

# Historical Fish Specimens Collected from the Tohoku District by the Saito Ho-on Kai Museum of Natural History

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**Abstract** The fish collection of the Saito Ho-on Kai Museum of Natural History was transferred to the National Museum of Nature and Science, Tokyo in February 2006. Ninety percent of the fish collection contains specimens collected from the Tohoku District during the period from 1930 to 1933 when natural environments of Japan were in good condition for various groups of fishes. The fish specimens from the Tohoku District were classified into 361 species/subspecies of 273 genera belonging to 131 families of 31 orders. A list of the species is shown with remarks on distribution.

**Key words:** Fish specimens, Saito Ho-on Kai Museum, Tohoku District, inventory.

## Introduction

The Saito Ho-on Kai Museum was established in November 1933 in Sendai City, Miyagi Prefecture, Japan. The first director of the museum, Prof. Shinkishi Hatai, was a renowned taxonomist of the Oligochaeta who was also a professor at the Tohoku University and served as the first director of the Palau Tropical Biological Station. In the early days of the museum, staff made broad surveys in the Tohoku District to collect many groups of living organisms, fossils, minerals and rocks, representing the wide and diverse nature of in the northern part of Honshu Island. Unfortunately, the museum suffered a terrible fire caused by an air raid during World War II, which resulted in the loss of the entire botanical collection as well as significant amounts of literature and other documents. However, other natural history collections fortunately survived the fire. After World War II, the museum changed its name in 1976 from the Saito Ho-on Kai Museum to the Saito Ho-on Kai Museum of Natural History, indicating its focus on natural history in-

stead of natural science. The museum has tried to keep its activity at the level before the war, but it failed to do so because of financial difficulties. In 2005, the Saito Ho-on Kai Museum of Natural History decided to donate its entire collection to the National Museum of Nature and Science, Tokyo. In February 2006 this historically important collection left its home for Tokyo.

The transferred fish collection of the Saito Ho-on Kai Museum of Natural History included 7449 specimens of 1932 lots collected from Japan and foreign countries. Many specimens in the collection came from the Tohoku District (Aomori, Akita, Iwate, Miyagi, Yamagata and Fukushima prefectures) in the period from 1930 to 1933. These specimens occupied 90 % of the fish collection.

The specimens of this fish collection were studied by major Japanese ichthyologists including Masamitsu Oshima, Yaichiro Okada, Kiyomatsu Matsubara, and Hyoji Ikeda. Of these authors, Okada and Ikeda (1938) reported 45 species of freshwater and brackish water fishes from the collection of the Saito Ho-on Kai Museum.

However, marine fishes of the collection have not been studied in depth by ichthyologists.

The freshwater fish specimens of the Saito Ho-on Kai Museum of Natural History well represent the freshwater fish fauna of the Tohoku District when aquatic environments of the district were still in good condition. As in other areas in Japan, the Tohoku District is not an exception in terms of economic development involving many construction projects in river systems, lakes, ponds and wetlands. In the late 1950s through mid-1970s, many aquatic environments in Japan suffered from huge development and construction pressures resulting in significant degradation of habitats for freshwater inhabitants. For example, Shinai-numa Pond, the type locality of a cyprinid fish *Pseudorasbora pumila pumila*, was lost and turned into paddy fields and railroads.

Examination of the fish collection of the Saito Ho-on Kai Museum of Natural History revealed that the specimens collected from the Tohoku District are classified into 361 species of 273 genera belonging to 131 families of 31 orders. A list of the fishes is shown below with some remarks.

### Materials and Methods

Systematic arrangement of taxa follows Nelson (1994). Scientific names generally follow the Catalog of Fishes on the website of the California Academy of Sciences, USA (<http://research.calacademy.org/research/Ichthyology/catalog/fishcatsearch.html>). Standard Japanese names follow Nakabo (2000) except for Japanese names including discriminatory words for human beings (see Amendments of discriminatory Japanese fish names by the Ichthyological Society of Japan, 2007). We also follow Arai *et al.* (2007: *Acheilognathus*), Kai and Nakabo (2008: *Sebastes*), Katafuchi and Nakabo (2007: *Ditrema*) and Yoshino and Kishimoto (2008: *Plotosus*) in taxonomic treatments of species in those genera. Number of specimens and size(s) are indicated in parentheses just after each catalog number. Standard length and total length are abbreviated as

SL and TL, respectively. The specimens from the Tohoku District were collected in 6 prefectures: Aomori, Akita, Iwate, Miyagi, Yamagata, and Fukushima (Figs. 1–2). Some specimens could not be identified to species level because of poor condition. The species reported by Okada and Ikeda (1938) are shown with an asterisk. All specimens are deposited in the National Museum of Nature and Science, Tokyo (NSMT-P). The species-group names of the cyprinid fish genus *Carassius* follow the ruling (Opinion 2027, March 2003) by the International Commission on Zoological Nomenclature (see also Gentry *et al.*, 2004)

### Species List

#### Order Myxiniiformes

#### Family Myxinidae

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

Akita: Yurihonjo City, off Honjo, NSMT-P 74972 (4, 29.5–43 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 74358 (1, 46.1 cm TL), 74808 (1, 43 cm TL).

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

Akita: Yurihonjo City, off Honjo, NSMT-P 74913 (1, 38.5 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 74486 (1, 43 cm TL), 74829 (3, 36.3–43.5 cm TL), 74902 (1, 44 cm TL).

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

Fukushima: Iwaki City, Onahama, NSMT-P 75025 (2, 59.5–62 cm TL).

*Myxine* sp.

Fukushima: Iwaki City, Onahama, NSMT-P 74811 (1, 45 cm TL), 74878 (1, 54.8 cm TL).

#### Family Petromyzontidae

*Lampetra tridentatus* (Richardson, 1836) [Japanese name: Mitsuba-yatsume]

Miyagi: Natori City, Natori-gawa River, NSMT-P 74580 (1, 37.2 cm TL).

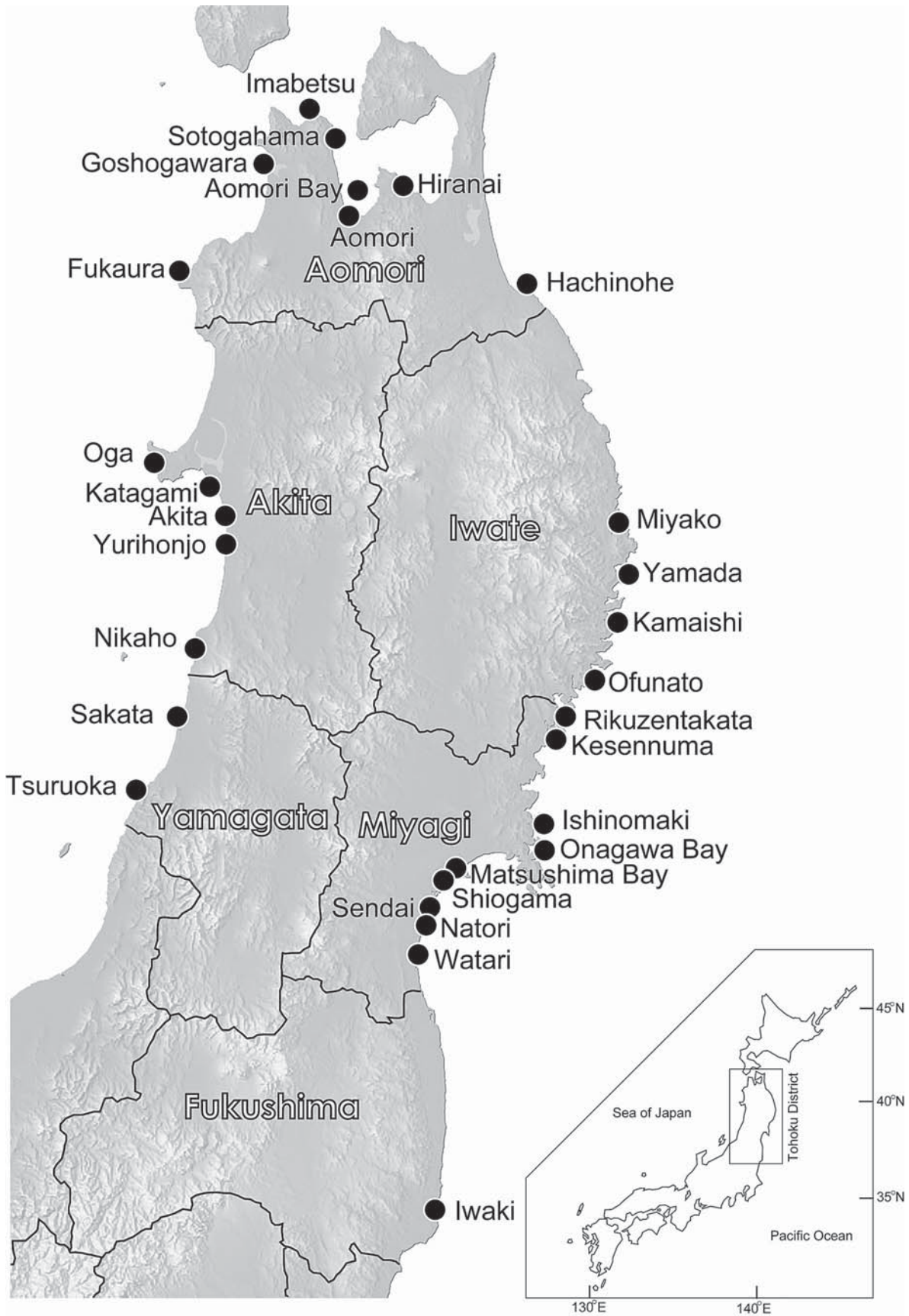


Fig. 1. Collection localities of marine fishes from the Tohoku District, Japan.

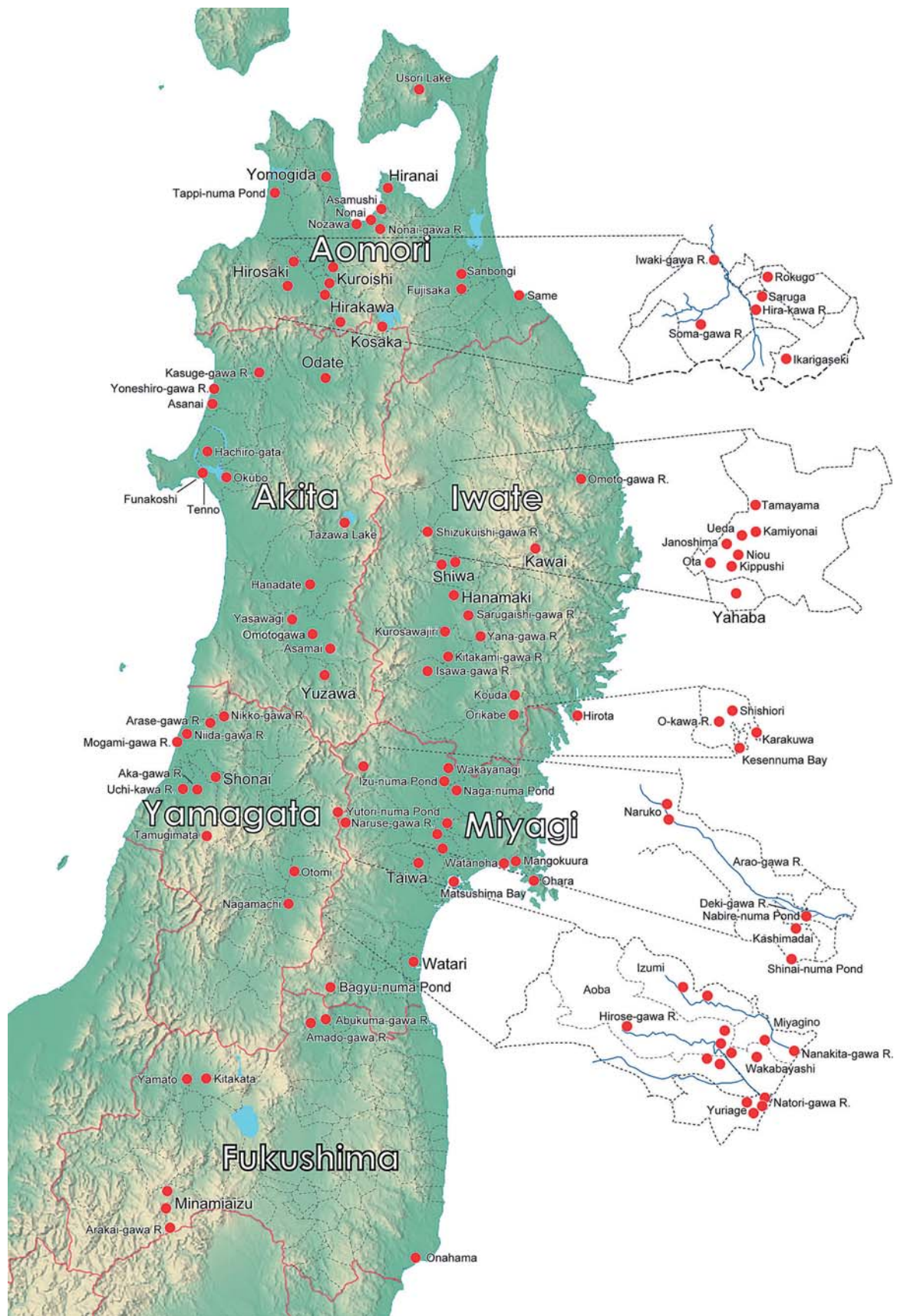


Fig. 2. Collection localities of freshwater and brackish water fishes from the Tohoku District, Japan.

\* *Lethenteron camtschaticum* (Tilesius, 1811)  
[Japanese name: Kawa-yatsume]

Aomori: Kuroishi City, Rokugo, NSMT-P 74341 (3, 33.8–36.9 cm TL).

Akita: Kazuno County, Kosaka Town, NSMT-P 73716 (8, 4.5–12.5 cm TL); Noshiro City, Asanai, NSMT-P 74581 (2, 41.2–41.8 cm TL).

Yamagata: Tsuruoka City, NSMT-P 73712 (2, 14.2–16.5 cm TL).

\* *Lethenteron reissneri* (Dybowski, 1869)  
[Japanese name: Suna-yatsume]

Akita: Yokote City, Asamai, NSMT-P 73883 (3, 8.4–11.4 cm TL), 74029 (1, 8.1–8.7 cm TL).

Iwate: Shiwa County, Shiwa Town, NSMT-P 73368 (3, 9.8–10.7 cm TL).

Miyagi: boundary between Miyagi County and Sendai City, NSMT-P 73950 (1, 9.6 cm TL); Natori City, Yuriage, NSMT-P 76840 (1, 14.4 cm TL); Osaki City, Naruko, NSMT-P 74052 (2, 11.8–12.8 cm TL); Sendai City, Izumi, NSMT-P 73720 (4, 8.5–9.7 cm TL).

Yamagata: Tsuruoka City, NSMT-P 73736 (1, 11.4 cm TL); Yamagata City, Nagamachi, NSMT-P 74159 (2, 12.2–12.7 cm TL).

Fukushima: Minamiaizu County, Minamiaizu Town, NSMT-P 73939 (1, 7.6 cm TL).

detailed locality, NSMT-P 74942 (2, 41.2–46.7 cm TL).

#### Family Triakididae

*Mustelus manazo* Bleeker, 1854 [Japanese name: Hoshi-zame]

Akita: Yamamoto County, Happo Town, NSMT-P 74857 (1, 43.9 cm TL).

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74734 (1, 35.3 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 74951 (3, 43.7–46.5 cm TL).

*Triakis scyllium* Müller & Henle, 1839 [Japanese name: Dochi-zame]

Fukushima: Iwaki City, Onahama, NSMT-P 74963 (4, 36.5–38 cm TL).

#### Family Carcharhinidae

*Sphyrna zygaena* (Linnaeus, 1758) [Japanese name: Shiro-shumoku-zame]

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74890 (1, 49.5 cm TL), 74959 (1, 49 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 74903 (1, 50.7 cm TL).

#### Order Chimaeriformes

##### Family Chimaeridae

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

Fukushima: Iwaki City, Onahama, NSMT-P 77185 (1, 75 cm TL).

#### Order Carcharhiniformes

##### Family Scyliorhinidae

*Galeus nipponensis* Nakaya, 1975 [Japanese name: Nihon-yamori-zame]

Fukushima: Iwaki City, Onahama, NSMT-P 74746 (1, 35.7 cm TL).

*Scyliorhinus torazame* (Tanaka, 1908) [Japanese name: Tora-zame]

Aomori: Higashitsugaru County, Imabetsu Town, NSMT-P 74879 (2, 43.7–44.7 cm TL); no

#### Order Lamniformes

##### Family Alopiidae

*Alopias superciliosus* Lowe, 1841 [Japanese name: Hachiware]

Miyagi: Ishinomaki City, Kinkazan, NSMT-P 77177 (1, 121 cm TL), 77178 (1, 117 cm TL).

#### Order Squaliformes

##### Family Squalidae

*Centrophorus* sp.

Miyagi: Shiogama City, NSMT-P (1, 20.1 cm SL).

*Centroscyllium ritteri* Jordan & Fowler, 1903 [Japanese name: Kasumi-zame]

Miyagi: Kesenuma City, NSMT-P 74956 (1, 42.7 cm TL); Natori City, off Yuriage, NSMT-P 74328 (1, 27 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 74884 (5, 18.7–45 cm TL).

*Etmopterus lucifer* Jordan & Snyder, 1902 [Japanese name: Fuji-kujira]

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 75027 (5, 33.5–33.9 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 73653 (3, 23.9–30.5 cm TL), 74360 (4, 26.1–29.5 cm TL), 74376 (2, 17.2–24.2 cm TL), 74908 (1, 43.4 cm TL).

*Etmopterus pusillus* (Lowe, 1839) [Japanese name: Karasu-zame]

Miyagi: Natori City, off Yuriage, NSMT-P 74454 (2, 24.5–25 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 74418 (5, 17.4–21.2 cm TL), 75214 (2, 17.7–19.4 cm TL).

*Squalus acanthias* Linnaeus, 1758 [Japanese name: Aburatsuno-zame]

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74843 (1, 32.1 cm TL); Kesenuma City, off Karakuwa, NSMT-P 74887 (1, 54.1 cm TL); Natori City, off Yuriage, NSMT-P 73279 (3, 23.7–25.8 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 77172 (4, 25.2–48 cm TL).

*Squalus mitsukurii* Jordan & Snyder, 1903 [Japanese name: Futotsuno-zame]

Miyagi: Kesenuma City, NSMT-P 74600 (1, 35.8 cm TL).

*Squalus* sp.

Iwate: Miyako City, off Miyako, NSMT-P 73693 (1, 23.5 cm TL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74084 (2, 4.4–12.4 cm TL), 74401 (1, 35.2 cm TL), 74760 (1, 37.4 cm TL); off Kesenuma City, NSMT-P 74415 (2, 13.9–14.2 cm TL).

## Order Squatiniformes

### Family Squatinidae

*Squatina nebulosa* Regan, 1906 [Japanese name: Koro-zame]

Akita: Nikaho City, off Konoura, NSMT-P 74766 (1, 35.6 cm TL).

## Order Rajiformes

### Family Pristidae

*Pristis microdon* Latham, 1794 [Japanese name: Nokogiri-ei]

Fukushima: Iwaki City, Onahama, NSMT-P 74742 (1, 59.3 cm TL).

### Family Rhinobatidae

*Rhinobatos schlegelii* Müller & Henle, 1841 [Japanese name: Sakata-zame]

Akita: Nikaho City, Konoura, NSMT-P 74325 (1, 26.6 cm TL).

### Family Rajidae

*Dipturus tengu* (Jordan & Fowler, 1903) [Japanese name: Tengu-kasube]

Miyagi: off Kesenuma City, NSMT-P 74383 (5, 34.5–35.5 cm TL).

*Dipturus* sp.

Miyagi: Natori City, off Yuriage, NSMT-P 74430 (1, 7.3 cm TL).

*Okamejei kenojei* (Müller & Henle, 1841) [Japanese name: Komon-kasube]

Aomori: Aomori City, Asamushi, NSMT-P 77139 (1, 30.1 cm TL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73428 (2, 16.9–18.4 cm TL).

*Okamejei meerdervoortii* (Bleeker, 1860) [Japanese name: Medama-kasube]

Fukushima: Iwaki City, Onahama, NSMT-P 74771 (1, 31 cm TL).

*Okamejei schmidtii* (Ishiyama, 1958) [Japanese name: Tsumari-kasube]

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74880 (1, 35.2 cm TL).

*Okamejei* sp.

Akita: Nikaho City, Konoura, NSMT-P 74443 (3, 20.1–27.5 cm TL).

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74859 (1, 30.9 cm TL); Watari County, off Watari Town, NSMT-P 75024 (1, 36 cm TL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74491 (1, 20.1 cm TL).

*Rhinoraja kujiensis* (Tanaka, 1916) [Japanese

name: Kuji-kasube]

Miyagi: Kesenuma City, NSMT-P 73644 (1, 24.3 cm TL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73582 (1, 21 cm TL).

#### Family Dasyatidae

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

Akita: Nikaho City, Konoura, NSMT-P 74372 (1, 29.1 cm TL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74558 (1, 32.1 cm TL).

*Myliobatis tobijeii* Bleeker, 1854 [Japanese name: Tobi-ei]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 74863 (1, 62.1 cm TL).

Iwate: Miyako City, off Miyako, NSMT-P 75070 (1, 56.6 cm TL).

Miyagi: Natori City, off Yuriage, NSMT-P 74561 (1, 46.6 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 74603 (1, 46.4 cm TL), 74769 (1, 48.2 cm TL), 74770 (1, 45 cm TL).

#### Order Albuliformes

##### Family Albulidae

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

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74776 (5, 24–25.5 cm SL); Natori City, off Yuriage, NSMT-P 73681 (2, 18.7–19.4 cm SL), 74679 (2, 19.2–23.1 cm SL); Watari County, Watari Town, NSMT-P 74596 (5, 23.2–27.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73812 (1, 18.3 cm SL), 73988 (1, 17.2 cm SL), 74285 (1, 21 cm SL).

#### Order Anguilliformes

##### Family Anguillidae

\* *Anguilla japonica* Temminck & Schlegel, 1846 [Japanese name: Unagi]

Akita: Katagami City, Hachiro-gata, NSMT-P 74304 (1, 34.2 cm TL); Minamiakita County, Hachiro-gata, NSMT-P 74593 (2, 39.1–47.9 cm TL).

Iwate: Morioka City, NSMT-P 74114 (1, 26.3 cm TL); Sarugaishi-gawa River, NSMT-P 73799 (1, 29.1 cm TL).

Miyagi: Ishinomaki City, Ohara, NSMT-P 73922 (1, 27.4 cm TL), Ishinomaki City, Watanoha, NSMT-P 74393 (1, 32.3 cm TL); Kesenuma City, Karakuwa, NSMT-P 74267 (1, 46.5 cm TL); Kesenuma City, Kesenuma Bay, NSMT-P 74827 (1, 61 cm TL); Kurihara City, Izu-numa Pond, NSMT-P 74147 (1, 27.5 cm TL); Osaki City, Kashimadai, Shinai-numa Pond, NSMT-P 76842 (2, 16.9–17.6 cm TL); Osaki City, near Kashimadai, NSMT-P 73934 (6, 8.1–22.6 cm TL); Sendai City, Aoba, NSMT-P 74123 (2, 23.8–27.2 cm TL); Sendai City, near Hirose-gawa River, NSMT-P 74948 (1, 40 cm TL); Shiraishi City, Bagyu-numa Pond, NSMT-P 74169 (2, 22.6–25.9 cm TL); Watari County, Watari Town, NSMT-P 74139 (4, 20.5–27.1 cm TL).

