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GIANNA INNOCENTI (\*)

## COLLECTIONS OF THE NATURAL HISTORY MUSEUM OF THE UNIVERSITY OF FLORENCE - ZOOLOGICAL SECTION “LA SPECOLA”. XXXII. PHYLUM ECHINODERMATA, CLASS ECHINOIDEA

**Abstract** - Collections of the Natural History Museum of the University of Florence - Zoological Section “La Specola”. XXXII. Phylum Echinodermata, Class Echinoidea. The list of the specimens belonging to the phylum Echinodermata, class Echinoidea, preserved in the Zoological Section “La Specola” of the Natural History Museum of the University of Florence is given.

**Key words** - Echinodermata, Echinoidea, systematics, collections.

**Riassunto** - Cataloghi del Museo di Storia Naturale dell’Università di Firenze, Sezione di Zoologia “La Specola”. XXXII. Phylum Echinodermata, Classe Echinoidea. Sono elencati gli esemplari appartenenti al phylum Echinodermata, classe Echinoidea conservati nelle collezioni della Sezione di Zoologia “La Specola” del Museo di Storia Naturale dell’Università di Firenze.

**Parole chiave** - Echinodermata, Echinoidea, sistematica, collezioni.

### INTRODUCTION

The collection of Echinoidea preserved in “La Specola” Museum consists of 100 identified species, belonging to 29 families, besides few unidentified specimens from the Mediterranean Sea and tropical areas. The specimens are currently preserved in alcohol or dried.

The collection was constituted at the same time and in the same circumstances as already reported for the Classes Ophiuroidea, Crinoidea, Holothuroidea and Asteroidea (Innocenti 2010, 2013a and 2013b). The collection hosts the echinoids collected during the cruise in the central Mediterranean Sea by the R/N “Washington”, studied by the geologist Giuseppe Stefanini (1882-1938) (Stefanini, 1915). Following Kroh et al. (2011), *Arbaciella elegans* Mortensen 1910 specimens are probably young stages of *Arbacia lixula*, *Echinometra mathaei* (Blainville 1925) specimens from the Red Sea, according to Bronstein & Loya (2013) are probably a new species within *Echinometra mathaei* complex (Matsuoka & Hatanaka, 1991) and *Asthenosoma varium* Grube 1868 specimens from Red Sea and surrounding areas are probably *Asthenosoma marisru-*

bri

Weinberg & de Ridder 1998, however all these species are so listed awaiting a revision from specialists. The aim of this catalogue is to provide a resource for research and/or loan to specialists. The systematic order of the class Echinoidea follows that proposed by Kroh & Mooi (2016).

For each specimen, or group of specimens, the following data are reported: species, author, year of description, nation, locality (with the Italian province abbreviation between brackets and for Italian localities listed from North to South), depth (when present), date (day, month.year) and collector, author of the determination, previous determination and author/s, new author/s in chronological order, number of specimens, and the Echinodermata catalogue number (MZUF, in brackets).

### Abbreviations, terms and acronyms

date?=unknown date; det.=determination/author; det.?=?=unknown author; don.=donated by; GRSTS=Gruppo Ricerche Scientifiche e Tecniche Subacquee; Is.=island/isle; ISTIP=Istituto Scientifico e Tecnico di Idrobiologia e Pesca; juv.=juvenile/s; leg.=collector/s; leg.?=?=unknown collector; Patria?=unknown locality; pur.=purchased; upd.=updated by; sp.=specimen/s; MZUF=Florence University Zoology Museum Echinodermata catalogue collection number.

### SYSTEMATICS

Class ECHINOIDEA Leske 1778

Subclass CIDAROIDEA Smith 1984

Order CIDAROIDA Claus 1880

Family CIDARIDAE Gray 1825

- Austrocidaris canaliculata* (A. Agassiz 1863)  
Chile, Strait of Magellan, 27.X.1961, exchange with  
Genova Museum, det. E. Tortonese, 1 sp. (MZUF 667)
- Cidaris cidaris* (Linnaeus 1758)  
Italy, (LI) Livorno, Lat. 43°27'59"N Long. 10°00'03"E,  
-139 m, 23.IV.1987, leg. I.S.T.I.P., det. M. Borri, 2 sp.  
(MZUF 1197)  
Italy, (LI) Livorno, Lat. 43°26'85"N Long. 09°55'05"E,  
-141 m, 24.IV.1987, leg. I.S.T.I.P., det. M. Borri, 14 sp.  
(MZUF 1199)  
Italy, (LI) Livorno, Lat. 43°24'30"N Long. 09°51'29"E,  
-204 m, 6.V.1986, leg. I.S.T.I.P., det. M. Borri, 9 sp.  
(MZUF 1204)  
Italy, (LI) Livorno, Lat. 43°20'75"N Long. 09°50'46"E,  
-247 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 6 sp.  
(MZUF 1017)  
Italy, (LI) Livorno, Lat. 43°18'14"N Long. 09°54'06"E,  
-252 m, 24.IV.1987, leg. I.S.T.I.P., det. M. Borri, 4 sp.  
(MZUF 1207)  
Italy, (LI) Livorno, Lat. 43°16'23"N Long. 10°04'92"E,  
-145 m, 23.IV.1987, leg. I.S.T.I.P., det. M. Borri, 1 sp.  
(MZUF 1200)  
Italy, (LI) Livorno, Lat. 43°15'20"N Long. 09°30'85"E,  
-165 m, 16.IV.1987, leg. I.S.T.I.P., det. M. Borri, 1 sp.  
(MZUF 1202)  
Italy, (LI) Livorno, Lat. 43°14'63"N Long. 09°31'36"E,  
-191 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp.  
(MZUF 1203)  
Italy, (LI) Livorno, Lat. 43°12'76"N Long. 09°31'67"E,  
-141 m, 30.IV.1986, leg. I.S.T.I.P., det. M. Borri, 1 sp.  
(MZUF 1198)  
Italy, (LI) Livorno, Lat. 43°10'23"N Long. 09°58'65"E,  
-205 m, 23.IV.1987, leg. I.S.T.I.P., det. M. Borri, 5 sp.  
(MZUF 1205)  
Italy, (LI) Livorno, Lat. 43°09'76"N Long. 09°45'10"E,  
-439 m, 24.IV.1987, leg. I.S.T.I.P., det. M. Borri, 10 sp.  
(MZUF 1210)  
Italy, (LI) Livorno, Lat. 43°06'79"N Long. 09°48'62"E,  
-145 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 6 sp.  
(MZUF 1016)  
Italy, (LI) Livorno, Lat. 43°06'48"N Long. 09°57'00"E,  
-134 m, 8.V.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp.  
(MZUF 1196)  
Italy, (LI) Livorno, Lat. 43°04'62"N Long. 10°11'76"E,  
-129 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 1 sp.  
(MZUF 1019)  
Italy, (LI) Livorno, Lat. 43°00'74"N Long. 09°50'56"E,  
-100 m, 23.IV.1987, leg. I.S.T.I.P., det. M. Borri, 10 sp.  
(MZUF 1100)  
Italy, (LI) Livorno, Lat. 42°58'37"N Long. 09°46'81"E,  
-143 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 6 sp.  
(MZUF 1022)  
Italy, (LI) Livorno, Lat. 42°58'37"N Long. 09°46'81"E,  
-143 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 4 sp.  
(MZUF 1429)

- Italy, (LI) Livorno, Lat. 42°58'11"N Long. 09°50'06"E,  
-155 m, 9.V.1986, leg. I.S.T.I.P., det. M. Borri, 3 sp.  
(MZUF 1201)  
Italy, (LI) Livorno, Lat. 42°55'34"N Long. 09°43'33"E,  
-317 m, 9.V.1986, leg. I.S.T.I.P., det. M. Borri, 3 sp.  
(MZUF 1208)  
Italy, (LI) Livorno, Lat. 42°53'00"N Long. 09°44'28"E,  
-419 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp.  
(MZUF 1020)  
Italy, (LI) Livorno, Lat. 42°51'76"N Long. 10°04'22"E,  
-96 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 8 sp.  
(MZUF 1015)  
Italy, (LI) Livorno, Lat. 42°46'61"N Long. 09°51'37"E,  
-461 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 5 sp.  
(MZUF 1012)  
Italy, (LI) Livorno, 8.V.1986, leg. I.S.T.I.P., det. M. Borri, 1 sp.  
(MZUF 1206)  
Italy, (LI) Elba Is., south coast, -100 m, 1990, leg. E. Borghi, det. E. Borghi, 1 sp.  
(MZUF 2782)  
Italy, (SS) near Asinara Is., -555-325 m, sandy and  
muddy bottoms, 8.VIII.1881, R/N "Washington", previous  
det. *Dorocidaris papillata* det. G. Stefanini, upd.  
G. Innocenti, 1 sp. (MZUF 2576)  
Italy, (CA) Cagliari, 26.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp.  
(MZUF 1796)  
Italy, (CA) E/SE Cagliari, IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp.  
(MZUF 1961)  
Italy, (CA) Gulf of Cagliari, 25.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp.  
(MZUF 1967)  
Italy, (CA) Gulf of Cagliari, 7.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp.  
(MZUF 1968)  
Italy, (CA) Gulf of Cagliari, 8.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 4 sp.  
(MZUF 1965)  
Italy, (CA) Quirra, VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 5 sp.  
(MZUF 1960)  
Italy, (CA) southern Sardinia, 17.VII.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp.  
(MZUF 1966)  
Italy, (CA) southern Sardinia, 18.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp.  
(MZUF 1963)  
Italy, (CA) southern Sardinia, 18.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp.  
(MZUF 1962)  
Italy, (CA) southern Sardinia, 20.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp.  
(MZUF 1969)  
Italy, (CA) southern Sardinia, 25.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp.  
(MZUF 1975)  
Italy, (CA) southern Sardinia, 25.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp.  
(MZUF 1976)  
Italy, (CA) southern Sardinia, 26.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp.  
(MZUF 1972)  
Italy, (CA) southern Sardinia, 26.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp.  
(MZUF 1973)  
Italy, (CA) southern Sardinia, 27.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp.  
(MZUF 1974)  
Italy, (CA) southern Sardinia, 3.V.1988, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp.  
(MZUF 1964)  
Italy, (CA) southern Sardinia, IV.1988, leg. M. Borri &

*C. Volpi*, det. G. Eva, 1 sp. (MZUF 1970)

Italy, (TP) Egadi Is., Lat. 38°05'N Long. 11°59'40"E, -400 m, sandy and muddy bottoms, 28.VIII.1881, R/N "Washington", previous det. *Dorocidaris papillata* det. G. Stefanini, upd. ?, 8 sp. (MZUF 665)

Morocco, Atlantic Ocean, -200 m, 1973, exchange with the Natural History Museum of Genova, det. E. Tortonese, 1 sp. (MZUF 394)

Libya, Tripoli, VII.1872, leg. F. Rossoni, previous det. *Dorocidaris papillata* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2573)

[Mediterranean Seal], <1843, leg. ?, previous det. *Dorocidaris papillata* det. A. Senna, upd. ?, 1 sp. (MZUF 662)

[Mediterranean Seal], <1843, leg. ?, previous det. *Dorocidaris papillata* det. A. Senna, upd. ?, 1 sp. (MZUF 663)

*Eucidaris metularia* (Lamarck 1816)

Egypt, IX.1867, donated by F. Parlatoore, previous det. *Cidaris metularia* det. A. Senna, upd. G. Innocenti, 3 sp. (MZUF 2574)

Saudi Arabia, Jeddah, Obhor Creek, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 291)

Saudi Arabia, Jeddah, Obhor Creek, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 3 sp. (MZUF 666)

Saudi Arabia, Jeddah, Obhor Creek, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 668)

Saudi Arabia, Jeddah, Obhor Creek, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 3 sp. (MZUF 672)

Somalia, Gesira, XII.1976, leg. S.B.S., det. E. Tortonese, 2 sp. (MZUF 372)

Kenya, Shimon, XI-XII.1993, leg. M. Borri & C. Volpi, det. M. Borri, 1 sp. (MZUF 1459)

Tanzania, Pemba, coral reef, low tide, VIII.1995, leg. F. Tarducci, det. E. Borghi, 1 sp. (MZUF 2787)

Mauritius Is., 1880, pur. Umlauff, previous det. *Cidaris metularia* det. A. Senna, upd. ?, 1 sp. (MZUF 575)

Samoa Is., IV.1889, pur. C.A. Pöhl, previous det. *Cidaris metularia* det. A. Senna, upd. E. Tortonese, 1 sp. (MZUF 673)

*Eucidaris thouarsii* (L. Agassiz & Desor 1846)

Ecuador, Galapagos Is., Barrington Is., NE Bay, 22.XII.1971, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 261)

Ecuador, Galapagos Is., Santa Cruz, -2m, 23.XII.1971, leg. G.R.S.T.S., det. M.L. Azzaroli, 1 sp. (MZUF 237)

Ecuador, Galapagos Is., Santa Cruz, -2m, 8.I.1972, leg. G.R.S.T.S., det. M.L. Azzaroli, 1 sp. (MZUF 233)

Ecuador, Galapagos Is., Santa Cruz, Academy Bay cliff, 23.XII.1971, leg. G.R.S.T.S., det. M.L. Azzaroli, 1 sp. (MZUF 262)

*Eucidaris tribuloides* (Lamarck 1816)

São Tomé and Príncipe, Ribeira Palma, 1973, ex-

change with Genova Museum, previous det. *Eucidaris tribuloides africana* Mortensen, det. E. Tortonese, upd. G. Innocenti, 1 sp. (MZUF 393)

*Goniocidaris* (*Goniocidaris*) *tubaria* (Lamarck 1816)

Australia, Bass Strait, IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 653)

*Phyllocaanthus imperialis* (Lamarck 1816)

Saudi Arabia, Jeddah, Obhor Creek, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 289)

Saudi Arabia, Farasan Is., Saluba, 3.IV.1984, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 904)

*Prionocidaris baculosa* (Lamarck 1816)

Saudi Arabia, Jeddah, Obhor Creek, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 290)

Saudi Arabia, Jeddah, I.1978, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 654)

Saudi Arabia, Farasan Is., IV.1984, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 2577)

*Stylocidaris affinis* (Philippi 1845)

Italy, (LI) Elba Is., 1878, leg. E.H. Giglioli & G.B. Toscanelli, previous det. *Dorocidaris papillata* det. A. Senna, upd. R. Farelli, 1 sp. (MZUF 656)

Italy, (LI) Livorno, Lat. 43°27'59"N Long. 10°00'03"E, -139 m, 23.IV.1987, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1401)

