

List of specimens of the families Ariommatidae, Centrolophidae, Nomeidae, Stromateidae, and Tetragonuridae (Actinopterygii: Teleostei) deposited in the Department of Zoology, The University Museum, The University of Tokyo

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Abstract

Two hundred and twenty-eight specimens of 21 species, representing the families Ariommatidae, Centrolophidae, Nomeidae, Stromateidae, and Tetragonuridae, were found in the Department of Zoology, The University Museum, The University of Tokyo. Held in 216 lots, the specimens included a paratype of *Psenes kamoharai* Abe, Kojima & Kosakai, 1963 and the holotype of *Tetragonurus pacificus* Abe, 1953. However, no ZUMT specimens or ZUMT ledger registrations of examples of the family Amarsipidae were found.

Introduction

Stromateoidei, a suborder of Perciformes including six families (Amarsipidae, Ariommatidae, Centrolophidae, Nomeidae, Stromateidae, Tetragonuridae) (Haedrich 1967, 2002a–e; Haedrich and Horn 1972; Last 2001a–f; Nakabo and Doiuchi 2013a–e), has recently been questioned by phylogenetic studies that indicated that such families were better placed in Scombriformes (Series Pelagiaria) together with several other families, such as Bramidae, Scombrolabracidae, Scombridae, and Gempylidae (Miya et al. 2013; Betancur-R. 2017), with which they had not previously been considered closely related. Moreover, recent molecular phylogenetic studies have also shown that Centrolophidae, Amarsipidae and Tetragonuridae are, in fact, sister groups of Scombrolabracidae and Chiasmodontidae, respectively, not of other three families included in Stromateoidei (Miya et al. 2013; Betancur-R. 2017; Harrington et al. 2021).

Many species of families previously included in Stromateoidei are known to change their body and coloration significantly with growth (Suda et al. 1986; Hata and Motomura 2018; Cabebe and Motomura 2019; Wada 2019). In particular, juveniles of many species of Centrolophidae and Nomeidae are often associated with floating objects, including jellyfishes and drifting seaweeds (Kato 1933; Daniel 1973; Jenkins 1983; Kagoshima City Aquarium Foundation 2008, 2018; Yoshino 2008). Although adults of most of the species, including Amarsipidae and Tetragonuridae, are thought to inhabit mid-water or deep sea bottom habitats, biological information on feeding and

habitat use, as well as accurate distribution of many of them are very poorly known due to their apparent rarity (Okamura 1997; Hata et al. 2016; Koeda and Teramura 2019). Some genera are also taxonomically confused (Nakabo and Doiuchi 2013b) and in need of revision.

On the other hand, some species of Centrolophidae and Stromateidae are abundantly caught and used as food (Yamada 1986a, b; Haedrich 2002c, e; Okamoto et al. 2011; Matsunuma and Okamoto 2015; Koeda 2019; Hata 2020). In particular, species of the genus *Pampus* are highly priced in China and western Japan (Yamada 1986c; Nakabo and Doiuchi 2013c; Last 2001f; Hata 2022).

Specimens of families previously included in Stromateoidei, deposited in the Department of Zoology, The University Museum, The University of Tokyo, include 3, 2, 5, 6, and 2 species of Ariommatidae, Centrolophidae, Nomeidae, Stromateidae, and Tetragonuridae, respectively. A paratype of *Psenes kamoharai* Abe, Kojima & Kosakai, 1963 and the holotype of *Tetragonurus pacificus* Abe, 1953 were also confirmed. However, no ZUMT specimens or ZUMT ledger registrations of examples of Amarsipidae were found.

Materials and Methods

Specimens held in the Department of Zoology, The University Museum, The University of Tokyo (abbreviated as ZUMT) and included in the present list, were identified following Haedrich (1967, 2002a–e), Haedrich and Horn (1972), Last (2001a–f), and Nakabo and Doiuchi (2013a–e). Parentheses following registration numbers include specimen numbers (if plural specimens were included in the lot), standard length, collection locality, collection date, and collector, plus type status (if applicable). Collection data of specimens are omitted if the same as that for the previous specimen. The collection year and collector for some specimens were estimated following Koeda et al. (2022).