#### Family Synphobranchidae

*Synphobranchus kaupii* Johnson, 1862 [Japanese name: Irako-anago]

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74911 (1, 61.5 cm TL).

#### Family Ophichthidae

*Ophichthus altipennis* (Kaup, 1856) [Japanese name: Hotate-umihebi]

Fukushima: Iwaki City, Onahama, NSMT-P 74484 (1, 51.2 cm TL).

*Ophisurus macrorhynchus* Bleeker, 1853 [Japanese name: Dainan-umihebi]

Akita: Yurihonjo City, off Honjo, NSMT-P 77175 (1, 155 cm TL).

#### Family Congridae

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

Akita: Nikaho City, off Konoura, NSMT-P 74820 (1, 57 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 74697 (1, 35 cm TL), 74900 (2, 40–42 cm TL).

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

Akita: Nikaho City, off Konoura, NSMT-P 74587 (1, 37.6 cm TL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 73326 (9, 7.3–8.3 cm TL), 74602 (2, 36.2–39.3 cm TL); Ishinomaki City, Ohara, NSMT-P 73784 (1, 26.4 cm TL); Kesenuma City, off Karakuwa, NSMT-P 74588 (1, 45 cm TL); Natori City, off Yuriage, NSMT-P 74592 (1, 38.5 cm TL); off Shiogama City, NSMT-P 74174 (1, 28 cm TL); Watari County, off Watari Town, NSMT-P 74812 (2, 55.5–62 cm TL).

Fukushima: Iwaki City, Onahama, NSMT-P 74909 (1, 50.5 cm TL).

*Gnathophis heterognathos ginanago* (Asano, 1958) [Japanese name: Nisegin-anago]

Fukushima: Iwaki City, Onahama, NSMT-P 73537 (1, 36.3 cm TL).

*Gnathophis heterognathos nystromi* (Bleeker, 1858–59) [Japanese name: Gin-anago]

Yamagata: Tsuruoka City, Kamo, NSMT-P 73817 (1, 42 cm TL).

#### Order Clupeiformes

##### Family Engraulidae

*Engraulis japonicus* Temminck & Schlegel, 1846 [Japanese name: Katakuchi-iwashi]

Aomori: Hachinohe City, Same, NSMT-P 73941 (2, 10.1–10.7 cm SL); Higashitsugaru County, Nonai-gawa River, NSMT-P 73751 (2, 4.1–4.6 cm SL).

Miyagi: Rikuzentakata City, Takata, NSMT-P 73325 (2, 7.5–11.4 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73891 (4, 6.2–8.1 cm SL).

##### Family Clupeidae

*Clupea pallasii* Valenciennes, 1847 [Japanese name: Nishin]

Aomori: Aomori City, Asamushi, NSMT-P 74639 (4, 21.5–22.5 cm SL), 74813 (6, 21.5–22 cm SL).

Iwate: Rikuzentakata City, Hirota, NSMT-P 73587 (1, 20.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 75778 (2, 14.2–14.7 cm SL).

*Etrumeus teres* (DeKay, 1842) [Japanese name: Urume-iwashi]

Miyagi: Motoyoshi County, off Motoyoshi Town, NSMT-P 73893 (5, 13.9–15.8 cm SL).

*Konosirus punctatus* (Temminck & Schlegel, 1846) [Japanese name: Konoshiro]

Akita: Katagami City, Tenno, Hachiro-gata, NSMT-P 74132 (2, 8.9–9.1 cm SL); Oga City, Funakoshi, Hachiro-gata, NSMT-P 74162 (7, 7.6–8.9 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 74693 (1, 19.6 cm SL); Miyagi County, Matsushima Town, Matsushima Bay, NSMT-P 74354 (1, 19 cm SL); Natori City, off Yuriage, NSMT-P 74412 (1, 19.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73373 (4, 8.9–10.8 cm SL), 73940 (1, 9.2 cm SL), 74113 (2, 9.1–10 cm SL).

*Sardinella zunasi* (Bleeker, 1854) [Japanese name: Sappa]

Fukushima: Iwaki City, Onahama, NSMT-P 73425 (2, 6.6–7.1 cm SL), 73948 (1, 9.4–10.7 cm SL), 74140 (1, 12.7 cm SL), 75301 (6, 6–7.1 cm SL).

*Sardinops melanostictus* (Temminck & Schlegel, 1846) [Japanese name: Ma-iwashi]

Aomori: Higashitsugaru County, Hiranai Town, NSMT-P 74803 (28, 12.2–14.5 cm SL); Higashitsugaru County, off Hiranai Town, NSMT-P 74550 (28, 12.3–15.4 cm SL), 74759 (46, 12.4–16.2 cm SL).

Miyagi: Kesenuma City, NSMT-P 73951 (4, 9.9–12.4 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 74427 (2, 18.9–20.3 cm SL); Kesenuma City, off Karakuwa, NSMT-P 74260 (6, 11–13.8 cm SL); Motoyoshi County, off Motoyoshi Town, NSMT-P 74599 (10, 13.2–20.6 cm SL); Natori City, off Yuriage, NSMT-P 74311 (12, 12–13.7 cm SL); Oshika County, Onagawa



Town, Enoshima Island, NSMT-P 75774 (2, 10.1–10.4 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73624 (2, 12.3–13.4 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74018 (1, 8 cm SL), 74124 (14, 10.2–14.3 cm SL), 74384 (21, 12.1–16.5 cm SL).

## Order Cypriniformes

### Family Cyprinidae

\* *Acheilognathus melanogaster* Bleeker, 1860 [Japanese name: Tanago]

Akita: Katagami City, Tenno, NSMT-P 73765 (3, 2.8–4.9 cm SL).

Iwate: Morioka City, Janoshima, NSMT-P 76774 (1, 6.5 cm SL); Morioka City, Kitakami-gawa River, NSMT-P 73552 (11, 5.4–7 cm SL); Morioka City, Ota, NSMT-P 76864 (1, 4.3 cm SL); Sarugaishi-gawa River, NSMT-P 73748 (1, 4.3 cm SL); Shimohei County, Kawai Village, NSMT-P 76929 (1, 3.6 cm SL).

Miyagi: Kurihara City, Izu-numa Pond, NSMT-P 73304 (9, 4.5–5.5 cm SL), 73750 (10, 3.7–4.6 cm SL); Sendai City, Wakabayashi, NSMT-P 75101 (1, 2.1 cm SL), 77125 (4, 2.8–3.5 cm SL); Shiraishi City, Bagyu-numa Pond, NSMT-P 75323 (1, 5.1 cm SL); Tome City, Nitta, NSMT-P 75298 (10, 3.6–4.2 cm SL).

Fukushima: Minamiaizu County, Minamiaizu Town, NSMT-P 76857 (2, 2.5–2.6 cm SL).

*Acheilognathus tabira erythropterus* Arai, Fujikawa & Nagata, 2007 [Japanese name: Akahire-tabira]

Miyagi: Kurihara City, Izu-numa Pond, NSMT-P 75177 (3, 3.7–4.6 cm SL), 76623 (1, 4.5 cm SL); Sendai City, Wakabayashi, NSMT-P 77130 (1, 2.9 cm SL).

*Acheilognathus tabira tohokuensis* Arai, Fujikawa & Nagata, 2007 [Japanese name: Kitano-akahire-tabira]

Miyagi: Osaki City, Kashimadai, Shinai-numa Pond, NSMT-P 76875 (3, 4.5–5 cm SL).

Yamagata: Tsuruoka City, NSMT-P 75320 (3, 6.4–6.6 cm SL); Tsuruoka City, Uchi-kawa River, NSMT-P 76866 (2, 5.1–5.5 cm SL).

\* *Acheilognathus typus* (Bleeker, 1863) [Japanese name: Zeni-tanago]

Iwate: Morioka City, Ueda, NSMT-P 73763 (1, 2.9 cm SL).

Miyagi: Kurihara City, Izu-numa Pond, NSMT-P 75176 (2, 2.1–2.4 cm SL); Sendai City, Wakabayashi, NSMT-P 73574 (4, 3.2–4 cm SL), 77127 (2, 3.3–4.6 cm SL), 77129 (2, 3.5–3.6 cm SL), 77135 (4, 3.4–3.8 cm SL); Shiraishi City, Bagyu-numa Pond, NSMT-P 74332 (2, 3.7–4.1 cm SL); Toda County, Wakuya Town, NSMT-P 76881 (3, 3.1–3.7 cm SL); Tome City, Nitta, NSMT-P 74133 (2, 6–6.3 cm SL), 75297 (2, 2.8–4.5 cm SL); Tome City, Nitta, Naga-numa Pond, NSMT-P 73530 (34, 2.5–5.8 cm SL).

Yamagata: Tsuruoka City, NSMT-P 74324 (3, 3.2–3.8 cm SL), 76870 (17, 1.6–6.1 cm SL); Tsuruoka City, Uchi-kawa River, NSMT-P 76867 (1, 3.7 cm SL).

*Carassius gibelio langsdorfi* (Cuvier & Valenciennes, 1842) [Japanese name: Ginbuna]

Aomori: Towada City, Sanbongi, NSMT-P 76885 (9, 1.6–2.7 cm SL); Tsugaru City, Tappinuma Pond, NSMT-P 73831 (3, 7.2–10.1 cm SL).

Akita: Katagami City, Hachiro-gata, NSMT-P 73978 (2, 3.7–4.7 cm SL); Katagami City, Okubo, NSMT-P 74809 (2, 20.8–24.5 cm SL); Katagami City, Okubo, Hachiro-gata, NSMT-P 74426 (2, 18.2–19.1 cm SL); Oga City, Funakoshi, Hachiro-gata, NSMT-P 74416 (5, 12.5–14.8 cm SL).

Iwate: Iwate County, Shizukuishi Town, NSMT-P 76883 (2, 2.4–3.4 cm SL); Morioka City, Kamiyonai, NSMT-P 74319 (2, 10.5–17.3 cm SL); Sarugaishi-gawa River, NSMT-P 74038 (1, 4.9 cm SL); Shimohei County, Kawai Village, NSMT-P 76928 (2, 4.2–5.3 cm SL); Shiwa County, Yahaba Town, NSMT-P 73868 (8, 5.4–10.2 cm SL).

Miyagi: Kami County, Kami Town, Yutori-numa Pond, NSMT-P 74885 (17, 11.8–20.5 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 73974 (1, 8.9 cm SL); Kurihara City, Izu-numa Pond, NSMT-P 73943 (2, 2–3.4 cm SL), 75178 (2, 2.8–2.9 cm SL); Osaki City, Kashimadai, Shinai-numa Pond, NSMT-P 73928 (16, 2.7–9.4 cm SL).

SL); Sendai City, NSMT-P 74032 (2, 6.6–9.5 cm SL); Sendai City, Miyagino, Nanakita-gawa River, NSMT-P 74057 (4, 5.8–10.1 cm SL); Sendai City, near Nishitaga, NSMT-P 73937 (2, 5.7–5.8 cm SL); Sendai City, Wakabayashi, NSMT-P 74309 (119, 2.7–10.3 cm SL), 74407 (302, 2.2–10.3 cm SL), 76637 (1, 2.3 cm SL), 77138 (174, 2.8–8.6 cm SL); Shiraishi City, Bagyu-numa Pond, NSMT-P 73652 (2, 11.5–16.2 cm SL), 73980 (3, 4.5–8.6 cm SL), 74134 (1, 11.1 cm SL), 74200 (2, 10.1–16.2 cm SL), 76879 (3, 3.6–4.8 cm SL), 77038 (1, 17 cm SL); Tome City, Nitta, NSMT-P 74106 (7, 6.9–9.6 cm SL), 75299 (13, 2.7–4.9 cm SL), 75685 (3, 2–2.1 cm SL); Tome City, Nitta, Naga-numa Pond, NSMT-P 75179 (2, 4.1–5.2 cm SL), 75318 (1, 3.2 cm SL); Watari County, Watari Town, NSMT-P 73820 (2, 2.1–3.1 cm SL), 73983 (4, 3.2–6.8 cm SL).

Yamagata: Niida-gawa River, NSMT-P 74155 (6, 7.1–10.6 cm SL); Tsuruoka City, NSMT-P 73944 (6, 3.9–5.9 cm SL), 74017 (4, 3.7–8.2 cm SL); Tsuruoka City, Uchi-kawa River, NSMT-P 74010 (1, 12.8 cm SL).

Fukushima: Kitakata City, NSMT-P 73680 (2, 10.1–16.7 cm SL); Minamiaizu County, Minamiaizu Town, NSMT-P 74074 (3, 7.2–8.5 cm SL), 76856 (4, 3.2–4.6 cm SL).

*Carassius gibelio* subsp. [Japanese name: Kinbuna]

Aomori: Higashisugaru County, Hiranai Town, NSMT-P 74214 (1, 14.2 cm SL).

Miyagi: Kami County, Kami Town, Yutori-numa Pond, NSMT-P 73602 (1, 13.3 cm SL); Sendai City, Wakabayashi, NSMT-P 74575 (250, 2.2–8.8 cm SL), 77126 (55, 2.8–7.6 cm SL); Shiraishi City, Bagyu-numa Pond, NSMT-P 75691 (1, 8.6 cm SL); Toda County, Wakuya Town, Nabire-numa Pond, NSMT-P 73985 (7, 6.1–8.4 cm SL); Watari County, Watari Town, NSMT-P 75218 (1, 5.8 cm SL).

\* *Cyprinus carpio* Linnaeus, 1758 [Japanese name: Koi]

Iwate: Morioka City, Kamiyonai, NSMT-P 76073 (1, 8.8 cm SL); Morioka City, Ueda, NSMT-P 74914 (1, 21.6 cm SL).

Miyagi: Shiraishi City, Bagyu-numa Pond, NSMT-P 74810 (3, 17.4–27.5 cm SL), 74950 (1, 31.1 cm SL); Toda County, Wakuya Town, NSMT-P 74627 (1, 29.8 cm SL); Watari County, Watari Town, NSMT-P 73459 (1, 8.5 cm SL).

Yamagata: Niida-gawa River, NSMT-P 74186 (3, 9.4–10.4 cm SL), 74611 (4, 14.1–15.3 cm SL); Nikko-gawa River, NSMT-P 74482 (4, 11.6–17.1 cm SL); Tsuruoka City, NSMT-P 74320 (2, 6.8–18.4 cm SL).

Fukushima: Minamiaizu County, Minamiaizu Town, NSMT-P 76858 (1, 4.5 cm SL).

\* *Hemibarbus barbus* (Temminck & Schlegel, 1846) [Japanese name: Nigoï]

Aomori: Tsugaru City, Tappi-numa Pond, NSMT-P 73616 (1, 12.2 cm SL).

Akita: Katagami City, Okubo, NSMT-P 74946 (2, 28–32.6 cm SL).

Iwate: Morioka City, Janoshima, NSMT-P 74738 (1, 27.1 cm SL).

Miyagi: Sendai City, Hirose-gawa River, NSMT-P 73959 (1, 9.6 cm SL), 74953 (1, 39.6 cm SL); Toda County, Wakuya Town, Deki-gawa River, NSMT-P 73997 (4, 6.3–9.8 cm SL).

Yamagata: Tsuruoka City, NSMT-P 73431 (1, 10.7 cm SL), 73634 (2, 10.8–12.2 cm SL).

Fukushima: Fukushima City, Abukuma-gawa River, NSMT-P 73276 (4, 15.5–19.9 cm SL); Kitakata City, NSMT-P 74437 (3, 18.3–20.1 cm SL).

\* *Phoxinus lagowskii steindachneri* (Sauvage, 1883) [Japanese name: Aburahaya]

Akita: Yokote City, Yasawagi, NSMT-P 73924 (5, 6.9–9.5 cm SL).

Iwate: Ichinoseki City, Orikabe, NSMT-P 74069 (1, 8.7 cm SL); Morioka City, Janoshima, NSMT-P 76874 (1, 7.3 cm SL).

Miyagi: Osaki City, Naruko, NSMT-P 76772 (1, 8.7 cm SL).

Fukushima: Kitakata City, NSMT-P 73777 (7, 5.4–8.9 cm SL); Minamiaizu County, Minamiaizu Town, NSMT-P 73372 (8, 2.4–6.4 cm SL), 75105 (2, 6.3–8.1 cm SL).

\* *Pseudogobio esocinus esocinus* (Temminck & Schlegel, 1846) [Japanese name: Kamatsuka]

Iwate: Kitakami-gawa River, NSMT-P 74080

(2, 8.5–9.1 cm SL); Morioka City, Janoshima, NSMT-P 73529 (1, 11.3 cm SL).

Miyagi: Osaki City, Kawatabi, NSMT-P 73463 (2, 8.2–8.3 cm SL); Sendai City, Hirose-gawa River, NSMT-P 73238 (4, 5.4–9 cm SL), 74390 (6, 6.9–9.6 cm SL).

Yamagata: Tsuruoka City, NSMT-P 73617 (1, 12.9 cm SL), 74086 (5, 9.3–11.4 cm SL).

Fukushima: Minamiaizu County, Minamiaizu Town, NSMT-P 73754 (1, 9.9 cm SL); near Fukushima City, Abukuma-gawa River, NSMT-P 73590 (2, 12.1–13.1 cm SL).

\* *Pseudorasbora pumila pumila* Miyadi, 1930 [Japanese name: Shinai-motsugo] (Fig. 3)

Akita: Minamiakita County, Hachiro-gata, NSMT-P 73460 (1, 4.5 cm SL); Yokote City, NSMT-P 76770 (1, 2.2 cm SL).

Iwate: Morioka City, Ota, NSMT-P 76865 (1, 3.6 cm SL); Shiwa County, Shiwa Town, NSMT-P 74314 (2, 4.8–5.6 cm SL), 76868 (1, 4.2 cm SL); Waga County, NSMT-P 74042 (4, 3.6–3.9 cm SL).

Miyagi: Kurihara City, Izu-numa Pond, NSMT-P 76621 (1, 3.3 cm SL); Kurihara City, Wakayanagi, NSMT-P 74231 (2, 4.5–4.8 cm SL); Osaki City, Kashimadai, Shinai-numa Pond, NSMT-P 73379 (2, 5.6–6.3 cm SL); Sendai City, Izumi, NSMT-P 74016 (1, 5.6 cm SL); Shiraiishi City, Bagyu-numa Pond, NSMT-P 74011 (21, 2.5–6.6 cm SL); Tome City, Nitta, NSMT-P 73890 (5, 3.1–3.4 cm SL); Tome City, Nitta, Naga-numa Pond, NSMT-P 74049 (51, 3–5.3 cm SL).

Yamagata: Tsuruoka City, NSMT-P 74154 (2, 4.6–7.2 cm SL), 74232 (4, 3.7–4.8 cm SL), 77123 (1, 3.7 cm SL).

*Rhodeus* sp.

Miyagi: Kurihara City, Izu-numa Pond, NSMT-P 76622 (1, 4 cm SL).

\* *Tanakia lanceolata* (Temminck & Schlegel, 1846) [Japanese name: Yari-tanago]

Akita: Yokote City, Asamai, NSMT-P 76862 (2, 3.4–5.3 cm SL).

Yamagata: Tsuruoka City, NSMT-P 74020 (5, 5.2–6.6 cm SL); Tsuruoka City, Uchi-kawa River, NSMT-P 74542 (1, 5.1 cm SL).

Fukushima: Kitakata City, NSMT-P 76861 (3, 3.4–5.2 cm SL).

*Tribolodon brandti* (Dybowski, 1872) [Japanese name: Maruta]

Miyagi: Miyagi County, Matsushima Town, Matsushima Bay, NSMT-P 74274 (1, 21.4 cm SL); off Shiogama City, NSMT-P 74957 (1, 36.4 cm SL); Watari County, off Watari Town, NSMT-P 74459 (2, 18.1–19.6 cm SL).

Fukushima: Fukushima City, Abukuma-gawa River, NSMT-P 77188 (1, 37 cm SL).

\* *Tribolodon hakonensis* (Günther, 1877) [Japanese name: Ugui]

Aomori: Nakatsugaru County, Soma-gawa River, NSMT-P 74547 (2, 18.5–19.7 cm SL); Shimokita County, Higashidori Village, NSMT-P 76886 (10, 5.4–6.5 cm SL); Shimokita County, Osorezan, Usori Lake, NSMT-P 74804 (59, 5.2–14.2 cm SL); Tsugaru City, Tappi-numa Pond, NSMT-P 73761 (1, 10.7 cm SL).

Akita: Katagami City, Hachiro-gata, NSMT-P 73994 (2, 9.4–10.1 cm SL), 74725 (2, 20.2–20.5 cm SL); Oga City, Funakoshi, Hachiro-gata, NSMT-P 74353 (7, 12.3–17 cm SL); Semboku City, Tazawa Lake, NSMT-P 73802 (3, 9–11.4 cm SL), 74828 (4, 14.4–20.1 cm SL); Yokote City, NSMT-P 73838 (5, 1.6–2.5 cm SL).

Iwate: Hanamaki City, NSMT-P 74075 (1, 9.8 cm SL); Iwate County, Shizukuishi Town, NSMT-P 73920 (2, 3.2–3.6 cm SL); Iwate County, Shizukuishi-gawa River, NSMT-P 73360 (2, 7.6–10.6 cm SL), 74148 (2, 11.7–12 cm SL), 74278 (2, 18–20 cm SL); Morioka City, Janoshima, NSMT-P 73932 (1, 10.7 cm SL), 76872 (1, 8 cm SL); Morioka City, Kamiyonai, NSMT-P 74145 (2, 12.3–15.2 cm SL); Rikuzentakata City, Hirota, NSMT-P 73655 (1, 28.8 cm SL).

Miyagi: Kami County, Kami Town, Naruse-gawa River, NSMT-P 74138 (6, 8.5–9.6 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 74218 (1, 20.6 cm SL), 74573 (1, 21.9 cm SL); Kesenuma City, off Karakuwa, NSMT-P 73268 (7, 17.1–24.5 cm SL), 73696 (5, 15.7–18.3 cm SL); Kesenuma City, O-kawa River, NSMT-P 73528 (13, 5.2–10.4 cm SL); Osaki City, Naruko, NSMT-P 76773 (1, 8.5 cm SL); Sendai City,

NSMT-P 74062 (2, 9.7–10 cm SL); Sendai City, Hirose-gawa River, NSMT-P 73430 (4, 8.9–10.2 cm SL), 73687 (7, 8.7–10.2 cm SL), 73964 (1, 8.4 cm SL), 74157 (1, 10.8 cm SL), 74204 (2, 14.4–14.7 cm SL), 74247 (6, 8.8–10.4 cm SL), 74249 (1, 15.1 cm SL), 74388 (3, 15.5–17.3 cm SL), 74444 (67, 8.1–10.8 cm SL), 74636 (1, 24.3 cm SL); Sendai City, Miyagino, NSMT-P 76863 (2, 4.2–4.8 cm SL); Sendai City, Wakabayashi, NSMT-P 74065 (4, 4.7–12 cm SL); Shiraishi City, Bagyu-numa Pond, NSMT-P 73690 (4, 13.3–15.2 cm SL); Toda County, Wakuya Town, NSMT-P 76880 (5, 7.7–10.1 cm SL); Toda County, Wakuya Town, Nabire-numa Pond, NSMT-P 73684 (5, 14.1–16 cm SL), 75100 (2, 5.6–6.1 cm SL).