Italy, (LI) Livorno, Lat. 43°26'47"N Long. 10°03'41"E, -101 m, 6.V.1986, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1399)

Italy, (LI) Livorno, Lat. 43°09'71"N Long. 09°55'12"E, -207 m, 8.V.1986, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1403)

Italy, (LI) Livorno, Lat. 43°01'76"N Long. 10°05'17"E, -156 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1013)

Italy, (LI) Livorno, Lat. 42°57'91"N Long. 10°27'29"E, -41 m, 30.IV.1987, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1397)

Italy, (LI) Livorno, Lat. 42°53'13"N Long. 10°08'53"E, -119 m, 9.V.1986, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1400)

Italy, (LI) Livorno, Lat. 42°50'64"N Long. 10°02'08"E, -88 m, 9.V.1986, leg. I.S.T.I.P., det. M. Borri, 4 sp. (MZUF 1398)

Italy, (SS) near Asinara Is., Lat. 41°10'27"N Long. 8°15'41"7"E, -168-284 m, 4.VIII.1881, leg. R/N "Washington", previous det. *Dorocidaris affinis*, det. G. Stefanini, upd. R. Farelli, 1 sp. (MZUF 655)

Italy, (CA) E/SE of Cagliari, 3.V.1988, leg. M. Borri & C. Volpi, det. G. Eva, 4 sp. (MZUF 1957)

Italy, (CA) southern Sardinia, 17.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1945)

Italy, (CA) southern Sardinia, 18.V.1992, leg. M. Borri

& C. Volpi, det. G. Eva, 3 sp. (MZUF 1949)  
 Italy, (CA) southern Sardinia, 18.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1951)  
 Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1948)  
 Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1956)  
 Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1958)  
 Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1959)  
 Italy, (CA) southern Sardinia, 20.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 4 sp. (MZUF 1944)  
 Italy, (CA) southern Sardinia, 17.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 4 sp. (MZUF 1946)  
 Italy, (CA) southern Sardinia, 25.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1950)  
 Italy, (CA) southern Sardinia, 27-28.IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1947)  
 Italy, (CA) southern Sardinia, IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1952)  
 Italy, (CA) southern Sardinia, IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1953)  
 Italy, (CA) southern Sardinia, IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1954)  
 Italy, (NA) Gulf of Naples, 1892, pur. Stazione Zoologica di Napoli, previous det. *Dorocidaris papillata* det. A. Senna, upd. R. Fareltri, 1 sp. (MZUF 657)  
 Italy, (NA) Gulf of Naples, 1892, pur. Stazione Zoologica di Napoli, previous det. *Dorocidaris papillata* det. A. Senna, upd. R. Fareltri, 1 sp. (MZUF 658)  
 Italy, (NA) Gulf of Naples, 1892, pur. Stazione Zoologica di Napoli, previous det. *Dorocidaris papillata* det. A. Senna, upd. E. Tortonese, 1 sp. (MZUF 659)  
 Italy, (TP) Egadi Is., Lat. 38°05'N Long. 11°59'40"E, -400 m, 28.VIII.1881, leg. R/N "Washington", previous det. *Dorocidaris affinis* det. G. Stefanini, upd. R. Fareltri, 1 sp. (MZUF 660)

#### CIDARIDAE GEN. SP.

Italy, (LI) Capraia Is., VIII.1968, leg. B. Conti & L. Delle Cave, det. G. Innocenti, 4 sp. (MZUF 2681)  
 Italy, (SS) N Maddalena Is., Bonifacio strait, -45-60 m, leg. G. Innocenti & J. Ferretti, det. G. Innocenti, 1 sp. (MZUF 2680)  
 Italy, (CA) Gulf of Cagliari, 9.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1955)  
 Italy, (TP) Mazara del Vallo, Torretta di Capo Granito, -40 m, sandy bottom, 10.XI.1983, leg. M/P "Nuova Santa Lucia", det. G. Innocenti, 4 sp. (MZUF 2678)  
 France, Banyuls sur Mer, 1960, leg. B. Lanza & S. Carfi, det. G. Innocenti, 1 sp. (MZUF 2679)  
 Greece, Chios Is., VII.1992, leg. G. Innocenti & J. Ferretti, det. G. Innocenti, 1 sp. (MZUF 2744)  
 Greece, Paros Is., Noussa, 9-17.IX.1993, leg. E. Talenti, det. G. Innocenti, 3 spines (MZUF 2677)

Israel, Haifa Bay, -35-40 m, 9-10.IX.1998, leg. G. Innocenti, det. G. Innocenti, 6 sp. (MZUF 2683)  
 Israel, off Haifa Bay, 13.XI.1995, leg. G. Innocenti, det. G. Innocenti, 1 sp. (MZUF 2676)  
 Cuba, Guardalavaca, 2-13.IX.1996, leg. E. Talenti, det. G. Innocenti, 1 sp. (MZUF 2682)

#### Subclass EUCHINOIDEA Bronn 1860

##### Infraclass ACROECHINOIDEA Smith 1981

###### Order DIADEMATOIDA Duncan 1899

###### Family DIADEMATIDAE Gray 1855

###### *Astropyga radiata* (Leske 1778)

Kenya, Mombasa, lagoon, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. A. Kroh, 1 sp. (MZUF 2623)

###### *Centrostephanus longispinus* (Philippi 1845)

Italy, (GR), Formica piccola di Grosseto, -55 m, VIII.1978, leg. G. Adriani, det. M. Borri, 1 sp. (MZUF 386)

Italy, (CA) Cagliari, 20.IV.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1786)

Italy, (CA) Porto Corallo, 26.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1808)

Italy, (CA) southern Sardinia, 26.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1980)

Italy, (NA) Naples, 1892, from the Didactic Collection, det. ?, 1 sp. (MZUF 684)

Italy, (ME) Lipari, Filicudi Is., Punta Stimpagnato, -60 m, in a marine cave, 15.VIII.1977, leg. G. Adriani, det. M. Borri, 1 sp. (MZUF 303)

###### *Diadema antillarum* Philippi 1845

USA, St. Thomas Is., 1885, don. Smithsonian Institution, det. A. Senna, 3 sp. (MZUF 677)

###### *Diadema mexicanum* A. Agassiz 1863

Mexico, Acapulco, 1885, don. Smithsonian Institution, det. A. Senna, 2 sp. (MZUF 686)

###### *Diadema setosum* (Leske 1778)

Red Sea, <1843, leg. ?, det. ?, 2 sp. (MZUF 682)

Red Sea, 1851, don. Clot Bey, det. A. Targioni Tozzetti, 2 sp. (MZUF 2578)

Jordan, Aqaba, I.1975, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 783)

Saudi Arabia, Jeddah, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 681)

Kenya, Mombasa, Mtwapa, 3.XII.1993, leg. M. Borri & C. Volpi, det. M. Borri, 1 sp. (MZUF 1442)

Kenya, Uyombo, X.1990, leg. M. Borri, det. M. Borri, 1 sp. (MZUF 1441)

Kenya, Vipingo, XI-XII.1993, leg. M. Borri & C. Volpi, det. M. Borri, 1 sp. (MZUF 1443)

Samoa Is., IV.1889, pur. C.A. Pöhl, det. ?, 1 sp. (MZUF 685)

*Diadema* sp.

Israel, Eilat, Coral beach, 24-25.XI.1995, leg. G. Innocenti, det. G. Innocenti, 1 sp. (MZUF 2583)  
Jordan, Gulf of Aqaba, National Tourist Camp, VIII.1993, leg. M. Borri & C. Volpi, det. E. Borghi, 2 sp. (MZUF 2771)

Jordan, Gulf of Aqaba, 4.V.1975, leg. B. Lanza, det. E. Borghi, 1 sp. (MZUF 2770)

Somalia, Durbo, -5 m, 23.X.1973, leg. M.L. Azzaroli, det. ?, 1 sp. (MZUF 675)

Somalia, Marayek, 1879, leg. Prince Tommaso, det. E. Tortonese, 3 sp. (MZUF 683)

Kenya, Watamu Beach, XI.1968, leg. B. Lanza, det. E. Tortonese, 1 juv. (MZUF 680)

Kenya, Mombasa, reef, IX.2000, leg. M. Borri & C. Volpi, det. E. Borghi, 2 sp. (MZUF 2769)

Kenya, Mtwapa, 3.XII.1993, leg. M. Borri & C. Volpi, det. E. Borghi, 1 sp. (MZUF 2773)

Philippines, Toloran Is., Toloran Bay, 3.III.1991, leg. M. Borri & C. Volpi, det. E. Borghi, 3 sp. (MZUF 2772)

*Echinothrix calamaris* (Pallas 1774)

Egypt, Farasan Is., IV.1984, leg. G.R.S.T.S., det. E. Borghi, 1 sp. (MZUF 2775)

Saudi Arabia, Jeddah, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 678)

Saudi Arabia, Jeddah, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 679)

Kenya, Vipingo, XI-XII.1993, leg. M. Borri & C. Volpi, det. M. Borri, 1 sp. (MZUF 1444)

*Echinothrix diadema* (Linnaeus 1758)

Somalia, Sar Uanle, XII.1976, leg. S.B.S., det. E. Tortonese, 1 sp. (MZUF 374)

Philippines, Palawan Is., St. Paul SNP, 20-27.II.1991, leg. M. Borri & C. Volpi, det. E. Borghi, 1 sp. (MZUF 2774)

Fiji Is., IV.1889, pur. C.A. Pöhl, previous det. *Echinothrix turcarum* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 676)

Infraclass CARINACEA Kroh & Smith 2010

Order ARBACIOIDA Gregory 1900

Family ARBACIIDAE Gray 1855

*Arbacia dufresnii* (Blainville 1825)

Argentina, Patagonia, Tierra del Fuego, Ushuaia, Isla Redonda, 3.I.1974, leg. M.L. Azzaroli & M. Sarà, det. E. Tortonese, 1 sp. (MZUF 567)

*Arbacia lixula* (Linnaeus 1758)

Italy, (LI) Baratti, 0-3 m, 17.IX.1989, leg. A. Lazzeretti, det. E. Borghi, 5 sp. (MZUF 2709)

Italy, (LI) Baratti, -30 m, 21.IV.1968, leg. M.L. Azzaroli & S. Carfi, det. E. Borghi, 41 sp. (MZUF 2686)

Italy, (LI) Baratti, 200 m out Punta delle Pianacce, 6.II.1966, leg. C. De Giuli, Mantellassi & Gori, det. S. Carfi, 4 sp. (MZUF 4)

Italy, (LI) Baratti, 200 m out Punta delle Pianacce, 6.II.1966, leg. C. De Giuli, Mantellassi & Gori, det. S. Carfi, 2 sp. (MZUF 5)

Italy, (LI) Baratti, 28.IV.1970, leg. F. Terzani, det. F. Terzani, 1 sp. (MZUF 2612)

Italy, (LI) Boccale, X.1989, leg. A. Lazzeretti & P.L. Finotello, det. E. Borghi, 8 sp. (MZUF 2711)

Italy, (LI) Castiglioncello harbour, 0-7 m, 13.X.1989, leg. M. Borri, S. Viciani & A. Lazzeretti, det. E. Borghi, 4 sp. (MZUF 2710)

Italy, (LI) Castiglioncello, 22.VII.1977, leg. F. Terzani, det. F. Terzani, 1 sp. (MZUF 2613)

Italy, (LI) Castiglioncello, between Fortullino and Santa Lucia, 26.VII.1979, leg. F. Terzani, det. E. Borghi, 1 sp. (MZUF 2714)

Italy, (LI) Elba Is., Viticcio, 1984, leg. G. Sapelli, det. E. Borghi, 1 sp. (MZUF 2720)

Italy, (LI) Livorno, 0-7 m, 27.X.1989, leg. P.L. Finotello & A. Lazzeretti, det. E. Borghi, 1 sp. (MZUF 2719)

Italy, (LI) Livorno, -1-7 m, 20.X.1989, leg. M. Borri & A. Lazzeretti, det. E. Borghi, 1 sp. (MZUF 2713)

Italy, (LI) Livorno, -6 m, 1989, leg. A. Lazzeretti, det. E. Borghi, 5 sp. (MZUF 2712)

Italy, (LI) Livorno, Meloria shoals, 28.IX.1969, leg. B. Lanza & L. Lottini, det. ?, 8 sp. (MZUF 574)

Italy, (LI) Livorno, Meloria shoals, IX.1969, leg. A. Lottini & B. Lanza, det. G. Innocenti, 3 sp. (MZUF 2812)

Italy, (LI) Quercianella, harbour, 0-6 m, 18.X.1989, leg. A. Lazzeretti, C. Volpi & S. Viciani, det. G. Innocenti, 12 sp. (MZUF 2814)

Italy, (LI) Rosignano Solvay, 1977, leg. F. Terzani, det. F. Terzani, 1 sp. (MZUF 2615)

Italy, (GR) Argentario, -3-6 m, 15.VI.1989, leg. M. Borri, A. Lazzeretti & S. Viciani, det. M. Borri, 1 sp. (MZUF 1668)

Italy, (GR) Argentario, Pellicano, -3-6 m, 17.VI.1989, leg. M. Borri, P.L. Finotello & A. Lazzeretti, det. M. Borri, 1 sp. (MZUF 1667)

Italy, (GR) Follonica gulf, 0-2 m, 30.IX.1989, leg. A. Lazzeretti, det. M. Borri, 1 sp. (MZUF 1671)

Italy, (GR) Le Rocchette, 0-2 m, 28.IX.1989, leg. S. Viciani & A. Lazzeretti, det. M. Borri, 2 sp. (MZUF 2584)

Italy, (GR) Porto Santo Stefano, IV.2001, leg. G. Innocenti, det. E. Borghi, 1 sp. (MZUF 2717)

Italy, (GR) Giannutri Is., 1884, don. V. Toscanelli, det. ?, 1 sp. (MZUF 571)

Italy, (SS) Porto Pollo, L'Isulella, 30.IV.1979, leg. L. Chelazzi & S. Lanza, det. G. Innocenti, 1 sp. (MZUF 2813)

France, Corsica, Fautea, VII.1974, leg. M. Lanza, det. ?, 1 sp. (MZUF 773)

Croatia, Hvar, Stari Grad, 20.VII.2004, leg. F. Terzani, det. E. Borghi, 1 sp. (MZUF 2716)

Greece, Chios Is., VIII.1992, leg. G. Innocenti & J. Ferretti, det. E. Borghi, 4 sp. (MZUF 2718)

