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Annotated catalogue of recent echinoderm type specimens in the collection of the Naturhistorisches Museum Wien

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Summary

The Naturhistorisches Museum Wien houses 107 type specimens of recent echinoderms representing 38 nominal species. Each species is presented (original name, current status, Museum characteristics, brief bibliography).

Zusammenfassung

Das Naturhistorische Museum in Wien besitzt 107 Typusexemplare rezenter Echinodermen, die 38 nominelle Arten repräsentieren. Für jede dieser Arten werden der Originalname, der derzeit gültige Name, weitere Etikettendaten und eine knappe Bibliographie angegeben.

Introduction

The echinoderm collection of the Vienna Museum was built up at the time of EMIL VON MARENZELLER (1845–1918) who was in charge of the invertebrate collection from 1873 to his retirement (see LORENZ 1919). It houses mostly specimens from the Mediterranean Sea, e. g., those collected by HELLER and VON MARENZELLER in the Adriatic Sea (HELLER 1863, 1868, VON MARENZELLER 1874, 1875, 1877 b) and by the Pola Expedition 1890–1894 in the whole Mediterranean area (VON MARENZELLER 1893 a, b, 1895 a, b). It also includes specimens collected by the Novara Expedition (MARKTANNER-TURNERETSCHER 1887), the österreichisch-hungarische Nordpol Expedition (VON MARENZELLER 1877 a), the Hironnelle Expedition of Monaco 1886–1888 (VON MARENZELLER 1892, 1893 c), and the Pola Expedition to the Red Sea, as well as representatives of the Atlantic and Indo-West Pacific fauna collected by Navy officers of the "Kriegsmarine" (MARKTANNER-TURNERETSCHER 1887, VON MARENZELLER 1895 c).

The echinoderm collection of Vienna was never revised. On the whole it houses 107 type specimens of recent echinoderms belonging to 38 nominal species, viz. 23 species of holothuroids (63 type specimens), 1 species of echinoid (1 type

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specimen), 4 species of asteroids (6 type specimens), and 10 species of ophiuroids (37 type specimens).

Catalogue of nominal species

The five classes of recent echinoderms are considered successively. Within each class nominal species are presented according to the alphabetic order of the specific names used in the original descriptions. Main bibliographical references and actual status are given for each species. Other informations are the reference numbers of the type specimens, the number of syntypes, the mode of preservation (dry or alcohol-preserved), and the origin of the specimens (type locality and/or collector).

1. Holothuroidea

The Vienna collection houses type specimens of 23 nominal species of holothuroids. They were collected either by scientific expeditions (Pola Expeditions in the Mediterranean Sea: types of 2 species; österreichisch-hungarische Nordpol Expedition: types of 1 species; Gazelle Expedition: type of 1 species; Hirondelle Expedition: type of 1 species) or by individual naturalists (Japan: types of 10 species; Mediterranean Sea: types of 6 species; Philippines: types of 2 species).

artica, *Haplodactyla* VON MARENZELLER, 1877 a: 29, pl. 4 fig. 1.

= *Molpadia artica* (VON MARENZELLER, 1877); see H. L. CLARK 1907: 169.

Type specimens: ref. 11542, 1 syntype (alcohol), österreichisch-hungarische Nordpol Expedition, 78°58'5 N–60°25'5 E (North of Nova Zembla); ref. 11560, 1 syntype (alcohol), same origin.

armatus, *Colochirus* VON MARENZELLER, 1881: 135, pl. 5 fig. 8.

= *Pentacta armatus* (VON MARENZELLER, 1881); see A. M. CLARK & ROWE 1971: 180.

Type specimens: ref. 11492, 1 syntype (alcohol), Japan, coll. RORETZ; ref. 11517, 23 syntypes (alcohol), same origin.

autopista, *Synapta* VON MARENZELLER, 1881: 123, pl. 4 fig. 3.

= *Protankyra autopista* (VON MARENZELLER, 1881); see OHSHIMA 1914: 472; HEDING 1928: 264.

