

## Annotated Checklist of Deep-sea Fishes of the Sea of Japan

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**Abstract:** A list of deep-sea fishes from the Sea of Japan is presented on the basis of a literature survey and specimens mainly collected in the years 2009–2013. A total of 363 species belonging to 104 families of 29 orders of deep-sea fishes is listed with remarks on the literature surveys and/or specimens.

**Key words:** deep-water fishes, fish fauna, distribution, Sea of Japan, voucher specimens.

### Introduction

The Sea of Japan is one of the major marginal seas in the western North Pacific Ocean, which is characterized by having a deep-sea floor, extending to 3,800m depth. The sea is semi-enclosed, connecting to the adjacent major seas via the Tatar (10m depth), Soya (60m depth), Tsugaru (140m depth), Tsushima (120m depth) and Korea straits (140m depth) and also the very narrow Kanmon Strait (46m depth) between Kyushu and Honshu to the Seto Inland Sea (Fig. 1). In addition, it has unique hydrographic features. The surface layer is affected by the warm Tsushima Current, a branch of the Kuroshio Current, from the south and the cold Liman Current from the north. In depths below 200–300m, temperatures year-around remain at 1°C or less and are much colder than other seas around Japan and the adjacent areas (Nishimura, 1974: table 14). This cold deep water mass (0.1–0.3°C) with low salinity (34.0–34.1‰) and high dissolved oxygen content (5–6mL/L) is called the Japan Sea Proper Water, which originates in the northwestern part of the sea and results from extensive cooling of the surface water during winter (Oba *et al.*, 1991).

The Sea of Japan is the newest marginal sea around Japan. Geological studies of the Sea of Japan revealed that the origin of the sea was a rift-valley on the eastern edge of the Asian Continent around 250 million years ago with the sea floor expanding until 15 million years ago (*e.g.*, Taira, 1990). A number of environmental changes took place in the Sea of Japan during the last 85,000 years (Oba *et al.*, 1991: fig. 7). For instance, during the last glacial period (27,000–17,000 years ago), the sea was completely isolated from its neighboring seas by a lowering of the sea level. The surface layer of the sea was also covered by a massive influx of freshwater from the Asian Continent; the development of stratification caused severe anoxic conditions that extir-

pated many deep-sea organisms (*e.g.*, Tada *et al.*, 1999), except for small fractions of their populations (Gorbarenko and Southon, 2000; Itaki *et al.*, 2004).

The environmental changes and geological history in the Sea of Japan have created a unique deep-sea fish fauna. It is characterized by both low species diversity and relatively few endemic species (Okiyama, 1974). The low species diversity may reflect the short period of time for colonization (Tyler, 2002). In addition, there are only a few oceanic deep-sea fishes recorded from the sea (Nishimura, 1964; Okiyama, 1974; Honma, 1987). The endemic fishes comprise cold-adapted eurybathic species. Nishimura (1974: table 3) indicated 7 endemic deep-sea species/subspecies inhabited the Sea of Japan with their sister groups residing in the Sea of Okhotsk and the Bering Sea.

There are several studies on fish faunas in local areas associated with or in the Sea of Japan, *e.g.*, Katayama (1940) for Toyama Bay, Mori (1956a) for the Oki Islands and Honma and Kitami (1967, 1970, 1980, 1995) for Sado Island. Russian researchers including G. U. Lindberg and his colleagues published a series of books on the fish fauna (*e.g.*, Lindberg and Legeza, 1959, 1965; Lindberg, and Krasnyukova, 1969, 1975). Recently, Shinohara *et al.* (2011) reported 160 species belonging to 18 families of 21 orders of deep-sea fishes from the Sea of Japan, based on the voucher specimens deposited in the following universities and museums: Hokkaido University Museum, Hakodate; Kochi University, Kochi; Kyoto University, Maizuru; Osaka Museum of Natural History, Osaka; National Museum of Nature and Science, Tsukuba; U.S. National Museum of Natural History, Washington D.C.; Zoological Institute of Russian Academy of Sciences, Saint Petersburg.

In the following pages, a total of 363 species belonging to 104 families of 29 orders of the deep-sea fishes are listed with remarks on the basis of literature surveys and/or specimens mainly collected in the years 2009–2013.

## Materials and Methods

Collection data of specimens captured by the R/V *Soyo-maru* of the Fisheries Research Agency (FRA), R/V *Tansei-maru* of the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) and T/V *Tanshu-maru* of Kasumi High School are shown in Fig. 1 and Table 1. The specimens are deposited in the National Museum of Nature and Science, Tsukuba (NSMT-P) and Kyoto University (FAKU). Specimens deposited in the Sado Marine Experimental Station, Niigata University (SMBS) were also examined (Fig. 2). Numbers of specimens are indicated in parentheses following station numbers and/or SMBS numbers.

Systematic arrangement of taxa follows Nelson (2006). Author(s) and year of each scientific name follows the Catalog of Fishes on the website of the California Academy of Sciences, USA (<http://research.calacademy.org/redirect?url=http://researcharchive.calacademy.org/research/Ichthyology/catalog/fishcatmain.asp>).

We examined the following publications including deep-sea fishes occurring below 200 m depth; Keys to the Fishes and Fish-like Animals of Japan (Okada and Matsubara, 1938); Fish Morphology and Hierarchy (Matsubara, 1955); The Fishes of the Japanese Archipelago, 2nd Edition (Masuda *et al.*, 1988); The Fishes of Northern Japan (Amaoka *et al.*, 1995); Fishes of Japan with Pictorial Keys to the Species (Nakabo, 1993a, 2000a, 2002a, 2013a). In addition to these major literature resources, revisional papers for taxonomic groups were examined to obtain information on distribution of deep-sea fishes in the Sea of Japan (*e.g.*, Toyoshima, 1985; Kido, 1988a; Kanayama, 1991). In our literature survey, we recorded localities given with significant

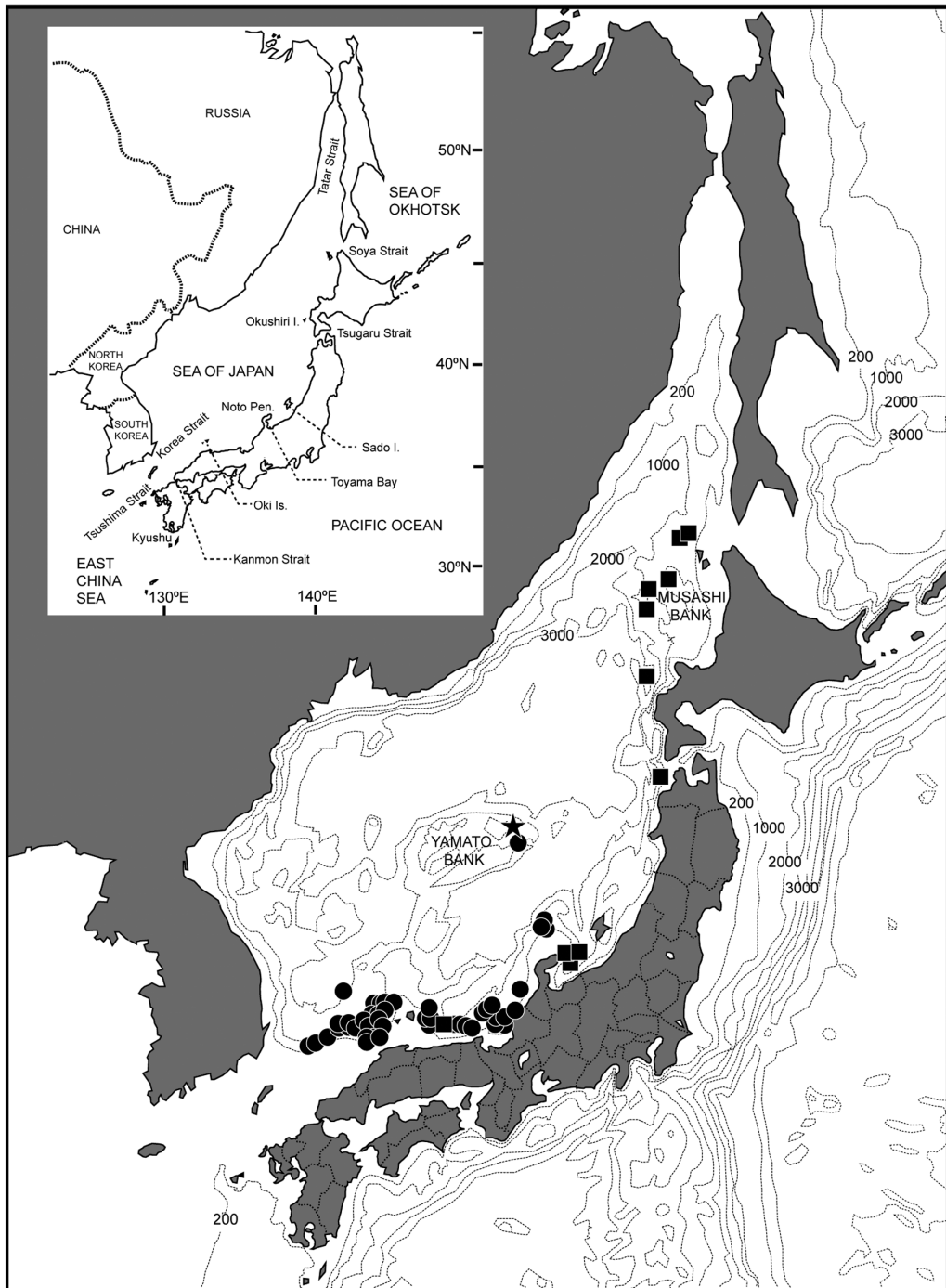


Fig. 1. Study areas and collection localities in the Sea of Japan. Star, stations of R/V *Soyo-maru*; squares, R/V *Tansai-maru*; circles, T/V *Tanshu-maru*.

accuracy (e.g., San'in District, Toyama Bay) but excluded general locality records such as "around Japan." In our research the Sea of Japan is delineated by the Tatar Strait in north and the Tushima and Korean straits in south.

Table 1. Trawl and baited trap stations of the R/Vs *Soyo-maru* and *Tansei-maru* and the T/S *Tanshu-maru* in 2009–2013. BT, beam trawl; OT, otter trawl.

Station no.	Date	Gear	Position in	Position out	Depth (m)
<i>R/V Soyo-maru</i>					
SO10-C4-B4	19 July 2010	BT	39°59.20'N, 135°57.80'E	39°58.60'N, 135°57.10'E	1371–1371
<i>R/V Tansei-maru</i>					
KT-10-08-R1	23 May 2010	BT	45°36.25'N, 140°54.73'E	45°35.66'N, 140°54.09'E	178–190
KT-10-08-R2	23 May 2010	BT	45°27.25'N, 140°20.90'E	45°26.15'N, 140°21.94'E	402–393
KT-10-08-T1	21 May 2010	BT	40°53.90'N, 140°00.04'E	40°53.28'N, 139°58.62'E	350–315
KT-11-09-E2	29 May 2011	BT	41°50.26'N, 139°34.03'E	41°48.70'N, 139°34.18'E	388–538
KT-11-09-K4	2 June 2011	BT	35°59.92'N, 134°20.58'E	35°59.61'N, 134°18.82'E	611–613
KT-11-09-M1	27 May 2011	BT	44°43.78'N, 140°05.79'E	44°43.12'N, 140°05.44'E	152–166
KT-11-09-M5	28 May 2011	BT	44°31.41'N, 139°47.13'E	44°29.91'N, 139°47.96'E	1035–1080
KT-11-09-M6	28 May 2011	BT	44°16.68'N, 139°36.85'E	44°14.25'N, 139°37.25'E	1461–1421
KT-11-09-N1	1 June 2011	BT	37°54.59'N, 136°56.92'E	37°54.51'N, 136°58.43'E	162–157
KT-11-09-N2	1 June 2011	BT	37°57.06'N, 136°56.60'E	37°57.04'N, 136°58.23'E	203–203
KT-11-09-N3	1 June 2011	BT	38°03.25'N, 136°53.39'E	38°03.82'N, 136°55.13'E	403–414
KT-11-09-N4	1 June 2011	BT	38°08.04'N, 136°49.64'E	38°09.00'N, 136°51.20'E	617–604
KT-11-09-T1	31 May 2011	BT	37°28.45'N, 137°28.15'E	37°29.16'N, 137°27.86'E	160–173
KT-11-09-T2	31 May 2011	BT	37°28.77'N, 137°29.07'E	37°29.53'N, 137°28.63'E	207–258
KT-11-09-T3	31 May 2011	BT	37°29.18'N, 137°33.25'E	37°29.35'N, 137°31.96'E	383–443
KT-11-09-T5	1 June 2011	BT	37°18.45'N, 137°31.77'E	37°18.66'N, 137°32.85'E	794–790
KT-11-09-T6	1 June 2011	BT	37°28.29'N, 137°45.89'E	37°26.70'N, 137°44.59'E	1488–1564
<i>T/V Tanshu-maru</i>					
TS09-T001	9 May 2009	OT	35°43.56'N, 131°06.41'E	35°42.96'N, 131°04.81'E	227–224
TS09-T002	10 May 2009	OT	35°49.86'N, 131°28.63'E	35°50.10'N, 131°26.81'E	248–248
TS09-T004	10 May 2009	OT	35°51.03'N, 131°34.58'E	35°51.09'N, 131°34.19'E	280–279
TS09-T006	9 May 2009	OT	35°53.59'N, 131°28.46'E	35°53.50'N, 131°26.62'E	342–329
TS09-T007	10 May 2009	OT	35°53.46'N, 131°33.78'E	35°53.32'N, 131°34.55'E	339–339
TS09-T008	11 May 2009	OT	35°37.75'N, 132°04.41'E	35°37.79'N, 132°06.24'E	208–208
TS09-T010	12 May 2009	OT	35°46.53'N, 132°02.23'E	35°46.28'N, 132°04.04'E	281–281
TS09-T011	9 May 2009	OT	35°27.85'N, 130°38.87'E	35°28.90'N, 130°40.18'E	208–211
TS09-T012	11 May 2009	OT	35°43.46'N, 132°05.83'E	35°43.34'N, 132°07.66'E	251–251
TS09-T013	9 May 2009	OT	35°34.34'N, 130°53.43'E	35°34.21'N, 130°51.75'E	225–223
TS09-T016	12 May 2009	OT	35°46.11'N, 132°13.33'E	35°46.42'N, 132°15.13'E	280–280
TS09-T017	12 May 2009	OT	35°39.83'N, 132°16.68'E	35°40.62'N, 132°18.22'E	209–211
TS09-T018	12 May 2009	OT	35°43.21'N, 132°17.38'E	35°44.03'N, 132°18.92'E	234–236
TS09-T020	13 May 2009	OT	35°45.09'N, 132°24.13'E	35°46.19'N, 132°25.36'E	215–215
TS09-T023	13 May 2009	OT	35°50.38'N, 132°23.92'E	35°50.70'N, 132°24.22'E	272–270
TS09-T025	13 May 2009	OT	35°49.09'N, 132°29.16'E	35°50.23'N, 132°31.15'E	230–230
TS09-T027	13 May 2009	OT	35°54.57'N, 132°26.46'E	35°55.88'N, 132°27.32'E	280–280
TS09-T029	12 May 2009	OT	35°48.05'N, 132°09.98'E	35°48.13'N, 132°11.82'E	321–321
TS09-T032	11 May 2009	OT	35°53.68'N, 131°54.22'E	35°53.63'N, 131°52.99'E	417–408
TS09-T033	11 May 2009	OT	35°51.91'N, 132°08.59'E	35°51.75'N, 132°10.42'E	441–439
TS09-T034	14 May 2009	OT	35°53.75'N, 132°32.75'E	35°55.16'N, 132°33.35'E	210–210
TS09-T035	14 May 2009	OT	36°01.72'N, 132°38.20'E	36°00.47'N, 132°37.37'E	210–211
TS09-T036	15 May 2009	OT	36°05.85'N, 132°40.07'E	36°04.82'N, 132°38.73'E	230–234
TS09-T037	15 May 2009	OT	36°08.98'N, 132°45.82'E	36°07.92'N, 132°44.52'E	206–205
TS09-T038	16 May 2009	OT	36°17.98'N, 132°43.84'E	36°19.45'N, 132°44.22'E	269–269
TS09-T039	16 May 2009	OT	36°19.53'N, 132°47.79'E	36°21.00'N, 132°48.10'E	219–218
TS09-T047	1 June 2009	OT	36°08.90'N, 133°46.83'E	36°07.75'N, 133°47.49'E	207–207
TS09-T049	2 June 2009	OT	36°09.18'N, 133°54.64'E	36°07.75'N, 133°55.16'E	247–247
TS09-T050	2 June 2009	OT	36°00.76'N, 133°54.48'E	35°59.29'N, 133°54.81'E	231–231
TS09-T053	14 May 2009	OT	36°00.39'N, 132°27.55'E	36°01.37'N, 132°28.49'E	349–350

Table 1. (continued).

Station no.	Date	Gear	Position in	Position out	Depth (m)
TS09-T054	15 May 2009	OT	36°19.75'N, 132°42.06'E	36°21.23'N, 132°42.38'E	318–322
TS09-T056	1 June 2009	OT	36°17.05'N, 133°53.20'E	36°15.74'N, 133°53.96'E	358–352
TS09-T057	15 May 2009	OT	36°16.94'N, 132°38.50'E	36°18.42'N, 132°38.77'E	441–434
TS09-T086	3 June 2009	OT	35°56.27'N, 134°33.87'E	35°56.75'N, 134°35.41'E	275–274
TS09-T087	3 June 2009	OT	35°51.52'N, 134°43.40'E	35°51.67'N, 134°45.23'E	225–225
TS09-T088	3 June 2009	OT	35°49.20'N, 134°51.89'E	35°49.25'N, 134°52.56'E	200–200
TS09-T093	3 June 2009	OT	35°58.52'N, 134°27.70'E	35°58.98'N, 134°29.47'E	328–330
TS09-T099	5 June 2009	OT	36°02.18'N, 135°12.16'E	36°02.19'N, 135°14.01'E	283–284
TS09-T101	31 May 2009	OT	35°58.93'N, 135°30.16'E	35°58.24'N, 135°31.82'E	251–250
TS09-T102	30 May 2009	OT	35°53.27'N, 135°48.27'E	35°53.02'N, 135°47.72'E	242–242
TS09-T105	31 May 2009	OT	36°06.43'N, 135°43.39'E	36°05.13'N, 135°42.46'E	292–291
TS09-T106	30 May 2009	OT	36°01.78'N, 135°42.77'E	36°01.22'N, 135°44.51'E	272–271
TS09-T107	30 May 2009	OT	36°09.30'N, 135°54.87'E	36°08.43'N, 135°54.91'E	202–201
TS09-T110	6 June 2009	OT	36°10.82'N, 135°25.63'E	36°11.33'N, 135°23.88'E	351–351
TS09-T115	6 June 2009	OT	36°15.29'N, 135°30.95'E	36°15.67'N, 135°29.16'E	451–452
TS09-T117	7 June 2009	OT	36°32.51'N, 136°08.82'E	36°33.73'N, 136°09.53'E	230–230
TS09-T141	14 June 2009	OT	36°00.52'N, 132°33.20'E	36°01.75'N, 132°34.25'E	250–251
TS10-OW01	21 Aug. 2010	BT	35°40.31'N, 132°20.29'E	35°40.48'N, 132°20.66'E	201–201
TS10-OW04	21 Aug. 2010	BT	35°53.21'N, 132°13.76'E	35°53.29'N, 132°14.26'E	504–502
TS10-OW09	28 Aug. 2010	BT	35°59.00'N, 132°12.55'E	35°59.15'N, 132°13.20'E	1000–1011
TS10-OW10	28 Aug. 2010	BT	36°01.13'N, 132°13.71'E	36°01.06'N, 132°14.28'E	1104–1104
TS10-OW12	27 Aug. 2010	BT	36°09.98'N, 132°11.67'E	36°10.26'N, 132°12.21'E	1296–1300
TS10-OW13	27 Aug. 2010	BT	36°13.23'N, 132°08.69'E	36°13.20'N, 132°09.29'E	1408–1394
TS10-OW18	26 Aug. 2010	BT	36°36.78'N, 131°39.63'E	36°37.18'N, 131°40.07'E	1895–1894
TS10-YA05	29 Aug. 2010	BT	39°40.16'N, 136°01.81'E	39°40.57'N, 136°01.44'E	1002–1010

Asterisks ahead of scientific names indicate records found in the publications with no voucher specimens. The species records found in the following publications are supported by their voucher specimens: Balushkin and Prirodina, 2008 (deposited in Zoological Institute, Saint Petersburg: ZIN); Balushkin *et al.*, 2011 (ZIN); Kawase and Kai, 2012 (Natural History Museum and Institute, Chiba); Matsuura *et al.*, 2009 (National Museum of Nature and Science, Tsukuba: NSMT-P); Nambu and Kido, 1990; Nambu *et al.*, 1991, 1992, 1993 (Toyama Science Museum); Sheiko and Fedorov, 2010 (ZIN); Sideleva *et al.*, 2006a, b (ZIN); Shinohara *et al.*, 2011 (see Introduction); Suzuki *et al.*, 2000 (Osaka Museum of Natural History, Osaka); Uozu Aquarium, 1997 (Uozu Aquarium, Uozu); Voronina and Volkova, 2003 (ZIN).

### Species List

#### Order Myxiniiformes

#### Family Myxinidae

*Eptatretus atami* (Dean, 1904) [Japanese name: Kuro-nuta-unagi]

*Paramyxine atami*: Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Honma, 1962; Takegawa and Morino, 1970; Tsuda, 1990; Uozu Aquarium, 1997.

*Eptatretus atami*: Nakabo and Kai, 2013.

*Eptatretus burgeri* (Girard, 1855) [Japanese name: Nuta-unagi]

*Eptatretus burgeri*: Mori, 1928; Mori and Uchida, 1934; Okada and Matsubara, 1938; Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970; Tsuda, 1990; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Nakabo and Kai, 2013.