The ZUMT specimens listed in this study were stored in room 407 in the museum building. Most were stored in shelved containers, although some larger specimens of *Hyperoglyphe japonica* (Döderlein, 1884) and all specimens of *Tetragonurus cuvieri* Risso, 1810 were stored in glass tanks labelled as “Centrolophidae” and “Tetragonuridae”, respectively, in the same room, with the glass lid sealed with a silicon adhesive (as of Mar. 2022). Although some of the ZUMT specimens, collected by Dr. Tokiharu Abe, had not been registered into the ZUMT collection, with collection data of most missing, they are listed herein together with their ZUMT ABE number (underlined number written on the label), in the hope that Dr. Abe’s catalog books with collection data will be rediscovered in the future. Additionally, specimens with catalogue numbers ZUMT ABE 2700 to 6000 were collected from Palau by Dr. Abe between 1936 and 1937 (Koeda et al. 2022).

Results

The ZUMT fish collection was confirmed as including specimens of Ariommatidae (9 lots including 9 specimens representing 3 species), Centrolophidae (117 lots, 120 specimens, 4 species), Nomeidae (58 lots, 60 specimens, 6 species, including a paratype of *Psenes kamoharai* Abe, Kojima & Kosakai, 1963), Stromateidae (32 lots, 39 specimens, 6 species), and Tetragonuridae (9 lots, 9 specimens, 2 species, including the holotype of *Tetragonurus pacificus* Abe, 1953). No ZUMT specimens or ZUMT ledger registrations of examples of Amarsipidae were found.

Although Abe (1959) reported *Cubiceps pauciradiatus* Günther, 1872 (ホソオキメダイ) based on 2 specimens [one specimen (standard length 120mm) registered as ZUMT ABE '57-347, collected from Manazuru, Kanagawa Pref., Japan between December 15 and 10 July 1958; and a second (standard length 80 mm) labelled as “tentative no. ABE 10832” (also as Cat. No. KAMOHARA 6759), collected from Kochi Pref., Japan in early 1957], such specimens or others identified as the above species were not found in the ZUMT fish collection. Abe (1955) also reported *Cubiceps gracilis* (Lowe, 1843), based on six specimens [ABE 10155, collected from ca. 340–370 km southeast of Inubo Point, Chiba Pref. (33°30'N, 143°30'E–144°00'E) on Dec. 1954; ABE 10169 (Pacific Ocean, in early Jan. 1955); ABE 10173, collected from ca. 50–100 km southeast of Aoga-shima Island, Izu Islands (32°10'N–32°11'N, 140°10'E–140°50'E) on 1 Feb. 1955; ABE 10178 (50 miles southeast of Tori-shima Island, Zunan Islands) in mid. Feb. 1955; ABE 10179 (no data); and a single individual (not preserved) from between the Hawaiian Islands and Midway Atoll between 21 Dec. 1954 and 16 Jan. 1955]. However, neither these specimens nor others identified as *C. gracilis* were found.

Species accounts

Family Centrolophidae イボダイ科

Hyperoglyphe japonica (Döderlein, 1884) メダイ

JAPAN

CHIBA PREF.

ZUMT 38639 (291.2 mm; Katsuura City)

TOKYO MARKET

ZUMT 12755 (167.7 mm), ZUMT 12756 (170.6 mm), ZUMT 12757 (113.4 mm), ZUMT 12767 (162.0 mm), ZUMT 12768 (180.7 mm), ZUMT 12769 (163.7 mm; obtained at Tokyo Market, Tokyo Met.)

KANAGAWA PREF.

