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Types in the Fish Collection of the Staatliches Museum für Naturkunde in Stuttgart. Part 2. The KLUNZINGER Collection

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Summary

The second part of a catalogue of types stored in the fish collection of the Staatliches Museum für Naturkunde in Stuttgart includes the types of CARL BENJAMIN KLUNZINGER's collection from the Red Sea, and FERDINAND VON MÜLLER's collection of Australian and New Zealand fishes described by KLUNZINGER. The fish collection originally contained types of 88 nominal KLUNZINGER species; types of 13 of them were problably lost during World War II. At present, the SMNS collection contains types of 75 nominal KLUNZINGER species, i.e. a total of 30 **holotype** and 147 **syntype** specimens.

3 **syntypes** of a small BLEEKER collection (Engraulididae, Exocoetidae) recently acquired are additionally presented in the catalogue.

Key words: Pisces; Type catalogue; KLUNZINGER, C. B.; MÜLLER, F. v.; Red Sea; Australia; New Zealand; Staatliches Museum für Naturkunde in Stuttgart

Zusammenfassung

Der zweite Teil eines Typenkatalogs der Fischsammlung des Staatlichen Museums für Naturkunde in Stuttgart behandelt die Typen der Sammlungen des Arztes CARL BENJAMIN KLUNZINGER vom Roten Meer sowie Typen aus der Sammlung des Barons FERDINAND VON MÜLLER, die aus Australien und Neuseeland stammen und von KLUNZINGER beschrieben wurden. Dieser Sammlungsteil enthielt ursprünglich die Typen von 88 nominellen Fischarten, von denen 13 vermutlich während des Zweiten Weltkrieges verloren gingen. Die Sammlung des SMNS enthält heute die Typen von 75 nominellen Arten, die von C. B. KLUNZINGER beschrieben wurden, insgesamt 30 **Holotypen** und 147 **Syntypen.**

3 **Syntypen** einer kleinen, kürzlich erworbenen BLEEKER-Sammlung (Engraulididae, Exocoetidae) sind zusätzlich im Katalog enthalten.

Contents

1. Introduction

The present paper is the second part of a type catalogue of the Staatliches Museum für Naturkunde in Stuttgart. The first part was about the BLEEKER collection from Indonesia (FRICKE, 1991a). It included an introduction about the history of the fish collection of the Stuttgart museum. This second part is dealing with the types described by C. B. KLUNZINGER.

CARL BENJAMIN KLUNZINGER was born on 18 November 1834 as the son of a protestant priest in Güglingen, former Kingdom of Württemberg, now state of Baden-Württemberg, southwestern Germany. He received the first education at a rural Latin school, then at a high school in Stuttgart. KLUNZINGER expressed an early interest in geology, botany and zoology, but, after finishing the school, started to study medicine at the universities in Tübingen and Würzburg, as a career as pure natural history scientist or teacher was nearly impossible in those days (KLUNZINGER, 1915).

After his first medicine exam in 1857, KLUNZINGER spent a practical year in Vienna and Prague, also attending geological and zoological lectures. He had his second exam in 1859, when Germany was at war, and therefore had to join the army as a chief physician afterwards, expecting a soon departure to France. After a few months, the war was over without active combat, and KLUNZINGER retired with half of his wages. He took a position as physician in the Black Forest mountain resort Liebenzell. After a year, he was dissatisfied with theory and practice of medicine, quit his job, and planned to travel around the world with the eyes of a natural historian. He returned to his parent's home at Stuttgart and started to prepare his journey.

In Stuttgart, he met Prof. KRAUSS, then curator of the Natural History Museum, who suggested that KLUNZINGER should travel to Kosseir (Al-Qusayr) at the Egyptian Red Sea shore where he should examine the natural history in detail. Former expeditions by German natural historians had lead to this area. A problem was money; KRAUSS suggested that KLUNZINGER should sell the natural history objects to the Stuttgart Museum.

KLUNZINGER first travelled to Trieste to get used to collecting, conservation and preparation of animals. In November 1862, he continued his journey to Cairo in Egypt, where he spent 18 months to learn the Arab language. He tried to get a position as a physician in Kosseir, and finally succeeded. KLUNZINGER moved to Kosseir in February 1864. There he spent 5 years and collected large quantities of fish and other marine animals (KLUNZINGER, 1877).

In 1869, KLUNZINGER returned to Stuttgart to examine his Red Sea fishes in the Natural History Museum; he also travelled to Frankfurt and Berlin to compare his materials with the collections there, and gave specimens to those museums. KLUNZINGER soon published two papers on Red Sea fishes (KLUNZINGER, 1870, 1871). He also worked in the Stuttgart museum on a collection of Australian fishes procured by F. VON MÜLLER, and was paid as a technician.

Ferdinand von Müller (1825–1896), born in Rostock in 1825, studied in Kiel medicine and natural history, and received a doctoral degree. He emigrated with his two sisters to Australia, and got a position as government botanist in Melbourne. His interest in animals and plants led to the opening of the Zoological-botanical Garden in Melbourne; Müller was the first director of this zoo. Here he was free to collect numerous animals and plants. He published the descriptions of about 2000 Australian plant species, including a monograph on *Eucalyptus*. Müller sent animals to several German museums. After 1865, he wanted to concentrate his materials in a single museum. He decided to send all of his animals to Stuttgart. Several journeys led him to Queensland, Darwin, Western Australia, and New Zealand. Müller died in 1896 in Melbourne (König, 1991).

Klunzinger, who worked on the Müller collection, described about 50 new species of fishes from Australia and New Zealand (Klunzinger, 1872, 1880). In 1872, he returned to Kosseir, again as physician, and tried to collect wanting species of Red Sea fishes. In 1875, Klunzinger arrived in Stuttgart with plenty of fish and marine animals (Klunzinger, 1877). He was again technician at the Stuttgart Museum in 1879–1884, relabelled and reidentified the whole fish collection in these years, and published his monograph on Red Sea fishes (Klunzinger, 1884). Several Red Sea fishes, including types, were sent to other museums in exchange [British Museum (Natural History), London; Museum of Comparative Zoology, Cambridge, Massachusetts; Naturhistorisches Museum, Vienna; Zoological Institute, St. Petersburg]. Later, Klunzinger got problems with Prof. Krauss, who had become director of the museum and argued that technicians were not allowed to do scientific research. Klunzinger wrote a letter to the Ministry of Churches and Schools, which was responsible for museums (Adam, 1991); as a result of this letter, he was appointed as professor of zoology at the University of Stuttgart in 1884, and spent there the rest of his life. Unfortunately, teaching took all of his time after that date, so that he could not do much more research. Klunzinger died on 21 June 1914 in Stuttgart (Fricke, 1991b).

Klunzinger's collection of Red Sea fishes in the Staatliches Museum für Naturkunde in Stuttgart comprises about 1,500 specimens; the Müller collection of Australian fishes is even larger, with about 2,500 specimens. Some materials were destroyed during World War II (see Fricke, 1991a). The collections contain a number of types, a catalogue of which is presented in the present paper.

As an addendum to the first part of the type catalog (Fricke, 1991), a few additional Bleeker types are presented in this paper. They originate from the collection of the Zoologisches Institut, University of Heidelberg (ZIH), which was given in part to the Forschungsinstitut Senckenberg, Frankfurt/Main (SMF), and in part to the Staatliches Museum für Naturkunde in Stuttgart (SMNS). The ZIH had received Bleeker materials as a gift from P. Bleeker in 1865. While the majority of Heidelberg Bleeker specimens was given to SMF, a few are now in the SMNS collection.

2. Methods

The catalogue of Klunzinger types comprises all specimens considered as types; it also states if specimens were present in the collection formerly but were lost during World War II or later. For judging if a specimen can be considered as a type, it is measured and compared with Klunzinger's original description, and with Klunzinger materials in other collections (abbreviations see below).

The SMNS specimen labels are the originals written by C. B. Klunzinger in 1869–1884, who mostly used the systematics of A. Günther's catalogues of the fishes in the British Museum (Günther, 1860–1870).

In the type section, the original combination of names used by KLUNZINGER is given first, together with the reference to the original description, type localities, and specimen size(s) in total length. It is followed by synonyms used by KLUNZINGER in later publications, and finally by the actual name, usually together with a reference. Then, type status, catalogue number, old catalogue number, locality, collector, and catalogue entry date are added. All type specimens are measured. The tip of the upper jaw is used as the starting point for standard and total length rather than the mid of the upper lip suggested by FRICKE (1983), as KLUNZINGER measured from that point. The remarks section contains information on KLUNZINGER materials in other collections. The arrangement of the families follows NELSON (1984).

3. Abbreviations and depositories

Abbreviations:

+	(after total length, e.g. "345+ mm TL"): in cases when the caudal fin of the specimen is broken, the total length given is smaller than the original total length; the plus sign indicates the wanting part;
?	(in synonymies): status in question;
ID	Identification by . . .;
SL	Standard length, measured from the tip of the upper jaw to the mid of caudal fin base;
TL	Total length, measured from the tip of the upper jaw to the end of the caudal fin;
uncat.	uncatalogized.