Type specimen: ref. 11642, holotype (alcohol; fragment), Miya Bay (Japan), coll. KÖRBL.

azorica, *Peniagone* VON MARENZELLER, 1892: 64; see also VON MARENZELLER 1893 c: 12, pl. 1 fig. 4, pl. 2 fig. 5; HANSEN 1975: 138, textfig. 63, pl. 10 figs 1–3.

Type specimen: ref. 11335, 1 paratype (alcohol), Hironnelle Expedition 1888 (Monaco), station 248, 41°40'41" N–26°44'08" W, 2870 m.

decorata, *Holothuria* VON MARENZELLER 1881: 137, pl. 4 fig. 12; see also MITSUKURI 1912: 112 (as *Holothuria monacaria*).

= *Holothuria (Thymiosycia) hilla* (LESSON, 1830); see A. M. CLARK & ROWE 1971: 178 & 194.

Type specimen: ref. 11081, holotype (alcohol), West coast of Enoshima (Japan), coll. KÖRBL.

echinata, *Cucumaria* VON MARENZELLER, 1881: 127, pl. 5 fig. 6; see also MITSUKURI 1912: 239, textfig. 47, pl. 8 fig. 70.

= *Pseudocnus echinatus* (VON MARENZELLER, 1881); see PANNING 1949: 422; A. M. CLARK & ROWE 1971: 182.

Type specimens: ref. 11353, 4 syntypes (alcohol), Japan, coll. RORETZ.

furcipraedita, *Trochodota* VON SALVINI-PLAWEN, 1972: 460, textfigs 1 a–e, 3, 4 & 6.

Type specimen: ref. 13117, holotype (alcohol), Secche della Meloria (Livorno, Italy), 4–5 m.

gazellae, *Colochirus* LAMPERT, 1889: 823, pl. 24 figs 5 a–5 c.

= *Plesiocolochirus gazellae* (LAMPERT, 1889); see CHERBONNIER 1946: 285; A. M. CLARK & ROWE 1971: 180.

Type specimens: ref. 11523, 2 syntypes (alcohol), Gazelle Expedition, "Meermeid" Strait, 2.5–7.5 fathoms.

geminiradiatus, *Myriotrochus*: VON SALVINI-PLAWEN, 1972: 462, textfigs 2 a–e.

Type specimen: ref 13118, holotype (alcohol), 42°25'06" N–15°20'36" W (Adriatic Sea), 150 m.

gracilis, *Anapta* SEMPER, 1868: 17, pl. 3 fig. 1, pl. 4 fig. 15, pl. 5 figs 16, 17 & 26, pl. 7 figs 7–8, pl. 8 figs 8, 13 & 15; see also A. M. CLARK & ROWE 1971: 184.

Type specimen: ref. 11591, 1 syntype (alcohol), Manila Bay (Philippines), coll. SEMPER.

grubei, *Cucumaria* VON MARENZELLER, 1874: 305; see also TORTONESE 1965: 79, textfig. 31.

= *Pseudocnus grubei* (VON MARENZELLER, 1874); see PANNING 1949: 432, textfig. 9; PANNING 1962: 67, textfig. 12.

Type specimen: ref. 11372, holotype (alcohol), Spalato (Trieste, Italy).

helleri, *Holothuria* VON MARENZELLER, 1877 b: 119; see also TORTONESE 1965: 63, textfig. 23 a.

Type specimen: ref. 11115, holotype (alcohol), Lussin piccolo (Trieste, Italy).

Remark: The name *H. helleri* was proposed by VON MARENZELLER to replace the name *Holothuria affinis* HELLER (see HELLER 1868: 73, pl. 3 fig. 7) which was preoccupied (see also VON MARENZELLER 1874: 320).

hypsipyrga, *Orcula* VON MARENZELLER, 1881: 135, pl. 5 fig. 10.

= *Phyllophorus (Phyllothuria) hypsipyrga* (VON MARENZELLER, 1881); see HEDING & PANNING 1954: 151, textfigs 64–65.