ZUMT 51902 (101.8 mm), ZUMT 51903 (110.6 mm; Koajiro, Aburatsubo, Misaki, Miura City; 31 May 1960)

ZUMT 51904 [36.5 mm; Moroiso, Misaki, Miura City (following drifting jellyfish); 6 Mar. 1960]

ZUMT 63043 (89.1 mm), ZUMT 63044 (84.2 mm), ZUMT 63045 (80.1 mm; Manazuru Town)

ZUMT ABE 61-119 (4, 37.6–64.9 mm), ZUMT ABE 61-546 (58.3 mm), ZUMT ABE 61-547 (53.1 mm; Manazuru Town; coll. between 26 Dec. 1960 and 1 Apr. 1961)

SHIZUOKA PREF.

ZUMT 33378 (80.5 mm), ZUMT 33384 (183.7 mm; Shizuoka Pref.)

WAKAYAMA PREF.

ZUMT ABE 8995 (102.2 mm), ZUMT ABE 8996 (88.1 mm), ZUMT ABE 8997 (65.6 mm; off Osaki, Shimotsu, Kainan City; May 1953)

ZUMT ABE 9058 [68.8 mm+ (head broken); off Osaki, Shimotsu, Kainan City; Apr. 1953]

TOKUSHIMA PREF.

ZUMT 26550 (242.7 mm; Oshima Island, Mugi Town)

LOCALITY UNKNOWN

ZUMT 12110 (215.0 mm), ZUMT 62929 (422.5 mm), ZUMT 62930 (434.0 mm), ZUMT 62931 (361.3 mm), ZUMT 63430 (91.3 mm), ZUMT ABE 8703 (256.8 mm), ZUMT ABE 14109 (289.3 mm), ZUMT ABE 59-134 (69.9 mm), ZUMT ABE 60-493 (37.5 mm), ZUMT ABE 60-494 (42.2 mm), ZUMT ABE 60-495 (31.7 mm), ZUMT ABE 60-942 (44.9 mm; no data)
ZUMT 64088 (290.4 mm; locality unknown; tagged as “・324”)

Icichthys lockingtoni Jordan & Gilbert 1880 クロメダイ

JAPAN

ZUMT 44697 (254.8 mm; probably collected from Ishikawa Pref., coll. by personnel of Ishikawa Prefectural Fisheries Experimental Station)

Remarks: *Icichthys lockingtoni* has been recorded only from the coast of the San-in District, facing the Japan Sea (Nakabo and Doiuchi 2013a), the present specimen therefore representing the first record of the species from Ishikawa Prefecture.

Psenopsis anomala (Temminck & Schlegel, 1844) イボダイ

JAPAN

IWATE PREF.

ZUMT 13067 (109.0 mm; Miyako Bay; coll. by S. Tanabe)

CHIBA PREF.

ZUMT 2806 [96.4 mm; probably collected from Chiba Pref.; donated from N. Yanagi (Takashima Experimental Station, Fisheries Training Center)]

ZUMT 40296 [47.7 mm; probably collected from Chiba Pref.; coll. by K. Furukawa (Katakai, Kujukuri Town)]

ZUMT 45338 (69.5 mm), ZUMT 45339 [35.5 mm; probably collected from Chiba Pref.; coll. by M. Yosezato (Naruto Junior High School)]

TOKYO MARKET

ZUMT 26400 (137.2 mm; obtained at Tokyo Market, Tokyo Met.; Oct. 1929)

KANAGAWA PREF.

ZUMT 34006 (63.9 mm), ZUMT 34007 (60.3 mm; Yokohama City or Ninomiya Town)

ZUMT 50510 (153.9 mm; Aburatsubo, Misaki, Miura City; 7 July 1959; coll. by Y. Tominaga)

ZUMT 62861 (81.4 mm), ZUMT 62862 (16.1 mm), ZUMT 62863 (74.8 mm), ZUMT 62864 [56.3 mm; off Misaki, Miura City (following Sand Jellyfish *Rhopilema hispidum*); 15 Sept. 1964]

ZUMT 62865 (62.2 mm), ZUMT 62866 (25.5 mm), ZUMT 62867 (50.7 mm), ZUMT 62868 (48.3 mm), ZUMT 62869 (42.2 mm), ZUMT 62870 [10.6 mm; off Misaki, Miura City (following Sand Jellyfish *Rhopilema hispidum*); 15 Sept. 1964]

ZUMT 63029 (171.4 mm), ZUMT 63030 (170.9 mm; Zaimokuza Beach, Kamakura City; 20 May 1932; coll. by T. Abe)

MIE PREF.