Depositories:

AMS	The Australian Museum, Sydney;
BMNH	The Natural History Museum, London;
MCZ	Museum of Comparative Zoology, Harvard College, Cambridge, Massachusetts;
NMW	Naturhistorisches Museum Wien;
SMF	Forschungsinstitut Senckenberg, Frankfurt/Main;
SMNS	Staatliches Museum für Naturkunde in Stuttgart;
ZIH	Zoologisches Institut der Universität Heidelberg (now in SMNS);
ZIL	Zoological Institute, Academy of Sciences, St. Petersburg (formerly Leningrad);
ZMB	Zoologisches Museum, Museum für Naturkunde der Humboldt-Universität, Berlin.

4. Type Catalogue

Acanthuridae

Naseus vomer Klunzinger, 1871: 514 ("54 cm; selten; ich bekam nur ein Exemplar").
= *Naso vomer* (Klunzinger, 1871) (after DOR, 1984: 258).
Holotype: SMNS 2751, 475 mm SL, 540 mm TL – "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: 1879.
Remarks: Further KLUNZINGER material: NMW 31505, 1 specimen, 51 cm TL, no type; — ZMB 8181, 1 specimen, no type; — ZMB 10583, 1 specimen, no type.

Apogonidae

Apogon conspersus Klunzinger, 1872: 18–19 (Südaustralien; 11 cm). KLUNZINGER, 1880: 344–345, pl. 3, fig. 2 (Port Philip and Hobson Bay; 10–12 cm).
= *Vincentia conspersa* (Klunzinger, 1872) (after GON, 1988: 8; PAXTON et al., 1989: 558–559).
Syntypes: SMNS 1591, 2 specimens, 53.1 mm and 91.7 mm SL, 65.0 and 112.0 mm TL — Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — MÜLLER, F. v. — Inv. date: Oct. 1868.

SMNS 1711, 1 specimen, 75.1 mm SL, 81.8+ mm TL — Port Philip Bay, Victoria, Australia, 38°07′S 144°48′E — MÜLLER, F. v. — Inv. date: Jan. 1870.
SMNS 1799, 2 specimens, 76.4 mm and 76.8 mm SL, 82.5+ mm and 90.1 mm TL — Queen's Cliff, Port Philip, Victoria, Australia, 38°16′S 144°40′E — MÜLLER, F. v. — Inv. date: June 1871.
SMNS uncat., 1 skull — Queen's Cliff, Port Philip, Victoria, Australia, 38°16′S 144°40′E — MÜLLER, F. v. — Inv. date: June 1871 (**not found**; probably lost).
Remarks: Further MÜLLER material: SMNS 1904, 1 specimen, 95.1 mm SL, 107.3+ mm TL, Port Denison, Queensland, Apr. 1873, no syntype.

Apogon punctatus Klunzinger, 1880: 345, pl. 3, fig 2 (King George Sound; 13 cm).
= *Vincentia punctata* (Klunzinger, 1880) (after PAXTON et al., 1989: 559).
Syntypes: SMNS 2541, 2 specimens, 106.0 mm and 112.6 mm SL, 127.1 mm and 132.9 mm TL — King George Sound, Western Australia, 35°03′S 117°57′E — MÜLLER, F. v. — Inv. date: 4 Nov. 1878.
Remarks: GON (1988) refers to the larger specimen of SMNS 2541 as to the holotype of *Apogon punctatus*. KLUNZINGER, however, used 2 specimens as syntypes of the species (according to the old SMNS catalogue and inventary, handwritten by KLUNZINGER).

Astronesthidae

Astronesthes martensii Klunzinger, 1871: 594–595 (15 cm; selten).
Valid (after DOR, 1984: 45; GIBBS in SMITH & HEEMSTRA, 1986: 232).
Syntype: SMNS 1776, 2 specimens, 100.5 and 102.4 mm SL, 110.5+ and 113.1 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — KLUNZINGER, C. B. — Inv. date: May 1871.
Remarks: Further type material: BMNH 1871.7.15.33, 1 syntype; — ZIL 2620, 1 syntype; ZIL 2633, 1 syntype.

Atherinidae

Atherina elongata Klunzinger, 1880: 394 (King George's Sound; 7–8 cm).
= *Atherinosoma elongata* (Klunzinger, 1880) (after PAXTON et al., 1989: 356).
Syntypes: SMNS 12188 (old catalogue number: SMNS 2574c), 4 specimens — King George Sound, Western Australia, 35°03′S 117°57′E — MÜLLER, F. v. — Inv. date: 4 Nov. 1878 (jaws plus disintegrated remains now in the Australian Museum, Sydney, registered under AMS I.29726–001 and AMS I.29726–002).

Atherina gobio Klunzinger, 1884: 130, pl. 11, fig. 4, 4a (10 cm).
Atherina cylindrica (non Valenciennes, 1835) Klunzinger, 1870: 834 (Kosseir; 10 cm, selten größer; jederzeit gemein).
= *Hypoatherina temmincki* (Bleeker, 1853) (after IVANTSOFF in SMITH & HEEMSTRA, 1986: 383).
Syntypes: SMNS 2772, 3 specimens — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — KLUNZINGER, C. B. — Inv. date: 1879.
Remarks: These specimens are syntypes of both *Atherina cylindrica* Klunzinger, 1870 (homonym of *Atherina cylindrica* Valenciennes, 1835), and of *Atherina gobio* Klunzinger, 1884.

Atherinichthys esox Klunzinger, 1872: 34–35 (Port Philip; 14 cm). KLUNZINGER, 1880: 394.
= *Atherinason esox* (Klunzinger, 1872) (after PAXTON et al., 1989: 355).
Syntypes: SMNS 1800, 2 specimens — Queen's Cliff, Port Philip, Victoria, Australia, 38°16′S 144°40′E — MÜLLER, F. v. — Inv. date: June 1871 (**not found**; probably lost).

Batrachoididae

Batrachus cirrhosus Klunzinger, 1871: 500–501 (34 cm; selten).
= *Thalassothia cirrhosa* (Klunzinger, 1871) (after Dor, 1984: 53).
Syntype: **SMNS 1756,** 1 specimen, 280.4 mm SL, 337.2 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: May 1871.
Remarks: Further type material: NMW 86595, 1 syntype.

Batrachus mülleri Klunzinger, 1880: 387, pl. 9, fig. 1 (Port Darwin; 14 cm).
= *Batrachoides diemensis* LeSueur, 1824 (after McCulloch, 1929: 359; Paxton et al., 1989: 272).
Holotype: **SMNS 2490,** 122.6 mm SL, 145.4 mm TL — Port Darwin (Darwin), Northern Territories, Australia, 12°28'S 130°50'E — Müller, F. v. — Coll. date: 15 Mar. 1878.

Belonidae

Belone appendiculatus Klunzinger, 1871: 580 (47–100 cm; selten).
= *Tylosurus acus melanotus* (Bleeker, 1851) (after Dor, 1984: 65).
Syntype: **SMNS 1615,** 1 dry specimen, 796+ mm SL, 855+ mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: Jan. 1869.
Remarks: Further type material: ZMB 10584, 1 syntype; ZMB 10689, 1 syntype. — Also in the SMNS collection is the following specimen: SMNS 3601 — 1 specimen — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: 1894). It cannot be considered as a syntype of the species, as it was apparently collected on Klunzinger's second collecting trip to Kosseir, while type materials were collected during his first trip.

Belone groeneri Klunzinger, 1880: 414 (Port Darwin; 60 cm).
= *Tylosurus gavialoides* (Castelnau, 1873) (after Paxton et al., 1989: 343).
Holotype: **SMNS 2601,** 537 mm SL, 587+ mm TL — Port Darwin (Darwin), Northern Territories, Australia, 12°28'S 130°50'E — Müller, F. v. — Inv. date: Mar. 1879.

Berycidae

Beryx mülleri Klunzinger, 1880: 359–360, pl. 3, fig. 1 (King George's Sound; 1 specimen; ca. 25 cm).
= *Centroberyx lineatus* (Cuvier, 1829) (after Paxton et al., 1989: 375).
Holotype: **SMNS 2571,** 208 mm SL, 270 mm TL — King George Sound, Western Australia, 35°03'S 117°57'E — Müller, F. v. — Inv. date: 4 Nov. 1878.

Blenniidae

Petroscirtes kraussi Klunzinger, 1871: 57 (4 cm; zwischen Steinen und Korallen am Abhange; nicht selten).
= *Enchelyurus kraussi* (Klunzinger, 1871) (after Dor, 1984: 225).
Syntypes: **SMNS 1868,** 2 specimens, 28.2, 29.0+ mm SL, 32.3, 33.0+ mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: 1873.
Remarks: Further type material: SMF 1662, 2 paralectotypes; — ZMB 8029, lectotype; ZMB 10506, 1 paralectotype.

Salarias mülleri Klunzinger, 1880: 388–389 (Hobson Bay; 7 cm).
= *Istiblennius mülleri* (Klunzinger, 1880) (after Smith-Vaniz & Springer, 1971: 57).
Holotype: **SMNS 1579,** Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — Müller, F. v. — Inv. date: Oct. 1868.

Salarias punctillatus Klunzinger, 1880: 389 (Port Darwin; 10 cm).
Valid (after SMITH-VANIZ & SPRINGER, 1971: 59).
Holotype: **SMNS 2495**, 82.3 mm SL, 99.0 mm TL — Port Darwin (Darwin), Northern Territories, Australia — MÜLLER, F. v. — Inv. date: Aug. 1878.
Remarks: SMITH-VANIZ & SPRINGER (1971) refer to the 2 specimens of SMNS 3660 as to the syntypes of *Salarias punctillatus*. They had seen these specimens in the SMF collection, where they were on loan. SMNS 3660, however, was collected by KRÄMER in Samoa in the year 1895, 15 years after the original description of the species had been published. SMNS 3660 therefore does not represent type material.