Yamagata: Nikko-gawa River, NSMT-P 73782 (3, 11.4–12.6 cm SL); Tsuruoka City, NSMT-P 73340 (5, 7.3–13.4 cm SL); Tsuruoka City, Uchikawa River, NSMT-P 73417 (1, 12.6 cm SL), 73884 (1, 10.4 cm SL).

Fukushima: Fukushima City, Abukuma-gawa River, NSMT-P 74968 (2, 19–23 cm SL); Iwaki City, Onahama, NSMT-P 74105 (1, 16.9 cm SL); Kitakata City, NSMT-P 73785 (4, 11.6–12.5 cm SL); Minamiaizu County, Minamiaizu Town, NSMT-P 73414 (1, 7.9 cm SL), 75174 (1, 3.6 cm SL); Minamiaizu County, Minamiaizu Town, Arakai-gawa River, NSMT-P 73992 (1, 10.2 cm SL).

#### Family Cobitidae

\* *Cobitis biwae* Jordan & Snyder, 1901 [Japanese name: Shima-dojou]

Aomori: Aomori City, Nozawa, NSMT-P 73298 (10, 3–7.6 cm SL); Hirosaki City, NSMT-P 73248 (2, 4.5–4.8 cm SL).

Akita: Yokote City, Asamai, NSMT-P 76654 (2, 4.7–6.4 cm SL).

Iwate: Hanamaki City, NSMT-P 75300 (1, 6.7 cm SL); Morioka City, Kippushi, NSMT-P 73254 (2, 3–5.8 cm SL); Morioka City, Niou, NSMT-P 73320 (3, 4.3–4.9 cm SL); Morioka City, Ueda, NSMT-P 76869 (2, 3.7–3.9 cm SL); Shimohei County, Kawai Village, NSMT-P 73302 (2,

3.7–5.1 cm SL).

Miyagi: Kurihara City, Wakayanagi, NSMT-P 73316 (1, 4.9 cm SL); Osaki City, Naruko, NSMT-P 73309 (1, 5.3 cm SL); Sendai City, NSMT-P 73300 (1, 4.1 cm SL); Sendai City, near Nishitaga, NSMT-P 73303 (6, 3.2–5.2 cm SL); Sendai City, Wakabayashi, NSMT-P 74167 (16, 2.6–7.1 cm SL), 76150 (17, 2.9–6.6 cm SL), 76636 (2, 4.1–4.3 cm SL), 77128 (2, 4.4–5.6 cm SL); Toda County, Wakuya Town, Nabire-numa Pond, NSMT-P 73350 (1, 6.5 cm SL); no detailed locality, NSMT-P 75683 (1, 5.3 cm SL).

Yamagata: Sakata City, Arase-gawa River, NSMT-P 73791 (3, 5.1–5.9 cm SL); Tsuruoka City, NSMT-P 73839 (6, 3.2–5.1 cm SL).

Fukushima: Minamiaizu County, Arakai-gawa River, NSMT-P 73292 (7, 3.2–5.3 cm SL).

\* *Lefua echigonia* Jordan & Richardson, 1907 [Japanese name: Hotoke-dojou]

Miyagi: Osaki City, Kawatabi, NSMT-P 73338 (1, 4.7 cm SL).

Yamagata: Yamagata City, Nagamachi, NSMT-P 74068 (3, 5.8–6.9 cm SL).

Fukushima: Minamiaizu County, Minamiaizu Town, NSMT-P 73308 (3, 2.1–2.5 cm SL).

\* *Misgurnus anguillicaudatus* (Cantor, 1842) [Japanese name: Dojou]

Aomori: Hirosaki City, NSMT-P 74180 (3, 6.3–9.1 cm SL).

Akita: Katagami City, Tenno, NSMT-P 73301 (2, 6.7–7 cm SL).

Iwate: Hanamaki City, NSMT-P 74024 (1, 5.7 cm SL); Iwate County, Shizukuishi Town, NSMT-P 73317 (3, 2.3–4 cm SL), 73759 (1, 9.5 cm SL), 73764 (1, 5.8 cm SL), 76936 (1, 3.8 cm SL); Kitakami-gawa River, NSMT-P 73778 (4, 9.2–10.7 cm SL); Morioka City, Janoshima, NSMT-P 74161 (2, 10.9–12.2 cm SL); Shimohei County, Kawai Village, NSMT-P 73305 (1, 8.3 cm SL); Waga County, NSMT-P 73788 (1, 9.5 cm SL).

Miyagi: Kesenuma City, Karakuwa, NSMT-P 73933 (7, 6.7–13.1 cm SL), 76850 (1, 12.3 (+) cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 73310 (1, 10.5 cm SL); Kurihara City, Izu-numa Pond, NSMT-P 75217 (1, 3.3 cm SL);

Kurokawa County, Taiwa Town, NSMT-P 74026 (2, 5.3–8.8 cm SL); Natori City, Yuriage, NSMT-P 73747 (1, 8.6 cm SL); Osaki City, Naruko, NSMT-P 74103 (1, 15.3 cm SL); Osaki City, Shida, NSMT-P 73318 (2, 9.1–10 cm SL); Sendai City, near Nishitaga, NSMT-P 73756 (1, 9.6 cm SL); NSMT-P; Sendai City, Wakabayashi, NSMT-P 73307 (1, 15.4 cm SL), 74143 (2, 12.3–14.2 cm SL), 74362 (49, 4–14.4 cm SL), 75317 (2, 8.9–9.2 cm SL); Toda County, Wakuya Town, Nabire-numa Pond, NSMT-P 74107 (4, 9.1–12.1 cm SL); no detailed locality, NSMT-P 74150 (4, 10.8–12.1 cm SL).

Yamagata: Tsuruoka City, NSMT-P 73768 (9, 7.9–12.6 cm SL).

Fukushima: Minamiaizu County, Arakai-gawa River, NSMT-P 76871 (3, 7–8.5 cm SL); Minamiaizu County, Minamiaizu Town, NSMT-P 75104 (1, 2.6 cm SL).

#### Order Siluriformes

##### Family Bagridae

\* *Pseudobagrus tokiensis* Döderlein, 1887  
[Japanese name: Gibachi]

Iwate: Ichinoseki City, Kouda, NSMT-P 74063 (6, 4.4–11.2 cm SL); Morioka City, Kippushi, NSMT-P 73314 (1, 14.5 cm SL).

Miyagi: Kurihara City, Izu-numa Pond, NSMT-P 73249 (1, 7.3 cm SL); Osaki City, Kashimadai, Shinai-numa Pond, NSMT-P 73798 (2, 4–8.6 cm SL); Osaki City, Naruko, NSMT-P 73243 (1, 8.3 cm SL), 73965 (1, 13.8 cm SL); Sendai City, Hirose-gawa River, NSMT-P 73299 (1, 6.8 cm SL); Shiraishi City, Bagyu-numa Pond, NSMT-P 74263 (12, 4–16.1 cm SL).

##### Family Siluridae

\* *Silurus asotus* Linnaeus, 1758 [Japanese name: Namazu]

Aomori: Aomori City, Asamushi, NSMT-P 74943 (3, 20.7–39.8 cm SL); near Aomori City, NSMT-P 74435 (17, 10.5–18.7 cm SL); Tsugaru City, Tappi-numa Pond, NSMT-P 74334 (1, 23.5 cm SL).

Akita: near Yokote City, NSMT-P 74821 (1, 32.4 cm SL), 74915 (1, 33.6 cm SL); Noshiro City, Yoneshiro-gawa River, NSMT-P 74340 (1, 24 cm SL); Oga City, Funakoshi, Hachiro-gata, NSMT-P 74564 (2, 16.2–21.3 cm SL).

Iwate: Iwate County, Shizukuishi Town, NSMT-P 74160 (1, 14.9 cm SL); Morioka City, Janoshima, NSMT-P 73977 (1, 12.4 cm SL); Morioka City, Kitakami-gawa River, NSMT-P 73545 (1, 12.5 cm SL).

Miyagi: Sendai City, NSMT-P 74348 (2, 18.5–20.1 cm SL); Sendai City, near Nishitaga, NSMT-P 74036 (1, 10.2 cm SL); Sendai City, Wakabayashi, NSMT-P 74308 (5, 6.1–19.9 cm SL); Toda County, Wakuya Town, Deki-gawa River, NSMT-P 74825 (5, 20.9–22 cm SL); Watari County, Watari Town, NSMT-P 74181 (1, 13.2 cm SL).

Yamagata: Niida-gawa River, NSMT-P 74792 (2, 24.2–28.1 cm SL); Tsuruoka City, NSMT-P 74166 (4, 12.7–14.2 cm SL); Tsuruoka City, Uchi-kawa River, NSMT-P 74400 (1, 23.4 cm SL).

Fukushima: Kitakata City, NSMT-P 74455 (1, 25.4 cm SL).

##### Family Amblycipitidae

*Liobagrus reinii* Hilgendorf, 1878 [Japanese name: Akaza]

Yamagata: Tsuruoka City, Aka-gawa River, NSMT-P 74330 (2, 8.5–9.1 cm SL).

##### Family Plotosidae

*Plotosus japonicus* Yoshino & Kishimoto, 2008  
[Japanese name: Gonzui]

Fukushima: Iwaki City, Onahama, NSMT-P 73775 (1, 11.2 cm SL), 73984 (1, 10.6 cm SL).

#### Order Osmeriformes

##### Family Argentinidae

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

Akita: Akita City, off Tsuchizakiminato, NSMT-P 74414 (9, 16.7–21.7 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73792 (1, 16.3 cm SL).

#### Family Osmeridae

*Hypomesus japonicus* (Brevoort, 1856) [Japanese name: Chika]

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73903 (3, 7.9–8.4 cm SL).

\* *Hypomesus nipponensis* McAllister, 1963 [Japanese name: Wakasagi]

Akita: Katagami City, Hachiro-gata, NSMT-P 73925 (2, 9.6–9.7 cm SL); Oga City, Funakoshi, NSMT-P 73609 (15, 5.2–11.9 cm SL).

Miyagi: Kurihara City, Izu-numa Pond, NSMT-P 74236 (5, 7.7–9.2 cm SL); Toda County, Wakuya Town, NSMT-P 73362 (10, 7.3–8.9 cm SL).

\* *Plecoglossus altivelis altivelis* (Temminck & Schlegel, 1846) [Japanese name: Ayu]

Aomori: Hirosaki City, Iwaki-gawa River, NSMT-P 73781 (3, 13.2–14.5 cm SL).

Akita: Yamamoto County, Fujisato Town, Kasuge-gawa River, NSMT-P 74326 (2, 14.4–14.5 cm SL); Katagami City, Tenno, NSMT-P 74281 (3, 14–14.4 cm SL); Yamamoto County, Fujisato Town, Kasuge-gawa River, NSMT-P 74100 (6, 14–15.9 cm SL).

Iwate: Isawa County, Kanegasaki Town, Kitakami-gawa River, NSMT-P 74318 (1, 21.1 cm SL); Isawa-gawa River, NSMT-P 74305 (5, 15.8–16.5 cm SL); Kitakami-gawa River, NSMT-P 74301 (5, 11.1–14.9 cm SL); Sarugaishi-gawa River, NSMT-P 73570 (1, 19 cm SL), 74647 (1, 21 cm SL); Shimohei County, Iwaizumi Town, Omoto-gawa River, NSMT-P 74549 (10, 15.9–19.7 cm SL), 74606 (10, 19.3–20.8 cm SL).

Miyagi: Kami County, Kami Town, Naruse-gawa River, NSMT-P 74357 (17, 9.8–15.2 cm SL); Natori City, Natori-gawa River, NSMT-P 73860 (19, 7.9–12.5 cm SL); Sendai City, Hirose-gawa River, NSMT-P 73960 (5, 6.2–9.3 cm SL), 74255 (19, 7.1–13.5 cm SL); Sendai City, Nishitaga, NSMT-P 74365 (15, 8.7–12.4 cm SL); Watari County, Watari Town, NSMT-P 73679 (1, 11.8 cm SL).

Yamagata: Tsuruoka City, Aka-gawa River, NSMT-P 73805 (2, 13.5–13.7 cm SL); Higashitagawa County, Shonai Town, NSMT-P 74481 (22, 11.9–14.8 cm SL); Nikko-gawa River, NSMT-P 74359 (8, 11.7–18 cm SL); Tsuruoka City, NSMT-P 73787 (2, 10.6–12.2 cm SL).

Fukushima: Fukushima City, Abukuma-gawa River, NSMT-P 74385 (2, 14.2–14.4 cm SL); Kitakata City, Yamato, NSMT-P 74119 (2, 15–15.6 cm SL).

Kitakami-gawa River, NSMT-P 74374 (6, 14.1–15.7 cm SL).

#### Family Salangidae

*Salangichthys microdon* (Bleeker, 1860) [Japanese name: Shirauo]

Aomori: Nonai-gawa River, NSMT-P 76062 (3, 5.5–5.7 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 73786 (31, 5.2–6 cm SL).

#### Order Salmoniformes

##### Family Salmonidae

*Oncorhynchus keta* (Walbaum, 1792) [Japanese name: Sake]

Aomori: Nonai-gawa River, NSMT-P 76063 (2, 3.3–3.5 cm SL); NSMT-P 75071 (69, 1.1–2.5 cm SL).

Miyagi: Watari County, off Watari Town, NSMT-P 77157 (1, 58.5 cm SL).

*Oncorhynchus masou masou* (Brevoort, 1856) [Japanese name: Yamame (Sakura-masu)]

Aomori: Hirakawa City, Hira-kawa River, NSMT-P 73630 (1, 11.9 cm SL), 74192 (2, 11.4–12.4 cm SL); Minamitsugaru County, Hayaseno-gawa River, NSMT-P 74149 (1, 11.8 cm SL).

Iwate: Iwate County, Shizukuishi Town, NSMT-P 73596 (2, 11.9–12.9 cm SL); Morioka City, Janoshima, NSMT-P 74310 (1, 19.6 cm SL); Morioka City, Kamiyonai, NSMT-P 73542 (2, 10–10.1 cm SL); Yana-gawa River, NSMT-P 74004 (6, 7.7–9.4 cm SL).

Miyagi: Kesenuma City, off Karakuwa,

NSMT-P 74671 (1, 36.5 cm SL), 77074 (1, 33.9 cm SL); Sendai City, Hirose-gawa River, NSMT-P 74185 (1, 17.5 cm SL).

Yamagata: Tsuruoka City, NSMT-P 73772 (2, 5.1–5.7 cm SL).

*Oncorhynchus nerka nerka* (Walbaum, 1792)  
[Japanese name: Beni-zake (Himemasu)].

Akita: Semboku City, Tazawa Lake, NSMT-P 92156 (3, 18.4–18.7 cm SL), 92157 (2, 18.8–19.4 cm SL).

*Oncorhynchus* sp.

Akita: Semboku City, Tazawa Lake, NSMT-P 76846 (1, 4.3 cm SL).

\* *Salvelinus fontinalis* (Mitchill, 1814) [Japanese name: Kawa-masu]

Aomori: Kamikita County (fish farm), NSMT-P 73758 (1, 11.8 cm SL).

\* *Salvelinus leucomaenis pluvius* (Hilgendorf, 1876) [Japanese name: Nikkou-iwana]

Aomori: Hirakawa City, Hira-kawa River, NSMT-P 74110 (1, 13 cm SL); Hirakawa City, Ikarigaseki, NSMT-P 76876 (2, 4.4–5.5 cm SL).

Akita: Semboku City, Tazawa, NSMT-P 74265 (2, 9.4–18 cm SL).

Iwate: Morioka City, Tamayama, NSMT-P 74151 (1, 14.6 cm SL).

Miyagi: Kami County, Kami Town, Yutori-numa Pond, NSMT-P 74438 (6, 16.1–17.6 cm SL), 76931 (5, 3.2–4 cm SL); Osaki City, Naruko, NSMT-P 74163 (1, 12.5 cm SL); Sendai City, Hirose-gawa River, NSMT-P 74336 (1, 17.3 cm SL).

Yamagata: Tsuruoka City, Tamugimata, NSMT-P 74222 (7, 11–15.7 cm SL).

Fukushima: Fukushima City, Amado-gawa River, NSMT-P 74266 (3, 14.6–16.8 cm SL); Kitakata City, NSMT-P 74428 (1, 21.5 cm SL); Minamiaizu County, Minamiaizu Town, NSMT-P 73973 (1, 10.9 cm SL).

#### Order Ateleopodiformes

##### Family Ateleopodidae

*Ateleopus japonicus* Bleeker, 1853 [Japanese name: Shachiburi]

Fukushima: Iwaki City, off Onahama, NSMT-P

74349 (1, 46.1 cm SL); Iwaki City, Onahama, NSMT-P 74831 (1, 41 cm SL).

*Ateleopus tanabensis* Tanaka, 1918 [Japanese name: Tanabe-shachiburi]

Fukushima: Iwaki City, Onahama, NSMT-P 76760 (1, 47 cm SL).

#### Order Aulopiformes

##### Family Aulopodidae

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

Akita: Nikaho City, off Konoura, NSMT-P 74130 (1, 12.1 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73444 (1, 15.5 cm SL).

#### Family Chlorophthalmidae

*Chlorophthalmus borealis* Kuronuma & Yamaguchi, 1941 [Japanese name: Maru-aomeeso]

Fukushima: Iwaki City, Onahama, NSMT-P 73297 (1, 12.8 cm SL); NSMT-P 73882 (7, 5.7–14.6 cm SL).

#### Family Synodontidae

*Saurida elongata* (Temminck & Schlegel, 1846)  
[Japanese name: Tokage-eso]

Akita: Katagami City, Tenno, NSMT-P 74633 (1, 30.5 cm SL).

*Saurida macrolepis* Tanaka, 1917 [Japanese name: Ma-eso]

Fukushima: Iwaki City, off Onahama, NSMT-P 74641 (1, 27 cm SL).

#### Order Myctophiformes

##### Family Myctophidae

*Diaphus* sp.

Fukushima: Iwaki City, Onahama, NSMT-P 73363 (1, 11.6 cm SL).

#### Order Polymixiiformes

##### Family Polymixiidae

*Polymixia* sp.

Fukushima: Iwaki City, Onahama, NSMT-P 73568 (1, 8.6 cm SL).

Order Ophidiiformes

Family Ophidiidae

*Hoplobrotula armata* (Temminck & Schlegel, 1846) [Japanese name: Yoroi-itachiuo]

Yamagata: Tsuruoka City, 50 km off Kamo, NSMT-P 74660 (2, 28.5–29.8 cm SL); Tsuruoka City, Kamo, NSMT-P 74205 (1, 22.3 cm SL).

*Neobythites sivicola* (Jordan & Snyder, 1901) [Japanese name: Shio-itachiuo]

Akita: Nikaho City, Konoura, NSMT-P 73795 (1, 17.5 cm SL); Nikaho City, off Konoura, NSMT-P 73595 (2, 15.9–16.1 cm SL), 74680 (1, 33.6 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73562 (1, 16.1 cm SL); Iwaki City, Onahama, NSMT-P 74121 (1, 22 cm SL), 74217 (1, 20.7 cm SL).

Order Gadiformes

Family Macrouridae

*Caelorinchus anatirostris* Jordan & Gilbert, 1904 [Japanese name: Nezumi-hige]

Miyagi: Kesenuma City, NSMT-P 74846 (1, 34.2 cm TL).

*Caelorinchus gilberti* Jordan & Hubbs, 1925 [Japanese name: Oni-hige]

Miyagi: off Kesenuma City, NSMT-P 74691 (1, 51 cm TL).

*Caelorinchus* sp.

Iwate: Miyako City, off Miyako, NSMT-P 74239 (1, 31.1 cm TL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73686 (1, 29.1 cm TL); Iwaki City, Onahama, NSMT-P 73336 (1, 18 cm TL).

*Coryphaenoides nasutus* Günther, 1877 [Japanese name: Hana-sokodara]

Miyagi: Natori City, off Yuriage, NSMT-P 74555 (1, 28.5 cm TL).

*Coryphaenoides* sp.

Miyagi: Natori City, off Yuriage, NSMT-P 74215 (1, 30.3 cm TL).

Family Moridae

*Laemonema longipes* Schmidt, 1938 [Japanese name: Itohiki-dara]

Miyagi: Shiogama City, Shiogama Fish Market, NSMT-P 77150 (1, 37.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74594 (1, 38.2 cm SL).

*Physiculus japonicus* Hilgendorf, 1879 [Japanese name: Chigo-dara]

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74733 (2, 26.5–28.5 cm SL), 74823 (1, 30.1 cm SL); Kesenuma City, off Karakuwa, NSMT-P 73547 (2, 17.4–23.2 cm SL); Natori City, off Yuriage, NSMT-P 73676 (1, 17.8 cm SL), 74578 (2, 22–23.8 cm SL); Natori City, Yuriage, NSMT-P 74752 (2, 24.4–25.5 cm SL); Shiogama City, Shiogama Fish Market, NSMT-P 76059 (1, 13.3 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73315 (1, 15.9 cm SL), 74220 (2, 20.5 (+)–22.4 (+) cm SL), 74379 (2, 19.1–19.3 cm SL), 74955 (1, 34 cm SL).

*Physiculus maximowiczi* (Herzenstein, 1896) [Japanese name: Ezo-iso-ainame]

Aomori: Higashitsugaru County, Imabetsu Town, NSMT-P 74874 (7, 15 (+)–23.3 (+) cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 74838 (1, 34.1 cm SL).

Miyagi: Ishinomaki City, Ohara, NSMT-P 73429 (1, 16.4 cm SL); Kesenuma City, off Karakuwa, NSMT-P 74801 (5, 22.5–26.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73550 (4, 19.4–22.8 cm SL).

Family Gadidae

*Eleginus gracilis* (Tilesius, 1810) [Japanese name: Komai]

Akita: Akita City, off Tsuchizakiminato, NSMT-P 74419 (4, 15.9–19 cm SL); Nikaho City, off Konoura, NSMT-P 73689 (2, 18.3–19.8 cm SL).

Miyagi: Shiogama City, Shiogama Fish Market, NSMT-P 74077 (2, 12.3–13.3 cm SL).

*Gadus macrocephalus* Tilesius, 1810 [Japanese



name: Ma-dara]

Aomori: Aomori City, Okunai, NSMT-P 73909 (6, 5.4–6.1 cm SL); Nishitsugaru County, off Fukaura Town, NSMT-P 74877 (2, 21–27.8 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 74866 (2, 28.7–30.1 cm SL); Oga City, Funakawaminato, NSMT-P 74762 (2, 24.5–25.6 cm SL).

Miyagi: Kesenuma City, NSMT-P 74483 (5, 19.4–20.8 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 73651 (1, 26.5 cm SL); Natori City, off Yuriage, NSMT-P 73927 (2, 15–15.1 cm SL); off Kesenuma City, NSMT-P 74548 (1, 23.1 cm SL); Watari County, Watari Town, NSMT-P 74961 (1, 44.7 cm SL), 74969 (1, 48.3 cm SL), 74970 (1, 44.6 cm SL), 74971 (1, 46.4 cm SL).

***Theragra chalcogramma*** (Pallas, 1814) [Japanese name: Suketou-dara]

Akita: Akita City, off Tsuchizakiminato, NSMT-P 73697 (3, 17.3–24.1 cm SL); Nikaho City, off Konoura, NSMT-P 74386 (1, 23.5 cm SL).

Miyagi: Watari County, Watari Town, NSMT-P 74739 (5, 27.9–30.6 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74747 (2, 25.3–25.5 cm SL).