ZUMT 23352 (105.5 mm; Owase City; coll. by K. Nakahara)

HYOGO PREF.

ZUMT 2255 (132.7 mm; obtained at a fish market in Fukura, Awaji City, Awaji-shima Island; coll. by R. Uchiyama; 24 May 1909)

ZUMT 13471 (113.5 mm), ZUMT 13472 (124.0 mm; probably collected from Hyogo Pref.; coll. by personnel of Hyogo Branch of Japan Fisheries Association)

ZUMT 19358 (53.2 mm; Akashi Strait; Aug. 1928; coll. by T. Saito)

YAMAGUCHI PREF.

ZUMT 9882 (47.2 mm; Suo-oshima Island; coll. by T. Yamahara)

ZUMT 11427 (156.0 mm; off Shimonoseki City; coll. by T. Kumada)

ZUMT 25239 (104.1 mm; Yamaguchi Pref.; coll. by M. Nagatomi)

NIIGATA PREF.

ZUMT 23428 (131.5 mm; Niigata Pref.; coll. by K. Igarashi)

SHIMANE PREF.

ZUMT 31259 (175.1 mm; Matsue City)

EHIME PREF.

ZUMT 20107 [149.9 mm; probably collected from Ehime Pref.; coll. by K. Yamashita (Ozu Junior High School)]

KOCHI PREF.

ZUMT 18636 [125.8 mm; Kochi Pref. (obtained from a fish retailer in Nakasuka, Kochi City); 2 Nov. 1928; coll. by T. Kamohara]

FUKUOKA PREF.

ZUMT 17983 [79.8 mm; probably collected from Fukuoka Pref.; coll. by O. Kinoshita (Yanagawa Middle High School for Girls)]

ZUMT 18050 (129.9 mm), ZUMT 18051 (127.1 mm; Ariake Sea; coll. by personnel of Fukuoka Prefectural Fisheries Experimental Station)

ZUMT 19631 (160.8 mm; Genkai-nada Sea; coll. by T. Matsumoto)

ZUMT 35584 (106.6 mm), ZUMT 35585 (106.5 mm), ZUMT 35587 (101.4 mm), ZUMT 35588 (103.3 mm), ZUMT 35589 (86.9 mm), ZUMT 35590 (77.8 mm), ZUMT 35591 (94.1 mm), ZUMT 35592 (89.9 mm), ZUMT 35593 (81.3 mm), ZUMT 35594 (67.4 mm; Ariake Sea, off Okinohata, Yanagawa City; Oct. 1931)

ZUMT 49838 (150.8 mm; obtained at Fukuoka Fish Market; 28 July 1959)

ZUMT 50743 (107.3 mm), ZUMT 50744 (36.3 mm; Ariake Sea; 19 Apr. 1959)

SAGA PREF.

ZUMT 51891 (99.9 mm; obtained at Kashima Fish Market, Kashima City; 11 Aug. 1959)

NAGASAKI PREF.

ZUMT 2346 (140.8 mm; Nagasaki Pref.; 3 July 1909)

ZUMT 3828 (193.5 mm; south of Osezaki, Fukue-jima Island, Goto Islands; coll. by *FV Hayatori-maru*)

ZUMT 49955 [142.7 mm; Fukue, Goto City (Fukue-jima Island, Goto Islands); 10 June 1953; coll. by I. Tomiyama]

ZUMT 63086 (121.9 mm; Mogi, Nagasaki City)

KUMAMOTO PREF.

