



Title	Illustrated list of additions to the ichthyofauna of Yonaguni-jima Island, the westernmost island of Japan: 37 new specimen-based records from the island
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## Illustrated list of additions to the ichthyofauna of Yonaguni-jima Island, the westernmost island of Japan: 37 new specimen-based records from the island

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**Abstract.** Previous surveys of fishes of Yonaguni-jima Island, the westernmost island of Japan, have recorded a total of 603 fish species (104 families). Field sampling was recently carried out at the island resulting in an additional 30 species recorded from Yonaguni-jima Island for the first time, plus a further 7 species now represented by voucher specimens, having been previously recorded from Yonaguni-jima Island only by underwater photographs. In addition, we have collected two adult specimens of *Scarus rubroviolaceus* Bleeker, 1847 (family Scaridae), as the species was available only as a juvenile specimen in previous reports. We have also successfully re-reported with a fresh-colored specimen's photograph of *Pterois radiata* Cuvier, 1829 (the family Scorpaenidae), which was previously recorded without any photographs. Color photographs of all these additional species are provided. The number of fish species from Yonaguni-jima Island now totals 633 (105 families).

coastal areas of islands generally result in a decrease in fish species diversity, Yonaguni-jima Island has a relatively high diversity as the island faces the warm and strong Kuroshio Current, which brings tropical fishes from the south (Matsuura & Senou, 2012).

An annotated checklist of fishes of Yonaguni-jima Island, compiled from field and literature surveys, was published by Koeda et al. (2016), who reported a total of 603 species (306 genera, 104 families), including 334 species that represented the first reliable records from the island on the bases of collected specimens.

Recently, the authors of this study conducted field sampling at Yonaguni-jima Island, and 82 specimens of 67 species (54 genera, 29 families) of marine fishes were collected by SCUBA diving. The present report aims to update a species list of the fishes of Yonaguni-jima Island presented by Koeda et al. (2016), and the newly recorded and topical fish species are listed and illustrated in the present study.

### Introduction

Yonaguni-jima Island is located at 24°27'N, 122°57'E, ca. 70 km and ca. 120 km west from Iriomote-jima and Ishigaki-jima islands, respectively (see Koeda et al. 2016: Figure 2). This small island belongs to the Yaeyama Islands, and is the westernmost island in Japan. The distance between Yonaguni-jima Island and Taiwan is only ca. 110 km. The shape of island is elliptical, with an area of ca. 28 km<sup>2</sup> and is 28 km in circumference with a population of ca. 1,500 people (Fujimoto 1972; Kato 2013). Most of the coastline of the island consists of sheer rocky cliffs. Thus, in-reef environments such as shallow waters, coral reefs, and sandy beaches are extremely limited (see Koeda et al. 2016: Fig. 3). Although the monotonous environments of the

### Materials and Methods

Localities of sites in Yonaguni-jima Island where fish were collected are given in Koeda et al. (2016: fig. 3) with the following additions: east of Umabana (24°28'N, 122°58'E); northeast of Kubura (24°27'N, 122°56'E); northeast of Sonai (24°28'N, 123°00'E); and west of Danno beach (24°27'N, 122°57'E). Fishes were collected by using SCUBA diving with hand nets and spears on the 4th and 5th of July 2016. Almost half of the specimens were collected from night diving. Curatorial procedures for collected specimens followed Motomura & Ishikawa (2013). All species records were compiled from voucher specimens.

The systematic arrangement of families generally follows Nelson (2006). Scientific names and



Fig. 1. Additional fishes of Yonaguni-jima Island – 1. A: *Gymnothorax breedeni*, KAUM-I. 88890, 587.0 mm TL; B: *Uropterygius fasciolatus*, KAUM-I. 88909, 317.0 mm TL; C: *Brotula* sp., KAUM-I. 88883, 220.4 mm SL; D: *Cypselurus poecilopterus*, KAUM-I. 88905, 154.7 mm SL; E: *Sargocentron caudimaculatum*, KAUM-I. 88906, 119.5 mm SL; F: *Pterois radiata*, KAUM-I. 88906, 119.5 mm SL; G: *Cephalopholis miniate*, KAUM-I. 88892, 200.4 mm SL; H: *Pseudanthias cooperi*, KAUM-I. 88466, 31.6 mm SL; I: *Pseudochromis luteus*, KAUM-I. 88454, 38.3 mm SL, female; J: *Assessor randalli*, KAUM-I. 88452, 24.0 mm SL; K: *Hoplolatilus cuniculus*, KAUM-I. 88465, 52.4 mm SL; L:

