    |    |    |
| Dendrodoris hermida | + | + | + | + | + | + | + | + | + |    |    |    |
| Dorisella arrolata  | + | + | + | + | + | + | + | + | + |    |    |    |
| Dorisella pelseneeri | + | + | + | + | + | + | + | + | + |    |    |    |

DEXIARCHIA

CLADOBANCHIA

DENDRONOTINA

Family Tritoniidae

| Tritonia hombergi   | + | + | + | + | + | + | + | + | + |    |    |    |
| Tritonia plebeia   | + | + |   |   |   |   |   |   |   |    |    |    |
| Tritonia manicata  | + | + | + | + | + | + | + | + | + |    |    |    |
| Tritonia (Tritonidoxa) gregii | + |   |   |   |   |   |   |   |   |    |    |    |
| Tritonia striata   | + | + | + | + | + | + | + | + | + |    |    |    |
| Tritonia nilsodhneri | + | + | + | + | + | + | + | + | + |    |    |    |
| Marionia blainvillei | + | + | + | + | + | + | + | + | + |    |    |    |
| Tritoepis praecta  | + |   |   |   |   |   |   |   |   |    |    |    |

Family Scyllaeidae

| Scylla polagica | + | + |   |   |   |   |   |   |   |    |    |    |

---

Table III (continued)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family Hancockiidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hancockia uncinata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Lomanotidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lomanotus marmoratus</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lomanotus barlettai</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Tethyidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tethys fimbria</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Phylliroidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phylliroe atlantica</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phylliroe bucephala</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cephalopige tenatodes</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Dendronotidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dendronotus frondosus</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Family Dotidae</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto coronata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto pinnatifida</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto fragilis</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto pugnacea</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto rosea</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto paulinae</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto cinerea</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto floridicola</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto pita</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto doerga</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto dunnei</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto millbayana</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto koeneckery</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto eireana</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto tuberculata</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto acuta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto arteoi</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto lenchei</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto oblicia</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto verdicii</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto fluctifraga</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto furva</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto unguis</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto escatullari</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doto solilloi</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"ARMININA"

**Family Arminidae**

| Armina maculata          | + | + | + | + | + | + | + | + | + |
| Armina tigrina           | + | + | + | + | + | + | + | + | + |
| Armina neapolitana       | + |   |   |   |   |   |   |   |   |    |    |    |
| Armina loveni            |   | + |   |   |   |   |   |   |   |    |    |    |
| Heterodoris robusta      |   | + |   |   |   |   |   |   |   |    |    |    |

**Family Madrellidae**

| Madrella aurantiaca      | + |   |   |   |   |   |   |   |   |    |    |    |

**Family Proctonotidae**

| Janolus cristatus        | + | + | + | + | + | + | + | + | + |

84
Table III (continued)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Janolus hyalinus</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janolus faustoi</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“AEOLIDINA”

**Family Flabellinidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flabellina affinis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flabellina pedata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flabellina pellucida</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flabellina gracilis</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flabellina lineata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flabellina dushia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flabellina babai</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flabellina baetica</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flabellina insolita</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flabellina ischitana</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calmella cavolini</td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Piseinotecidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piseinotecus sphaeriferus</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piseinotecus gabineri</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Piseinotecus gaditanus</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Facelinidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favorinus branchialis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favorinus ghanensis</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favorinus blaus</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favorinus vitreus</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facelina annulicorns</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facelina bostomiensis</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facelina corona</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facelina rubrividata</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facelina quartrefagesi</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facelina variagata</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facelina schwobi</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facelina dubia</td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facelina fusca</td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phydiana lynceus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cranina peregrina</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caloria elegans</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leucis poisca</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facelinopsis marioni</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dondice accidentalis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dondice banyulensis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antonietta luteorufa</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dicata odhneri</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pratofolia pulchrales</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Babakina anadoni</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algarvia alba</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Aeolidiidae**

<table>
<thead>
<tr>
<th>Species</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aeolidia papillosa</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sparilla neapolitana</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aeolidiella alderi</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aeolidiella glauca</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aeolidiella sanguinea</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aeolidiella indica</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cerberilla bernadettea</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berghia caeruleascens</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**J. L. Cervera et al.**

Checklist of opisthobranchs from Spain and Portugal

Table III (continued)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berghia verrucicornis</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berghia columbina</td>
<td>+</td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limenandra nodosa</td>
<td></td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Family Eubranchidae**

- Eubranchus tricolor
- Eubranchus pallidus
- Eubranchus vittatus
- Eubranchus farrani
- Eubranchus cingulatus
- Eubranchus exigus
- Eubranchus donae
- Eubranchus arii
- Eubranchus prietoi
- Eubranchus intransis
- Eubranchus leopoldoi
- Eubranchus telesforoi
- Eubranchus vascot

**Family Pseudovermidae**

- Pseudovermis artabrensis

**Family Calmidae**

- Calma glaucoides
- Calma gobioophaga

**Family Glaucidae**

- Glacus atlanticus

**Family Tergipedae**

- Tergipes tergipes
- Cuthona caerulea
- Cuthona foliata
- Cuthona amaena
- Cuthona pallida
- Cuthona genovae
- Cuthona acelata
- Cuthona granosa
- Cuthona ilonae
- Cuthona miniostratia
- Cuthona albopunctata
- Cuthona thompsoni
- Cuthona avellani
- Cuthona fideniciae
- Cuthona correa
- Catriona gymnata
- Catriona mussa
- Tenellia adspersa

**Family Fionidae**

- Fiona pinnata

**Family Embletoniidae**

- Embletonia pulchra
Figure 2. Horizontal tree obtained from the cluster analysis performed. Geographical study areas are numbered 1 to 12 (see text for details)

ACKNOWLEDGEMENTS

We are indebted to many colleagues and friends who have helped us a great deal in the preparation of the present paper, supplying and sharing information, and/or authorising the publication of their photographs. Others have assisted in collecting, collating, and processing the bibliographical data: Miguel Barbosa, María Dornelas, Shireen Fahey, José Fernández López, Manuel González Duarte, Terry Gosliner, Celia Laguna Mora, Fátima Martins, Diego Moreno Lampreave, Leopoldo Moro Abad, Ricardo Neves, Jesús Ortea Rato, Silvia Sánchez Ángel, Luis Sánchez Tocino, Alma Sánchez Santos, José Augusto Silva, Victoriano Urgorri Carrasco, Ángel Valdés, and Peter Wirtz. Antonio Monteiro read an early version of the manuscript and suggested some textual corrections. Our special thanks to Concha Mosquera de Arancibia; it was her enthusiastic support of this project right from the beginning which led to the Instituto Español de Oceanografía agreeing to assume its publication costs. Moreover, her conscientious editorial work has made notable improvements to the final draft.