Greece, Chios Is., VIII.1992, leg. G. Innocenti & J. Ferretti, det. E. Borghi, 2 sp. (MZUF 2743)

Greece, Crete, Anissaras, Hersonissos, 27.VIII.1998, leg. A. Terzani, det. F. Terzani, 1 sp. (MZUF 2614)

Greece, Laconia, Elaphonissi Is., VIII.2001, leg. Fl. Terzani, det. E. Borghi, 1 sp. (MZUF 2715)

Adriatic Sea, <1843, leg. ?, det. ?, 2 sp. (MZUF 568)

Mediterranean Sea, 1893, exchange with Berlin Museum, det. ?, 1 sp. (MZUF 570)

[Mediterranean Sea], <1843, leg. ?, det. ?, 2 sp. (MZUF 572)

#### *Arbacia punctulata* (Lamarck 1816)

USA, Massachussets, Woods Hole, 1881, don. Smithsonian Museum, det. A. Senna, 1 sp. (MZUF 2618)

Venezuela, Margarita Is., 1962, don. E. Tortonese, det. E. Tortonese, 1 sp. (MZUF 573)

#### *Arbaciella elegans* Mortensen 1910

Italy, (LI) Livorno, -2-6.5 m, 20.X.1989, leg. M. Borri, det. M. Borri, 1 sp. (MZUF 2580)

Italy, (LI) Quercianella harbour, -5-8 m, 6.X.1989, leg. G. Buracchi, det. M. Borri, 1 sp. (MZUF 2579)

#### *Tetrapygus niger* (Molina 1782)

Chile, Antofagasta, 1893, exchange with Berlin Museum, previous det. *Arbacia nigra* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 569)

Chile, Antofagasta, 1893, exchange with Berlin Museum, previous det. *Arbacia nigra* det. A. Senna, upd. E. Tortonese, 1 sp. (MZUF 576)

### Order CAMARODONTA Jackson 1912

#### Family ECHINIDAE Gray 1825

##### *Echinus esculentus* Linnaeus 1758

Norway, Kattegat, 1873, pur. Copenhagen Museum, det. A. Targioni Tozzetti, 1 sp. (MZUF 733)

##### *Echinus melo* Lamarck 1816

Italy, (LI) Livorno, 24.IV.1987, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1270)

Italy, (LI) Livorno, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1240)

Italy, (LI) Livorno, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1241)

Italy, (LI) Livorno, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 5 sp. (MZUF 1273)

Italy, (LI) Livorno, Lat. 43°26'47"N Long. 10°03'41"E, -101 m, 6.V.1986, leg. I.S.T.I.P., det. M. Borri, 4 sp. (MZUF 1265)

Italy, (LI) Livorno, Lat. 43°14'63"N Long. 09°31'36"E, -191 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 6 sp. (MZUF 1274)

Italy, (LI) Livorno, Lat. 43°12'76"N Long. 09°31'67"E, -141 m, 30.IV.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1271)

Italy, (LI) Livorno, Lat. 43°12'34"N Long. 09°33'95"E, -396 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 10 sp. (MZUF 1277)

Italy, (LI) Livorno, Lat. 43°11'00"N Long. 09°43'83"E, -421 m, 24.IV.1987, leg. I.S.T.I.P., det. M. Borri, 7 sp. (MZUF 1279)

Italy, (LI) Livorno, Lat. 43°10'23"N Long. 09°58'65"E, -205 m, 23.IV.1987, leg. I.S.T.I.P., det. M. Borri, 4 sp. (MZUF 1435)

Italy, (LI) Livorno, Lat. 43°09'71"N Long. 09°55'12"E, -207 m, 8.V.1986, leg. I.S.T.I.P., det. M. Borri, 6 sp. (MZUF 1275)

Italy, (LI) Livorno, Lat. 43°09'05"N Long. 09°47'54"E, -332 m, 24.IV.1987, leg. I.S.T.I.P., det. M. Borri, 4 sp. (MZUF 1437)

Italy, (LI) Livorno, Lat. 43°07'59"N Long. 09°36'78"E, -416 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 6 sp. (MZUF 1278)

Italy, (LI) Livorno, Lat. 43°06'14"N Long. 10°12'12"E, -126 m, 30.IV.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1268)

Italy, (LI) Livorno, Lat. 43°04'62"N Long. 10°11'76"E, -129 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 3 sp. (MZUF 1269)

Italy, (LI) Livorno, Lat. 43°02'81"N Long. 10°19'37"E, -113 m, 30.IV.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1266)

Italy, (LI) Livorno, Lat. 43°00'74"N Long. 09°50'56"E, -100 m, 23.IV.1987, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1432)

Italy, (LI) Livorno, Lat. 42°58'11"N Long. 09°50'06"E, -155 m, 9.V.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1272)

Italy, (LI) Livorno, Lat. 42°57'91"N Long. 10°27'29"E, -41 m, 30.IV.1987, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1431)

Italy, (LI) Livorno, Lat. 42°55'34"N Long. 09°43'33"E, -317 m, 9.V.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1276)

Italy, (LI) Livorno, Lat. 42°54'52"N Long. 09°47'35"E, -370 m, 29.IV.1987, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1438)

Italy, (LI) Livorno, Lat. 42°53'13"N Long. 10°08'53"E, -119 m, 9.V.1986, leg. I.S.T.I.P., det. M. Borri, 3 sp. (MZUF 1267)

- Italy, (LI) Livorno, Lat. 42°51'76"N Long. 10°04'22"E, -96 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1264)
- Italy, (LI) Livorno, Lat. 42°50'64"N Long. 10°02'08"E, -88 m, 9.V.1986, leg. I.S.T.I.P., det. M. Borri, 3 sp. (MZUF 1263)
- Italy, (NU) Capo Sferracavallo, 16.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1811)
- Italy, (CA) Cagliari, 17.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1783)
- Italy, (CA) Cagliari, 18.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1819)
- Italy, (CA) Cagliari, 18.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1780)
- Italy, (CA) Cagliari, 20.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 11 sp. (MZUF 1781)
- Italy, (CA) Cagliari, 28.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 4 sp. (MZUF 1779)
- Italy, (CA) Cagliari, 28.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1782)
- Italy, (CA) Cagliari, 8.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 3 sp. (MZUF 1785)
- Italy, (CA) Capo Teulada, Sant'Antioco, 19.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 3 sp. (MZUF 1778)
- Italy, (CA) E/SE Cagliari, 3.V.1988, leg. M. Borri & C. Volpi, det. G. Eva, 3 sp. (MZUF 1809)
- Italy, (CA) Gulf of Cagliari, 7.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 4 sp. (MZUF 1810)
- Italy, (CA) Gulf of Cagliari, 8.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1812)
- Italy, (CA) southern Sardinia, 18.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 2 juv. (MZUF 1820)
- Italy, (CA) southern Sardinia, 19.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1784)
- Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1817)
- Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1818)
- Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1932)
- Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1941)
- Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1942)
- Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 5 sp. (MZUF 1984)
- Italy, (CA) southern Sardinia, 4.V.1988, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1813)
- Mediterranean Sea, <1843, leg. ?, det. A. Senna, 2 sp. (MZUF 734)
- Gracilechinus acutus* (Lamarck 1816)
- Italy, (LI) Livorno, Lat. 43°45'21"N Long. 09°48'22"E, -261 m, 9.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1255)
- Italy, (LI) Livorno, Lat. 43°40'61"N Long. 09°55'15"E, -147 m, 9.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1248)
- Italy, (LI) Livorno, Lat. 43°38'92"N Long. 09°55'80"E, -139 m, 7.V.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1244)
- Italy, (LI) Livorno, Lat. 43°26'85"N Long. 09°55'05"E, -141 m, 24.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1245)
- Italy, (LI) Livorno, Lat. 43°26'47"N Long. 10°03'41"E, -101 m, 6.V.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 3 sp. (MZUF 1239)
- Italy, (LI) Livorno, Lat. 43°19'24"N Long. 09°34'97"E, -462 m, 8.IX.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 3 sp. (MZUF 1262)
- Italy, (LI) Livorno, Lat. 43°17'53"N Long. 10°09'48"E, -127 m, 6.V.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1243)
- Italy, (LI) Livorno, Lat. 43°12'34"N Long. 09°33'95"E, -396 m, 8.IX.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 20 sp. (MZUF 1258)
- Italy, (LI) Livorno, Lat. 43°11'00"N Long. 09°43'83"E, -421 m, 24.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1259)
- Italy, (LI) Livorno, Lat. 43°10'23"N Long. 09°58'65"E, -205 m, 23.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 2 sp. (MZUF 1253)
- Italy, (LI) Livorno, Lat. 43°09'76"N Long. 09°45'10"E, -439 m, 24.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 2 sp. (MZUF 1260)
- Italy, (LI) Livorno, Lat. 43°09'71"N Long. 09°55'12"E, -207 m, 8.V.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 3 sp. (MZUF 1430)
- Italy, (LI) Livorno, Lat. 43°09'05"N Long. 09°47'54"E, -332 m, 24.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 3 sp. (MZUF 1256)
- Italy, (LI) Livorno, Lat. 43°06'79"N Long. 09°48'62"E, -145 m, 8.IX.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 5 sp. (MZUF 1247)
- Italy, (LI) Livorno, Lat. 43°04'46"N Long. 10°28'41"E, -48 m, 30.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 2 sp. (MZUF 1235)

- Italy, (LI) Livorno, Lat. 43°00'74"N Long. 09°50'56"E, -100 m, 23.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 6 sp. (MZUF 1110)
- Italy, (LI) Livorno, Lat. 42°58'37"N Long. 09°46'81"E, -143 m, 8.IX.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 16 sp. (MZUF 1246)
- Italy, (LI) Livorno, Lat. 42°58'11"N Long. 09°50'06"E, -155 m, 9.V.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1249)
- Italy, (LI) Livorno, Lat. 42°57'91"N Long. 10°27'29"E, -41 m, 30.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 16 sp. (MZUF 1234)
- Italy, (LI) Livorno, Lat. 42°55'81"N Long. 10°22'46"E, -87 m, 30.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1236)
- Italy, (LI) Livorno, Lat. 42°55'09"N Long. 10°13'27"E, -119 m, 8.IX.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1242)
- Italy, (LI) Livorno, Lat. 42°54'52"N Long. 09°47'35"E, -370 m, 29.IV.1987, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1257)
- Italy, (LI) Livorno, Lat. 42°51'76"N Long. 10°04'22"E, -96 m, 8.IX.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1238)
- Italy, (LI) Livorno, Lat. 42°50'64"N Long. 10°02'08"E, -88 m, 9.V.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1237)
- Italy, (LI) Livorno, Lat. 42°46'61"N Long. 09°51'37"E, -461 m, 8.IX.1986, leg. I.S.T.I.P., previous det. *Echinus acutus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 1261)
- Italy, (SS) near Asinara Is., Lat. 41°10'27"4"N Long. 08°15'41"7"E, -168-284 m, 4.VIII.1881, leg. R/N "Washington", previous det. *Echinus acutus* det. G. Stefanini, upd. G. Innocenti, 1 sp. (MZUF 2751)
- Italy, Lat. 39°58'32"N Long. 9°48'08"E, -395 m, mud with Pteropoda, VIII.1881, leg. R/N "Washington", previous det. *Echinus acutus* det. G. Stefanini, upd. G. Innocenti, 3 sp. (MZUF 739)
- Italy, (CA) Cagliari, 17.VI.1996, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 4 sp. (MZUF 1757)
- Italy, (CA) Capo di Pula and Capo Spartivento, 27.VI.1996, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 1 juv. (MZUF 1823)
- Italy, (CA) E/SE Cagliari, 3.V.1988, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 1 sp. (MZUF 1814)
- Italy, (CA) Gulf of Cagliari, 7.VII.1997, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 1 sp. (MZUF 1815)
- Italy, (CA) Gulf of Cagliari, 7.VII.1997, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 3 juv. (MZUF 1824)
- Italy, (CA) Gulf of Cagliari, 8.VII.1997, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 1 sp. (MZUF 1762)
- Italy, (CA) Gulf of Cagliari, 9.VII.1997, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 2 sp. (MZUF 1816)
- Italy, (CA) southern Sardinia, 17.VI.1996, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 3 sp. (MZUF 1756)
- Italy, (CA) southern Sardinia, 17.VI.1996, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 1 sp. (MZUF 1758)
- Italy, (CA) southern Sardinia, 18.V.1992, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 8 juv. (MZUF 1822)
- Italy, (CA) southern Sardinia, 18.V.1992, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 2 sp. (MZUF 1940)
- Italy, (CA) southern Sardinia, 18.VI.1996, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 1 sp. (MZUF 1761)
- Italy, (CA) southern Sardinia, 19.V.1992, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 2 sp. (MZUF 1821)
- Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 8 sp. (MZUF 1983)
- Italy, (CA) southern Sardinia, 20.VI.1996, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 2 sp. (MZUF 1759)
- Italy, (CA) southern Sardinia, 20.VI.1996, leg. M. Borri & C. Volpi, previous det. *Echinus acutus* det. G. Eva, upd. G. Innocenti, 1 sp. (MZUF 1760)
- Italy, (NA) Naples, 1892, pur. Stazione Zoologica di Napoli, previous det. *Echinus acutus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 736)
- Italy, (CT) Catania, 1878, pur. A. Aradas, previous det. *Echinus acutus* det. A. Senna, upd. G. Innocenti, 3 sp. (MZUF 741)
- Italy, (TP) Egadi Is., Lat. 38°05'N Long. 11°59'40"E, -400 m, sand and mud, 28.VIII.1881, leg. R/N "Washington", previous det. *Echinus acutus* det. G. Stefanini, upd. G. Innocenti, 1 sp. (MZUF 737)
- Italy, (TP) Egadi Is., Lat. 38°05'N Long. 11°59'40"E, -400 m, sand and mud, 28.VIII.1881, leg. R/N "Washington", previous det. *Echinus acutus* det. G. Stefanini, upd. G. Innocenti, 1 sp. (MZUF 738)
- Italy, (TP) Pantelleria Is., -25 m, in association with

*Plagiobrissus (Rhabdobraissus) costae* and *Echinocyamus pusillus*, 1996, leg. E. Borghi, det. E. Borghi, 1 sp. (MZUF 2777)

*Gracilechinus elegans* (Düben & Koren 1844)  
Norway, Fjord of Lofoten, 1895, pur. G.A. Frank, previous det. *Echinus elegans* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 735)