Bothidae

Pseudorhombus mülleri Klunzinger, 1872: 40 (Hobson Bay; 15 cm). KLUNZINGER, 1880: 407, pl. 9, fig. 2.
= *Arnoglossus muelleri* (Klunzinger, 1872) (after SCOTT, GLOVER & SOUTHCOTT, 1974: 107).
Holotype: **SMNS 1668**, 134.3 mm SL, 151.4+ mm TL — Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — MÜLLER, F. v. — Inv. date: May 1869.

Caesionidae

Caesio suevicus Klunzinger, 1884: 46, pl. 5, fig. 2 [häufigste und größte (bis 27 cm) Art].
= *Caesio suevica* Klunzinger, 1884 (after DOR, 1984: 137; CARPENTER, 1988: 41).
Syntype: **SMNS 3450**, 1 specimen, 119.8 mm SL, 144.6 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: 1894.
Remarks: Further type material: NMW 77818, 2 syntypes; — ZMB 10575, 1 syntype.

Carcharhinidae

Carcharias (*Scoliodon*) *crenidens* Klunzinger, 1880: 426–427 (Queensland; 1 specimen, 60 cm).
= *Rhizoprionodon acutus* (Rüppell, 1837) (after PAXTON et al., 1989: 83).
Holotype: **SMNS 2449**, 565 mm TL — Endeavour Strait, Queensland, Australia, 10°50'S 142°15'E — MÜLLER, F. v. — Inv. date: Aug. 1878.
Remarks: Further MÜLLER material: SMNS 3362, 2 specimens, Australia, 1891, no types.

Carcharias ehrenbergi Klunzinger, 1871: 661 (1,45 m und mehr; im offenen Meere).
= *Carcharhinus limbatus* (Müller & Henle, 1839) (ID J. A. F. GARRICK, Apr. 1968; after DOR, 1984: 6; COMPAGNO, 1984: 481).
Syntypes: **SMNS 12137**, 1 skull — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: Jan. 1869.
SMNS 12259 (original inventary number: SMNS 1642 1/2), 37 teeth — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: Jan. 1869.
Remarks: SMNS 12259 was originally a complete dry specimen; only the teeth of the specimen were found during a type search in July 1991. The rest of the specimen is lost.
Further type material: ZMB 4470, 1 syntype; ZMB 4472, 1 syntype.

Dirrhizodon elongatus Klunzinger, 1871: 665 (2,30 m, 1 Exemplar, jetzt im Museum Stuttgart).
= *Hemipristis elongata* (Klunzinger, 1871) (after DOR, 1984: 8; COMPAGNO, 1984: 440; Bass et al. in SMITH & HEEMSTRA, 1986: 79).
Holotype: SMNS 1640, 1 dry specimen — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: Jan. 1869 (**not found**; probably lost).

Galeocerdo obtusus Klunzinger, 1871; 664 ("Das Exemplar misst 3 m, jetzt im Museum Stuttgart").
= *Galeocerdo cuvier* (Péron & LeSueur, 1822) (after Dor, 1984: 8; Compagno, 1984: 503).
Holotype: **SMNS 12141** (original inventary number: SMNS 1706), 1 dry head skeleton — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: 1869.

Chaetodontidae

Chelmo mülleri Klunzinger, 1880: 361 (Australia).
= *Chelmon mülleri* Klunzinger, 1880 (after Steene, 1977: 57).
Syntypes: **SMNS 2477**, 3 specimens, 92.8 mm, 95.3 mm, and 95.9 mm SL, 108.8 mm, 111.6 mm, and 114.4 mm TL — Port Darwin (Darwin), Northern Territories, Australia, 12°28'S 130°50'E — Müller, F. v. — Inv. date: Aug. 1878.
SMNS 2613, 2 specimens, 77.5 mm and 91.3 mm SL, 93.5 mm and 107.9 mm TL — Port Darwin (Darwin), Northern Territories, Australia, 12°28'S 130°50'E — Müller, F. v. — Inv. date: Mar. 1879.

Chandidae

Ambassis mülleri Klunzinger, 1880: 346–347, pl. 1, fig. 3 (Port Darwin; 4 specimens; 6 cm).
Ambassis urotaenia (non Bleeker): Klunzinger, 1872: 19 (South Australia).
Valid (after Paxton et al., 1989: 486).
Syntype: **SMNS 1693**, 1 specimen, 41.2 mm SL, 52.8 mm TL — Murray River, South Australia — Müller, F. v. — Inv. date: Aug. 1869.
Remarks: Klunzinger (1880: 347) erroneously states as type locality "Port Darwin". The material on which Klunzinger's 1872 description of *Ambassis urotaenia* (non Bleeker) was based, which is the only material of the species ever received in SMNS, originates from the Murray River (SMNS fish catalogue; original specimen label). Murray River is therefore the type locality. Though Klunzinger (1880: 347) mentions 4 syntype specimens, only two existed in the SMNS collection; Klunzinger's specimen number was probably erroneous. One of these two specimens was found in 1991. The other syntype is apparently **lost.**

Cheilodactylidae

Chilodactylus asper Klunzinger, 1872: 24–26 (Südaustralien; 40 cm).
Chilodactylus spectabilis Hutton, 1872: Klunzinger, 1880: 364–365.
= *Cheilodactylus spectabilis* Hutton, 1872 (after McCulloch, 1929: 258; Last, Scott & Talbot, 1983: 395).
Holotype: **SMNS 1655**, ca. 330 mm SL, ca. 415 mm TL — "Neuholland" (Queen's Cliff, Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — Müller, F. v. — Inv. date: May 1869.

Chilodactylus nebulosus Klunzinger, 1872: 26–27 (Queen's Cliff; 16 cm). Klunzinger, 1880: 364.
= *Psilocranium nigricans* (Richardson, 1850) (after McCulloch, 1929: 259).
Holotype: **SMNS 1595**, 133.9 mm SL, 161.0 mm TL — Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — Müller, F. v. — Inv. date: Oct. 1868.
Remarks: Further Müller material: SMNS 2339, 1 specimen, Port Philip, Victoria, 1877, no type.

Clinidae

Clinus marmoratus Klunzinger, 1872: 33–34 (Port Philip; 15 cm). Klunzinger, 1880: 392.
Valid (according to McCulloch, 1929: 348).
Syntypes: SMNS 1798, 2 specimens — Queen's Cliff, Port Philip, Victoria, Australia, 38°16'S 144°40'E — Müller, F. v. — Inv. date: June 1871.
Remarks: Specimens now in AMS.

Cristiceps tristis Klunzinger, 1872: 31–32 (Murray River; 16 cm). KLUNZINGER, 1880: 392.
Valid (according to McCULLOCH, 1929: 350).
Holotype: **SMNS 1689,** 133.1 mm SL, 151.8 mm TL — Murray River, South Australia — MÜLLER, F. v. — Inv. date: Aug. 1869.

Clupeidae

Clupea mülleri Klunzinger, 1880: 416–417 (Neuseeland; 10 cm).
= *Sprattus muelleri* (Klunzinger, 1880) (after WHITEHEAD, 1985: 47; PAULIN et al., 1989: 250).
Holotype: **SMNS 2590,** 92.6 mm SL, 97.6+ mm TL — Northwest coast of New Zealand — MÜLLER, F. v. — Inv. date: Nov. 1878.

Dasyatididae

Urogymnus rhombeus Klunzinger, 1871: 683–684 (Scheibenlänge 57 cm, Schwanzlänge 1.26 m; selten; 2 Exemplare).
= *Urogymnus asperrimus* (Bloch & Schneider, 1801) (after DOR, 1984: 20; COMPAGNO in SMITH & HEEMSTRA, 1986: 141).
Syntype: SMNS 1630, 1 specimen — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: Jan. 1869 (**not found**; probably lost).

Dinolestidae

Dinolestes mülleri Klunzinger, 1872: 30, pl. 3 (Hobson Bay; 38 cm). KLUNZINGER, 1880: 374.
= *Dinolestes lewini* (Griffith, 1834) (after SCOTT, GLOVER & SOUTHCOTT, 1974: 205).
Holotype: **SMNS 1557,** 313 mm SL, 363 mm TL — Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — MÜLLER, F. v. — Inv. date: Oct. 1868.
Remarks: Further MÜLLER material: SMNS 2543, 1 specimen, King George Sound, 4 Nov. 1878, no type. SMNS 2625, 1 specimen, King George Sound, Mar. 1879, no type.

Eleotrididae

Eleotris reticulatus Klunzinger, 1880: 385, pl. 4, fig. 3 (Port Darwin; 4 cm).
= *Carassiops compressus* (Krefft, 1864) (after McCULLOCH, 1929: 364–365).
Syntypes: SMNS 2515, 7 specimens — Port Darwin (Darwin), Northern Territories, Australia, 12°28'S 130°50'E — MÜLLER, F. v., — Inv. date: Aug. 1878 (**lost**).
Remarks: A catalog entry says "da verschimmelt, unbrauchbar; VII 1958/p." (discarded in July 1958).