ZUMT 18299 (57.0 mm; probably collected from Kumamoto Pref.; coll. by personnel of Kumamoto Prefectural Fisheries Experimental Station)

PRECISE LOCALITY UNKNOWN

ZUMT 43301 (102.7 mm; no data; tagged as “深浦 38”)

EAST CHINA SEA

ZUMT 51119 (112.3 mm), ZUMT 51120 (74.2 mm), ZUMT 51148 (52.3 mm), ZUMT 51149 (48.9 mm; East China Sea; Dec. 1959)

ZUMT 51188 (108.0 mm), ZUMT 51189 (135.3 mm), ZUMT 51190 (66.6 mm), ZUMT 51191 (97.0 mm), ZUMT 51192 (121.4 mm), ZUMT 51193 (78.8 mm), ZUMT 51194 (73.2 mm), ZUMT 51725 (57.9 mm), ZUMT 51760 (125.1 mm; East China Sea)

CHINA

ZUMT 51454 [104.9 mm; East China Sea, east of Nantong, Jiangsu Province (32°35'N, 122°40'E)]

TAIWAN

ZUMT 19031 (154.2 mm; Keelung; coll. by H. Sato)

ZUMT 63031 (147.4 mm; Ximending Market, Taipei City; 17 Oct. 1929)

LOCALITY UNKNOWN

ZUMT 63028 (84.3 mm), ZUMT ABE 7766 (44.7 mm), ZUMT ABE 60-1551 (87.0 mm; no data)

ZUMT 63091 (171.2 mm; no data; tagged as “T-40”)

ZUMT ABE 62-260 (47.8 mm; no data; coll. in Apr. 1962)

***Tubbia tasmanica* Whitley, 1934**

NEW ZEALAND

ZUMT 64093 (358.1 mm; New Zealand; 4 Mar. 1983)

Family Nomeidae エボシダイ科

***Cubiceps baxteri* McCulloch, 1923 オキメダイ**

JAPAN

ZUMT 64094 (355.8 mm; Manazuru Town, Kanagawa Pref.)

ZUMT ABE 56-212 (294.7 mm; off Tori-shima Island, Zunan Islands; 1 Mar. 1931)

Cubiceps whiteleggii (Waite, 1894) ボウズコンニャク

JAPAN

ZUMT 23756 (140.7 mm), ZUMT 23761 (140.6 mm), ZUMT 23794 (138.0 mm; Taniyama, Kagoshima City, Kagoshima Pref.; 20 July 1930)

Nomeus gronovii (Gmelin, 1789) エボシダイ

JAPAN

ZUMT 5848 (94.8 mm; Joga-shima Island, Miura City, Kanagawa Pref.)
ZUMT 10176 (103.7 mm; probably collected from Shizuoka Pref.; coll. by personnel of Shizuoka Prefectural Fisheries Experimental Station)
ZUMT 39050 (129.0 mm; Onahama, Iwaki City, Fukushima Pref.)
ZUMT 39700 (70.9 mm), ZUMT 39701 (58.8 mm; Anegasaki, Ichihara City, Chiba Pref.)
ZUMT 40315 (3 specimens, 16.8–32.1 mm; Misaki, Miura City, Kanagawa Pref.)
ZUMT 42413 (31.3 mm; Shimoda City, Shizuoka Pref.; coll. by K. Kato)
ZUMT ABE 61-118 (54.6 mm; Manazuru Town, Kanagawa Pref.; coll. between 26 Dec. 1960 and 1 Apr. 1961)

LOCALITY UNKNOWN

ZUMT 60812 (33.5 mm), ZUMT 63041 (58.4 mm; no data)

Remarks. Suda et al. (1986) reported 15 examples of the species (including ZUMT 5848, 10176, 39700, and 39701) in detail.

Psenes arafurensis Günther, 1889 クラゲウオ

JAPAN

ZUMT 40600 (175.2 mm; Hakodate, Abashiri, or Sapporo, Hokkaido)
ZUMT 49133 (158.3 mm; Misaki, Miura City, Kanagawa Pref.; 1956; coll. by I. Tomiyama)
ZUMT 51905 (19.9 mm; Aburatsubo, Misaki, Miura City, Kanagawa Pref.; Mar. 1960; coll. by N. Isono)

LOCALITY UNKNOWN

ZUMT ABE 56-193 (46.1 mm; no data)

