

PRELIMINARY LIST OF ZOOPLANKTON OF THE CANARY ISLANDS. II. SIPHONOPHORA, PTEROPODA, HETEROPODA, OSTRACODA, AMPHIPODA AND DECAPODA.

By FERNANDO LOZANO SOLDEVILLA * & PILAR HERNÁNDEZ HERNÁNDEZ **

RESUMEN: Se presentan en este trabajo los resultados de las investigaciones realizadas hasta este momento por diferentes equipos de investigación, entre los que se encuentra el de Planctología del Departamento de Biología Animal (Ciencia Marinas) de la Universidad de La Laguna, dentro del campo del zooplancton de las aguas de las Islas Canarias.

Se expone una lista sistemática preliminar que incluye un total de 256 especies, correspondientes a 73 Sifonóforos, 20 Pterópodos, 8 Heterópodos, 35 Ostrácodos, 94 Anfípodos (8 Gammáridos y 86 Hipéridos) y 26 Decápodos planctónicos (12 Carideos y 14 Peneideos).

Palabras clave: Zooplancton, Islas Canarias; NE. Atlántico.

ABSTRACT: This work is based on investigations so far carried out by various teams of investigators including the Planktologists concerned with the zooplankton of the waters of the Canary Islands belonging to the Animal Biology (Marine Sciences) Department of the University of La Laguna.

The resulting preliminary systematic list includes the total of 256 species consisting of 73 species of Siphonophores, 20 Pteropods, 8 Heteropods, 35 Ostracods, 94 Amphipods (8 Gammarids and 86 Hyperiid) and 26 planktonic Decapods (12 Carideans and 14 Penaeids).

Key words: Zooplankton, Canary Islands, NE. Atlantic.

* Department of Animal Biology (Marine Sciences), Faculty of Biology, University of La Laguna. C/ Astrofísico Francisco Sánchez s/n, 38206 La Laguna, Tenerife, Canary Islands, Spain.

** Department of Biology, Faculty of Sciences, University of Alicante, 03071 Alicante, Spain.

Table 1. - Characteristics of hauls at sampling stations of zooplankton studies in waters of the Canary Islands (compiled from the sources indicated).

SIPHONOPHORA

Situation of stations: SE of Fuerteventura (Canary Islands).

Net: N113 (1m² ring-net and 0.33 mm. of pore size) and IKTM (3 m. with 5 mm. mesh netting).

Haul: Horizontal and oblique series (960-0 metres). Diurnal and nocturnal.

Expedition: Sond Cruise, 1965.

Ship: R. R. S. "Discovery".

Source: HAECKEL (1869 and 1888) and PUGH (1974).

PTEROPODA AND HETEROPODA

Situation of stations: St.VIII (28° 3' 15" N and 17° 27' W), St. 1 (27° 24' N and 16° 55' W), St. 85 (28° 42' N and 18° 6' W), NE of Tenerife (San Andrés) and whole Canary Islands.

Net: Juday-Bogorov (0.20 m² of mouth area and 250 um and 100 um of pore size) and Standard International WP-2 (Triplicate) of 250 um of pore size.

Haul: Oblique and vertical (200-0 metres). Diurnal.

Expedition: Challenger Expedition, 1873-1876 and Canarias 85.

Ship: H. M. S. "Challenger", B/O. "Agamenón, B/O. "Islas Canarias" and B/I. "Taliarte".

Source: PELSENEER (1887 and 1888), SMITH (1888), FERNANDEZ de PUELLES (1986) and HERNANDEZ & LOZANO SOLDEVILLA (in preparation).

OSTRACODA

Situation of stations: St.VIII (28° 3' 15" N and 17° 27' W), St. 85 (28° 42' N and 18° 6' W), NE of Tenerife (San Andrés) and SE of Fuerteventura (Canary Islands).

Net: Juday-Bogorov (0.20 m² of mouth area and 250 um and 100 um of pore size) and N113 (1 m² ring-net and 0.33 mm. pore size).

Haul: Horizontal series (960-0 metres) and vertical (200-0 metres). Diurnal and nocturnal.

Expedition: Challenger Expedition, 1873-1876 and Sond Cruise, 1965.