taxonomical attributions generally follow Nakabo (2013) with some modifications based on recent published or unpublished taxonomic studies. Authorship and published year follow Eschmeyer et al. (2017). Species in families are arranged in alphabetical order by species name. Standard Japanese names generally follow Nakabo (2013).

Voucher specimens are listed in each species account. Those data include registration number, standard length [abbreviated as SL; total length (TL) are used in the order Anguilliformes], sex, locality on Yonaguni-jima Island, collection depth, collection method, and collection date. All of the specimens collected during the present survey at Yonaguni-jima Island in 2016 are deposited at the Kagoshima University Museum (KAUM).

## Results

82 specimens of 67 species (54 genera, 29 families) of marine fishes were collected by SCUBA diving in the present study. Two species of moray eels, *Gymnothorax breedeni* McCosker & Randall, 1977 and *Uropterygius fasciolatus* Regan, 1909, were firstly reported by Koeda & Akita (2017) and Koeda & Hibino (2017), respectively, on the basis of the specimens collected from this survey. Besides from these, 28 additional fish species were recorded from Yonaguni-jima Island for the first time. In addition, a further 7 species, which had only been recorded by photographs, are now represented by collected voucher specimens. *Scarus rubroviolaceus* Bleeker, 1847, which had only been reported on the basis of a juvenile specimen (KAUM-I. 78371, 11.8 mm SL) in Koeda et al. (2016), was re-reported with adult specimens (KAUM-I. 88475, 411.0 mm SL, male; KAUM-I. 88476, 375.5 mm SL, female; Figures 2I, J) in the present study. Moreover, *Pterois radiata* Cuvier, 1829 was previously reported without any photographs, and is herein re-reported with color

photographs of a fresh specimen. Thus, a total of 39 species (34 genera, 23 families) are listed here with specimen photographs (Figures 1–3), all being the first records from the marine waters of Yonaguni-jima Island supported by voucher specimens with color photographs. This work brings the total number of fish species for Yonaguni-jima Island to 633 (314 genera, 105 families).

## List of additional species to the ichthyofauna of Yonaguni-jima Island, Japan

### ANGUILLIFORMES

#### MURAENIDAE

#### *Gymnothorax breedeni* McCosker & Randall, 1977

Hachimonji-utsubo

(Fig. 1A)

KAUM-I. 88888, 920.0 mm TL, KAUM-I. 88889, 534.0 mm TL, KAUM-I. 88890, 587.0 mm TL, Umabana, 7 m depth, spear, 5 July 2016.

Remarks. The species was reported by Koeda and Akita (2017) as the first Japanese record on the basis of collected specimens on the present study.

#### *Uropterygius fasciolatus* Regan, 1909

Murakumo-kikaiutsubo

(Fig. 1B)

KAUM-I. 88909, 317.0 mm TL, KAUM-I. 88910, 463.0 mm TL, Umabana, 7 m depth, hand net, 5 July 2016.

Remarks. The species was reported by Koeda and Hibino (2017) as the first Japanese record on the basis of collected specimens on the present study.

### GADIFORMES

#### OPHIDIIDAE

#### *Brotula* sp.

(Fig. 1C)

KAUM-I. 88883, 220.4 mm SL, east of Umabana, 8

*Lethrinus atkinsoni*, KAUM-I. 88885, 242.7 mm SL; M: *Parupeneus cyclostomus*, KAUM-I. 88880, 276.0 mm SL; N: *Chaetodon kleinii*, KAUM-I. 88907, 87.0 mm SL; O: *Heniochus diphreutes*, KAUM-I. 88908, 132.3 mm SL; P: *Cirrhitichthys aprinus*, KAUM-I. 88450, 22.9 mm SL; Q: *Plectroglyphidodon imparipennis*, KAUM-I. 88461, 14.6 mm SL.