## Order Lophiiformes

### Family Lophiidae

***Lophiomus setigerus*** (Vahl, 1797) [Japanese name: Ankou]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 74280 (1, 20.5 cm SL).

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

Aomori: Aomori Bay, NSMT-P 74917 (1, 28.2 (+) cm SL).

Akita: Nikaho City, Konoura, NSMT-P 73707 (4, 9.4–19.6 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 74257 (1, 12.9 cm SL); Natori City, Yuriage, NSMT-P 74727 (2, 17.9–20.3 cm SL); off Kesenuma City, NSMT-P 74849 (2, 29.2–30.6 cm

SL); Watari County, Watari Town, NSMT-P 74867 (2, 35.5–36.2 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73518 (3, 20.2–22.7 cm SL); Iwaki City, Onahama, NSMT-P 74248 (3, 13.2–16 cm SL).

### Family Antennariidae

***Histrio histrio*** (Linnaeus, 1758) [Japanese name: Hana-okoze]

Miyagi: Ishinomaki City, Tashirojima Island, NSMT-P 73995 (1, 10.1 cm SL).

### Family Chaunacidae

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

Fukushima: Iwaki City, Onahama, NSMT-P 73539 (1, 10.1 cm SL), 73740 (3, 9–9.6 cm SL), 73966 (1, 9 cm SL), 74191 (1, 9.4 cm SL).

### Family Ogcocephalidae

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

Akita: Nikaho City, off Konoura, NSMT-P 73366 (1, 9.3 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 75795 (1, 4.2 cm SL).

### Family Ceratiidae

***Cryptopsaras couesii*** Gill, 1883 [Japanese name: Mitsukuri-enaga-chouchin-ankou]

Iwate: off Kesenuma City, NSMT-P 74425 (1, 14.8 cm SL).

## Order Mugiliformes

### Family Mugilidae

***Chelon affinis*** (Günther, 1861) [Japanese name: Sesuji-bora]

Yamagata: Mogami-gawa River, NSMT-P 73797 (2, 9.2–10.1 cm SL).

\* ***Chelon haematocheilus*** (Temminck & Schlegel, 1845) [Japanese name: Menada]

Aomori: Hachinohe City, Same, NSMT-P

73957 (1, 8.1 cm SL).

Yamagata: Mogami-gawa River, NSMT-P 75175 (1, 9.2 cm SL).

\* *Mugil cephalus cephalus* Linnaeus, 1758  
[Japanese name: Bora]

Aomori: Goshogawara City, Jusan, NSMT-P 74732 (1, 31.1 cm SL), 77076 (1, 30.3 cm SL).

Akita: Oga City, Funakawaminato, NSMT-P 73673 (1, 21.5 cm SL).

Iwate: Rikuzentakata City, Hirota, NSMT-P 73824 (1, 27.8 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73436 (1, 19.6 cm SL), 74211 (1, 17.6 cm SL), 74226 (1, 17.4 cm SL); Miyagi County, Matsushima Town, Matsushima Bay, NSMT-P 74632 (2, 22–22.5 cm SL); Toda County, Wakuya Town, Nabire-numa Pond, NSMT-P 73834 (3, 16–16.4 cm SL); Watari County, off Watari Town, NSMT-P 74102 (4, 14.4–16.2 cm SL); Watari County, Watari Town, NSMT-P 73827 (2, 18.3–19.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73826 (1, 18.4 cm SL).

#### Order Atheriniformes

##### Family Atherinidae

*Hypoatherina valenciennesi* (Bleeker, 1853)  
[Japanese name: Tougorou-iwashi]

Fukushima: Iwaki City, Onahama, NSMT-P 73847 (1, 8.7 cm SL), 74043 (2, 7.9–8.1 cm SL), 74056 (2, 7.5–7.6 cm SL), 75777 (1, 7.9 cm SL).

#### Order Beloniformes

##### Family Adrianichthyidae

\* *Oryzias latipes* (Temminck & Schlegel, 1846)  
[Japanese name: Medaka]

Aomori: Higashitsugaru County, Yomogida Village, NSMT-P 73376 (3, 2.3–2.4 cm SL); Hirakawa City, Saruga, NSMT-P 73565 (14, 2.9–2.5 cm SL).

Akita: Katagami City, Tenno, NSMT-P 73808 (5, 1.7–2 cm SL); Yokote City, NSMT-P 73810 (5, 1.4–2.6 cm SL).

Iwate: Kitakami City, Kurosawajiri, NSMT-P

73608 (80, 1.7–3.1 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 73600 (20, 2.4–3.2 cm SL); Miyagi County, Matsushima Town, Matsushima Bay, NSMT-P 73599 (12, 2–3 cm SL); Sendai City, near Nishitaga, NSMT-P 73564 (5, 1.8–2.2 cm SL); Sendai City, Wakabayashi, NSMT-P 73567 (20, 1.4–2.2 cm SL), 77124 (1, 2.1 cm SL), 77132 (12, 2.2–2.7 cm SL), 77136 (33, 1.7–2.5 cm SL).

#### Family Belonidae

*Strongylura anastomella* (Valenciennes, 1846)  
[Japanese name: Datsu]

Fukushima: Iwaki City, Onahama, NSMT-P 74905 (1, 58.6 cm SL).

#### Family Scomberesocidae

*Cololabis saira* (Brevoort, 1856) [Japanese name: Sanma]

Miyagi: Kesenuma City, NSMT-P 74577 (5, 23.5–25.3 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 74649 (2, 23.8–24.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74221 (1, 22.1 cm SL).

#### Family Exocoetidae

*Cypselurus agoo agoo* (Temminck & Schlegel, 1846) [Japanese name: Tobiuo]

Fukushima: Iwaki City, Hisanohama, NSMT-P 73666 (1, 25.1 cm SL).

*Cypselurus heterurus doederleini* (Steindachner, 1887) [Japanese name: Tsukushi-tobiuo]

Miyagi: Natori City, off Yuriage, NSMT-P 73691 (2, 20.5–20.9 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 74860 (3, 24.5–25.2 cm SL).

*Cypselurus pinnatibarbus japonicus* (Franz, 1910) [Japanese name: Hama-tobiuo]

Yamagata: Tsuruoka City, Kamo, NSMT-P 74479 (2, 29.9–30.2 cm SL).

*Cypselurus* sp.

Miyagi: Ishinomaki City, Tashirohama, NSMT-P 73699 (2, 22.2–25.1 cm SL); Kesenu-

ma City, off Karakuwa, NSMT-P 74774 (2, 23.3–28.5 cm SL).

Family Hemiramphidae

*Hyporhamphus intermedius* (Cantor, 1842)

[Japanese name: Kurume-sayori]

Aomori: Hachinohe City, Same, NSMT-P 74189 (2, 9–10.3 cm SL).

Akita: Nikaho City, Konoura, NSMT-P 74005 (2, 10.3–10.4 cm SL); Oga City, Funakoshi, Hachiro-gata, NSMT-P 74298 (22, 9.5–12.5 cm SL).

\* *Hyporhamphus sajori* (Temminck & Schlegel, 1846) [Japanese name: Sayori]

Aomori: Aomori City, Asamushi, NSMT-P 73271 (8, 26–26.8 cm SL), 74754 (12, 24.4–27.9 cm SL).

Akita: Katagami City, Tenno, NSMT-P 73637 (2, 17.6–18 cm SL); Oga City, Funakoshi, NSMT-P 73621 (4, 18.5–20.3 cm SL).

Iwate: Rikuzentakata City, Takata, NSMT-P 74650 (1, 26.9 (+) cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 74268 (1, 24.4 cm SL).

Order Beryciformes

Family Monocentridae

*Monocentris japonica* (Houttuyn, 1782) [Japanese name: Matsukasa-uo]

Akita: Nikaho City, off Konoura, NSMT-P 73532 (1, 7.7 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74055 (2, 8.8–9.1 cm SL).

Family Trachichthyidae

*Hoplostethus japonicus* Hilgendorf, 1879

[Japanese name: Hiuchi-dai]

Fukushima: Iwaki City, Onahama, NSMT-P 73364 (2, 7.6–8.5 cm SL).

Family Berycidae

*Beryx splendens* Lowe, 1834 [Japanese name: Kinme-dai]

Fukushima: Iwaki City, Onahama, NSMT-P 73677 (1, 18.1 cm SL).

Order Zeiformes

Family Zeidae

*Cyttopsis rosea* (Lowe, 1843) [Japanese name: Kago-matou-dai]

Fukushima: Iwaki City, Onahama, NSMT-P 73369 (1, 7.2 cm SL).

*Zenopsis nebulosa* (Temminck & Schlegel, 1845) [Japanese name: Kagami-dai]

Iwate: Shimohei County, Yamada Town, Yamada Bay, NSMT-P 74630 (2, 21.9–22.7 cm SL).

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74171 (1, 10.4 cm SL); Motoyoshi County, off Motoyoshi Town, NSMT-P 73426 (1, 7.4 cm SL); Natori City, near Yuriage, NSMT-P 74730 (1, 18.9 cm SL); Natori City, off Yuriage, NSMT-P 73702 (3, 15–16.4 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 74798 (1, 25.1 cm SL); Iwaki City, Onahama, NSMT-P 74111 (1, 11.4 cm SL), 74462 (2, 8.9–10.3 cm SL).

*Zeus faber* Linnaeus, 1758 [Japanese name: Matou-dai]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 73906 (1, 11.9 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 73623 (1, 7.9 cm SL); Yamamoto County, Happo Town, NSMT-P 74918 (2, 24.7–25.9 cm SL).

Iwate: Miyako City, off Miyako, NSMT-P 73432 (3, 9.1–10.9 cm SL).

Miyagi: Kesenuma City, NSMT-P 74772 (1, 27.3 cm SL); Natori City, off Yuriage, NSMT-P 74551 (1, 15.8 cm SL), 76410 (4, 6.9–14.7 cm SL); Watari County, off Watari Town, NSMT-P 74736 (2, 10.3–25.8 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73700 (2, 16.4–17.5 cm SL).

Fukushima: off Iwaki City, NSMT-P 74085 (1, 8.8 cm SL).

Family Caproidae

*Antigonia capros* Lowe, 1843 [Japanese name:

## Hishi-dai]

Fukushima: Iwaki City, Onahama, NSMT-P 73770 (1, 6.8 cm SL).

## Order Gasterosteiformes

## Family Aulorhynchidae

*Aulichthys japonicus* Brevoort, 1862 [Japanese name: Kuda-yagara]

Miyagi: Kesenuma City, NSMT-P 76777 (2, 6.6–7.5 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 74023 (1, 12.2 cm SL); Kesenuma City, off Karakuwa, NSMT-P 76927 (1, 6.8 cm SL).

## Family Gasterosteidae

\* *Gasterosteus aculeatus* Linnaeus, 1758 [Japanese name: Itoyo]

Aomori: Towada City, Fujisaka, NSMT-P 74175 (2, 3.5–7.6 cm SL), 76852 (1, 3.6 cm SL).

Miyagi: Kesenuma City, Shishiori, NSMT-P 73861 (4, 2.2–6.5 cm SL); Sendai City, Miyagi-no, NSMT-P 74120 (2, 6.8–7.2 cm SL); Sendai City, near Miyaginohara, NSMT-P 76832 (1, 8.1 cm SL).

Yamagata: Tsuruoka City, NSMT-P 73852 (7, 6.8–8 cm SL).

Fukushima: Minamiaizu County, Minamiaizu Town, NSMT-P 76831 (13, 2.7–5.2 cm SL).

\* *Pungitius pungitius* (Linnaeus, 1758) [Japanese name: Ibara-tomiyo]

Aomori: Towada City, Fujisaka, NSMT-P 76851 (10, 3–5 cm SL), 77421 (9, 3–5.1 cm SL).

Akita: Daisen City, Hanadate, NSMT-P 77397 (2, 3.6–4 cm SL); Katagami City, Tenno, NSMT-P 76780 (3, 4.2–5.2 cm SL); Yokote City, Asamai, NSMT-P 73837 (3, 4.6–5.4 cm SL), 74172 (2, 4.2–5.3 cm SL), 76271 (8, 2.8–7 cm SL), 76779 (3, 4.1–4.9 cm SL); Yuzawa City, NSMT-P 74364 (2, 3.7–3.8 cm SL).

Yamagata: Higashine City, Otomi, NSMT-P 77418 (4, 3.1–4.4 cm SL); Niida-gawa River, NSMT-P 76778 (2, 3–3.8 cm SL); Tsuruoka City, NSMT-P 73242 (26, 2.6–4.8 cm SL), 77403 (9, 2.6–5.4 cm SL).

## Family Syngnathidae

*Hippocampus coronatus* Temminck & Schlegel, 1850 [Japanese name: Tatsuno-otoshigo]

Aomori: Aomori City, Asamushi, NSMT-P 76925 (6, 4.8–6.6 cm SL).

*Syngnathus schlegeli* Kaup, 1856 [Japanese name: Yojiuo]

Aomori: Aomori City, Yunoshima Island, NSMT-P 76574 (5, 15.5–21 cm SL).

Akita: Katagami City, Hachiro-gata, NSMT-P 74216 (3, 18.7–20.6 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73347 (1, 22.8 cm SL); Iwaki City, Onahama, NSMT-P 74164 (3, 21.3–21.6 cm SL).

## Family Fistulariidae

*Fistularia commersonii* Rüppell, 1838 [Japanese name: Ao-yagara]

Akita: NSMT-P 74872 (1, 45.9 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74176 (4, 16.3–19.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73912 (1, 17.3 cm SL), 74253 (2, 19–21.3 cm SL).

*Fistularia petimba* Lacepède, 1803 [Japanese name: Aka-yagara]

Akita: Nikaho City, off Konoura, NSMT-P 74554 (4, 24.6–35 cm SL); 74954 (2, 48.2–50.1 cm SL).

## Family Macroramphosidae

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

Miyagi: Natori City, off Yuriage, NSMT-P 76833 (1, 8.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74027 (1, 10.7 cm SL).

## Order Scorpaeniformes

## Family Dactylopteridae

*Daicocus peterseni* (Nyström, 1887) [Japanese name: Hoshisemi-houbou]

Akita: Nikaho City, off Konoura, NSMT-P

74620 (1, 24.5 cm SL).

Iwate: Ofunato City, Ofuna Bay, NSMT-P 73346 (1, 23.4 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 73335 (1, 25 cm SL); 74672 (2, 23.5–25.7 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 74673 (1, 28 cm SL); Iwaki City, Onahama, NSMT-P 74904 (1, 26.5 cm SL), 76769 (1, 29.6 cm SL).

#### Family Scorpaenidae

*Helicolenus hilgendorffi* (Döderlein, 1884)

[Japanese name: Yume-kasago]

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73789 (1, 10.2 cm SL), 75172 (2, 11.4–12.4 cm SL); Kesenuma City, off Karakuwa, NSMT-P 74728 (19, 9.8–16.4 cm SL); Natori City, near Yuriage, NSMT-P 73452 (2, 18.8–19.5 cm SL); Natori City, off Yuriage, NSMT-P 73512 (2, 12.4–13.8 cm SL); off Kesenuma City, NSMT-P 74572 (8, 12.8–16 cm SL); Watari County, Watari Town, NSMT-P 74254 (5, 13.7–14 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73419 (2, 9.2–9.4 cm SL), 73862 (2, 9–10.6 cm SL); Iwaki City, Onahama, NSMT-P 73864 (1, 15.1 cm SL), 74194 (1, 13 cm SL).

*Inimicus japonicus* (Cuvier, 1829) [Japanese name: Oni-okoze]

Aomori: Aomori City, Asamushi, NSMT-P 73597 (1, 9.5 cm SL), 73659 (3, 10.8–12.9 cm SL); Nishitsugaru County, off Fukaura Town, NSMT-P 74245 (1, 18 cm SL).

Akita: Nikaho City, Konoura, NSMT-P 73591 (1, 21.5 cm SL); Nikaho City, off Konoura, NSMT-P 76500 (1, 16.1 cm SL).

Yamagata: Tsuruoka City, off Kamo, NSMT-P 73856 (1, 10.1 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 74258 (1, 15.5 cm SL); Iwaki City, Onahama, NSMT-P 73456 (1, 17 cm SL), 74302 (1, 17.3 cm SL), 74585 (1, 19.7 cm SL).

*Scorpaena neglecta* Temminck & Schlegel, 1843 [Japanese name: Izu-kasago]

Akita: Yamamoto County, Happo Town, NSMT-P 74651 (2, 16.2–18.6 cm SL), 74745 (1, 19.9 cm SL).

Fukushima: Iwaki City, NSMT-P 74021 (2, 7.2–7.4 cm SL); Iwaki City, Onahama, NSMT-P 73660 (1, 13.6 cm SL).

*Sebastes cheni* Barsukov, 1988 [Japanese name: Shiro-mebaru]

Aomori: Aomori City, Yunoshima Island, NSMT-P 74635 (3, 17–17.9 cm SL); Aomori City, Asamushi, NSMT-P 74869 (2, 21.6(+)-22.2(+)) cm SL); Higashitsugaru County, Hiranai Town, NSMT-P 74658 (3, 20.1 (+)-22.6 (+) cm SL).

Miyagi: Ishinomaki City, off Watanoha, NSMT-P 73524 (1, 14.9 cm SL); Ishinomaki City, Ohara, NSMT-P 74022 (2, 7.4–7.8 cm SL); Kesenuma City, NSMT-P 74195 (1, 14.5 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 73767 (1, 11.8 cm SL), 74361 (1, 19 cm SL); Natori City, off Yuriage, NSMT-P 73695 (4, 13.5–15.9 cm SL); Natori City, Yuriage, NSMT-P 74196 (1, 15.1 cm SL); off Kesenuma City, NSMT-P 74830 (1, 22.7 cm SL); Watari County, Watari Town, NSMT-P 74389 (1, 15.8 cm SL), 74901 (1, 22.7 cm SL), 76763 (1, 21.8 cm SL), 76764 (1, 22.4 cm SL), 76765 (1, 21.6 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73904 (2, 10.9–11.1 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73606 (1, 12.5 cm SL).

*Sebastes inermis* Cuvier, 1829 [Japanese name: Aka-mebaru]

Yamagata: Sakata City, Tobishima, NSMT-P 73374 (1, 10.4 cm SL).

*Sebastes iracundus* (Jordan & Starks, 1904) [Japanese name: Osaga]

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 76767 (1, 18.7 cm SL); Natori City, off Yuriage, NSMT-P 74753 (1, 30.9 cm SL), 76762 (1, 27.3 cm SL).

*Sebastes joyneri* Günther, 1878 [Japanese name: Togotto-mebaru]

Miyagi: Kesenuma City, Karakuwa, NSMT-P 74763 (3, 16.7–25.2 cm SL); Watari County, Watari Town, NSMT-P 74764 (2, 21.3–21.4 cm SL).

SL).

*Sebastes nivosus* Hilgendorf, 1880 [Japanese name: Goma-soi]

Akita: Yamamoto County, Happo Town, NSMT-P 74824 (2, 18.5–21.4 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74640 (1, 20.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74292 (1, 20.2 cm SL).

*Sebastes oblongus* Günther, 1880 [Japanese name: Takenoko-mebaru]

Aomori: Aomori City, near Asamushi, NSMT-P 75302 (1, 8.1 cm SL); Higashitsugaru County, Hiranai Town, Mourajima Island, NSMT-P 74657 (1, 26 (+) cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 74681 (1, 23.1 cm SL).

Iwate: Miyako City, off Miyako, NSMT-P 73361 (1, 13.6 cm SL).

*Sebastes pachycephalus nudus* Matsubara, 1943 [Japanese name: Ougon-mura-soi]

Aomori: Higashitsugaru County, Imabetsu Town, NSMT-P 74546 (1, 17.5 cm SL), 74559 (3, 19.2–20 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 74300 (1, 15 cm SL).

Miyagi: Ishinomaki City, Watanoha, NSMT-P 74566 (1, 17.1 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74396 (1, 16.5 cm SL).

*Sebastes schlegelii* Hilgendorf, 1880 [Japanese name: Kuro-soi]

Aomori: Aomori City, Asamushi, NSMT-P 76056 (1, 3.3 cm SL).

Akita: Nikaho City, Kisakata, NSMT-P 74567 (1, 16.5 cm SL); Nikaho City, off Konoura, NSMT-P 74424 (1, 18.2 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73911 (1, 5.2 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74476 (1, 15.8 cm SL).

*Sebastes scythropus* (Jordan & Snyder, 1900) [Japanese name: Ukeguchi-mebaru]

Iwate: Miyako City, off Miyako, NSMT-P

75112 (1, 11.7 cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 74791 (1, 25 cm SL).

*Sebastes taczanowskii* Steindachner 1880 [Japanese name: Ezo-mebaru]

Aomori: Nikaho City, off Konoura, NSMT-P 74366 (9, 11.7–15 cm SL).

*Sebastes thompsoni* (Jordan & Hubbs, 1925) [Japanese name: Usu-mebaru]

Miyagi: Natori City, near Yuriage, NSMT-P 74557 (2, 18.2–18.5 cm SL); off Kesenuma City, NSMT-P 73626 (2, 15–15.1 cm SL), 74582 (5, 15.6–17.2 cm SL).

*Sebastes trivittatus* Hilgendorf, 1880 [Japanese name: Shima-zoi]

Aomori: Aomori City, near Asamushi, NSMT-P 74045 (1, 13.3 cm SL).

Akita: Yamamoto County, Happo Town, NSMT-P 74740 (1, 21.2 cm SL).

*Sebastes vulpes* Döderlein, 1884 [Japanese name: Kitsune-mebaru]

Aomori: Higashitsugaru County, NSMT-P 74458 (2, 9.1–14.7 cm SL), 74773 (1, 26.2 cm SL), 74922 (1, 29.7 (+) cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74598 (1, 21.5 cm SL); Natori City, Yuriage, NSMT-P 74275 (1, 18.8 cm SL).

Yamagata: Tsuruoka City, off Kamo, NSMT-P 74625 (2, 24.5–24.9 cm SL).

*Sebastes zonatus* Chen & Barsukov, 1976 [Japanese name: Tanuki-mebaru]

Iwate: Rikuzentakata City, Hirota, NSMT-P 74238 (1, 17.6 cm SL).

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 73685 (1, 18.9 cm SL).

*Sebastes* sp.

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73416 (3, 9.1–9.5 cm SL).

*Sebastiscus marmoratus* (Cuvier, 1829) [Japanese name: Kasago]

Miyagi: Natori City, near Yuriage, NSMT-P 74475 (1, 14.5 cm SL); off Kesenuma City, NSMT-P 73742 (1, 15.4 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P

74556 (2, 18.3–18.5 cm SL).

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

Iwate: Miyako City, off Miyako, NSMT-P 75113 (1, 11.5 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73667 (1, 20.5 cm SL); Kesenuma City, off Karakuwa, NSMT-P 74817 (5, 18.8–20.4 cm SL); Natori City, off Yuriage, NSMT-P 73647 (2, 13.4–13.7 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73648 (1, 16.9 cm SL).

#### Family Aploactinidae

*Erisphex pottii* (Steindachner, 1896) [Japanese name: Abu-okoze]

Miyagi: Natori City, off Yuriage, NSMT-P 73766 (3, 6.8–8.5 cm SL); Watari County, off Watari Town, NSMT-P 74048 (1, 9 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73968 (2, 7.8–8.9 cm SL), 73986 (3, 7.1–8.7 cm SL), 73987 (1, 8.4 cm SL); Iwaki City, Onahama, NSMT-P 73971 (1, 8.9 cm SL).