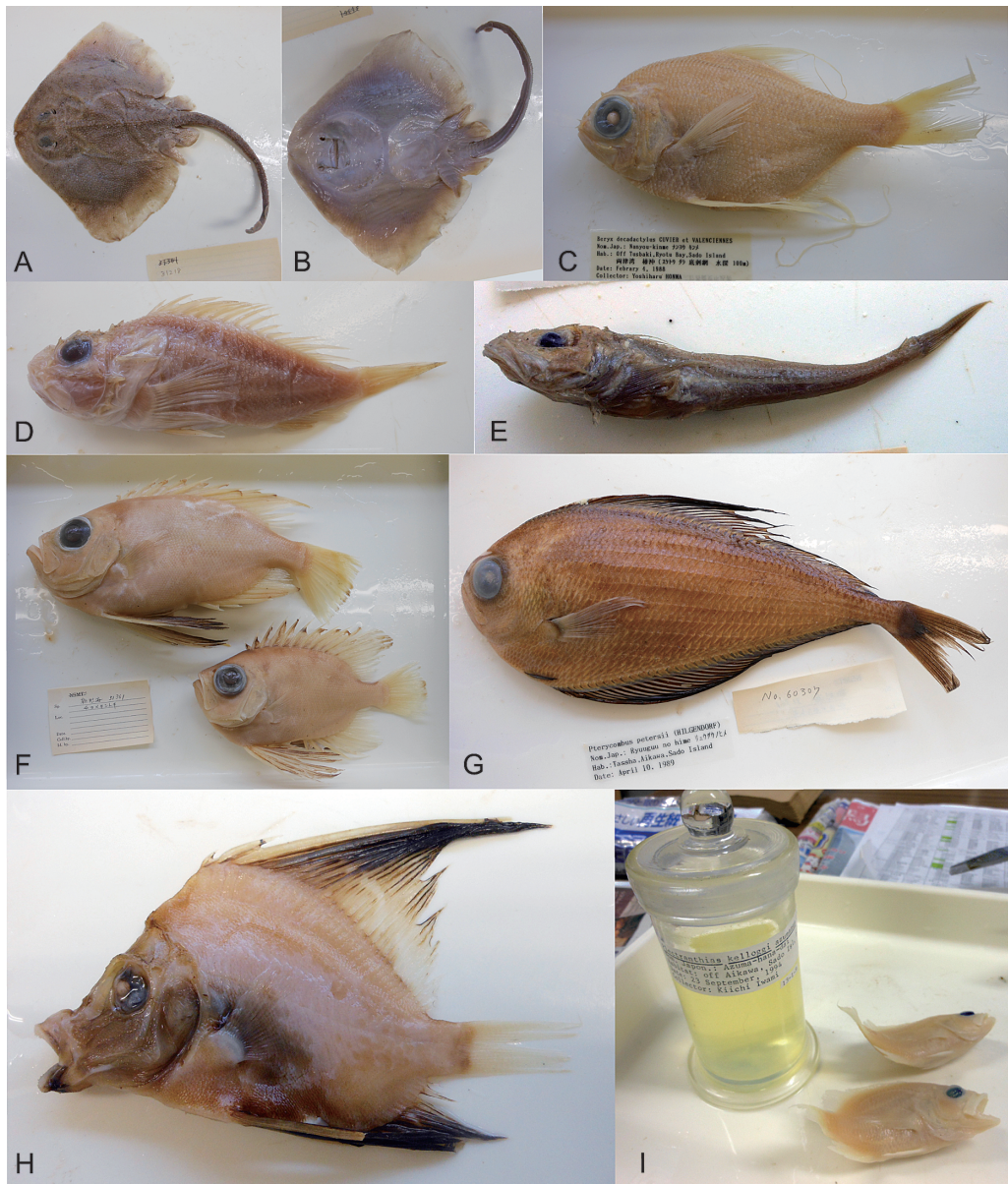


Fig. 2. Fishes deposited in the Sado Marine Biological Station, Niigata University (SMBS). A–B, dorsal and ventral views of *Bathyraja bergi*, 217 mm TL, off Tassha, Sado Island, 13 May 1959; C, *Beryx decadactylus*, 185 mm SL, Ryotsu Bay, Sado Island, 4 February 1988; D, *Scorpaena neglecta*, 204 mm SL, off Tassha, Sado Island; E, *Icelus toyamensis*, 88 mm SL, Hyōtan-se Shallow, off Sado Island, 20 September 1957; F, *Cookeolus japonicus*, 148–198 mm SL, off Tassha, Sado Island, 13 June 1954; G, *Pterycombus petersii*, 200 mm SL, Tassha, Sado Island, 10 April 1989; H, *Histiopterus typus*, 74 mm SL, off Himetsu, Sado Island, 4 March 1991; I, a glass jar and *Plectranthias kelloggi azumanus*, 92 mm SL (2 specimens), off Aikawa, Sado Island, 23 September 1994.

*Eptatretus bürgeri*: Katayama, 1940.

*Eptatretus okinoseanus* (Dean, 1904) [Japanese name: Murasaki-nuta-unagi]

*Eptatretus okinoseanus*: Katayama, 1940; Tsuda, 1990; Shinohara *et al.*, 2011; Nakabo and

Kai, 2013.

Order Chimaeriformes

Family Chimaeridae

***Chimaera phantasma*** Jordan and Snyder, 1900 [Japanese name: Ginzame]

*Chimaera phantasma*: Mori and Uchida, 1934; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Shinohara *et al.*, 2011; Honma, 2013; Nakabo *et al.*, 2013a.

\****Hydrolagus barbouri*** (Garman, 1908) [Japanese name: Kokonohoshi-ginzame]

*Chimaera barbouri*: Honma, 1952.

*Bathyalopex barbouri*: Kato, 1956.

*Hydrolagus barbouri*: Lindberg and Legeza, 1959; Honma, 2013; Nakabo *et al.*, 2013a.

\****Hydrolagus mitsukurii*** (Jordan and Snyder, 1904) [Japanese name: Aka-ginzame]

*Chimaera mitsukurii*: Honma, 1952.

*Phasnichthys mitsukurii* [*sic*]: Kato, 1956.

*Hydrolagus mitsukurii*: Lindberg and Legeza, 1959; Honma, 2013; Nakabo *et al.*, 2013a.

\****Hydrolagus ogilbyi*** (Waite, 1898) [Japanese name: Ginzame-damashi]

*Hydrolagus ogilbyi*: Kato, 1956.

Order Lamniformes

Family Mitsukurinidae

\****Mitsukurina owstoni*** Jordan, 1898 [Japanese name: Mitsukurizame]

*Mitsukurina owstoni*: Katayama, 1940; Aonuma *et al.*, 2013.

*Scapanorhynchus owstoni*: Kato, 1956; Tsuda, 1990.

Family Lamnidae

***Isurus oxyrinchus*** Rainesque, 1810 [Japanese name: Aozame]

*Isuropsis glauca*: Mori and Uchida, 1934; Honma, 1952.

*Isrus glauca*: Mori, 1952.

*Isurus glaucus*: Kato, 1956; Mori, 1956a; Honma, 1956b; Lindberg and Legeza, 1959; Honma, 1963; Tsuda, 1990.

*Isurus oxyrinchus*: Honma and Kitami, 1978; Uozu Aquarium, 1997; Sokolovskaya *et al.*, 1998; Honma *et al.*, 2011; Honma, 2013; Yoshino *et al.*, 2013a.

***Lamna ditropis*** Hubbs and Follett, 1947 [Japanese name: Nezumizame]

*Lamna cornubica*: Katayama, 1940; Honma, 1952, 1963.

*Lamna ditropis*: Kato, 1956; Lindberg and Legeza, 1959; Ueno, 1971; Honma and Kitami, 1978; Honma, 1991a; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Honma, 2013; Yoshino *et al.*, 2013a.

*Lamna ditropis* [*sic*]: Tsuda, 1990.

Family Alopiidae

\****Alopias pelagicus*** Nakamura, 1935 [Japanese name: Nitari]

*Alopias pelagicus*: Honma, 1952; Mori, 1952; Kato, 1956; Lindberg and Legeza, 1959; Honma, 1963; Takegawa and Morino, 1970; Honma and Kitami, 1978; Kobayashi *et al.*, 2006; Honma, 2013.

*Alopias vulpes*: Mori and Uchida, 1934.

*Alopias vulpinus*: Ueno, 1971.

\**Alopias vulpinus* (Bonnaterre, 1788) [Japanese name: Ma-onaga]

*Alopias unlpinus* [sic]: Tsuda, 1990.

*Alopias vulpinus*: Maeda and Tsusui, 2003; Honma, 2013; Yoshino *et al.*, 2013b.

#### Order Carcharhiniformes

##### Family Scyliorhinidae

***Cephaloscyllium umbratile*** Jordan and Fowler, 1903 [Japanese name: Nanukazame]

*Cephaloscyllium umbratile*: Mori and Uchida, 1934; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Nakaya, 1975; Tsuda, 1990; Honma, 1991a; Uozu Aquarium, 1997; Shinohara *et al.*, 2011; Yoshino *et al.*, 2013a.

*Cephaloscyllium isbaellum* [sic]: Suzuki *et al.*, 2000.

\****Galeus eastmani*** (Jordan and Snyder, 1904) [Japanese name: Yamorizame]

*Galeus eastmani*: Kato, 1956; Tsuda, 1990.

***Halaelurus buergeri*** (Müller and Henle, 1838) [Japanese name: Nagasaki-torazame]

*Halaelurus bürgeri*: Nakaya, 1975.

*Halaelurus buergeri*: Maeda and Tsutsui, 2003; Yoshino *et al.*, 2013a.

***Scyliorhinus torazame*** (Tanaka, 1908) [Japanese name: Torazame]

*Catulus torazame*: Mori and Uchida, 1934; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952.

*Scyliorhinus torazame* [sic]: Mori, 1952.

*Scyliorhinus torazame*: Honma, 1955b; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Honma, 1963; Ueno, 1971; Nakaya, 1975; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Yoshino and Aonuma, 2000, 2002; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Yoshino *et al.*, 2013a.

*Scyliorhinus torazame* [sic]: Suzuki *et al.*, 2000.

SMBS uncatalogued (1).

##### Family Triakididae

\****Mustelus griseus*** Pietschmann, 1908 [Japanese name: Shirozame]

*Cynias griseus*: Mori and Uchida, 1934; Mori, 1952.

*Mustelus griseus*: Honma, 1955c; Honma, 1956b; Kato, 1956; Lindberg and Legeza, 1959; Honma, 1963; Tsuda, 1990; Aonuma *et al.*, 2013; Honma, 2013.

***Mustelus manazo*** Bleeker, 1854 [Japanese name: Hoshizame]

*Cynias manazo*: Mori, 1928; Mori and Uchida, 1934; Mori, 1952.

*Mustelus manazo*: Snyder, 1912; Honma, 1952; Mori, 1952; Honma, 1955b; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Honma, 1963; Takegawa and Morino, 1970; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Aonuma *et al.*, 2013; Honma, 2013.

##### Family Carcarhinidae

\****Carcharhinus plumbeus*** (Nardo, 1827) [Japanese name: Mejirozame]



*Carcharhinus gangeticus*: Kato, 1956; Ueno, 1971; Tsuda, 1990.

*Carcharhinus plumbeus*: Maeda and Tsutsui, 2003; Kobayashi *et al.*, 2006; Aonuma *et al.*, 2013; Honma, 2013.

\**Rhizoprionodon acutus* (Rüppell, 1837) [Japanese name: Hiragashira]

*Scoliodon walbeehmi*: Kato, 1956.

*Rhizoprionodon acutus*: Honma *et al.*, 1990; Tsuda, 1990; Honma, 1991a; Aonuma *et al.*, 2013; Honma, 2013.

#### Order Hexanchiformes

##### Family Hexanchinidae

*Heptranchias perlo* (Bonnaterre, 1788) [Japanese name: Edo-aburazame]

*Heptranchias perlo*: Honma, 1952; Mori, 1952; Honma, 1954; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Honma, 1963; Honma and Kitami, 1978; Tsuda, 1990; Shinohara *et al.*, 2011; Hatooka *et al.*, 2013a; Honma, 2013.

\**Hexanchus griseus* (Bonnaterre, 1788) [Japanese name: Kagurazame]

*Hexanchus griseus*: Tsuda, 1990; Honma *et al.*, 2011, 2012; Honma, 2013.

#### Order Squaliformes

##### Family Somniosidae

\**Somniosus (Somniosus) pacificus* Bigelow and Schroeder, 1944 [Japanese name: Ondenzame]

*Somniosus pacificus*: Ueno, 1971; Maeda and Tsutsui, 2003.

*Somniosus (Somniosus) pacificus*: Hatooka *et al.*, 2013a.

#### Family Squalidae

*Squalus acanthias* Linnaeus, 1758 [Japanese name: Abura-tsunozame]

*Squalus suckleyi*: Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Katayama, 1952; Ouchi, 1963.

*Squalus (Acanthias) suckeryi*: Mori, 1952.

*Squalus acanthias*: Matsubara, 1955; Honma, 1956b; Kato, 1956; Mori, 1956a; Honma, 1963; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Hatooka *et al.*, 2013c; Honma, 2013.

*Squalus acanthias acanthias*: Lindberg and Legeza, 1959.

\**Squalus brevirostris* Tanaka, 1917 [Japanese name: Tsumari-tsunozame]

*Squalus brevirostris*: Mori, 1928; Mori and Uchida, 1934; Mori, 1952.

\**Squalus japonicus* Ishikawa, 1908 [Japanese name: Togari-tsunozame]

*Squalus japonicus*: Mori, 1928; Mori and Uchida, 1934; Mori, 1952.

*Squalus mitsukurii* Jordan and Snyder, 1903 [Japanese name: Futo-tsunozame]

*Squalus mitsukurii*: Mori, 1928; Mori and Uchida, 1934; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Hatooka *et al.*, 2013c; Honma, 2013.

*Squalus mitsukurii*: Tsuda, 1990.

Order Squatiniformes  
Family Squatinidae

***Squatina japonica*** Bleeker, 1858 [Japanese name: Kasuzame]

*Squatina japonica*: Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Honma, 1956b; Lindberg and Legeza, 1959; Honma, 1963; Takegawa and Morino, 1970; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Sokolovskaya *et al.*, 1998; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Kobayashi *et al.*, 2006; Hatooka *et al.*, 2013c; Honma, 2013.

***Squatina nebulosa*** Regan, 1906 [Japanese name: Korozame]

*Squatina nebulosa*: Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Tsuda, 1990; Matsuura *et al.*, 2009; Hatooka *et al.*, 2013c; Honma, 2013.

Order Pristiophoriformes  
Family Pristiophoridae

\****Pristiophorus japonicus*** Günther, 1870 [Japanese name: Nokogirizame]

*Pristiophorus japonicus*: Mori and Uchida, 1934; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Maeda and Tsutsui, 2003; Hatooka *et al.*, 2013a; Honma, 2013.

Order Rhinobatiformes  
Family Rhinobatidae

***Rhinobatos hynnicephalus*** Richardson, 1846 [Japanese name: Komon-sakatazame]

*Rhinobatos hynnicephalus*: Takegawa and Morino, 1970; Honma *et al.*, 1972; Tsuda, 1990; Uozu Aquarium, 1997; Honma, 2013.

***Rhinobatos schlegelii*** Muller and Henle, 1841 [Japanese name: Sakatazame]

*Rhinobatos schlegelii*: Mori, 1928; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Takegawa and Morino, 1970.

*Rhinobatos schlegelii*: Tsuda, 1990; Matsuura *et al.*, 2009; Hatooka *et al.*, 2013c.

*Rhinobatos granulates*: Honma, 2013.

Order Rajiformes  
Family Torpedinidae

***Narke japonica*** (Temminck and Schlegel, 1850) [Japanese name: Shibire-ei]

*Narke japonica*: Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Takegawa and Morino, 1970; Tsuda, 1990; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011.

\****Torpedo tokionis*** (Tanaka, 1908) [Japanese name: Yamato-shibire-ei]

*Torpedo tokionis*: Tsuda, 1990; Hatooka *et al.*, 2013a.

Family Rajidae

\****Bathyraya aleutica*** (Gilbert, 1896) [Japanese name: Aryūshan-kasube]

*Bathyraya aleutica*: Maeda and Tsutsui, 2003.

***Bathyraya bergi*** Dolganov, 1983 [Japanese name: Soko-gangi-ei] (Fig. 2AB)

*Breviraja isotrachys*: Honma, 1955d; Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma,

1963; Ouchi, 1963; Takegawa and Morino, 1970; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Hatooka and Yamada, 1993; Hatooka *et al.*, 2000, 2002.

*Breviraja (Bathyraja) isotrachys*: Ishiyama, 1967.

*Bathyraja bergi*: Dolganov, 1985; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Hatooka *et al.*, 2013b; Honma, 2013.

TS09-T035 (1), SMBS uncatalogued (1).

***Bathyraja smirnovi*** (Soldatov and Pavlenko, 1915) [Japanese name: Dobu-kasube]

*Raja smirnovi*: Soldatov and Pavlenko, 1915 (original description).

*Breviraja smirnovi*: Honma, 1955a; Matsubara, 1955; Kato, 1956; Mori, 1956a, c; Lindberg and Legeza, 1959; Ouchi, 1963; Ueno, 1971; Tsuda, 1990; Honma, 2013.

*Breviraya (Arctoraja) smirnovi*: Ishiyama, 1967.

*Breviraja smirnovi ankasube*: Honma and Kitami, 1978.

*Bathyraja smirnovi*: Takegawa and Morino, 1970; Ogata *et al.*, 1973; Nakaya and Shirai, 1992; Nambu *et al.*, 1992; Hatooka and Yamada, 1993; Uozu Aquarium, 1997; Hatooka *et al.*, 2000, 2002; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Hatooka *et al.*, 2013b.

TS09-T006 (2).

***Dipturus kwangtungensis*** (Chu, 1960) [Japanese name: Gangi-ei]

*Raja kenoei*: Mori and Uchida, 1934; Katayama, 1940; Hikita, 1950; Honma, 1952; Mori, 1952; Honma, 1955b; Kato, 1956; Mori, 1956a; Honma, 1963; Takegawa and Morino, 1970; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990.

*Dipturus kwangtungensis*: Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Hatooka *et al.*, 2013b; Honma, 2013.

\****Dipturus macrocauda*** (Ishiyama, 1955) [Japanese name: Kitsune-kasube]

*Dipturus macrocauda*: Hatooka *et al.*, 2013b.

#### Family Urolophidae

***Urolophus aurantiacus*** Müller and Henle, 1941 [Japanese name: Hirata-ei]

*Urolophus fuscus*: Honma, 1955c; Kato, 1956.

*Urolophus aurantiacus*: Mori, 1956a; Honma, 1963; Lindberg and Legeza, 1959; Takegawa and Morino, 1970; Honma and Kitami, 1978; Tsuda, 1990; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Honma, 2013; Yamaguchi *et al.*, 2013a.

#### Family Dasyatidae

***Dasyatis akajei*** (Müller and Henle, 1841) [Japanese name: Aka-ei]

*Dasyatis akajei*: Mori, 1928; Mori and Uchida, 1934; Mori, 1952; Honma, 1955b; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1959; Honma, 1963; Takegawa and Morino, 1970; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Matsuura *et al.*, 2009; Honma, 2013; Yamaguchi *et al.*, 2013b.

#### Order Albuliformes

##### Family Albulidae

***Pterothrissus gissu*** Hilgendorf, 1877 [Japanese name: Gisu]

*Pterothrissus gissu*: Tanaka, 1928; Katayama, 1940; Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma, 1963; Lindberg and Legeza, 1965; Takegawa and Morino, 1970; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Aizawa, 1993; Uozu Aquarium, 1997; Aizawa, 2000, 2002; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Aizawa and Doiuchi, 2013; Honma, 2013.

*Pterothrissus gissu* [*sic*]: Honma, 1952.

Order Anguilliformes  
Family Synbranchidae

\**Dysomma anguillare* Barnard, 1923 [Japanese name: Asaba-hora-anago]

*Dysomma anguillare*: Hatooka, 2013.

\**Meadia abyssalis* (Kamohara, 1938) [Japanese name: Hirejiro-anago]

*Meadia abyssalis*: Hatooka, 2013.

Family Ophichthidae

*Echelus uropterus* (Temminck and Schlegel, 1846) [Japanese name: Hire-anago]

*Echelus uropterus*: Honma, 1962, 1963; Lindberg and Legeza, 1965; Honma and Kitami, 1978; Tsuda, 1990; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

SMBS uncatalogued (1).

\**Ophichthus urolophus* (Temminck and Schlegel, 1847) [Japanese name: Suso-umihebi]

*Ophichthus urolophus*: Katayama, 1940; Kato, 1956; Mori, 1952, 1956a; Tsuda, 1990; Hatooka, 2013; Honma, 2013.

*Ophichthys urolophus*: Lindberg and Legeza, 1965.

*Ophisurus macrorhynchus* Bleeker, 1852 [Japanese name: Dainan-umihebi]

*Ophisurus macrorhynchus*: Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956; Honma, 1963; Mori, 1956a; Lindberg and Legeza, 1965; Takegawa and Morino, 1970; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

\**Pisodonophis cancrivorus* (Richardson, 1848) [Japanese name: Minami-umihebi]

*Pisodonophis cancrivorus*: Hatooka, 2013.

*Scolecenchelys fuscipennis* McCosker, Ide and Endo, 2012 [Japanese name: Tsumaguro-suso-umihebi]

*Scolecenchelys fuscipennis*: McCosker *et al.*, 2012 (original description); Honma, 2013.

Family Congridae

\**Ariosoma major* (Asano, 1958) [Japanese name: Ō-shiro-anago]

*Ariosoma majus* [*sic*]: Hatooka, 2013.

*Ariosoma meeki* (Jordan and Snyder, 1900) [Japanese name: Goten-anago]

*Anago anago*: Tsuda, 1990.

*Ariosoma meeki*: Matsuura *et al.*, 2009; Hatooka, 2013; Honma, 2013.

\**Ariosoma shiroanago* (Asano, 1958) [Japanese name: Shiro-anago]

*Ariosoma shiroanago shiroanago*: Asano, 1958; Lindberg and Legeza, 1965; Asano, 1988; Hatooka, 1993.

*Alloconger shiroanago*: Tsuda, 1990.

*Ariosoma shiroanago*: Hatooka, 2013.

***Conger myriaster*** (Brevoort, 1856) [Japanese name: Ma-anago]

*Astroconger myriaster*: Kato, 1956.

*Conger myriaster*: Ueno, 1971; Tsuda, 1990; Maeda and Tsutsui, 2003; Honma, 2013.

TS09-T001 (1), TS09-T034 (1), TS09-T101 (1).

*Remarks.* This species occurs at depths shallower than 100 m (Hatooka, 2013) but our specimens were collected at 200–251 m depth. Shinohara and Matsuura (1997) reported this species can be collected below 380 m depth in Suruga Bay, Japan.

\****Congriscus megastomus*** (Günther, 1877) [Japanese name: Oki-anago]

*Congriscus megastomus*: Hatooka, 2013.

\****Gnathophis ginanago*** (Asano, 1958) [Japanese name: Nise-gin-anago]

*Gnathophis ginanago*: Hatooka, 2013.

***Gnathophis nystromi nystromi*** (Jordan and Snyder, 1901) [Japanese name: Gin-anago]

*Rhynchocymba nystromi*: Katayama, 1940; Kato, 1956.

*Arisoma nystromi*: Honma, 1952.

*Rhynchocymba nystromi*: Mori, 1952, 1956a.

*Rhynchocymba nystromi nystromi*: Honma, 1956b, 1963; Lindberg and Legeza, 1965; Takegawa and Morino, 1970; Honma and Kitami, 1978.

*Rhynchocymba nystromi* subsp.: Honma, 1977.

*Gnathophis nystromi*: Honma, 1990.

*Gnathophis nystromi nystromi*: Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Honma, 2013.

*Gnathophis heterognathos*: Hatooka, 2013.

SMBS uncatalogued (1).

#### Order Argentiniformes

##### Family Argentinidae

\****Argentina kagoshimae*** Jordan and Snyder, 1902 [Japanese name: Kagoshima-nigisu]

*Argentina elongata kagoshimae*: Lindberg and Legeza, 1965.

*Argentina kagoshimae*: Horikawa, 1997; Hatooka, 2013.

***Glossanodon semifasciatus*** (Kishinouye, 1904) [Japanese name: Nigisu]

*Argentina semifasciata*: Kishinouye, 1904a (original description), b; Katayama, 1940; Matsubara, 1943a; Mori, 1952; Honma, 1952; Kato, 1956; Mori, 1956a; Honma, 1963; Ouchi, 1963; Lindberg and Legeza, 1965; Honma, 1977; Honma and Kitami, 1978.

*Glossanodon semifasciatus*: Honma and Kitami, 1967; Takegawa and Morino, 1970; Honma and Kitami, 1980; Hatooka, 1993; Suzuki *et al.*, 2000; Hatooka, 2000, 2002; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

#### Order Stomiiformes

##### Family Sternoptychidae

***Maurolicus japonicus*** Ishikawa, 1915 [Japanese name: Kyūri-eso]

*Maurolicus pennanti*: Mori and Uchida, 1934.

*Maurolicus japonicus*: Katayama, 1940; Honma, 1952; Matsubara, 1955; Kato, 1956; Lindberg and Legeza, 1965; Ogata *et al.*, 1973; Mori, 1956a; Honma, 1963; Takegawa and Morino, 1970; Tsuda, 1990; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011;

Aizawa and Doiuchi, 2013; Honma, 2013.