We would also like to acknowledge several projects and grants that have supported the collection of data or bibliographic information: REN2000-0890/GLO (Spanish Ministry of Science and Technology), REN2001-1956-C17-02/GLO (Spanish Ministry of Science and Technology), HP1997-0052 (Spanish-Portuguese Joint Action, Spanish Ministry of Education and Culture), HP1999-0093 (Spanish-Portuguese Joint Action, Spanish Ministry of Education and Culture), CRUP Ação Integrada E45/98, CRUP Ação Integrada E91/00 and (GRG 970607)1086/97/JARC/501 (NATO Research Council). One of the authors, M. A. E. Malacuías, has been benefited from two grants from the FCT (Portuguese Ministry of Science and Technology), SFRH/BD/2289/2000 and SFRH/BD/8607/2002.

REFERENCES


J. L. Cervera et al.


Chia, M. de. 1911-1913. *Aplec de notices sobre els moluscs Ceuta y la Isla de Alborán*. Barcelona.


Forbes, E. and J. Good Ôir. 1839. Notice of researchers in Orkney and Shetland during the month of June 1839. Atenaearum 618 (August): 647. (Quoted by Thompson and Brown, 1984.)


Checklist of opisthobranchs from Spain and Portugal


McAndrew, R. 1852. Note on the mollusces observed during a short visit to the Canary and Madeira Islands. Annals and Magazine of Natural History (sèrie 2) 10: p. 8.


Pruvot, G. 1897. Essais sur les fonds et la faune de la Manche Occidentales (Côtes de Bretagne) comparés a ceux du Golfe du Lion. *Archives de Zoologie Experimentale et Generale* (3) 5: 511-650. (Quoted by Ros, 1976a.)
et al. J. L. Cervera


J. L. Cervera et al.


Plate 1. From left to right, from top to bottom: *Runcina adriatica* Thompson, 1980; *Runcina bahreensis* Cervera, García-Gómez and García, 1991; *Lobiger serratifalci* (Calcara, 1840); *Afhisoplis formosa* Pruvot-Fol, 1953; *Ercolania lozanoi* Ortea, 1981; *Pleurobranchus garciagomezi* Cervera, Cattaneo-Vietti and Edmunds, 1996; *Okenia mediterranea* (Ihering, 1886); *Trapania tartanella* (Ihering, 1885)
Plate 2. From left to right, from top to bottom: *Plocamopherus maderae* (Lowe, 1842); *Tambja marbellensis* Schick and Cervera, 1998; *Hypselodoris malacitana* Luque, 1986; *Chromodoris luteopunctata* (Gantès, 1962); *Thordisa azmanii* Cervera and García-Gómez, 1989; *Geitodoris pusae* (Marcus, 1955); *Taringa millegrana* (Alder and Hancock, 1854); *Doriopsilla pelseneeri* Oliveira, 1895.
Plate 3. From left to right, from top to bottom: *Doto furva* García-Gómez and Ortea, 1983; *Calmella cavolini* (Vérany, 1846); *Pisainotecus gabinieri* (Vicente, 1975); *Favorinus vitreus* Ortea, 1982; *Learchis poica* Marcus and Marcus, 1960; *Dicata odhneri* Schmekel, 1968; *Babakina anadoni* (Ortea, 1979); *Cerberilla bernadettae* Tardy, 1965
Plate 4. From left to right, from top to bottom: *Berghia columbina* (García-Gómez and Thompson, 1990); *Eubranchus prietoi* Llera and Ortea, 1981; *Eubranchus linensis* García-Gómez, Cervera and García, 1990; *Calma gobiocephala* Calado and Urgorri, 2002; *Cuthona ocellata* (Schmekel, 1966); *Cuthona thompsoni* García, López-González and García-Gómez, 1991; *Cuthona fidenciae* (Ortea, Moro and Espinosa, 1999); *Catriona maua* Marcus and Marcus, 1960.
The Instituto Español de Oceanografía thanks the referees listed below, as well as others who prefer to remain anonymous, for their critical revision of this publication.

Dr. Terrence Gosliner. California Academy of Sciences, 875 Howard Street, San Francisco, CA 94103, USA, e-mail: tgosliner@calacademy.org

Dr. Ángel Antonio Luque del Villar. Laboratorio de Biología Marina, Departamento de Biología, Edificio de Biología, Universidad Autónoma de Madrid, c/ Darwin, 2, Madrid, Spain, e-mail: angel.luque@uam.es

Dr. Ángel Valdés Gallego. Associate Curator of Malacology, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, e-mail: avaldes@nhm.org

Dr. José Manuel Viéitez Martín. Departamento de Zoología y Antropología Física, Universidad de Alcalá, 28871 Alcalá de Henares, Madrid, Spain, e-mail: josem.vieitez@uah.es
INDEX

PREFACE .............................................. 3
ABSTRACT ........................................... 5
RESUMEN ............................................ 6
INTRODUCTION ....................................... 6
RESULTS .............................................. 9

Order ARCHITECTIBRANCHIA Haszprunar, 1985 .......... 9
Family Ringiculidae Meeck, 1862
Genus *Ringicula* Deshayes, 1838 ............... 9