Remarks. Because the northern limit of the distributional range of *P. arafurensis* in the Pacific Ocean was previously believed to be Noto Town, Ishikawa Prefecture, Japan (Tsuji et al. 2010; Sakai, 2010; Nakabo and Doiuchi, 2013c; Lee et al., 2016), ZUMT 40600, collected from Hokkaido, represents the northernmost record of the species. However, the precise collection locality is unknown, the ledger indicating the collection locality to be either

Hakodate (southwestern Hokkaido, facing Tsugaru Strait), Abashiri (northeastern Hokkaido, facing the Okhotsk Sea), or Sapporo (western Hokkaido, the largest city in Hokkaido and not facing the sea). The ledger also stated that “no one knows the name of fish there”.

Psenes cyanophrys Valenciennes, 1833 スジハナビラウオ

JAPAN

ZUMT 51936 (133.8 mm; obtained at Nagasaki Fish Market; 12 Aug. 1960)
ZUMT 51937 (149.4 mm), ZUMT 51938 (137.9 mm), ZUMT 51939 (130.7 mm), ZUMT 51940 (157.0 mm; Urajiro, Nobeoka City, Miyazaki Pref.; 2 Aug. 1960)
ZUMT 52309 [185.0 mm; paratype of *Psenes kamoharai* Abe, Kojima & Kosakai, 1963; 40 miles (64 km ca.) northwest of Hamada City, Shimane Pref.; 20 Aug. 1963]

INDONESIA

ZUMT 48747 (21.3 mm), ZUMT 48750 [23.7 mm; Banda Sea (6°S, 130°E); late June 1956; coll. by I. Tomiyama]

KIRIBATI

ZUMT 48633 (38.9 mm), ZUMT 48634 (35.6 mm), ZUMT 48635 (27.7 mm), ZUMT 48636 (25.7 mm), ZUMT 48637 (26.1 mm), ZUMT 48638 (23.0 mm), ZUMT 48639 (23.6 mm), ZUMT 48640 (22.4 mm), ZUMT 48641 (20.7 mm), ZUMT 48642 (18.3 mm), ZUMT 48643 (20.4 mm), ZUMT 48644 (18.7 mm), ZUMT 48645 [18.0 mm; central Pacific, approx. 60 km southwest of Banaba (1°15'S, 169°09'E)]

LOCALITY UNKNOWN

ZUMT 62933 (108.6 mm), ZUMT 63026 (32.4 mm; no data)

Remarks. Abe et al. (1963) described the new species *Psenes kamoharai*, subsequently regarded by (Haedrich 1967) as a junior synonym of *P. cyanophrys*, and designated four specimens in Dr. Abe's collection as paratypes: one specimen with Zoological Institute, Faculty of Science of University of Tokyo catalogue number 52309 (the original description indicates that the specimen was tentatively registered as ABE '63-998), 185 mm in standard length, collected off Hamada, Shimane Pref., Japan, 20 Aug, 1963; one specimen with “tentative catalogue number” ABE '60-1961, 197 mm in standard length, collected off Hamada, Shimane Pref., 31 July, 1960; one specimen with “tentative catalogue number” ABE '60-1962, 194 mm in standard length, collected off Hamada, Shimane Pref., 23 Aug. 1960; and one specimen labelled as ABE '58-235 (specimen-number not shown as “tentative catalogue number”), 126 mm in standard length, collected from Manazuru, Kanagawa Pref., Japan in 1958. However, no paratype specimens [except for ZUMT 52309 (shown as ABE '63-998 in the original description)] were found.