*Maurolicus pennanti japonicus*: Honma, 1968.

*Maurolicus muelleri*: Honma and Kitami, 1978; Fujii, 1988; Tsuda, 1990; Aizawa, 1993; Amaoka *et al.*, 1995; Uozu Aquarium, 1997; Sokolovskaya *et al.*, 1998.

*Maurolicus japoicus*: Aizawa, 1997.

TS09-T101 (5), TS10-OW18 (3).

\**Sternoptyx diaphana* Hermann, 1781 [Japanese name: Mune-eso]

*Sternoptyx diaphana*: Maeda and Tsutsui, 2003; Aizawa and Doiuchi, 2013.

#### Order Ateleopodiformes

##### Family Ateleopodidae

*Ateleopus japonicus* Bleeker, 1854 [Japanese name: Shachiburi]

*Ateleopus japonicus*: Kato, 1956; Lindberg and Legeza, 1965; Takegawa and Morino, 1970; Tsuda, 1990; Amaoka and Kobayashi, 2003; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Honma, 2013.

*Ateleopus purpureus*: Mori, 1956a.

*Ateleopus purpureus* Tanaka, 1990 [Japanese name: Murasaki-shachiburi]

*Ateleopus purpureus*: Kato, 1956; Tsuda, 1990; Suzuki *et al.*, 2000; Kobayashi *et al.*, 2006; Aizawa and Doiuchi, 2013.

#### Order Aulopiformes

##### Family Aulopodidae

*Aulopus japonicus* Günther, 1877 [Japanese name: Hime]

*Hime japonica*: Mori, 1952; Katayama, 1940; Honma, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma, 1963; Lindberg and Legeza, 1965; Takegawa and Morino, 1970; Honma, 1977; Honma and Kitami, 1978.

*Aulopus japonicus*: Tsuda, 1990; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013.

SMBS uncatalogued (2).

#### Family Chlorophthalmidae

*Chlorophthalmus albatrossis* Jordan and Starks, 1904 [Japanese name: Aome-eso]

*Chlorophthalmus albatrossis*: Katayama, 1940; Kato, 1956; Lindberg and Legeza, 1965; Tsuda, 1990; Shinohara *et al.*, 2011; Honma, 2013.

*Chlorophthalmus albatrossis* [*sic*]: Mori, 1956a.

*Chlorophthalmus albatrossis albatrossis*: Honma *et al.*, 1972.

#### Family Paralepididae

*Lestidium prolixum* Harry, 1953 [Japanese name: Namehadaka]

*Lestidium prolixum*: Suzuki *et al.*, 2000; Shinohara *et al.*, 2011.

Order Myctophiformes  
Family Myctophidae

- \****Diaphus watasei*** Jordan and Starks, 1904 [Japanese name: Hadaka-iwashi]  
*Diaphus coeruleus*: Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1965.  
*Diaphus watasei*: Tsuda, 1990.
- \****Myctophum asperum*** Richardson, 1845 [Japanese name: Ara-hadaka]  
*Myctophum asperum*: Mori, 1952.
- \****Myctophum nitidulum*** Garman, 1899 [Japanese name: Susuki-hadaka]  
*Myctophum affine*: Mori, 1952.
- \****Notoscopelus japonicus*** (Tanaka, 1908) [Japanese name: Ōkuchi-iwashi]  
*Notoscopelus elongatus*: Kato, 1956; Mori, 1956a.  
*Notoscopelus japonicus*: Tsuda, 1990; Nakabo, 1993b, 2000b, 2002b; Nakabo and Kai, 2013.

Order Lampridiformes  
Family Veliferidae

- Velifer hypselopterus*** Bleeker, 1879 [Japanese name: Kusa-aji]  
*Velifer hypselopterus*: Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1965; Fujii, 1988; Tsuda, 1990; Honma, 1991a; Aizawa, 1993, 2000, 2002; Shinohara *et al.*, 2011; Aizawa and Doiuchi, 2013; Honma, 2013.

Family Lampridae

- Lampris guttatus*** (Brünnich 1788) [Japanese name: Akamanbō]  
*Lampris regia*: Katayama, 1940; Honma, 1952; Tsuda, 1990.  
*Lampris regius*: Honma, 1955b; Kato, 1956; Mori, 1956a; Honma, 1963; Lindberg and Legeza, 1965; Honma and Kitami, 1978.  
*Lampris guttatus*: Fujii, 1988; Aizawa, 1993; Amaoka *et al.*, 1995; Uozu Aquarium, 1997; Aizawa, 2000, 2002; Kitagawa *et al.*, 2008; Aizawa and Doiuchi, 2013; Honma, 2013.

Family Lophotidae

- \****Eumecichthys fiski*** (Günther, 1890) [Japanese name: Tengunotachi]  
*Eumecichthys fiski*: Matsubara, 1955; Mori, 1956a; Tsuda, 1990; Amaoka *et al.*, 1995; Honma *et al.*, 1995; Hayashi, 2000, 2002, 2013.  
*Eumethichthys fiski*: Kamohara, 1942; Kato, 1956; Lindberg and Legeza, 1965; Fujii, 1988.  
*Eumethichthys fiskii*: Hayashi, 1993.  
*Eumecichthys fiskii*: Honma, 2013.
- Lophotus capellei*** Temminck and Schlegel, 1845 [Japanese name: Akanamada]  
*Lophotus capellei* [*sic*]: Tsuda, 1990.  
*Lophotus capellei*: Honma and Kitami, 1980; Honma and Mizusawa, 1981; Fujii, 1988; Amaoka *et al.*, 1995; Hayashi, 1993; Uozu Aquarium, 1997; Hayashi, 2000, 2002; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Hayashi, 2013; Honma, 2013.

Family Trachipteridae

- Desmodema polystictum*** (Ogilby, 1898) [Japanese name: Furisode-uo]

*Trachipterus misakiensis*: Matsubara, 1955; Kato, 1956; Mori, 1956a.

*Trachipterus misakiensis*: Lindberg and Legeza, 1965.

*Desmodema polystictum*: Fujii, 1988; Tsuda, 1990; Hayashi, 1993; Amaoka *et al.*, 1995; Tsuda, 1990; Hayashi, 2000, 2002; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Hayashi and Senou, 2013.

***Trachipterus ishikawae*** Jordan and Snyder, 1901 [Japanese name: Sakegashira]

*Trachipterus* sp.: Mori, 1952.

*Trachipterus ishikawai*: Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma, 1962, 1963, 1968; Takegawa and Morino, 1970; Ueno, 1971; Honma, 1977.

*Trachipterus ishikawae*: Honma and Kitami, 1967, 1978; Fujii, 1988; Tsuda, 1990; Uozu Aquarium, 1997; Hayashi, 1993; Amaoka *et al.*, 1995; Hayashi, 2000, 2002; Maeda and Tsutsui, 2003; Kobayashi *et al.*, 2006; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Hayashi and Senou, 2013; Honma, 2013.

*Trachipterus ishikawai*: Lindberg and Legeza, 1965.

TS09-T023 (1), TS09-T086 (1).

***Trachipterus trachipterus*** (Gmelin, 1789) [Japanese name: Tengaihata]

*Trachipterus iris*: Matsubara, 1955; Kato, 1956; Mori, 1956a; Tsuda, 1990.

*Trachipterus iris*: Lindberg and Legeza, 1965.

*Trachipterus trachipterus*: Fujii, 1988; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011.

***Zu cristatus*** (Bonelli, 1820) [Japanese name: Yuki-furisodeuo]

*Trachipterus ijimae*: Katayama, 1940.

*Trachipterus ijimae*: Honma, 1952.

*Trachipterus ijimai*: Matsubara, 1955; Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970.

*Trachipterus ijimai*: Lindberg and Legeza, 1965.

*Zu cristatus*: Tsuda, 1990; Amaoka *et al.*, 1995; Hayashi, 1993; Uozu Aquarium, 1997; Hayashi, 2000, 2002; Maeda and Tsutsui, 2003; Kobayashi *et al.*, 2006; Hayashi and Senou, 2013; Honma, 2013.

SMBS uncatalogued (1).

#### Family Regalecidae

***Regalecus russellii*** (Shaw, 1803) [Japanese name: Ryūgūnotsukai]

*Regalecus russellii*: Okada and Matsubara, 1938; Honma, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a, b; Honma, 1963; Honma and Kitami, 1967; Lindberg and Legeza, 1965; Ueno, 1971; Honma and Kitami, 1978; Fujii, 1988; Tsuda, 1990; Hayashi, 1993, 2000, 2002; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Hayashi, 2013; Honma, 2013.

*Regalecus russellii*: Takegawa and Morino, 1970.

#### Order Polymixiniiformes

##### Family Polymixiniidae

\****Polymixia japonica*** Günther, 1877 [Japanese name: Ginmedai]

*Polymixia japonica*: Tsuda, 1990.



Order Ophidiiformes  
Family Ophidiidae

***Hoplobrotula armata*** (Temminck and Schlegel, 1846) [Japanese name: Yoroi-itachi-uo]

*Hoplobrotula armata*: Katayama, 1940; Honma, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970; Lindberg and Krasnyukova, 1975; Tsuda, 1990; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

***Neobythites sivicola*** (Jordan and Snyder, 1901) [Japanese name: Shio-itachi-uo]

*Watasea sivicola*: Katayama, 1940; Honma, 1952; Mori, 1952.

*Neobythites sivicolus*: Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma, 1963; Takegawa and Morino, 1970; Lindberg and Krasnyukova, 1975; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Honma, 2013.

*Neobythites sivicola*: Uozu Aquarium, 1997; Machida, 1988; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

\****Ophidion asiro*** (Jordan and Fowler, 1902) [Japanese name: Ashiro]

*Otophidium asiro*: Mori, 1956a; Kato, 1956; Fowler, 1958; Lindberg and Krasnyukova, 1975.

*Ophidion asiro*: Tsuda, 1990; Nakabo and Kai, 2013.

\****Sirembo imberbis*** (Temminck and Schlegel, 1846) [Japanese name: Umidojō]

*Sirembo imberbis*: Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Fowler, 1958; Lindberg and Krasnyukova, 1975; Tsuda, 1990; Honma, 2013; Nakabo and Kai, 2013.

Order Gadiformes  
Family Moridae

***Lotella phycis*** (Temminck and Schlegel, 1846) [Japanese name: Iso-ainame]

*Lotella phycis*: Honma, 1952; Mori, 1952; Kato, 1956; Lindberg and Legeza, 1965; Tsuda, 1990; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Honma, 2013.

***Physiculus japonicus*** Hilgendorf, 1881 [Japanese name: Chigodara]

*Physiculus japonicus*: Katayama, 1940; Honma, 1952; Kato, 1956; Lindberg and Legeza, 1965; Tsuda, 1990; Suzuki *et al.*, 2000; Balushkin and Prirodina, 2008; Shinohara *et al.*, 2011; Honma, 2013.

Family Macrouridae

\****Abyssicola macrochir*** (Günther, 1877) [Japanese name: Tenaga-dara]

*Abyssicola macrochir*: Honma *et al.*, 2008; Honma, 2013.

\****Coelorhynchus japonicus*** (Temminck and Schlegel, 1846) [Japanese name: Tōjin]

*Coelorhynchus japonicus*: Katayama, 1940; Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1965; Tsuda, 1990; Nakabo and Kai, 2013.

***Coelorhynchus multispinulosus*** Katayama, 1942 [Japanese name: Yari-hige]

*Coelorhynchus multispinulosus*: Matsubara, 1955; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1965; Okamura, 1970; Honma and Kitami, 1978; Honma *et al.*, 1972; Tsuda, 1990; Shinohara *et al.*, 2011.

*Coelrorinchus multispinosus*: Nakabo, 1993b; Okamura, 1997; Nakabo, 2000b, 2002b; Honma, 2013; Nakabo and Kai, 2013.

- \**Coelorinchus parallelus* (Günther, 1877) [Japanese name: Soroi-hige]  
*Coelorinchus parallelus*: Kato, 1956; Lindberg and Legeza, 1965; Tsuda, 1990.

#### Family Bregmacerotidae

- \**Bregmaceros japonicus* Tanaka, 1908 [Japanese name: Sai-uo]  
*Bregmaceros japonicus*: Tanaka, 1913a; Jordan and Hubbs, 1925; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Lindberg and Legeza, 1965; Honma, 1968; Honma and Kitami, 1978; Tsuda, 1990.  
*Bregmaceros nectabanus* Whitley, 1941 [Japanese name: Toyama-sai-uo]  
*Bregmaceros nectabanus*: Masuda *et al.*, 1986; Tsuda, 1990; Nakabo, 1993b; Uozu Aquarium, 1997; Nakabo, 2000b; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.  
*Bregmaceros neonectabanus* Masuda, Ozawa and Tabeta, 1986 [Japanese name: Kurohara-sai-uo]  
*Bregmaceros neonectabanus*: Masuda *et al.*, 1986 (original description); Nakabo, 1993b, 2000b, 2002b.

#### Family Gadidae

- Gadus macrocephalus* Tilesius, 1810 [Japanese name: Madara]  
*Gadus macrocephalus*: Snyder, 1912; Mori, 1928; Mori and Uchida, 1934; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma, 1957b, 1963; Ouchi, 1963; Ueno, 1971; Ogata *et al.*, 1973; Honma and Kitami, 1978; Tsuda, 1990; Endo, 1997; Sokolovskaya *et al.*, 1998; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Balushkin and Prirodina, 2008; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013.  
*Gadus morhua macrocephalus*: Lindberg and Legeza, 1965; Adrianov and Kussakin, 1998.  
 KT-11-09-T1 (1), TS09-T011 (1), TS09-T038 (1).  
*Theragra chalcogramma* (Pallas, 1814) [Japanese name: Suketō-dara]  
*Theragra chalcogramma*: Mori, 1928; Mori and Uchida, 1934; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Katayama, 1952; Mori, 1952; Honma, 1955b; Matsubara, 1955; Kato, 1956; Mori, 1956a, c; Honma, 1963; Ouchi, 1963; Lindberg and Legeza, 1965; Ueno, 1971; Ogata *et al.*, 1973; Honma and Kitami, 1978; Honma and Kitami, 1978; Okamura, 1988; Tsuda, 1990; Nambu *et al.*, 1992; Nakabo, 1993b; Endo, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Balushkin and Prirodina, 2008; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.  
 KT-10-08-R2 (2), SMBS uncatalogued (2).

#### Order Lophiiformes

#### Family Lophiidae

- Lophiomus setigerus* (Vahl, 1797) [Japanese name: Ankō]  
*Lophiomus setigerus*: Mori, 1928; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Honma, 1963; Ueno, 1971; Honma and Kitami, 1978; Honma and Kitami, 1978; Tsuda, 1990; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013; Yamada and Yagishita, 2013.

***Lophius litulon*** (Jordan, 1902) [Japanese name: Ki-ankō]

*Lophius litulon*: Snyder, 1912; Mori, 1928; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Honma, 1963; Honma and Kitami, 1967; Ueno, 1971; Honma and Kitami, 1978; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013; Yamada and Yagishita, 2013.

TS09-T001 (1), TS09-T008 (1), TS09-T035 (1), TS09-T050 (1), TS09-T102 (1), SMBS uncatalogued (2).

## Family Chaunacidae

**\**Chaunax abei*** Le Danois, 1978 [Japanese name: Midori-fusa-ankō]

*Chaunax fimbriatus*: Katayama, 1940; Matsubara, 1955; Kato, 1956; Masuda *et al.*, 1975; Tsuda, 1990.

*Chaunax abei*: Lindberg *et al.*, 1997; Yamada and Yagishita, 2013.

## Family Ogcocephalidae

***Halieutaea stellata*** (Vahl, 1797) [Japanese name: Akagutsu]

*Halieutaea stellata*: Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Honma and Kitami, 1978; Tsuda, 1990; Suzuki *et al.*, 2000; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013; Yamada and Yagishita, 2013.

**\**Malthopsis lutea*** Alcock, 1891 [Japanese name: Fūryū-uo]

*Malthopsis lutea*: Mori, 1952; Kato, 1956; Mori, 1956a; Tsuda, 1990; Yamada, 2002.

*Malthopsis kobayashii*: Yamada and Yagishita, 2013.

## Family Ceratiidae

**\**Cryptosaras couesii*** Gill 1883 [Japanese name: Mitsukuri-enaga-chōchin-ankō]

*Cryptosaras couesi*: Okada and Matsubara, 1938; Matsubara, 1955.

*Cryptosaras coues* [*sic*]: Tsuda, 1990.

*Cryptosaras couesii*: Nakabo, 1993b, 2000b, 2002b.

## Family Himantolophidae

***Himantolophus sagamius*** (Tanaka, 1918) [Japanese name: Chōchin-ankō]

*Himantolophus groenlandicus*: Maeda and Tsutsui, 2003.

## Order Beryciformes

## Family Berycidae

***Beryx decadactylus*** Cuvier, 1829 [Japanese name: Nan'yō-kinme] (Fig. 2C)

*Beryx decadactylus*: Mori, 1952; Lindberg and Legeza, 1965; Honma *et al.*, 1990; Honma, 1991a; Uozu Aquarium, 1997; Honma, 2013.

SMBS uncatalogued (4).

***Beryx splendens*** Lowe 1834 [Japanese name: Kinmedai]

*Beryx splendens*: Katayama, 1940; Honma, 1952; Kato, 1956; Lindberg and Legeza, 1965; Tsuda, 1990; Uozu Aquarium, 1997; Kitagawa *et al.*, 2008; Honma, 2013.

## Order Zeiformes

## Family Zeidae

\**Zenion japonicum* Kamohara, 1934 [Japanese name: Soko-matōdai]

*Zenion japonicum*: Katayama, 1940; Kato, 1956; Lindberg and Legeza, 1965; Tsuda, 1990.

*Zenopsis nebulosa* (Temminck and Schlegel, 1845) [Japanese name: Kagamidai]

*Zenopsis nebulosa*: Mori and Uchida, 1934; Katayama, 1940; Mori, 1952; Kato, 1956; Mori, 1956a; Honma, 1962, 1963; Honma and Kitami, 1967; Lindberg and Legeza, 1965; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Uozu Aquarium, 1997; Sokolovskaya *et al.*, 1998; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Zeus nebulosa*: Honma, 1977.

TS09-T006 (1).

*Zeus faber* Linnaeus, 1758 [Japanese name: Matōdai]

*Zeus japonicus*: Mori, 1928; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Honma, 1955b; Kato, 1956; Mori, 1956a; Honma, 1963; Lindberg and Legeza, 1965; Takegawa and Morino, 1970; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990.

*Zeus faber*: Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

SMBS uncatalogued (1).

## Family Grammicolepididae

\**Xenolepidichthys dalgleishi* Gilchrist, 1922 [Japanese name: Hishi-matōdai]

*Xenolepidichthys dalgleishi*: Tsuda, 1990.

## Order Gasterosteiformes

## Family Macroramphosidae

\**Macroramphosus japonicus* (Günther, 1861) [Japanese name: Daikoku-sagifue]

*Macroramphosus japonicus* [*sic*]: Honma, 2013

*Macroramphosus japonicus*: Senou, 2013.

*Macroramphosus scolopax* (Linnaeus, 1758) [Japanese name: Sagifue]

*Macroramphosus sagifue*: Katayama, 1940; Honma, 1952.

*Macroramphosus scolopax*: Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970; Tsuda, 1990; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Kitagawa *et al.*, 2008; Honma, 2013; Senou, 2013.

## Order Scorpaeniformes

## Family Scorpaenidae

*Helicolenus avius* Abe and Eschmeyer, 1972 [Japanese name: Oki-kasago]

*Helicolenus avius*: Shinohara *et al.*, 2011.

*Helicolenus hilgendorfi* (Döderlein, 1884) [Japanese name: Yume-kasago]

*Helicolenus hilgendorfi*: Matsubara, 1943b, 1955; Mori, 1956a; Takegawa and Morino, 1970; Tsuda, 1990; Amaoka *et al.*, 1995; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

*Helicolenus dactylopterus*: Mori, 1952.

TS09-T036 (1), TS09-T037 (1), TS09-T056 (1).

***Hozukius emblemarius*** (Jordan and Starks, 1904) [Japanese name: Hōzuki]

*Hozukius emblemarius*: Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

\****Pontinus macrocephalus*** (Sauvage, 1882) [Japanese name: Hiodoshi]

*Pontinus macrocephalus*: Takegawa and Morino, 1970; Nakabo and Kai, 2013.

***Scorpaena neglecta*** Temminck and Schlegel, 1843 [Japanese name: Izu-kasago] (Fig. 2D)

*Scorpaena izensis*: Kato, 1956; Takegawa and Morino, 1970; Tsuda, 1990.

*Scorpaena neglecta*: Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Honma, 2013; Nakabo and Kai, 2013.

SMBS uncatalogued (2).

\****Scorpaena onaria*** Jordan and Snyder, 1900 [Japanese name: Fusa-kasago]

*Scorpaena neglecta*: Kato, 1956.

*Scorpaena neglecta neglecta*: Takegawa and Morino, 1970; Tsuda, 1990.

*Scorpaena onaria*: Nakabo, 1993b; Honma, 2013; Nakabo and Kai, 2013.

***Sebastes baramenuke*** (Wakiya, 1917) [Japanese name: Bara-menuke]

*Sebastes baramenuke*: Matsubara, 1943b (original description); Tomiyama and Abe, 1958; Honma *et al.*, 1984; Lindberg and Krasnyukova, 1987; Tsuda, 1990; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Sebastes (Acutomentum) baramenuke*: Mori, 1952.

SMBS uncatalogued (1).

***Sebastes glaucus*** Hilgendorf, 1880 [Japanese name: Kuro-menuke]

*Sebastodes glaucus*: Soldatov and Lindberg, 1930; Katayama, 1940.

*Sebastodes glaucus*: Katayama, 1940.

*Sebastes glaucus*: Kato, 1956; Ueno, 1971; Kanayama and Kitagawa, 1983; Lindberg and Krasnyukova, 1987; Amaoka, 1988; Tsuda, 1990; Nakabo, 1993b; Ishida, 1997; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

***Sebastes itinus*** (Jordan and Starks, 1904) [Japanese name: Yanagi-mebaru]

*Sebastes itinus*: Honma, 1955d; Kato, 1956; Tsuda, 1990; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

***Sebastes matsubarae*** Hilgendorf, 1880 [Japanese name: Akōdai]

*Sebastodes matsubarae*: Hilgendorf, 1880 (original description); Katayama, 1940.

*Sebastes matsubarae*: Matsubara, 1943b; Honma, 1952; Tomiyama and Abe, 1958; Uozu Aquarium, 1997; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Sebastes matsubarai*: Kato, 1956; Mori, 1956a; Lindberg and Krasnyukova, 1987; Tsuda, 1990.

***Sebastes owstoni*** (Jordan and Thompson, 1914) [Japanese name: Hatsume]

*Sebastodes ruber*: Pavlenko, 1910 (original description); Soldatov and Lindberg, 1930.

*Sebastodes owstoni*: Mori and Uchida, 1934; Hikita, 1950.

*Sebastes owstoni*: Okada and Matsubara, 1938; Katayama, 1940; Matsubara, 1943b; Honma, 1952; Katayama, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma, 1963; Ouchi, 1963; Honma and Kitami, 1970; Takegawa and Morino, 1970; Ueno, 1971; Ogata *et al.*, 1973; Honma, 1977; Honma and Kitami, 1978; Kanayama and Kitagawa, 1983; Lindberg and Krasnyukova, 1987; Amaoka, 1988; Tsuda, 1990; Nambu *et al.*, 1992; Nakabo, 1993b; Amaoka *et al.*, 1995; Ishida, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b; Suzuki

*et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Matsuura *et al.* 2009; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Sebastes (Hatsumeus) owstoni*: Mori, 1952.