#### Family ECHINOMETRIDAE Gray 1855

*Colobocentrotus (Podophora) atratus* (Linnaeus 1758)  
Somalia, Gesira, IX-X.1984, leg. S. Cianfanelli, det. G. Innocenti, 1 sp. (MZUF 2611)  
Mascarene Is., <1843, leg. ?, previous det. *Colobocentrotus atratus* det. A. Senna and *Podophora atrata* det. A. Targioni Tozzetti, upd. G. Innocenti, 1 sp. (MZUF 764)  
Mauritius Is., 1893, exchange with Berlin Museum, previous det. *Colobocentrotus atratus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 765)  
French Polynesia, Tuamotu Is., IV.1889, pur. C.A. Pöhl, previous det. *Colobocentrotus atratus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 766)

*Echinometra mathaei* (Blainville 1825)  
Red Sea, VII.1873, don. P. Panceri, previous det. *Echinometra lucunter* det. A. Senna, upd. E. Tortonese, 2 sp. (MZUF 763)  
Israel, Eilat, Coral beach, 24-25.XI.1995, leg. G. Innocenti, det. E. Borghi, 2 sp. (MZUF 2789)  
Jordan, Gulf of Aqaba, National Tourist Camp, VII.1993, leg. M. Borri & C. Volpi, det. E. Borghi, 3 sp. (MZUF 2788)  
Jordan, Gulf of Aqaba, National Tourist Camp, VII.1993, leg. M. Borri & C. Volpi, det. E. Borghi, 2 sp. (MZUF 2803)

Egypt, Berenice Lake, 30.IV.1980, leg. G. Adriani, det. E. Tortonese, 2 sp. (MZUF 778)  
Egypt, Shadwan, X-XI.1965, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 759)  
Saudi Arabia, Jeddah, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 755)  
Saudi Arabia, Jeddah, Obhor Creek, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 3 sp. (MZUF 288)  
Eritrea, Massawa, 1871, don. G. Doria, det. E. Borghi, 1 sp. (MZUF 2798)  
Somalia, Gesira, XII.1976, leg. S.B.S., det. E. Tortonese, 29 sp. (MZUF 381)  
Somalia, Gesira, XII.1976, leg. S.B.S., det. E. Tortonese, 4 sp. (MZUF 530)  
Somalia, Sar Uanle, XII.1976, leg. S.B.S., det. E. Tortonese, 18 sp. (MZUF 382)  
Kenya, Mida Creek, Uyombo, X.1990, leg. M. Borri, det. M. Borri, 7 sp. (MZUF 1452)

Kenya, Mombasa, lagoon, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. M. Borri, 3 sp. (MZUF 2589)  
Kenya, Mombasa, lagoon, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. M. Borri, 3 sp. (MZUF 2590)  
Kenya, Mombasa, reef, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. M. Borri, 3 sp. (MZUF 2588)  
Kenya, Ngomeni, X.1990, leg. M. Borri, det. M. Borri, 3 sp. (MZUF 1453)  
Kenya, Watamu beach, XI.1968, leg. B. Lanza, det. E. Tortonese, 2 sp. (MZUF 752)  
Madagascar, Evatra, Lokaro peninsula, Port Dauphin, 4.VIII.2009, leg. S. Cianfanelli & M. Calcagno, det. E. Borghi, 1 sp. (MZUF 2790)  
Mauritius Is., 1875, pur. M. Paulucci, det. E. Borghi, 1 sp. (MZUF 2797)  
Maldives, Velassaru, Lat. 04°08'N Long. 73°26'E, II.1976, leg. M.L. Azzaroli, det. E. Tortonese, 1 sp. (MZUF 276)  
Philippines, 1962, leg. ?, det. E. Tortonese, 1 sp. (MZUF 753)  
Fiji Is. (=Viti Is.), IV.1889, pur. C.A. Pöhl, previous det. *Echinometra lucunter* det. A. Senna, upd. E. Tortonese, 1 sp. (MZUF 758)

*Echinometra lucunter* (Linnaeus 1758)  
Red Sea, <1843, leg. ?, det. A. Senna, 9 sp. (MZUF 754)  
Red Sea, IX.1867, leg. F. Parlatore, det. A. Senna, 3 sp. (MZUF 762)  
Eritrea, Massaua, 1871, don. G. Doria, det. A. Senna, 1 sp. (MZUF 757)  
Mauritius Is., 1875, don. M. Paulucci, det. A. Senna, 1 sp. (MZUF 756)  
Indian Ocean, 1873, don. von Martens, det. A. Senna, 1 sp. (MZUF 2587)  
South America, IV.1889, pur. C.A. Pöhl, previous det. *Echinometra subangularis* det. A. Senna, upd. E. Tortonese, 1 sp. (MZUF 760)

*Echinometra* sp.  
Somalia, Gesira, X.1979, leg. M. Vannini, det. E. Borghi, 5 juv. (MZUF 2791)

*Heliocidaris tuberculata* (Lamarck 1816)  
Australia, Sydney, IV.1889, pur. C.A. Pöhl, previous det. *Strongylocentrotus tuberculatus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 769)

*Heterocentrotus mamillatus* (Linnaeus 1758)  
Saudi Arabia, Jeddah, Obhor Creek, -2 m, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 302)  
Mauritius Is., 1893, exchange with Berlin Museum, det. A. Senna, 1 sp. (MZUF 748)  
Maldives, near Velassaru, Lat. 04°08'N Long. 73°26'E, II.1976, leg. G. Barbieri, det. E. Tortonese, 1 sp. (MZUF 744)  
Indian Ocean, <1843, don. Clot Bey, det. A. Senna, 1 sp. (MZUF 2586)

Kiribati, Gilbert Is., 1962, leg. ?, det.?, 1 sp. (MZUF 747)

Samoa Is., IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 751)

Tuvalu (=Ellice Is.), IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 750)

*Patria*?, <1899, don. M. Paulucci, det. E. Borghi, 1 sp. (MZUF 2795)

#### *Heterocentrotus trigonarius* (Lamarck 1816)

Red Sea, IX.1867, leg. F. Parlatore, det. A. Senna, 1 sp. (MZUF 745)

Kenya, Ngomeni, X.1990, leg. M. Borri, det. M. Borri, 2 sp. (MZUF 1457)

Mascarene Is., 1878, leg. ?, det. A. Senna, 1 sp. (MZUF 746)

Indian Ocean, <1843, leg. ?, det. A. Senna, 1 sp. (MZUF 2585)

Indian Ocean, <1843, leg. ?, det. A. Senna, 1 sp. (MZUF 742)

Indian Ocean, <1843, leg. ?, det. A. Senna, 3 sp. (MZUF 743)

Fiji Is. (=Viti Is.), IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 749)

#### *Heterocentrotus* sp.

Egypt, Sinai, Dahab, El Kura bay, 26.XII.1972, leg. G.R.S.T.S., det. G. Innocenti, 1 p. (MZUF 2609)

Djibouti, Ras Bir, near Obock, XI.2008, leg. M. Borri, det. G. Innocenti, 1 sp. (MZUF 2606)

#### Family STRONGYLOCENTROTIDAE

Gregory 1900

#### *Strongylocentrotus droebachiensis* (O.F. Müller 1776)

Denmark, Sprogø, 1893, exchange with Berlin Museum, "Pomerania" expedition, det. A. Senna, 1 sp. (MZUF 2593)

Iceland, Heimaey Is., 31.VII.2008, leg. S. Cianfanelli & M. Calcagno, det. E. Borghi, 1 sp. (MZUF 2794)

USA, Massachussets, Woods Hole, 1881, don. Smithsonian Museum, det. A. Senna, 1 sp. (MZUF 767)

USA, off Cape Cod, 20-40 fathoms, 1879, don. Smithsonian Museum, det. A. Senna, 2 sp. (MZUF 768)

#### Family TOXOPNEUSTIDAE Troschel 1872

#### *Lytechinus semituberculatus* (Valenciennes in L. Agassiz 1846)

Ecuador, Galapagos Is., 12.I.1972, leg. G.R.S.T.S., det. E. Tortonese, 4 sp. (MZUF 235)

Ecuador, Galapagos Is., Isabela Is., Tagus Bay, 2.I.1972, leg. G.R.S.T.S., det. M.L. Azzaroli, 1 sp. (MZUF 236)

Ecuador, Galapagos Is., I.1971, leg. R. Perotto, det. E.

Borghi, 1 sp. (MZUF 2792)

#### *Lytechinus variegatus* (Lamarck 1816)

Australia, Strait of Bass, IV.1889, pur. C.A. Pöhl, previous det. *Toxopneustes variegatus* det. A. Senna upd. G. Innocenti, 1 sp. (MZUF 651)

#### *Nudechinus scotiopremnus* H.L. Clark 1912

Saudi Arabia, Jeddah, Obhor Creek, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 292)



Fig. 1. *Nudechinus scotiopremnus* H.L. Clark 1912 from Saudi Arabia, Jeddah, Obhor Creek, IV.1977 (MZUF 292) (photo by Saulo Bambi).

#### *Nudechinus verruculatus* (Lütken 1864)

Australia, Moreton Bay, IV.1889, pur. C.A. Pöhl, previous det. *Echinus angulosus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 740)

#### *Sphaerechinus granularis* (Lamarck 1816)

Italy, (GE) Genova, 1870, leg. C. Biasi, det. A. Senna, 2 sp. (MZUF 641)

Italy, (LI) Baratti, 0-3 m, 17.IX.1989, leg. A. Lazzeretti, det. E. Borghi, 1 sp. (MZUF 2696)

Italy, (LI) Baratti, 200 m out Punta delle Pianacce, 13.II.1966, leg. C. De Giuli & Mantellassi, det. S. Carfi, 1 sp. (MZUF 21)

Italy, (LI) Baratti, 200 m out Punta delle Pianacce, 20.II.1966, leg. C. De Giuli, det. S. Carfi, 1 sp. (MZUF 22)

Italy, (LI) Baratti, 200 m out Punta delle Pianacce, 6.II.1966, leg. C. De Giuli, Mantellassi & Gori, det. S. Carfi, 4 sp. (MZUF 6)

- Italy, (LI) Elba Is., 1861, leg. Pisani, det. A. Senna, 1 sp. (MZUF 638)
- Italy, (LI) Elba Is., Enfola, -0.5 m, VIII.1980, leg. E. Talenti, det. G. Innocenti, 1 sp. (MZUF 2619)
- Italy, (LI) Livorno, <1962, leg. ?, det. ?, 1 sp. (MZUF 626)
- Italy, (LI) Livorno, Lat. 43°00'74"N Long. 09°50'56"E, -100 m, 23.IV.1987, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1111)
- Italy, (LI) Livorno, Lat. 42°57'91"N Long. 10°27'29"E, -41 m, 30.IV.1987, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1362)
- Italy, (LI) Meloria shoals, 21.IX.1970, leg. M.L. Azzaroli, det. ?, 4 sp. (MZUF 639)
- Italy, (LI) Meloria shoals, 28.IX.1969, leg. B. Lanza & L. Lottini, det. ?, 1 sp. (MZUF 637)
- Italy, (LI) Pianosa Is., Scoglio della Scola, -30 m, 31.V.1970, leg. A. Ceccanti, det. G. Innocenti, 1 sp. (MZUF 2610)
- Italy, (GR) Argentario, Pellicano, -3-6 m, 17.VI.1989, leg. M. Borri, P.L. Finotello & A. Lazzeretti, det. M. Borri, 2 sp. (MZUF 1424)
- Italy, (GR) Argentario, Santa Caterina, -6-8 m, 16.VI.1989, leg. M. Borri, A. Lazzeretti & S. Viciani, det. M. Borri, 1 sp. (MZUF 1427)
- Italy, (SS) Porto Pollo, L'Isulella, 30.IV.1979, leg. L. Chelazzi & S. Lanza, det. G. Innocenti, 1 sp. (MZUF 2608)
- Italy, (SS) Porto Pollo, L'Isulella, 30.IV.1979, leg. L. Chelazzi & S. Lanza, det. G. Innocenti, 1 sp. (MZUF 2698)
- Italy, (CA) Cagliari, 14.VI.2000, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1773)
- Italy, (CA) Cagliari, 25.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1776)
- Italy, (CA) Cagliari, 25.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1777)
- Italy, (CA) Capo di Pula, 10.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1771)
- Italy, (CA) Capo di Pula, 10.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1825)
- Italy, (CA) Gulf of Cagliari, 7.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1672)
- Italy, (CA) Porto Corallo, 14.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 7 sp. (MZUF 1770)
- Italy, (CA) Quirra, 14.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1772)
- Italy, (CA) Quirra, 14.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1826)
- Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1827)
- Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1943)
- Italy, (CA) southern Sardinia, 27.IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1807)
- Italy, (CA) southern Sardinia, 3.V.1988, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1774)
- Italy, (CA) southern Sardinia, 3.V.1988, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1775)
- Italy, (CA) southern Sardinia, 3.V.1988, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1798)
- Italy, (CA) southern Sardinia, IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 8 sp. (MZUF 1799)
- Italy, (CA) southern Sardinia, IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 3 sp. (MZUF 1800)
- Italy, (NA) Naples, 1892, pur. Stazione Zoologica di Napoli, det. ?, 1 sp. (MZUF 2616)
- Italy, (NA) Naples, 1962, pur. Stazione Zoologica di Napoli, det. ?, 1 sp. (MZUF 634)
- Italy, (NA) Naples, XII.1864, leg. P. Panceri, det. A. Senna, 1 sp. (MZUF 2592)
- Italy, (FG) Tremiti Archipelago, San Domino Is., harbour, 22.V.2001, leg. S. Cianfanelli & E. Talenti, 23.V.2001, det. E. Borghi, 1 sp. (MZUF 2695)
- Italy, (TA) Taranto, 1868, leg. A. Targioni Tozzetti, det. A. Targioni Tozzetti, 1 sp. (MZUF 627)
- Italy, (CT) Catania, 1868, leg. A. Targioni Tozzetti, det. A. Targioni Tozzetti, 1 sp. (MZUF 631)
- Italy, (CT) Catania, 1878, don. A. Aradas, det. A. Senna, 2 sp. (MZUF 624)
- Italy, (ME) Messina, 1878, leg. E.H. Giglioli & G.B. Toscanelli, det. A. Senna, 3 sp. (MZUF 636)
- Italy, (ME) Messina, IX-X.1868, leg. A. Targioni Tozzetti, det. A. Senna, 10 sp. (MZUF 640)
- France, Nice, 1864, pur. F. Cara, det. A. Senna, 4 sp. (MZUF 643)
- France, Nice, 1880, pur. Gal Frères, det. A. Senna, 2 sp. (MZUF 633)
- France, Nice, 1884, pur. Gal Frères, det. A. Senna, 1 sp. (MZUF 628)
- France, Corsica, Fautea, Santa Lucia de Porto Vecchio, VIII.1971, leg. B. Lanza, det. ?, 1 sp. (MZUF 642)
- France, Corsica, Fautea, Santa Lucia de Porto Vecchio, VIII.1972, leg. B. Lanza, det. E. Borghi, 1 sp. (MZUF 2694)
- France, Corsica, Fautea, VII-VIII.1973, leg. ?, det. ?, 1 sp. (MZUF 645)
- Croatia, Povile, Novi Vinodolski, VII.1966, leg. I. Filippelli, det. E. Borghi, 1 sp. (MZUF 2693)
- Croatia, Rovinj, Isola Rossa, -4-7 m, 26.V.1996, leg. C. Volpi & S. Cannicci, det. G. Innocenti, 3 sp. (MZUF 2697)
- Montenegro, Kotor (=Cattaro), 1882, don. Martinovich, det. A. Senna, 1 sp. (MZUF 623)
- Tyrrhenian Sea, 1970, leg. ?, det. ?, 1 sp. (MZUF 625)
- Adriatic Sea, <1843, leg. ?, det. A. Targioni Tozzetti, 3 sp. (MZUF 629)
- Mediterranean Sea, <1843, leg. ?, det. A. Senna, 1 sp. (MZUF 2591)
- Mediterranean Sea, 1893, don. Berlin Museum, det. A. Senna, 1 sp. (MZUF 635)