図 1. 与那国島から追加で採集された魚類 – 1. A: ハチモンジウツボ, KAUM-I. 88890, 587.0 mm TL; B: ムラクモキカイウツボ, KAUM-I. 88909, 317.0 mm TL; イタチウオ属の一種, KAUM-I. 88883, 220.4 mm SL; D: アヤトビウオ, KAUM-I. 88905, 154.7 mm SL; E: クラカケエビス, KAUM-I. 88906, 119.5 mm SL; F: キミオコゼ, KAUM-I. 88906, 119.5 mm SL; G: ユカタハタ, KAUM-I. 88892, 200.4 mm SL; H: カシワハナダイ, KAUM-I. 88466, 31.6 mm SL; I: コガネニセスズメ, KAUM-I. 88454, 38.3 mm SL, 雌; J: ツバメタナバタウオ, KAUM-I. 88452, 24.0 mm SL; K: オキナワサンゴアマダイ, KAUM-I. 88465, 52.4 mm SL; L: イソフエフキ, KAUM-I. 88885, 242.7 mm SL; M: マルクチヒメジ, KAUM-I. 88880, 276.0 mm SL; N: ミゾレチョウウオ, KAUM-I. 88907, 87.0 mm SL; O: ムレハタタテダイ, KAUM-I. 88908, 132.3 mm SL; P: ミナミゴンベ, KAUM-I. 88450, 22.9 mm SL; Q: イシガキスズメダイ, KAUM-I. 88461, 14.6 mm SL.

m depth, spear, 4 July 2016.

## **BELONIFORMES**

### **EXOCOETIDAE**

#### ***Cypselurus poecilopterus* (Valenciennes, 1847)**

Aya-tobiuo

(Fig. 1D)

KAUM-I. 88905, 154.7 mm SL, northeast of Kubura, 0 m, jumped in to the boat, 4 July 2016.

## **BERYCIFORMES**

### **HOLOCENTRIDAE**

#### ***Sargocentron caudimaculatum* (Rüppell, 1838)**

Kurakake-ebisu

(Fig. 1E)

KAUM-I. 88906, 119.5 mm SL, northeast of Sonai, 10 m depth, 4 July 2016.

## **PERCIFORMES**

### **SCORPAENIDAE**

#### ***Pterois radiata* Cuvier, 1829**

Kimi-okoze

(Fig. 1F)

KAUM-I. 88906, 119.5 mm SL, west of Danno beach, 8 m depth, hand net, 4 July 2016.

Remarks. Koeda et al. (2016) reported this species without photographs.

### **SERRANIDAE**

#### ***Cephalopholis miniata* (Forsskål, 1775)**

Yukata-hata

(Fig. 1G)

KAUM-I. 88892, 200.4 mm SL, Dnannodrop, 15 m depth, spear, 5 July 2016.

#### ***Pseudanthias cooperi* (Regan, 1902)**

Kashiwa-hanadai

(Fig. 1H)

KAUM-I. 88466, 31.6 mm SL, KAUM-I. 88954, 28.3 mm SL, KAUM-I. 88955, 28.5 mm SL, KAUM-I. 88956, 27.6 mm SL, Dannodrop, 15–18 m depth, hand net, 5 July 2016.

### **PSEUDOCHROMIDAE**

#### ***Pseudochromis luteus* Aoyagi, 1943**

Kogane-nisesuzume

(Fig. 1I)

KAUM-I. 88454, 38.3 mm SL, female, west of Danno Beach, 8 m depth, hand net, 4 July 2016.

### **PLESIOPIDAE**

#### ***Assessor randalli* Allen & Kuitar, 1976**

Tsubame-tanabatauo

(Fig. 1J)

KAUM-I. 88452, 24.0 mm SL, west of Danno Beach, 8 m depth, hand net, 4 July 2016.

### **MALACANTHIDAE**

#### ***Hoplostiltilus cuniculus* Randall & Dooley, 1974**

Okinawa-sangoamadai

(Fig. 1K)

KAUM-I. 88465, 52.4 mm SL, Dannodrop, 41 m depth, spear, 5 July 2016.