Engraulididae

Engraulis encrasicholoides Bleeker, 1852: 37–38 (Batavia, Surabaja, Kammal/Java, in mari, 13 spec., 86–120 mm TL).
= *Thryssa encrasicholoides* (Bleeker, 1852) (after WHITEHEAD et al., 1988: 430).
Syntype: **SMNS 12815** (ex ZIH 134), 1 specimen, 94.2 mm SL, 108.1 mm TL — Indian Archipelago — BLEEKER, P. — Inv. date: 1865.

Engraulis russellii Bleeker, 1852: 38 (Batavia, Samarang/Java, in mari, 30 spec., 40–145 mm TL).
= *Stolephorus indicus* (van Hasselt, 1823) (after WHITEHEAD et al., 1988: 412).
Syntype: **SMNS 12816** (ex ZIH 133), 1 specimen, 114.2 mm SL, 130.4 mm TL — Indian Archipelago — BLEEKER, P. — Inv. date: 1865.

Exocoetidae

Exocoetus gryllus Klunzinger, 1871: 586 (14 cm, nicht größer; zeitweise häufig).
= *Parexocoetus mento* (Valenciennes, 1846) (after Dor, 1984: 61).
Syntypes: SMNS 1769, 3 specimens, 98.1, 99.6, and 104.8 mm SL, 122.4+, 125.2, 127.7 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: May 1871.
Remarks: Further type material: BMNH 1871.7.15–18–39, 2 syntypes; — MCZ 3741, 1 syntype; — SMF 6960, 1 syntype; — ZIL 2571, 2 syntypes; — ZMB 8056, 2 syntypes.

Exocoetus oligolepis Bleeker, 1866: 109–111 (Java, Bali, Sumatra, Singapura, Celebes, Batjan, Amboina, Banda; in mari; 17 spec., 160–258 mm TL).
= *Cypsilurus oligolepis* (Bleeker, 1866) (after Weber & Beaufort, 1922: 189).
Syntype: SMNS 12817 (ex ZIH 305), 1 specimen, 135.3 mm SL, 160+ mm TL — Indian Archipelago — Bleeker, P. — Inv. date: 1865.

Galaxiidae

Galaxias obtusus Klunzinger, 1872: 41 (Yarra Sagoon; 12 cm).
Galaxias attenuatus (Jenyns, 1842): Klunzinger, 1880: 412–413.
= *Galaxias maculatus* (Jenyns, 1842) (after Paxton et al., 1989: 176–177).
Syntypes: SMNS 1599, 3 specimens — Yarra River Lagoon, Melbourne, Victoria, Australia, 37°49'S 144°58'E — Müller, F. v. — Inv. date: Oct. 1868.
Remarks: Specimens now in AMS.

Galaxias rostratus Klunzinger, 1872: 41–42 (Murray River; 13 cm). Klunzinger, 1880: 412. Valid (after Paxton et al., 1989: 178).
Syntypes: SMNS 1597, 1 specimen — Murray River, South Australia — Müller, F. v. — Inv. date: Oct. 1868.
SMNS 1696, 2 specimens — Murray River, South Australia — Müller, F. v. — Inv. date: Aug. 1869.
Remarks: Specimens now in AMS.
Further Müller material: SMNS 1928, 2 specimens, Murray River, South Australia, Dec. 1873, no types.

Gerreidae

Gerres rüppellii Klunzinger, 1884: 48, pl. 5, fig. 6.
= *Gerres acinaces* Bleeker, 1854 (after Dor, 1984: 146).
Syntypes: SMNS 891, 2 specimens, 127.0 and 171.5 mm SL, 158.2+ and 228.8 mm TL — Massaua (Mesewa), Eritrea, Red Sea, 15°38'N 39°28'E — Heuglin, T. v. — Sep. 1861.

Gobiidae

Apocrytes (*Gobiichthys*) *petersii* Klunzinger, 1871: 480 ("11–18 cm; selten; auf der Klippe in Seegraswiesen").
= *Oxyurichthys papuensis* (Valenciennes, 1837) (after Dor, 1984: 249).
Syntype: SMNS 1753, 1 specimen, 96.5 mm SL, 130.8 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: May 1871.

Gobiosoma vulgare Klunzinger, 1871: 44 (2,5–3,0 cm; "sehr gemein, . . . in *Stilophora*-büschen und in Korallbrunnen mit solchen Büschen, nie am Ufer der Klippe").
= *Lioteres vulgare* (Klunzinger, 1871) (after Dor, 1984: 248).
Syntype: SMNS 12138 (original inventary number: SMNS 1312c), 6 specimens, 15.3, 16.4, 17.1, 19.2, 23.5, 24.1 mm SL, 19.2, 20.0+, 20.2, 23.1, 28.6, and 29.2 mm TL — Rothes Meer (Massaua, Eritrea, Red Sea), 15°38'N 39°28'E — Heuglin, T. v. — Inv. date: July 1865.

Remarks: The specimens of SMNS 12138 are syntypes of *Gobiosoma vulgare* (noted on the label of the specimen jar handwritten by KLUNZINGER).
Further type material: MCZ 3815, 6 syntypes; — ZIL 2640, 2 syntypes; ZIL 2644, 2 syntypes; — ZMB 8030, 1 syntype; ZMB 10502, 1 syntype.

Gonostomatidae

Maurolicus mucronatus Klunzinger, 1871: 593–594 (4 cm; nicht selten; im Hafen).
= *Maurolicus muelleri* (Gmelin, 1788) (after DOR, 1984: 45; WEITZMAN in SMITH & HEEMSTRA, 1986: 254).
Syntypes: SMNS 1774, 5 specimens — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — KLUNZINGER, C. B. — Inv. date: May 1871 (**not found**; lost).
Remarks: Entry in the old SMNS inventary: "verdorben" (discarded; around 1910–1920).

Haemulidae

Diagramma sordidum Klunzinger, 1870: 735–736 (20 cm; nicht selten).
= *Plectorhinchus sordidus* (Klunzinger, 1870) (after DOR, 1984: 150; SMITH & MCKAY in SMITH & HEEMSTRA, 1986: 568).
Syntype: **SMNS 2059,** 1 specimen, 95.9 mm SL, 110.5 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — KLUNZINGER, C. B. — Inv. date: 1876.
Remarks: Further type material: BMNH 1871.7.15.26, 1 syntype; — ZIL 2510, 1 syntype; ZIL 2518, 1 syntype; — ZMB 7980, 1 syntype.
A further SMNS specimen [SMNS 3548, 1 specimen — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — KLUNZINGER, C. B. — Inv. date: 1894] cannot be a syntype, as it was collected on KLUNZINGER's second trip to Egypt, while the types originate from the first trip.

Kuhliidae

Paradules leetus Klunzinger, 1872: 21 (Murray River; 5 cm).
Paradules laetus: Klunzinger, 1880: 25.
Nannoperca australis Günther, 1861: KLUNZINGER, 1880: 429.
= *Nannoperca australis* Günther, 1861 (after PAXTON et al., 1989: 540).
Syntypes: **SMNS 1695,** 3 specimens, 37.3 mm, 41.6 mm, and 44.5 mm SL, 43.3 mm, 44.7+ mm, and 51.5 mm TL — Murray River, South Australia — MÜLLER, F. v. — Inv. date: Aug. 1869.

Paradules obscurus Klunzinger, 1872: 20–21 (Yarra Sagoon; 4.5 cm). KLUNZINGER, 1880: 25, pl. 1, fig. 2.
= *Nannoperca obscura* (Klunzinger, 1872) (after PAXTON et al., 1989: 541).
Syntypes: **SMNS 1598,** 27 specimens, 13.3–33.6 mm SL, 15.6–43.1 mm TL — Yarra River Lagoon, in Melbourne, Victoria, Australia, 37°49′S 144°58′E — MÜLLER, F. v. — Inv. date: Oct. 1868.
Remarks: Further MÜLLER material: SMNS 2780, 90 specimens from King George Sound, catalogized in the SMNS in 1879, no types.

Kyphosidae

Pimelepterus fallax Klunzinger, 1884: 64–65 (bis 30 cm).
Pimelepterus tahmel (non Forsskal, 1775): Klunzinger, 1870: 795–796 ("ziemlich häufig; lebt am Korallenabhange, liebt die Tiefe, zeitenweise kommt er herauf an die Brandung").
= *Kyphosus bigibbus* (Lacepède, 1801) (after DOR, 1984: 167).
Syntypes: **SMNS 3495,** 4 specimens, 90.0 mm, 95.4 mm, 102.9 mm, 103.1 mm SL; 108.5 mm, 112.7 mm, 121.2 mm, 122.4 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — KLUNZINGER, C. B. — Inv. date: 1894.

Labridae

Cossyphus frenchii Klunzinger, 1880: 400–401 (King George's Sound; 30 cm).
= *Lepidaplois vulpinus* (Richardson, 1850) (after McCulloch, 1929: 322).
Holotype: **SMNS 2685,** 243 mm SL, 287 mm TL — King George Sound, Western Australia, 35°03'S 117°57'E — Müller, F. v. — Inv. date: June 1879.