Type specimen: ref. 11474, holotype (alcohol), Japan, coll. RORETZ.

inornatus, *Colochirus* VON MARENZELLER, 1881: 130, pl. 5 fig. 7; see also MITSUKURI 1912: 221, textfig. 40, pl. 8 fig. 73; OHSHIMA 1915: 267.

= *Plesiocolochirus inornatus* (VON MARENZELLER, 1881); see CHERBONNIER 1946: 285; A. M. CLARK & ROWE 1971: 192.

Type specimens: ref. 11494, 1 syntype (alcohol), Japan, coll. RORETZ; ref. 11524, 3 syntypes (alcohol), same origin.

japonica, *Chirodota* VON MARENZELLER, 1881: 123; see also OHSHIMA 1914: 479.

= ? *Trochodota japonica* (VON MARENZELLER, 1881); see HEDING 1928: 277.

Type specimens: ref. 11592, 1 syntype (alcohol), Eno Sima (Japan), coll. DRASCHE; ref. 11646, 1 syntype (alcohol), same origin.

japonicum, *Thyonidium* VON MARENZELLER, 1881: 134, pl. 5 fig. 9; see also MITSUKURI 1912: 230, textfig. 44 (as *Phyllophorus japonicus*).

= *Pentadactyla japonica* (VON MARENZELLER, 1881); see HEDING & PANNING 1954: 201, textfig. 101.

Type specimens: ref. 11480, 2 syntypes (alcohol), Japan, coll. RORETZ; ref. 11537, 1 syntype (alcohol; labelled "type"), same origin.

köllikeri, *Cucumaria* SEMPER, 1868: 236, pl. 39 fig. 17; see also TORTONESE 1965: 77, textfigs 28 & 29 b.

= *Pseudocnus dubiosis koellikeri* (SEMPER, 1868); see PANNING 1962: 62, textfigs 5–6.

Type specimen: ref. 11387, 1 syntype (alcohol), Napoli, coll. SEMPER.

Remark: According to the label the specimen was collected by SEMPER at Naples. SEMPER (1868) did not specify the type locality saying only that the specimens presumably originate from Sicily.

ludwigi, *Kolga* VON MARENZELLER, 1893 a: 70; see also VON MARENZELLER 1893 b: 20, pl. 3 figs 7–7 a, pl. 4 figs 8–8 c.

= *Irpa ludwigi* (VON MARENZELLER, 1893); see HANSEN 1975: 172.

Type specimen: ref. 11150, 1 syntype (alcohol; fragment), Pola Expedition, locality unspecified (off S. Sicily, 755–1292 m).

marionii, *Cucumaria* VON MARENZELLER, 1877 b: 117, pl. 5 figs 1–1 b.

= *Neocucumis marioni* (VON MARENZELLER, 1877); see HEDING & PANNING 1954: 83, textfig. 26; TORTONESE 1965: 95, textfig. 41.

Type specimen: ref. 11484, holotype (alcohol), Marseille, 108 m, coll. MARION.

occultatus, *Pseudostichopus* VON MARENZELLER 1893 a: 68; see also VON MARENZELLER 1893 b: 15, pl. 4 fig. 9; TORTONESE 1965: 71, textfig. 27.

Type specimens: ref. 11250, 8 syntypes (alcohol); Pola Expedition, Mediterranean Sea (localities unspecified), 415–1445 m.

ooplax, *Synapta* VON MARENZELLER, 1881: 122, pl. 4, figs. 1–1 d.

= *Patinapta ooplax* (VON MARENZELLER, 1881); see HEDING 1928: 238; A. M. CLARK & ROWE 1971: 186.

Type specimens: ref. 11586, 1 syntype (alcohol; labelled “type”), Japan, coll. RORETZ; ref. 11614, 5 syntypes (alcohol), same origin.

roretzii, *Haplodactyla* VON MARENZELLER, 1877 a: 387, pl. 4 fig. 1.