### **LETHRINIDAE**

#### ***Lethrinus atkinsoni* Seale, 1910**

Iso-fuefuki

(Fig. 1L)

KAUM-I. 88885, 242.7 mm SL, off Yonaguni Airport, 5 m depth, spear, 5 July 2016.

### **MULLIDAE**

#### ***Parupeneus cyclostomus* (Lacepède, 1801)**

Marukuchi-himeji

(Fig. 1M)

KAUM-I. 88880, 276.0 mm SL, east of Umabana, 8 m depth, spear, 4 July 2016.

### **CHAETODONTIDAE**

#### ***Chaetodon kleinii* Bloch, 1790**

Mizore-chouchouuo

(Fig. 1N)

KAUM-I. 88907, 87.0 mm SL, Dannodrop, 15 m depth, spear, 4 July 2016.

#### ***Heniochus diphreutes* Jordan, 1903**

Mure-hatatatedai

(Fig. 1O)

KAUM-I. 88908, 132.3 mm SL, Dannodrop, 25 m depth, spear, 4 July 2016.

### **CIRRHITIDAE**

#### ***Cirrhitichthys aprinus* (Cuvier, 1829)**

Minami-gombe

(Fig. 1P)

KAUM-I. 88450, 22.9 mm SL, Dannodrop, 15 m depth, hand net, 4 July 2016.

### **POMACENTRIDAE**

***Plectroglyphidodon imparipennis* (Vaillant & Sauvage, 1875)**

Ishigaki-suzumedai

(Fig. 1Q)