Mediterranean Sea, 1962, leg.?, det.?, 5 sp. (MZUF 644)

Mediterranean Sea, date?, leg.?, det.?, 3 sp. (MZUF 632)

*Toxopneustes maculatus* (Lamarck 1816)

Indian Ocean, <1843, leg.?, det. A. Senna, 1 sp. (MZUF 647)

Samoa Is., IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 664)

*Toxopneustes pileolus* (Lamarck 1816)

Somalia, date?, leg. ?, det. E. Borghi, 1 sp. (MZUF 2767)

Kenya, Uyombo, X.1990, leg. M. Borri, det. M. Borri, 1 sp. (MZUF 1450)

Kenya, Vipingo, XI-XII.1993, leg. M. Borri & C. Volpi, det. M. Borri, 2 sp. (MZUF 1451)

Kenya, Mombasa, lagoon, IX.2000, leg. M. Borri & C. Volpi, det. E. Borghi, 1 sp. (MZUF 2768)

Samoa Is., IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 652)

*Patria?*, 1885, don. Smithsonian Institution, det. A. Senna, 1 sp. (MZUF 649)

*Toxopneustes* sp.

Mauritius Is., VII.1880, pur. Umlauff, det. A. Senna, 1 sp. (MZUF 650)

Mauritius Is., VII.1880, pur. Umlauff, det. A. Senna, 1 sp. (MZUF 2605)

India, Paumben, 2 fathoms, IV.1889, leg. K. Fristedt, det. A. Senna, 2 sp. (MZUF 648)

*Tripneustes gratilla* (Linnaeus 1758)

Red Sea, 1851, leg. Clot Bey, previous det. *Hipponeoe variegata* det. A. Senna, upd. G. Innocenti, 3 sp. (MZUF 2598)

Egypt, Sinai, Dahab, El Kura, 28.XII.1972, leg. P. Solaini, det. E. Borghi, 1 p. (MZUF 2808)

Jordan, Gulf of Aqaba, 4.V.1975, leg. B. Lanza, det. E. Borghi, 1 sp. (MZUF 2801)

Jordan, Gulf of Aqaba, National Tourist Camp, VII.1993, leg. M. Borri & C. Volpi, det. E. Borghi, 10 sp. (MZUF 2802)

Jordan, Aqaba, 1978, leg. M. Borri, det. E. Tortonese, 9 sp. (MZUF 2594)

Jordan, Aqaba, Yemanye, 2.I.1975, leg. M. Poggesi, det. E. Tortonese, 2 sp. (MZUF 646)

Jordan, Aqaba, Yemanye, 4.V.1975, leg. B. Lanza, det. E. Tortonese, 1 sp. (MZUF 794)

Saudi Arabia, Jeddah, Obhor Creek, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 5 sp. (MZUF 287)

Somalia, Gesira, XII.1976, leg. S.B.S., det. E. Tortonese, 11 sp. (MZUF 379)

Somalia, Sar Uanle, XII.1976, leg. S.B.S., det. E. Tortonese, 8 sp. (MZUF 380)

Kenya, Mida Creek, Kirepwe Is., 14.IX.2000, leg. S. Cianfanelli & E. Talenti, det. G. Innocenti, 3 sp. (MZUF 2607)

Kenya, Mombasa, lagoon, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. M. Borri, 1 sp. (MZUF 2595)

Kenya, Mombasa, lagoon, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. E. Borghi, 3 sp. (MZUF 2807)

Kenya, Mombasa, reef, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. M. Borri, 2 sp. (MZUF 2594)

Kenya, Mtwapa, Mombasa, 3.XII.1993, leg. M. Borri & C. Volpi, det. M. Borri, 4 sp. (MZUF 1446)

Kenya, Uyombo, X.1990, leg. M. Borri, det. M. Borri, 11 sp. (MZUF 1445)

Kenya, Watamu beach, XI.1968, leg. B. Lanza, det. E. Tortonese, 2 sp. (MZUF 791)

Kenya, Vipingo, 24.XI.1993, leg. M. Borri & C. Volpi, det. M. Borri, 4 sp. (MZUF 1447)

Mauritius Is., VII.1880, pur. Umlauff, previous det. *Hipponeoe variegata* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2599)

Indian Ocean, <1843, leg. ?, previous det. *Hipponeoe variegata* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2601)

Indian Ocean, <1843, leg. ?, previous det. *Hipponeoe variegata* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2597)

India, Paumben, 2 fathoms, IV.1889, leg. K. Fristedt, previous det. *Hipponeoe variegata* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2602)

East Indies, IV.1889, pur. C.A. Pöhl, previous det. *Hipponeoe variegata* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2600)

Samoa Is., IV.1889, pur. C.A. Pöhl, previous det. *Hipponeoe variegata* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2603)

*Tripneustes ventricosus* (Lamarck 1816)

USA, Virgin Is., Saint Thomas, 1885, don. Smithsonian Institution, previous det. *Hipponeoe esculenta* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2604)

*Tripneustes* sp.

Kenya, Mombasa, Mtwapa, 3.XII.1993, leg. M. Borri & C. Volpi, det. E. Borghi, 1 sp. (MZUF 2806)

### Family PARECHINIDAE Mortensen 1903

*Loxechinus albus* (Molina 1782)

Argentina, Tierra del Fuego, Ushuaia, I.1974, leg. G.R.S.T.S., det. E. Tortonese, 9 sp. (MZUF 275)

*Paracentrotus lividus* (Lamarck 1816)

Italy, (GE) Gulf of Genova, X.1869, leg. C. Biagi, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 7 sp. (MZUF 701)

Italy, (SP) Gulf of La Spezia, 1863, leg. A. Targioni Tozzetti, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 6 sp. (MZUF 705)

- Italy, (LI) Baratti, 0-3 m, 17.IX.1989, leg. A. Lazzeretti, det. E. Borghi, 1 sp. (MZUF 2699)
- Italy, (LI) between Torre Mozza and Torre del Sale, 25-26.XI.1981, leg. F. Terzani, leg. F. Terzani, 1 sp. (MZUF 2706)
- Italy, (LI) Boccale, X.1989, leg. A. Lazzeretti & P.L. Finotello, det. E. Borghi, 4 sp. (MZUF 2700)
- Italy, (LI) Calafuria, 23.II.1997, leg. L. Falciai, det. L. Falciai, 4 sp. (MZUF 2617)
- Italy, (LI) Castiglioncello harbour, 0-7 m, 13.X.1989, leg. M. Borri, S. Viciani & A. Lazzeretti, det. E. Borghi, 1 sp. (MZUF 2701)
- Italy, (LI) Castiglioncello, 27.XII.1978, leg. F. & A. Terzani, det. F. Terzani, 2 sp. (MZUF 2708)
- Italy, (LI) Elba Is., Portoferaio, II.1882, leg. V. Toscanelli, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 19 sp. (MZUF 697)
- Italy, (LI) Meloria shoals, 28.IX.1969, leg. B. Lanza & L. Lottini, det. M.L. Azzaroli, 6 sp. (MZUF 708)
- Italy, (LI) Quercianella, harbour, -0.3-9 m, 6.X.1989, leg. G. Buracchi, P.L. Finotello & A. Lazzeretti, det. M. Borri, 4 sp. (MZUF 456)
- Italy, (LI) Quercianella, 0-11 m, 7.IX.1989, leg. A. Lazzeretti & P.L. Finotello, det. G. Innocenti, 4 sp. (MZUF 2815)
- Italy, (GR) Argentario, Santa Caterina, -6-8 m, 16.VI.1989, leg. P.L. Finotello, A. Lazzeretti & S. Viciani, det. M. Borri, 13 sp. (MZUF 478)
- Italy, (GR) Giannutri Is., III.1884, leg. Simionelli, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 698)
- Italy, (GR) Le Rocchette, 28.IX.1989, 0-2 m, leg. S. Viciani & A. Lazzeretti, det. M. Borri, 6 sp. (MZUF 434)
- Italy, (GR) Porto Ercole, II.1869, leg. A. Targioni Tozzetti, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 702)
- Italy, (GR) Talamone, 26.IX.1989, 0-0.3 m, leg. A. Lazzeretti, det. M. Borri, 3 sp. (MZUF 246)
- Italy, (SS) Maddalena Is., 1878, don. Ministry of Agriculture, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 704)
- Italy, (NU) San Teodoro, VII.1982, leg. F. Terzani, det. F. Terzani, 1 sp. (MZUF 2703)
- Italy, (CA) Sant'Antioco, 1878, don. A. Aradas, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 3 sp. (MZUF 770)
- Italy, (CA) Sant'Antioco, Cala Lunga, 5.V.1986, leg. S. Cianfanelli, det. G. Innocenti, 3 sp. (MZUF 2749)
- Italy, (NA) Naples, X.1869, leg. P. Panceri, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 710)
- Italy, (TA) Gulf of Taranto, IX-X.1868, leg. A. Targioni Tozzetti, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 4 sp. (MZUF 709)
- Italy, (TA) Taranto, IX-X.1868, leg. A. Targioni Tozzetti, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. E. Tortonesi, 6 sp. (MZUF 713)
- Italy, (CT) Catania, 1872, don. A. Aradas, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 711)
- Italy, (ME) Messina, VIII-X.1878, leg. E.H. Giglioli & G.B. Toscanelli, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 5 sp. (MZUF 703)
- Italy, (PA) Palermo, VIII-IX.1885, don. E.H. Giglioli, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 706)
- France, Banyuls-sur-Mer, 1960, leg. S. Carfì, det. E. Borghi, 4 sp. (MZUF 2809)
- France, Nice, VI.1884, pur. Gal Frères, det. E. Tortonesi, 1 sp. (MZUF 699)
- Croatia, Hvar, Stari Grad, 20.VII.2004, leg. F. Terzani, det. E. Borghi, 2 sp. (MZUF 2705)
- Croatia, S of Zara, Drage, Summer 1975, leg. E. Tonon, det. F. Terzani, 1 sp. (MZUF 2704)
- Greece, Crete, Anissaras, Hersonissos, 27.VIII.1998, leg. A. Terzani, det. F. Terzani, 1 sp. (MZUF 2707)
- Greece, Chios Is., VIII.1992, leg. G. Innocenti & J. Ferretti, det. E. Borghi, 4 sp. (MZUF 2702)
- Greece, Chios Is., VIII.1992, leg. G. Innocenti & J. Ferretti, det. E. Borghi, 3 sp. (MZUF 2742)
- Israel, Haifa, Tel Shikmona, X-XII.1995, leg. G. Innocenti, det. G. Innocenti, 2 sp. (MZUF 2748)
- Morocco, 14 km S of Essaouira, Sidi Kaouki, 20.VII.1985, leg. C. Corti, det. E. Borghi, 4 sp. (MZUF 2800)
- Mediterranean Sea, 1863, purchased at the market, det. ?, 2 sp. (MZUF 700)
- Mediterranean Sea, <1843, leg. ?, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 6 sp. (MZUF 707)
- Mediterranean Sea, <1843, leg. ?, previous det. *Strongylocentrotus lividus* det. A. Senna, upd. G. Innocenti, 3 sp. (MZUF 712)
- Psammechinus microtuberculatus* (Blainville 1825)
- Italy, (TS) Trieste, I.1882, don. Stossich, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 3 sp. (MZUF 725)
- Italy, (VE) Chioggia, 1872, leg. A. Renier, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 1 sp. (MZUF 717)
- Italy, (VE) near Chioggia, 1871, leg. A. Renier, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 5 sp. (MZUF 731)
- Italy, (SP) Gulf of La Spezia, 1862, leg. A. Targioni Tozzetti, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 2 sp. (MZUF 720)
- Italy, (LI) Livorno, Lat. 43°28'83"N Long. 10°16'50"E, -46 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1014)