TS09-T018 (1), TS09-T034 (1), TS09-T037 (2) TS09-T039 (2), TS09-T101 (1), TS09-T102 (1).

***Sebastes steindachneri*** Hilgendorf, 1880 [Japanese name: Yanaginomai]

*Sebastes steindachneri*: Hilgendorf, 1880 (original description); Honma, 1952; Kato, 1956; Uchi, 1963; Ueno, 1971; Amaoka, 1988; Tsuda, 1990; Nakabo, 1993b; Amaoka *et al.*, 1995; Ishida, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Matsuura *et al.* 2009; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Sebastodes steindachneri*: Soldatov and Lindberg, 1930.

***Sebastiscus albofasciatus*** (Lacepède, 1802) [Japanese name: Ayame-kasago]

*Sebastiscus albofasciatus*: Kato, 1956; Takegawa and Morino, 1970; Shimizu, 1988; Tsuda, 1990; Nakabo, 1993b; Ishida, 1997; Nakabo, 2000b, Suzuki *et al.*, 2000; Nakabo, 2002b; Honma, 2013; Nakabo and Kai, 2013.

\****Sebastolobus macrochir*** (Günther, 1877) [Japanese name: Kichiji]

*Sebastolobus macrochir*: Mori, 1952; Honma, 1952; Kato, 1956; Mori, 1956a; Tsuda, 1990; Sokolovskaya *et al.*, 1998; Honma, 2013; Nakabo and Kai, 2013.

***Setarches longimanus*** (Alcock, 1894) [Japanese name: Aka-kasago]

*Setarches longimanus*: Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

#### Family Triglidae

***Chelidonichthys spinosus*** (McClelland, 1843) [Japanese name: Hōbō]

*Chelidonichthys kumu*: Snyder, 1912; Mori, 1928; Matsubara and Hiyama, 1932; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Honma, 1955b; Kato, 1956; Mori, 1956a; Honma, 1963; Takegawa and Morino, 1970; Honma, 1977; Honma and Kitami, 1978; Sokolovskaya *et al.*, 1998.

*Chelidonichthys kum* [sic]: Ueno, 1971.

*Chelidonichthys spinosus*: Tsuda, 1990; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013; Yamada and Yagishita, 2013.

*Trigla (Chelidonichthys) kumu*: Adrianov and Kussakin, 1998.

SMBS uncatalogued (1).

***Lepidotrigla abyssalis*** Jordan and Starks, 1902 [Japanese name: Soko-kanagashira]

*Lepidotrigla abyssalis*: Katayama, 1940; Honma, 1952; Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970; Tsuda, 1990; Suzuki *et al.*, 2000; Matsuura *et al.* 2009; Shinohara *et al.*, 2011; Honma, 2013; Yamada and Yagishita, 2013.

SMBS uncatalogued (1).

***Lepidotrigla guentheri*** Hilgendorf, 1879 [Japanese name: Kanado]

*Lepidotrigla guentheri*: Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Kato, 1956; Honma, 1963, 1977; Honma and Kitami, 1978.

*Lepidotrigla guentheri*: Mori, 1952, 1956a; Tomiyama and Abe, 1958; Lindberg and Krasnyukova, 1987; Tsuda, 1990; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011.

***Lepidotrigla microptera*** Günther, 1873 [Japanese name: Kanagashira]

*Lepidotrigla strauchi*: Snyder, 1912.

*Lepidotrigla microptera*: Katayama, 1940; Hikita, 1950; Honma, 1952; Mori, 1952; Honma, 1956b; Kato, 1956; Mori, 1956a; Honma, 1963; Takegawa and Morino, 1970; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Matsuura *et al.* 2009; Shinohara *et al.*, 2011; Honma, 2013; Yamada and Yagishita, 2013.

SMBS uncatalogued (1).

***Peristedion orientale*** Temminck and Schlegel, 1843 [Japanese name: Kihōbō]

*Peristedion orientale*: Mori, 1928; Mori and Uchida, 1934; Katayama, 1940; Mori, 1952; Kato, 1956; Honma *et al.*, 1972; Tsuda, 1990; Matsuura *et al.* 2009; Shinohara *et al.*, 2011; Honma, 2013; Yamada and Yagishita, 2013.

\****Satyrichthys rieffeli*** (Kaup, 1859) [Japanese name: Iso-kihōbō]

*Satyrichthys rieffeli*: Kato, 1956; Tsuda, 1990.

\****Scalicus amiscus*** (Jordan and Starks, 1904) [Japanese name: Hige-kihōbō]

*Satyrichthys amiscus*: Tsuda, 1990.

#### Family Hoplichthyidae

\****Hoplichthys filamentosus*** Matsubara and Ochiai, 1950 [Japanese name: Ito-harigochi]

*Hoplichthys filamentosus*: Nakabo and Kai, 2013.

\****Hoplichthys gilberti*** Jordan and Richardson, 1908 [Japanese name: Soko-harigochi]

*Hoplichthys gilberti*: Nakabo and Kai, 2013.

\****Hoplichthys langsdorfii*** Cuvier, 1829 [Japanese name: Natsu-harigochi]

*Hoplichthys langsdorfii*: Matsubara and Ochiai, 1950; Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970; Tsuda, 1990.

\****Hoplichthys regani*** Jordan, 1908 [Japanese name: Harigochi]

*Hoplichthys regani*: Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970; Tsuda, 1990.

#### Family Bembridae

***Bembras japonicus*** Cuvier, 1829 [Japanese name: Akagochi]

*Bembras japonica*: Mori, 1956a.

*Bembras japonicus*: Katayama, 1940; Kato, 1956; Lindberg and Krasnyukova, 1987; Tsuda, 1990; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

***Parabembras curtus*** (Temminck and Schlegel, 1843) [Japanese name: Ubagochi]

*Parabembras curtus*: Mori, 1928; Takegawa and Morino, 1970; Tsuda, 1990; Nakabo and Kai, 2013.

*Parabembras curta*: Shinohara *et al.*, 2011.

#### Family Dactylopteridae

\****Dactyloptena orientalis*** Cuvier, 1829 [Japanese name: Semihōbō]

*Dactyloptena orientalis*: Kato, 1956; Ueno, 1971; Honma, 2013; Tsuda, 1990.

***Daicocus peterseni*** (Nyström, 1887) [Japanese name: Hoshi-semihōbō]

*Daicocus peterseni*: Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Honma, 1956b; Kato, 1956; Honma, 1963; Takegawa and Morino, 1970; Honma and Kitami, 1978; Lindberg *et al.*, 1997; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Matsuura *et al.*, 2009; Honma, 2013; Nakabo and Doiuchi, 2013.

## Family Anolopomatidae

\**Anoplopoma fimbria* (Pallas, 1814) [Japanese name: Gindara]

*Anoplopoma fimbria*: Maeda and Tsutsui, 2003.

\**Erilepis zonifer* (Lockington, 1880) [Japanese name: Aburabōzu]

*Erilepis zonifer*: Nakabo and Kai, 2013.

## Family Ereuniidae

*Marukawichthys ambulator* Sakamoto, 1931 [Japanese name: Marukawa-kajika]

*Marukawichthys ambulator*: Sakamoto, 1931 (original description); Katayama, 1940; Honma, 1955a, c; Matsubara, 1955; Watanabe, 1960; Honma, 1963; Takegawa and Morino, 1970; Lindberg and Krasnyukova, 1975; Honma and Kitami, 1978; Yabe, 1988; Tsuda, 1990; Nakabo, 1993b; Uozu Aquarium, 1997; Nakabo, 2000b, 2002b; Sideleva *et al.*, 2006a; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

*Marukawichthys ambulator* [sic]: Kato, 1956.

*Marukawichthys ambulatory* [sic]: Honma, 2013.

## Family Cottidae

*Alcichthys elongatus* (Steindachner, 1881) [Japanese name: Niji-kajika]

*Alcichthys alcicornis*: Kato, 1956; Watanabe, 1960; Ouchi, 1963; Tsuda, 1990; Amaoka *et al.*, 1995; Yabe, 1997.

*Alcichthys okiensis*: Kato, 1956; Mori, 1956d (original description).

*Alcichthys elongatus*: Maeda and Tsutsui, 2003; Sideleva *et al.*, 2006a; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Honma, 2013; Nakabo and Kai, 2013.

*Artdiellus aporosus* Soldatov, 1922 [Japanese name: Madara-okikajika]

*Artdiellus aporosus*: Okada and Matsubara, 1938; Sideleva *et al.*, 2006b; Nakabo and Kai, 2013.

\**Artdiellus camchaticus* Gilbert and Burke, 1912 [Japanese name: Kamuchakka-kajika]

*Artdiellus camchaticus*: Okada and Matsubara, 1938; Nakabo and Kai, 2013.

*Artdiellus dydymovi* Soldatov, 1915 [Japanese name: Kobu-okikajika]

*Artdiellus dydymovi*: Okada and Matsubara, 1938; Ueno, 1971; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Nakabo and Kai, 2013.

*Artdiellus dydymovi dydymovi*: Ouchi, 1963; Yabe, 1988; Tsuda, 1990; Amaoka *et al.*, 1995; Sideleva *et al.*, 2006b; Honma, 2013.

TS09-T008 (2).

*Artdiellus fuscimentus* Nelson, 1986 [Japanese name: Nodoguro-okikajika]

*Artdiellus fuscimentus*: Nakabo, 1993b, 2000b, 2002b; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

TS09-T047 (3), TS09-T049 (1), TS09-T088 (1).

*Artdiellus ochotensis* Gilbert and Burke, 1912 [Japanese name: Ohōtsuku-kajika]

*Artdiellus ochotensis*: Okada and Matsubara, 1938; Ueno, 1971; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Sideleva *et al.*, 2006b; Nakabo and Kai, 2013.

*Cottiusculus gonez* Jordan and Starks, 1904 [Japanese name: Oki-himekajika]

*Cottiusculus gonez*: Okada and Matsubara, 1938; Mori, 1952; Matsubara, 1955; Kato, 1956;



Watanabe, 1960; Takegawa and Morino, 1970; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978; Yabe, 1988; Nakabo, 1993b; Amaoka *et al.*, 1995; Yabe, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Sideleva *et al.*, 2006b; Honma, 2013; Nakabo and Kai, 2013.

*Cottiusculus gonez gonez*: Tsuda, 1990.

KT-11-09-N2 (3), KT-11-09-T6 (1).

***Cottiusculus nihonkaiensis*** Kai and Nakabo, 2009 [Japanese name: Nihon-kin-kajika]

*Cottiusculus schmidti* (not of Jordan and Starks, 1904): Kato, 1956; Watanabe, 1960; Ouchi, 1963; Ueno, 1971; Yabe, 1988; Tsuda, 1990; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008.

*Cottiusculus schmidti* (not of Jordan and Starks, 1904): Amaoka *et al.*, 1995 (in part).

*Cottiusculus nihonkaiensis*: Kai and Nakabo, 2009 (original description); Honma, 2013.

TS09-T088 (1), TS09-T107 (76), SMBS uncatalogued (2).

***Enophrys diceraus*** (Pallas, 1787) [Japanese name: Oni-kajika]

*Ceratocottus namiyæ*: Snyder, 1912.

*Ceratocottus namiyei*: Okada and Matsubara, 1938.

*Ceratocottus diceraus namiyei*: Kato, 1956.

*Ceratocottus diceraus*: Watanabe, 1960.

*Enophrys diceraus*: Ueno, 1971; Tsuda, 1990; Amaoka *et al.*, 1995; Yabe, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Sideleva *et al.*, 2006a; Kitagawa *et al.*, 2008; Nakabo and Kai, 2013.

*Enophrys diceratus* [*sic*]: Honma, 2013.

***Gymnocanthus detrisus*** Gilbert and Burke, 1912 [Japanese name: Sebiro-kajika]

*Gymnocanthus detrisus*: Okada and Matsubara, 1938; Matsubara, 1955; Ueno, 1971; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Sideleva *et al.*, 2006a; Nakabo and Kai, 2013.

\****Gymnocanthus galeatus*** Bean, 1881 [Japanese name: Chikame-kajika]

*Gymnocanthus galeatus*: Nakabo and Kai, 2013.

***Gymnocanthus herzensteini*** Jordan and Starks, 1904 [Japanese name: Tsumaguro-kajika]

*Gymnocanthus herzensteini*: Snyder, 1912; Hikita, 1950; Kato, 1956; Watanabe, 1960; Ouchi, 1963; Ueno, 1971; Yabe, 1988; Tsuda, 1990; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Sideleva *et al.*, 2006a; Kitagawa *et al.*, 2008; Honma, 2013.

***Gymnocanthus intermedius*** (Temminck and Schlegel, 1843) [Japanese name: Ai-kajika]

*Gymnocanthus ventralis*: Mori, 1928; Okada and Matsubara, 1938; Mori, 1952; Matsubara, 1955; Kato, 1956; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990.

*Gymnocanthus intermedius*: Mori and Uchida, 1934; Watanabe, 1960; Nakabo, 1993b; Amaoka *et al.*, 1995; Uozu Aquarium, 1997; Yabe, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Sideleva *et al.*, 2006a; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Honma, 2013; Nakabo and Kai, 2013.

***Gymnocanthus pistilliger*** (Pallas, 1814) [Japanese name: Hage-kajika]

*Gymnocanthus pistilliger*: Matsubara, 1955; Kato, 1956; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Nakabo, 1993b; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Sideleva *et al.*, 2006a; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Honma, 2013; Nakabo and Kai, 2013.

***Hemilepidotus gilberti*** Jordan and Starks, 1904 [Japanese name: Yokosujikajika]

*Hemilepidotus gilberti*: Okada and Matsubara, 1938; Ueno, 1971; Tsuda, 1990; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Sideleva *et al.*, 2006a; Nakabo and Kai, 2013.

\**Hemilepidotus papilio* (Bean, 1880) [Japanese name: Kujaku-kajika]

*Melletes pacificus*: Ueno, 1971.

*Hemilepidotus papilio*: Nakabo and Kai, 2013.

*Icelus cataphractus* (Pavlenko, 1910) [Japanese name: Kōrikajika]

*Icelus spiniger cataphractus*: Kato, 1956; Mori, 1956a; Honma, 1963; Ouchi, 1963; Takegawa and Morino, 1970; Honma, 1977; Honma and Kitami, 1978; Lindberg and Krasnyukova, 1987; Adrianov and Kussakin, 1998; Sideleva *et al.*, 2006a.

*Icelus spiniger*: Katayama, 1940; Hikita, 1950; Honma, 1952; Mori, 1952; Kato, 1956; Oshima, 1957; Watanabe, 1960; Ouchi, 1963; Ueno, 1971; Tsuda, 1990.

*Icelus cataphract* [*sic*]: Ueno, 1971.

*Icelus cataphractus*: Nakabo, 1993b; Amaoka *et al.*, 1995; Yabe, 1997; Sokolovskaya *et al.*, 1998; Suzuki *et al.*, 2000; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

KT-10-08-R1 (20).

*Icelus gilberti* Taranetz, 1936 [Japanese name: Daruma-kōrikajika]

*Icelus gilberti*: Taranetz, 1936 (original description); Ueno, 1971; Yabe, 1988; Sokolovskaya *et al.*, 1998; Sideleva *et al.*, 2006a.

*Icelus rastrinoides* Taranetz, 1936 [Japanese name: Nise-matsu-kajika]

*Icelus rastrinoides*: Taranetz, 1936 (original description); Matsubara, 1955; Ueno, 1971; Sokolovskaya *et al.*, 1998; Siderleva *et al.*, 2006a.

*Icelus stenosomus* Andriashev, 1937 [Japanese name: Yase-kōri-kajika]

*Icelus uncinialis*: Okada and Matsubara, 1938; Mori, 1952; Ueno, 1971.

*Icelus uncinialis stenosomus*: Kato, 1956; Honma, 1957a, 1963a; Ouchi, 1963; Honma and Kitami, 1970, 1978; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Sideleva *et al.*, 2006a.

*Icelus stenosomus*: Nakabo, 1993b; Murai *et al.*, 1994; Nakabo, 2000b, 2002b; Honma, 2013; Nakabo and Kai, 2013.

*Icelus toyamensis* (Matsubara and Iwai, 1951) [Japanese name: Tomi-kajika] (Fig. 4E)

*Ricuzenius (Alloricuzenius) toyamensis*: Matsubara and Iwai, 1951a; Watanabe, 1960.

*Ricuzenius toyamensis*: Matsubara, 1955; Honma, 1957a, 1963; Ouchi, 1963; Honma, 1977; Honma and Kitami, 1978; Lindberg and Krasnyukova, 1987; Yabe, 1988; Tsuda, 1990; Uozo Aquarium, 1997; Sideleva *et al.*, 2006a.

*Icelus toyamensis*: Nakabo, 1993b, 2000b, 2002b; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

SMBS uncatalogued (1).

*Myoxocephalus jaok* (Cuvier, 1829) [Japanese name: Oku-kajika]

*Myoxocephalus edomius*: Kato, 1956.

*Myoxocephalus jaok*: Watanabe, 1960; Yabe, 1988; Tsuda, 1990; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Sideleva *et al.*, 2006a; Kitagawa *et al.*, 2008; Honma, 2013; Nakabo and Kai, 2013.

\**Myoxocephalus niger* (Bean, 1881) [Japanese name: Ke-kajika]

*Myoxocephalus niger*: Watanabe, 1960; Ueno, 1971; Yabe, 1988; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998.

***Myoxocephalus polyacanthocephalus*** (Pallas, 1814) [Japanese name: Toge-kajika]

*Myoxocephalus polyacanthocephalus*: Snyder, 1912; Watanabe, 1960; Ueno, 1971; Yabe, 1988; Tsuda, 1990; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Sideleva *et al.*, 2006a; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Honma, 2013; Nakabo and Kai, 2013.

*Ainocottus ensiger*: Hikita, 1950; Kato, 1956; Ueno, 1971; Tsuda, 1990.

**\**Ricuzenius pinetorum*** Jordan and Starks, 1904 [Japanese name: Matsu-kajika]

*Ricuzenius pinetorum*: Watanabe, 1960; Ueno, 1971; Yabe, 1988; Tsuda, 1990; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Honma, 2013; Nakabo and Kai, 2013.

***Stelgistrum stejneri*** Jordan and Gilbert, 1898 [Japanese name: Ottosei-kajika]

*Stelgistrum stejneri*: Okada and Matsubara, 1938; Ueno, 1971; Nakabo and Kai, 2013.

*Stelgistrum steinigeri* [sic]: Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Sideleva *et al.*, 2006a.

***Taurocottus bergii*** Soldatov and Pavlenko, 1915 [Japanese name: Kiri-kajika]

*Taurocottus bergii*: Okada and Matsubara, 1938; Ueno, 1971; Yabe, 1988; Amaoka *et al.*, 1995; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Sideleva *et al.*, 2006a.

*Taurocottus bergii*: Nakabo and Kai, 2013.

KT-10-08-R1 (3).

***Triglops jordani*** (Jordan and Starks, 1904) [Japanese name: Karafuto-kajika]

*Triglops jordani*: Okada and Matsubara, 1938; Matsubara, 1955; Ueno, 1971; Lindberg and Krasnyukova, 1987; Tsuda, 1990; Pietsch, 1993; Nakabo, 1993b; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Sideleva *et al.*, 2006a; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

***Triglops pingelii*** Reinhardt, 1837 [Japanese name: Hokkyoku-kajika]

*Triglops beani*: Okada and Matsubara, 1938; Honma, 1952; Mori, 1952; Ueno, 1971; Tsuda, 1990.

*Triglops pingelii beani*: Matsubara, 1955; Honma, 1963.

*Triglops pingelii beani*: Kato, 1956; Honma and Kitami, 1978.

*Triglops pingelii*: Lindberg and Krasnyukova, 1987; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Pietsch, 1993; Nakabo, 1993b.

*Triglops pingelii*: Sideleva *et al.*, 2006a; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

*Triglops pingelii pingelii*: Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003.

*Triglops pingelii pingelii*: Honma, 2013.

***Triglops szepticus*** Gilbert, 1896 [Japanese name: Nirami-kajika]

*Triglops szepticus*: Okada and Matsubara, 1938; Honma, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a, c; Honma, 1963; Ouchi, 1963; Takegawa and Morino, 1970; Ueno, 1971; Ogata *et al.*, 1973; Honma, 1977; Honma and Kitami, 1978; Lindberg and Krasnyukova, 1987; Tsuda, 1990; Nambu *et al.*, 1992; Pietsch, 1993; Nakabo, 1993b; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Sideleva *et al.*, 2006a; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Triglops uchidai*: Watanabe, 1960.

KT-10-08-R1 (15), SMBS uncatalogued (2).

## Family Hemitripterae

***Hemitripterus villosus*** (Pallas, 1814) [Japanese name: Kemushi-kajika]

*Hemitripterus villosus*: Okada and Matsubara, 1938; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma, 1963; Honma and Kitami, 1970; Takegawa and Morino, 1970; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978; Nakabo, 1993b; Amaoka *et al.*, 1995; Uozu Aquarium, 1997; Yabe, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Mecklenburg, 2003; Sideleva *et al.*, 2006b; Kitagawa *et al.*, 2008; Matsuura *et al.*, 2009; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Hemitripterus (americanus) villosus*: Tsuda, 1990.

***Nautichthys pribilovius*** (Jordan and Gilbert, 1898) [Japanese name: Okoze-kajika]

*Nautichthys oculo-fasciatus*: Okada and Matsubara, 1938; Matsubara, 1955; Ueno, 1971.

*Nautichthys pribilovius*: Adrianov and Kussakin, 1998; Maeda and Tsutsui, 2003; Mecklenburg, 2003; Balanov *et al.*, 2006; Sideleva *et al.*, 2006a; Nakabo and Kai, 2013.

## Family Agonidae

***Anoplagonus occidentalis*** Lindberg, 1950 [Japanese name: Nise-name-tokubire]

*Anoplagonus occidentalis*: Ueno, 1971; Kanayama and Maruyama, 1979; Kanayama, 1991; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Kitagawa *et al.*, 2008; Sheiko and Fedorov, 2010; Honma, 2013; Nakabo and Kai, 2013.

**\**Aspidophoroides monopterygius*** (Bloch, 1786) [Japanese name: Tate-tokubire]

*Aspidophoroides bartoni*: Ueno, 1971; Tsuda, 1990; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998.

*Aspidophoroides monopterygius*: Kanayama, 1991; Nakabo, 1993b; Amaoka *et al.*, 1995; Kitagawa *et al.*, 2008; Maeda and Tsutsui, 2003.

***Freemanichthys thompsoni*** (Jordan and Gilbert, 1898) [Japanese name: Yase-tokubire]

*Podothecus thompsoni*: Mori, 1928; Mori and Uchida, 1934; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Ouchi, 1963; Ueno, 1971; Lindberg and Krasnyukova, 1987; Tsuda, 1990; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998.

*Freemanichthys thompsoni*: Kanayama, 1991; Nakabo, 1993b; Amaoka *et al.*, 1995; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Sheiko and Fedorov, 2010; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

*Freemanichthys thompsoni* [sic]: Honma, 2013.

KT-10-08-R1 (2).

***Hypsagonus quadricornis*** (Valenciennes, 1829) [Japanese name: Tsuno-shachi-uo]

*Hypsagonus quadricornis corniger*: Taranetz, 1933.

*Hypsagonus quadricornis*: Honma, 1955d; Kato, 1956; Honma, 1963; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Kanayama, 1991; Nakabo, 1993b; Sheiko, 1993; Amaoka *et al.*, 1995; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

**\**Leptagonus frenatus*** (Gilbert, 1896) [Japanese name: Yase-tengu-tokubire]

*Sarritor frenatus*: Kato, 1956.