#### Family Triglididae

*Chelidonichthys spinosus* (McClelland, 1844) [Japanese name: Houbou]

Aomori: Aomori City, Asamushi, NSMT-P 74676 (1, 26.9 cm SL).

Akita: Nikaho City, Kisakata, NSMT-P 74674 (1, 23.8 cm SL); Yamamoto County, Happo Town, NSMT-P 74289 (3, 17–24.5 cm SL).

Miyagi: Natori City, Yuriage, NSMT-P 73625 (2, 16.7–17.8 cm SL).

*Lepidotrigla abyssalis* Jordan & Starks, 1904 [Japanese name: Soko-kanagashira]

Aomori: Aomori City, Asamushi, NSMT-P 75775 (1, 13.5 cm SL); Nishitsugaru County, Fukaura Town, NSMT-P 74116 (3, 10.6–11.5 cm SL).

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 73657 (2, 19.6–19.8 cm SL).

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

Aomori: Aomori City, Asamushi, NSMT-P

74583 (1, 24 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 74297 (1, 12.4 cm SL).

Iwate: Rikuzentakata City, Hirota, NSMT-P 74295 (1, 22.8 cm SL).

Miyagi: Kesenuma City, NSMT-P 74288 (1, 19.7 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 74229 (1, 18.5 cm SL); Kesenuma City, off Karakuwa, NSMT-P 74552 (4, 15.6–22.5 cm SL), 74634 (4, 13.6–21.6 cm SL); Natori City, off Yuriage, NSMT-P 73870 (6, 11.4–16.2 cm SL), 73954 (2, 14.2–14.5 cm SL); off Kesenuma City, NSMT-P 74613 (5, 18.9–20 cm SL); Watari County, Watari Town, NSMT-P 73813 (1, 16.3 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74237 (2, 15.5–15.6 cm SL); Tsuruoka City, off Kamo, NSMT-P 74570 (2, 20–20.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73282 (2, 9.2–10.9 cm SL), 73631 (1, 10.7 cm SL), 74307 (4, 11–19.2 cm SL).

*Peristedion orientale* Temminck & Schlegel, 1843 [Japanese name: Kihoubou]

Akita: Nikaho City, off Konoura, NSMT-P 73465 (2, 9.8–10.1 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 73849 (1, 12.8 cm SL), 76175 (1, 11.4 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73803 (1, 12.1 cm SL), 74109 (3, 10.8–12.8 cm SL).

*Satyrichthys amiscus* (Jordan & Starks, 1904) [Japanese name: Hige-kihoubou]

Miyagi: Shiogama City, Shiogama Fish Market, NSMT-P 76058 (1, 8.8 cm SL); Watari County, off Watari Town, NSMT-P 73421 (1, 9 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73371 (1, 12.8 cm SL).

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

Fukushima: Iwaki City, Onahama, NSMT-P 75183 (1, 13.5 cm SL).

#### Family Platycephalidae

*Cociella crocodila* (Tilesius, 1812) [Japanese

name: Ine-gochi]

Akita: Nikaho City, Konoura, NSMT-P 73682 (2, 17.5–24.1 cm SL); Nikaho City, off Konoura, NSMT-P 74135 (1, 14.3 cm SL), 75213 (1, 23.4 cm SL).

Fukushima: Iwaki City, NSMT-P 74690 (1, 25.7 cm SL).

*Platycephalus* sp. [Japanese name: Ma-gochi]

Akita: Katagami City, Tenno, NSMT-P 74682 (1, 29.4 cm SL).

Miyagi: Ishinomaki City, off Watanoha, NSMT-P 73669 (1, 25.4 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 74841 (2, 27.8–28.5 cm SL); Miyagi County, Matsushima Town, Matsushima Bay, NSMT-P 74757 (2, 22.2–28.6 cm SL); Natori City, off Yuriage, NSMT-P 73645 (4, 20.6–20.7 cm SL); Watari County, off Watari Town, NSMT-P 74441 (1, 22.4 cm SL).

*Suggrundus meerdervoortii* (Bleeker, 1860)  
[Japanese name: Me-gochi]

Aomori: Nishitsugaru County, Fukaura Town, NSMT-P 74127 (1, 14 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 73663 (1, 17.3 cm SL).

*Rogadius asper* (Cuvier, 1829) [Japanese name: Matsuba-gochi]

Akita: Katagami City, Tenno, NSMT-P 74256 (2, 11.6–13.1 cm SL).

#### Family Hoplichthyidae

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

Fukushima: Iwaki City, near Onahama, NSMT-P 74041 (1, 8.9 cm SL).

#### Family Hexagrammidae

*Hexagrammos agrammus* (Temminck & Schlegel, 1843) [Japanese name: Kujime]

Akita: Oga City, Funakawaminato, NSMT-P 74678 (3, 14.3–21.3 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73418 (2, 13.9–14.1 cm SL).

*Hexagrammos otakii* Jordan & Starks, 1895  
[Japanese name: Ainame]

Aomori: Aomori City, Asamushi, NSMT-P 77079 (1, 38.4 cm SL), 77080 (1, 34 cm SL), 77081 (1, 28.8 cm SL), 77082 (1, 30.6 cm SL), 77083 (1, 33.4 cm SL), 77084 (1, 33.3 cm SL), 77085 (1, 31.8 cm SL), 77086 (1, 30.1 cm SL), 77087 (1, 28.8 cm SL), 77088 (1, 28.2 cm SL), 77089 (1, 28.9 cm SL), 77090 (1, 27.6 cm SL), 77091 (1, 28.2 cm SL), 77092 (1, 27 cm SL); Higashitsugaru County, Hiranai Town, off Futagojima Island, NSMT-P 74947 (1, 28.2 cm SL).

Akita: Oga City, Funakawaminato, NSMT-P 74876 (2, 20.3–21.6 cm SL).

Iwate: Rikuzentakata City, Hirota, NSMT-P 73665 (1, 20.7 cm SL).

Miyagi: Kesenuma City, Karakuwa, NSMT-P 74741 (1, 33.1 (+) cm SL), 74818 (3, 23.5–28 cm SL), 73443 (4, 4.3–4.7 cm SL), 74182 (1, 15.9 cm SL); Kesenuma City, off Karakuwa, NSMT-P 74861 (5, 23–27.2 cm SL); Natori City, off Yuriage, NSMT-P 73578 (4, 9–19.3 cm SL); Natori City, Yuriage, NSMT-P 73662 (1, 19.7 cm SL); off Shiogama City, NSMT-P 73753 (1, 11.4 cm SL), 74574 (9, 11.1–17.4 cm SL); Watari County, Watari Town, NSMT-P 74851 (4, 27.8–28.5 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73771 (1, 10.9 cm SL).

*Pleurogrammus azonus* Jordan & Metz, 1913  
[Japanese name: Hokke]

Miyagi: Watari County, off Watari Town, NSMT-P 74735 (1, 32 cm SL).

#### Family Ereuniidae

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

Akita: Nikaho City, off Konoura, NSMT-P 74006 (1, 11.9 cm SL).

Miyagi: Watari County, off Watari Town, NSMT-P 73809 (1, 10.9 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 76776 (2, 9.8–10.3 cm SL).

#### Family Cottidae

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



Akita: Nikaho City, Konoura, NSMT-P 74586 (3, 16.1–19.7 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73729 (1, 17.1 cm SL); Kesenuma City, off Karakuwa, NSMT-P 74750 (3, 18.3–21.1 cm SL); off Kesenuma City, NSMT-P 74850 (7, 13.6–20.7 cm SL); Shiogama City, NSMT-P 74076 (1, 18.4 cm SL); Watari County, off Watari Town, NSMT-P 73332 (4, 14.4–19.4 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73730 (1, 14.3 cm SL).

**Bero elegans** (Steindachner, 1881) [Japanese name: Bero]

Aomori: Aomori Bay, NSMT-P 73707 (4, 6.2–11.7 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 76834 (1, 8.1 cm SL); Motoyoshi County, Motoyoshi Town, NSMT-P 73972 (2, 3.6–13 cm SL).

**Blepias cirrhosus** (Pallas, 1814) [Japanese name: Isobatengu]

Aomori: Higashisugaru County, Hiranai Town, Oshima Island, NSMT-P 73312 (4, 5.3–5.8 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73713 (2, 11.1–13.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73739 (1, 12.2 cm SL).

**Cottiusculus schmidti** Jordan & Starks, 1904 [Japanese name: Kin-kajika]

Miyagi: Natori City, off Yuriage, NSMT-P 76401 (2, 6.3–7.4 cm SL); off Kesenuma City, NSMT-P 76992 (2, 6.3–6.4 cm SL); Watari County, off Watari Town, NSMT-P 75293 (3, 7.5–7.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73717 (3, 6.6–7.5 cm SL), 73850 (4, 6.7–7.7 cm SL), 76837 (2, 7–7.3 cm SL).

\* **Cottus pollux** Günther, 1873 [Japanese name: Kajika]

Aomori: near Hirosaki City, NSMT-P 76838 (3, 5.5–8 cm SL); Shimokita County, Higashidori Village, NSMT-P 73910 (10, 4.4–7.5 cm SL).

Akita: Odate City, Odate, NSMT-P 73731 (2, 5.2–7.1 cm SL).

Iwate: Iwate County, Shizukuishi Town, NSMT-P 73760 (1, 9.2 cm SL); Iwate County, Shizukuishi-gawa River, NSMT-P 73473 (2, 5.2–5.8 cm SL); Morioka City, Janoshima, NSMT-P 76835 (3, 5.9–6.9 cm SL); Sarugaishi-gawa River, NSMT-P 76839 (3, 4.1–6 cm SL); Shimohei County, Kawai Village, NSMT-P 73266 (1, 3.2 cm SL).

Miyagi: Osaki City, Naruko, NSMT-P 73718 (1, 7.3 cm SL), 76836 (1, 9.5 cm SL); Osaki City, Naruko, Arao-gawa River, NSMT-P 73467 (10, 5–9.2 cm SL), 75295 (2, 5.4–5.9 cm SL).

Yamagata: Tsuruoka City, Aka-gawa River, NSMT-P 73584 (1, 8.7 cm SL); Tsuruoka City, Tamugimata, NSMT-P 73721 (2, 5.5–7.3 cm SL); Tsuruoka City, NSMT-P 73719 (1, 7.6 cm SL).

Fukushima: Kitakata City, NSMT-P 76771 (1, 10 cm SL).

Kitakami-gawa River, NSMT-P 74190 (1, 8.9 cm SL).

**Cottus reinii** Hilgendorf, 1879 [Japanese name: Utsusemi-kajika]

Miyagi: Sendai City, near Nishitaga, NSMT-P 73842 (1, 3.3 cm SL).

**Enophrys diceraus** (Pallas, 1788) [Japanese name: Oni-kajika]

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 73610 (1, 13.6 cm SL).

**Furcina ishikawae** Jordan & Starks, 1904 [Japanese name: Sarasa-kajika]

Aomori: Aomori City, Asamushi, NSMT-P 74030 (6, 3.6–6 cm SL).

**Furcina osimae** Jordan & Starks, 1904 [Japanese name: Kinu-kajika]

Fukushima: Iwaki City, Onahama, NSMT-P 73469 (1, 3.5 cm SL).

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

Fukushima: Iwaki City, off Onahama, NSMT-P 75687 (1, 16.8 cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 73874 (2, 12.7–14.2 cm SL).

Miyagi: Natori City, near Yuriage, NSMT-P 73876 (1, 15.8 cm SL); off Kesenuma City,

NSMT-P 76993 (3, 15.5–16.4 cm SL).

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

Akita: Nikaho City, Konoura, NSMT-P 73749 (1, 8.7 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 73546 (1, 12.4 cm SL), 73875 (1, 13.2 cm SL); Shiogama City, Shiogama Fish Market, NSMT-P 74071 (1, 15.1 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 75190 (1, 11.9 cm SL); Tsuruoka City, off Kamo, NSMT-P 73479 (3, 7.6–11.5 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 74219 (2, 15.8–16 cm SL), 74293 (6, 15.4–17.5 cm SL).

*Icelus cataphractus* (Pavlenko, 1910) [Japanese name: Koori-kajika]

Akita: Nikaho City, Konoura, NSMT-P 74477 (5, 17.8–21.2 cm SL); Nikaho City, off Konoura, NSMT-P 74039 (1, 9.7 cm SL).

Iwate: Miyako City, off Miyako, NSMT-P 73420 (1, 13.4 cm SL).

*Myoxocephalus brandtii* (Steindachner, 1867) [Japanese name: Shimofuri-kajika]

Fukushima: Iwaki City, Onahama, NSMT-P 73725 (1, 10.5 cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 74864 (1, 32.2 cm SL).

*Myoxocephalus stelleri* Tilesius, 1811 [Japanese name: Gisu-kajika]

Aomori: Aomori Bay, NSMT-P 73733 (1, 7.1 cm SL); Aomori City, Asamushi, NSMT-P 74371 (1, 15 cm SL); Nishitsugaru County, Fukaura Town, NSMT-P 74560 (1, 17.3 cm SL).

Miyagi: Ishinomaki City, Ohara, NSMT-P 74775 (1, 23.4 cm SL); Kesennuma City, NSMT-P 73674 (1, 18.9 cm SL); Matsushima Bay, NSMT-P 73818 (1, 19 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73329 (1, 12.6 cm SL), 73790 (1, 19 cm SL).

*Myoxocephalus* sp.

Miyagi: Ishinomaki City, Ohara, NSMT-P 74420 (1, 19.1 cm SL).

*Pseudoblennius cottoides* (Richardson, 1848)

[Japanese name: Asahi-anahaze]

Aomori: Aomori City, Asamushi, NSMT-P 73468 (9, 4–5.1 cm SL).

Miyagi: Kesennuma City, Karakuwa, NSMT-P 76849 (1, 7.9 cm SL).

*Pseudoblennius percoides* Günther, 1861 [Japanese name: Anahaze]

Fukushima: Iwaki City, Onahama, NSMT-P 73963 (1, 13.7 cm SL).

*Pseudoblennius* sp. [Japanese name: Kirin-anahaze]

Aomori: Aomori Bay, NSMT-P 75173 (57, 3–6 cm SL); Aomori City, Asamushi, NSMT-P 73728 (32, 3.9–6.9 cm SL), 76055 (21, 5.3–7.2 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 73723 (2, 4.6–5.6 cm SL); Kesennuma City, NSMT-P 73952 (1, 12.5 cm SL); Kesennuma City, Kesennuma Bay, NSMT-P 73475 (1, 11.3 cm SL), 73476 (2, 11.6–13.5 cm SL), 73478 (1, 12.5 cm SL), 73706 (1, 12.7 cm SL), 73735 (3, 4.7–8.5 cm SL).

Yamagata: Sakata City, Tobishima, NSMT-P 73726 (2, 4.6–6 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74233 (1, 9.6 cm SL).

#### Family Hemitripterae

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

Aomori: Aomori City, Asamushi, NSMT-P 74612 (1, 23.2 (+) cm SL), 74790 (1, 24.8 (+) cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 76499 (1, 13.6 cm SL), 74796 (2, 19.8–25.3 cm SL).

Miyagi: Ishinomaki City, Ohara, NSMT-P 73649 (1, 20.5 cm SL); Kesennuma City, Kesennuma Bay, NSMT-P 73477 (1, 16.7 cm SL); Kesennuma City, off Karakuwa, NSMT-P 74350 (1, 18.7 cm SL); Motoyoshi County, off Motoyoshi Town, NSMT-P 75034 (3, 22.2 (+)–25.4 (+) cm SL); Natori City, near Yuriage, NSMT-P 74212 (1, 16.8 cm SL); Natori City, off Yuriage, NSMT-P 73632 (1, 11.5 cm SL), 73907 (1, 16.9 cm SL);

off Kesenuma City, NSMT-P 74291 (1, 23 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73594 (1, 10.2 cm SL); Iwaki City, Onahama, NSMT-P 74568 (3, 17.8–19.5 cm SL), 76145 (1, 10.2 cm SL).

#### Family Agonidae

*Agonomalus proboscidalis* (Valenciennes, 1858)

[Japanese name: Atsumori-uo]

Miyagi: Natori City, off Yuriage, NSMT-P 73480 (1, 11.5 cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 73744 (1, 13 cm SL).

*Hypsagonus corniger* Taranetz, 1933 [Japanese name: Tongari-shachi-uo]

Yamagata: Tsuruoka City, off Kamo, NSMT-P 73727 (1, 7.9 cm SL).

*Ocella iburia* (Jordan & Starks, 1904) [Japanese name: Saburou]

Miyagi: Natori City, off Yuriage, NSMT-P 74395 (3, 18–20.1 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73916 (1, 7.3 cm SL); Iwaki City, Onahama, NSMT-P 74210 (2, 15.1–15.4 cm SL), 74225 (1, 18.4 cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 74201 (1, 15.4 cm SL), 76650 (1, 15 cm SL).

*Pallasina barbata* (Steindachner, 1876) [Japanese name: Yagiuo]

Akita: Nikaho City, off Konoura, NSMT-P 73466 (1, 16 cm SL); Yamamoto County, Happo Town, NSMT-P 73471 (1, 12.2 cm SL).

*Percis japonica* (Pallas, 1769) [Japanese name: Inu-gochi]

Iwate: Miyako City, off Miyako, NSMT-P 74286 (1, 14.4 cm SL).

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

Akita: Nikaho City, Konoura, NSMT-P 74323 (1, 22.5 cm SL); Nikaho City, off Konoura,

NSMT-P 73345 (1, 23.6 cm SL), 73448 (1, 17.4 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73880 (2, 16.5–17.7 cm SL), 74223 (1, 19.7 cm SL); Natori City, off Yuriage, NSMT-P 73352 (3, 24.2–25.4 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74965 (3, 23.7–30.2 cm SL).

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

Miyagi: Watari County, off Watari Town, NSMT-P 73339 (4, 12.5–16.7 cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 76649 (1, 9.5 cm SL).

#### Family Psychrolutidae

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

Akita: Nikaho City, off Konoura, NSMT-P 74814 (3, 14.4–19.2 cm SL), 74845 (2, 21.5–24.4 cm SL).

Miyagi: Watari County, off Watari Town, NSMT-P 73953 (1, 14.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73611 (1, 14.3 cm SL).

*Ebinania vermiculata* Sakamoto, 1932 [Japanese name: Aka-donko]

Fukushima: Iwaki City, off Onahama, NSMT-P 74848 (1, 30 cm SL); Iwaki City, Onahama, NSMT-P 74862 (1, 29.3 cm SL).

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

Iwate: Miyako City, off Miyako, NSMT-P 73930 (1, 15 cm SL).

#### Family Cyclopteridae

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

Akita: Yamamoto County, Happo Town, NSMT-P 74835 (2, 22.3–24.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74694 (1, 22.7 cm SL).

## Family Liparidae

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

Iwate: Miyako City, off Miyako, NSMT-P 73878 (4, 9.4–14.4 cm SL).

Miyagi: Shiogama City, Shiogama Fish Market, NSMT-P 74078 (5, 9.6–13.7 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74067 (1, 12.1 cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 73724 (3, 10.5–13 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73738 (1, 16.5 cm SL).

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

Akita: Nikaho City, Konoura, NSMT-P 73743 (1, 18 cm SL).

Miyagi: Watari County, off Watari Town, NSMT-P 74609 (5, 20.1–21.2 cm SL).

*Liparis* sp.

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 73275 (1, 19.5 cm SL).

## Order Perciformes

## Family Moronidae

\**Lateolabrax japonicus* (Cuvier, 1828) [Japanese name: Suzuki]

Aomori: Aomori City, Asamushi, NSMT-P 73536 (1, 25.9 cm SL); Goshogawara City, Jusan, NSMT-P 74685 (1, 27.6 cm SL).

Akita: Katagami City, Hachiro-gata, NSMT-P 73829 (4, 13.1–16.3 cm SL), 74246 (1, 17.8 cm SL); Yurihonjo City, off Yuri, NSMT-P 77181 (1, 30 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 74352 (2, 19.1–19.2 cm SL); Natori City, Yuriage, NSMT-P 74637 (1, 23.3 cm SL).

Yamagata: Tsuruoka City, Uchi-kawa River, NSMT-P 74046 (2, 9.1–9.6 cm SL); Tsuruoka City, NSMT-P 73779 (2, 8.3–10 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73816 (1, 15.6 cm SL); Iwaki City, Onahama, NSMT-P 74805 (1, 22.6 cm SL).

## Family Acropomatidae

*Acropoma hanedai* Matsubara, 1953 [Japanese name: Haneda-hotarujako]

Fukushima: Iwaki City, Onahama, NSMT-P 75779 (1, 13 cm SL).

*Doederleinia berycoides* (Hilgendorf, 1879)  
[Japanese name: Aka-mutsu]

Aomori: Nishitsugaru County, Fukaura Town, NSMT-P 73990 (2, 10.3–10.4 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 73871 (3, 15.4–16.6 cm SL).

Miyagi: Natori City, near Yuriage, NSMT-P 74153 (1, 9.6 cm SL); Natori City, off Yuriage, NSMT-P 73814 (1, 11.2 cm SL), 74031 (1, 14.7 cm SL); Watari County, off Watari Town, NSMT-P 73872 (8, 15–17 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73658 (2, 14.9–15.2 cm SL); Tsuruoka City, off Kamo, NSMT-P 73970 (2, 14.5–14.6 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 74608 (1, 28.7 cm SL); Iwaki City, Onahama, NSMT-P 73612 (2, 8.7–9.4 cm SL), 73811 (1, 10.2 cm SL).

*Stereolepis doederleini* Lindberg & Krasnyukova, 1969 [Japanese name: Okuchi-ishinagi]

Aomori: Nishitsugaru County, Fukaura Town, NSMT-P 74108 (2, 10.6–13.3 cm SL).

Akita: Nikaho City, Konoura, NSMT-P 73569 (2, 12.5–13 cm SL); Oga City, Funakawaminato, NSMT-P 74744 (3, 13.3–21.3 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 74447 (6, 11.3–17.2 cm SL); Natori City, Yuriage, NSMT-P 73521 (1, 16.2 cm SL); Watari County, off Watari Town, NSMT-P 74050 (1, 16.2 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73865 (1, 13.3 cm SL), 74059 (1, 10.3 cm SL).

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

Fukushima: Iwaki City, Onahama, NSMT-P 74199 (1, 13.3 cm SL).

## Family Serranidae

*Epinephelus septemfasciatus* (Thunberg, 1793)  
[Japanese name: Ma-hata]

Akita: Oga City, Funakawaminato, NSMT-P 74842 (1, 25 cm SL).

***Epinephelus* sp.**

Akita: Nikaho City, off Konoura, NSMT-P 76922 (1, 2.6 cm SL).

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

Aomori: Nishitsugaru County, Fukaura Town, NSMT-P 74053 (1, 13.3 cm SL).

Akita: Oga City, off Funakawaminato, NSMT-P 74768 (3, 16–25.8 cm SL).

Miyagi: Natori City, near Yuriage, NSMT-P 74259 (2, 14.6–16.8 cm SL); Natori City, off Yuriage, NSMT-P 73603 (1, 15.3 cm SL), 74235 (2, 14.4–14.9 cm SL); Watari County, off Watari Town, NSMT-P 74095 (1, 15.5 cm SL).

Yamagata: Tsuruoka City, 70 km off Kamo, NSMT-P 74748 (2, 19.9–20.6 cm SL); Tsuruoka City, Kamo, NSMT-P 74099 (2, 12.2–13.4 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74411 (1, 17.2 cm SL), 74440 (5, 14.5–17.3 cm SL).