Ship: H. M. S. "Challenger", R. R. S. "Discovery", B/O. "Agamenón" and B/O. "Islas Canarias".

Source: BRADY (1880), ANGEL (1969) and FERNANDEZ de PUELLES (1986).

AMPHIPODA

Situation of station: St 1. (27° 24' N and 16° 55' W) and SE of Fuerteventura (Canary Islands).

Net: N113 (1 m² ring-net and 0.33 mm. of pore size), IKTM (3m with 5 mm. mesh netting) and Neuston net.

Haul: Horizontal series (960-0 metres). Diurnal and nocturnal.

Expedition: Challenger Expedition, 1873-1876 and Sond Cruise, 1965.

Ship: H. M. S. "Challenger", R. R. S. "Discovery".

Source: STEBBING (1888) and THURSTON (1976a, 1976b and 1976c).

DECAPODA

Situation of station: SE of Fuerteventura (Canary Islands).

Net: N113 (1 m² ring-net and 0.33 mm. of pore size), IKTM (3m with 5 mm. mesh netting).

Haul: Horizontal series (960-0 metres). Diurnal and nocturnal.

Expedition: Sond Cruise, 1965.

Ship: R. R. S. "Discovery".

Source: FOXTON (1970a and 1970b), SANTAELLA & BRAVO DE LA LAGUNA (1975) and GONZALEZ *et al.* (in press).

PRELIMINARY LIST OF ZOOPLANKTON OF THE CANARY ISLANDS.

CLASS HYDROZOA

FAMILY PHYSOPHORIDAE

Physophora hydrostatica FORSKAL, 1775

ORDER SIPHONOPHORA

FAMILY ATHORYBIIDAE

Melophysa melo (QUOY & GAIMARD, 1827)

SUBORDER PHYSOPHORAE

FAMILY APOLEMIIDAE

Apolemia uvaria LESUEUR, 1880

FAMILY FORSKALIIDAE

Forskalia edwardsii KOLLICKER, 1853
Forskalia tholoides HAECKEL, 1888

FAMILY AGALMIDAE

Agalma okeni (SARS, 1846) FEWKES, 1811

Stephanomia rubra (VOGT, 1852)

Halistermma rubrum (VOGT, 1852)

Nectalia loligo HAECKEL, 1888

Marrus orthocanna (KRAMP, 1942)

Marrus orthocannoides TOTTON, 1954

Nanomia bijuga (CHIAJE, 1841)

SUBORDER CALYCOPHORAE

FAMILY PRAYIDAE

SUBFAMILY AMPHICARYONINAE

Amphicaryon acaule CHUN, 1888

Amphicaryon ernesti TOTTON, 1954

Meresearsia praeclara TOTTON, 1954

FAMILY PYROSTEPHIDAE

Bargmannia elongata TOTTON, 1954

SUBFAMILY PRAYINAE

- Praya galea* HAECKEL, 1888
Praya dubia (QUOY & GAIMARD, 1833, 1834)
Praya resticulata (BIGELOW, 1911)
Rosacea cymbiformis (CHIAJE, 1822)
Desmophyes annectens BIGELOW, 1911

SUBFAMILY NECTOPYRAMIDINAE

- Nectopyramis diomedae* BIGELOW, 1911
Nectopyramis natans (BIGELOW, 1911)
Nectopyramis spinosa SEARS, 1952
Nectopyramis thetis BIGELOW, 1911

FAMILY HIPPOPODIIDAE

- Hippopodius hippopus* (FORSKAL, 1776)
Vogtia glabra BIGELOW, 1918
Vogtia spinosa KEFFERSTEIN & EHLERS,
 1861
Vogtia serrata (MOSER, 1925)
Vogtia pentacantha KOLLICKER, 1853

FAMILY DIPHYIDAE

SUBFAMILY SULCULEOLARIINAE

- Sulculeolaria quadrivalvis* BLAINVILLE, 1834.
Sulculeolaria biloba (SARS, 1846)
Sulculeolaria monoica (CHUN, 1888)
Sulculeolaria turgida (GEGENBAUER, 1843)
Sulculeolaria chuni (LENS & VAN RIEMSDIJK,
 1908)