*Leptagonus frenatus*: Oshima, 1957; Kanayama, 1991; Nakabo, 1993b; Amaoka *et al.*, 1995;

Nakabo, 2000b, 2002b; Nakabo and Kai, 2013.

*Leptogonus frenatus* [*sic*]: Honma, 2013.

***Leptogonus leptorhynchus*** (Gilbert, 1896) [Japanese name: Tengu-tokubire]

*Sarritor leptorhynchus knipowitschi*: Lindberg and Andriashev, 1937; Honma, 1963; Takegawa and Morino, 1970; Lindberg and Krasnyukova, 1987.

*Sarritor leptorhynchus*: Katayama, 1940; Honma, 1952; Kato, 1956; Oshima, 1957; Mori, 1956a; Ouchi, 1963; Ueno, 1971; Uozu Aquarium, 1997.

*Saritor leptorhynchus* [*sic*]: Katayama, 1952.

*Sarritor leptorhynchus leptorhynchus*: Matsubara, 1955; Honma, 1977; Tsuda, 1990.

*Leptogonus leptorhynchus*: Kanayama, 1991; Nakabo, 1993b; Amaoka *et al.*, 1995; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Kitagawa *et al.*, 2008; Sheiko and Fedorov, 2010; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

*Sarritor knipowitschi*: Ueno, 1971; Sheiko and Fedorov, 2010.

*Leptogonus leptorhynchus* [*sic*]: Honma, 2013.

TS09-T117 (3).

\****Ocella iburia*** (Jordan and Starks, 1904) [Japanese name: Saburō]

*Ocella iburia*: Kato, 1956; Tsuda, 1990; Honma, 2013.

***Ocella kuronumai*** (Freeman, 1951) [Japanese name: Shirō]

*Ocella kuronumai*: Freeman, 1951 (original description); Honma and Kitami, 1970; Honma *et al.*, 1972; Honma and Kitami, 1978; Tsuda, 1990.

*Ocella kuronumai*: Kanayama, 1991; Nakabo, 1993b; Uozu Aquarium, 1997; Nakabo, 2000b, 2002b; Sheiko and Fedorov, 2010; Nakabo and Kai, 2013.

***Percis japonica*** (Pallas, 1769) [Japanese name: Inugochi]

*Percis japonica*: Tanaka, 1927; Mori, 1928; Mori and Uchida, 1934; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Honma, 1963; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Maeda and Tsutsui, 2003; Sheiko and Fedorov, 2010; Nakabo and Kai, 2013.

*Percis japonicus*: Kanayama, 1991; Nakabo, 1993b; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Honma, 2013.

***Podothecus sachi*** (Jordan and Snyder, 1901) [Japanese name: Tokubire]

*Podothecus xystes*: Snyder, 1911 (original description); Okada and Matsubara, 1938; Kato, 1956.

*Podothecus sachi*: Hikita, 1950; Kato, 1956; Ueno, 1971; Tsuda, 1990; Kanayama, 1991; Nakabo, 1993b; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Sheiko and Fedorov, 2010; Honma, 2013; Nakabo and Kai, 2013.

SMBS uncatalogued (2).

***Podothecus sturioides*** (Guichenot, 1869) [Japanese name: Same-tokubire]

*Podothecus gilberti*: Kato, 1956; Ueno, 1971; Adrianov and Kussakin, 1998.

*Podothecus sturioides*: Nakabo, 1993b; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Sheiko and Fedorov, 2010; Honma, 2013; Nakabo and Kai, 2013.

***Podothecus veterinus*** Jordan and Starks, 1895 [Japanese name: Onaga-tokubire]

*Podothecus veterinus*: Kanayama, 1991; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Sheiko and Fedorov, 2010.

***Tilesina gibbosa*** Schmidt, 1904 [Japanese name: Oni-shachi-uo]

*Tilesina gibbosa*: Okada and Matsubara, 1938; Kato, 1956; Ueno, 1971; Tsuda, 1990; Kanayama, 1991; Nakabo, 1993b; Amaoka *et al.*, 1995; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Sheiko and Fedorov, 2010; Honma, 2013; Nakabo and Kai, 2013.

*Tilesina hubbsi*: Freeman, 1951 (original description).

#### Family Psychrolutidae

***Dasycottus setiger*** Bean, 1890 [Japanese name: Ganko]

*Dasycottus setiger*: Jordan and Evermann, 1898; Snyder, 1912; Soldatov and Lindberg, 1930; Schmidt, 1950; Oshima, 1957; Watanabe, 1960; Ueno, 1971; Yabe, 1988; Lindberg and Krasnyukova, 1987; Tsuda, 1990; Nakabo, 1993b; Amaoka *et al.*, 1995; Yabe, 1997; Sokolovskaya *et al.*, 1998; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Dasycottus japonicus*: Tanaka, 1914b; Okada and Matsubara, 1938; Katayama, 1940; Hikita, 1950; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma, 1963; Ouchi, 1963; Honma and Kitami, 1970; Ueno, 1971; Ogata *et al.*, 1973; Honma, 1977; Honma and Kitami, 1978; Lindberg and Krasnyukova, 1987.

*Dasycottus* sp.: Mori, 1952.

*Dasycottus uchidai*: Mori, 1955 (original description); Kato, 1956; Mori, 1956a, c; Takegawa and Morino, 1970.

*Dasycottus longidorosalis* [*sic*]: Kato, 1956.

*Dasycottus longipinnis*: Mori, 1956a (original description).

TS09-T001 (3), TS09-T056 (1).

\****Eurymen gyrinus*** Gilbert and Burke, 1912 [Japanese name: Yagishiri-kajika]

*Eurymen bassargini*: Soldatov and Lindberg, 1930 (original description); Okada and Matsubara, 1938, 1955; Watanabe, 1960; Adrianov and Kussakin, 1998.

*Eurymen gyrinus*: Okada and Matsubara, 1938; Yabe, 1988; Nakabo, 1993b; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Nakabo and Kai, 2013.

*Gilbertidia ochotensis*: Watanabe, 1960.

*Eurymen gurinus* [*sic*]: Ueno, 1971.

***Malacocottus gibber*** Sakamoto, 1930 [Japanese name: Yamato-kobushi-kajika]

*Malacocottus gibber*: Sakamoto, 1930 (original description); Okada and Matsubara, 1938; Katayama, 1940; Matsubara, 1955; Honma, 1955d; Kato, 1956; Mori, 1956a; Watanabe, 1960; Honma, 1963; Ouchi, 1963; Takegawa and Morino, 1970; Ueno, 1971; Ogata *et al.*, 1973; Honma and Kitami, 1978; Tsuda, 1990; Nambu *et al.*, 1992; Nakabo, 1993b; Shinohara *et al.*, 1992; Amaoka *et al.*, 1995; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

KT-11-09-T1 (1), TS09-T004 (1), TS09-T006 (2), TS09-T007 (1), TS09-T056 (1), SMBS uncatalogued (3).

\****Malacocottus zonurus*** Bean, 1890 [Japanese name: Kobushi-kajika]

*Malacocottus zonurus*: Matsubara, 1955; Tsuda, 1990; Nakabo, 1993b; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo and Kai, 2013.

*Malacocottus zonurus microphthalmus*: Mori, 1956c.

***Psychrolutes paradoxus*** Günther, 1861 [Japanese name: Uranai-kajika]

*Psychrolutes paradoxus*: Mori, 1952; Matsubara, 1955; Honma, 1957a, 1963; Takegawa and Morino, 1970; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978; Yabe, 1988; Tsuda, 1990; Nakabo, 1993b; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

TS09-T117 (3).

#### Family Cyclopteridae

***Aptocyclus ventricosus*** (Pallas, 1769) [Japanese name: Hotei-uo]

*Cyclopterichthys ventricosus*: Katayama, 1940; Hikita, 1950; Honma, 1952; Oshima, 1957.

*Aptocyclus ventricosus*: Mori and Uchida, 1934; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma, 1957b, 1963; Takegawa and Morino, 1970; Ueno, 1970, 1971; Ogata *et al.*, 1973; Honma, 1977; Honma and Kitami, 1978; Lindberg and Krasnyukova, 1987; Tsuda, 1990; Nambu *et al.*, 1992; Nakabo, 1993b; Kido and Shinohara, 1996; Amaoka *et al.*, 1995; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Pelagocyclus vitiazi*: Ueno, 1970; Lindberg and Krasnyukova, 1987; Kido, 1988b; Nakabo, 1993b.

TS09-T032 (1), TS09-T115 (1), SMBS uncatalogued (1).

\****Cyclopterus bergi*** Popov, 1929 [Japanese name: Kobu-fūsen-uo]

*Cyclopterus bergi*: Ueno, 1970, 1971; Kido, 1988b; Nakabo, 1993b; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Nakabo and Kai, 2013.

\****Cyclopteropsis lindbergi*** Soldatov, 1930 [Japanese name: Name-fūsen-uo]

*Cyclopteropsis lindbergi*: Ueno, 1970, 1971; Kido, 1988b; Tsuda, 1990; Nakabo, 1993b; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Honma, 2013; Nakabo and Kai, 2013.

***Eumicrotremus birulai*** Popov, 1925 [Japanese name: Konpeitō]

*Cyclolumpus asperrimus*: Tanaka, 1912 (original description); Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Oshima, 1957; Ouchi, 1963; Takegawa and Morino, 1970; Honma, 1977.

*Cyclolumpus osperrimum* [sic]: Kato, 1956.

*Cyclolumpus birulai*: Kato, 1956; Oshima, 1957.

*Eumicrotremus birulai*: Honma, 1963; Ueno, 1970, 1971; Honma and Kitami, 1978; Kido, 1988b; Nakabo, 1993b; Amaoka *et al.*, 1995; Kido, 1997; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

*Euprotomicrus birulai* [sic]: Ogata *et al.*, 1973.

*Eumicrotremus birlai* [sic]: Honma, 2013.

TS09-T001 (2), TS09-T006 (18), TS09-T010 (15), TS09-T010 (15), TS09-T012 (14), TS09-T102 (1), TS09-T106 (3), SMBS uncatalogued (1).

\****Eumicrotremus pacificus*** Schmidt, 1904 [Japanese name: Fūsen-uo]

*Eumicrotremus pacificus*: Kato, 1956; Ueno, 1970, 1971; Tsuda, 1990; Amaoka *et al.*, 1995; Nakabo, 1993b; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Nakabo and Kai, 2013.

\**Eumicrotremus taranetzi* Perminov, 1936 [Japanese name: Name-dango]

*Eumicrotremus taranetzi*: Ueno, 1970; Kido, 1988b; Amaoka *et al.*, 1995; Nakabo, 1993b, 2000b, 2002b; Kitagawa *et al.*, 2008; Nakabo and Kai, 2013.

#### Family Liparidae

*Careproctus acanthodes* Gilbert and Burke, 1912 [Japanese name: Toge-bikunin]

*Careproctus acanthodes*: Okada and Matsubara, 1938; Ueno, 1971; Kido, 1988b; Sokolovskaya *et al.*, 1998; Chernova *et al.*, 2004; Shinohara *et al.*, 2011.

*Careproctus batialis* Popov, 1933 [Japanese name: Dattan-bukunin]

*Careproctus batialis*: Popov, 1933 (original description); Ueno, 1971; Pitruk, 1991; Chernova, 1998; Sokolovskaya *et al.*, 1998; Chernova *et al.*, 2004.

*Careproctus colletti* Gilbert, 1896 [Japanese name: Arasuka-bikunin]

*Careproctus colletti*: Okada and Matsubara, 1938; Honma, 1952; Kato, 1956; Mori, 1956a; Lindberg and Krasnyukova, 1987; Kido, 1988a, 1988b; Nambu and Kido, 1990; Tsuda, 1990; Nakabo, 1993b; Amaoka *et al.*, 1995; Kido, 1997; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Chernova *et al.*, 2004; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Careproctus puniceus*: Mori, 1955 (original description); Kato, 1956; Takegawa and Morino, 1970.

*Careproctus entomelas*: Mori, 1956a; Tsuda, 1990.

KT-11-09-M6 (1).

*Careproctus entargyreus* Gilbert and Burke, 1912 [Japanese name: Sokoshiro]

*Careproctus entargyreus*: Ueno, 1971; Kido, 1988b; Chernova *et al.*, 2004; Shinohara *et al.*, 2011.

*Careproctus entomelas* Gilbert and Burke, 1912 [Japanese name: Sokoguro]

*Careproctus entomelas*: Burke, 1930; Okada and Matsubara, 1938; Kato, 1956; Kido, 1988b; Tsuda, 1990; Chernova *et al.*, 2004; Shinohara *et al.*, 2011.

\**Careproctus furcatus* Mori, 1956 [Japanese name: Oki-bikunin]

*Careproctus furcatus*: Kato, 1956; Mori, 1956d (original description, type lost); Chernova *et al.*, 2004.

*Careproctus notosaikaiensis* Kai, Ikeguchi and Nakabo, 2011 [Japanese name: Noto-saikai-bikunin] (Fig. 4A)

*Careproctus notosaikaiensis*: Kai *et al.*, 2011 (original description); Nakabo and Kai, 2013.

*Careproctus rastrinus* Gilbert and Burke, 1912 [Japanese name: Sake-bikunin]

*Careproctus pellucidus*: Hikita, 1950; Katayama, 1952; Kato, 1956; Oshima, 1957; Takegawa and Morino, 1970; Ueno, 1971; Tsuda, 1990; Chernova *et al.*, 2004.

*Careproctus rastrinus*: Kato, 1956; Ueno, 1971; Lindberg and Krasnyukova, 1987; Kido, 1988a; Tsuda, 1990; Nakabo, 1993b; Amaoka *et al.*, 1995; Kido, 1997; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Chernova *et al.*, 2004; Kitagawa *et al.*, 2008.

*Careproctus rastrinus* species complex: Honma, 2013; Nakabo and Kai, 2013.

\**Careproctus rhodomelas* Gilbert and Burke, 1912 [Japanese name: Bara-bikunin]

*Careproctus rhodomelas*: Kato, 1956; Tsuda, 1990.

\**Careproctus roseofuscus* Gilbert and Burke, 1912 [Japanese name: Tobi-bikunin]

*Careproctus roseofuscus*: Maeda and Tsutsui, 2003.

\**Careproctus segaliensis* Gilbert and Burke, 1912 [Japanese name: Karafuto-bikunin]



*Careproctus segaliensis*: Katayama, 1940; Matsubara, 1955; Kato, 1956; Takegawa and Morino, 1970; Ueno, 1971; Lindberg and Krasnyukova, 1987; Tsuda, 1990; Chernova *et al.*, 2004.

***Careproctus sinensis*** Gilbert and Burke, 1912 [Japanese name: Sekichiku-bikunin]

*Careproctus sinensis*: Gilbert and Burke, 1912 (original description); Burke, 1930; Okada and Matsubara, 1938; Honma, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Oshima, 1957; Ouchi, 1963; Takegawa and Morino, 1970; Lindberg and Krasnyukova, 1987; Kido, 1988a, 1988b; Nambu and Kido, 1990; Tsuda, 1990; Nakabo, 1993b, 2000b, 2002b; Chernova *et al.*, 2004; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

***Careproctus trachysoma*** Gilbert and Burke, 1912 [Japanese name: Zara-bikunin]

*Careproctus trachysoma*: Gilbert and Burke, 1912 (original description); Burke, 1930; Okada and Matsubara, 1938; Honma, 1952; Matsubara, 1955; Kato, 1956; Honma, 1963; Ueno, 1971; Honma and Kitami, 1978; Lindberg and Krasnyukova, 1987; Kido, 1988a, b; Nambu and Kido, 1990; Tsuda, 1990; Nambu *et al.*, 1992; Nakabo, 1993b; Amaoka *et al.*, 1995; Kido, 1997; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Chernova *et al.*, 2004; Shinohara *et al.*, 2011.

*Careproctus rastrinus* species complex: Nakabo and Kai, 2013.

KT-11-09-K4 (1), KT-11-09-N4 (2), KT-11-09-T3 (1), KT-11-09-T5 (1), TS09-T004 (2), TS09-T006 (1), TS09-T016 (2), TS09-T032 (2).

***Crystallias matsushimae*** Jordan and Snyder, 1902 [Japanese name: Abachan]

*Crystallias matsushimae*: Burke, 1930; Okada and Matsubara, 1938; Katayama, 1940; Hikita, 1950; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Mori, 1956a; Oshima, 1957; Kato, 1956; Honma, 1963; Ouchi, 1963; Honma and Kitami, 1970; Takegawa and Morino, 1970; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978; Kido, 1988b; Tsuda, 1990; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Chernova *et al.*, 2004.

*Crystallias kamoae*: Kato, 1956; Oshima, 1957 (original description).

*Crystallichthys matsushimae*: Kido, 1988a; Nambu and Kido, 1990; Nakabo, 1993b; Amaoka *et al.*, 1995; Kido, 1997; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

KT-11-09-E2 (1), KT-11-09-T2 (3), TS09-T37 (3), TS09-T088 (4).

***Liparis frenatus*** (Gilbert and Burke, 1912) [Japanese name: Kanten-bikunin]

*Cyclogaster frenatus*: Gilbert and Burke, 1912 (original description).

*Liparis frenatus*: Okada and Matsubara, 1938; Ueno, 1971; Lindberg and Krasnyukova, 1987; Kido, 1988a, b; Nambu and Kido, 1990; Tsuda, 1990; Nakabo, 1993b; Amaoka *et al.*, 1995; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Chernova *et al.*, 2004; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

***Liparis ingens*** (Gilbert and Burke, 1912) [Japanese name: Kōrai-bikunin]

*Cyclogaster ingens*: Gilbert and Burke, 1912 (original description).

*Liparis ingens*: Burke, 1930; Mori, 1952; Kato, 1956; Kido, 1988b; Tsuda, 1990; Adrianov and Kussakin, 1998; Shinohara *et al.*, 2011.

***Liparis latifrons*** Schmidt, 1950 [Japanese name: Bōzu-kusa-uo]

*Liparis latifrons meridionalis*: Lindberg and Krasnyukova, 1987; Chernova, 1998.

*Liparis latifrons*: Kido, 1988b; Nakabo, 1993b; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Chernova *et al.*, 2004; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

***Liparis ochotensis*** Schmidt, 1904 [Japanese name: Isago-bikunin]

*Liparis ochotensis*: Mori, 1956c; Ueno, 1971; Lindberg and Krasnyukova, 1987; Kido, 1988a;

Nambu and Kido, 1990; Uozu Aquarium, 1997; Nambu *et al.*, 1992; Nakabo, 1993b; Amaoka *et al.*, 1995; Kido, 1997; Adrianov and Kussakin, 1998; Chernova, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Chernova *et al.*, 2004; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Nakabo and Kai, 2013.

*Liparis rhodosoma*: Takegawa and Morino, 1970; Ueno, 1971.

*Liparis niger*: Ogata *et al.*, 1973; Adrianov and Kussakin, 1998.

TS09-T006 (1), TS09-T032 (1).

***Liparis tanakae*** (Gilbert and Burke, 1912) [Japanese name: Kusa-uo]

*Cyclogaster tanakae*: Tanaka, 1914a.

*Liparis tanakai*: Okada and Matsubara, 1938; Kato, 1956; Ouchi, 1963; Ueno, 1971; Kido, 1988a; Nambu and Kido, 1990; Machida *et al.*, 1991; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Honma, 2013.

*Liparis tanakae*: Okada and Matsubara, 1938; Tsuda, 1990; Chernova *et al.*, 2004; Kobayashi *et al.*, 2006; Nakabo and Kai, 2013.

TS09-T039 (1).

***Liparis tessellatus*** (Gilbert and Burke, 1912) [Japanese name: Bikunin]

*Liparis tessellatus*: Burke, 1930; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara and Iwai, 1954; Kato, 1956; Mori, 1956a, c; Honma, 1963; Takegawa and Morino, 1970; Ueno, 1971; Honma and Kitami, 1978; Lindberg and Krasnyukova, 1987; Kido, 1988a, b; Nambu and Kido, 1990; Tsuda, 1990; Nakabo, 1993b; Amaoka *et al.*, 1995; Kido, 1997; Sokolovskaya *et al.*, 1998; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Chernova *et al.*, 2004; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Kai, 2013.

*Liparis brevicaudus*: Mori, 1956c (original description).

KT-11-09-N1 (1), KT-11-09-T1 (1), TS09-T001 (1), TS09-T006 (7), TS09-T013 (3), TS09-T046 (2), TS09-T049 (1), TS09-T101 (2), TS09-T102 (1), TS09-T105 (1), TS09-T106 (1).

#### Order Perciformes

#### Family Acropomatidae

\****Acropoma japonicum*** Günther, 1859 [Japanese name: Hotarujako]

*Acropoma japonicum*: Mori, 1952; Katayama, 1960; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970.

***Doderleinia berycoides*** (Hilgendorf, 1878) [Japanese name: Akamutsu]

*Döderleinia berycoides*: Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Katayama, 1960; Takegawa and Morino, 1970.

*Döderleinia berycoides*: Katayama, 1960; Lindberg and Krasnyukova, 1969; Tsuda, 1990; Hatooka, 1993; Mochizuki, 1997; Hatooka, 2000, 2002; Kobayashi *et al.*, 2006; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

\****Malakichthys griseus*** Döderlein, 1883 [Japanese name: Ōme-hata]

*Malakichthys griseus*: Honma, 1952; Kato, 1956; Mori, 1956a; Katayama, 1960; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Tsuda, 1990; Hatooka, 1993; Mochizuki, 1997; Hatooka, 2000, 2002, 2013; Honma, 2013.

\****Malakichthys wakiyae*** Jordan and Hubbs, 1925 [Japanese name: Wakiya-hata]

*Malakichthys wakiyai*: Katayama, 1960; Lindberg and Krasnyukova, 1969.

*Malakichthys wakiyae*: Hatooka, 2013.

***Synagrops japonicus*** (Döderlein, 1883) [Japanese name: Sumikui-uo]

*Synagrops japonicus*: Mori, 1952, 1956a; Katayama, 1960; Takegawa and Morino, 1970; Tsuda, 1990; Suzuki *et al.*, 2000; Hatooka, 2002; Shinohara *et al.*, 2011; Hatooka, 2013.

*Synayrops japonicus* [*sic*]: Kato, 1956.

## Family Polyprionidae

***Stereolepis doederleini*** Lindberg and Krasnyukova, 1969 [Japanese name: Ōkuchi-ishinagi]

*Stereolepis ischinagi*: Snyder, 1912; Mori, 1928; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Katayama, 1960; Honma, 1963; Takegawa and Morino, 1970; Ueno, 1971.

*Stereolepis doederleini*: Lindberg and Krasnyukova, 1969 (original description); Tsuda, 1990; Hatooka, 1993; Amaoka *et al.*, 1995; Uozu Aquarium, 1997; Sokolovskaya *et al.*, 1998; Hatooka, 2000; Suzuki *et al.*, 2000; Hatooka, 2002; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Hatooka and Kai, 2013.

*Stereolepis ishinagi* [*sic*]: Honma and Kitami, 1978.

*Stereolepis döderleini*: Honma, 2013.

**\**Stereolepis gigas*** Ayres, 1859 [Japanese name: Kokuchi-ishinagi]

*Stereolepis gigas*: Lindberg and Krasnyukova, 1969; Hatooka, 1993; Sokolovskaya *et al.*, 1998; Hatooka, 2000, 2002; Hatooka and Kai, 2013.

## Family Serranidae

***Caprodon schlegelii*** (Günther, 1859) [Japanese name: Aka-isaki]

*Caprodon schlegeli*: Kato, 1956; Mori, 1956a; Katayama, 1960; Lindberg and Krasnyukova, 1969.

*Caprodon schlegelii*: Mori, 1952; Tsuda, 1990; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Senou, 2013.

**\**Chelidoperca hirundinacea*** (Valenciennes, 1831) [Japanese name: Himekodai]

*Chelidoperca undinacea*: Uchida and Mori, 1934.