Family Priacanthidae

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

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 74187 (1, 9.4 cm SL).

Iwate: Miyako City, off Miyako, NSMT-P 74439 (2, 10.2–12 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 74342 (4, 10–13 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 75204 (1, 12 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73457 (2, 13.6–13.9 cm SL), 73643 (1, 13.1 cm SL).

***Priacanthus macracanthus*** Cuvier, 1829 [Japanese name: Kintoki-dai]

Miyagi: Natori City, off Yuriage, NSMT-P 74317 (1, 9.5 cm SL).

***Priacanthus* sp.**

Fukushima: Iwaki City, Onahama, NSMT-P 73573 (1, 6.2 cm SL), 74008 (1, 7 cm SL).

Family Apogonidae

***Apogon lineatus*** Temminck & Schlegel 1842

[Japanese name: Tenjiku-dai]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 74025 (3, 6.3–7.1 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 73979 (4, 6.5–7.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73462 (1, 6.6 cm SL).

Family Sillaginidae

***Sillago japonica*** Temminck & Schlegel, 1843

[Japanese name: Shiro-gisu]

Aomori: Higashitsugaru County, Nonai-gawa River, NSMT-P 75103 (1, 5.3 cm SL); Nishitsugaru County, Fukaura Town, NSMT-P 73887 (2, 15–15.1 cm SL).

Akita: Katagami City, Hachiro-gata, NSMT-P 75288 (2, 5.6–5.7 cm SL); Nikaho City, Kisakata, NSMT-P 74207 (1, 15.5 cm SL); Nikaho City, off Konoura, NSMT-P 74240 (1, 16.6 cm SL); Oga City, Funakawaminato, NSMT-P 74273 (2, 16.6–20.3 cm SL).

Fukushima: Iwaki City, near Onahama, NSMT-P 73830 (3, 13–15.7 cm SL); Iwaki City, Onahama, NSMT-P 74184 (1, 11.6 cm SL), 74241 (1, 16.7 cm SL), 76172 (1, 8.6 cm SL), 76923 (1, 7.6 cm SL).

Family Malacanthidae

***Branchiostegus japonicus*** (Houttuyn, 1782)

[Japanese name: Aka-ama-dai]

Akita: Nikaho City, Kisakata, NSMT-P 74837 (1, 32.1 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73523 (2, 12.9–14.6 cm SL).

***Branchiostegus* sp.**

Akita: Akita City, off Tsuchizakiminato, NSMT-P 74394 (2, 13–14.4 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74563 (2, 19–19.7 cm SL).

Family Pomatomidae

***Scombrops boops*** (Houttuyn, 1782) [Japanese

name: Mutsu]

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73859 (1, 13.6 cm SL), 74083 (2, 13.2–14.1 cm SL).

*Scombrops gilberti* (Jordan & Snyder, 1901)  
[Japanese name: Kuro-mutsu]

Miyagi: Watari County, off Watari Town, NSMT-P 74815 (1, 25.4 cm SL).

#### Family Echeneididae

*Remora remora* (Linnaeus, 1758) [Japanese name: Naga-koban]

Aomori: Aomori Bay, NSMT-P 74087 (1, 38.3 cm SL).

#### Family Coryphaenidae

*Coryphaena hippurus* Linnaeus, 1758 [Japanese name: Shiira]

Akita: Akita City, off Tsuchizakiminato, NSMT-P 74944 (1, 41.8 cm SL).

#### Family Carangidae

*Alectis ciliaris* (Bloch, 1787) [Japanese name: Itohiki-aji]

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74035 (1, 10.2 cm SL); Watari County, off Watari Town, NSMT-P 74731 (1, 11.7 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74463 (1, 8.9 cm SL).

*Kaiwarinus equula* (Temminck & Schlegel, 1844) [Japanese name: Kaiwari]

Aomori: Nishitsugaru County, Fukaura Town, NSMT-P 73601 (1, 9.2 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 73899 (2, 11.1–11.8 cm SL), 73921 (1, 7.7 cm SL); Oga City, Funakawaminato, NSMT-P 74270 (3, 8.7–12.5 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 73935 (1, 10.1 cm SL).

*Naucrates ductor* (Linnaeus, 1758) [Japanese name: Buri-modoki]

Fukushima: Iwaki City, Onahama, NSMT-P 74054 (3, 10.7–14.1 cm SL).

*Seriola lalandi* Valenciennes, 1833 [Japanese name: Hiramasa]

Miyagi: Ishinomaki City, off Kinkazan, NSMT-P 77077 (1, 43.2 cm SL); off Natori City, NSMT-P 73589 (1, 15.9 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73583 (1, 13.9 cm SL).

*Seriola quinqueradiata* Temminck & Schlegel, 1845 [Japanese name: Buri]

Aomori: Aomori City, Asamushi, NSMT-P 74802 (13, 13.6–20.5 cm SL).

Akita: Nikaho City, NSMT-P 74654 (2, 13.8–22.8 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74833 (2, 21.5–21.9 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74377 (1, 18.4 cm SL).

*Trachurus japonicus* (Temminck & Schlegel, 1844) [Japanese name: Ma-aji]

Aomori: Aomori City, Asamushi, NSMT-P 73434 (6, 11.4–12.9 cm SL); Nishitsugaru County, off Fukaura Town, NSMT-P 73538 (1, 14.8 cm SL).

Miyagi: Hachinohe City, NSMT-P 73746 (1, 6.8 cm SL); Kesenuma City, NSMT-P 73902 (1, 9.2 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 73375 (2, 8.9–9.6 cm SL), 73544 (1, 16.7 cm SL), 73841 (1, 9.3 cm SL), 73926 (1, 17.1 cm SL), 74136 (1, 17.2 cm SL); Kesenuma City, off Karakuwa, NSMT-P 73961 (1, 15.4 cm SL); Motoyoshi County, off Motoyoshi Town, NSMT-P 74434 (6, 17.7–19.3 cm SL); Watari County, Watari Town, NSMT-P 74605 (4, 21.5–24.5 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73989 (2, 8.6–8.9 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73577 (10, 11.8–16.4 cm SL), 74276 (1, 23.6 cm SL), 74329 (1, 20.5 cm SL), 74642 (1, 22.1 cm SL).

#### Family Bramidae

*Brama japonica* Hilgendorf, 1878 [Japanese name: Shima-gatsuo]

Fukushima: Iwaki City, Onahama, NSMT-P

74966 (1, 36.3 cm SL).

*Taractichthys steindachneri* (Döderlein, 1883)

[Japanese name: Hirejiro-manzaiuo]

Miyagi: Kesenuma City, NSMT-P 74964 (1, 29.1 cm SL).

#### Family Lobotidae

*Lobotes surinamensis* (Bloch, 1790) [Japanese name: Matsu-dai]

Miyagi: Ishinomaki City, near Kinkazan, NSMT-P 74623 (1, 31.7 cm SL); Kesenuma City, off Karakuwa, NSMT-P 77093 (1, 42.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74916 (1, 37.2 cm SL).

#### Family Haemulidae

*Haplogenyis nigripinnis* (Temminck & Schlegel, 1843) [Japanese name: Higesori-dai]

Akita: Yamamoto County, Happo Town, NSMT-P 74797 (1, 26.2 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74457 (1, 16.5 cm SL).

*Plectorhynchus cinctus* (Temminck & Schlegel, 1843) [Japanese name: Koshou-dai]

Akita: Nikaho City, off Konoura, NSMT-P 73579 (1, 12.6 cm SL); Yamamoto County, Happo Town, NSMT-P 76759 (1, 10.4 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 74335 (6, 11.5–13.7 cm SL); Watari County, Watari Town, NSMT-P 73804 (1, 14.3 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73580 (1, 9.6 cm SL).

#### Family Sparidae

*Acanthopagrus schlegelii* (Bleeker, 1854)

[Japanese name: Kuro-dai]

Aomori: Aomori Bay, NSMT-P 74765 (1, 25 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 74202 (1, 10.4 cm SL); Oga City, Funakawaminato, NSMT-P 74755 (1, 27.8 cm SL), 77075 (2, 9.3–10.7 cm SL).

Miyagi: Ishinomaki City, Ohara, NSMT-P

75688 (1, 5 cm SL); Watari County, off Watari Town, NSMT-P 73780 (1, 11 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74283 (1, 10.9 cm SL).

*Evynnis tumifrons* (Temminck & Schlegel, 1843) [Japanese name: Chi-dai]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 73433 (2, 10.5–12.2 cm SL).

Iwate: Kamaishi City, Kamaishi Bay, NSMT-P 74198 (2, 12.2–12.5 cm SL).

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74456 (1, 14.1 cm SL); Motoyoshi County, off Motoyoshi Town, NSMT-P 74234 (2, 11.7–12.1 cm SL), 74822 (5, 16–17.5 cm SL); Natori City, near Yuriage, NSMT-P 74250 (2, 13.4–14.5 cm SL); Natori City, off Yuriage, NSMT-P 74252 (1, 14.3 cm SL); Watari County, Watari Town, NSMT-P 74446 (4, 14.5–15.3 cm SL).

Yamagata: Tsuruoka City, off Kamo, NSMT-P 74565 (2, 15.5–16 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73572 (1, 6.5 cm SL), 74344 (6, 11.7–14.1 cm SL), 74648 (1, 19.7 cm SL).

*Pagrus major* (Temminck & Schlegel, 1843) [Japanese name: Ma-dai]

Aomori: Aomori Bay, NSMT-P 74844 (1, 23.8 cm SL); Aomori City, Asamushi, NSMT-P 74756 (3, 16.1–16.4 cm SL).

Akita: Nikaho City, NSMT-P 74847 (1, 27.5 cm SL); Nikaho City, off Konoura, NSMT-P 73646 (1, 15.3 cm SL).

Miyagi: Watari County, off Watari Town, NSMT-P 75291 (2, 7.5–7.8 cm SL).

#### Family Sciaenidae

*Nibea mitsukurii* (Jordan & Snyder, 1900)

[Japanese name: Nibe]

Miyagi: Ishinomaki City, off Watanoha, NSMT-P 73641 (1, 19.2 cm SL); Natori City, off Yuriage, NSMT-P 74473 (3, 10–15.8 cm SL); Watari County, off Watari Town, NSMT-P 74767 (10, 15.5–20.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73527 (1, 9.3 cm SL), 73604 (1, 18.5 cm SL),

75200 (3, 14.5–16 cm SL).

*Pennahia argentata* (Houttuyn, 1782) [Japanese name: Shiro-guchi]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 73635 (2, 10.8–12.4 cm SL).

Akita: Katagami City, Hachiro-gata, NSMT-P 73427 (2, 11.4–11.7 cm SL); Nikaho City, Konoura, NSMT-P 74737 (1, 27.6 cm SL).

Miyagi: Miyagi County, Matsushima Town, Matsushima Bay, NSMT-P 73571 (5, 13.7–16.1 cm SL); Natori City, near Yuriage, NSMT-P 74751 (2, 18.3–21 cm SL); off Shiogama City, NSMT-P 74569 (4, 14.8–16 cm SL); Watari County, off Watari Town, NSMT-P 74758 (5, 18.6–23.8 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 74104 (2, 10.2–12.2 cm SL); Iwaki City, Onahama, NSMT-P 73622 (4, 11.2–13.6 cm SL), 73628 (3, 16.1–17.4 cm SL).

#### Family Mullidae

*Upeneus japonicus* (Houttuyn, 1782) [Japanese name: Himeji]

Akita: Nikaho City, Konoura, NSMT-P 73794 (2, 8.9–9 cm SL); Nikaho City, off Konoura, NSMT-P 73323 (3, 8.3–9.6 cm SL), 73946 (1, 8.8 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 73762 (1, 12.7 cm SL).

Fukushima: Iwaki City, near Onahama, NSMT-P 74096 (4, 10.2–11.1 cm SL).

#### Family Chaetodontidae

*Chaetodon auripes* Jordan & Snyder, 1901 [Japanese name: Chocho-uo]

Fukushima: Iwaki City, Onahama, NSMT-P 73752 (1, 3.7 cm SL).

#### Family Pentacerotidae

*Evistias acutirostris* (Temminck & Schlegel, 1844) [Japanese name: Tengu-dai]

Fukushima: Iwaki City, Onahama, NSMT-P 74949 (1, 22.5 cm SL).

#### Family Kyphosidae

*Girella punctata* Gray, 1835 [Japanese name: Mejina]

Akita: Katagami City, Hachiro-gata, NSMT-P 73757 (2, 5.7–6.7 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 73559 (1, 7 cm SL), 73892 (1, 7.9 cm SL); Kesenuma City, NSMT-P 76884 (1, 3.1 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74033 (2, 9.7–11.3 cm SL).

*Microcanthus strigatus* (Cuvier, 1831) [Japanese name: Kagokaki-dai]

Fukushima: Iwaki City, near Onahama, NSMT-P 74405 (1, 14 cm SL).

#### Family Teraponidae

*Rhynchopelates oxyrhynchus* (Temminck & Schlegel, 1842) [Japanese name: Shima-isaki]

Akita: Katagami City, Tenno, NSMT-P 73566 (2, 2–2.6 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73563 (1, 7.7 cm SL).

#### Family Oplegnathidae

*Oplegnathus fasciatus* (Temminck & Schlegel, 1844) [Japanese name: Ishi-dai]

Aomori: Aomori City, Asamushi, NSMT-P 73534 (21, 5.8–8.5 cm SL), 75205 (1, 19.6 cm SL); Higashitsugaru County, Imabetsu Town, NSMT-P 73613 (1, 16.3 cm SL); Nishitsugaru County, off Fukaura Town, NSMT-P 74269 (1, 13.1 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 74003 (2, 9.1–10.3 cm SL), 74014 (1, 8.8 cm SL); Oga City, Funakawaminato, NSMT-P 73873 (2, 10–15.3 cm SL), 74856 (1, 19.5 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 76843 (1, 2.2 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 74001 (2, 5.9–8.3 cm SL), 74015 (6, 3.2–4.6 cm SL); Kesenuma City, off Karakuwa, NSMT-P 73993 (3, 5.8–7.5 cm SL); Natori City, off Yuriage, NSMT-P 74433 (10, 8.9–10.6 cm SL); Watari County, off Watari



Town, NSMT-P 73592 (3, 9.5–12.5 cm SL), 74060 (10, 6.1–8 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73295 (1, 9.2 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73278 (4, 7.6–10.4 cm SL); 74094 (1, 10.8 cm SL).

***Oplegnathus punctatus*** (Temminck & Schlegel, 1844) [Japanese name: Ishigaki-dai]

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 74034 (2, 5.8–6.6 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74409 (1, 12.1 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73999 (1, 9.2 cm SL).

#### Family Cheilodactylidae

***Goniistius zebra*** (Döderlein, 1883) [Japanese name: Migimaki]

Fukushima: Iwaki City, Onahama, NSMT-P 73636 (1, 15.4 cm SL).

***Goniistius zonatus*** (Cuvier, 1830) [Japanese name: Takanoha-dai]

Fukushima: Iwaki City, Onahama, NSMT-P 73822 (1, 6.3 cm SL).

#### Family Cepolidae

***Cepola schlegeli*** Bleeker, 1854 [Japanese name: Sumitsuki-akatachi]

Fukushima: Iwaki City, Onahama, NSMT-P 74128 (2, 21.5–22 (+) cm TL), 74378 (3, 23.7–35.2 cm SL), 74453 (2, 24.4–25.6 cm SL).

#### Family Embiotocidae

***Ditrema temminckii temminckii*** (Bleeker, 1853) [Japanese name: Umi-tanago]

Aomori: Higashitsugaru County, Imabetsu Town, NSMT-P 74571 (8, 12.6–18.4 cm SL).

Akita: Oga City, Funakawaminato, 73668 (2, 12.8–15.6 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 74064 (49, 2.4–3.5 cm SL); Kesennuma City, NSMT-P 75199 (5, 11–11.7 cm SL); Kesennuma City, Karakuwa, NSMT-P 73341 (2,

14.5–18 cm SL); Kesennuma City, Kesennuma Bay, NSMT-P 73344 (1, 15.6 cm SL), 73807 (1, 12.4 cm SL), 74066 (2, 5.9–6.2 cm SL); Kesennuma City, off Karakuwa, NSMT-P 74795 (4, 16.6–20.8 cm SL); Motoyoshi County, Motoyoshi Town, NSMT-P 73441 (3, 15.2–19.2 cm SL), 74279 (1, 16.1 cm SL); Natori City, off Yuriage, NSMT-P 73855 (2, 9.4–10.4 cm SL); Oshika County, Onagawa Bay, NSMT-P 74158 (1, 13.4 cm SL); Oshika County, Onagawa Town, off Enoshima, NSMT-P 73291 (1, 15.2 cm SL), 73319 (6, 14–15.3 cm SL); Sendai City, NSMT-P 76924 (9, 2.7–3.1 cm SL).

Yamagata: Sakata City, Tobishima, NSMT-P 74117 (1, 12.7 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73265 (3, 9.7–11.8 cm SL); Iwaki City, Onahama, NSMT-P 73656 (1, 16 cm SL), 74461 (1, 17.2 cm SL).

***Ditrema viride*** Oshima, 1940 [Japanese name: Ao-tanago]

Akita: Oga City, Funakawaminato, NSMT-P 73263 (1, 11.5 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 74125 (4, 11.6–13.9 cm SL); Ishinomaki City, Ohara, NSMT-P 74000 (1, 11.1 cm SL); Kesennuma City, off Karakuwa, NSMT-P 73776 (2, 7.9–8.1 cm SL); Miyagi County, Matsushima Town, Matsushima Bay, NSMT-P 74312 (3, 13–14.3 cm SL); Natori City, Yuriage, NSMT-P 73261 (1, 12.3 cm SL); Natori City, off Yuriage, NSMT-P 73819 (1, 13.2 cm SL).

***Neoditrema ransonneti*** Steindachner, 1883 [Japanese name: Oki-tanago]

Miyagi: Ishinomaki City, Tashirojima Island, NSMT-P 73900 (1, 9.4 cm SL); Kesennuma City, NSMT-P 73253 (4, 8.8–9.1 cm SL), 73620 (4, 13–14.7 cm SL); Kesennuma City, off Karakuwa, NSMT-P 73281 (1, 16.1 cm SL), 73844 (1, 8.5 cm SL); Kesennuma City, Karakuwa, NSMT-P 73975 (1, 10.1 cm SL); Oshika County, Onagawa Bay, NSMT-P 76171 (3, 7.7–11.3 cm SL); Oshika County, Onagawa Town, off Enoshima, NSMT-P 76652 (5, 12.2–12.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74480 (2, 14.8–17 cm SL), 76186 (1, 13.7 cm

SL).

## Family Pomacentridae

*Chromis notata notata* (Temminck & Schlegel, 1843) [Japanese name: Suzume-dai]

Yamagata: Sakata City, Tobishima, NSMT-P 73365 (2, 8.5–8.6 cm SL), 73464 (1, 10.4 cm SL).

## Family Labridae

*Halichoeres poecilopterus* (Temminck & Schlegel, 1845) [Japanese name: Kyusen]

Aomori: Aomori City, Asamushi, NSMT-P 74073 (2, 10.3–11.5 cm SL), 74322 (3, 15.2–18.8 cm SL); Higashitsugaru County, NSMT-P 73835 (3, 10.5–18.3 cm SL); Higashitsugaru County, Hiranai Town, Futagojima Island, NSMT-P 74126 (3, 15.5–15.8 cm SL), 74545 (2, 16–18.1 cm SL).

Akita: Oga City, Funakawaminato, NSMT-P 74398 (1, 18.3 cm SL).

Miyagi: Ishinomaki City, Watanoha, NSMT-P 74264 (1, 16.8 cm SL); Matsushima Bay, NSMT-P 74562 (1, 20 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74299 (1, 16.6 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74659 (1, 22.3 cm SL).

*Halichoeres tenuispinis* (Günther, 1862) [Japanese name: Hon-bera]

Yamagata: Sakata City, Tobishima, NSMT-P 74061 (1, 10.9 cm SL).

*Pseudolabrus sieboldi* Mabuchi & Nakabo, 1997 [Japanese name: Hoshi-sasanoha-bera]

Fukushima: Iwaki City, Onahama, NSMT-P 74122 (1, 15 cm SL).

*Semicossyphus reticulatus* (Valenciennes, 1839) [Japanese name: Kobu-dai]

Aomori: Higashitsugaru County, Hiranai Town, off Oshima Island, NSMT-P 74368 (1, 17.4 cm SL).

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74417 (1, 17.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73442 (1, 22.1 cm SL).

## Family Zoarcidae

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

Akita: Nikaho City, off Konoura, NSMT-P 74282 (2, 26.6–27 cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 74272 (1, 34.6 cm SL).

Miyagi: Kesenuma City, NSMT-P 74431 (1, 29.8 cm SL); Natori City, off Yuriage, NSMT-P 74432 (3, 35.5–40.2 cm SL), 74465 (1, 37.6 cm SL); Shiogama City, Shiogama Fish Market, NSMT-P 74262 (1, 38 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 74331 (2, 32–32.7 cm SL); Iwaki City, Onahama, NSMT-P 74213 (1, 35.7 cm SL).

*Lycodes hubbsi* Matsubara, 1955 [Japanese name: Yokosuji-kuro-geenge]

Miyagi: off Kesenuma City, NSMT-P 74464 (1, 31.7 cm SL); Shiogama City, Shiogama Fish Market, NSMT-P 77151 (1, 29.8 (+) cm SL).

*Lycodes nishimurai* Shinohara & Shirai, 2005 [Japanese name: Orochi-geenge]

Akita: Nikaho City, off Konoura, NSMT-P 74489 (2, 26.9–28.5 cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 74007 (1, 17.5 cm SL), 74337 (1, 21.5 cm SL), 74380 (1, 29.8 cm SL).

*Zoarchias* sp.

Aomori: Aomori City, Asamushi, NSMT-P 73377 (2, 7.9–8 cm SL).

## Family Stichaeidae

*Chirolophis japonicus* Herzenstein, 1890 [Japanese name: Fusa-ginpo]

Aomori: Aomori City, Asamushi, NSMT-P 74422 (1, 20.4 cm SL), 74653 (2, 16–23.5 cm SL), 74839 (1, 31 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73853 (1, 14.5 (+) cm SL).

*Dictyosoma burgeri* van der Hoeven, 1855 [Japanese name: Dainan-ginpo]

Akita: Nikaho City, off Konoura, NSMT-P 74141 (1, 17.3 cm SL), 74228 (3, 13.8–15 cm SL).

Miyagi: Kesennuma City, Karakuwa, NSMT-P 73370 (1, 7.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74870 (1, 29.5 cm SL).

***Ernogrammus hexagrammus*** (Schlegel, 1845)  
[Japanese name: Musuji-gaji]

Akita: Nikaho City, off Konoura, NSMT-P 75690 (1, 8.2 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73955 (2, 8.8–11.1 cm SL).

***Opisthocentrus tenuis*** Bean & Bean, 1897  
[Japanese name: Hanajiro-gaji]

Aomori: Aomori City, Asamushi, NSMT-P 73520 (40, 5.3–13.2 cm SL), 74413 (5, 7.9–14.2 cm SL); Higashitsugaru County, Hiranai Town, Oshima Island, NSMT-P 74051 (39, 3.9–15.4 cm SL).

Miyagi: Kesennuma City, Karakuwa, NSMT-P 73378 (1, 9.6 cm SL).