KAUM-I. 88461, 14.6 mm SL, west of Danno



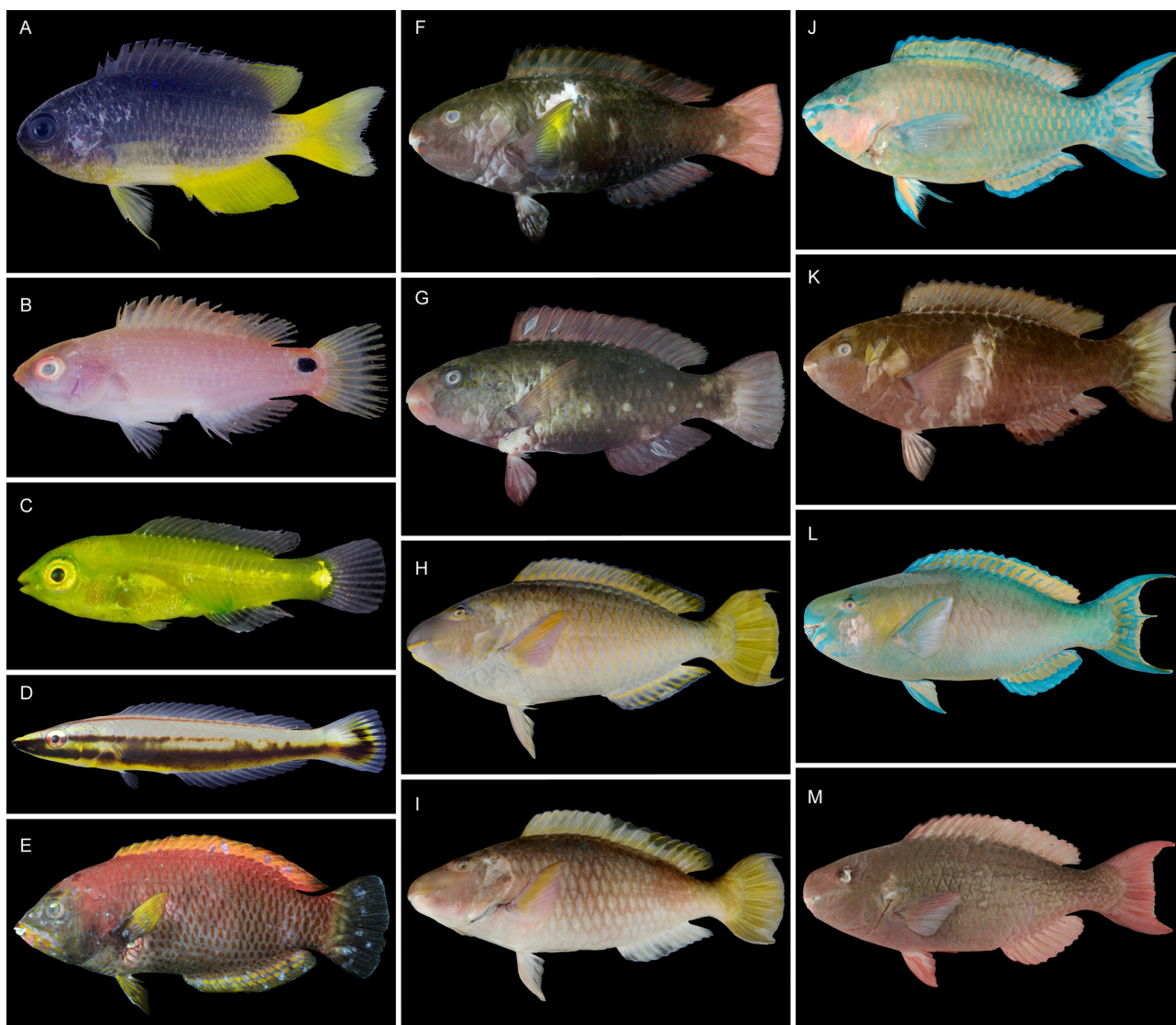


Fig. 2. Additional fishes of Yonaguni-jima Island – 2. A: *Pomacentrus coelestis*, KAUM-I. 88469, 32.0 mm SL; B: *Cirrhilabrus cyanopleura*, KAUM-I. 88470, 22.1 mm SL; C: *Halichoeres chrysus*, KAUM-I. 88464, 9.3 mm SL; D: *Hologymnosus annulatus*, KAUM-I. 88455, 41.3 mm SL; E: *Pseudodax moluccanus*, KAUM-I. 88901, 188.6 mm SL; F: *Chlorurus japonensis*, KAUM-I. 88898, 167.5 mm SL, female; G: *Chlorurus sordidus*, KAUM-I. 88902, 142.4 mm SL, female; H: *Hipposcarus longiceps*, KAUM-I. 88884, 393.0 mm SL, male; I: *Hipposcarus longiceps*, KAUM-I. 88474, 422.0 mm SL, female; J: *Scarus chameleon*, KAUM-I. 88879, 222.8 mm SL, male; K: *Scarus chameleon*, KAUM-I. 88893, 165.5 mm SL, female; L: *Scarus rubroviolaceus*, KAUM-I. 88475, 411.0 mm SL, male; M: *Scarus rubroviolaceus*, KAUM-I. 88476, 375.5 mm SL, female.

図2. 与那国島から追加で採集された魚類 – 2. A: ソラスズメダイ, KAUM-I. 88469, 32.0 mm SL; B: クロヘリイトヒキベラ, KAUM-I. 88470, 22.1 mm SL; C: コガネキュウセン, KAUM-I. 88464, 9.3 mm SL; D: ナメラベラ, KAUM-I. 88455, 41.3 mm SL; E: ブダイベラ, KAUM-I. 88901, 188.6 mm SL; F: シジュウカラ, KAUM-I. 88898, 167.5 mm SL, 雌; G: ハゲブダイ, KAUM-I. 88902, 142.4 mm SL, 雌; H: キツネブダイ, KAUM-I. 88884, 393.0 mm SL, 雄; I: キツネブダイ, KAUM-I. 88474, 422.0 mm SL, 雌; J: カメレオンブダイ, KAUM-I. 88879, 222.8 mm SL, 雄; K: カメレオンブダイ, KAUM-I. 88893, 165.5 mm SL, 雌; L: ナガブダイ, KAUM-I. 88475, 411.0 mm SL, 雄; M: ナガブダイ, KAUM-I. 88476, 375.5 mm SL, 雌.

Beach, 5 m, hand net, 4 July 2016.

depth, hand net, 5 July 2016.