Family Acteonidae D’Orbigny, 1835
Genus *Acteon* Montfort, 1810 .................. 9
Genus *Crenilabium* Cossmann, 1889 .......... 10
Genus *Pseudacteon* Thiele, 1925 ............. 10
Genus *Japanacteon* Taki, 1956 ............... 10
Genus *Liocarenus* Harris and Burrows, 1891 .... 10
Genus *Callourtacon* Hamlin, 1884 ........... 10
Genus *Acteonina* D’Orbigny, 1850 .......... 10
Genus *Tomlinula* Strand, 1932 .............. 10
Genus *Inopinodon* Bouchet, 1975 .......... 11

Family Amplustridae Gray, 1847
Genus *Hydatina* Schumacher, 1817 .......... 11
Genus *Micromelo* Pilsbry, 1895 .......... 11

Order CEPHALASPIDEA s. s. Mikkelsen, 1996 .......... 11
Family Diaphanidae Odhner, 1914
Genus *DIaphana* Brown, 1827 ............ 11
Genus *Colocephalus* M. Sars, 1870 ........ 11
Genus *Colpodespis* M. Sars, 1870 ........ 11

Family Retusidae Thiele, 1926
Genus *Retusa* Brown, 1827 ............ 11
Genus *Cylchnina* Monterosato, 1884 ........ 13
Genus *Volvulella* Newton, 1891 .......... 13
Genus *Pyrunculus* Pilsbry, 1895 .......... 13
Genus *Relichna* Bouchet, 1975 .......... 13
Family Cylichnidae Rudman, 1978
Genus Acteocina Gray, 1847 ...................................................... 14
Genus Cylichna Lovén, 1846 .................................................... 14
Genus Scaphander Montfort, 1810 ........................................... 14
Genus Meloscaphander Schepman, 1913 ................................. 15
Genus Roxania Leach in Gray, 1847 ..................................... 15

Family Philinidae Gray, 1850
Genus Philine Ascanius, 1772 ................................................ 15
Genus Laona A. Adams, 1865 ................................................ 17

Family Philinoglossidae Hoffmann, 1833
Genus Philinoglossa Hertling, 1932 ..................................... 17

Family Gastropteridae Swainson, 1840
Genus Gastropteron Koose, 1813 ........................................... 17

Family Aglajidae Renier, 1807
Genus Aglaja Renier, 1807 .................................................. 17
Genus Chelidonura A. Adams, 1850 ..................................... 17
Genus Odontoaglaja Rudman, 1978 ...................................... 17
Genus Melanochlamys Cheeseman, 1881 ............................... 17
Genus Philinopsis Pease, 1860 ............................................. 18

Aglajidae incerta sedis
Doridium ? ................................................................. 18

Family Runcinidae H. and A. Adams, 1854
Genus Runcina Forbes and Hanley, 1853 ............................ 18

Family Bullidae Lamarck, 1801
Genus Bulla Linnaeus, 1758 ............................................... 19

Family Haminoeidae Pilsbry, 1895
Genus Haminoea Turton and Kingston, 1830 ....................... 19
Genus Atys Montfort, 1810 ............................................... 20
Genus Weinkauffia Monterosato, 1884 ............................... 21
Genus Cylichnium Dall, 1908 ............................................ 21

Haminoeidae incerta sedis
Weinkauffia ? ............................................................. 21

Order ANASPIDEA Fischer, 1883 ......................................... 21

Family Akeridae Odhner, 1922
Genus Akera Müller, 1776 ............................................... 21

Family Aplysiidae Lamarck, 1809
Genus Aplysia Linnaeus, 1767 ........................................... 21
Genus Bursatella De Blainville, 1817 ................................. 23
Family Dolabriferidae Pilsbry, 1895
Genus Petalifera Gray, 1847 ........................................................ 23
Genus Dolabrifera Gray, 1847 ...................................................... 23

Family Notarchidae Eales and Engel, 1935
Genus Notarchus Cuvier, 1817 ................................................ 23
Genus Stylocheilus Gould, 1852 ................................................. 23

Order ACOCHLIDIOMORPHA Salvini-Plawen, 1983 ................. 23
Family Hedylopsidae Odhner, 1952
Genus Hedylopsis Thiele, 1931 ................................................ 23

Family Asperinidae Rankin, 1979
Genus Asperina Rankin, 1979 .................................................. 23

Family Microhedylidae Hertling, 1930
Genus Unela Marcus, 1953 ....................................................... 23
Genus Pontohedyle Golikov and Starobogatov, 1972 ............ 24

Order THECOSOMATA Blainville, 1824 ................................. 24
Suborder EUTHECOSOMATA Meisenheimer, 1905
Family Cavoliniidae D’Orbigny, 1842
Genus Cavolinia Abildgaard, 1791 ....................................... 24
Genus Diacria Gray, 1847 ......................................................... 24
Genus Clio Linnaeus, 1767 ....................................................... 24
Genus Cressa Rang, 1828 ......................................................... 25
Genus Hyalocylis Folin, 1875 ...................................................... 25
Genus Styliola Blainville, 1827 ................................................. 25
Genus Cuvierina Boas, 1886 ..................................................... 25
Genus Diacavolinia Van der Spoel, 1987 .............................. 25

Family Limacinidae Gray, 1840
Genus Limacina Bosc, 1817 ..................................................... 26

Suborder PSEUDOTHECOSOMATA Meisenheimer, 1905
Family Cymbuliidae Cantraine, 1841
Genus Cymbulia Péron and Lesueur, 1810 .......................... 26
Genus Corolla Dall, 1871 ......................................................... 26

Family Desmopteridae Chun, 1889
Genus Desmopterus Chun, 1889 ............................................. 26

Family Peraclidae Tesch, 1913
Genus Peracle Forbes, 1844 .................................................. 27