Julis rüppellii Klunzinger, 1871: 536–537 (20–25 cm; sehr gemein, findet sich nur in der Nähe des Korallenabhanges).
= *Thalassoma rueppellii* (Klunzinger, 1871) (after Dor, 1984: 210).
Syntypes: **SMNS 3557,** 2 specimens, 152.2 mm and 161.5 mm SL, 179.9 mm and 208.3 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: 1894.
Remarks: Further type material: NMW 27523, 1 syntype; — ZIL 2550, 1 syntype; ZIL 2559, 1 syntype.

Labrichthys biserialis Klunzinger, 1880: 402 (King George's Sound; 20 cm).
= *Pseudolabrus bostockii* (Castelnau, 1873) (after McCulloch, 1929: 310).
Syntypes: SMNS 2569 — King George Sound, Western Australia, 35°03'S 117°57'E — Müller, F. v. — Inv. date: 4 Nov. 1878 (**not found;** probably lost).
SMNS 2682, 3 specimens, 156.7 mm, 167.7 mm, and 168.1 mm SL, 187.0 mm, 201.7 mm, and 202.7 mm TL — King George Sound, Western Australia, 35°03'S 117°57'E — Müller, F. v. — Inv. date: June 1879.
Remarks: A note in the SMNS inventary says for SMNS 2569: "zum Schädel" (the specimen was partly disintegrated, the skull was preserved).

Labrichthys tetrica var. *fuscipinnis* Klunzinger, 1872: 37 (Southern Australia). Klunzinger, 1880: 402 (Port Philip).
= *Pseudolabrus tetricus* (Richardson, 1840) (after Waite, 1921: 130–131; McCulloch, 1929: 310).
Holotype: **SMNS 1549,** 1 specimen, 390 mm SL, 450 mm TL — Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — Müller, F. v. — Inv. date: Oct. 1868.
Remarks: Further Müller material: SMNS 2342, 1 specimen, Port Philip, no type, Dec. 1877.

Labrichthys tetrica var. *ocellata* Klunzinger, 1880: 78 (Murray River; 20–35 cm).
= *Pseudolabrus tetricus* (Richardson, 1840) (after Waite, 1921: 130–131; McCulloch, 1929: 310).
Holotype: **SMNS 2333,** 166 mm SL, 202 mm TL — Murray River, South Australia — Müller, F. v. — Inv. date: Dec. 1877.

Labrichthys tetrica var. *tigripinnis* Klunzinger, 1872: 37 (Southern Australia).
= *Pseudolabrus tetricus* (Richardson, 1840) (after Waite, 1921: 130–131; McCulloch, 1929: 310).
Syntypes: **SMNS 1659,** 2 specimens, 233 and 274 mm SL, 276 and 312 mm TL — Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — Müller, F. v. — Inv. date: May 1869.

Platychoerops mülleri Klunzinger, 1880: 399–400, pl. 8, fig. 2 (King George's Sound; 28 cm).
= *Achoerodus gouldii* (Richardson, 1843) (after McCulloch, 1929: 321).
Holotype: **SMNS 2686,** 331 mm SL, 379 mm TL — King George Sound, Western Australia, 35°03'S 117°57'E — Müller, F. v. — Inv. date: June 1879.

Leiognathidae

Equula splendens var. *novemaculata* Klunzinger, 1880: 379 (Queensland; 1 specimen).
= *Leiognathus splendens* (Cuvier, 1829) (after Weber & Beaufort, 1931: 324–325).
Holotype: **SMNS 2448,** 75.6 mm SL, 92.3 mm TL — Endeavour River, Queensland, Australia — Müller, F. v. — Inv. date: Aug. 1878.

Lethrinidae

Lethrinus acutus Klunzinger, 1884: 39, pl. 7, fig. 1 (häufig).
Lethrinus ramak (non Forsskal, 1775): Klunzinger, 1870: 752.
= *Lethrinus microdon* Valenciennes, 1830 (after Carpenter & Allen, 1989: 71).
Syntype: **SMNS 913**, 2 specimens, 152.1 mm and 202.9 mm SL, 188.9 mm and 252.8 mm TL — Massaua (Mesewa), Eritrea, Red Sea, 15°38′N 39°28′E — Heuglin, T. v., — 1862. **SMNS 3448**, 1 specimen, 114.9 mm SL, 136.8+ mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — Klunzinger, C. B. — Inv. date: 1894.
Remarks: Further type material: NMW 8890, 1 syntype; NMW 8893, 3 syntypes).

Lethrinus xanthochilus Klunzinger, 1870: 753 (30–45 cm; selten; "theils mit dem Ringnetze auf der Klippe, theils mit der Angel . . . gefangen").
Valid (after Carpenter & Allen, 1989: 89).
Syntype: SMNS 1602, 1 dry specimen — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — Klunzinger, C. B. — Inv. date: 1869 (**not found**; probably lost).

Mobulidae

Dicerobatis monstrum Klunzinger, 1871: 687–688 ("54 cm Scheibenlänge bei dem vorliegenden Exemplare, einem Fötus; das gestrandete Muttertier maß gegen 2 m").
= *Mobula diabolus* (Shaw, 1804) (after Dor, 1984: 21).
Holotype: SMNS 1632, 1 dry specimen — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — Klunzinger, C. B. — Inv. date: Jan. 1869 (**not found**; probably lost).

Moridae

Physiculus palmatus Klunzinger, 1872: 38 (Port Philip, Hobson Bay; up to 50 cm). Steindachner, 1879b: 12. Klunzinger, 1880: 405.
= *Pseudophycis barbata* Günther, 1863 (after Paxton et al., 1989: 302).
Syntypes: **SMNS 1589**, 1 adult specimen, 174.3 mm SL, 190.5 mm TL — Hobson's Bay, Victoria, Australia, 37°51′S 144°56′E — Müller, F. v. — Inv. date: Oct. 1868.
SMNS 1792, 1 young specimen — Quenn's Cliff, Port Philip, Victoria, Australia, 38°16′S 144°40′E — Müller, F. v. — Inv. date: June 1871 (**not found**; probably lost).
Remarks: Further Müller material: SMNS 2242, 1 specimen, Hobson's Bay, Victoria, Apr. 1877, no type.

Mugilidae

Mugil gelatinosus Klunzinger, 1872: 35–36 (Murray River; 45 cm). Klunzinger, 1880: 395.
Valid (according to McCulloch, 1929: 114).
Holotype: **SMNS 1563**, 355 mm SL, 433 mm TL — Hobson's Bay, Victoria, Australia, 37°51′S 144°56′E — Müller, F. v. — Inv. date: Oct. 1868.

Mugil mülleri Klunzinger, 1880: 395 (King George's Sound; 8 cm).
Valid (according to McCulloch, 1929: 116).
Holotype: SMNS 2572 — King George Sound, Western Australia, 35°03′S 117°57′E — Müller, F. v. — Inv. date: 4 Nov. 1878 (**not found**; probably lost).

Myxus superficialis Klunzinger, 1870: 831.
= *Mugil cephalus* Linnaeus, 1758 (after Dor, 1984: 192).
Syntype: **SMNS 1743**, 3 specimens, 25.1 mm, 27.1 mm, and 32.1 mm SL, 28.1+ mm, 31.5 mm, and 34.6+ mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — Klunzinger, C. B. — Inv. date: May 1871.
Remarks: Further type material: MCZ 3813, 2 syntypes; — SMF 1869, 2 syntypes; — ZIL 2640, 2 syntypes.

Myxus trimaculatus Klunzinger, 1870: 832 (1.5–2.0 cm).
Uncertain identity (Dor, 1984: 193).
Syntypes: SMNS 1749, several specimens — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: May 1871 (**not found**; probably lost).
Remarks: Further type material: ZMB 8000, 4 syntypes; — ZIL 2603, 2 syntypes.

Mullidae

Mulloides ruber Klunzinger, 1870: 743–744 (30–40 cm; ziemlich selten).
= *Mulloides vanicolensis* (Valenciennes, 1831) (after Dor, 1984: 161).
Syntypes: **SMNS 2061,** 2 specimens, 198.2 mm and 200.3+ mm SL, 233.2 mm and 248.8 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: 1876.
SMNS uncat., 1 skull — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: 1876 (**not found**; probably lost).
Remarks: Further type material: ZIL 2523, 1 syntype. — ZMB 7982, 1 syntype.

Parupeneus notospilus Klunzinger, 1884: 51–52, pl. 5, fig. 3 ("nie über 12 cm; ziemlich häufig im Hafen von Kosseir").
? *Upeneus spilurus* Bleeker, 1854: Klunzinger, 1870: 747 ("Nicht häufig; im Hafen; 12 cm").
= *Parupeneus rubescens* (Lacepède, 1801) (after Dor, 1984: 163; Ben-Tuvia in Smith & Heemstra, 1986: 612).
Syntypes: **SMNS 3545,** 6 specimens, 67.4 mm, 77.9 mm, 82.2 mm, 82.4 mm, 88.2 mm, and 91.2 mm SL, 80.7 mm, 92.9 mm, 94.0+ mm, 95.6+ mm, 103.4+ mm, and 106.4+ mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: 1894.

Myctophidae

Scopelus coeruleus Klunzinger, 1871: 592–593 (11 cm; selten).
= *Diaphus coeruleus* (Klunzinger, 1871) (after Dor, 1984: 49).
Syntypes: **SMNS 1775,** 2 specimens — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: May 1871.