***Pomacentrus coelestis* Jordan & Starks, 1901**

Sora-suzumedai

(Fig. 2A)

KAUM-I. 88469, 32.0 mm SL, Dannodrop, 15 m

**LABRIDAE**

***Cirrhilabrus cyanopleura* (Bleeker, 1851)**

Kuroheri-itohikibera

(Fig. 2B)

KAUM-I. 88470, 22.1 mm SL, Dannodrop, 15 m

depth, hand net, 5 July 2016.

***Halichoeres chrysus* Randall, 1981**

Kogane-kyusen

(Fig. 2C)

KAUM-I. 88464, 9.3 mm SL, west of Danno Beach, 5 m depth, hand net, 4 July 2016.

***Hologymnosus annulatus* (Lacepède, 1801)**

Namera-bera

(Fig. 2D)

KAUM-I. 88455, 41.3 mm SL, west of Danno Beach, 8 m depth, hand net, 4 July 2016.

***Pseudodax moluccanus* (Valenciennes, 1840)**

Budai-bera

(Fig. 2E)

KAUM-I. 88901, 188.6 mm SL, west of Danno Beach, 7 m depth, hand net, 4 July 2016.

**SCARIDAE**

***Chlorurus japanensis* (Bloch, 1789)**

Shijyuukara

(Fig. 2F)

KAUM-I. 88898, 167.5 mm SL, female, northeast of Sonai, 10 m depth, spear, 4 July 2016.

***Chlorurus sordidus* (Forsskål, 1775)**

Hage-budai

(Fig. 2G)

KAUM-I. 88902, 142.4 mm SL, female, west of Danno Beach, 7 m depth, spear, 4 July 2016.

***Hipposcarus longiceps* (Valenciennes, 1840)**

Kitsune-budai

(Fig. 2HJ)

KAUM-I. 88884, 393.0 mm SL, male, off Yonaguni Airport, 5 m depth, spear, 5 July 2016; KAUM-I. 88474, 422.0 mm SL, female, east of Umabana, 5 m depth, spear, 4 July 2016.

***Scarus chameleon* Choat & Randall, 1986**

Kamereon-budai

(Fig. 2JK)

KAUM-I. 88879, 222.8 mm SL, male, east of Umabana, 5 m depth, spear, 4 July 2016; KAUM-I. 88893, 165.5 mm SL, female, Dannodrop, 13 m depth, spear, 5 July 2016.

***Scarus rubroviolaceus* Bleeker, 1847**

Naga-budai

(Fig. 2LM)

KAUM-I. 88475, 411.0 mm SL, male, east of Umabana, 5 m depth, spear, 4 July 2016; KAUM-I. 88476, 375.5 mm SL, female, east of Umabana, 5 m depth, spear, 4 July 2016.

**Remarks.** Koeda et al. (2016) reported this species from Yonaguni-jima Island on the basis of a juvenile specimen. Our report represented the first records of adult specimens.

**BLENNIIDAE**

***Ecsenius bicolor* (Day, 1888)**

Futairo-kaeruuu

(Fig. 3A)

KAUM-I. 88456, 30.5 mm SL, west of Danno Beach, 8 m depth, hand net, 4 July 2016.

***Exallias brevis* (Kner, 1868)**

Sedaka-gimpo

(Fig. 3B)

KAUM-I. 88462, 30.7 mm SL, west of Danno Beach, 5 m depth, hand net, 4 July 2016.

**GOBIIDAE**

***Gobiodon* sp.**

(Fig. 3C)

KAUM-I. 88958, 20.8 mm SL, Dannodrop, 15 m depth, hand net, 5 July 2016.

***Trimma annosum* Winterbottom, 2003**

Pegasusu-benihaze

(Fig. 3D)

KAUM-I. 88459, 12.3 mm SL, west of Danno Beach, 8 m depth, hand net, 4 July 2016.

***Trimma maiandros* Hoese, Winterbottom & Reader, 2011**

Ao-benihaze

(Fig. 3E)

KAUM-I. 88457, 20.7 mm SL, west of Danno Beach, 8 m depth, hand net, 4 July 2016.