Order GYMNOSOMATA Blainville, 1894 ............................ 27
Family Pneumodermatidae Latreille, 1825
Genus Pneumoderma Péron and Lesueur, 1910 .................. 27
Family Clionidae Oken, 1815
Genus Clione Pallas, 1774 27
Genus Paraclione Tesch, 1903 27

Family Notobranchaeidae Pelseneer, 1886
Genus Notobranchaea Pelseneer, 1886 27
Genus Schleschia Strand, 1932 27

Order SACOGLOSSA Von Ihering, 1876 27
Suborder OXYNOACEA H. Adams and A. Adams, 1854
Family Volvatellidae Pilsbry, 1895
Genus Ascobulla Marcus, 1972 27

Family Oxynoidae H. Adams and A. Adams, 1854
Genus Oxynoe Rafinesque, 1819 27
Genus Lobiger Krohn, 1847 28

Suborder PLAKOBRANCHACEA Rang, 1829
Superfamily PLAKOBRANCHHOIDEA Rang, 1829
Family Plakobranchidae Rang, 1829 (= Elysiidae Forbes and Hanley, 1851)
Genus Elysia s. l. Risso, 1818 28
Genus Thuridilla Bergh, 1872 29

Family Boselliidae Marcus, 1982
Genus Bosellia Trinchese, 1891 29

Superfamily LIMAPONTIOIDEA Gray, 1847
Family Polybranchiidae O'Donoghue, 1929 (= Caliphyllidae Thiele, 1931)
Genus Polybranchia Pease, 1860 29
Genus Caliphylla A. Costa, 1867 29
Genus Cyerce Bergh, 1871 29

Family Hermaeidae H. Adams and A. Adams, 1854
Genus Aplysiopsis Deshayes, 1853 29
Genus Hermaea Lovén, 1844 29
Genus Hermaeopsis A. Costa, 1869 30

Family Limapontiidae Gray, 1847 (= Stüigeridae Iredale and O'Donoghue, 1923)
Genus Stiliger Ehrenberg, 1831 30
Genus Limapontia Johnston, 1836 30
Genus Calliapaea D'Orbigny, 1837 30
Genus Ercolania s. l. Trinchese, 1872 30
Genus Placida Trinchese, 1876 30
Genus Costasiella Pruvo-Fol, 1951 31

Order UMBRACULACEA Dall, 1889 31
Family Tylodinidae Gray, 1847
Genus Tylodina Rafinesque, 1814 31
Genus Anidolyta Willan, 1987 31
Family Umbraculidae Dall, 1889
Genus Umbraculum Schumacher, 1817 ........................... 31

Superorder NUDIPLEURA Wägele and Willan, 2000
Order Pleurobranchacea Férussac, 1822 ......................... 32
Family Pleurobranchidae Férussac, 1822
Subfamily Pleurobranchinae Férussac, 1822
Tribe Pleurobranchini Férussac, 1822
Genus Pleurobranchus Cuvier, 1805 ............................. 32
Tribe Berthellini Burn, 1962
Genus Berthella Blainville, 1824 ............................... 32
Genus Berthellina Gardiner, 1936 ............................... 33
Subfamily Pleurobranchaeinae Pilsbry, 1896
Genus Pleurobranchaea Meckel in Leue, 1813 .................. 33

Order Nudibranchia Blainville, 1814 .......................... 34
Suborder Anthobranchia Minichev, 1970
Infraorder Dordina Pelseneer, 1894
“Phanerobranchia” Fischer, 1883
Family Corambidae Bergh, 1871
Genus Corambe Bergh, 1869 ..................................... 34

Family Onchidorididae Alder and Hancock, 1845
Genus Adalaria Bergh, 1878 ..................................... 34
Genus Onchidoris Blainville, 1816 ................................ 34
Genus Acanthodoris Gray, 1850 .................................. 34
Genus Diaphorodoris Iredale and O’Donoghue, 1923 ........ 34

Family Goniodorididae H. and A. Adams, 1854
Genus Goniodoris Forbes and Goodsir, 1839 .................... 35
Genus Okenia Menke, 1830 ...................................... 35
Genus Ancula Lovén, 1846 ........................................ 35
Genus Trapania Pruvot-Fol, 1931 ................................ 35
Genus Bermudella Odhner, 1941 ................................ 36

Family Polyceridae Alder and Hancock, 1845
Genus Limacia O. F. Müller, 1781 ................................ 36
Genus Polycera Cuvier, 1817 ...................................... 36
Genus Thecacera Fleming, 1828 ................................ 37
Genus Plocamopherus Leuckart, 1828 ............................ 37
Genus Crimora Alder and Hancock, 1862 ......................... 37
Genus Roboastra Bergh, 1877 .................................... 38
Genus Polycerella Verrill, 1880 .................................. 38
Genus Kaloplocamus Bergh, 1880 ................................ 38
Genus Tambja Burn, 1962 ........................................ 38

Family Aegiridae Fischer, 1883
Genus Aegires Lovén, 1844 ....................................... 38
“CRYPTOBRANCHIA” Fischer, 1883
LABIOSTOMATA Valdés, 2002
Family Chromodorididae Bergh, 1891
Genus Glossodoris Ehrenbergh, 1831 ........................................ 39
Genus Hypselodoris Stimpson, 1855 ........................................ 39
Genus Chromodoris Alder and Hancock, 1855 ............................... 41
Genus Cadlina Bergh, 1878 .................................................... 42

Family Dorididae Rafinesque, 1815
Genus Doris Linnaeus, 1758 .................................................... 42
Genus Aldisa Bergh, 1878 ...................................................... 43