Ophichthyidae

Ophichthys arenicola Klunzinger, 1871: 609–610 (20–40 cm; häufig im Sand und Schlamm im Hafen).
= *Cirrhimuraena playfairii* (Günther, 1870) (after Dor, 1984: 35; McCosker & Castle in Smith & Heemstra, 1986: 179).
Syntype: **SMNS 1781,** 2 specimens, 165.0+ mm and 335.0 mm SL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: May 1871.
Remarks: Further type material: MCZ 3767, 3 syntypes. — SMF 835, 1 syntype. — ZIL 2570, 1 syntype; ZIL 8066, 1 syntype.

Ophidiidae

Genypterus tigerinus Klunzinger, 1872: 39–40 (Südaustralien). Klunzinger, 1880: 405–406.
Valid (after Paxton et al., 1989: 312).
Syntypes: **SMNS 1574,** 1 damaged specimen, 285.0+ mm SL, 297.6+ mm TL — Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — Müller, F. v. — Inv. date: Oct. 1868.
SMNS uncat. (ex SMNS 1574), 1 skeleton — Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — Müller, F. v. — Inv. date: Oct. 1868 (**not found**).
SMNS 1664, 1 specimen, 356 mm SL, 368 mm TL — Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — Müller, F. v. — Inv. date: May 1869.
Remarks: Further Müller material: SMNS 2246, 1 specimen, Hobson's Bay, Apr. 1877, no type; SMNS 3371, 1 specimen, Hobson's Bay, 1891, no type.

Pempheridídae

Pempherichthys güntheri Klunzinger, 1871: 470–471 (6 cm; selten).
= *Parapriacanthus guentheri* (Klunzinger, 1871) (after Dor, 1984: 165).
Syntype: **SMNS 1752,** 1 specimen, 51.4 mm SL, 59.3 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — Klunzinger, C. B. — Inv. date: May 1871.
Remarks: Further type material: BMNH 1871.7.15.35, 1 syntype. — ZMB 8007, 1 syntype.

Pempheris mülleri Klunzinger, 1880: 380–381, pl. 6 (King George's Sound; 17 cm).
= *Pempheris klunzingeri* McCulloch, 1911 (after McCulloch; 1929: 234).
Holotype: **SMNS 2559,** 141.2 mm SL, 160.2 mm TL — King George Sound, Western Australia, 35°03'S 117°57'E — Müller, F. v. — Inv. date: 4 Nov. 1878.
Remarks: This specimen is also the holotype of *Pempheris klunzingeri* McCulloch, 1911, which is a replacement name for *Pempheris mülleri* Klunzinger, preoccupied by *Pempheris mülleri* Poey, 1860.

Pempheris multiradiatus Klunzinger, 1880: 381 (King George's Sound; 17 cm).
Valid.
Syntypes: **SMNS 2557,** 3 specimens, 145.8 mm, 158.5 mm, and 172.9 mm SL, 188.1 mm, 198.4 mm, and 224.1 mm SL — King George Sound, Western Australia, 35°03'S 117°57'E — Müller, F. v. — Inv. date: 4 Nov. 1878.
SMNS 2676, 4 specimens, 121.2 mm, 127.1 mm, 142.7 mm, and 184.1 mm SL, 160.8 mm, 167.1 mm, 174.7 mm, and 226.7+ mm TL — King George Sound, Western Australia, 35°03'S 117°57'E — Müller, F.v., — Inv. date: June 1879.
SMNS uncat. (ex SMNS 2676), 1 skeleton — King George Sound, Western Australia, 35°03'S 117°57'E — Müller, F. v. — Inv. date: June 1879 (**not found**).

Platycephalidae

Platycephalus mülleri Klunzinger, 1880: 368, pl. 4, fig. 2 (Australia).
= *Suggrundus bosschei* (Bleeker, 1860) (after Knapp in Paxton et al., 1989: 471).
Holotype: **SMNS 1880,** 303 mm SL, 363 mm TL — Port Denison, Queensland, 20°15'S 148°25'E — Müller, F. v. — Inv. date: Apr. 1873.

Platycephalus speculator Klunzinger, 1872: 28 (Hobson Bay; 30 cm). Klunzinger, 1880: 367–368, pl. 4, fig. 1.
Valid (after Knapp in Paxton et al., 1989: 470).
Holotype: **SMNS 1570,** 255 mm SL, 299 mm TL — Hobson's Bay, Victoria, Australia, 37°51'S 144°56'E — Müller, F. v. — Inv. date: Oct. 1868.

Pleuronectidae

Solea uncinata Klunzinger, 1880: 408 (King George's Sound; 15–20 cm).
= *Ammotretis rostratus* Günther, 1862 (according to McCulloch, 1929: 280–281).
Syntypes: SMNS 2695, 4 specimens — King George Sound, Western Australia, 35°03'S 117°57'E — Müller, F. v. — Inv. date: June 1879 (**not found**; probably lost).

Plotosidae

Cnidoglanis mülleri Klunzinger, 1880: 411 (Port Darwin; 15 cm).
= *Paraplotosus albilabris* (Valenciennes, 1840) (after Paxton et al., 1989: 225).
Holotype: **SMNS 2519,** 143.9 mm SL, 160.2 mm TL — Port Darwin (Darwin), Northern Territories, Australia, 12°28'S 130°50'E — Müller, F. v. — Inv. date: 15 Mar. 1878.

Pomacanthidae

Holacanthus douboulayi var. *longitudinaliter-striata* Klunzinger, 1880: 362–363 (Port Darwin; 18 cm).
= *Chaetodontoplus duboulayi* (Günther, 1867) (after Allen, 1979: 250).
Holotype: **SMNS 2472**, 150.0 mm SL, 179.7 mm TL — Port Darwin (Darwin), Northern Territories, Australia, 12°28′S 130°50′E — Müller, F. v. — Inv. date: 15 Mar. 1878.

Pomacentridae

Heliastes dimidiatus Klunzinger, 1871: 529 (6 cm; selten; nur 1 Exemplar).
= *Chromis dimidiata* (Klunzinger, 1871) (after Dor, 1984: 181; Allen in Smith & Heemstra, 1986: 674).
Holotype, **SMNS 1765,** 39.8 mm SL, 50.1 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — Klunzinger, C. B. — Inv. date: May 1871.

Heliastes lividus Klunzinger, 1872: 36–37 (Port Philip; 21 cm).
= *Parma victoriae* (Günther, 1863) (after Allen, 1991: 248).
Holotype: **SMNS 1716**, 165.5 mm SL, 215.4 mm TL — Port Philip Bay, Victoria, Australia, 38°07′S 144°48′E — Müller, F. v. — Inv. date: Jan. 1870.
Remarks: Further Müller material: SMNS 2688, 2 specimens, King George Sound, Western Australia, Müller, June 1879, no types.

Pomacentrus sulfureus Klunzinger, 1871: 521–522 (9 cm; nicht selten am Abhang).
Valid (after Smith, 1960: 345; Dor, 1984: 186).
Syntypes: **SMNS 1763,** 1 specimen, 65.5 mm SL, 81.6 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — Klunzinger, C. B. — Inv. date: 1871.
SMNS 3526, 4 specimens, 67.0 mm, 68.0 mm, 76.4 mm, and 77.9 mm SL, 74.0+ mm, 84.5 mm, 93.4 mm, and 96.6 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — Klunzinger, C. B. — Inv. date: 1894.
Remarks: Further type material: BMNH 1871.7.15–36, 1 syntype. — ZIL 2550, 1 syntype; ZIL 2556, 1 syntype.

Pseudochromidae

Pseudochromis mülleri Klunzinger, 1880: 370–371 (Port Darwin; 6.5 cm).
= *Pseudochromis punctatus* (Richardson, 1846) (after Paxton et al., 1989: 520).
Holotype: SMNS 2579, 1 specimen — Port Darwin (Darwin), Northern Territories, Australia, 12°28′S 130°50′E — Müller, F. v. — Inv. date: 4 Nov. 1878 (**not found**; probably lost).

Rajidae

Raja dentata Klunzinger, 1872: 46–47 (Port Philip; 50 cm). Klunzinger, 1880: 429.
= *Raja lemprieri* (Richardson, 1845) (after Paxton et al., 1989: 56).
Syntypes: SMNS 1658, 1 female specimen — "Neuholland" (Hobson's Bay, Victoria, Australia, 37°57′S 144°56′E) — Müller, F. v. — Inv. date: May 1869 (**not found**; probably lost).
SMNS 1816, 1 female specimen — Queen's Cliff, Port Philip, Victoria, Australia, 38°16′S 144°40′E — Müller, F. v. — Inv. date: June 1871 (**not found**; probably lost).
Remarks: Further Müller material: SMNS 3360, 1 specimen, Australia, 1891, no type.

Scaridae

Pseudoscarus forskalii Klunzinger, 1871: 566–567 (27 cm; nicht sehr häufig).
= *Scarus psittacus* Forsskal, 1775 (after Dor, 1984: 216).
Syntypes: **SMNS 12139** (original inventary number: SMNS 914 b), 2 specimens, 161.9 mm and 214.9 mm SL, 188.6 mm and 258.0 mm TL — Massaua (Mesewa), Eritrea, Red Sea, 15°38′N 39°28′E — Heuglin, T. v. — Inv. date: Sep. 1861.