**SIGANIDAE**

***Siganus punctatus* (Schneider & Forster, 1801)**

Buchi-aigo

(Fig. 3F)

KAUM-I. 88887, 313.7 mm SL, off Yonaguni Airport, 5 m depth, spear, 5 July 2016.

**ACANTHURIDAE**

***Naso brachycentron* (Valenciennes, 1835)**

Oni-tenguhagi

(Fig. 3G)

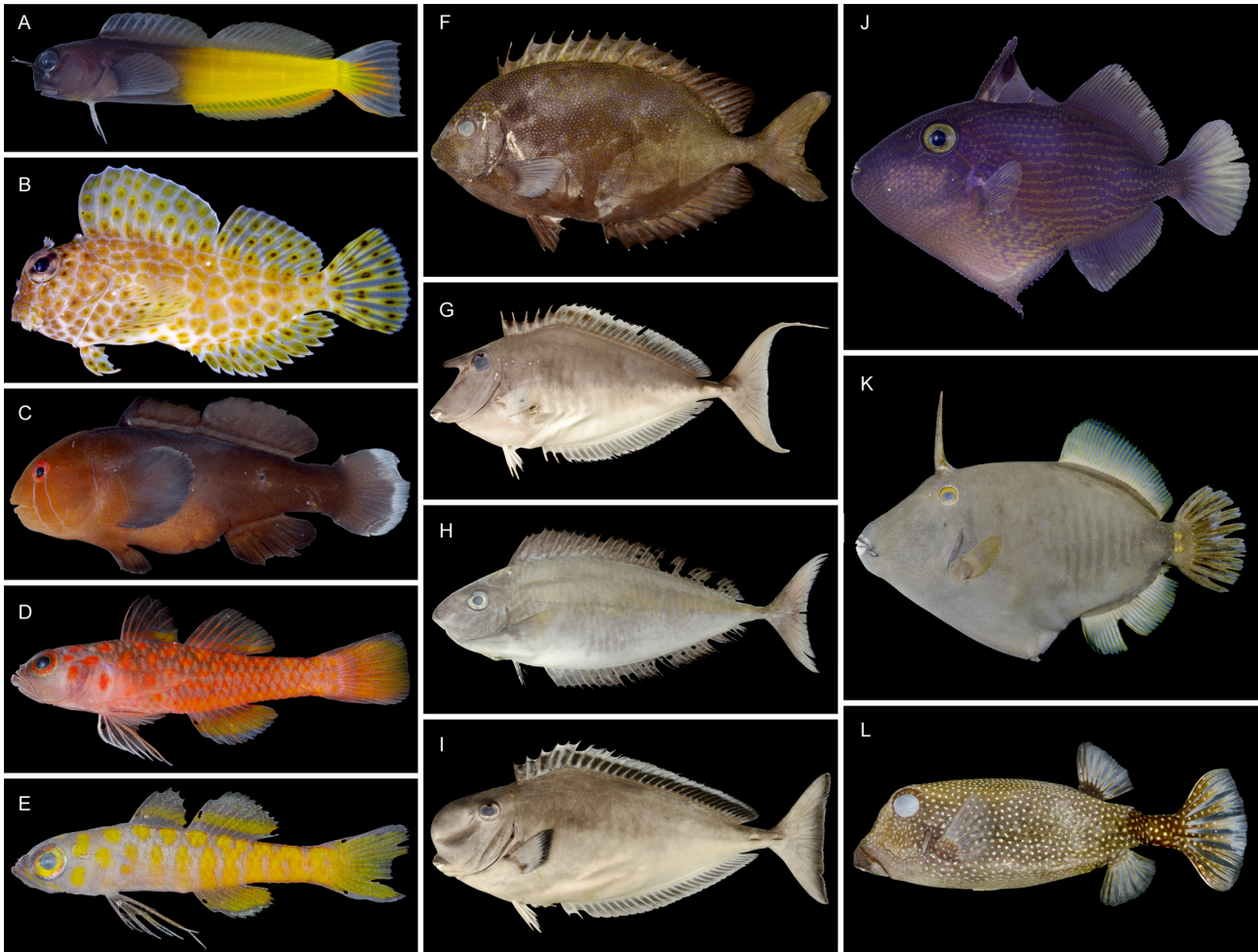


Fig. 3. Additional fishes of Yonaguni-jima Island – 3. A: *Ecsenius bicolor*, KAUM-I. 88456, 30.5 mm SL; B: *Exallias brevis*, KAUM-I. 88462, 30.7 mm SL; C: *Gobiodon* sp., KAUM-I. 88958, 20.8 mm SL; D: *Trimma annosum*, KAUM-I. 88459, 12.3 mm SL; E: *Trimma maiandros*, KAUM-I. 88457, 20.7 mm SL; F: *Siganus punctatus*, KAUM-I. 88887, 313.7 mm SL; G: *Naso brachycentron*, KAUM-I. 88882, 272.3 mm SL; H: *Naso thynnoides*, KAUM-I. 88877, 247.8 mm SL; I: *Naso tonganus*, KAUM-I. 88881, 305.2 mm SL; J: *Pseudobalistes fuscus*, KAUM-I. 88468, 31.7 mm SL; K: *Cantherhines dumerilii*, KAUM-I. 88878, 227.7 mm SL; L: *Ostracion meleagris meleagris*, KAUM-I. 90799, 88.3 mm SL.

図3. 与那国島から追加で採集された魚類 – 3. A: フタイロカエルウオ, KAUM-I. 88456, 30.5 mm SL; B: セダカギンボ, KAUM-I. 88462, 30.7 mm SL; C: コバンハゼ属の一種, KAUM-I. 88958, 20.8 mm SL; D: ペガスピニハゼ, KAUM-I. 88459, 12.3 mm SL; E: アオベニハゼ, KAUM-I. 88457, 20.7 mm SL; F: ブチアイゴ, KAUM-I. 88887, 313.7 mm SL; G: オニテングハギ, KAUM-I. 88882, 272.3 mm SL; H: ボウズハギ, KAUM-I. 88877, 247.8 mm SL; I: トサカハギ, KAUM-I. 88881, 305.2 mm SL; J: イソモンガラ, KAUM-I. 88468, 31.7 mm SL; K: ハクセイハギ, KAUM-I. 88878, 227.7 mm SL; L: クロハコフグ, KAUM-I. 90799, 88.3 mm SL.