Psenes pellucidus Lütken, 1880 ハナビラウオ

JAPAN

ZUMT ABE 8704 (135.8 mm; Kesenuma City, Miyagi Pref.; Aug. 1952)

ZUMT ABE 9587 (143.1 mm; Kubota Beach, Nagaura, Sodegaura City, Chiba Pref.; 12 Oct. 1953; coll. by K. Sugawara)

ZUMT ABE 61-117 (43.2 mm; Manazuru Town, Kanagawa Pref.; coll. between 26 Dec. 1960 and 1 Apr. 1961)

ZUMT ABE 61-543 (66.6 mm), ZUMT ABE 61-544 (71.9 mm), ZUMT ABE 61-545 (53.4 mm; Manazuru Town, Kanagawa Pref.; coll. between 2 Apr. 1961 and 20 June 1961)

ZUMT ABE 62-14 (92.8 mm), ZUMT ABE 62-15 (89.8 mm), ZUMT ABE 62-16 (101.5 mm; Manazuru Town, Kanagawa Pref.; coll. between Jan. 1962 and 12 Feb. 1962)

LOCALITY UNKNOWN

ZUMT 63033 (90.0 mm; no data; tagged as “マ 53”)

ZUMT 64089 (289.1 mm; no data; tagged as “・ 352”)

ZUMT ABE 58-123 (126.5 mm), ZUMT ABE 59-38 (112.2 mm), ZUMT ABE 59-137 (136.5 mm), ZUMT ABE 60-34 (92.6 mm), ZUMT ABE 60-38 (86.8 mm; no data)

Family Stromateidae マナガツオ科

***Pampus argenteus* (Euphrasen, 1788)**

PALAU

ZUMT 63036 (31.8 mm; Palau; separated from ZUMT ABE 4301)

INDONESIA

ZUMT 42132 (82.2 mm; Jakarta, Java; 5 Mar. 1909; I. Iijima and K. Aoki)

***Pampus chinensis* (Euphrasen, 1788) シナマナガツオ**

JAPAN

ZUMT 54575 (94.1 mm; Toyama Pref.)

***Pampus cinereus* (Bloch, 1795) ヒレナガマナガツオ**

JAPAN

ZUMT 44208 [162.9 mm; probably obtained at Tokyo Market, Tokyo Met.; previously stored in same bottle with ZUMT 4674 (*Pampus punctatissimus*)]

EAST CHINA SEA

ZUMT 51088 (182.6 mm; East China Sea; Dec. 1959)

Pampus echinogaster (Basilewsky, 1855) コウライマナガツオ

JAPAN

ZUMT 7266 (131.1 mm; Nagasaki Pref.; Dec.; coll. by I. Kaneko)

ZUMT 7912 (273.0 mm; probably collected from Ehime Pref.; coll. by K. Otsuki)

ZUMT 18202 (75.2 mm; Ariake Sea; coll. by personnel of Fukuoka Prefectural Fisheries Experimental Station)

ZUMT 35583 (140.0 mm; Ariake Sea; Oct. 1931; coll. by I. Tomiyama)

ZUMT 44206 (147.5 mm), ZUMT 44207 [148.7 mm; probably obtained at Tokyo Market, Tokyo Met.; previously stored in same bottle with ZUMT 4674 (*Pampus punctatissimus*)]

ZUMT 49842 (224.8 mm; obtained at Fukuoka Fish Market; 28 July 1959)

ZUMT 50741 (61.3 mm), ZUMT 50742 (52.8 mm; Ariake Sea; 19 Apr. 1959; coll. by Y. Tominaga)

ZUMT 50999 (192.2 mm; obtained from fish retailer in Yamashita, Yokohama City, Kanagawa Pref.; 11 May 1960)

CHINA

ZUMT 54483 (147.0 mm), ZUMT 54484 (148.2 mm; East China Sea, east of Nantong, Jiangsu Province (32°35'N, 122°40'E), 23 m depth; 11 Oct. 1984)

EAST CHINA SEA

ZUMT 51472 (87.9 mm), ZUMT 51473 (102.2 mm; East China Sea)

ZUMT 52007 (144.4 mm; East China Sea)

LOCALITY UNKNOWN

ZUMT 63207 (214.5 mm; no data; tagged as "P.-8")

Pampus punctatissimus (Temminck & Schlegel, 1845) マナガツオ

JAPAN

ZUMT 3254 (168.1 mm; obtained at Kumamoto Fish Market, Kumamoto Pref.; 22 Jan. 1912)

ZUMT 4674 (171.0 mm; obtained at Tokyo Market, Tokyo Met.)