Scatophagidae

Scatophagus argus var. *ocellata* Klunzinger, 1880: 363 (Port Darwin; 18 cm).
= *Scatophagus argus* (Bloch, 1788).
Holotype: **SMNS 2611**, 149.7 mm SL, 178.3 mm TL — Port Darwin (Darwin), Northern Territories, Australia, 12°28′S 130°50′E — Müller, F. v. — Inv. date: Mar. 1879.
Remarks: This form was not mentioned by McCulloch (1929), but is evidently a colour variation of *Scatophagus argus* and is therefore synonymized with that species.

Sciaenidae

Umbrina mülleri Klunzinger, 1880: 372–373 (Queensland; 20 cm).
Valid (according to McCulloch, 1929: 222).
Syntypes: **SMNS 2440**, 2 specimens, 160.2 mm and 170.5 mm SL, 184.3+ mm and 194.2+ mm TL — Endeavour Strait, Queensland, Australia, 10°50′S 142°15′E — Müller, F. v. — Inv. date: Aug. 1878.

Scorpaenidae

Scorpaena ambigua Klunzinger, 1872: 27 (Hobson Bay; 40 cm).
Sebastes scorpaenoides (Guichenot, 1867): Klunzinger, 1880: 365–366.
= *Neosebastes scorpaenoides* Guichenot, 1867 (after Paxton et al., 1989: 445).
Syntypes: **SMNS 1560**, 2 specimens, 238 mm and 318 mm SL, 290 mm and 396 mm TL — Hobson's Bay, Victoria, Australia, 37°51′S 144°56′E — Müller, F. v. — Inv. date: Oct. 1868.
Remarks: Further Müller material: SMNS 2336, 1 specimen, Murray River, Dec. 1877, no type.

Serranidae

Anthias (*Pseudanthias*) *gibbosus* Klunzinger, 1884: 9.
= *Anthias squamipinnis* Peters, 1855 (after Dor, 1984: 103).
Syntypes: SMNS 3482, 2 specimens — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — Klunzinger, C. B. — Inv. date: 1894 (**not found**; probably lost).

Anthias rasor extensa Klunzinger, 1872: 17–18 (Hobson Bay, 2 spec., 20 cm).
Anthias extensus: Klunzinger, 1880: 339–340, pl. 2.
= *Caesioperca rasor* (Richardson, 1839) (after Paxton et al., 1989: 503).
Syntypes: **SMNS 1559**, 2 specimens, 174.1 mm and 191.3 mm SL, 215.0 mm and 240.6 mm TL — Hobson's Bay, Victoria, Australia, 37°51′S 144°56′E — Müller, F. v. — Inv. date: Oct. 1868.
Remarks: Further catalogue number: SMNS 1566 (now part of SMNS 1559). Further Müller material: SMNS 3373, 1 specimen, Australia, June 1891, no type.

Anthias (*Pseudanthias*) *taeniatus* Klunzinger, 1884: 9, pl. 3, fig. 2 ("Ich bekam über ein Dutzend dieser und der anderen Arten, aber oft verdorben, da sie meistens im Magen anderer Fische . . . gefunden wurden").
Valid (after Dor, 1984: 104).
Syntypes: **SMNS 3447**, 1 specimen, 54.4 mm SL, 65.9 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06′N 34°17′E — Klunzinger, C. B. — Inv. date: 1894.

SMNS 2752,— 1 specimen, 57.4 mm SL, 67.2+ mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: 1874.
SMNS 12140 (original inventary number: SMNS 3447), 6 specimens, 40.7 mm, 52.2 mm, 54.3 mm, 58.0 mm, 63.6 mm, and 67.0 mm SL, 50.2 mm, 62.5 mm, 66.8 mm, 71.0 mm, 78.8 mm, and 78.8+ mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: 1894.
Remarks: The specimen SMNS 3447 (originally together with SMNS 12140) was selected as a lectotype by P. C. HEEMSTRA in 1977, but this is not yet published (HEEMSTRA, personal communication, 8 August 1991). DOR (1984: 104) had seen the specimen in the SMNS collection and cited the specimen as lectotype of the species, but did not indicate a standard length or any characteristics of the specimen. Therefore, DOR's published designation is not considered as valid. The SMNS specimens are therefore treated as syntypes of the species.

Sparidae

Dentex (*Polysteganus*) *coeruleopunctatus* Klunzinger, 1870: 763–764.
= *Polysteganus coeruleopunctatus* (Klunzinger, 1870) after DOR, 1984: 160; SMITH & SMITH in SMITH & HEEMSTRA, 1986: 590–591).
Syntype: SMNS 1873, 1 specimen, ca. 215 mm SL, ca. 258 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: Feb. 1873.

Pagrus megalommatus Klunzinger, 1870: 762 (in der Tiefe; 26 cm; selten).
= *Argyrops megalommatus* (Klunzinger, 1870) (after DOR, 1984: 158).
Syntype: SMNS 2756, 1 specimen, 207.5 mm SL, 245.5 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: 1879.
SMNS uncat., 1 skeleton, "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: 1879 (**not found**; probably lost).

Sphyraenidae

Sphyraena chrysotaenia Klunzinger, 1884: 128, 129, pl. 9, fig. 3.
Valid (DOR, 1984: 194; SYLVA & WILLIAMS in SMITH & HEEMSTRA, 1986: 723).
Syntypes: SMNS 2073, 4 specimens, 184.5 mm, 199.0 mm, 201.0 mm, and 207.0 mm SL, 204.5 mm, 219.0+ mm, 222.0+ mm, and 225.0 mm TL — "Kosseir" (Al-Qusayr), Egypt, Red Sea, 26°06'N 34°17'E — KLUNZINGER, C. B. — Inv. date: 1876.
Remarks: Further type material: NMW 77364, 3 syntypes. — ZMB 10577, 1 syntype; ZMB 10578, 1 syntype. — Further KLUNZINGER material: SMNS 3451, 2 specimens, Kosseir, 1894, no types.

Syngnathidae

Gastrotokeus gracilis Klunzinger, 1872: 44–45 (Port Philip; 12 cm).
Stigmatophora argus (Richardson, 1840): KLUNZINGER, 1880: 420 (Port Philip, Port Darwin).
= *Stigmatophora argus* (Richardson, 1840) (after DAWSON, 1985: 176; PAXTON et al., 1989: 430).
Syntypes: SMNS 1809, 4 specimens, 97.5+ mm, 99.8+ mm, 107.0+ mm, and 115.5 mm TL — Queen's Cliff, Port Philip, Victoria, Australia, 38°16'S 144°40'E — MÜLLER, F. v. — Inv. date: June 1871.

Syngnathus caretta Klunzinger, 1880: 419 (Port Philip; 10 cm).
Syngnathus modestus (non Günther, 1870): Klunzinger, 1872: 44.
= *Pugnaso curtirostris* (Castelnau, 1872) (after DAWSON, 1985: 163; PAXTON et al., 1989: 428).
Holotype: SMNS 1810, 92+ mm TL — Queen's Cliff, Port Philip, Victoria, Australia, 38°16'S 144°40'E — MÜLLER, F. v. — Inv. date: June 1871.

Zeidae

Antigonia mülleri Klunzinger, 1880: 380 (Neuseeland; 2 specimens, 2.5 cm).
= *Capromimus abbreviatus* (Hector, 1875) (after Whitley, 1968: 44).
Syntypes: **SMNS 2591,** 2 specimens, 24.4 mm and 27.5 mm SL, 28.9 mm and 33.2 mm TL — Northwest coast of New Zealand — Müller, F. v. — Inv. date: Nov. 1878.

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6. References

Adam, K. D. (1991): Aus der 200jährigen Geschichte des Stuttgarter Naturkundemuseums. – Stuttgarter Beitr. Naturk., (A) **457**: 1–23; Stuttgart.

Allen, G. R. (1979): Falter- und Kaiserfische. Band **2**. Atlantik, Karibik, Rotes Meer und Indo-Pazifik. – Pp. 148–352; Melle (Mergus).

– (1991): Riffbarsche der Welt. – 271 pp.; Melle (Mergus).

Bath, H. & J. E. Randall (1991): Synopsis der Gattung *Salarias* Cuvier, 1817 mit Beschreibung einer neuen Art. – Senckenbergiana biol., **71** (4–6): 245–258; Frankfurt/Main.

Bleeker, P. (1852): Bijdrage tot de kennis der haringachtige visschen van den Soenda-Molukschen Archipel. – Verh. Bat. Gen., **24**: 1–52; Rotterdam.

– (1866): Sur les espèces d'Exocoet de l'Inde archipélagique. – Ned. Tijds. Dierk. **3**: 105–129; Rotterdam.

Carpenter, K. E. (1988): FAO species catalogue. Vol. **8**. Fusilier fishes of the world. An annotated and illustrated catalogue of caesionid species known to date. – IV + 75 pp.; Rome (FAO).

Carpenter, K. E. & G. R. Allen (1989): FAO species catalogue. Vol. **9**. Emperor fishes and large-eye breams of the world (family Lethrinidae). An annotated and illustrated catalogue of lethrinid species known to date. – V + 188 pp., 8 pls.; Rome (FAO).

Compagno, L. J. V. (1984): FAO species catalogue. Vol. 4. Sharks of the world. An annotated and illustrated catalogue of shark species known to date. Part 2 – Carcharhiniformes. – X pp. + pp. 251–655; Rome (FAO).

Dawson, C. E. (1985): Indo-Pacific pipefishes (Red Sea to the Americas). – 230 pp.; Ocean Springs (Gulf Coast Research Laboratory).