SUBFAMILY DIPHYINAE

- Diphyes dispar* CHAMISSO & EYSENHARDT,
 1821
Diphyes bojani (ESCHSCHOLTZ, 1829)
Lensia multicristata (MOSER, 1925)
Lensia achilles TOTTON, 1941
Lensia subtilis (CHUN, 1886)
Lensia meteori (LELOUP, 1934)
Lensia cossak TOTTON, 1941
Lensia grimaldi LELOUP, 1933
Lensia hotspur TOTTON, 1941
Lensia fowleri (BIGELOW, 1911)
Lensia campanella (MOSER, 1925)
Lensia lelouveteau TOTTON, 1941
Lensia exeter TOTTON, 1941
Lensia havock TOTTON, 1941
Lensia hostile TOTTON, 1941

? *Miggiaea atlantica* CUNNINGHAM, 1892

? *Muggiaea kochi* (WILL, 1844)

Chelophyes appendiculata (ESCHSCHOLTZ, 1829)

Eudoxoides mitra (HUXLEY, 1859)

Eudoxoides spiralis (BIGELOW, 1911)

Dimophyes arctica (CHUN, 1897)

Diphyopsis compressa (HAECKEL, 1866)

FAMILY CLAUSOPHYIDAE

Clausophyes ovata (KEFFERSTEIN & EHLERS,
 1860)

Chuniphyes multidentata LENS & VAN
 RIEMSDIJK, 1908

Heteropyramis maculata MOSER, 1925

FAMILY ABYLIDAE

SUBFAMILY ABYLINAE

Abyla trigona QUOY & GAIMARD, 1827

Abyla crystallus HAECKEL, 1867

Abyla carina HAECKEL, 1888

SUBFAMILY CERATOCYMBINAE

Ceratocymba sagittata (QUOY & GAIMARD,
 1827)

SUBFAMILY ABYLOPSINAE

Abylopsis tetragona (OTTO, 1823)

Abylopsis eschscholtzii (HUXLEY, 1829)

Bassia bassensis (QUOY & GAIMARD, (1833)
 (1834)

Calpe gegenbauri HAECKEL, 1888

Enneagonum hyalinum QUOY & GAIMARD,
 1827

SUBORDER CYSTONECTAE

FAMILY RHIZOPHYSIDAE

SUBFAMILY CANNOPHYSINAE

Cannophysa murrayana HAECKEL, 1888

SUBFAMILY LINOPHYSINAE

Nectophysa wyvillei HAECKEL, 1888

FAMILY PHYSALIDAE

SUBFAMILY ARETHUSINAE

Alophota giltschiana HAECKEL, 1888*Arethusa challengerii*

CLASS GASTROPODA

SUBCLASS OPISTHOBRANCHIA

ORDER THECOSOMATA

SUBORDER EUTHECOSOMATA

FAMILY LIMACINIDAE

Limacina inflata (D'ORBIGNY, 1836)*Limacina lesueuri* (D'ORBIGNY, 1836)*Limacina bulimoides* (D'ORBIGNY, 1836)*Limacina trachiformis* (D'ORBIGNY, 1836)

FAMILY CAVOLINIIDAE

Creseis acicula (RANG, 1828)*Hyalocylis striata* (RANG, 1828)*Styliola subula* (QUOY & GAIMARD, 1827)*Clio pyramidata* LINNAEUS, 1767*Clio cuspidata* (BOSC, 1802)*Clio polita* (PELSENEER, 1888)*Diacria trispinosa* (BLAINVILLE, 1821)*Diacria quadridentata* (BLAINVILLE, 1821)*Cavolinia inflexa* (LESUEUR, 1813)*Cavolinia gibbosa* (D'ORBIGNY, 1836)*Cavolinia uncinata* (RANG, 1829)*Cuvierina columnella* (RANG, 1827)

SUBORDER PSEUDOTHECOSOMATA

FAMILY CYMBULIIDAE

Cymbulia peroni BLAINVILLE, 1818

FAMILY PERACLIDIDAE

Peraclis bispinosa PELSENEER, 1888*Peraclis reticulata* (D'ORBIGNY, 1836)*Peraclis triacantha* (FISHER, 1882)