Family Discodorididae Bergh, 1891
Genus Jorunna Bergh, 1876 .................................................... 43
Genus Discodoris Bergh, 1877 ................................................... 44
Genus Thordisa Bergh, 1877 ..................................................... 44
Genus Platydoris Bergh, 1877 ................................................... 44
Genus Rostanga Bergh, 1879 ................................................... 45
Genus Pelodoris Bergh, 1880 .................................................... 45
Genus Paradors Bergh, 1884 ..................................................... 45
Genus Baptodors Bergh, 1884 .................................................... 46
Genus Geitodoris Bergh, 1891 ................................................... 46
Genus Taringa Marcus, 1955 ..................................................... 46
Genus Thorybopus Bouchet, 1977 .............................................. 47

LABIOSTOMATA incerta sedis
Genus Carminodoris Bergh, 1889 ............................................... 47

POROSTOMATA Bergh, 1878
Familia Phyllidiidae Rafinesque, 1814
Genus Phyllidia Cuvier, 1797 ................................................... 47
Genus Phyllidiopsis Bergh, 1875 ................................................ 47
Genus Reticulidia Brunckhorst, 1990 .......................................... 47

Familia Dendrodorididae O’Donoghue, 1924
Genus Dendrodoris Ehrenberg, 1831 .......................................... 47
Genus Doriopsilla Bergh, 1880 .................................................. 48

DEXIARCHIA Schrödl, Wägele and Willan, 2001
Suborder CLADOBRANCHIA Willan and Morton, 1984
“DENDRONOTINA” Sars, 1878
Family Tritoniidae Lamarck, 1809
Genus Tritonia Cuvier, 1803 .................................................... 48
Genus Marionia Vayssière, 1877 ............................................... 49
Genus Tritoniopsis Eliot, 1905 ................................................... 49

Family Scyllaeidae Fischer, 1883
Genus Scyllaea Linnaeus, 1758 .................................................. 49
Family Hancockiidae MacFarland, 1923
Genus Hancockia Gosse, 1877 ................................. 50

Family Lomanotidae Bergh, 1892
Genus Lomanus Vérany, 1844 .......................... 50

Family Tethyidae Alder and Hancock, 1855
Genus Tethys Linnaeus, 1767 .......................... 50

Family Phylliroiidae Férussac, 1821
Genus Phylliroe Péron and Lesueur, 1810 .......................... 50
Genus Cephalopyge Hanel, 1905 .......................... 50

Family Dendronotidae Sars, 1878
Genus Dendronotus Alder and Hancock, 1845 .................. 50

Family Dotoidae Gray, 1853
Genus Doto Oken, 1815 .................................. 50

“ARMININA” Odhner, 1934
Family Arminidae Iredale and O’Donoghue, 1923
Genus Armina Rafinesque, 1814 .......................... 52
Genus Heterodoris Verrill and Emerton in Verrill, 1882 .................. 52

Family Madrellidae Preston, 1911
Genus Madrella Alder and Hancock, 1864 .................. 52

Family Proctonotidae Gray, 1853
Genus Janolus Bergh, 1884 .................................. 52

“AEOLIDINA” Odhner, 1934
Family Flabellinidae Bergh, 1889
Genus Flabellina Voigt, 1834 .......................... 53
Genus Calmella Eliot, 1906 .................................. 54

Family Piseinotecidae Edmunds, 1970
Genus Piseinotecus Marcus, 1955 .......................... 54

Family Facelinidae Bergh, 1889
Genus Favorinus Gray, 1850 .......................... 54
Genus Facelina Alder and Hancock, 1855 .................. 55
Genus Phidiana Gray, 1850 .................................. 55
Genus Cratena Bergh, 1864 .................................. 55
Genus Caloria Trinchese, 1888 .......................... 56
Genus Learchis Bergh, 1896 .................................. 56
Genus Facelinopsis Pruvo-Fol, 1954 .................. 56
Genus Dondice Marcus, 1958 .................................. 56
Genus Antonietta Schmekel, 1966 .................. 56
Genus Dicata Schmekel, 1967 .................................. 56
Genus Pruwolfia Tardy, 1969 .................................. 56
Genus Babakina Roller, 1972 .......................... 57
Genus Algarvia García-Gómez and Cervera, 1989 .......................... 57

Family Aeolidiidae D’Orbigny, 1834
Genus Aeolidia Cuvier, 1798 .......................... 57
Genus Spurilla Bergh, 1864 .......................... 57
Genus Aeolidiella Bergh, 1867 .......................... 57
Genus Cerberilla Bergh, 1873 .......................... 58
Genus Berghia Trinches, 1877 .......................... 58
Genus Limenandra Haefelfinger and Stamm, 1958 .......................... 58

Family Eubranchidae Odhner, 1934
Genus Eubranchus Forbes, 1838 .......................... 58

Family Pseudovermididae Thiele, 1931
Genus Pseudovermis Périaslavzef, 1891 .......................... 59

Family Calmidae Iredale and O’Donoghue, 1923
Genus Calma Alder and Hancock, 1855 .......................... 59

Family Glaucidae Menke, 1828
Genus Glaucus Forster, 1777 .......................... 59

Family Tergipedidae Thiele, 1931
Genus Tergipes Cuvier, 1805 .......................... 59
Genus Cuthona Alder and Hancock, 1855 .......................... 59
Genus Catronia Winckworth, 1941 .......................... 61
Genus Tenellia A. Costa, 1866 .......................... 61

Family Fionidae Alder and Hancock, 1855
Genus Fiona Alder and Hancock, 1851 .......................... 61

Family Embletoniidae Schmekel, 1970
Genus Embletonia Alder and Hancock, 1851 .......................... 61

REMARKS .......................... 61
CONCLUSIONS .......................... 72
ACKNOWLEDGEMENTS .......................... 74
REFERENCES .......................... 87
REFEREES .......................... 113
INDEX .......................... 115
BOLETÍN. INSTITUTO ESPAÑOL DE OCEANOGRÁFÍA

Publicación científica dedicada a las Ciencias Marinas y a la Oceanografía en sus distintas ramas: Biología, Ecología, Geología, Física, Química, Pesquerías, Acuicultura y Contaminación.

Podrán publicarse en BOLETÍN artículos de investigación, revisiones temáticas, notas, monografías, símposios y congresos.