*Chelidoperca hirundinacea*: Mori, 1952; Kato, 1956; Mori, 1956a; Katayama, 1960; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Tsuda, 1990; Senou, 2013.

***Epinephelus septemfasciatus*** (Thunberg, 1793) [Japanese name: Mahata]

*Epinephelus septemfasciatus*: Mori, 1928; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Honma, 1955b; Kato, 1956; Mori, 1956a; Katayama, 1960; Honma, 1963; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Senou, 2013.

SMBS uncatalogued (1).

***Nippon spinosus*** Cuvier, 1828 [Japanese name: Ara]

*Nippon spinosus*: Cuvier and Valenciennes, 1828 (original description); Mori and Uchida, 1934; Katayama, 1940; Kato, 1956; Mori, 1956a; Katayama, 1960; Honma, 1963; Takegawa and Morino, 1970; Honma and Kitami, 1978; Tsuda, 1990; Uozu Aquarium, 1997; Honma, 2013; Senou, 2013.

*Nippon spinosus* [*laspus calami*]: Shinohara *et al.*, 2011.

***Plectranthias kelloggi azumanus*** (Jordan and Richardson, 1910) [Japanese name: Azuma-hana-dai] (Fig. 2I)

*Zallanthias azumanus*: Tanaka, 1919; Katayama, 1940; Honma, 1952; Mori, 1952; Matsuura, 1955; Kato, 1956; Mori, 1956a; Katayama, 1960; Lindberg and Krasnyukova, 1969; Tsuda, 1990.

*Plectranthias kelloggi azumanus*: Uozu Aquarium, 1997; Senou, 2013; Honma, 2013.  
SMBS uncatalogued (2).

#### Family Callanthidae

***Callanthias japonicus*** Franz, 1910 [Japanese name: Shikishima-hanadai]

*Percanthias japonicus*: Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970; Honma and Kitami, 1978.

*Callanthias japonicus*: Katayama, 1960; Lindberg and Krasnyukova, 1969; Honma and Kitami, 1970; Honma *et al.*, 1972; Tsuda, 1990; Senou, 1993, 1997; Uozu Aquarium, 1997; Senou, 2000; Suzuki *et al.*, 2000; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Honma, 2013; Senou, 2013.

SMBS uncatalogued (1).

#### Family Banjosidae

\****Banjos banjos*** (Richardson, 1846) [Japanese name: Chōsen-bakama]

*Banjos banjos*: Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Krasnyukova, 1969; Honma *et al.*, 2002; Hatooka, 2013; Honma, 2013.

#### Family Priacanthidae

***Cookeolus japonicus*** (Cuvier, 1829) [Japanese name: Chikame-kintoki] (Fig. 2F)

*Priacanthus japonicus*: Mori and Uchida, 1934.

*Priacanthus boops*: Katayama, 1940; Honma, 1952; Mori, 1952; Honma, 1955b; Kato, 1956; Mori, 1956a; Honma, 1963; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990.

*Cookeolus boops*: Uozu Aquarium, 1997.

*Cookeolus japonicus*: Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Hayashi, 2013; Honma, 2013.

SMBS uncatalogued (2).

***Priacanthus macracanthus*** Cuvier, 1829 [Japanese name: Kintokidai]

*Priacanthus macracanthus*: Mori and Uchida, 1934; Honma, 1952; Mori, 1952; Kato, 1956; Lindberg and Krasnyukova, 1969; Honma and Kitami, 1970, 1978; Tsuda, 1990; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Suzuki *et al.*, 2000; Hayashi, 2002; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Hayashi, 2013; Honma, 2013.

***Pristigenys nipponia*** (Cuvier, 1829) [Japanese name: Kurumadai]

*Pseudopriacanthus nipponius*: Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Krasnyukova, 1969.

*Pristigenys nipponia*: Tsuda, 1990; Uozu Aquarium, 1997; Hayashi, 2013; Honma, 2013.

#### Family Malacanthidae

\****Branchiostegus auratus*** (Kishinouye, 1907) [Japanese name: Ki-amadai]

*Branchiostegus auratus*: Mori, 1952, 1956a; Tsuda, 1990; Aizawa and Doiuchi, 2013.

*Branchiostegus japonicus auratus*: Kato, 1956; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970.

***Branchiostegus japonicus*** (Houttuyn, 1782) [Japanese name: Aka-amadai]

*Branchiostegus japonicus*: Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Honma, 1977; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Kobayashi *et al.*, 2006; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Aizawa and Doiuchi, 2013.

*Branchiostegus japonicus japonicus*: Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970.

*Branchiostegus japonicas* [*sic*]: Honma, 2013.

#### Family Scombroptidae

***Scombroptus boops*** (Houttuyn, 1782) [Japanese name: Mutsu]

*Scombroptus boops*: Katayama, 1940; Honma, 1952; Kato, 1956; Mori, 1956a; Lindberg and Krasnyukova, 1969; Honma and Kitami, 1970; Takegawa and Morino, 1970; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Hayashi, 2013; Honma, 2013.

SMBS uncatalogued (1).

#### Family Bramidae

***Brama dussumieri*** Cuvier, 1831 [Japanese name: Hime-shimagatsuo]

*Brama dussumieri*: Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Honma *et al.*, 2012; Hatooka and Kai, 2013; Honma, 2013.

SMBS uncatalogued (1).

***Brama japonica*** Hilgendorf, 1878 [Japanese name: Shimagatsuo]

*Brama raii*: Katayama, 1940; Mori, 1952; Honma and Mizusawa, 1966; Lindberg and Krasnyukova, 1969; Tsuda, 1990.

*Lepidotus brama*: Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970.

*Brama japonica*: Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Hatooka and Kai, 2013; Honma, 2013.

***Pteraclis aesticola*** (Jordan and Snyder, 1901) [Japanese name: Benten-uo]

*Bentenia aesticola*: Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a.

*Pteraclis velifera*: Lindberg and Krasnyukova, 1969.

*Pteraclis aesticola*: Hatooka, 1993, 2000, 2002; Shinohara *et al.*, 2011; Hatooka and Kai, 2013.

***Pterycombus petersii*** (Hilgendorf, 1878) [Japanese name: Ryūgūnohime] (Fig. 2G)

*Centropholis petersi*: Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma and Mizusawa, 1966; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Ueno, 1971; Tsuda, 1990.

*Pterycombus petersii*: Honma, 1991a, b; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Kobayashi *et al.*, 2006; Hatooka and Kai, 2013; Honma, 2013.

*Pterycombus petersi* [*lapsus calami*]: Shinohara *et al.*, 2011.

SMBS uncatalogued (3).

\****Taractes asper*** Lowe, 1843 [Japanese name: Manzai-uo]

*Taractes platycephalus*: Mori, 1952; Honma, 1962, 1963; Lindberg and Krasnyukova, 1969; Honma and Kitami, 1978; Tsuda, 1990.

*Taractes asper*: Hatooka, 1993, 2000, 2002; Maeda and Tsutsui, 2003; Hatooka and Kai,

2013; Honma, 2013.

***Taractes rubescens*** (Jordan and Evermann, 1887) [Japanese name: Tsurugi-echiopia]

*Steunegeria rubescens*: Honma, 1963; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Honma and Kitami, 1978.

*Taractes rubescens*: Honma and Mizusawa, 1966; Tsuda, 1990; Uozu Aquarium, 1997; Hatooka and Kai, 2013; Honma, 2013.

\****Taractichthys steindachneri*** (Döderlein, 1883) [Japanese name: Hirejiro-manzai-uo]

*Taractichthys steindachneri*: Honma, 1963; Honma and Mizusawa, 1966; Tsuda, 1990; Hatooka, 1993, 2000; Kobayashi *et al.*, 2006; Hatooka and Kai, 2013; Honma, 2013.

*Taractichthys longipinnis*: Honma and Mizusawa, 1966; Lindberg and Krasnyukova, 1969; Honma and Kitami, 1978; Tsuda, 1990.

#### Family Caristiidae

***Caristius macropus*** (Bellotti, 1903) [Japanese name: Yaegisu]

*Elephenor macropus*: Ueno, 1971.

*Platyberyx macropus*: Hatooka, 2000, 2002; Shinohara *et al.*, 2011.

*Caristius macropus*: Hatooka, 2013.

#### Family Emmelichthyidae

***Emmelichthys strusakeri*** Heemstra and Randall, 1977 [Japanese name: Rōsoku-chibiki]

*Emmelichthys strusakeri*: Hatooka, 1993, 2000; Honma *et al.*, 2000; Suzuki *et al.*, 2000; Hatooka, 2002; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Hatooka and Hagiwara, 2013; Honma, 2013.

***Erythrocles microceps*** Miyahara and Okamura, 1998 [Japanese name: Hichibiki]

*Erythrocles microceps*: Hatooka, 2000; Suzuki *et al.*, 2000; Hatooka, 2002; Shinohara *et al.*, 2011; Hatooka and Hagiwara, 2013.

SMBS uncatalogued (2).

***Erythrocles schlegelii*** (Richardson, 1846) [Japanese name: Hachibiki]

*Erythrocles schlegelii*: Mori and Uchida, 1934; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Honma, 1963; Honma and Kitami, 1967; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Honma, 1977; Honma and Kitami, 1978.

*Erythrocles schlegelii*: Uozu Aquarium, 1997; Hatooka, 2002; Suzuki *et al.*, 2000; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Hatooka and Hagiwara, 2013; Honma, 2013.

SMBS uncatalogued (1).

#### Family Lutjanidae

\****Etelis coruscans*** Valenciennes, 1862 [Japanese name: Hamadai]

*Etelis carbunculus*: Mori, 1952.

#### Family Sparidae

***Dentex hypselosomus*** Bleeker, 1854 [Japanese name: Kidai]

*Taius tumifrons*: Tanaka, 1915; Mori, 1928; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956.

*Dentex tumifrons*: Mori, 1956a; Lindberg and Krasnyukova, 1969; Tsuda, 1990; Uozu Aquar-

ium, 1997; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Honma, 2013.

*Dentex hypselosomus*: Hayashi and Hagiwara, 2013.

\**Evynnis cardinalis* (Lacepède, 1802) [Japanese name: Hirekodai]

*Evynnis cardinalis*: Mori, 1928; Mori and Uchida, 1934; Mori, 1952; Kato, 1956; Mori, 1956a; Lindberg and Krasnyukova, 1969; Tsuda, 1990; Hayashi and Hagiwara, 2013.

#### Family Glaucosomatidae

\**Glaucosoma hebraicum* Richardson, 1845 [Japanese name: Aobadai]

*Glaucosoma hebraicum*: Kato, 1956; Mori, 1956a; Tsuda, 1990; Hayashi and Hagiwara, 2013.

#### Family Pentacerotidae

*Evistias acutirostris* (Temminck and Schlegel, 1844) [Japanese name: Tengudai]

*Evistias acutirostris*: Mori, 1952; Lindberg and Krasnyukova, 1969; Tsuda, 1990; Honma, 1991a; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Hatooka and Yagishita, 2013.

*Histiopterus typus* Temminck and Schlegel, 1844 [Japanese name: Kawabisha] (Fig. 2H)

*Histiopterus typus*: Katayama, 1940; Kato, 1956; Mori, 1956a; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Tsuda, 1990; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Hatooka and Yagishita, 2013; Honma, 2013.

SMBS uncatalogued (1).

\**Pentaceros japonicus* Steindachner, 1883 [Japanese name: Tsubodai]

*Quinquarius japonicus*: Kato, 1956.

*Pentaceros japonicus*: Tsuda, 1990; Kitagawa *et al.*, 2008; Hatooka and Yagishita, 2013; Honma, 2013.

#### Family Zoarcidae

*Bilabria ornata* (Soldatov, 1922) [Japanese name: Usa-genge]

*Lycenchelys ornatus*: Soldatov, 1922 (original description).

*Bilabria ornata*: Taranetz, 1937; Schmidt, 1950; Fowler, 1958; Ueno, 1971; Lindberg and Krasnyukova, 1975; Hatooka, 2002.

*Bothrocara hollandi* (Jordan and Hubbs, 1925) [Japanese name: Noro-genge]

*Allolepis hollandi*: Jordan and Hubbs, 1925 (original description); Okada and Matsubara, 1938; Katayama, 1940, 1949; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Fowler, 1958; Honma, 1963; Ouchi, 1963; Takegawa and Morino, 1970; Ueno, 1971; Ogata *et al.*, 1973; Lindberg and Krasnyukova, 1975; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Nambu *et al.*, 1992; Hatooka, 1993; Nambu *et al.*, 1993; Amakawa *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Suzuki *et al.*, 2000; Balanov and Solomatov, 2008; Balushkin *et al.*, 2011.

*Lycogramma crystallonota*: Popov, 1933 (original description).

*Allolepis nazumii*: Mori, 1956c (original description).

*Allolepis nazumi*: Fowler, 1958; Lindberg and Krasnyukova, 1975.

*Bothrocara hollandi*: Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Anderson and Fedorov, 2004; Balanov and Solomatov, 2008; Anderson *et al.*, 2009; Shinohara *et al.*, 2011;

Hatooka, 2013; Honma, 2013.

*Bothrocarac holladi* [sic]: Kitagawa *et al.*, 2008.

SO10-C4-B4 (1), KT-10-08-R4 (1), KT-10-08-R6 (1), KT-11-09-M5 (3), TS09-T001 (1), TS09-T004 (10), TS09-T006 (1), TS09-T010 (3), TS09-T049 (1), TS09-T053 (1), TS09-T102 (2), TS09-T106 (11), TS10-OW09 (11), TS10-OW10 (2), TS10-OW12 (2), TS10-OW13 (1), TS10-OW18 (4), TS10-YA05 (7).

***Bothrocarac tanakae*** (Jordan and Hubbs, 1925) [Japanese name: Kanten-geenge]

*Zestichthys tanakae*: Hikita, 1950; Oshima, 1957; Lindberg and Krasnyukova, 1975; Tsuda, 1990.

*Zestichthys tanakai*: Kato, 1956; Ueno, 1971; Hatooka, 1993.

*Bothrocarac tanakae*: Hatooka, 2000, 2002; Shinohara *et al.*, 2011; Hatooka, 2013.

\* ***Bothrocarac zestum*** Jordan and Fowler, 1902 [Japanese name: Shiro-geenge]

*Lycogramma zestum*: Katayama, 1940; Lindberg and Krasnyukova, 1975.

*Lycogramma zesta* [sic]: Ueno, 1971.

*Lycogramma zosta* [sic]: Tsuda, 1990.

***Davidijordania lacertina*** (Pavlenko, 1910) [Japanese name: Naga-sarasagaji]

*Davidijordania lacertina*: Matsubara, 1955; Fowler, 1958; Lindberg and Krasnyukova, 1975; Hatooka, 1993, Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Hatooka, 2000, 2002; Anderson and Fedorov, 2004; Balanov *et al.*, 2006; Balanov and Solomatov, 2008; Shinohara and Kim, 2009; Balushkin *et al.*, 2011.

***Davidijordania poecilimon*** (Jordan and Fowler, 1902) [Japanese name: Sarasagaji]

*Davidijordania poecilimon*: Taranetz, 1937; Okada and Matsubara, 1938; Katayama, 1940, 1949; Honma, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Fowler, 1958; Honma, 1963; Takegawa and Morino, 1970; Lindberg and Krasnyukova, 1975; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Hatooka, 1993; Nambu *et al.*, 1993; Amaoka *et al.*, 1995; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Anderson and Fedorov, 2004; Kitagawa *et al.*, 2008; Balushkin *et al.*, 2011.

*Davidijordania spilota*: Fowler, 1943 (original description), 1958.

*Davidijordania poecilimon* [lapsus calami]: Shinohara *et al.*, 2011.

KT-11-09-N1 (1), TS09-T107 (2), SMBS uncatalogued (2).

***Derjuginia japonica*** (Katayama, 1943) [Japanese name: Nirami-geenge]

*Gengea japonica*: Katayama, 1943 (original description), 1949, 1952; Honma, 1955a, e; Matsubara, 1955; Kato, 1956; Mori, 1956a; Fowler, 1958; Honma, 1963; Ouchi, 1963; Takegawa and Morino, 1970; Lindberg and Krasnyukova, 1975; Tsuda, 1990; Uozu Aquarium, 1997.

*Derjuginia japonica*: Toyoshima, 1981; Hatooka, 1993, 2000, 2002; Maeda and Tsutsui, 2003; Balushkin *et al.*, 2011; Shinohara *et al.*, 2011.

*Gymnelopsis ochotensis*: Anderson and Fedorov, 2004; Hatooka, 2013; Honma, 2013.

TS09-T099 (2), TS09-T106 (3), TS09-T141 (2).

***Krusensterniella maculata*** Andriashev, 1938 [Japanese name: Ai-haregaji] (Fig. 4B)

*Krusensterniella maculata*: Andriashev, 1938 (original description); Matsubara, 1955; Fowler, 1958; Ueno, 1971; Lindberg and Krasnyukova, 1975; Hatooka, 1993, Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Anderson and Fedorov, 2004; Balushkin *et al.*, 2011; Hatooka, 2013.

KT-11-09-M1 (1).

\* ***Krusensterniella notabilis*** Schmidt, 1904 [Japanese name: Haregaji]



*Krusensterniella notabilis*: Anderson and Fedorov, 2004.

\**Lycodes brevipes* Bean, 1890 [Japanese name: Ashibosogenge]

*Lycodes brevipes*: Ueno, 1971.

*Lycodes brevipes ochotensis*: Lindberg and Krasnyukova, 1975.

\**Lycodes brunneofasciatus* Suvorov, 1935 [Japanese name: Harasuji-genge]

*Lycodes brunneofasciatus*: Hatooka, 1993, 2000, 2002, 2013.

\**Lycodes caudimaculatus* Matsubara, 1936 [Japanese name: Irezumigaji]

*Lycodes caudimaculatus*: Tekegawa and Morino, 1970; Lindberg and Krasnyukova, 1975; Tsuda, 1990.

*Lycodes japonicus* Matsubara and Iwai, 1951 [Japanese name: Ashinaga-genge]

*Lycodes japonicus*: Matsubara and Iwai, 1951b (original description); Matsubara, 1955; Honma, 1956a; Kato, 1956; Honma, 1957a; Oshima, 1957; Honma, 1963; Ogata *et al.*, 1973; Lindberg and Krasnyukova, 1975; Honma and Kitami, 1978; Toyoshima, 1984; Toyoshima, 1985; Nambu *et al.*, 1992; Tsuda, 1990; Hatooka, 1993; Nambu *et al.*, 1993; Uozu Aquarium, 1997; Hatooka, 2000, 2002; Anderson and Fedorov, 2004; Balanov and Solomatov, 2008; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

TS09-T033 (3), TS09-T53 (1), TS09-T053 (1), TS09-T057 (2), TS09-T110 (5), TS10-OW04 (4).

\**Lycodes macrolepis* Taranetz and Andriashev, 1935 [Japanese name: Yokoshima-gaji]

*Lycodes macrolepis*: Katayama, 1949; Matsubara and Iwai, 1951b; Katayama, 1952; Matsubara, 1955; Mori, 1956a, c; Honma, 1957a; Oshima, 1957; Fowler, 1958; Honma, 1963; Ouchi, 1963; Lindberg and Krasnyukova, 1975; Honma and Kitami, 1978; Tsuda, 1990; Hatooka, 1993, 2000, 2002.

*Lycodes matsubarae* Toyoshima, 1985 [Japanese name: Matsubara-genge]

*Lycodes yamatoi*: Toyoshima, 1985 (original description); Hatooka, 1993, 2000, 2002; Maeda and Tsutsui, 2003; Anderson and Fedorov, 2004; Balanov and Kukhlevsky, 2011; Balushkin *et al.*, 2011; Shinohara *et al.*, 2011; Honma, 2013.

*Lycodes matsubarae*: Nambu *et al.*, 1992; Hatooka, 1993, 2000, 2002; Nazarkin and Shinohara, 2012; Hatooka, 2013; Honma, 2013.

KT-11-09- K3 (1), TS09-T004 (3), TS09-T006 (2), TS09-T013 (2), TS09-T141 (1).

*Lycodes nakamurae* (Tanaka, 1914) [Japanese name: Kuro-genge]

*Furcimanus nakamurae*: Tanaka, 1914b (original description); Jordan and Hubbs, 1925; Okada and Matsubara, 1938; Katayama, 1940, 1949; Honma, 1952; Mori, 1952; Katayama, 1952; Mori, 1956a; Oshima, 1957.

*Lycodes diapterus nakamurae*: Lindberg, 1947; Tsuda, 1990.

*Lycodes nakamurae*: Matsubara, 1955; Kato, 1956; Honma and Sugihara, 1963; Ouchi, 1963; Takegawa and Morino, 1970; Ogata *et al.*, 1973; Honma, 1977; Toyoshima, 1985, 1988; Nambu *et al.*, 1992; Hatooka, 1993; Nambu *et al.*, 1993; Amaoka *et al.*, 1995; Sokolovskaya *et al.*, 1998; Hatooka, 2000; Suzuki *et al.*, 2000; Hatooka, 2002; Maeda and Tsutsui, 2003; Balanov and Solomatov, 2008; Shinohara *et al.*, 2011; Honma, 2013.

*Furcimanus nakamurae*: Mori, 1956c.

*Lycodes diapterus nakamurae*: Honma, 1963; Lindberg and Krasnyukova, 1975; Honma and Kitami, 1978.

*Lycodes nakamurae*: Ueno, 1971; Anderson and Fedorov, 2004; Balanov and Solomatov, 2008; Hatooka, 2013.

KT-11-09-N3 (2), TS09-T027 (6), TS09-T029 (2), TS09-T054 (2), TS09-T056 (2), TS09-

T086 (1), TS09-T099 (1), TS09-T101 (2), TS09-T102 (3), SMBS uncatalogued (3).

***Lycodes nishimurai*** Shinohara and Shirai, 2005 [Japanese name: Orochi-geenge] (Fig. 4C)

*Lycodes nishimurai*: Shinohara and Shirai, 2005 (original description); Balushkin *et al.*, 2011; Shinohara *et al.*, 2011; Hatooka, 2013.

TS09-T007 (1), TS09-T033 (6), TS09-T053 (1), TS09-T057 (2).

***Lycodes palearis fasciatus*** (Schmidt, 1904)

*Lycodes palearis fasciatus*: Taranetz, 1937; Lindberg and Krasnyukova, 1975; Sokolovskaya *et al.*, 1998; Shinohara *et al.*, 2011.

*Lycodes fasciatus*: Fowler, 1958.

***Lycodes paucilepidotus*** Toyoshima, 1985 [Japanese name: Hage-mayugaji]

*Lycodes paucilepidotus*: Toyoshima, 1985 (original description); Hatooka, 1993; Amaoka *et al.*, 1995; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Hatooka, 2013.

\****Lycodes schmidti*** Gratzianov, 1907

*Lycodes palearis schmidti*: Lindberg and Krasnyukova, 1975; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998.

*Lycodes schmidti*: Anderson and Fedorov, 2004.

***Lycodes sigmatoides*** Lindberg and Krasnyukova, 1975 [Japanese name: Esuji-gaji]

*Lycodes schmidti*: Kato, 1956; Ueno, 1971.

*Lycodes sigmatoides*: Lindberg and Krasnyukova, 1975 (original description); Tsuda, 1990; Anderson and Fedorov, 2004; Shinohara *et al.*, 2011; Hatooka, 2013.

*Lycodes sygmatoides* [*sic*]: Sokolovskaya *et al.*, 1998.

\****Lycodes soldatovi*** Taranetz and Andriashev, 1935 [Japanese name: Kuro-gaji]

*Lycodes soldatovi*: Kato, 1956; Ouchi, 1963; Lindberg and Krasnyukova, 1975.

Remarks. Hatooka (2013) mentioned the occurrence from Sado Island with a question mark.