SUBCLASS PROSOBRANCHIA

ORDER HETEROPODA

FAMILY ATLANTIDAE

Protatlanta souleyeti (SMITH, 1888)*Atlanta peroni* LESUEUR, 1817*Atlanta fusca* SOULEYET, 1852*Atlanta helicinoides* SOULEYET, 1852*Atlanta inclinata* SOULEYET, 1852*Atlanta inflata* SOULEYET, 1852*Atlanta lesueuri* SOULEYET, 1852

FAMILY CARINARIIDAE

Carinaria lamarcki PERON & LESUEUR, 1810

CLASS CRUSTACEA

SUBCLASS OSTRACODA

ORDER MYODOCOPINA

SUBORDER MYODOCOPINA

SUPERFAMILY CYPRIDINACEA

FAMILY CIPRIDINIDAE

Macrocypridina castanea (BRADY, 1897)

SUPERFAMILY HALOCYPRIDACEA

FAMILY ARCHICOCHOECIDAE

Archiconchoecia cucullata (BRADY, 1902)

FAMILY HALOCYPRIDIDAE

Halocypris brevisrostris

FAMILY CONCHOECIDAE

Conchoecia oblonga (CLAUS, 1890)*Conchoecia porrecta* CLAUS, 1890*Conchoecia acuminata* (CLAUS, 1890)*Conchoecia parthenoda* MÜLLER, 1906*Conchoecia subarcuata* CLAUS, 1890*Conchoecia daphnoides* (CLAUS, 1890)*Conchoecia bispinosa* CLAUS, 1890*Conchoecia secemenda* VAVRA, 1906*Conchoecia haddoni* BRADY & NORMAN, 1896*Conchoecia spinifera* (CLAUS, 1890)*Conchoecia hyalophyllum* CLAUS, 1890*Conchoecia alata* MÜLLER, 1906*Conchoecia imbricata* (BRADY, 1880)*Conchoecia rhynchena* MÜLLER, 1906*Conchoecia loricata* CLAUS, 1894

Conchoecia inermis CLAUS, 1890
Conchoecia lophura MÜLLER, 1906
Conchoecia ametra MÜLLER, 1906
Conchoecia kampta (MÜLLER, 1906)
Conchoecia curta LUBBOCK, 1860
Conchoecia spirostris CLAUS, 1874
Conchoecia elegans SARS, 1866
Conchoecia skogsbergi ILES, 1935
Conchoecia procera MÜLLER, 1890
Conchoecia brackyaskos MÜLLER, 1906
Conchoecia magna CLAUS, 1874
Conchoecia aequiseta MÜLLER, 1906
Conchoecia hirsuta MÜLLER, 1906
Conchoecia incisa MÜLLER, 1906
Conchoecia atlantica (LUBBOCK, 1856)
Conchoecia macrocheira MÜLLER, 1906
Conchoecia dorsotuberculata MÜLLER, 1906

SUBCLASS MALACOSTRACA

ORDER AMPHIPODA

SUBORDER GAMMARIDEA

FAMILY EUSIRIDAE

Eusiropsis riisei STEBBING, 1897
Stenopoeira atlantica STEBBING, 1888

FAMILY LYSIANASSIDAE

Cybelocephalus birsteini THURSTON, 1976
Cyphocaris anonyx BOECK, 1871
Cyphocaris challengerii STEBBING, 1888

FAMILY PARDALISCIDAE

Halice macronyx (STEBBING, 1888)
Halicoides discoveryi THURSTON, 1976

FAMILY STEGOCEPHALIDAE

Parandania boeckii (STEBBING, 1888)

SUBORDER HYPERIIDAE

FAMILY MIMONECTIDAE

Mimonectes gausi (WOLTERECK, 1904)

FAMILY PROSCINIDAE

Proscina magna STEPHENSEN & PIRLOT, 1931

FAMILY SCINIDAE

Scina borealis (SARS, 1882)
Scina crassicornis (FABRICIUS, 1775)
Scina curvidactyla CHEVREUX, 1914
Scina damasii PIRLOT, 1929
Scina excisa WAGLER, 1926
Scina lepisma (CHUN, 1889)
Scina marginata (BOVALLIUS, 1885)
Scina oedicarpus STEBBING, 1895
Scina pusilla CHEVREUX, 1919
Scina rattrayi STEBBING, 1895
Scina similis STEBBING, 1895
Scina stebbingi CHEVREUX, 1919
Scina stenopus STEBBING, 1895
Scina submarginata TATTERSALL, 1906
Scina tullbergi (BOVALLIUS, 1885)
Scina vosseleri atlantis THURSTON, 1976
Scina wagneri atlantis THURSTON, 1976
Scina wolterecki WAGLER, 1926
Acanthoscina acanyhodes (STEBBING, 1895)
Ctenoscina brevicaudata WAGLER, 1926