= *Ankyroderma roretzi* (VON MARENZELLER, 1877); see VON MARENZELLER 1881: 124, pl. 4 figs 4–4 d; MITSUKURI 1912: 267, textfig. 55, pl. 8 fig. 78.

Type specimen: ref. 11619, 1 syntype (alcohol), Japan, coll. RORETZ.

similis, *Synapta* SEMPER, 1868: 10, pl. 3 fig. 2, pl. 4 fig. 14, pl. 6 figs 1 & 3, pl. 7 figs 5–6, pl. 8 fig. 1.

= *Protankyra similis* (SEMPER 1868); see H. L. CLARK 1907: 109, pl. 2 fig. 2; A. M. CLARK & ROWE 1971: 186.

Type specimen: ref. 11587, 1 syntype (alcohol), Bohol (Philippines), coll. SEMPER.

2. Echinoidea

The Vienna collection houses only 1 type specimen of echinoids of unknown origin.

pöhli, *Parasalenia* PFEFFER, 1887: 110; see also MORTENSEN 1943: 272, textfigs 126 c–d, 127 b–d, pl. 29 figs 12–16, pl. 31 fig. 6.

= *Parasalenia poehli* PFEFFER, 1887.

Type specimen: ref. 10897, 1 syntype (alcohol), origin unknown, coll. PÖHL.

Remark: According to MORTENSEN (1943) *P. poehli* is distributed all over the Indo-West pacific area (from the Red Sea to Tahiti).

3. Asteroidea

The Vienna collection houses type specimens of 4 nominal species of asteroids. They were collected either by the Pola Expedition in the Mediterranean Sea (types of 2 species) or by individual naturalists (Salomon Islands: type of 1 species; Hawaii: type of 1 species).

callosus, *Echinaster* VON MARENZELLER, 1895 c: 1, pl. 1 figs 1–2; see also A. M. CLARK & ROWE 1971: 40 & 72.

Type specimen: ref. 9998, holotype (alcohol), Salomon Islands, coll. KESSLITZ.

fisheri, *Mithrodia* HOLLY, 1932: 6, textfigs 2 a–b; see also ENGEL et al. 1948: 27, textfigs 9–11, pls 7–8 (part); POPE & ROWE 1977: 202, 203.

Type specimen: ref. 9975, holotype (alcohol), Pearl and Hermes Reef (Hawaii), 20–30 fathoms, coll. PIETSCHMANN.

hystricis, *Pentagonaster* VON MARENZELLER, 1893 a: 67; see also VON MARENZELLER 1893 b: 4, pl. 1 figs 2–2 a, pl. 2 figs 2 b–c.

= *Ceramaster grenadensis* (PERRIER, 1881); see DOWNEY 1973: 49, pl. 17 figs C–D.

Type specimens: ref. 9741, 2 syntypes (alcohol), Pola Expedition, Mediterranean Sea, locality not precised; ref. 9742, 2 syntypes (alcohol), same origin; ref. 9743, 1 syntype (alcohol), same origin.

mediterraneus, *Gnathaster* VON MARENZELLER, 1893 a: 68; see also VON MARENZELLER 1893 b: 6, pl. 2 figs 4–4 a, pl. 3 figs 4 b–c.

= *Odontaster mediterraneus* (VON MARENZELLER, 1893); see TORTONESE 1965: 152, textfig. 70; SIBUET 1974: 791.

Type specimen: ref. 9593, holotype (alcohol), Pola Expedition, Mediterranean Sea (E. of Milo, Egean Sea), 834 m.

4. Ophiuroidea

The Vienna collection houses type specimens of 10 nominal species of ophiuroids. They originate from the Adriatic Sea (types of 2 species), the Atlantic Ocean (West Africa, Fernando Po, and Haïti: types of 5 species), the Indian Ocean (Aru and Nicobar Islands: types of 2 species) and the S. E. Australian coast (Sydney: type of 1 species).

brevispina, *Amphiura* MARKTANNER-TURNERETSCHER, 1887: 301, pl. 12 figs 14–15.