***Lycodes tanakae*** Jordan and Thompson, 1914 [Japanese name: Tanaka-geenge]

*Lycodes tanakae*: Jordan and Thompson, 1914 (original description); Okada and Matsubara, 1938; Katayama, 1940, 1949; Honma, 1952; Katayama, 1952; Mori, 1952; Fowler, 1958; Lindberg and Krasnyukova, 1975; Tsuda, 1990; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Anderson and Fedorov, 2004; Balanov and Solomatov, 2008; Balushkin *et al.*, 2011; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

*Lycodes tanakai*: Katayama, 1949; Matsubara and Iwai, 1951b; Matsubara, 1955; Kato, 1956; Mori, 1956a, c; Honma, 1963; Ouchi, 1963; Honma and Sugihara, 1963; Takegawa and Morino, 1970; Ueno, 1971; Ogata *et al.*, 1973; Honma, 1977; Honma and Kitami, 1978; Toyoshima, 1985; Hatooka, 1993; Nambu *et al.*, 1993; Amaoka *et al.*, 1995; Koyanagi, 1997; Uozu Aquarium, 1997; Sokolovskaya *et al.*, 1998; Suzuki *et al.*, 2000.

TS09-T002 (2), TS09-T004 (1), TS09-T006 (1), TS09-T013 (3), TS09-T049 (1), TS09-T102 (6), TS09-T106 (2), TS09-T141 (1).

\****Lycodes uschakovi*** Popov, 1931 [Japanese name: Kawari-geenge]

*Lycodes uschakovi*: Lindberg and Krasnyukova, 1975; Toyoshima, 1985, 1988; Hatooka, 1993; Sokolovskaya *et al.*, 1998; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Anderson and Fedorov, 2004; Hatooka, 2013.

\****Lycodes ygreknotatus*** Schmidt, 1950 [Japanese name: Waiji-geenge]

*Lycodes ygreknotatus*: Ueno, 1971; Hatooka, 2013.

***Lycozoarces regani*** Popov, 1933 [Japanese name: Sedaka-geenge]

*Lycozoarces hubbsi*: Matsubara, 1955; Fowler, 1958; Ueno, 1971.

*Lycozoarces regani*: Popov, 1933 (original description); Lindberg and Krasnyukova, 1975;



Fig. 3. Zoarcid specimens of *Petroschmidtia teraoui* (Katayama, 1943) reported as “Sadohinagenge, *Lycodes sadoensis* Matsubara and Honma (MS)” in Honma (1963), SMBS uncatalogued, 126, 127, 140 and 103 mm SL (from top to bottom).

Hatooka, 1993; Amaoka *et al.*, 1995; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Anderson and Fedorov, 2004; Balushkin *et al.*, 2011; Hatooka, 2013.

\**Petroschmidtia albonotata* Taranetz and Andriashev, 1934 [Japanese name: Hanagenge]

*Petroschmidtia albonotata*: Ueno, 1971.

*Petroschmidtia teraoui* (Katayama, 1943) [Japanese name: Hina-genge]

*Lycodes teraoui*: Katayama, 1943 (original description), 1949; Matsubara and Iwai, 1951b; Katayama, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Fowler, 1958; Takegawa and Morino, 1970; Lindberg and Krasnyukova, 1975; Toyoshima, 1985; Tsuda, 1990; Hatooka, 1993, 2000, 2002; Anderson and Fedorov, 2004; Shinohara *et al.*, 2011; Hatooka, 2013.

*Lycodes* sp.: Kato, 1956; Honma, 1963; Ouchi, 1963; Honma, 1977.

*Lycodes sadoensis* [nomen nudum]: Honma and Kitami, 1978.

*Lycodes sadoensis*: Toyoshima and Honma, 1980 (original description); Honma *et al.*, 1984; Toyoshima, 1985; Hatooka, 1993, 2000, 2002; Anderson and Fedorov, 2004; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

TS09-T001 (1), TS09-T012 (2), TS09-T013 (3), TS09-T017 (1), TS09-T018 (6), TS09-T020 (20), TS09-T034 (2), TS09-T038 (1), TS09-T039 (22), TS09-T054 (1), TS09-T087 (3), TS09-T099 (1), TS10-OW01 (2), SMBS uncatalogued (4).

*Remarks.* Generic position and synonymies of the species follow Nazarkin *et al.* (2014). The type specimens of *Lycodes sadoensis* were collected not from off Sado Island but off Noto Peninsula (Toyoshima and Honma, 1980). Specimens collected off Sado Island and named as Sadohinagenge in Japanese (Honma, 1963) are deposited in SMBS (Fig. 3).

***Petroschmidtia toyamensis*** Katayama, 1941 [Japanese name: Ago-genge]

*Petroschmidtia toyamensis*: Katayama, 1941 (original description); Katayama, 1943, 1949; Matsubara and Iwai, 1951b; Katayama, 1952; Honma, 1955c; Matsubara, 1955; Kato, 1956; Mori, 1956a; Oshima, 1957; Fowler, 1958; Honma, 1963; Honma and Sugihara, 1963; Takegawa and Morino, 1970; Ogata *et al.*, 1973; Lindberg and Krasnyukova, 1975; Honma and Kitami, 1978; Toyoshima, 1985; Tsuda, 1990; Hatooka, 1993; Nambu *et al.*, 1993; Amaoka *et al.*, 1995; Koyanagi, 1997; Uozu Aquarium, 1997; Hatooka, 2000; Suzuki *et al.*, 2000; Hatooka, 2002; Maeda and Tsutsui, 2003; Anderson and Fedorov, 2004; Shinohara *et al.*, 2011; Honma, 2013.

*Petroschmidtia toyamaensis* [*sic*]: Ueno, 1971.

*Lycodes toyamensis*: Balanov and Solomatov, 2008; Hatooka, 2013.

KT-11-09-K4 (2), TS09-T033 (1), TS09-T106 (1).

#### Family Stichaeidae

\****Acantholumpenus mackayi*** (Gilbert, 1896) [Japanese name: Nuime-gaji]

*Lumpenus fowleri*: Kato, 1956; Fowler, 1958.

*Acantholumpenus mackayi*: Ueno, 1971; Tsuda, 1990; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Mecklenburg and Sheiko, 2004.

***Anisarchus macrops*** (Matsubara and Ochiai, 1952) [Japanese name: Medama-ginpo]

*Lumpenus macrops*: Matsubara and Ochiai, 1952 (original description); Matsubara, 1955; Honma, 1955a, e; Kato, 1956; Tomiyama and Abe, 1958; Honma, 1963, 1977; Honma and Kitami, 1978.

*Anisarchus macrops*: Lindberg and Krasnyukova, 1975; Tsuda, 1990; Hatooka, 1993; Amaoka *et al.*, 1995; Miki, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Hatooka, 2000, 2002; Mecklenburg and Sheiko, 2004; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

KT-10-08-R1 (7), TS09-T117 (4).

***Anisarchus medius*** (Reinhardt, 1837) [Japanese name: Nise-medama-ginpo]

*Anisarchus medius*: Matsubara, 1955; Lindberg and Krasnyukova, 1975; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Mecklenburg and Sheiko, 2004; Yamanaka and Yabe, 2012.

***Bryozonichthys lysimus*** (Jordan and Snyder, 1902) [Japanese name: Fusakake-ginpo]

*Bryozonichthys lysimus*: Nambu *et al.*, 1992; Hatooka, 1993; Amaoka *et al.*, 1995; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Mecklenburg and Sheiko, 2004; Hatooka, 2013.

\****Leptoclinus maculatus*** (Fries, 1838) [Japanese name: Yase-ginpo]

*Leptoclinus maculatus*: Ueno, 1971; Mecklenburg and Sheiko, 2004; Hatooka, 2013.

***Lumpenella longirostris*** (Evermann and Goldsborough, 1907) [Japanese name: Nezumi-ginpo]

*Lumpenella longirostris*: Soldatov and Lindberg, 1930; Taranetz, 1937; Schmidt, 1950; Ueno, 1971; Lindberg and Krasnyukova, 1975; Nambu *et al.*, 1992; Hatooka, 1993; Amaoka *et al.*, 1995; Uozu Aquarium, 1997; Sokolovskaya *et al.*, 1998; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Mecklenburg and Sheiko, 2004; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

*Lumpenella nigricans*: Honma, 1955a, e; Matsubara, 1955; Kato, 1956; Honma, 1963; Honma and Kitami, 1978; Tsuda, 1990.

***Lumpenopsis triocellata*** (Matsubara, 1943) [Japanese name: Mitsuboshi-ginpo]

*Leptoclinus triocellatus*: Matsubara, 1943a (original description).

*Lumpenopsis triocellatus*: Honma, 1963; Lindberg and Krasnyukova, 1975; Honma and Kitami, 1978; Tsuda, 1990; Hatooka, 1993; Miki, 1997; Hatooka, 2000, 2002; Mecklenburg and Sheiko, 2004; Hatooka, 2013; Honma, 2013.

***Lumpenus sagitta*** Wilimovsky, 1956 [Japanese name: Unagi-gaji]

*Lumpenus anguillaris*: Tanaka, 1913b; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Fowler, 1958.

*Lumpenus gracilis*: Matsubara, 1955; Kato, 1956; Honma, 1963.

*Lumpenus sagitta*: Ueno, 1971; Lindberg and Krasnyukova, 1975; Honma and Kitami, 1978; Tsuda, 1990; Hatooka, 1993; Amaoka *et al.*, 1995; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Hatooka, 2000, 2002; Mecklenburg and Sheiko, 2004; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

\****Stichaeopsis epallax*** (Jordan and Snyder, 1902) [Japanese name: Ame-gaji]

*Stichaeopsis epallax*: Kato, 1956; Fowler, 1958; Ueno, 1971; Tsuda, 1990; Hatooka, 1993; Amaoka *et al.*, 1995; Miki, 1997; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Mecklenburg and Sheiko, 2004; Hatooka, 2013; Honma, 2013.

***Stichaeus grigorjewi*** Herzenstein, 1890 [Japanese name: Nagaduka]

*Stichaeus elongatus*: Sakamoto, 1930 (original description); Okada and Matsubara, 1938; Oshima, 1957.

*Dinogunnellus grigorjewi*: Mori and Uchida, 1934; Okada and Matsubara, 1938; Katayama, 1940; Hikita, 1950; Honma, 1952; Katayama, 1952; Mori, 1952.

*Stichaeus grigorjewi*: Honma, 1955b; Matsubara, 1955; Kato, 1956; Mori, 1956a; Fowler, 1958; Honma, 1963; Ouchi, 1963; Takegawa and Morino, 1970; Ueno, 1971; Lindberg and Krasnyukova, 1975; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Hatooka, 1993; Amaoka *et al.*, 1995; Miki, 1997; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Hatooka, 2000, 2002; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Mecklenburg and Sheiko, 2004; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Hatooka, 2013; Honma, 2013.

***Stichaeus nozawae*** Jordan and Snyder, 1902 [Japanese name: Tauegaji]

*Stichaeus nozawae*: Jordan and Snyder, 1902 (original description).

*Stichaeus nozawae*: Okada and Matsubara, 1938; Oshima, 1957; Fowler, 1958; Honma, 1963; Lindberg and Krasnyukova, 1975; Tsuda, 1990; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Mecklenburg and Sheiko, 2004; Hatooka, 2013.

*Stichaeus nozawai*: Matsubara, 1955; Kato, 1956; Ouchi, 1963; Ueno, 1971; Honma and Kitami, 1978; Hatooka, 1993; Amaoka *et al.*, 1995; Miki, 1997; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Honma, 2013.

***Xenolumpenus longipterus*** Shinohara and Yabe, 2009 [Japanese name: Furisode-gaji] (Fig. 4D)

*Xenolumpenus longipterus*: Shinohara and Yabe, 2009 (original description); Hatooka, 2013.

#### Family Cryptacanthodidae

***Cryptacanthodes bergi*** Lindberg, 1930 [Japanese name: Hadaka-ōkami-uo]

*Cryptacanthodes bergi*: Soldatov and Lindberg, 1930; Matsubara, 1955; Kato, 1956; Honma, 1957a; Fowler, 1958; Honma, 1963; Takegawa and Morino, 1970; Ueno, 1971; Lindberg and

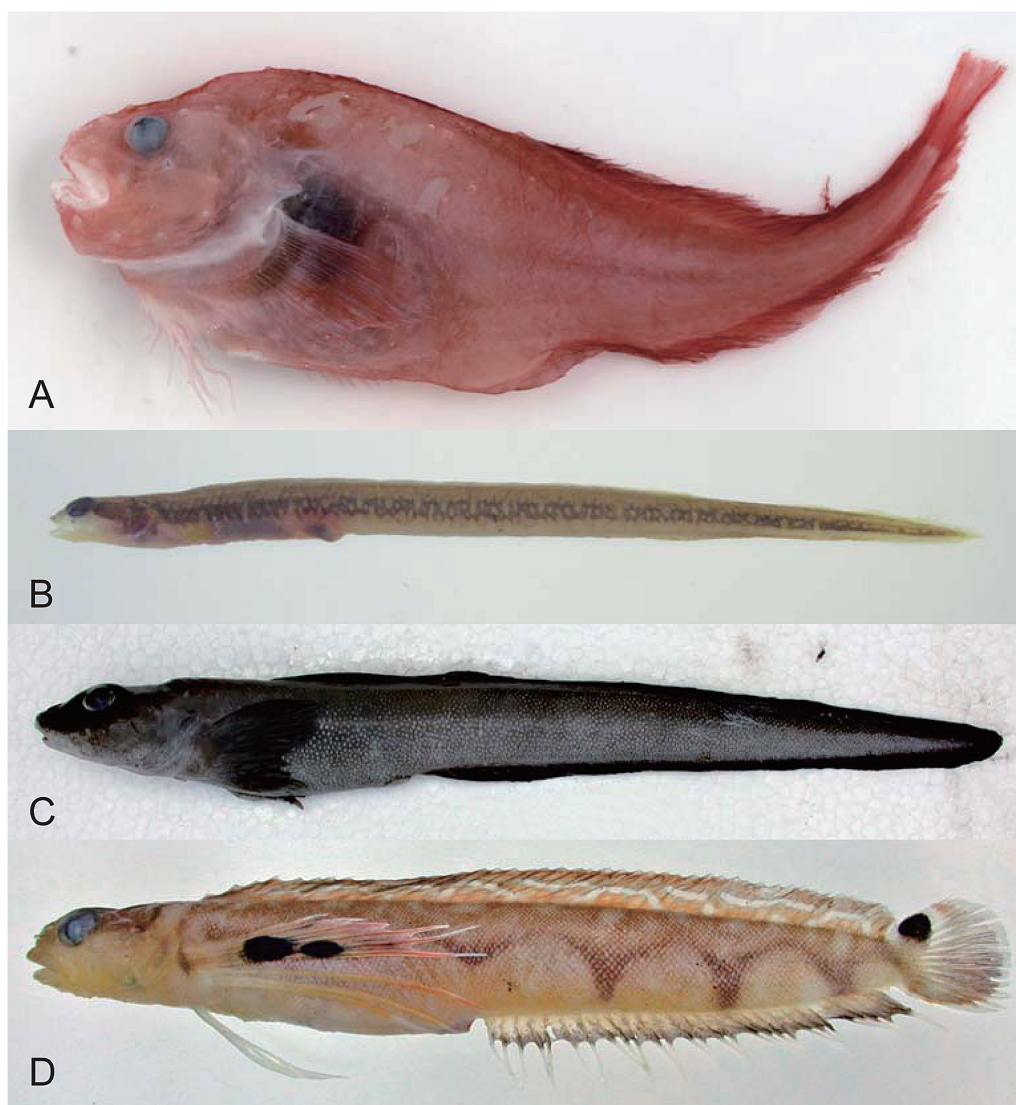


Fig. 4. Freshly dead specimens of four species endemic to the Sea of Japan. A, *Careproctus notosaikaiensis*, FAKU 135383, 160 mm SL, off Noto Peninsula; B, *Krusensterniella maculata*, NSMT-P 106556, 80 mm SL, Musashi Bank; C, *Lycodes nishimurai*, NSMT-P 67246, 275 mm SL, Yamato Bank; D, *Xenolumpenus longipterus*, NSMT-P 69644, holotype, 115 mm SL, near Okushiri Island.

Krasyukova, 1975; Honma and Kitami, 1978; Tsuda, 1990; Hatooka, 1993; Amaoka *et al.*, 1995; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Hatooka, 2000, 2002; Maeda and Tsutsui, 2003; Hatooka, 2013; Honma, 2013.

*Cryptacanthocephoides bergi* [*lapsus calami*]: Shinohara *et al.*, 2011.

SMBS uncatalogued (2).

#### Family Champsodontidae

***Champsodon snyderi*** Franz, 1910 [Japanese name: Wanigisu]

*Champsodon snyderi*: Katayama, 1940; Honma, 1955d; Kato, 1956; Mori, 1956a; Honma,

1963; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Honma and Kitami, 1978; Tsuda, 1990; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Hatooka and Hagiwara, 2013; Honma, 2013.

#### Family Trichodontidae

***Arctoscopus japonicus*** (Steindachner, 1881) [Japanese name: Hatahata]

*Arctoscopus japonicus*: Mori, 1928; Mori and Uchida, 1934; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Katayama, 1952; Kato, 1956; Mori, 1956a, c; Honma, 1963; Ouchi, 1963; Honma, 1968; Lindberg and Krasnyukova, 1969; Honma and Kitami, 1970; Takegawa and Morino, 1970; Ueno, 1971; Ogata *et al.*, 1973; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Nambu *et al.*, 1992; Hatooka, 1993; Amaoka *et al.*, 1995; Amaoka, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Hatooka, 2000; Suzuki *et al.*, 2000; Hatooka, 2002; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011, Hatooka, 2013; Honma, 2013.

KT-11-09-M1 (2), TS09-T004 (28).

#### Family Uranoscopidae

***Uranoscopus japonicus*** Houttuyn, 1782 [Japanese name: Mishima-okoze]

*Uranoscopus japonicus*: Mori, 1928; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Honma, 1955b; Kato, 1956; Mori, 1956a; Honma, 1963; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Honma and Kitami, 1978; Tsuda, 1990; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Honma, 2013; Yamada and Yagishita, 2013.

SMBS uncatalogued (3).

***Xenocephalus elongatus*** (Temminck and Schlegel, 1843) [Japanese name: Ao-mishima]

*Gnathagnus elongata*: Mori, 1928.

*Gnathagnus elongatus*: Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Honma, 1963; Lindberg and Krasnyukova, 1969; Takegawa and Morino, 1970; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990.

*Xenocephalus elongatus* [*sic*]: Suzuki *et al.*, 2000.

*Xenocephalus elongatus*: Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Yamada and Yagishita, 2013.

SMBS uncatalogued (1).

#### Family Callionymidae

\****Foetorepus altivelis*** (Temminck and Schlegel, 1845) [Japanese name: Beni-teguri]

*Callionymus altivelis*: Mori, 1952.

*Synchiropus altivelis*: Kato, 1956; Mori, 1956a; Lindberg and Krasnyukova, 1975; Tsuda, 1990.

#### Family Gempylidae

\****Gempylus serpens*** Cuvier, 1829 [Japanese name: Kurotachi-kamasu]

*Gempylus serpens*: Tsuda, 1990; Nakabo and Doiuchi, 2013.

***Nealotus tripus*** Johnson, 1865 [Japanese name: Fūrai-kamasu]

*Nealotus tripus*: Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Honma *et al.*, 2012; Honma,

2013; Nakabo and Doiuchi, 2013.

TS09-T017 (1), TS09-T038 (1), TS09-T093 (1).

\**Promethichthys prometheus* (Cuvier, 1832) [Japanese name: Kuroshibi-kamasu]

*Promethichthys prometheus*: Kato, 1956; Mori, 1956a; Lindberg and Krasnyukova, 1975; Tsuda, 1990; Nakabo and Doiuchi, 2013.

*Rexea prometheoides* (Bleeker, 1856) [Japanese name: Kagokamasu]

*Rexea prometheoides*: Mori, 1952; Honma *et al.*, 1990; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

*Ruvettus pretiosus* Cocco, 1833 [Japanese name: Baramutsu]

*Ruvettus pretiosus*: Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Nakabo and Doiuchi, 2013.

*Thyrsitoides marleyi* Fowler, 1929 [Japanese name: Nagatachi-kamasu]

*Thyrsitoides marleyi*: Honma *et al.*, 1990; Tsuda, 1990; Uozu Aquarium, 1997; Honma, 2013; Nakabo and Doiuchi, 2013.

#### Family Luvaridae

\**Luvarus imperialis* Rafinesque, 1810 [Japanese name: Ama-shiira]

*Luvarus imperialis*: Ueno, 1971; Maeda and Tsutsui, 2003.

#### Family Trichiuridae

\**Assurger anzac* (Alexander, 1917) [Japanese name: Nagayume-tachimodoki]

*Assurger anzac*: Kobayashi *et al.*, 2006; Nakabo and Doiuchi, 2013.

\**Benthodesmus tenuis* (Günther, 1877) [Japanese name: Tachimodoki]

*Lepidopus tenuis*: Honma, 1952.

*Benthodesmus tenuis*: Ueno, 1971; Lindberg and Krasnyukova, 1975; Tsuda, 1990; Maeda and Tsutsui, 2003; Honma, 2013; Nakabo and Doiuchi, 2013.

\**Eupleurogrammus* sp. [Japanese name: Oshiroidachi]

*Eupleurogrammus muticus* [*sic*]: Tsuda, 1990.

\**Evoxymetopon taeniatus* Gill, 1863 [Japanese name: Yume-tachimodoki]

*Evoxymetopon taeniatus*: Mori, 1952; Honma *et al.*, 1984; Tsuda, 1990; Honma, 2013; Nakabo and Doiuchi, 2013.

*Trichiurus japonicus* Temminck and Schlegel, 1844 [Japanese name: Tachi-uo]

*Trichiurus haumela*: Katayama, 1940; Honma, 1952; Mori, 1952.

*Trichiurus lepturus*: Honma, 1956b; Kato, 1956; Mori, 1956a; Honma, 1963; Takegawa and Morino, 1970; Ueno, 1971; Lindberg and Krasnyukova, 1975; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998.

*Trichiurus japonicus*: Mori and Uchida, 1934; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

SMBS uncatalogued (2).

#### Family Centrolophidae

*Hyperoglyphe japonica* (Döderlein, 1884) [Japanese name: Medai]

*Ocyrius japonicus*: Honma, 1952; Mori, 1952; Kato, 1956; Mori, 1956a; Honma, 1963; Honma and Kitami, 1970; Takegawa and Morino, 1970; Ueno, 1971; Honma, 1977; Honma and Kitami, 1978.



*Hyperoglyphe japonica*: Lindberg and Krasnyukova, 1975; Tsuda, 1990; Amaoka *et al.*, 1995; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

TS09-T006 (4), TS09-T013 (1), TS09-T105 (1), TS09-T141 (2), SMBS uncatalogued (1).

***Icichthys lockingtoni*** Jordan and Gilbert, 1880 [Japanese name: Kuro-medai]

*Icichthys lockingtoni*: Nakabo and Doiuchi, 2013.

*Remarks*. According to Nakabo and Doiuchi (2013), the occurrence can be confirmed from San'in District, based on FAKU 58768 and 58769.

***Psenopsis anomala*** (Temminck and Schlegel, 1844) [Japanese name: Ibodai]

*Psenopsis anomala*: Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Kato, 1956; Mori, 1956a; Honma, 1963; Honma and Kitami, 1970; Takegawa and Morino, 1970; Lindberg and Krasnyukova, 1975; Honma, 1977; Honma and Kitami, 1978; Tsuda, 1990; Nakabo, 1993b; Amaoka *et al.*, 1995; Okamura, 1997; Uozu Aquarium, 1997; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

*Psenopsis anomala* [*sic*]: Ueno, 1971.