***Opisthocentrus* sp.**

Miyagi: Kesennuma City, Karakuwa, NSMT-P 73823 (1, 5.6 cm SL).

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

Akita: Nikaho City, off Konoura, NSMT-P 74541 (3, 24.2–25.4 cm SL).

Miyagi: Kesennuma City, Kesennuma Bay, NSMT-P 74683 (1, 36.5 cm SL); Kesennuma City, off Karakuwa, NSMT-P 73664 (1, 31.1 cm SL), 75035 (8, 32.5–45.5 cm SL); Shiogama City, Shiogama Fish Market, NSMT-P 74875 (1, 35 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74590 (2, 24.3–24.9 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74098 (1, 20.8 cm SL).

#### Family Pholididae

***Pholis crassispina*** (Temminck & Schlegel, 1845)  
[Japanese name: Take-ginpo]

Aomori: Aomori City, Asamushi, NSMT-P 74333 (15, 9.1–14.8 cm SL), 76060 (9, 9.8–13

cm SL); Higashitsugaru County, Hiranai Town, Oshima Island, NSMT-P 73633 (12, 8.9–14.7 cm SL).

Miyagi: Ishinomaki City, NSMT-P 73424 (1, 8.6 cm SL).

Fukushima: Iwaki City, near Onahama, NSMT-P 75289 (1, 13.5 cm SL).

***Pholis nebulosa*** (Temminck & Schlegel, 1845)  
[Japanese name: Ginpo]

Aomori: Higashitsugaru County, Nonai-gawa River, NSMT-P 76572 (2, 3.2–3.9 cm SL).

Miyagi: Kesennuma City, Kesennuma Bay, NSMT-P 73618 (2, 19.2–21.7 cm SL), 73866 (1, 21.8 cm SL); Natori City, off Yuriage, NSMT-P 73614 (1, 24.2 cm SL); Watari County, Watari Town, NSMT-P 73461 (5, 12.5–15.8 cm SL).

Fukushima: Iwaki City, near Onahama, NSMT-P 73661 (2, 5.4–22.2 cm SL).

***Pholis* sp.**

Miyagi: Kesennuma City, Kesennuma Bay, NSMT-P 73423 (14, 2.8–3.4 cm SL).

#### Family Pinguipedidae

***Parapercis sexfasciata*** (Temminck & Schlegel, 1843) [Japanese name: Kurakake-toragisu]

Akita: Nikaho City, off Konoura, NSMT-P 74129 (1, 15.2 cm SL).

***Parapercis* sp.**

Akita: Nikaho City, off Konoura, NSMT-P 74131 (1, 25.7 cm SL).

#### Family Trichodontidae

***Arctoscopus japonicus*** (Steindachner, 1881)  
[Japanese name: Hatahata]

Akita: Nikaho City, Kisakata, NSMT-P 73901 (1, 13.5 cm SL), 74339 (15, 13.4–19.8 cm SL); Nikaho City, off Konoura, NSMT-P 74868 (21, 15.3–20.3 cm SL).

Yamagata: Tsuruoka City, off Kamo, NSMT-P 73886 (1, 15.6 cm SL), 73956 (1, 15.2 cm SL).

#### Family Ammodytidae

***Ammodytes personatus*** Girard, 1856 [Japanese name: Ikanago]

Aomori: Hachinohe City, Shirahama, NSMT-P 76878 (5, 5–6.3 cm SL).

Miyagi: Ishinomaki City, Ajishima Island, NSMT-P 74243 (10, 9.6–12.7 cm SL); Kesennuma City, Kesennuma Bay, NSMT-P 74367 (4, 16.4–23.2 cm SL); Kesennuma City, off Karakuwa, NSMT-P 74442 (17, 15.2–20.7 cm SL); Natori City, off Yuriage, NSMT-P 73800 (1, 8.8 cm SL); Oshika County, Onagawa Town, Enoshima Island, NSMT-P 74242 (29, 9.7–14.3 cm SL).

#### Family Uranoscopidae

*Uranoscopus chinensis* Guichenot, 1882 [Japanese name: Kibire-mishima]

Miyagi: Natori City, Yuriage, NSMT-P 74343 (1, 16.8 cm SL); Watari County, off Watari Town, NSMT-P 74313 (2, 16–16.6 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 74177 (1, 13.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 76064 (1, 16.1 cm SL), 76690 (1, 10.3 cm SL).

*Uranoscopus japonicus* Houttuyn, 1782 [Japanese name: Mishima-okoze]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 74144 (1, 15.3 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 74173 (2, 12.7–14.5 cm SL); Yurihonjo City, Yuri, NSMT-P 74743 (1, 18.8 cm SL).

Yamagata: Tsuruoka City, off Kamo, NSMT-P 74478 (2, 16.5–17.1 cm SL).

*Xenocephalus elongatus* (Temminck & Schlegel, 1843) [Japanese name: Ao-mishima]

Akita: Oga City, off Funakawaminato, NSMT-P 73981 (1, 10.1 cm SL).

Yamagata: Tsuruoka City, off Kamo, NSMT-P 74142 (1, 16.6 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73526 (1, 11.7 cm SL), 74891 (6, 15.8–17.7 cm SL).

#### Family Blenniidae

*Omobranchus elegans* (Steindachner, 1876) [Japanese name: Nabeka]

Aomori: Higashitsugaru County, Hiranai

Town, Futagojima Island, NSMT-P 73525 (9, 2.8–4.2 cm SL).

Akita: Katagami City, Tenno, NSMT-P 73734 (1, 3.1 cm SL); Nikaho City, Konoura, NSMT-P 73357 (2, 3.9–4.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73769 (2, 3.8–5 cm SL).

*Xiphasia setifer* Swainson, 1839 [Japanese name: Unagi-ginpo]

Fukushima: Iwaki City, Onahama, NSMT-P 73522 (1, 36.7 cm SL).

#### Family Callionymidae

*Repomucenus curvicornis* Valenciennes, 1837 [Japanese name: Nezumi-gochi]

Akita: Nikaho City, off Konoura, NSMT-P 73260 (2, 12.4–16.3 cm SL).

*Repomucenus lunatus* (Temminck & Schlegel, 1845) [Japanese name: Numeri-gochi]

Fukushima: off Iwaki City, NSMT-P 73535 (2, 11.7–10.4 cm SL).

*Repomucenus ornatipinnis* (Regan, 1905) [Japanese name: Seto-numeri]

Aomori: Aomori Bay, Aburamezaki Cape, NSMT-P 73541 (2, 14–14.8 cm SL); Aomori City, Asamushi, NSMT-P 74208 (2, 15.2–16.1 cm SL), 76412 (1, 9.5 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 73294 (5, 8.3–13.1 cm SL), 75206 (3, 12.9–16 cm SL).

Fukushima: Iwaki City, NSMT-P 73619 (1, 16.5 cm SL); Iwaki City, Onahama, NSMT-P 73806 (2, 12.3–13.7 cm SL).

*Repomucenus valenciennei* (Temminck & Schlegel, 1845) [Japanese name: Hatatate-numeri]

Aomori: Aomori City, Asamushi, NSMT-P 73472 (1, 8.6 cm SL).

Miyagi: Kesennuma City, Kesennuma Bay, NSMT-P 76926 (1, 8.3 cm SL), 76930 (1, 7.3 cm SL).

#### Family Odontobutidae

*Odontobutis obscura* (Temminck & Schlegel, 1845) [Japanese name: Donko]

Iwate: Shimohei County, Kawai Village, NSMT-P 76859 (1, 4.8 cm SL).

#### Family Gobiidae

\* *Acanthogobius flavimanus* (Temminck & Schlegel, 1845) [Japanese name: Ma-haze]

Akita: Katagami City, Hachiro-gata, NSMT-P 73929 (3, 9.4–13.1 cm SL); Katagami City, Tenno, NSMT-P 76651 (1, 4.8 cm SL); Oga City, Funakoshi, Hachiro-gata, NSMT-P 74402 (11, 10.5–15.7 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74037 (1, 12.8 cm SL), 74072 (2, 13.4–13.7 cm SL), 74197 (1, 15 cm SL); Matsushima Bay, NSMT-P 74410 (2, 16.5–16.6 cm SL); off Shiogama City, NSMT-P 74406 (4, 15.1–15.8 cm SL); Osaki City, Naruko, Araogawa River, NSMT-P 75294 (1, 8.5 cm SL); Sendai City, Wakabayashi, NSMT-P 74047 (1, 13 cm SL); Watari County, off Watari Town, NSMT-P 73931 (5, 13.1–14.9 cm SL); Watari County, Watari Town, NSMT-P 74058 (1, 8.3 cm SL).

Yamagata: Nikko-gawa River, NSMT-P 74112 (2, 11.5–15.4 cm SL); Tsuruoka City, NSMT-P 73845 (2, 6.6–7.6 cm SL), 73947 (2, 10.2–13.4 cm SL).

\* *Acanthogobius lactipes* (Hilgendorf, 1879) [Japanese name: Ashishiro-haze]

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 73836 (3, 3.1–3.8 cm SL); Sendai City, Wakabayashi, NSMT-P 75689 (1, 3.9 cm SL).

Yamagata: Tsuruoka City, NSMT-P 76173 (1, 4.3 cm SL).

*Amblychaeturichthys hexanema* (Bleeker, 1853) [Japanese name: Aka-haze]

Akita: Nikaho City, off Konoura, NSMT-P 73255 (1, 11.5 cm SL), 73540 (3, 13.6–15.3 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 75776 (2, 12.3–12.5 cm SL); off Iwaki City, NSMT-P 74044 (3, 11.5–13.5 cm SL).

*Chaenogobius annularis* Gill, 1859 [Japanese name: Ago-haze]

Aomori: Aomori City, Asamushi, NSMT-P 75292 (16, 2.7–4.7 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73908 (1, 4.4 cm SL).

*Chaenogobius gulosus* (Sauvage, 1882) [Japanese name: Dorome]

Aomori: Aomori City, Asamushi, NSMT-P 73918 (5, 4.1–8.2 cm SL); Nishitsugaru County, Fukaura Town, NSMT-P 74082 (2, 6.5–8.9 cm SL).

Akita: Nikaho City, Konoura, NSMT-P 73857 (3, 7.7–8.7 cm SL).

Miyagi: Ishinomaki City, Kinkazan, NSMT-P 74382 (2, 3.4–3.5 cm SL).

*Chaenogobius* sp.

Fukushima: Iwaki City, Onahama, NSMT-P 73306 (3, 1.8–1.9 cm SL).

*Favonigobius gymnauchen* (Bleeker, 1860) [Japanese name: Hime-haze]

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 76211 (2, 4.9–5.2 cm SL).

\* *Gymnogobius breunigii* (Steindachner, 1879) [Japanese name: Biringo]

Aomori: Aomori City, Asamushi, NSMT-P 76411 (1, 4.5 cm SL).

Akita: Katagami City, Tenno, NSMT-P 73313 (2, 4.3–5.1 cm SL).

*Gymnogobius castaneus* (O'Shaughnesy, 1875) [Japanese name: Juzukake-haze]

Aomori: Higashitsugaru County, Hiranai Town, Oshima Island, NSMT-P 76057 (1, 2.7 cm SL).

Akita: Yokote City, Asamai, NSMT-P 73246 (5, 3.4–4.4 cm SL); Yokote City, NSMT-P 73801 (2, 2.5–2.8 cm SL).

Miyagi: Kurihara City, Izu-numa Pond, NSMT-P 73543 (5, 2.9–3.8 cm SL); Osaki City, Kawatabi, NSMT-P 73322 (2, 2.3–2.7 cm SL); Sendai City, Wakabayashi, NSMT-P 77133 (21, 2.9–4.2 cm SL), 77137 (35, 2.9–4.7 cm SL), 76635 (12, 2.7–3.9 cm SL); Shiraishi City, Bagyu-numa Pond, NSMT-P 74012 (3, 3.1–5.2 cm SL); Toda County, Wakuya Town, NSMT-P 76933 (2, 3.7–4.8 cm SL); Tome City, Nitta, NSMT-P 74070 (82, 2.3–5.1 cm SL); Tome City, Nitta, Naga-numa Pond, NSMT-P 75319 (2, 1.4–2.1 cm SL).

Yamagata: Nikko-gawa River, NSMT-P 73333

(3, 3.1–4.3 cm SL); Tsuruoka City, NSMT-P 75321 (1, 2.2 cm SL), 76174 (4, 3.6–4.3 cm SL).

***Gymnogobius heptacanthus*** (Hilgendorf, 1879)  
[Japanese name: Niku-haze]

Aomori: Aomori City, Asamushi, NSMT-P 73843 (57, 1.2–2.5 cm SL), 74081 (63, 3.2–4.7 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 76210 (1, 4.6 cm SL).

***Gymnogobius petschiliensis*** (Rendahl, 1924)  
[Japanese name: Sumi-ukigori]

Aomori: Hachinohe City, Same, NSMT-P 76882 (2, 4–4.1 cm SL).

Miyagi: Ishinomaki City, Ohara, NSMT-P 76775 (2, 4.1–4.6 cm SL), 76937 (1, 7 cm SL); Kesenuma City, Karakuwa, NSMT-P 76935 (2, 3.1–4.6 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 76939 (2, 4.2–4.4 cm SL).

***Gymnogobius*** sp.

Aomori: Goshogawara City, Jusan, NSMT-P 76941 (32, 1.9–3.2 cm SL).

Miyagi: Osaki City, Naruko, NSMT-P 73264 (2, 4.5–4.7 cm SL); Osaki City, Naruko, Araogawa River, NSMT-P 73923 (3, 4.5–5.4 cm SL).

\* ***Gymnogobius urotaenia*** (Hilgendorf, 1879)  
[Japanese name: Ukigori]

Aomori: Aomori City, near Asamushi, NSMT-P 73846 (2, 8.1–9.9 cm SL).

Akita: Semboku City, Tazawa Lake, NSMT-P 76845 (1, 5.3 cm SL).

***Leucopsarion petersii*** Hilgendorf, 1880 [Japanese name: Shiro-uo]

Aomori: Nonai-gawa River, NSMT-P 74355 (518, 3.3–4.6 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 76920 (15, 3.5–4 cm SL).

***Pterogobius elapoides*** (Günther, 1872) [Japanese name: Kinubari]

Aomori: Aomori City, Asamushi, NSMT-P 73949 (66, 1.9–4.7 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 76932 (1, 5.5 cm SL).

***Pterogobius zacalles*** Jordan & Snyder, 1901  
[Japanese name: Ryugu-haze]

Aomori: Aomori Bay, NSMT-P 73273 (26,

7.5–11.1 cm SL); Aomori City, Asamushi, NSMT-P 73324 (3, 9–9.7 cm SL), 73905 (2, 8.5–8.7 cm SL); Aomori City, near Asamushi, NSMT-P 73793 (1, 8.4 cm SL).

***Pterogobius zonoleucus*** Jordan & Snyder, 1901  
[Japanese name: Chagara]

Yamagata: Sakata City, Tobishima, NSMT-P 73330 (7, 4.7–6.4 cm SL).

***Rhinogobius*** sp. [Japanese name: Tou-yoshinobori]

Aomori: Hirosaki City, Iwaki-gawa River, NSMT-P 76179 (2, 4.2–5.4 cm SL); Shimokita County, Higashidori Village, NSMT-P 75236 (2, 3.9–4 cm SL).

Iwate: Hanamaki City, NSMT-P 76921 (1, 3.7 cm SL); Morioka City, Kamiyonai, NSMT-P 73259 (1, 3.7 cm SL); Morioka City, Ueda, NSMT-P 74381 (3, 2.5–3 cm SL); Sarugaishigawa River, NSMT-P 74002 (2, 6.4–6.6 cm SL); Shiwa County, Shiwa Town, NSMT-P 73245 (9, 2.6–3.4 cm SL).

Miyagi: Kurihara City, Tsukidate, Natsu-kawa River, NSMT-P 76844 (1, 3.8 cm SL); Sendai City, Wakabayashi, NSMT-P 73239 (117, 2.3–4 cm SL), 75102 (1, 2.3 cm SL), 77131 (1, 3.3 cm SL), 77134 (2, 2.8–3.2 cm SL); Toda County, Wakuya Town, NSMT-P 76919 (6, 2.3–3.7 cm SL), 76934 (2, 3–3.2 cm SL).

***Rhinogobius*** sp.

Iwate: Iwate County, Shizukuishi Town, NSMT-P 73732 (4, 1.7–1.8 cm SL).

Miyagi: Kurihara City, Wakayanagi, NSMT-P 76877 (1, 2.9 cm SL).

***Tridentiger brevispinis*** Katsuyama, Arai & Nakamura, 1972 [Japanese name: Numachichibu]

Aomori: Hirosaki City, Iwaki-gawa River, NSMT-P 73858 (1, 9.9 cm SL).

Miyagi: Kurihara City, Izu-numa Pond, NSMT-P 76938 (4, 4.2–7.1 cm SL); Tome City, Nitta, NSMT-P 75686 (23, 3.1–6.3 cm SL).

Yamagata: Nikko-gawa River, NSMT-P 73575 (2, 7.1–7.6 cm SL); Tsuruoka City, NSMT-P 73244 (2, 7.3–9.3 cm SL).

\* ***Tridentiger obscurus*** (Temminck & Schlegel, 1845) [Japanese name: Chichibu]

Iwate: Morioka City, Janoshima, NSMT-P 74013 (3, 5.5–7 cm SL).

Miyagi: Sendai City, Hirose-gawa River, NSMT-P 73711 (3, 7–8 cm SL).

*Tridentiger trigonocephalus* (Gill, 1859) [Japanese name: Akaobi-shima-haze]

Akita: Nikaho City, Konoura, NSMT-P 76942 (2, 5–5.3 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 73915 (1, 3.2 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73337 (1, 6.4 cm SL), 75290 (2, 4.6–6.2 cm SL).

#### Family Siganidae

*Siganus fuscescens* (Houttuyn, 1782) [Japanese name: Aigo]

Akita: Oga City, Funakawaminato, NSMT-P 73367 (1, 8.8 cm SL), 73755 (1, 8.2 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 74294 (1, 10.5 cm SL); Watari County, off Watari Town, NSMT-P 73605 (1, 11.4 cm SL).

#### Family Zanclidae

*Zanclus cornutus* (Linnaeus, 1758) [Japanese name: Tsunodashi]

Fukushima: Iwaki City, Onahama, NSMT-P 74652 (1, 14 cm SL).

#### Family Sphyrinae

*Sphyrna japonica* Bloch & Schneider, 1801 [Japanese name: Yamato-kamasu]

Fukushima: Iwaki City, Onahama, NSMT-P 73638 (20, 11.6–14.3 cm SL).

*Sphyrna pinguis* Günther, 1874 [Japanese name: Aka-kamasu]

Fukushima: Iwaki City, off Onahama, NSMT-P 74687 (1, 26.9 cm SL); Iwaki City, Onahama, NSMT-P 73422 (2, 12–12.4 cm SL).

#### Family Gempylidae

*Ruvettus pretiosus* Cocco, 1833 [Japanese name: Bara-mutsu]

Fukushima: Iwaki City, Onahama, NSMT-P

73692 (1, 23 cm SL).

#### Family Trichiuridae

*Trichiurus japonicus* Temminck & Schlegel, 1844 [Japanese name: Tachi-uo]

Fukushima: Iwaki City, off Onahama, NSMT-P 74408 (3, 38–38.2 cm TL); Iwaki City, Onahama, NSMT-P 74858 (1, 79.3 cm TL).

*Trichiurus* sp. [Japanese name: Tenjiku-tachi]

Yamagata: Tsuruoka City, Kamo, NSMT-P 77165 (1, 101.9 cm TL).

#### Family Scombridae

*Auxis rochei* (Risso, 1810) [Japanese name: Maru-soda]

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74920 (1, 27.2 cm SL).

*Auxis thazard* (Lacepède, 1800) [Japanese name: Hira-soda]

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74888 (5, 27.3–29.1 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74689 (1, 26.8 cm SL).

*Katsuwonus pelamis* (Linnaeus, 1758) [Japanese name: Katsuo]

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74886 (1, 35 cm SL); Kesenuma City, off Karakuwa, NSMT-P 77155 (1, 50.6 cm SL).

*Sarda orientalis* (Temminck & Schlegel, 1844) [Japanese name: Hagatsuo]

Fukushima: Iwaki City, Onahama, NSMT-P 74179 (1, 15 cm SL), 74224 (1, 18.8 cm SL).

*Scomber australasicus* Cuvier, 1832 [Japanese name: Goma-saba]

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74696 (1, 23.5 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74688 (1, 26.8 cm SL).

*Scomber japonicus* Houttuyn, 1782 [Japanese name: Ma-saba]

Aomori: Aomori City, Asamushi, NSMT-P 73701 (9, 20.5–22.7 cm SL).

Akita: Nikaho City, Kisakata, NSMT-P 74553 (1, 21.5 cm SL).

Miyagi: Ishinomaki City, off Watanoha,

NSMT-P 74643 (1, 27.2 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 73848 (1, 11.4 cm SL), 74761 (1, 27.7 cm SL); Kesenuma City, off Karakuwa, NSMT-P 74923 (5, 28.2–34.3 cm SL); Natori City, off Yuriage, NSMT-P 74726 (6, 7.7–22.6 cm SL); Rikuzentakata City, Takata, NSMT-P 76643 (1, 11.5 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 76170 (3, 8.5–11.1 cm SL); Iwaki City, Onahama, NSMT-P 74193 (1, 19.2 cm SL), 74646 (2, 24–25.2 cm SL), 74836 (3, 28.7–30.5 cm SL).

#### Family Centrolophidae

*Hyperoglyphe japonica* (Döderlein, 1884)  
[Japanese name: Me-dai]

Miyagi: off Shiogama City, NSMT-P 74460 (1, 16.9 cm SL).

*Psenopsis anomala* (Temminck & Schlegel, 1844) [Japanese name: Ibo-dai]

Fukushima: Iwaki City, Onahama, NSMT-P 73598 (1, 15 cm SL).

*Psenopsis shojimai* Ochiai & Mori 1965 [Japanese name: Niseibo-dai]

Miyagi: Natori City, off Yuriage, NSMT-P 73615 (1, 11.5 cm SL); Watari County, off Watari Town, NSMT-P 73560 (2, 11–11.8 cm SL).

#### Order Pleuronectiformes

##### Family Bothidae

*Crossorhombus kobensis* (Jordan & Starks, 1906) [Japanese name: Kobe-daruma-garei]

Fukushima: Iwaki City, Onahama, NSMT-P 73531 (1, 8.7 cm SL).

##### Family Paralichthyidae

*Paralichthys olivaceus* (Temminck & Schlegel, 1846) [Japanese name: Hirame]

Aomori: Higashitsugaru County, Imabetsu Town, NSMT-P 74628 (1, 29.8 cm SL); Nishitsugaru County, off Fukaura Town, NSMT-P 74621 (1, 22 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 73321 (2, 13–18.2 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay,

NSMT-P 73714 (1, 13.5 cm SL); Kesenuma City, off Karakuwa, NSMT-P 77182 (1, 31 cm SL), 77183 (1, 31 cm SL); Natori City, near Yuriage, NSMT-P 73533 (1, 20.8 cm SL); Natori City, off Yuriage, NSMT-P 73741 (2, 10.9–16.7 cm SL); Watari County, Watari Town, NSMT-P 74921 (4, 32.8–37.9 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 77024 (2, 13–15.4 cm SL).

*Pseudorhombus cinnamoneus* (Temminck & Schlegel, 1846) [Japanese name: Ganzou-birame]

Akita: Yamamoto County, Happo Town, NSMT-P 74882 (1, 22.4 cm SL).