Type specimens: ref. 10357, 10 syntypes (alcohol), Novara-Expedition, St Paul (presumably St Paul Island, Indian Ocean).

Remark: Status unknown. The species was cited in the catalogue of H. L. CLARK (1915); it was not considered by FELL (1962) nor by A. M. CLARK (1970).

- forbesi*, *Pectinura* HELLER, 1863: 422, pl. 2 figs 5–8; see also HELLER 1868: 57.
= *Ophioconis forbesi* (HELLER, 1863); see TORTONESE 1965: 262, textfig. 120.
Type specimen: ref. 10184, 1 syntype (alcohol), Lissa (Adriatic Sea), 30–50 fathoms, coll. HELLER.
- foveolata*, *Ophiothrix* MARKTANNER-TURNERETSCHER, 1887: 313, pl. 13 figs 32–33; see also A. M. CLARK & ROWE 1971: 84 & 110, pl. 15 fig. 3; A. M. CLARK & COURTMAN-STOCK 1976: 143.
Type specimen: ref. 10580, holotype (alcohol), Aru Island (South Molucca), coll. WOLF.
- grubei*, *Ophiura* HELLER, 1863: 431, pl. 2 figs 13–16; see also HELLER 1868: 58 (as *Ophioglypha grubei*); TORTONESE 1965: 274, textfig. 126.
Type specimens: ref. 10250, 2 syntypes (alcohol), Lesina (Adriatic Sea), 10–30 fathoms.
- ljungmani*, *Ophiactis* MARKTANNER-TURNERETSCHER, 1887: 297, pl. 12 figs 9–11.
= *Ophiactis savignyi* (MÜLLER & TROSCHEL, 1842); see KOEHLER 1914: 185, pl. 7 fig. 15, pl. 10 fig. 1.
Type specimens: ref. 10337, 3 syntypes (alcohol), ? 0.7° N – 23 to 25° W (West Afrika; see MADSEN 1970: 152); , coll. SCHILLING; ref. 10338, 12 syntypes (alcohol), Port au Prince (Haïti), coll. BOBRIK.
- lütkeni*, *Ophiactis* MARKTANNER-TURNERETSCHER, 1887: 298, pl. 12 figs 7–8.
= *Ophiactis luetkeni* MARKTANNER-TURNERETSCHER, 1887; see MADSEN 1970: 210, textfigs 35 a–c.
Type specimens: ref. 10339, 17 syntypes (alcohol), Fernando Po, coll. LIPPE.
- macrolepidota*, *Ophiactis* MARKTANNER-TURNERETSCHER, 1887: 298, pl. 12 figs 12–13; see also A. M. CLARK 1965: 42.
Type specimen: ref. 10340, holotype (alcohol), “Sidney” (presumably Sydney, Australia), coll. WOLF.
- marmorata*, *Ophiocoma* MARKTANNER-TURNERETSCHER, 1887: 303, pl. 12 figs 16–17; see also MADSEN 1970: 152.
Type specimens: ref. 10466, 4 syntypes (alcohol), ? 0.7° N–23 to 25° W (West Africa; see MADSEN 1970: 152), coll. EICHHORN.
- mülleri*, *Amphiura* MARKTANNER-TURNERETSCHER, 1887: 300, pl. 13 figs 25–26.
= ? *Amphiura grandisquama* LYMAN, 1869; see MADSEN 1970: 153 & 177, textfigs 12 a–c.
Type specimen: ref. 10391, holotype (alcohol), ? 0.7° N–23 to 25° W (West Africa; see MADSEN 1970: 152), coll. SCHILLING.

novarae, *Ophiolophus* MARKTANNER-TURNERETSCHER, 1887: 314, pl. 13 figs 40–41; see also KOEHLER 1904: 117, textfigs 97–98 (redescription of the holotype); A. M. CLARK & ROWE 1971: 84 & 117.
 Type specimen: ref. 10653, holotype (alcohol), Novara Expedition, Nicobar Islands.

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