\****Psenopsis shojimai*** Ochiai and Mori, 1965 [Japanese name: Nise-ibodai]

*Psenopsis shojimai*: Nakabo, 1993b; Nakabo and Doiuchi, 2013.

#### Family Nomeidae

\****Cubiceps whiteleggii*** (Waite, 1894) [Japanese name: Bōzu-kon'nyaku]

*Cubiceps squamiceps*: Honma, 1995; Kobayashi *et al.*, 2006; Honma, 2013.

*Cubiceps whiteleggii*: Nakabo and Doiuchi, 2013.

***Psenes cyanophrys*** Valenciennes, 1833 [Japanese name: Suji-hanabira-uo]

*Psenes cyanophrys*: Nakabo, 1993b; Okamura, 1997; Nakabo, 2000b, 2002b; Nakabo and Doiuchi, 2013.

*Remarks*. According to Nakabo and Doiuchi (2013), the occurrence can be confirmed from Wakasa Bay, based on FAKU 53317, 53318, 53278 and 54787.

***Nomeus gronovii*** (Gmelin, 1789) [Japanese name: Eboshidai]

*Nomeus gronovii*: Tsuda, 1990; Suzuki *et al.*, 2000; Nakabo and Doiuchi, 2013.

***Psenes pellucidus*** Lütken, 1880 [Japanese name: Hanabira-uo]

*Icticus ischanus*: Katayama, 1940.

*Icticus pellucidus*: Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970.

*Psenes pellucidus*: Lindberg and Krasnyukova, 1975; Honma *et al.*, 1984; Tsuda, 1990; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Kobayashi *et al.*, 2006; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

TS09-T141 (1).

***Psenes arafurensis*** Günther, 1889 [Japanese name: Kurage-uo]

*Psenes arafurensis*: Nakabo, 1993b; Okamura, 1997; Nakabo and Doiuchi, 2013.

*Remarks*. According to Nakabo and Doiuchi (2013), the occurrence can be confirmed from the western Sea of Japan, based on deposited in the Seikai National Fisheries Research Institute.

#### Family Ariommatidae

\****Ariomma indicum*** (Day, 1871) [Japanese name: Maru-ibodai]

*Ariomma indica*: Nakabo, 1993b; Okamura, 1997; Nakabo, 2000b; Nakabo and Doiuchi,

2013.

\**Ariomma luridum* Jordan and Snyder, 1904 [Japanese name: Ōme-medai]

*Ariomma lurida*: Takegawa and Morino, 1970; Ueno, 1971.

*Ariomma luridum*: Maeda and Tsutsui, 2003; Nakabo and Doiuchi, 2013.

#### Family Tetragonuridae

\**Tetragonurus cuvieri* Risso, 1810 [Japanese name: Doku-uroko-ibodai]

*Tetragonurus cuvieri*: Nakabo and Doiuchi, 2013.

#### Family Caproidae

\**Antigonia capros* Lowe, 1843 [Japanese name: Hishidai]

*Antigonia capros*: Katayama, 1940; Mori, 1952; Kato, 1956; Mori, 1956a; Tsuda, 1990; Nakabo and Kai, 2013.

#### Order Pleuronectiformes

##### Family Citharidae

*Citharoides macrolepidotus* Hubbs, 1915 [Japanese name: Koke-birame]

*Citharoides macrolepidotus*: Mori, 1952; Matsubara, 1955; Mori, 1956a; Amaoka, 1988; Tsuda, 1990; Nambu *et al.*, 1991; Lindberg and Fedorov, 1993; Nakabo, 1993b, 2000b, 2002b; Voronina and Volkova, 2003; Shinohara *et al.*, 2011; Nakabo and Doiuchi, 2013.

##### Family Paralichthyidae

*Paralichthys olivaceus* (Temminck and Schlegel, 1846) [Japanese name: Hirame]

*Paralichthys olivaceus*: Snyder, 1912; Kato, 1956; Ueno, 1971; Tsuda, 1990; Nakabo, 1993b; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Nakabo and Doiuchi, 2013; Honma, 2013.

*Pseudorhombus pentophthalmus* Günther, 1862 [Japanese name: Tama-ganzō-birame]

*Pseudorhombus pentophthalmus* [*sic*]: Ueno, 1971.

*Pseudorhombus pentophthalmus*: Kato, 1956; Tsuda, 1990; Nambu *et al.*, 1991; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Honma, 2013.

##### Family Bothidae

\**Engyprosopon maldivensis* (Regan, 1908) [Japanese name: Tenaga-darumagarei]

*Engyprosopon maldivensis*: Nakabo and Doiuchi, 2013.

\**Japonolaeops dentatus* Amaoka, 1969 [Japanese name: Hina-darumagarei]

*Japonolaeops dentatus*: Nakabo and Doiuchi, 2013.

*Laeops kitaharae* (Smith and Pope, 1906) [Japanese name: Yarigarei]

*Laeops lanceolata*: Mori, 1952; Honma, 1962; Ochiai and Amaoka, 1962; Honma, 1963; Takegawa and Morino, 1970; Honma and Kitami, 1978; Tsuda, 1990; Nakabo and Doiuchi, 2013.

*Laeops kitaharai*: Mori, 1956a; Kato, 1956; Tsuda, 1990.

*Laeops kitaharae*: Amaoka, 1988; Nambu *et al.*, 1991; Lindberg and Fedorov, 1993; Nakabo, 1993b; Amaoka, 1997; Nakabo, 2000b, 2002b; Honma, 2013; Nakabo and Doiuchi, 2013.

## Family Pleuronectidae

***Acanthopsetta nadeshnyi*** Schmidt, 1904 [Japanese name: Urocome-garei]

*Acanthopsetta nadeshnyi*: Mori and Uchida, 1934; Okada and Matsubara, 1938; Mori, 1952; Honma, 1955d; Matsubara, 1955; Kato, 1956; Mori, 1956a, c; Honma, 1963; Ouchi, 1963; Takegawa and Morino, 1970; Honma and Kitami, 1978; Sakamoto, 1988; Tsuda, 1990; Nambu *et al.*, 1991, 1992; Lindberg and Fedorov, 1993; Nakabo, 1993b; Amaoka *et al.*, 1995; Sakamoto, 1997; Uozu Aquarium, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Evseenko, 2004; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

*Acanthopsetta nadeshnyi* [sic]: Katayama, 1952.

*Acanthopsetta nadeshnyi* [sic]: Ueno, 1971.

KT-10-08-R1 (2), KT-10-08-R2 (3), KT-10-08-T1 (1), SMBS uncatalogued (1).

\****Atheresthes evermanni*** Jordan and Starks, 1904 [Japanese name: Abura-garei]

*Atheresthes evermanni*: Katayama, 1940; Honma, 1952; Kato, 1956; Honma, 1963; Ouchi, 1963; Ueno, 1971; Honma and Kitami, 1978; Sakamoto, 1988; Tsuda, 1990; Lindberg and Fedorov, 1993; Nakabo, 1993b; Amaoka *et al.*, 1995; Sakamoto, 1997; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Honma, 2013; Nakabo and Doiuchi, 2013.

***Clidoderma asperrimum*** (Temminck and Schlegel, 1846) [Japanese name: Same-garei]

*Clidoderma asperrimum*: Snyder, 1912; Mori, 1928; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Katayama, 1952; Kato, 1956; Mori, 1952, 1956a; Ueno, 1971; Tsuda, 1990; Lindberg and Fedorov, 1993; Sakamoto, 1997; Adrianov and Kussakin, 1998; Adrianov and Kussakin, 1998; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Ivankova, 2007; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

***Dexistes rikuzenius*** Jordan and Starks, 1904 [Japanese name: Migi-garei]

*Dexistes rikuzenius*: Mori and Uchida, 1934; Mori, 1952; Honma, 1955c; Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma, 1963; Honma and Kitami, 1978; Honma and Kitami, 1978; Tsuda, 1990; Nambu *et al.*, 1991; Lindberg and Fedorov, 1993; Sakamoto, 1997; Uozu Aquarium, 1997; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

***Eopsetta grigorjewi*** (Herzenstein, 1890) [Japanese name: Mushi-garei]

*Xystrias grigorjewi*: Mori, 1928; Mori and Uchida, 1934; Katayama, 1940; Honma, 1952; Mori, 1952, 1956a.

*Eopsetta grigorjewi*: Honma, 1955b; Kato, 1956; Matsubara, 1963; Takegawa and Morino, 1970; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Nambu *et al.*, 1991; Lindberg and Fedorov, 1993; Nakabo, 1993b; Amaoka *et al.*, 1995; Sakamoto, 1997; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

*Eopsetta grigorjewi* [sic]: Sokolovskaya *et al.*, 1998.

SMBS uncatalogued (1).

***Glyptocephalus stelleri*** (Schmidt, 1904) [Japanese name: Hireguro]

*Glyptocephalus sasæ*: Snyder, 1912.

*Microstomus hireguro*: Tanaka, 1917.

*Tanakius hireguro*: Mori and Uchida, 1934.

*Glyptocephalus stelleri*: Katayama, 1940; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a, 1956c; Honma, 1963; Ouchi, 1963; Honma and

Kitami, 1970; Ueno, 1971; Ogata *et al.*, 1973; Honma, 1977; Honma and Kitami, 1978; Sakamoto, 1988; Tsuda, 1990; Nambu *et al.*, 1991, 1992; Nakabo, 1993b; Amaoka *et al.*, 1995; Sakamoto, 1997; Adrianov and Kussakin, 1998; Adrianov and Kussakin, 1998; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; ; Evseenko, 2004; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

KT-11-09-N3 (3), KT-11-09-T1 (1), TS09-T004 (1), TS09-T011 (1), TS09-T102 (5), TS09-T107 (7), SMBS uncatalogued (1).

***Hippoglossoides dubius*** Schmidt, 1904 [Japanese name: Aka-garei]

*Hippoglossoides katakuræ*: Snyder, 1912.

*Hippoglossoides dubius*: Snyder, 1912; Mori and Uchida, 1934; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a, c; Honma, 1963; Ouchi, 1963; Takegawa and Morino, 1970; Ueno, 1971; Ogata *et al.*, 1973; Honma and Kitami, 1978; Sakamoto, 1988; Tsuda, 1990; Nambu *et al.*, 1991; Nambu *et al.*, 1992; Amaoka *et al.*, 1995; Sakamoto, 1997; Sokolovskaya *et al.*, 1998; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; ; Evseenko, 2004; Kitagawa *et al.*, 2008; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

*Cynopsetta dubia*: Tanaka, 1913b; Katayama, 1952.

*Hippoglossoides (Hippoglossoides) dubius*: Lindberg and Fedorov, 1993; Adrianov and Kussakin, 1998.

SMBS uncatalogued (1).

***Hippoglossoides elassodon*** Jordan and Gilbert, 1881 [Japanese name: Uma-garei]

*Hippoglossoides elassodon*: Kato, 1956; Mori, 1956a; Ueno, 1971; Tsuda, 1990; Nambu *et al.*, 1991; Amaoka *et al.*, 1995; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Shinohara *et al.*, 2011; Nakabo and Doiuchi, 2013.

*Hippoglossoides (Hippoglossoides) elassodon*: Lindberg and Fedorov, 1993.

***Hippoglossoides pinetorum*** (Jordan and Starks, 1904) [Japanese name: Sōhachi]

*Cleithenes herzensteini*: Mori, 1928; Mori and Uchida, 1934; Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Mori, 1952, 1956a; Ueno, 1971; Voronina and Volkova, 2003.

*Cleithenes pinetorum*: Okada and Matsubara, 1938; Kato, 1956; Takegawa and Morino, 1970; Amaoka *et al.*, 1995; Voronina and Volkova, 2003.

*Protopsetta herzensteini*: Katayama, 1952.

*Cleithenes pinetorum herzensteini*: Matsubara, 1955; Kato, 1956; Honma, 1963; Ouchi, 1963; Honma and Kitami, 1978; Tsuda, 1990.

*Hippoglossoides pinetorum*: Nambu *et al.*, 1991; Sakamoto, 1997; Nakabo, 1993b, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

*Hippoglossoides (Cleithenes) herzensteini*: Lindberg and Fedorov, 1993; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998.

TS09-T011 (1).

***Hippoglossus stenolepis*** Schmidt, 1904 [Japanese name: Ohyō]

*Hippoglossus stenolepis*: Okada and Matsubara, 1938; Katayama, 1940; Honma, 1952; Kato, 1956; Ueno, 1971; Tsuda, 1990; Nakabo, 1993b; Sakamoto, 1997; Uozu Aquarium, 1997; Sokolovskaya *et al.*, 1998; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

*Hippoglossus hippoglossus stereolepis*: Adrianov and Kussakin, 1998.

***Microstomus achne*** (Jordan and Starks, 1904) [Japanese name: Baba-garei]

*Microstomus achne*: Okada and Matsubara, 1938; Honma, 1952; Mori, 1952; Matsubara, 1955; Kato, 1956; Mori, 1956a; Honma and Kitami, 1970; Ueno, 1971; Honma and Kitami, 1978; Honma and Kitami, 1978; Sakamoto, 1988; Tsuda, 1990; Lindberg and Fedorov, 1993; Nakabo, 1993b; Amaoka *et al.*, 1995; Sakamoto, 1997; Adrianov and Kussakin, 1998; Adrianov and Kussakin, 1998; Nakabo, 2000b; Suzuki *et al.*, 2000; Nakabo, 2002b; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

***Pleuronectes asper*** Pallas, 1814 [Japanese name: Kogane-garei]

*Limanda asper*: Tsuda, 1990; Voronina and Volkova, 2003.

*Pleuronectes (Limanda) asper*: Lindberg and Fedorov, 1993; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998.

*Pleuronectes asper*: Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Nakabo and Doiuchi, 2013.

***Pleuronectes bilineatus*** (Ayres, 1855) [Japanese name: Shumushu-garei]

*Lepidopsetta bilineata*: Okada and Matsubara, 1938; Ouchi, 1963.

*Pleuronectes bilineata*: Honma, 1952; Matsubara, 1955.

*Pleuronectes bilineatus*: Sakamoto, 1988; Tsuda, 1990; Nambu *et al.*, 1991; Nakabo, 1993b; Amaoka *et al.*, 1995; Sakamoto, 1997; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

***Pleuronectes quadrituberculatus*** Pallas, 1814 [Japanese name: Tsuno-garei]

*Pleuronectes quadrituberculatus*: Sakamoto, 1988; Nambu *et al.*, 1991; Nakabo, 1993b; Sakamoto, 1997; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Shinohara *et al.*, 2011; Honma, 2013; Nakabo and Doiuchi, 2013.

*Pleuronectes pallasii*: Tsuda, 1990.

*Pleuronectes (Pleuronectes) quadrituberculatus*: Lindberg and Fedorov, 1993; Adrianov and Kussakin, 1998.

\****Pleuronectes sakhaliensis*** (Hubbs, 1915) [Japanese name: Karafuto-garei]

*Limanda korigarei*: Ueno, 1971.

*Pleuronectes sakhaliensis*: Nakabo and Doiuchi, 2013.

\****Reinhardtius hippoglossoides*** (Walbaum, 1792) [Japanese name: Karasu-garei]

*Reinhardtius matsuurai*: Kato, 1956.

*Reinhardtius matsuurae*: Mori, 1956a.

*Reinhardtius hippoglossoides*: Ueno, 1971; Sakamoto, 1988; Tsuda, 1990; Nakabo, 1993b; Nambu *et al.*, 1991; Amaoka *et al.*, 1995; Sakamoto, 1997; Nakabo, 2000b, 2002b; Maeda and Tsutsui, 2003; Kitagawa *et al.*, 2008; Honma, 2013; Nakabo and Doiuchi, 2013.

*Reinhardtius hippoglossoides natsuurae*: Lindberg and Fedorov, 1993.

***Tanakius kitaharae*** (Jordan and Starks, 1904) [Japanese name: Yanagi-mushigarei]

*Tanakius kitaharae*: Katayama, 1940; Honma, 1952; Katayama, 1952; Mori, 1952; Matsubara, 1955; Lindberg and Fedorov, 1993; Nakabo and Doiuchi, 2013.

*Tanakius kitaharai*: Kato, 1956; Mori, 1956a; Ouchi, 1963; Honma and Kitami, 1970; Ueno, 1971; Honma and Kitami, 1978; Tsuda, 1990; Nambu *et al.*, 1991; Suzuki *et al.*, 2000; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Shinohara *et al.*, 2011; Honma, 2013.

SMBS uncatalogued (1).

***Verasper moseri*** Jordan and Gilbert, 1898 [Japanese name: Matsukawa]

*Verasper moseri*: Kato, 1956; Ueno, 1971; Sakamoto, 1988; Tsuda, 1990; Amaoka *et al.*, 1995; Sakamoto, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and

Tsutsui, 2003; Kitagawa *et al.*, 2008; Voronina and Volkova, 2003.

***Verasper variegatus*** (Temminck and Schlegel, 1846) [Japanese name: Hoshi-garei]

*Verasper variegatus*: Kato, 1956; Ueno, 1971; Sakamoto, 1988; Tsuda, 1990; Sakamoto, 1997; Adrianov and Kussakin, 1998; Sokolovskaya *et al.*, 1998; Maeda and Tsutsui, 2003; Voronina and Volkova, 2003; Kitagawa *et al.*, 2008; Honma, 2013; Nakabo and Doiuchi, 2013.

#### Family Poecilopsettidae

***Poecilopsetta plinthus*** (Jordan and Starks, 1904) [Japanese name: Kawara-garei]

*Poecilopsetta plinthus*: Honma and Mizusawa, 1966; Honma and Kitami, 1978; Sakamoto, 1988; Lindberg and Fedorov, 1993; Tsuda, 1990; Nambu *et al.*, 1991; Suzuki *et al.*, 2000; Voronina and Volkova, 2003; Shinohara *et al.*, 2011; Nakabo and Doiuchi, 2013.

*Poecilopsetta pinthus* [sic]: Honma, 2013.

#### Family Samaridae

\****Samariscus latus*** Matsubara and Takamuki, 1951 [Japanese name: Tsumari-tsukinowa-garei]

*Samariscus latus*: Sakamoto, 1988, 1997; Nakabo and Doiuchi, 2013.

#### Family Cynoglossidae

\****Cynoglossus ochiaii*** Yokogawa, Endo and Sakaji, 2008 [Japanese name: Oki-genko]

*Cynoglossus ochiaii*: Yamada and Yagishita, 2013.

\****Symphurus orientalis*** (Bleeker, 1879) [Japanese name: Azuma-garei]

*Symphurus orientalis*: Okada and Matsubara, 1938; Yamada and Yagishita, 2013.

#### Order Tetraodontiformes

##### Family Triacanthodidae

\****Macrorhamphosodes uradoi*** (Kamohara, 1933) [Japanese name: Fue-kawamuki]

*Macrorhamphosodes uradoi*: Hayashi and Hagiwara, 2013.

***Triacanthodes anomalus*** (Temminck and Schlegel, 1850) [Japanese name: Beni-kawamuki]

*Triacanthodes anomalus anomalus*: Honma and Mizusawa, 1966.

*Triacanthodes anomalus*: Katayama, 1940; Kato, 1956; Takegawa and Morino, 1970; Tsuda, 1990; Lindberg *et al.*, 1997; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Hayashi and Hagiwara, 2013; Honma, 2013.

#### Family Monacanthidae

***Thamnaconus hypargyreus*** (Cope, 1871) [Japanese name: Sarasa-hagi]

*Canthrinus tessellatus*: Honma, 1952.

*Cantherines tessellatus*: Mori, 1952.

*Novodon tessellatus* [sic]: Kato, 1956.

*Navodon tessellatus*: Honma and Kitami, 1970; Honma and Chiba, 1978; Honma and Kitami, 1978; Tsuda, 1990.

*Thamnaconus hypargyreus*: Suzuki *et al.*, 2000; Hayashi and Hagiwara, 2013; Honma, 2013. TS09-T107 (2).

## Family Ostraciidae

***Kentrocapros aculeatus*** (Houttuyn, 1782) [Japanese name: Itomaki-fugu]

*Kentrocapros aculeatus*: Mori and Uchida, 1934; Kato, 1956; Mori, 1956a; Takegawa and Morino, 1970; Honma and Chiba, 1978; Tsuda, 1990; Lindberg *et al.*, 1997; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Shinohara *et al.*, 2011; Hayashi and Hagiwara, 2013; Honma, 2013.

*Aracana aculeata*: Katayama, 1940; Honma, 1952; Mori, 1952.

## Family Triodontidae

***Triodon macropterus*** Lesson, 1831 [Japanese name: Uchiwa-fugu]

*Triodon bursarius*: Katayama, 1940; Mori, 1952; Kato, 1956.

*Triodon macropterus*: Tsuda, 1990; Lindberg *et al.*, 1997; Uozu Aquarium, 1997; Nakabo and Doiuchi, 2013.

## Family Tetraodontidae

***Sphoeroides pachygaster*** (Müller and Troschel, 1848) [Japanese name: Yorito-fugu]

*Liosaccus cutaneus* [*sic*]: Matsubara, 1955.

*Liosaccus cutaneus*: Honma and Kitami, 1970; Honma *et al.*, 1972; Honma and Chiba, 1978; Honma and Kitami, 1978; Tsuda, 1990.

*Liosarcus pachygaster*: Honma, 1991a.

*Sphoeroides pachygaster*: Lindberg *et al.*, 1997; Uozu Aquarium, 1997; Suzuki *et al.*, 2000; Kobayashi *et al.*, 2006; Shinohara *et al.*, 2011; Honma, 2013; Yamada and Yagishita, 2013.

SMBS uncatalogued (1).

## General Remarks

In summary, a total of 363 species in 104 families and 29 orders was included in our list. Compared to deep-sea fishes of Suruga Bay (Shinohara and Matsuura, 1997: 483 spp.), Tosa Bay (Shinohara *et al.*, 2001: 599 spp.), the Ryukyu Islands (Shinohara *et al.*, 2005: 644 spp.) and the Pacific coast off Tohoku District (Shinohara *et al.*, 2009: 496 spp.), the species diversity of deep-sea fishes is clearly lower in the Sea of Japan. Although the limited diversity of deep-sea fishes is possibly due to several factors, the extremely small number of oceanic deep-sea fishes has also contributed to the depauperate deep-sea fish fauna (*e.g.*, Shinohara *et al.*, 2011).

Our list revealed that relatively speciose families in the Sea of Japan are Cottidae (30 spp.), Zoarcidae (29 spp.), Liparidae (20 spp.), Pleuronectidae (19 spp.), Scorpaenidae (15 spp.), Agonidae (13 spp.) and Stichaeidae (12 spp). The five most speciose families include about 30% of the entire species in the list. According to Shinohara and Matsuura (1997) and Shinohara *et al.* (2001, 2005, 2009), the Sea of Japan is thought to be unique in having the highest number of species in the Cottidae (30 vs. 9 in Pacific off Tohoku, 0 in Ryukyu Islands, 4 in Tosa Bay and 5 in Suruga Bay), Zoarcidae (29 vs. 20, 1, 4 and 2), Liparidae (20 vs. 14, 3, 2 and 3), Pleuronectidae (19 vs. 14, 8, 14 and 7) and Stichaeidae (12 vs. 5, 0, 1 and 2). The unique fauna of the Sea of Japan also includes 9 endemic species (Figs. 2, 4), *i.e.*, *Icelus toyamensis* (Cottidae), *Ocella kuronumai* (Agonidae), *Careproctus acanthodes*, *C. entargyneus*, *C. entomelas* and *C. notosaikaiensis* (Liparidae), *Krusenterniella maculata* and *Lycodes nishimurai* (Zoarcidae) and *Xenolumpenus longipterus* (Stichaeidae).

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