Dor, M. (1984): C.L.O.F.R.E.S. – Checklist of the fishes of the Red Sea. – XXII + 437 pp., 1 map; Jerusalem (Israel Acad. Sci. Hum.).

Eschmeyer, W. N. (1990): Catalog of the genera of recent fishes. – V + 697 pp.; San Francisco (California Academy of Sciences).

Fricke, R. (1983): Revision of the Indo-Pacific genera and species of the dragonet family Callionymidae (Teleostei). – X + 774 pp.; Braunschweig (J. Cramer).

– (1991a): Types and historical materials in the fish collection of the Staatliches Museum für Naturkunde in Stuttgart. Part 1. The Bleeker collection. – Stuttgarter Beitr. Naturk., (A) **471**: 1–85; Stuttgart.

– (1991b): Bleeker und Klunzinger – zwei bedeutende Sammler im 19. Jahrhundert. Aus der Geschichte des Stuttgarter Naturkundemuseums. – Stuttgarter Beitr. Naturk., (C) **30**: 38–42; Stuttgart.

Gon, O. (1988): Redescription of the holotypes of *Vincentia conspersa* (Klunzinger, 1872) and *Apogon punctatus* (Klunzinger, 1879) (Pisces, Apogonidae). – Rec. W. Aust. Mus., **14**(1): 7–13; Perth.

GÜNTHER, A. (1860–1870): Catalogue of the (Acanthopterygian) fishes in the (collection of the) British Museum. – Vol. 2, XXII + 548 pp., 1860; vol. 3, XXV + 586 pp., 1861; vol. 4, XXII + 534 pp., 1862; vol. 5, XXII + 455 pp., 1864; vol. 6, XV + 368 pp., 1866; vol. 7, XX + 512 pp., 1868; vol. 8, XXV + 549 pp., 1870: London [British Museum (Natural History)].

KLUNZINGER, C. B. (1870): Synopsis der Fische des Rothen Meeres. I. Theil. – Verh. zool.-bot. Ges. Wien, 20: 669–834; Wien.

– (1871): Synopsis der Fische des Rothen Meeres. II. Theil. – Verh. zool.-bot. Ges. Wien, 21: 441–688, 1353–1368; Wien.

– (1872): Zur Fischfauna von Süd-Australien. – Arch. Naturgesch., 38(1): 17–47; Leipzig.

– (1877): Bilder aus Oberägypten, der Wüste und dem Rothen Meere. – XVI + 400 pp.; Stuttgart (Levy & Müller).

– (1880): Die v. MÜLLER'sche Sammlung australischer Fische in Stuttgart. – Sber. Akad. Wiss., Wien, (1) 80, (1879): 325–430, pls. 1–9; Wien.

– (1884): Die Fische des Rothen Meeres. Eine kritische Revision mit Bestimmungstabellen. – IX + 133 pp., 13 pls.; Stuttgart (E. Schweizerbarth).

– (1915): Erinnerungen aus meinem Leben als Arzt und Naturforscher zu Koseir am Roten Meere. – 89 pp.; Würzburg (Kabitzsch).

KÖNIG, C. (1991): Forschungsreisende und ihre Verdienste um den Aufbau der zoologischen Sammlung. Aus der Geschichte des Stuttgarter Naturkundemuseums. – Stuttgarter Beitr. Naturk., (C) 30: 21–37; Stuttgart.

LAST, P. R., E. O. G. SCOTT & F. H. TALBOT (1983): Fishes of Tasmania. – VIII + 563 pp.; Hobart (Tasmanian Fisheries Development Agency).

MCCULLOCH, A. R. (1911): Zoological results of the fishing experiments carried out by the F.I.S. "Endeavour" 1909–1910. – Report on the fishes obtained by the F.I.S. "Endeavour" on the coasts of New South Wales, Victoria, South Australia and Tasmania, 1(1): 1–87, pls. 1–11; Sydney.

– (1929): A check-list of the fishes recorded from Australia, I–III. – Mem. Aust. Mus., 5(1–3): 1–436; Sydney.

– (1930): A check-list of the fishes recorded from Australia, IV. – Mem. Aust. Mus., 5(4): I–X + 437–534; Sydney.

NELSON, J. S. (1984): Fishes of the world. – 2nd ed., XV + 523 pp.; New York (J. Wiley).

OGILBY, J. D. (1898): On some Australian Eleotrinae. – Proc. Linn. Soc. N. S. W., 23: 783–793; Sydney.

PAULIN, C., A. STEWART, C. ROBERTS & P. MCMILLAN (1989): New Zealand fish; a complete guide. – Nat. Mus. New Zealand (Misc. Ser.), 19: I–XIV + 1–279; Wellington.

PAXTON, J. R., D. F. HOESE, G. R. ALLEN & J. E. HANLEY (1989): Zoological catalogue of Australia. Vol. 7. Pisces: Petromyzontidae to Carangidae. – XII + 665 pp.; Canberra (Australian Government Publishing Service).

SAINSBURY, K. J., P. J. KAILOLA & G. G. LEYLAND (1985): Continental shelf fishes of Northern and North-Western Australia. An illustrated guide. – VIII + 375 pp.; Canberra (Clouston & Hall).

SCOTT, T. D., C. J. M. GLOVER & R. V. SOUTHCOTT (1974): The marine and freshwater fishes of South Australia. 2nd ed. – 393 pp.; Adelaide (D. J. Woolman, Govt. Printer).

SMITH, J. L. B. (1960): Coral fishes of the family Pomacentridae from the Western Indian Ocean and the Red Sea. – Ichth. Bull., Rhodes Univ., Dept. Ichth. 19: 317–349, pl. 33; Grahamstown.

SMITH, M. M. & P. C. HEEMSTRA (1986): SMITH's sea fishes. – XX + 1047 pp., 144 pls.; Johannesburg (Macmillan South Africa).

SMITH-VANIZ, W. F. & V. G. SPRINGER (1971): Synopsis of the tribe Salariini, with description of five new genera and three new species (Pisces: Blenniidae). – Smithson. Contrib. Zool., 73: I–IV + 1–72; Washington D. C.

STEENE, R. C. (1977): Falter- und Kaiserfische. Vollständige Erfassung der Arten um Australien und Neuguinea unter Berücksichtigung ihres Vorkommens im Indo-Pazifik. Band 1. – 144 pp.; Melle (Mergus).

STEINDACHNER, F. (1879a): Ichthyologische Beiträge (VII). – Sber. Akad. Wiss. Wien, (1878), 78(1): 377–400; Wien.
– (1879b): Einige neue und seltene Fisch-Arten aus den K. K. Zoologischen Museen zu Wien, Stuttgart und Warschau. 1. Zur Fisch-Fauna von Süd-Australien. – Denkschr. Akad. Wiss., Wien, 41(1): 1–52, pls. 1–9; Wien.
– (1880): Ichthyologische Beiträge (VIII). – Sber. Akad. Wiss., Wien, 80(1), (1879): 119–191, pls. 1–3; Wien.
WAITE, E. R. (1921): Catalogue of the fishes of South Australia. – Rec. S. Aust. Mus., 2(1): 1–208, pl. 1; Adelaide.
WEBER, M. & L. F. DE BEAUFORT (1922): The fishes of the Indo-Australian Archipelago. IV. Heteromi, Solenichthyes, Synentognathi, Percesoces, Labyrinthici, Microcyprini. – XIII + 410 pp.; Leiden (Brill).
– & – (1931): The fishes of the Indo-Australian Archipelago. VI. Perciformes (continued). Families: Serranidae, Theraponidae, Sillaginidae, Emmelichthyidae, Bathyclupeidae, Coryphaenidae, Carangidae, Rachycentridae, Pomatomidae, Lactariidae, Menidae, Leiognathidae, Mullidae. – XII + 448 pp.; Leiden (Brill).
– & – (1936): The fishes of the Indo-Australian Archipelago. VII. Perciformes (continued). Families: Chaetodontidae, Toxotidae, Monodactylidae, Pempheridae, Kyphosidae, Lutjanidae, Lobotidae, Sparidae, Nandidae, Sciaenidae, Malacanthidae, Cepolidae. – XVI + 607 pp.; Leiden (Brill).
WHITEHEAD, P. J. P. (1985): FAO species catalogue. Vol. 7. Clupeoid fishes of the world (suborder Clupeoidei). An annotated and illustrated catalogue of the herrings, sardines, pilchards, sprats, shads, anchovies and wolf-herrings. Part 1 – Chirocentridae, Clupeidae and Pristigasteridae. – X + 303 pp.; Rome (FAO).
WHITEHEAD, P. J. P., G. J. NELSON & T. WONGRATANA (1988): FAO species catalogue. Vol. 7. Clupeoid fishes of the world (suborder Clupeoidei). An annotated and illustrated catalogue of the herrings, sardines, pilchards, sprats, shads, anchovies and wolf-herrings. Part 2 – Engraulididae. – VIII pp. + pp. 305–579; Rome (FAO).
WHITLEY, G. P. (1929): Some fishes of the order Amphiprioniformes. – Mem. Queensland Mus., 9(3): 207–246, pls. 27–28; Brisbane.
– (1968): A check-list of the fishes recorded from the New Zealand region. – Aust. Zool., 15(1): 1–102; Sydney.

7. Index

(***Types*** are printed in **bold type**)

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