FAMILY LANCEOLIDAE

Lanceola loveni BOVALLIUS, 1885
Lanceola pacifica var. *robusta* WOLTERECK,
 1909
Lanceola sayana BOVALLIUS, 1885

FAMILY VIBILIIDAE

Vibilia armata BOVALLIUS, 1887
Vibilia australis STEBBING, 1888
Vibilia propinqua STEBBING, 1888
Vibilia stebbingi BEHNING & WOLTERECK,
 1912
Vibilia viatrix BOVALLIUS, 1887

FAMILY PARAPHRONIMIDAE

Paraphronima crassipes CLAUS, 1879
Paraphronima gracilis CLAUS, 1879

FAMILY HYPERIIDAE

Hyperietta stephensini BOWMAN, 1973
Hyperietta vosseleri (STEBBING, 1904)
Hyperoides longipes CHEVREUX, 1900
Hyperoche picta BOVALLIUS, 1889
Lestrigonus bengalensis GILES, 1888
Lestrigonus latissimus (BOVALLIUS, 1889)
Lestrigonus machrophthalmus (VOSSLER, 1901)

Lestrigonus schizogeneios (STEBBING, 1888)
Phronimopsis spirifer CLAUS, 1879
Themistella fusca (DANA, 1852)

FAMILY PHRONIMIDAE

Phronima atlantica GUÉRIN, 1836
Phronima colletti BOVALLIUS, 1887
Phronima pacifica STREETS, 1877
Phronima sedentaria (FORSKAL, 1775)
Phronima solitaria GUÉRIN, 1836
Phronima stebbingi VOSSELER, 1901
Phronimella elongata (CLAUS, 1862)

FAMILY PHROSINIDAE

Anchylomera blossevellei MILNE-EDWARDS,
 1830
Phrosina semilunata RISSO, 1822
Primno macropa GUÉRIN, 1831

FAMILY LYCAEOPSIDAE

Lycaeopsis neglecta PIRLOT, 1929
Lycaeopsis themistoides CLAUS, 1879
Lycaeopsis zamboangae (STEBBING, 1888)

FAMILY LYCAEIDAE

Brachyscelus crusculum BATE, 1861
Brachyscelus macrocephalus STEPHENSEN, 1925
Lycaea bovallii CHEVREUX, 1900
Lycaea bovallioides STEPHENSEN, 1925
Tryphana malmi BOECK, 1871

FAMILY PRONOIDAE

Eupronoe aemata CLAUS, 1879
Eupronoe minuta CLAUS, 1879
Paralycaea gracilis CLAUS, 1879
Parapronoe crustulum CLAUS, 1879
Pronoe capito GUÉRIN, 1836
Sympronoe parva (CLAUS, 1879)

FAMILY OXYCEPHALIDAE

Calamorrhynchus pellucidus STREETS, 1878
Glossocephalus milneedwardsi BOVALLIUS, 1887
Oxycephalus clausi BOVALLIUS, 1887
Oxycephalus piscator MILNE-EDWARDS, 1840
Rhabdosoma brevicaudatum STEBBING, 1888
Rhabdosoma whitei BATE, 1862
Simorrhynchotus antennarius (CLAUS, 1871)
Streetsia challengerii STEBBING, 1888

Streetsia porcella (CLAUS, 1879)

FAMILY PLATYSCOLIDAE

Amphithysus bispinosus CLAUS, 1879
Amphithysus similis CLAUS, 1879
Hemityphis rapax (MILNE-EDWARDS, 1830)
Paratyphis parvus CLAUS, 1887
Paratyphis promontorii STEBBING, 1888
Platyscelus ovoides (RISSO, 1816)
Platyscelus serratulus STEBBING, 1888
Tetrathynus forcipatus CLAUS, 1879