*Pseudorhombus oculocirris* Amaoka, 1969  
[Japanese name: Heraganzou-birame]

Fukushima: Iwaki City, Onahama, NSMT-P 77023 (2, 12.4–12.6 cm SL).

*Pseudorhombus pentophthalmus* Günther, 1862  
[Japanese name: Tamaganzou-birame]

Aomori: Nishitsugaru County, Fukaura Town, NSMT-P 73877 (3, 10.2–11.5 cm SL).

Miyagi: Natori City, near Yuriage, NSMT-P 76642 (1, 9.4 cm SL).

##### Family Pleuronectidae

*Atheresthes evermanni* Jordan & Starks, 1904  
[Japanese name: Abura-garei]

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74800 (3, 23.5–30.1 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74873 (2, 24.5–27.2 cm SL), 77018 (2, 23.4–30.2 cm SL).

*Clidoderma asperrimum* (Temminck & Schlegel, 1846) [Japanese name: Same-garei]

Miyagi: Natori City, near Yuriage, NSMT-P 73501 (2, 14.1–17.1 cm SL); Watari County, off Watari Town, NSMT-P 75028 (4, 25–32.5 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73267 (1, 19.4 cm SL); Iwaki City, Onahama, NSMT-P 73498 (1, 18.3 cm SL), 77013 (1, 26.3 cm SL).

*Dexistes rikuzenius* Jordan & Starks, 1904  
[Japanese name: Migi-garei]



Miyagi: Kesennuma City, Karakuwa, NSMT-P 73296 (2, 11.9–16.7 cm SL); Natori City, near Yuriage, NSMT-P 76501 (2, 15.8–19 cm SL); off Kesennuma City, NSMT-P 73287 (1, 14.7 cm SL), 74604 (1, 19.4 cm SL); Watari County, Watari Town, NSMT-P 73349 (4, 17.5–19.1 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 77017 (2, 11.5–13.5 cm SL).

*Eopsetta grigorjewi* (Herzenstein, 1890) [Japanese name: Mushi-garei]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 73286 (1, 20 cm SL).

Miyagi: Natori City, near Yuriage, NSMT-P 76503 (2, 20.9–21.1 cm SL); Natori City, off Yuriage, NSMT-P 74622 (2, 17.1–17.3 cm SL), 76995 (2, 19.6–19.8 cm SL); off Kesennuma City, NSMT-P 74960 (5, 21.3–22.9 cm SL), 76413 (1, 19.7 cm SL), 76416 (1, 15.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 76999 (4, 12–26.8 cm SL); off Iwaki City, NSMT-P 73505 (2, 17.5–18.3 cm SL).

*Glyptocephalus stelleri* (Schmidt, 1904) [Japanese name: Hire-guro]

Miyagi: Kesennuma City, Karakuwa, NSMT-P 73331 (5, 13.3–17.6 cm SL); Natori City, off Yuriage, NSMT-P 74284 (3, 14.4–17.8 cm SL); off Kesennuma City, NSMT-P 73500 (3, 15.2–17 cm SL), 76641 (2, 14.3–15 cm SL); Watari County, off Watari Town, NSMT-P 74907 (5, 22–24.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73445 (2, 12–13.4 cm SL).

*Hippoglossoides dubius* Schmidt, 1904 [Japanese name: Aka-garei]

Miyagi: Shiogama City, Shiogama Fish Market, NSMT-P 73881 (2, 10.6–12.3 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 76997 (2, 21–22.2 cm SL).

*Hippoglossoides pinetorum* Jordan & Starks, 1904 [Japanese name: Souhachi]

Miyagi: Kesennuma City, NSMT-P 73650 (3, 18.6–20.2 cm SL); Kesennuma City, Kesennuma Bay, NSMT-P 73503 (1, 17.8 cm SL); Motoyoshi County, off Motoyoshi Town, NSMT-P 73832 (1, 13.1 cm SL); Natori City, near Yuriage, NSMT-P

73284 (1, 18.6 cm SL); Natori City, off Yuriage, NSMT-P 73359 (2, 14.2–15.4 cm SL); off Kesennuma City, NSMT-P 76414 (1, 21.7 cm SL), 76415 (1, 16.9 cm SL).

Fukushima: Iwaki City, NSMT-P 73358 (1, 10.6 cm SL); Iwaki City, Onahama, NSMT-P 73446 (1, 14.4 cm SL), 77016 (1, 11.8 cm SL).

*Kareius bicoloratus* (Basilewsky, 1855) [Japanese name: Ishi-garei]

Aomori: Aomori City, Asamushi, NSMT-P 73290 (1, 18.6 cm SL), 74638 (1, 26.4 cm SL); Higashitsugaru County, Nonai-gawa River, NSMT-P 76573 (1, 2.5 cm SL).

Miyagi: Ishinomaki City, Mangokuura, NSMT-P 73938 (3, 2.8–6.3 cm SL); Ishinomaki City, Ohara, NSMT-P 77022 (2, 11.9–17.8 cm SL); Natori City, near Yuriage, NSMT-P 73240 (1, 21.6 cm SL); Natori City, off Yuriage, NSMT-P 73262 (2, 9.9–10 cm SL); Watari County, off Watari Town, NSMT-P 77019 (3, 6.5–7.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74351 (1, 13.6 cm SL), 77015 (2, 10.9–18.1 cm SL).

*Lepidopsetta mochigarei* Snyder, 1911 [Japanese name: Asaba-garei]

Akita: Yurihonjo City, Yuri, NSMT-P 74749 (1, 19.7 cm SL).

Miyagi: Kesennuma City, Kesennuma Bay, NSMT-P 73510 (1, 22.2 cm SL); Natori City, near Yuriage, NSMT-P 73504 (1, 17.3 cm SL); Natori City, off Yuriage, NSMT-P 74629 (1, 19.6 cm SL); off Kesennuma City, NSMT-P 74607 (2, 20–20.6 cm SL), 74610 (1, 26.9 cm SL).

*Liopsetta pinnifasciata* (Kner, 1870) [Japanese name: Matsukawa]

Miyagi: Kesennuma City, off Karakuwa, NSMT-P 73458 (1, 17.3 cm SL).

*Microstomus stelleri* (Schmidt, 1904) [Japanese name: Baba-garei]

Miyagi: Kesennuma City, Karakuwa, NSMT-P 74618 (1, 21.3 cm SL), 74906 (3, 22.9–27.8 cm SL); Natori City, Yuriage, NSMT-P 74793 (2, 17.8–21.2 cm SL); off Kesennuma City, NSMT-P 73654 (3, 20–21.3 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P

74794 (2, 21.4–22.2 cm SL).

***Myzopsetta punctatissimus*** (Steindachner, 1879)

[Japanese name: Suna-garei]

Akita: Nikaho City, off Konoura, NSMT-P 73354 (1, 21.6 cm SL).

***Platichthys stellatus*** (Pallas, 1787) [Japanese name: Numa-garei]

Aomori: Aomori City, Asamushi, NSMT-P 74617 (1, 17.6 cm SL); Nishitsugaru County, off Fukaura Town, NSMT-P 73269 (1, 20.4 cm SL).

Akita: Nikaho City, Konoura, NSMT-P 74677 (3, 10.4–21.5 cm SL); Oga City, Funakoshi, NSMT-P 73516 (6, 11.7–14.4 cm SL); Yurihonjo City, Yuri, NSMT-P 73509 (1, 19.1 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 74445 (1, 15.4 cm SL); NSMT-P 73270 (1, 12.5 cm SL).

***Pleuronectes*** sp.

Miyagi: Kesenuma City, Karakuwa, NSMT-P 73969 (1, 14.7 cm SL).

***Pleuronichthys cornutus*** (Temminck & Schlegel, 1846) [Japanese name: Meita-garei]

Aomori: Aomori Bay, NSMT-P 73517 (1, 19.2 cm SL); Nishitsugaru County, Fukaura Town, NSMT-P 73879 (3, 12.5–12.7 cm SL).

Akita: Nikaho City, Konoura, NSMT-P 73283 (1, 13.7 cm SL); Nikaho City, off Konoura, NSMT-P 73348 (1, 12.4 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 74290 (6, 9.2–11.5 cm SL); Watari County, off Watari Town, NSMT-P 74591 (1, 16.1 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74616 (4, 15–17.4 cm SL), 77012 (1, 16.7 cm SL); off Iwaki City, NSMT-P 73258 (2, 14.2–15 cm SL).

***Pleuronichthys*** sp. [Japanese name: Nagare-meita-garei]

Aomori: Higashitsugaru County, Imabetsu Town, NSMT-P 74645 (1, 21.7 cm SL).

Miyagi: Natori City, near Yuriage, NSMT-P 73288 (1, 16.3 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73942 (1, 13.3 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 77000 (1, 9 cm SL).

***Pseudopleuronectes herzensteini*** (Jordan &

Snyder, 1901) [Japanese name: Ma-garei]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 76683 (2, 13.1–14.6 cm SL).

Miyagi: Ishinomaki City, Ohara, NSMT-P 77021 (5, 10.9–15.5 cm SL); Natori City, near Yuriage, NSMT-P 73683 (2, 15.8–18.9 cm SL); Natori City, off Yuriage, NSMT-P 76994 (7, 11.8–13.3 cm SL); Watari County, off Watari Town, NSMT-P 74854 (6, 14.2–29.2 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 77014 (2, 12.1–13.5 cm SL).

***Pseudopleuronectes schrenki*** (Schmidt, 1904) [Japanese name: Kurogashira-garei]

Miyagi: Rikuzentakata City, Hirota, NSMT-P 74614 (1, 27.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73715 (2, 14.5–15.5 cm SL).

***Pseudopleuronectes yokohamae*** (Günther, 1877) [Japanese name: Mako-garei]

Aomori: Aomori City, Asamushi, NSMT-P 73277 (15, 4.4–18.2 cm SL).

Miyagi: Kesenuma City, Karakuwa, NSMT-P 73508 (6, 14.8–19.3 cm SL), 74819 (4, 17.1–20.8 cm SL); Kesenuma City, Kesenuma Bay, NSMT-P 74576 (2, 17.1–19.1 cm SL); Natori City, off Yuriage, NSMT-P 73502 (2, 14–14.6 cm SL), 74892 (6, 10.7–16.9 cm SL); Natori City, Yuriage, NSMT-P 73506 (2, 15.8–17.4 cm SL); off Kesenuma City, NSMT-P 77166 (5, 20.9–24.7 cm SL); Watari County, off Watari Town, NSMT-P 77020 (4, 13.7–14.9 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73328 (1, 10.5 cm SL), 73451 (1, 12.4 cm SL), 76998 (1, 14 cm SL).

Tohoku District, NSMT-P 74698 (2, 19.2–20.6 cm SL).

***Tanakius kitaharae*** (Jordan & Starks, 1904) [Japanese name: Yanagimushi-garei]

Miyagi: Natori City, near Yuriage, NSMT-P 76502 (2, 21.4–22.3 cm SL).

***Verasper variegatus*** (Temminck & Schlegel, 1846) [Japanese name: Hoshi-garei]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 74624 (1, 30 cm SL).

Akita: Oga City, Funakawaminato, NSMT-P 73272 (2, 12.5–15.5 cm SL).

Miyagi: Ishinomaki City, off Kinkazan, NSMT-P 74619 (1, 21.5 cm SL); Natori City, near Yuriage, NSMT-P 73519 (1, 20.4 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 74626 (1, 18.5 cm SL); Iwaki City, Onahama, NSMT-P 74919 (1, 22.9 cm SL).

#### Family Soleidae

*Heteromycteris japonicus* (Temminck & Schlegel, 1846) [Japanese name: Sasa-ushinoshita]

Akita: Nikaho City, off Konoura, NSMT-P 73894 (1, 11.5 cm SL).

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 73854 (1, 11.1 cm SL).

*Pseudaesopia japonica* (Bleeker, 1860) [Japanese name: Seto-ushinoshita]

Akita: Yamamoto County, Happo Town, NSMT-P 74799 (1, 9.8 cm SL).

*Zebrias zebrinus* (Temminck & Schlegel, 1846) [Japanese name: Shima-ushinoshita]

Akita: Yamamoto County, Happo Town, NSMT-P 74855 (3, 12.3–24 cm SL).

Yamagata: Tsuruoka City, Kamo, NSMT-P 73586 (1, 15.3 cm SL).

#### Family Cynoglossidae

*Cynoglossus interruptus* Günther, 1880 [Japanese name: Genko]

Akita: Nikaho City, off Konoura, NSMT-P 75287 (1, 14.3 cm SL).

*Cynoglossus joyneri* Günther, 1878 [Japanese name: Akashitabirame]

Akita: Yamamoto County, Happo Town, NSMT-P 77073 (1, 26.4 cm SL).

Miyagi: Watari County, off Watari Town, NSMT-P 74853 (8, 19.2–20.5 cm SL).

Fukushima: Iwaki City, NSMT-P 76653 (2, 14.2–14.8 cm SL); Iwaki City, Onahama, NSMT-P 74170 (3, 12.6–15 cm SL), 74421 (1, 19.5 cm SL).

*Paraplagusia japonica* (Temminck & Schlegel, 1846) [Japanese name: Kuro-ushinoshita]

Akita: Nikaho City, Kisakata, NSMT-P 74589 (1, 24.6 cm SL); Yamamoto County, Happo

Town, NSMT-P 77072 (3, 23.5–24.6 cm SL).

Iwate: Rikuzentakata City, Hirota, NSMT-P 74347 (1, 29.2 cm SL).

Miyagi: Ishinomaki City, off Watanoha, NSMT-P 74404 (1, 23.5 cm SL); Natori City, off Yuriage, NSMT-P 74230 (1, 12.7 cm SL); Watari County, off Watari Town, NSMT-P 74852 (6, 24.5–32.8 cm SL); Watari County, Watari Town, NSMT-P 74889 (1, 28.4 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73710 (1, 8.7 cm SL).

#### Order Tetraodontiformes

##### Family Triacanthodidae

*Triacanthodes anomalus* (Temminck & Schlegel, 1850) [Japanese name: Beni-kawamuki]

Fukushima: Iwaki City, Onahama, NSMT-P 76841 (1, 6.9 cm SL).

##### Family Monacanthidae

*Aluterus monoceros* (Linnaeus, 1758) [Japanese name: Usuba-hagi]

Fukushima: Iwaki City, Onahama, NSMT-P 74967 (1, 35.5 cm SL).

*Rudarius ercodes* Jordan & Fowler, 1902 [Japanese name: Amime-hagi]

Aomori: Aomori City, Asamushi, NSMT-P 73241 (13, 0.3–2.4 cm SL), 73251 (9, 1.8–3.3 cm SL).

*Stephanolepis cirrhifer* (Temminck & Schlegel, 1850) [Japanese name: Kawa-hagi]

Aomori: Nishitsugaru County, off Fukaura Town, NSMT-P 73898 (1, 11.5 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 73895 (2, 10.5–11 cm SL); Oga City, Funakawaminato, NSMT-P 73551 (3, 10.9–12.4 cm SL).

Miyagi: Natori City, off Yuriage, NSMT-P 73982 (2, 11.1–11.5 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73917 (1, 7.3 cm SL); Iwaki City, Onahama, NSMT-P 73252 (1, 9.9 cm SL), 74338 (1, 11.3 cm SL), 74601 (1, 13 cm SL).

***Thamnaconus modestus*** (Günther, 1877)

[Japanese name: Umazura-hagi]

Aomori: Nishitsugaru County, Fukaura Town, NSMT-P 73256 (1, 14.1 cm SL).

Akita: Nikaho City, off Konoura, NSMT-P 73896 (2, 11–12.5 cm SL).

Miyagi: Kesenuma City, Kesenuma Bay, NSMT-P 73250 (1, 5.9 cm SL); Kesenuma City, off Karakuwa, NSMT-P 73678 (1, 15.8 cm SL), 74865 (6, 16.3–21.7 cm SL); Natori City, off Yuriage, NSMT-P 74655 (3, 19.8–21.4 cm SL); Natori City, Yuriage, NSMT-P 73737 (2, 12.3–14.4 cm SL).

Yamagata: Tsuruoka City, off Kamo, NSMT-P 74597 (2, 18.2–18.6 cm SL).

Fukushima: Iwaki City, off Onahama, NSMT-P 73705 (4, 13.3–15.8 cm SL); Iwaki City, Onahama, NSMT-P 73285 (2, 15–15.5 cm SL), 73289 (2, 11.7–12.7 cm SL), 74962 (3, 21.5–30.5 cm SL); no detailed locality, NSMT-P 73704 (3, 14.8–17.7 cm SL).

## Family Ostraciidae

***Kentrocapros aculeatus*** (Houttuyn, 1782)

[Japanese name: Itomaki-fugu]

Miyagi: Natori City, off Yuriage, NSMT-P 73474 (1, 8.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73247 (1, 4.8 cm SL), 73998 (1, 7.8 cm SL).

***Lactoria diaphana*** (Bloch & Schneider, 1801)

[Japanese name: Umi-suzume]

Miyagi: Watari County, off Watari Town, NSMT-P 73353 (1, 10.4 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73821 (1, 9.2 cm SL).

***Ostracion immaculatus*** Temminck & Schlegel, 1850 [Japanese name: Hako-fugu]

Aomori: Higashitsugaru County, Hiranai Town, off Kamomejima Island, NSMT-P 74692 (1, 19.4 cm SL).

***Tetrosomus concatenatus*** (Bloch, 1785) [Japanese name: Hama-fugu]

Miyagi: Kesenuma City, Matsuiwa, NSMT-P 74040 (1, 3.6 cm SL).

## Family Tetraodontidae

***Lagocephalus gloveri*** Abe & Tabeta, 1983

[Japanese name: Kuro-saba-fugu]

Akita: Nikaho City, off Konoura, NSMT-P 73293 (1, 13.8 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74287 (1, 12.9 cm SL), 74373 (1, 17.1 cm SL).

Lagocephalus wheeleri Abe, Tabeta &amp; Kitahama, 1984 [Japanese name: Shiro-saba-fugu]

Akita: Nikaho City, off Konoura, NSMT-P 73869 (1, 13.2 cm SL).

***Takifugu niphobles*** (Jordan & Snyder, 1901)

[Japanese name: Kusa-fugu]

Aomori: Aomori City, Asamushi, NSMT-P 74097 (3, 6.6–7.8 cm SL).

Miyagi: Miyagi County, Matsushima Town, Matsushima Bay, NSMT-P 73867 (2, 10–10.2 cm SL); off Shiogama City, NSMT-P 73450 (3, 9–11.2 cm SL); Oshika County, Onagawa, Dejima Island, NSMT-P 74261 (5, 9–11.2 cm SL).

Yamagata: Sakata City, Tobishima, NSMT-P 74152 (1, 12.4 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74079 (2, 8.3–11.5 cm SL).

Takifugu pardalis (Temminck &amp; Schlegel, 1850) [Japanese name: Higan-fugu]

Akita: Oga City, Funakawaminato, NSMT-P 73967 (1, 9.1 cm SL).

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74669 (1, 26.8 cm SL), 77032 (1, 16.2 cm SL), 77033 (1, 21 cm SL); Motoyoshi County, Motoyoshi Town, NSMT-P 74663 (1, 23.8 cm SL), 77029 (1, 23.4 cm SL), 77030 (1, 23.1 cm SL); Motoyoshi County, off Motoyoshi Town, NSMT-P 74101 (1, 13.4 cm SL); Natori City, NSMT-P 73945 (1, 9 cm SL).

***Takifugu poecilonotus*** (Temminck & Schlegel, 1850) [Japanese name: Komon-fugu]

Akita: Oga City, Funakawaminato, NSMT-P 75324 (1, 9.7 cm SL).

***Takifugu porphyreus*** (Temminck & Schlegel, 1850) [Japanese name: Ma-fugu]

Akita: Nikaho City, off Konoura, NSMT-P 74667 (1, 21.5 cm SL), 77028 (1, 22.5 cm SL).

Miyagi: Kesenuma City, off Karakuwa, NSMT-P 74973 (1, 22.5 cm SL); Motoyoshi

County, off Motoyoshi Town, NSMT-P 74615 (1, 25.1 cm SL), 74666 (1, 27.1 cm SL), 77034 (1, 26.7 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 74399 (1, 18.8 cm SL), 74662 (1, 24.6 cm SL).

***Takifugu rubripes*** (Temminck & Schlegel, 1850)  
[Japanese name: Tora-fugu]

Akita: Nikaho City, off Konoura, NSMT-P 74664 (1, 30.9 cm SL).

***Takifugu snyderi*** (Abe, 1988) [Japanese name: Shousai-fugu]

Fukushima: Iwaki City, Onahama, NSMT-P 74661 (1, 25.4 cm SL), 75069 (4, 13.7–14.6 cm SL), 77031 (1, 22 cm SL).

***Takifugu stictonotus*** (Temminck & Schlegel, 1850) [Japanese name: Goma-fugu]

Fukushima: Iwaki City, Onahama, NSMT-P 74668 (1, 25.8 cm SL).

#### Family Diodontidae

***Chilomycterus reticulatus*** (Linnaeus, 1758)  
[Japanese name: Ishigaki-fugu]

Fukushima: Iwaki City, Onahama, NSMT-P 74881 (1, 22.7 cm SL).

***Diodon holocanthus*** Linnaeus, 1758 [Japanese name: Hari-senbon]

Aomori: Aomori City, off Yunoshima Island, NSMT-P 73962 (1, 6.8 cm SL); Higashitsugaru County, Sotogahama Town, NSMT-P 74115 (1, 12.2 cm SL).

Fukushima: Iwaki City, Onahama, NSMT-P 73888 (1, 8.4 cm SL).

#### Remarks

The fish collection of the Saito Ho-on Kai Museum of Natural History includes some noteworthy specimens from a zoogeographical viewpoint. As stated in the “Introduction”, aquatic environments in the Tohoku District were drastically changed in the 1950s through the 1970s, which resulted in the destruction of many habitats for freshwater fishes. For example, the cyprinid fish, *Pseudorasbora pumila pumila* described as a new species by Miyadi (1930), had been widely distributed from the central to northern parts of Honshu Island, but it disappeared in many areas including the type locality. Although the type specimens of this species are not extant, the specimens of the Saito Ho-on Kai Museum of Natural History came from many places of the Tohoku District including the type locality (Fig. 3), Akita Prefecture (Hachiro-gata and Yokote City), Iwate Prefecture (Morioka City, Shiwa County, and Waga County), and Miyagi Prefecture (Izu-numa Pond, Kurihara City, Shinai-numa Pond [type locality], Sendai City, Bagyu-numa Pond, Tome City, and Naga-numa Pond).

In addition to freshwater fishes, the fish collection of Saito Ho-on Kai Museum of Natural History showed northern range extensions of the following fishes: *Ophichthus altipennis* (Ophichthidae, previously known as far north as Tokyo Bay), *Caelorinchus anatirostris* (Macrouridae, previously known as far north as Sagami Bay); *Antigonia capros* (Caproidae, previously known as far north as Sagami Bay); *Hoplichthys gilberti*



Fig. 3. *Pseudorasbora pumila pumila* Miyadi, 1930, collected from Shinai-numa Pond, Miyagi Prefecture, Japan (NSMT-P 73379, 6.3 cm SL).

(Hoplichthyidae, previously known as far north as Sagami Bay); *Sphyraena japonica* (Sphyrænidae, previously known as far north as Sagami Bay); *Kentrocapros aculeatus* (Ostraciidae, previously known as far north as Sagami Bay).

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