ZUMT 11408 (185.3 mm; Shimonoseki City, Yamaguchi Pref.; coll. by T. Kumada)

ZUMT 63240 (28.1 mm; Ariake Sea; 23 July)

EAST CHINA SEA

ZUMT 52008 (224.9 mm; East China Sea)

ZUMT 51089 (194.5 mm; East China Sea; Dec. 1959)

TAIWAN

ZUMT 13702 (152.0 mm; obtained at a fish market in Taipei City; coll. by T. Aoki)

LOCALITY UNKNOWN

ZUMT 54576 (108.0 mm), ZUMT ABE 58-372 (293.7 mm; no data)

ZUMT 63208 (151.4 mm; no data; tagged as “75”)

***Peprilus burti* Fowler, 1944**

ZUMT 63032 (8 specimens, 129.3–137.5 mm; served at a tavern in Hongo, Bunkyo-ku, Tokyo, Japan; Sept. 1969)

Remarks. The species is distributed in the Gulf of Mexico (Hedrich 1967, 2002e; Haedrich and Horn 1972).

Family Ariommatidae オオメメダイ科

***Ariomma brevipanus* (Klunzinger, 1884) ミナミメダイ**

JAPAN

ZUMT 6787 (158.1 mm; obtained at Tokyo Market, Tokyo Met.)

LOCALITY UNKNOWN

ZUMT 40122 (97.3 mm; locality unknown; coll. in 3 Sept. 1922)

ZUMT ABE 59-629 (73.8 mm), ZUMT ABE 60-1341 (182.1 mm; no data)

***Ariomma indica* (Day, 1871) マルイボダイ**

EAST CHINA SEA

ZUMT 51162 (168.7 mm; East China Sea; Jan, 1960)

ZUMT 51441 (119.3 mm; East China Sea; Sept. 1959)

LOCALITY UNKNOWN

ZUMT 52217 (147.6 mm), ZUMT 52218 (158.9 mm; no data)

***Ariomma lurida* Jordan & Snyder, 1904 オオメメダイ**

LOCALITY UNKNOWN

ZUMT ABE 58-114 (184.1 mm; no data)

Family Tetragonuridae ドクウロコイボダイ科
Tetragonurus cuvieri Risso, 1810 ドクウロコイボダイ

JAPAN

ZUMT 39259 (283.3 mm; Hirota Bay, Kesen District, Iwate Pref.; 1938; coll. by R. Chiba)
ZUMT 63434 (345.2 mm; Samani Town, Hokkaido)
ZUMT 63435 (292.5 mm), ZUMT 63436 (330.6 mm), ZUMT 63437 (298.9 mm; Kushiro
City, Hokkaido)

LOCALITY UNKNOWN

ZUMT 63433 (275.5 mm), ZUMT 63821 (260.8 mm; no data)

Tetragonurus pacificus Abe, 1953

PAPUA NEW GUINEA

ZUMT 47823 [holotype of *Tetragonurus pacificus* Abe, 1953; 122.5 mm; east of New Britain,
Papua New Guinea (approx. 6°36'S, 152°29'E; obtained from stomach of *Thunnus*
albacares (Bonnaterre, 1788); 30 Dec. 1952; coll. by *RV Fusa-maru*]

SOUTH PACIFIC

ZUMT 48781 (48.4 mm; approx. 320 km southeast of Banaba, Kiribati; 30 Mar. 1956)

Remarks. Koeda and Teramura (2019) described in detail three examples of the species,
including ZUMT 47823 and 48781.

Acknowledgements

We thank I. Abe, S. Fujiwara, A. Iinuma, M. Saito, A. Takahashi, H. Ogata and other
volunteers for the opportunity to examine the present specimens and providing curatorial
assistance. This study was supported in part by the Sasakawa Scientific Research Grant from
the Japan Science Society (28-745, 2021-4064); a Grant-in-Aid from the Japan Society for the
Promotion of Science for JSPS Fellows (DC2: 29-6652); JSPS KAKENHI Grant Numbers
19K23691 and 21K06313JP.

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