GUÍA PARA LOS AUTORES

Idiomas

Se aceptarán originales en español o inglés, indistintamente.

Preparación de originales

Los originales se mecanografiarán a doble espacio, en tamaño DIN A-4. En general, para los artículos enviados a BOLETÍN, se procurará limitar la extensión a un máximo de 15 páginas impresas (dos páginas mecanografiadas de 39 líneas y 62 matrices por línea representan una página impresa).

El texto debe presentarse en la siguiente forma:

Título del trabajo, nombres de los autores e institución, dirección postal (calle, ciudad, país), y la dirección de correo electrónico y los números de teléfono y fax del primer autor.

Se incluirá un título abreviado.

A continuación figurarán un resumen en español y otro en inglés (abstract), con el título del trabajo en inglés.

El trabajo, cuando su naturaleza lo permita, se articulará en introducción, material y métodos, resultados, discusión, agradecimientos y bibliografía.

Los símbolos y signos químicos, físicos o matemáticos se escribirán siempre ateniéndose a las normas internacionales vigentes: SI (Sistema Internacional de Unidades), ISO (International Standard Organization) y UNE (Una Norma Española). Dichos símbolos, por tanto, se escribirán siempre sin punto y permanecerán invariables en plural. Las normas ISO y UNE servirán siempre de referencia en la elaboración de originales.

En español las mayúsculas también se acentuarán siguiendo las normas correctas de ortografía.

Para facilitar la lectura de números de muchas cifras, éstas pueden separarse en grupos apropiados, preferentemente de tres cifras, a contar desde el signo decimal en uno y otro sentido; los grupos deben ir separados por un pequeño espacio, pero nunca por un punto u otro signo.

El signo decimal es una coma en la parte baja de la línea. En los textos escritos en inglés puede utilizarse también un punto, siempre en la parte baja de la línea.

Los números que indiquen años tampoco llevarán punto pero, al contrario que en el caso anterior, en su lugar no se dejará ningún espacio. Por ejemplo, la forma correcta de escribir año mil novecientos noventa y nueve es 1999.

El nombre vulgar de las especies, cuando se citen por primera vez (en los títulos en español y en inglés, en el resumen, en el abstract y en el resto del texto), debe ir seguido de su nombre científico y éste, a ser posible, del nombre del autor que la describió y del año. En las veces posteriores en que aparezca el nombre de la especie no se volverán a citar ni autor ni año.

Irán en cursiva los nombres de géneros y especies, así como los nombres de revistas y símposios y los títulos de los libros.

No se aceptarán llamadas a pie de página.

Resumen y abstract

Ambos apartados no excederán de 125 palabras cada uno y darán a conocer los objetivos del trabajo así como los procedimientos seguidos y los resultados y datos más significativos obtenidos.

Al principio del abstract se incluirá el título del trabajo en inglés y al final de cada apartado figurarán hasta un máximo de ocho palabras clave, no incluidas en el título y por orden de importancia, representativas del trabajo.

Introducción

La introducción no excederá de 500 palabras, indicará brevemente los objetivos del estudio y proporcionará suficiente cantidad de información como para aclarar el planteamiento del trabajo y la hipótesis que se pretende comprobar.
Material y métodos

Este apartado será lo más conciso posible pero deberá proporcionar toda la información necesaria para permitir a cualquier investigador especializado evaluar la metodología empleada.

Resultados

El apartado de resultados será lo más claro posible y se ceñirá a los resultados de la investigación esenciales para establecer los principales puntos del trabajo.

Discusión

Se incluirá una breve discusión sobre la validez de los resultados observados relacionándolos con los de otros trabajos publicados sobre el mismo asunto así como un informe sobre el significado del trabajo. Se desaconseja discusiones extensas sobre la literatura existente.

Bibliografía

La bibliografía se limitará a los trabajos citados en el texto y sólo figurarán en ella los trabajos publicados o “en prensa”. Esta última información deberá indicarse, en lugar del año, entre paréntesis. Las referencias en el texto a los autores se harán citando el apellido del autor (en minúsculas) y a continuación, entre paréntesis, el año de la publicación, o bien poniendo entre paréntesis el(los) autor(es) y el año, separados por una coma. Las observaciones no publicadas, las comunicaciones personales o los trabajos en preparación sobre el mismo asunto así como un informe sobre el significado del trabajo. Se desaconseja discusiones extensas sobre la literatura existente.

Ejemplos de citas bibliográficas:

– De una revista:

– De un libro:

– De un artículo de un libro que forma parte de una serie:

– De un artículo de un simposio:

Los autores serán responsables de que todas las citas bibliográficas estén completas y de la exactitud de las mismas.

Tablas, figuras, láminas, mapas y fotografías o diapositivas

Todas las ilustraciones (figuras, láminas, mapas y fotografías o diapositivas) deben ser originales y se prepararán en papel de alta calidad de reproducción fotográfica, o en archivos de disquete independientes del texto (junto con copias de impresora láser). Sólo se incluirán aquéllas que muestren datos esenciales; nunca deberá producirse duplicidad de datos por la presentación de los mismos en texto, tablas e ilustraciones.

El grosor de las líneas y el tamaño de las letras y otros símbolos serán los adecuados para que sean visibles y claros cuando se efectúe la reducción (en su caso) y ajuste, a una o dos columnas, al formato de la página. La reducción no podrá ser en ningún caso superior al 60 % y los símbolos menores, una vez reducidos, no serán inferiores a 1,5 mm.