FAMILY PARASCELIDAE

Schizoscelus ornatus CLAUS, 1879
Thyropus sphaerana (CLAUS, 1879)
Thyropus typhoides (CLAUS, 1879)

ORDER DECAPODA

SUBORDER CARIDEA

FAMILY OPLOPHORIDAE

Acanthephyra purpurea MILNE-EDWARDS,
 1881
Systellaspis debilis (MILNE-EDWARDS, 1881)
Systellaspis cristata (FAXON, 1893)
Systellaspis braueri (BALSS, 1914)
Oplophorus spinosus (BRULLÉ, 1839)
Meningodora vesca (SMITH, 1882)
Meningodora mollis SMITH, 1882
Meningodora longirostris BATE, 1888
Ephyrina hoskynii WOOD-MASON, 1892)

FAMILY PANDALIDAE

Parapandalus richardi (COUTIÈRE, 1905)

FAMILY PASIPHAEDIAE

Pasiphaea hoplocerca (CHACE, 1940)
Eupasiphaea gilesii (WOOD-MASON, 1892)

SUBORDER PENAEIDEA

FAMILY PENAEIIDAE

SUBFAMILY ARISTAEINAE

Gennadas valens (SMITH, 1884)
Gennadas elegans (SMITH, 1882)

Bentheogennema intermedia (BATE, 1888)

SUBFAMILY PENAEINAE

Funchalia villosa (BOUVIER, 1905)

FAMILY SERGESTIDAE

Sergestes (Sergia) robustus SMITH, 1882

Sergestes (Sergestes) pectinatus SUND, 1920

Sergestes (Sergia) japonicus BATE, 1881

Sergestes (Sergia) tenuiremis KROYER, 1855

Sergestes (Sergestes) corniculum KROYER,
1855

Sergestes (Sergestes) sargassi ORTMANN, 1893

Sergestes (Sergestes) vigilax STIMPSON, 1860

Sergestes (Sergestes) armatus KROYER, 1855

Sergestes (Sergia) spendens SUND, 1920

Sergestes (Sergestes) atlanticus MILNE-EDWARDS,
1830

BIBLIOGRAPHY

ALVARINO, A.:

1981. Siphonophorae. En: *Atlas del zooplancton del atlántico sudoccidental y métodos de trabajo con el zooplancton marino*. (Ed. D. Boltovskoy), 383-441 pp. Publicación especial del INIDEP, Mar del Plata, Argentina.

ANGEL, M. V.:

1969. Planktonic ostracods from the Canary Islands Region; their depth distributions, diurnal migrations, and community organization. *J. mar. biol. Ass. U.K.*, 49: 515-553.

1981. Ostracoda. En: *Atlas del zooplancton del atlántico sudoccidental y métodos de trabajo con el zooplancton marino*. (Ed. D. Boltovskoy), 543-585 pp. Publicación especial del INIDEP, Mar del Plata, Argentina.

BRADY, G. S.:

1880. Report on the Ostracoda draged by H. M. S. "Challenger" during the years 1873-1876. *Report on the Scientific Results of the Voyage of H. M. S. Challenger during the years 1873-1876 (Zoology)*, Vol. I, 1-184.

CHEVREUX, E. & L. FAGE:

1925. Amphipodes. *Faune de France*, 9: 1-488.

FERNANDEZ DE PUELLES, M^a. L.:

1986. Ciclo anual de la comunidad de Meso y Microzooplancton: su biomasa, estructura, relaciones tróficas y producción en aguas de las Islas Canarias. *Tesis Doctoral, Universidad Autónoma de Madrid*. (inérita), 275 pp.

FOXTON, P.:

1970a. The vertical distribution of pelagic decapods (Crustacea: Natantia) collected on the Sond Cruises, 1965. I. Caridea. *J. mar. biol. Ass. U.K.*, 50: 939-960.

1970b. The vertical distribution of pelagic decapods (Crustacea: Natantia) collected on the Sond Cruises, 1965. II. The Penaeidea and general discussion. *J. mar. biol. Ass. U.K.*, 50: 961-1000.