- Italy, (LI) Castiglioncello, harbour, 0-7 m, 13.X.1989, leg. S. Viciani, M. Borri & A. Lazzeretti, 1 sp. (MZUF 2799)
- Italy, (SS) Maddalena Is., 1872, don. Ministry of Agriculture, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 1 sp. (MZUF 723)
- Italy, (SS) Maddalena Is., 1881, R/N "Washington", det. G. Stefanini, 1 sp. (MZUF 715)
- Italy, (SS) Maddalena Is., Porto Camicie, 1881, leg. E.H. Giglioli, R/N "Washington", previous det. *Echinus microtuberculatus* det. A. Senna, upd. E. Tortonese, 9 sp. (MZUF 730)
- Italy, (SS) Maddalena Is., Porto Camicie, -35 m, 29.VII.1881, leg. R/N "Washington", det. G. Stefanini, 2 sp. (MZUF 2752)
- Italy, (CA) Porto Corallo, 14.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1938)
- Italy, (CA) southern Sardinia, 13.VI.2000, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1829)
- Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1936)
- Italy, (CA) southern Sardinia, 27.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 4 sp. (MZUF 1979)
- Italy, (CA) southern Sardinia, 29.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1937)
- Italy, (CA) southern Sardinia, 3.V.1988, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1828)
- Italy, (CA) southern Sardinia, IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1939)
- Italy, (NA) Naples, 1864, leg. P. Panceri, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 2 sp. (MZUF 721)
- Italy, (NA) Naples, 1892, pur. Stazione Zoologica di Napoli, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 1 sp. (MZUF 722)
- Italy, (NA) Naples, 1892, pur. Stazione Zoologica di Napoli, previous det. *Echinus microtuberculatus* det. ?, upd. ?, 1 sp. (MZUF 728)
- Italy, (NA) Naples, 1962, don. E. Tortonese, det. E. Tortonese, 8 sp. (MZUF 727)
- Italy, (NA) Naples, 1962, leg. ?, det. E. Tortonese, 1 sp. (MZUF 719)
- Italy, (NA) Naples, 1962, leg. ?, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 2 sp. (MZUF 718)
- Italy, (TA) Taranto, 1868, leg. A. Targioni Tozzetti, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 1 sp. (MZUF 724)
- Mediterranean Sea, <1843, leg. ?, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 1 sp. (MZUF 732)
- North Sea, <1843, leg. ?, previous det. *Echinus microtuberculatus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2620)
- United Kingdom, Devonshire, 1862, pur. Wright, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 1 sp. (MZUF 716)
- France, Nice, 1864, pur. F. Cara, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 1 sp. (MZUF 726)
- France, Nice, 1884, pur. Gal Frères, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 3 sp. (MZUF 729)
- Russia, Olga Bay, 1879, don. Prince Tommaso, previous det. *Echinus microtuberculatus* det. A. Senna, upd. ?, 1 sp. (MZUF 714)
- Psammechinus miliaris* (P.L.S. Müller 1771)
- United Kingdom, The Channel, Camber Sands, Rye beach, VII.1993, leg. S. Novello, det. E. Borghi, 1 sp. (MZUF 2692)
- Psammechinus* sp.
- Portugal, Figuiera da Fox, 26.VIII.1995, leg. S. Cianfanelli & M. Calcagno, det. E. Borghi, 1 sp. (MZUF 2793)
- Family PARASALENIIDAE Mortensen 1903
- Parasalenia gratiosa* A. Agassiz 1863
- Fiji Is. (=Viti Is.), IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 771)
- Parasalenia poehlii* Pfeffer 1887
- French Polynesia, Marquesas Islands, IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 772)
- Family TEMNOPLEURIDAE A. Agassiz 1872
- Amblynopneustes* sp.
- Australia, Bass Strait, IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 690)
- Mespolia globulus* (Linnaeus 1758)
- Indian Ocean, <1843, leg. ?, det. A. Senna, 2 sp. (MZUF 689)
- Fiji Is. (=Viti Is.), IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 691)
- Philippines, Toloran Is., Toloran Bay, 3.III.1991, leg. M. Borri & C. Volpi, det. E. Borghi, 2 sp. (MZUF 2776)
- Microcyphus maculatus* L. Agassiz in L. Agassiz & Desor 1846
- Indian Ocean, <1843, leg. ?, det. A. Senna, 1 sp. (MZUF 2621)
- Microcyphus rousseauii* L. Agassiz in L. Agassiz & Desor 1846
- Egypt, Farasan, Dum Suq, 6.IV.1984, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 2622)

Somalia, Gesira, XII.1976, leg. S.B.S., det. E. Tortonese, 1 sp. (MZUF 377)

*Microcyphus* sp.

Oman, Masirah Is., 20°12'38"N 58°38'08"E, 25.IV.2012, leg. S. Vanni, det. E. Borghi, 1 sp. (MZUF 2783)

*Pseudechinus magellanicus* (Philippi 1857)

Argentina, Patagonia, 27.X.1961, exchange with Genova Museum, det. E. Tortonese, 8 sp. (MZUF 429)

Argentina, Tierra del Fuego, Ushuaia, I.1974, leg. G.R.S.T.S., det. E. Tortonese, 4 sp. (MZUF 441)

Argentina, Tierra del Fuego, Ushuaia, 21.I.1974, leg. M.L. Azzaroli, det. E. Tortonese, 2 sp. (MZUF 446)

*Salmacis bicolor* L. Agassiz in L. Agassiz & Desor 1846

Madagascar, Lokaro peninsula, Evatra, Fort Dauphin, 4.VIII.2009, leg. S. Cianfanelli, M. and E. Bodon, M. Calcagno & G. Vezzani, det. E. Borghi, 1 sp. (MZUF 2796)

*Salmacis bicolor rarispina* L. Agassiz in L. Agassiz & Desor 1846

Australia, Bowen, IV.1889, pur. C.A. Pöhl, previous det. *Salmacis rarispina* Agassiz det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2804)

*Salmacis sphaeroides* (Linnaeus 1758)

Philippines, -200 m, 2008, leg. E. Borghi, det. E. Borghi, 1 sp. (MZUF 2780)

*Temnopleurus hardwicki* (Gray 1855)

Japan, I.1877, pur. Ricasoli Perfetti, det. A. Senna, 6 sp. (MZUF 688)

*Temnopleurus toreumaticus* (Leske 1778)

Australia, northern Australia, IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 687)

Temnopleuridae gen. Sp.

Kenya, Mida Creek, Mida, I.XI.1999, leg. S. Cianfanelli, det. E. Borghi, 1 sp. (MZUF 2784)

Family TRIGONOCIDARIDAE Mortensen 1903

*Genocidaris maculata* A. Agassiz 1869

Italy, (NA) Naples, 1893, pur. Stazione Zoologica di Napoli, det. E. Tortonese, 1 sp. (MZUF 692)

Order STOMOPNEUSTOIDA Kroh & Smith 2010

Family STOMOPNEUSTIDAE Mortensen 1903

*Stomopneustes variolaris* (Lamarck 1816)

Somalia, Gesira, XII.1976, leg. S.B.S., det. E. Tortonese, 1 sp. (MZUF 375)

Somalia, Sar Uanle, XII.1976, leg. S.B.S., det. E. Tortonese, 3 sp. (MZUF 376)

Somalia, XII.1976, leg. S.B.S., det. E. Tortonese, 1 sp. (MZUF 694)

Kenya, Mombasa, reef, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. M. Borri, 2 sp. (MZUF 2625)

Kenya, Mtwapa, 22.XI.1993, leg. M. Borri & C. Volpi, det. M. Borri, 7 sp. (MZUF 1440)

Kenya, Uyombo, X.1990, leg. M. Borri, det. M. Borri, 3 sp. (MZUF 1439)

Mauritius Is., VII.1880, pur. Umlauff, det. A. Senna, 1 sp. (MZUF 693)

Mauritius Is., VII.1880, pur. Umlauff, det. A. Senna, 1 sp. (MZUF 695)

Mauritius Is., VII.1880, pur. Umlauff, det. A. Senna, 1 sp. (MZUF 696)

Mauritius Is., VII.1880, pur. Umlauff, det. A. Senna, 2 sp. (MZUF 2624)

Order ECHINOTHURIOIDA Claus 1880

Family ECHINOTHURIIDAE Thomson 1872

*Asthenosoma varium* Grube 1868

Jordan, Aqaba, Yemanye, 2-5.I.1975, leg. M. Poggesi, det. E. Tortonese, 1 sp. (MZUF 579)

Saudi Arabia, Obhor Creek, Jeddah, reef, -20 m, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 298)

Saudi Arabia, Sharm Obhor, Jeddah, 1978, leg. M. Borri, det. E. Tortonese, 1 sp. (MZUF 578)

*Asthenosoma* sp.

Sri Lanka, Trincomalee, 3-7 fathoms, III.1889, leg. K. Fristedt, det. A. Senna, 2 sp. (MZUF 577)

ECHINOIDEA REGULARIA GEN. SP.

Italy, (LI) Baratti, 200 m out Punta delle Pianacce, 13.II.1966, leg. C. De Giuli & Mantellassi, 2 sp. (MZUF 16)

Italy, (LI) Baratti, 200 m out Punta delle Pianacce, 13.II.1966, leg. C. De Giuli & Mantellassi, 1 sp. (MZUF 17)

Italy, (LI) Elba Is. Capo d'Enfola, -0.8 m, VIII.1980, leg. E. Talenti, 2 sp. (MZUF 2764)

Iceland, Heimaey Is., 31.VII.2008, leg. S. Cianfanelli & M. Calcagno, 1 sp. (MZUF 2810)

Jordan, Gulf of Aqaba, National Tourist Camp, VII.1993, leg. M. Borri & C. Volpi, 3 sp. (MZUF 2811)

Netherlands, Curaçao, III.1931, leg. N. Beccari, 1 sp. (MZUF 2766)

Argentina, Valdes peninsula, Puerto Piramide, IV.1998, leg. J. Ferretti, 1 sp. (MZUF 2765)

Subclass EUCHINOIDEA Bronn 1860

Infraclass IRREGULARIA Latreille 1825

Order ECHINONEOIDA H.L. Clark 1925

Family ECHINONEIDAE L. Agassiz & Desor 1847

*Echinoneus cyclostomus* Leske 1778

Somalia, Sar Uanle, XII.1976, leg. S.B.S., det. E. Tortonese, 1 sp. (MZUF 383)

Kenya, Mombasa, reef, IX.2000, leg. M. Borri & C. Volpi, det. A. Kroh, 1 sp. (MZUF 2671)

Kenya, Vipingo, 24.XI.1993, leg. M. Borri & C. Volpi, det. M. Borri, 2 sp. (MZUF 2687)

Reunion Is., 1991, leg. E. Borghi, det. E. Borghi, 1 sp. (MZUF 2781)

Indonesia, Sulawesi, Samalona Is., VII.1985, leg. E. Talenti, det. A. Kroh, 1 sp. (MZUF 2658)

*Echinoneus* sp.

Maldives, Malé, Digifinolu Is., 1.VIII.1984, leg. S. Cianfanelli & M. Manfredi, 1 sp. (MZUF 2816)

Order CASSIDULOIDA Claus 1880

Family NEOLAMPADIDAE Lambert 1918

*Neolampas rostellata* A. Agassiz 1869

Italy, (TP) Egadi Is., Lat. 38°05'N Long. 11°59'40"E, -400 m, sandy and muddy bottoms, 28.VIII.1881, leg. R/N "Washington", det. G. Stefanini, 4 sp. (MZUF 580)

Order CLYPEASTEROIDA A. Agassiz 1882

Family CLYPEASTERIDAE L. Agassiz 1835

*Arachnoides placenta* (Linnaeus 1758)

Indian Ocean, <1843, leg. ?, det. A. Senna, 2 sp. (MZUF 2626)

Australia, North-western Australia, VII.1880, pur. Umlauff, det. A. Senna, 1 sp. (MZUF 582)

Australia, Queensland, VIII.1983, leg. M. Vannini, det. A. Kroh, 1 sp. (MZUF 2674)

*Clypeaster australasiae* (Gray 1851)

Austral Seas, <1843, leg. ?, previous det. *Echinanthus testudinarius* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 2630)

Austral Seas, Asian Ocean, <1843, leg. ?, previous det. *Echinanthus testudinarius* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2631)



1 cm

Fig. 2. *Neolampas rostellata* A. Agassiz 1869 from the Mediterranean Sea, Italy, Egadi Is., Lat. 38°05'N Long. 11°59'40"E, -400 m, sandy and muddy bottoms, 28.VIII.1881 (MZUF 580), from above respectively aboral, lateral, oral views (photo by Saulo Bambi).

*Clypeaster humilis* (Leske 1778)

Red Sea, 1861, pur. Savignò, previous det. *Clypeaster scutiformis* det. A. Senna, upd. G. Innocenti, 4 sp. (MZUF 549)

Red Sea, 1874, pur. Pecchioli heirs, previous det. *Clypeaster scutiformis* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2652)

Red Sea, IV.1875, pur. L. De Greaux, previous det. *Clypeaster scutiformis* det. A. Senna, upd. G. Innocenti, 5 sp. (MZUF 545)

Egypt, Farasan Is., IV.1984, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 2628)

Jordan, Aqaba, 1977, leg. G.R.S.T.S., det. E. Tortonese, 2 sp. (MZUF 785)

Eritrea, Massaua, 1870, leg. A. Issel & O. Beccari, don. Doria, det. A. Senna, 2 sp. (MZUF 548)

Eritrea, Massaua, 27.X.1961, exchange with Genova Museum, det. E. Tortonese, 1 sp. (MZUF 542)

Saudi Arabia, Jeddah, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 7 sp. (MZUF 2634)

Saudi Arabia, Obhor Creek, Jeddah, IV.1977, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 294)

Somalia, Masayek, 1879, leg. Prince Tommaso, det. A. Senna, 4 sp. (MZUF 547)

Kenya, Mombasa, reef, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. M. Borri, 1 sp. (MZUF 2635)

Mauritius Is., 1875, pur. M. Paulucci, previous det. *Clypeaster scutiformis* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 543)

Sri Lanka, Trincomalee, III.1889, leg. K. Fristedt, previous det. *Clypeaster scutiformis* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 544)

*Patria?*, <1843, leg. ?, previous det. *Clypeaster scutiformis* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2633)

*Clypeaster rarispinus* de Meijere 1903

Kenya, Mida Creek, X.1990, leg. M. Borri, det. M. Borri, 1 sp. (MZUF 2688)

*Clypeaster reticulatus* (Linnaeus 1758)

Jordan, Gulf of Aqaba, IV.1978, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 398)

*Clypeaster rosaceus* (Linnaeus 1758)

Atlantic Ocean, <1843, leg. ?, previous det. *Echinanthus rosaceus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2632)

*Clypeaster* sp.