En la elaboración de tablas y en los rótulos de figurar se utilizará el tipo de letra Times. Si no se dispone de este tipo se utilizará cualquier otro de letra romana (como Prestige o Dutch).
Los rótulos irán siempre en minúscula y sin negrita.
No se presentarán rótulos elaborados con transferibles.
Se procurará que las ilustraciones no sean ni apaisadas ni en color.
Las figuras se delinearán cerradas, es decir, con los correspondientes ejes de abscisas y ordenadas unidos entre sí por sus paralelas. El nombre de cada variable se escribirá siempre a lo largo de su eje, coincidiendo el final con el extremo del mismo.
Las tablas, en cambio, no llevarán nunca líneas verticales.
La posición definitiva de tablas e ilustraciones en la publicación se indicará en los márgenes del original.
Las tablas se numerarán con números romanos: tabla I., etc.; las figuras (figuras, láminas, mapas y fotografías o diapositivas) se numerarán con números arábigos y todas se denominarán figuras: figura 1., etc. Todas las leyendas irán en hoja aparte.

Envío de originales

Los originales enviados a BOLETÍN no habrán sido publicados, ni aceptados, ni presentados para su publicación, ni tampoco serán enviados simultáneamente a ningún otro medio de edición.
El original, en formato electrónico y en papel, se remitirá al coordinador editorial a través del Sr. Subdirector General de Investigación del IEO. Avda. de Brasil, 31, 28020 Madrid, España. Para seguridad se aconseja el correo certificado. Se podrá utilizar también el correo electrónico: publicaciones@md.ieo.es. Cuando se trate de la publicación de un simposio o un congreso, los manuscritos definitivos de las comunicaciones se enviarán al coordinador del mismo.
El receptor del original acusará recibo del mismo. Los autores retendrán en su poder una copia del original enviado.
Para la elaboración del original se utilizarán los programas Microsoft Word o WordPerfect. Para la elaboración de ilustraciones se utilizará preferentemente Excel, Harvard Graphics, Surfer, Map View, Corel Draw o Power Point. Las ilustraciones se enviarán en el programa con el que hayan sido realizadas.
Como soporte se podrán utilizar disquetes de 3.5 pulgadas, o discos compactos (CD), compatibles con los sistemas MS-DOS y Windows Microsoft.
El trabajo de edición se facilitará notablemente si se presenta el texto seguido, sin sangrías de párrafo y sin tabuladores en el texto. Los trabajos que no se adapten a las normas de esta publicación serán devueltos al primer autor para su corrección antes de ser evaluados.
Los originales serán revisados críticamente por al menos dos evaluadores.
Los trabajos ya evaluados se remitirán al primer autor, solicitando que se tomen en consideración los comentarios y críticas de los evaluadores. Cuando esto se haya llevado a cabo, los autores re enviarán el original y una copia al correspondiente coordinador. El editor decidirá entonces su aceptación o rechazo.
El plazo de envío del original corregido, tomadas en consideración las evaluaciones, no será superior a dos semanas; pasado dicho plazo el editor podrá cambiar la fecha de recepción del original, figurando en la publicación la fecha de recepción del original corregido.
Los autores dispondrán de un plazo máximo de dos semanas para revisar las correcciones del editor; pasado este plazo el editor se reserva el derecho de publicar el trabajo sin revisar por los autores, declinando cualquier responsabilidad por los errores que pudieran aparecer en la publicación.

Fecha límite de recepción de originales

Los originales recibidos con posterioridad a la primera semana del mes de septiembre no podrán ser contemplados en el programa editorial del siguiente año y, por tanto, no se asegura que sean publicados durante el mismo.

Pruebas

La corrección de pruebas por parte de los autores se limitará a los errores de imprenta. Las pruebas de imprenta deberán ser devueltas corregidas en un plazo de dos semanas; pasado este plazo el editor se reserva el derecho de publicar el trabajo sin corregir por los autores o anular su publicación.

Ejemplares publicados

Cuando la publicación conste de un solo artículo se enviarán gratuitamente al autor 10 ejemplares de su trabajo (si el artículo está firmado por varios autores los 10 ejemplares se enviarán al primer autor), si la publicación consta de varios artículos el primer autor de cada uno recibirá gratuitamente su artículo en formato pdf. El editor podrá decidir enviar todos los artículos de la obra al coordinador del trabajo, que será quien se encargue de remitirlos a los autores.
An scientific publication dedicated to the marine sciences and oceanography in their different branches: biology, ecology, geology, physics, chemistry, fishing, aquaculture and pollution.

Research papers, thematic reviews, notes, monographs, symposia and congresses may be published in BOLETÍN.

GUIDE FOR AUTHORS

Languages

Papers are accepted in Spanish or English.

Preparation of Originals

Text should be typed, double-spaced throughout, on DIN A-4 paper. In general, individual papers sent to BOLETÍN should have a maximum length of 15 printed pages (one printed page equals approximately two typed pages with 39 lines each, 62 characters/line).

Present the text as follows:

Title of the paper, names of authors and institution, mailing address (street, city, country), and the first author’s e-mail address and telephone and fax numbers.

Include an abbreviated version of the title.

An abstract, in Spanish and English versions, should follow the title heading, along with a Spanish (or English) translation of the title.

Whenever possible, divide the paper into:

Introduction, Material and Methods, Results, Discussion, Acknowledgements and References.

Chemical, physical or mathematical signs and symbols should follow standard international usage: SI (Système International d’Unités), ISO (International Standard Organization) and UNE (Una Norma Española). Therefore, these symbols should always be written without periods, and will remain unmodified when plural. Always refer to the ISO and UNE norms when preparing texts for publication.

In Spanish, accent capital letters, following correct spelling norms.

To simplify the reading of long numbers, they may be separated into appropriate groups, preferably with three places, counting from the decimal point in one or the other direction; these groups should be separated by a space, but never by a comma or other sign.

The decimal sign is a comma on the line. Texts in English may also use a point, on the line.

Numbers indicating years should follow this format: 1999 (for nineteen ninety-nine).

The first citation of the vernacular name of a species (in the Spanish and English titles, the abstract, the resumen, and the body of the text) should be followed by its scientific name, and then, whenever possible, by the name of the author who described it, and the year. Omit the author and the year in subsequent citations.

Italicize genus and species names, as well as the titles of journals, symposia, and books.