FURNESTIN, M. L.:

1957. Chaetognathes et zooplancton du secteur atlantique marocain. *Rev. Trav. Inst. Pêches marit.*, 21 (1-2): 1-356.

GONZALEZ, J. A., M. A. CALDENTEY & J. I. SANTANA:

(in press). Catálogo de las especies de la familia Pandalidae (Crustacea, Decapoda, Caridae) em Canarias. *Vieraea*.

HAECKEL, E.:

1869. Über Arbeitstheilung in Natur und Menschenleben. (Anthemodes canariensis).

1888. Report on the Siphonophores collected by H. M. S. "Challenger" during the years 1873-1876. *Report on the Scientific Results of the Voyage of H. M. S. Challenger during the years 1873- 1876 (Zoology)*, Vol. XXVIII, 1-380.

HERNANDEZ, P.:

(in preparation). Moluscos Pterópodos y Heterópodos de las aguas de las Islas Canarias (Campana Canarias 85). *Tesina de Licenciatura, Universidad de La Laguna*.

PELSENEER, P.:

1887. Report on the Pteropoda collected by H. M. S. "Challenger" during the years 1873-1876. *Report on the Scientific Results of the Voyage of H. M. S. Challenger during the years 1873-1876 (Zoology)*, Vol. XIX, 1-74.

1888. Report on the Pteropoda collected by H. M. S. "Challenger" during the years 1873-1876. Part II. Thecosomata. *Report on the Scientific Results of the Voyage of H. M. S. Challenger during the years 1873-1876 (Zoology)*, Vol. XXIII, 1-51.

PERES, J. M.:

1982. Major pelagic assemblages. *In: Marine Ecology*. (Ed. O. Kinne), Vol. 5, Part, 1, 187-311. pp. John Wiley & Sons Ltd.

PUGH, P. R.:

1974. The vertical distribution on the Siphonophores collected during the SOND Cruise, 1965. *J. mar. biol. Ass. U.K.*, 54: 25-90.

SANTAELLA, E. & J. BRAVO DE LA LAGUNA:

1975. The family Pandalidae (Crustacea, Decapoda, Caridea) in the Canary Islands. Species and distribution. *I. C. E. S., C. M.* 1975/K; 41, 8pp.

SMITH, E. A.:

1888. Report on the Heteropoda collected by H. M. S. "Challenger" during the years 1873-1876. *Report on the Scientific Results of the Voyage of H. M. S. Challenger during the years 1873-1876 (Zoology)*, Vol. XXIII, 1-51.

STEBBING, T. R. R.:

1888. Report on the Amphipoda collected by H. M. S. "Challenger" during the years 1873-1876. *Report on the Scientific Results of the Voyage of H. M. S. Challenger during the years 1873-1876 (Zoology)*, Vol. XXIX, Part I and II 1-1737.

THURSTON, M.H.:

1976a. New pelagic Amphipods (Crustacea: Amphipoda) collected on the SOND Cruise, 1965. *J. mar. biol. Ass. U.K.*, 56: 143-159.

- 1976b. The vertical distribution and diurnal migration on the Crustacea Amphipoda collected during the Sond Cruise, 1965. I. The Gammridea. *J. mar. biol. Ass. U.K.*, 56: 359-382.
- 1976c. The vertical distribution and diurnal migration on the Crustacea Amphipoda collected during the Sond Cruise, 1965. II. The Hyperideia and general discussion. *J. mar. biol. Ass. U.K.*, 56: 383-470.

VAN DER SPOEL, S.:

1967. Euthecosomata, a group with remarkable developmental stages (Gastropoda - Pteropoda). *J. Noorduijn en Zoon Gornchen*, 376 pp.

1976. Pseudothecosomata, Gimnosomata and Heteropoda (Gastropoda). *Bohn, Scheltema & Holkema, Utrecht*, 484 pp.

VAN DER SPOEL, S. & D. BOLTOVSKOY:

1981. Pterópoda. En: *Atlas del zooplancton del atlántico sudoccidental y métodos de trabajo con zooplancton marino*. (Ed. D. Boltovskoy), 493-531 pp. Publicación especial del INIDEP, Mar del Plata, Argentina.

VAN DER SPOEL, S. & A. C. PIERROT-BULTS:

1979. Zoogeography and diversity in plankton. *Bunge Scientific Publishers, Utrecht*, 410 pp.

Received 3.5.1990