Egypt, Hurgada, VIII.1983, leg. M. & R. Cassetti, det. E. Borghi, 1 sp. (MZUF 2661)

Egypt, VIII.1983, leg. S. Cianfanelli, det. E. Borghi, 1 sp. (MZUF 2662)

Jordan, Gulf of Aqaba, 4.V.1975, leg. B. Lanza, det. M. Borri, 1 sp. (MZUF 2629)

Eritrea, near Massaua, -30 m, 1871, leg. A. Issel & O. Beccari, don. Doria, det. A. Senna, 1 sp. (MZUF 2627)

#### Family ECHINOCYAMIDAE

Lambert & Thiéry 1914

*Echinocyamus pusillus* (O.F. Müller 1776)

Italy, (MS) mouth of the Magra river, 1.II.1981, leg. S. Cianfanelli, det. G. Innocenti, 1 sp. (MZUF 2754)

Italy, (LI) Castiglioncello, 15.III.2012, leg. G. Innocenti, det. E. Borghi, 1 sp. (MZUF 2728)

Italy, (LI) Elba Is. Capo d'Enfola, VIII.1980, leg. E. Talenti, det. G. Innocenti, 1 sp. (MZUF 2746)

Italy, (LI) Elba Is. Capo d'Enfola, -19 m, 1.I.1981, leg. S. Cianfanelli, det. G. Innocenti, 3 sp. (MZUF 2755)

Italy, (LI) Elba Is., 1861, leg. Pisani, det. A. Senna, 115 sp. (MZUF 565)

Italy, (LI) Gulf of Baratti, 22.III.1981, leg. S. Cianfanelli, det. G. Innocenti, 3 sp. (MZUF 2756)

Italy, (GR) Puntone di Scarlino, La Dogana, -2 m, 13.VIII.1986, leg. S. Cianfanelli, det. E. Borghi, 5 sp. (MZUF 2729)

Italy, (GR) Puntone di Scarlino, La Dogana, -6 m, 10.VIII.1986, leg. S. Cianfanelli, det. E. Borghi, 6 sp. (MZUF 2730)

Italy, (SS) Arzachena, Pitrizza, 8.VIII.1981, leg. S. Cianfanelli, det. G. Innocenti, 2 sp. (MZUF 2759)

Italy, (SS) Cala Serraina, 3.VIII.1981, leg. S. Cianfanelli, det. G. Innocenti, 10 sp. (MZUF 2757)

Italy, (SS) Maddalena Is., Porto Camicie, 29.VII.1881, leg. E.H. Giglioli, R/N "Washington", det. E. Borghi, 15 sp. (MZUF 2727)

Italy, (SS) N Maddalena Is., Bonifacio strait, -45-60 m, 15.VI.1998, leg. G. Innocenti & J. Ferretti, det. G. Innocenti, 10 sp. (MZUF 2747)

Italy, (OR) Is Arutas, 15.VIII.1981, leg. S. Cianfanelli, det. G. Innocenti, 2 sp. (MZUF 2758)

Italy, (CA) Chia, 1.V.1986, leg. S. Cianfanelli, det. E. Borghi, 3 sp. (MZUF 2731)

Italy, (CA) Portixeddu, Capo Pecora, 4.V.1986, leg. S. Cianfanelli, det. E. Borghi, 6 sp. (MZUF 2732)

Italy, (CA) Sant'Antioco, Cala Lunga, 5.V.1986, leg. S. Cianfanelli, det. E. Borghi, 67 sp. (MZUF 2733)

Italy, (NA) Gulf of Naples, IX.1892, pur. Stazione Zoologica di Napoli, det. A. Senna, 1 sp. (MZUF 560)

Italy, (NA) Gulf of Naples, IX.1892, pur. Stazione Zoologica di Napoli, det. A. Senna, 1 sp. (MZUF 564)

Italy, (CT) Catania, 1872, don. Ministry of Agriculture, det. A. Senna, 2 sp. (MZUF 561)

France, Corsica, Gulf of Figari, 10.VIII.1981, leg. S. Cianfanelli, det. G. Innocenti, 26 sp. (MZUF 2750)

Croatia, Senj, 26.VII.1982, leg. S. Cianfanelli, det. G. Innocenti, 1 sp. (MZUF 2760)

Greece, Naxos Is., Ghora, VII.1992, leg. E. Talenti, det. G. Innocenti, 1 sp. (MZUF 2763)

Greece, Naxos Is., Aghia Anna, VII.1992, leg. E. Talenti, det. G. Innocenti, 3 sp. (MZUF 2762)

Greece, Sparton, 15.VIII.1982, leg. S. Cianfanelli, det. G. Innocenti, 4 sp. (MZUF 2761)

Israel, Palmahim, -35 m, V.2007, leg. B.S. Galil, det. E. Borghi, 1 sp. (MZUF 2726)

Mediterranean Sea, <1843, leg. ?, det. A. Senna, 1 sp. (MZUF 559)

Mediterranean Sea, <1843, leg. ?, det. A. Senna, 5 sp. (MZUF 566)

Mediterranean Sea, 1874, pur. Pecchioli heirs, det. A. Senna, 5 sp. (MZUF 562)

*Echinocyamus* sp.

Maldives, Malé, Digifinolu Is., 1.VIII.1984, leg. S. Cianfanelli & M. Manfredi, det. A. Kroh, 2 sp. (MZUF 2667)

Family FIBULARIIDAE Gray 1855

*Fibularia ovulum* Lamarck 1816

Maldives, Malé, Digifinolu Is., 1.VIII.1984, leg. S. Cianfanelli & M. Manfredi, det. A. Kroh, 13 sp. (MZUF 2666)

*Fibularia volva* L. Agassiz in L. Agassiz & Desor 1847  
East Indies, <1843, leg. ?, det. A. Senna, 11 sp. (MZUF 557)

*Fibularia* sp.

Saudi Arabia, Obhor Creek, Jeddah, -5 m, 1978, leg. G.R.S.T.S, det. A. Kroh, 3 sp. (MZUF 2670)

India, Paumben, IV.1889, leg. K. Fristedt, det. A. Senna, 1 sp. (MZUF 558)

India, Paumben, 2 fathoms, IV.1889, leg. K. Fristedt, det. A. Senna, 1 sp. (MZUF 563)

FIBULARIIDAE GEN. SP.

India, Paumben, 6 fathoms, IV.1889, leg. K. Fristedt, det. A. Kroh, 10 sp. (MZUF 2673)

Family LAGANIDAE Desor 1858

*Jacksonaster depressum* (L. Agassiz 1841)

Somalia, Sar Uanle, XII.1976, leg. S.B.S., previous det. *Laganum depressum* det. E. Tortonese, upd. G. Innocenti, 2 sp. (MZUF 384)

Kenya, Malindi, Jambo Village, VII.1991, leg. E. Talenti, previous det. *Laganum depressum* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 2636)

Indian Ocean, <1843, leg. ?, previous det. *Laganum depressum* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 556)

Sri Lanka, Trincomalee, 3 fathoms, III.1889, leg. K. Fristedt, previous det. *Laganum depressum* det. A. Senna, upd. G. Innocenti, 3 sp. (MZUF 553)

New Zealand, 1887, don. C.G. Schmidt, previous det. *Laganum depressum* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 554)

Kingdom of Tonga, Tonga Is., IV.1889, pur. C.A. Pöhl, previous det. *Laganum depressum* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 555)

Kiribati, Gilbert Is., 1962, leg. ?, previous det. *Laganum depressum* det. E. Tortonese, upd. G. Innocenti, 2 sp. (MZUF 550)

*Laganum laganum* (Leske 1778)

Persian Gulf, <1843, leg. ?, previous det. *Laganum bonani* det. A. Senna, upd. G. Innocenti, 7 sp. (MZUF 552)

Indonesia, Borneo Islands, 1962, don. E. Tortonese, det. E. Tortonese, 1 sp. (MZUF 551)

Papua New Guinea, 1872, leg. O. Beccari, det. A. Kroh, 2 sp. (MZUF 2672)

*Laganum* sp.

*Patria?*, <1899, don. M. Paulucci, det. E. Borghi, 1 sp. (MZUF 2741)

Indonesia, Bali, I.1977, leg. M. Cassetti, det. A. Kroh, 1 sp. (MZUF 2663)

LAGANIDAE GEN.SP.

Kenya, Ras Ngomeni, Robinson Is., XI.1991, leg. M. Vannini, det. A. Kroh, 3 sp. (MZUF 2665)

Australia, out Townsville, Magnetic Is., Radical bay, 25.VII.1992, leg. M. Borri & C. Volpi, det. A. Kroh, 3 sp. (MZUF 2664)

Family ECHINARACHNIIDAE  
Lambert in Lambert & Thiéry 1914

*Echinarachnius parma* (Lamarck 1816)

Canada, New Brunswick, St. John, 1997, don. R. Jory, det. A. Kroh, 1 sp. (MZUF 2659)

USA, Massachussets, Vineyard, 1881, don. Smithsonian Institution, det. A. Senna, 5 sp. (MZUF 612)

Family SCUTELLIDAE Gray, 1825

*Scaphechinus mirabilis* A. Agassiz 1864

Japan, <1893, previous det. *Echinarachnius mirabilis* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 611)

Fiji Is., IV.1889, pur. C.A. Pöhl, previous det. *Echinarachnius mirabilis* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 605)

Family ROTULIDAE Gray 1855

*Heliphora orbiculus* (Linnaeus 1758)

South America, 1871, pur. Bellenghi, previous det. *Rotula rumpfii* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 614)

*Rotula deciesdigitatus* (Leske 1778)

Liberia, Monrovia, 1893, "Gazelle" expedition, exchange with Berlin Museum, previous det. *Rotula augusti* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 615)

Western Africa, <1843, leg. ?, previous det. *Rotula augusti* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 2637)

*Rotula* sp.

South America, 1871, pur. Bellenghi, det. A. Senna and A. Targioni Tozzetti, 1 sp. (MZUF 616)

## Family ASTRICLYPEIDAE Stefanini 1912

*Echinodiscus bisperforatus* Leske 1778

South Africa, Mossel Bay, IV.1889, pur. C.A. Pöhl, previous det. *Echinodiscus biforis* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 610)

*Sculpsitechinus auritus* (Leske 1778)

Red Sea, 1854, don. C. Allegri, previous det. *Echinodiscus auritus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2639)

Eritrea, Massaua, 1870, leg. A. Issel & O. Beccari, don. Doria, previous det. *Echinodiscus auritus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2638)

Somalia, Masayek, 1879, don. Prince Tommaso, previous det. *Echinodiscus auritus* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 613)

Kenya, Watamu Beach, XI.1968, leg. B. Lanza, previous det. *Echinodiscus auritus* det. E. Borghi, upd. G. Innocenti, 2 sp. (MZUF 2655)

Tanzania, Mafia Is., Tutia islet, VIII.1974, leg. A. Ol-schki, previous det. *Echinodiscus auritus* det. E. Tortonese, upd. G. Innocenti, 1 sp. (MZUF 396)

Moçambique, 1988, leg. R. Volpi, previous det. *Echinodiscus auritus* det. E. Borghi, upd. G. Innocenti, 5 sp. (MZUF 2654)

*Patria?*, VII.1906, don. L. Del Vivo, previous det. *Echinodiscus auritus* det. E. Borghi, upd. G. Innocenti, 2 sp. (MZUF 2653)

## ASTRYCLYPEIDAE GEN.SP.

Indonesia, Bali, Kuta beach, VII.1985, leg. E. Talenti, det. A. Kroh, 2 sp. (MZUF 2660)

## Family MELLITIDAE Stefanini 1912

*Encope emarginata* (Leske 1778)

Antille, 1871, pur. Bellenghi, det. A. Senna and A. Targioni Tozzetti, 3 sp. (MZUF 609)

Australia, Queensland, Bowen, IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 608)

*Encope micropora* tetrpora L. Agassiz 1841

Ecuador, Galapagos Is., Barrington Is., -5 m, XII.1971, leg. G.R.S.T.S., previous det. *Encope micropora galapagensis* det. M.L. Azzaroli, upd. G. Innocenti, 1 sp. (MZUF 249)

Ecuador, Galapagos Is., Barrington Is., -5 m, XII.1971, leg. G.R.S.T.S., previous det. *Encope micropora galapagensis* det. M.L. Azzaroli, upd. G. Innocenti, 1 sp. (MZUF 250)

Ecuador, Galapagos Is., Barrington Is., -5 m, XII.1971, leg. G.R.S.T.S., previous det. *Encope micropora galapagensis* det. M.L. Azzaroli, upd. G. Innocenti, 1 sp. (MZUF 252)

Ecuador, Galapagos Is., Barrington Is., -5 m, XII.1971, leg. G.R.S.T.S., previous det. *Encope micropora galapagensis* det. M.L. Azzaroli, upd. G. Innocenti, 1 sp. (MZUF 253)

*Mellita quinquesperforata* (Leske 1778)

Antille, <1843, leg. ?, previous det. *Mellita testudinata* det. A. Senna, upd. G. Innocenti, 2 sp. (MZUF 607)

Atlantic Ocean, <1843, leg. ?, previous det. *Mellita testudinata* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 606)

Atlantic Ocean, <1843, leg. ?, previous det. *Mellita testudinata* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2640)

## Order ECHINOLAMPADOIDA Kroh &amp; Smith 2010

## Family ECHINOLAMPADIDAE Gray 1851

*Conolampas diomedae* Mortensen 1948

Philippines, -100 m, 2008, leg. E. Borghi, det. E. Borghi, 2 sp. (MZUF 2779)

*Echinolampas ovata* (Leske 1778)

Eritrea, Massawa, 1870, leg. A. Issel & O. Beccari, don. Doria, previous det. *Echinolampas oviformis* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 581)

## Order SPATANGOIDA L. Agassiz 1840

## Family BRISSIDAE Gray 1855

*Brissopsis atlantica* Mortensen 1907

Morocco, Atlantic coast, -300 m, 1973, exchange with Genova Museum, det. E. Tortonese, 1 sp. (MZUF 390)

*Brissopsis atlantica mediterranea* Mortensen 1913

Italy, (CA) Capo di Pula, 10.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1830)

Italy, (CA) Gulf of Cagliari, 7.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1831)

*Brissopsis lyrifera* (Forbes 1841)

Italy, Livorno, Lat. 43°32'56"N Long. 09°37'33"E, -578 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 6 sp. (MZUF 1018)

Italy, Lat. 41°02'58"N Long. 08°32'20"E, -420-370 m, muddy bottom, 4.VIII.1881, leg. R/N "Washington", det. G. Stefanini & E. Tortonese, 2 sp. (MZUF 583)

Mediterranean Sea, <1843, leg. ?, det. A. Senna, 3 sp. (MZUF 584)

Norway, Kattegat, 1873, don. Copenhagen Museum, det. ?, 1 sp. (MZUF 585)

*Brissus latecarinatus* (Leske 1778)

Mauritius Is., VII.1880, pur. Umlauff, previous det.  
*Brissus carinatus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2641)

Fiji Is. (=Viti Is.), IV.1889, pur. C.A. Pöhl, previous det.