Footnotes will not be accepted.

Abstract and Resumen

Include English and Spanish versions of the abstract (resumen, in Spanish), no more than 125 words each, setting out the paper’s objectives, as well as the procedures followed and the most relevant findings and data obtained.

Include the title of the paper in Spanish at the beginning of the Spanish abstract. At the end of this section, list a maximum of eight key words, not included in the title and in order of importance, indicative of the paper’s contents.

Introduction

The introduction should not exceed 500 words, briefly indicating the study’s objectives and providing sufficient information to clarify the paper’s basic focus and the hypothesis being tested.

Materials and Methods

Make this section as concise as possible, while giving all the information necessary to enable any specialist to evaluate the methodology used.
Results

This section should be as clear as possible, and limited to findings essential for establishing the paper’s main points.

Discussion

Include a brief discussion regarding the validity of the results observed in relation to those of other published papers on the same topic, as well as a report on the paper’s significance. Extensive discussion of the literature is discouraged.

References

Limit bibliographies to those works cited in the text which have been published or are “in press”. If a paper is in press, this phrase should replace the year at the end of the bibliographic reference, in parentheses. For references in the text, cite the author’s surname (capitalizing the first letter only), followed by the year of publication in parentheses; when the entire reference is enclosed in parentheses, the surname(s) of the author(s) should be followed by a comma and the year. Cite unpublished observations, personal communiqués or works in preparation or under evaluation in the text only; rather than the year of publication, they should be followed by: “unpublished observation”, “manuscript” (“MS”) or “unpublished”, “personal communiqué” (“pers. comm.”), “in preparation” or “under evaluation” or “submitted”. When the publication has more than three authors, cite only the first, followed by et al. In the bibliography, however, all authors’ names should appear, separated by commas. Alphabetize bibliographic references; references by the same author should be put in chronological order. The names of journals should, preferably, not be abbreviated. Journal abbreviations should follow those indicated in Periodical Title Abbreviations. Eighth Edition. Gale Research Inc. Detroit; London. 1992. If this is not possible, they should be written without abbreviation.

Examples of bibliographic references:

– Of a journal:

– Of a book:

– Of an article from a book which forms part of a series:

– Of an article from a symposium:

Authors will be responsible for the completeness and accuracy of their bibliographic references.

Tables, figures, plates, maps and photographs or slides

All illustrations (figures, plates, maps and photographs or slides) should be originals, presented apart from the type-written text. Line illustrations may be submitted as high-quality photographic prints or as computer software files (along with laser-printed copies). Include them only if they show special data; do not present data twice in the text, tables or illustrations.

The thickness of the lines and the size of letters and other symbols should enable them to be clearly visible when reduced (if necessary) for publication, to the size or one or two columns on the page. Originals will not be reduced more than 60 %, and reduced symbols will not be smaller than 1.5 mm.

In preparing tables and figure captions, use the Times font, or, if that is not possible, some other Roman font (such as Prestige or Dutch).

Figure captions should use lowercase letters, without boldface type.

Do not present originals made with transfers.

Illustrations should not be in colour or formatted lengthways.

Figures should be drawn with a boxed-in format, closing the abscessas and ordinates with parallel lines. The names of variables should always be placed along the axes, flush with the ends.

Tables, however, should never have vertical lines.

Indicate the definitive published position of tables and illustrations in the margins of the original.
Tables should bear roman numerals: Table I., etc. Use arabic numerals for illustrations (figures, plates, maps and photographs or slides), and title all of them figures: figure 1., etc. List all captions on a separate page.

Submissions

Originals sent to BOLETÍN must be unpublished. Simultaneous submissions or papers which have been accepted by or presented to another publication shall not be accepted.

A printed copy and a computer file of the work should be sent to the Editor, care of the Subdirector General de Investigación (Deputy Director of Research) of the IEO, Avda. de Brasil 31, 28020 Madrid, Spain. We recommend that originals be sent by certified mail. The e-mail (publicaciones@md.ieo.es) could be used. In case of the publication of a symposium or congress, the final versions of conferences should be sent to the event’s co-ordinator.

Reception of these originals will be confirmed. Authors should save their own back-up copy of the manuscript.

Computer files should be sent in Microsoft Word or WordPerfect format. Illustrations should, preferably, be programmed in Excel, Harvard Graphics, Surfer, Map View, Corel Draw, or Power Point. Illustrations should be submitted in the same program that was used to create them.

Software copies should be submitted on 3.5 inch discs, or compact discs (CD), compatible with MSDOS or Windows Microsoft operative system.

Please present the text without paragraph indentations or any tabulations.

Papers not meeting the norms of this publication will be returned to their authors for correction before they are reviewed.

Papers will be critically reviewed by at least two referees.

After evaluation, papers will be returned to the first author so that they may be revised in keeping with the referees’ comments and criticism. Authors should return the revised original and one copy to the corresponding coordinator. The Editor will then accept or reject the paper.

Return the corrected original within two weeks; if not, the Editor will be able to change the reception date of the original to be included in the published version, substituting the reception date of the corrected original.

If authors fail to meet the aforesaid two-week deadline, the Editor reserves the right to publish the paper without the authors’ revisions, declining any responsibility for errors which could appear in the published version.

Deadline for reception of originals

Submissions received after the first week of September cannot be included in the following year’s editorial programming. Therefore, their publication during that year cannot be guaranteed.

Proofs

Authors must limit their proof corrections to printing errors. Corrected proofs should be returned within two weeks; after this period, the Editor reserves the right to publish the paper uncorrected by the authors or cancel its publication.

Offprints

In the case of issues comprising a single paper, 10 courtesy copies will be sent to the author (if the issue is by several authors, courtesy copies will be sent to the first author).

If the issue has several papers, a pdf courtesy copy will be sent to the first author of each paper. The Editor may decide to send all of these pdf files to the co-ordinator, who would then be responsible for distributing them to the authors.