*Brissus carinatus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 587)

*Brissus unicolor* (Leske 1778)

Italy, (LI) Castiglioncello, 15.III.1912, leg. ?, det. ?, 1 sp. (MZUF 590)

Italy, (LI) Pianosa Is., 31.V.1970, leg. M.L. Azzaroli, A. Ceccanti & L. Chelazzi, det. ?, 1 sp. (MZUF 417)

Italy, (LI) Pianosa Is., 6.VIII.1970, leg. A. Ceccanti, M.L. Azzaroli & L. Chelazzi, det. M.L. Azzaroli, 1 sp. (MZUF 630)

Italy, (LI) Pianosa Is., Cala San Giovanni, -2-4 m, 21.IV.1971, leg. A. Ceccanti & Vannucci, det. E. Borghi, 2 sp. (MZUF 2786)

Italy, (SS) Maddalena Is., 1881, leg. E.H. Giglioli, det. A. Senna, 1 sp. (MZUF 591)

Italy, (CA) Cagliari, 11.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 3 sp. (MZUF 1675)

Italy, (CA) Cagliari, 28.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1795)

Italy, (CA) Porto Corallo, 14.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1933)

Italy, (CA) southern Sardinia, 3.VII.2001, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1832)

Italy, (CA) southern Sardinia, VII.2001, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1833)

Italy, (NA) Gulf of Naples, 1892, pur. Stazione Zoologica di Napoli, det. A. Senna 1 sp. (MZUF 593)

France, Nice, 1864, pur. F. Cara, det. A. Senna, 1 sp. (MZUF 594)

France, Nice, 1864, pur. F. Cara, det. A. Senna, 3 sp. (MZUF 592)

France, SE Corsica, VII.1972, leg. M.L. Azzaroli, det. E. Tortonese, 1 sp. (MZUF 777)

Greece, Chios Is., VIII.1992, leg. G. Innocenti & J. Ferretti, det. E. Borghi, 1 sp. (MZUF 2725)

Adriatic Sea, <1843, leg. ?, det. A. Senna, 4 sp. (MZUF 586)

Mediterranean Sea, 1874, pur. Pecchioli heirs, det. A. Senna, 1 sp. (MZUF 589)

Kenya, Mombasa, reef, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. M. Borri, 1 sp. (MZUF 2642)

Kenya, Shimoni, XI-XII.1993, leg. M. Borri & C. Volpi, det. M. Borri, 2 sp. (MZUF 2689)

West Indies, 1867, pur. Schauffuss, det. A. Senna, 1 sp. (MZUF 588)

*Patria?*, <1899, don. M. Paulucci, det. E. Borghi, 1 sp. (MZUF 2740)

*Brissus* sp.

Philippines, Coron Is., Busuanga, 10.III.1991, leg. M. Borri & C. Volpi, det. E. Borghi, 5 sp. (MZUF 2656)

*Meoma ventricosa grandis* Gray 1851

Mexico, Acapulco, 1885, don. Smithsonian Institution, previous det. *Meoma grandis* Gray, upd. G. Innocenti, 1 sp. (MZUF 2805)

*Metalia sternalis* (Lamarck 1816)

Kenya, Mombasa, reef, 5-23.IX.2000, leg. M. Borri & C. Volpi, det. M. Borri, 1 sp. (MZUF 2648)

Samoa Is., IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 231)

*Metalia* sp.

Kenya, Mombasa, reef, IX.2000, leg. M. Borri & C. Volpi, det. A. Kroh, 1 sp. (MZUF 2668)

*Plagiobrissus grandis* (Gmelin 1791)

Antille, <1899, leg. ?, previous det. *Metalia pectoralis* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 2647)

## Family LOVENIIDAE Lambert 1905

*Breynia australasiae* (Leach 1815)

Australia, <1899, leg. ?, det. A. Senna, 1 sp. (MZUF 2643)

*Echinocardium cordatum* (Pennant 1777)

Italy, (RA) Lido di Savio, VII.2003, leg. M. Borri, det. E. Borghi, 1 sp. (MZUF 2785)

Italy, (GR) Alberese beach, IV.1989, leg. G. Innocenti, det. E. Borghi, 1 sp. (MZUF 2723)

Italy, (GR) Feniglia beach, 24.V.1997, leg. G. Innocenti, det. E. Borghi, 4 sp. (MZUF 2722)

Italy, (GR) Follonica, Puntone beach, 17.II.2007, leg. L. Borri, det. E. Borghi, 5 sp. (MZUF 2721)

Italy, (GR) Tombolo della Giannella, 6.VII.2002, leg. F. & A. Terzani, det. E. Borghi, 1 sp. (MZUF 2737)

Italy, (VT) Lido di Tarquinia, 31.VIII.1992, leg. F. & A. Terzani, det. E. Borghi, 1 sp. (MZUF 2736)

Italy, (NU) Sarrala, Marina di Tertenia, 15.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1793)

Italy, (CA) Cagliari, Capo di Pula, 10.VII.1999, leg. M. Borri and C. Volpi, det. G. Eva, 1 sp. (MZUF 1792)

Italy, (NA) Gulf of Naples, 1892, pur. Stazione Zoologica di Napoli, det. A. Senna, 1 sp. (MZUF 602)

Italy, (FG) Rodi Garganico, 21.IV.1987, leg. F. Terzani, det. E. Borghi, 1 sp. (MZUF 2735)

Italy, (CZ) Capo Vaticano, 15.VII.1969, leg. M. L. Azzaroli, det. ?, 1 sp. (MZUF 601)

United Kingdom, 1862, pur. Wright, det. A. Targioni Tozzetti and A. Senna, 2 sp. (MZUF 604)

United Kingdom, Liverpool, 1862, don. Liverpool Museum to A. Targioni Tozzetti, det. A. Targioni Tozzetti and A. Senna, 3 sp. (MZUF 603)

United Kingdom, The Channel, Camber Sands, Rye beach, VII.1993, leg. S. Novello, det. E. Borghi, 3 sp. (MZUF 2657)

Croatia, Split (=Spalato), -8 m, 2001, leg. E. Borghi, det. E. Borghi, 1 sp. (MZUF 2778)  
 Greece, 1982, leg. S. Cianfanelli, det. E. Borghi, 1 sp. (MZUF 2724)  
 Australia, Sydney, IV.1889, pur. C.A. Pöhl, previous det. *Echinocardium australe* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 600)

*Echinocardium mediterraneum* (Forbes 1844)

Italy, (LI) between Torre Mozza and Torre del Sale, 25-26.XI.1981, leg. F. Terzani, det. E. Borghi, 1 sp. (MZUF 2734)

Italy, (LI) Castiglioncello, Caletta, 3.X.1949, leg. V. Baldasseroni, det. E. Tortonese, 1 sp. (MZUF 596)

Italy, (CA) Gulf of Cagliari, 9.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1794)

Italy, (MC) Porto Civitanova, 1884, leg. G. Cavanna, det. A. Senna, 5 sp. (MZUF 595)

Italy, (NA) Gulf of Naples, 1892, pur. Stazione Zoologica di Napoli, det. A. Senna, 2 sp. (MZUF 599)

Italy, (NA) Naples, 1892, pur. Stazione Zoologica di Napoli, previous det. *Echinocardium cordatum* det. ?, upd. G. Innocenti, 1 sp. (MZUF 2646)

France, Nice, 1884, pur. Gal Frères, det. A. Senna, 2 sp. (MZUF 597)

Mediterranean Sea, <1843, leg. ?, det. A. Senna, 28 sp. (MZUF 598)

*Echinocardium* sp.

Italy, (GR) Punta Ala, Lo Sparviero, 8.VIII.1978, leg. M. Borri, det. ?, 2 sp. (MZUF 792)

*Lovenia elongata* (Gray 1845)

Jordan, Aqaba, IV.1978, leg. G.R.S.T.S., det. E. Tortonese, 1 sp. (MZUF 776)

*Lovenia* sp.

Jordan, Aqaba, 4.V.1975, leg. B. Lanza, det. E. Tortonese, 4 sp. (MZUF 2644)

Family MARETIIDAE Lambert 1905

*Mareta planulata* (Lamarck 1816)

Mauritius Is., 1875, pur. M. Paulucci, det. A. Senna, 1 sp. (MZUF 535)

East Indies, IV.1889, pur. C.A. Pöhl, det. A. Senna, 1 sp. (MZUF 534)

Indian Ocean, <1843, leg. ?, det. A. Senna 2 sp. (MZUF 536)

Family SPATANGIDAE Gray 1825

*Spatangus subinermis* Pomel 1887

Italy, (LI) Livorno, Lat. 43°38'92"N Long. 09°55'80"E, -139 m, 7.V.1986, leg. I.S.T.I.P., det. M. Borri, 1 sp. (MZUF 1359)

*Spatangus purpureus* O.F. Müller 1776

Italy, (LI) Elba Is., Portoferraio, II.1882, leg. Focardi, det. A. Senna, 1 sp. (MZUF 541)

Italy, (LI) Livorno, Lat. 42°50'64"N Long. 10°02'08"E, -88 m, 9.V.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1361)

Italy, (LI) Livorno, Lat. 42°57'91"N Long. 10°27'29"E, -41 m, 30.IV.1987, leg. I.S.T.I.P., det. M. Borri, 3 sp. (MZUF 1360)

Italy, (LI) Livorno, Lat. 42°58'37"N Long. 09°46'81"E, -143 m, 8.IX.1986, leg. I.S.T.I.P., det. M. Borri, 2 sp. (MZUF 1021)

Italy, (LI) Livorno, Lat. 43°00'74"N Long. 09°50'56"E, -100 m, 23.IV.1987, leg. I.S.T.I.P., det. M. Borri, 4 sp. (MZUF 1101)

Italy, (SS) Maddalena Is., 1878, don. Ministry of Agriculture, det. A. Targioni Tozzetti, 1 sp. (MZUF 537)  
 Italy, (SS) N Maddalena Is., Bonifacio strait, -45-60 m, 15.VI.1998, leg. G. Innocenti & J. Ferretti, det. G. Innocenti, 1 sp. (MZUF 2738)

Italy, (CA) Arbatax, 16.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1678)

Italy, (CA) Cagliari, 14.VI.2000, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1787)

Italy, (CA) Cagliari, 14.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1766)

Italy, (CA) Cagliari, 14.VII.2000, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1788)

Italy, (CA) Cagliari, 17.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 4 sp. (MZUF 1791)

Italy, (CA) Cagliari, 18.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1790)

Italy, (CA) Cagliari, 20.VI.1996, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1789)

Italy, (CA) Cagliari, 20.VI.2000, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1765)

Italy, (CA) Cagliari, 28.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1702)

Italy, (CA) Cagliari, 28.VI.2001, leg. M. Borri & C. Volpi, det. G. Eva, 3 sp. (MZUF 1769)

Italy, (CA) Cagliari, 3.VII.2001, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1767)

Italy, (CA) Cagliari, 7.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1768)

Italy, (CA) Capo di Pula, 10.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 3 sp. (MZUF 1684)

Italy, (CA) E-SE Cagliari, 27.IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 4 sp. (MZUF 1804)

Italy, (CA) E-SE Cagliari, 3.V.1988, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1805)

Italy, (CA) Gulf of Cagliari, 7.VII.1997, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1679)

Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1934)

Italy, (CA) southern Sardinia, 20.V.1992, leg. M. Borri & C. Volpi, det. G. Eva, 2 sp. (MZUF 1935)

Italy, (CA) southern Sardinia, 3.V.1988, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1806)  
 Italy, (CA) southern Sardinia, IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1802)  
 Italy, (CA) southern Sardinia, IV.1988, leg. M. Borri & C. Volpi, det. G. Eva, 1 sp. (MZUF 1803)  
 Italy, (NA) Naples, 1892, pur. Stazione Zoologica di Napoli, det. ?, 1 sp. (MZUF 546)  
 Italy, (CT) Catania, 1870, leg. A. Aradas, det. A. Senna, 1 sp. (MZUF 2649)  
 Italy, (CT) Catania, 1878, don. Ministry of Agriculture, det. A. Senna, 1 sp. (MZUF 538)  
 Croatia, Pag Is., 20.VI.1971, leg. G. Borgioli, det. ?, 1 sp. (MZUF 540)  
 Croatia, Povile, Novi Vinodolski, VII.1966, leg. I. Filippelli, det. ?, 1 sp. (MZUF 539)

#### Family SCHIZASTERIDAE Lambert 1905

##### *Abatus curvidens* Mortensen 1836

Antarctica, South Shetland Islands, Half Moon Is., -30 m, 26.I.1974, leg. Fresi & Cinelli, det. E. Tortonese, 1 sp. (MZUF 622)

##### *Ova canaliferus* (Lamarck 1816)

Italy, (TS) Gulf of Trieste, 1894, don. E.H. Graeffe, previous det. *Schizaster canaliferus* det. E.H. Graeffe, upd. G. Innocenti, 4 sp. (MZUF 620)

Italy, (LI) Quercianella, -40 m, 30.IX.1999, leg. R. Silvestri & A. Voliani, previous det. *Schizaster canaliferus* det. M. Borri, upd. G. Innocenti, 1 sp. (MZUF 2651)

Italy, (GR) Giglio Is., -200 m, 1957, leg. M/P "Madonna della Fiducia", det. G. Innocenti, 2 sp. (MZUF 2739)

Italy, (SS) Maddalena Is., Porto Camicie, 1881, leg. E.H. Giglioli, R/N "Washington", previous det. *Schizaster canaliferus* det. G. Eva, upd. G. Innocenti, 1 sp. (MZUF 2650)

Italy, (CA) southern Sardinia, 13.VI.2000, leg. M. Borri & C. Volpi, previous det. *Schizaster canaliferus* det. G. Eva, upd. G. Innocenti, 1 sp. (MZUF 1764)

Italy, (CA) southern Sardinia, 28.VIII.2001, leg. M. Borri & C. Volpi, previous det. *Schizaster canaliferus* det. G. Eva, upd. G. Innocenti, 2 sp. (MZUF 1763)

Italy, (NA) Gulf of Naples, 1864, leg. P. Panceri, previous det. *Schizaster canaliferus* det. A. Senna, upd. G. Innocenti, 3 sp. (MZUF 621)

Italy, (NA) Naples, 1892, pur. Stazione Zoologica di Napoli, previous det. *Schizaster canaliferus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 618)

Italy, (TA) Gulf of Taranto, 1868, don. Mastrigli, previous det. *Schizaster canaliferus* det. A. Senna, upd. G. Innocenti, 3 sp. (MZUF 619)

Italy, (CT) Catania, 1872, leg. A. Aradas, previous det. *Schizaster canaliferus* det. A. Senna, upd. G. Innocenti, 1 sp. (MZUF 617)  
**SCHIZASTERIDAE GEN.SP.**  
 Saudi Arabia, Jeddah, 1978, leg. G.R.S.T.S., DET. A. Kroh, 1 sp. (MZUF 2669)

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