KAUM-I. 88882, 272.3 mm SL, east of Umabana,  
5 m depth, spear, 4 July 2016.

***Naso thynnoides* (Cuvier, 1829)**

Bouzu-hagi

(Fig. 3H)

KAUM-I. 88877, 247.8 mm SL, east of Umabana,  
10 m depth, spear, 4 July 2016

***Naso tonganus* (Valenciennes, 1835)**

Tosaka-hagi

(Fig. 3I)

KAUM-I. 88881, 305.2 mm SL, east of Umabana, 5

m depth, spear, 4 July 2016.

**TETRAODONTIFORMES**

**BALISTIDAE**

***Pseudobalistes fuscus* (Bloch & Schneider, 1801)**

Iso-mongara

(Fig. 3J)

KAUM-I. 88468, 31.7 mm SL, Dannodrop, 18 m  
depth, hand net, 5 July 2016.

**MONACANTHIDAE**

***Cantherhines dumerilii* (Hollard, 1854)**



Hakusei-hagi  
(Fig. 3K)  
KAUM-I. 88878, 227.7 mm SL, east of Umabana, 5  
m depth, spear, 4 July 2016.

#### OSTRACIIDAE

##### *Ostracion meleagris meleagris* Shaw, 1796

Kuro-hakofugu  
(Fig. 3L)  
KAUM-I. 90799, 88.3 mm SL, off Yonaguni  
Airport, 5 m depth, spear, 5 July 2016.

#### Discussion

Yonaguni-jima Island, located only 110 km east of Taiwan, is the westernmost island in Japan. A large-scale expedition was conducted at this island in September 2015, and 399 species were collected (Koeda et al. 2016). During this expedition, two new records of species for Japan, *Cypho zaps* Gill, 2004 (Pseudochromidae) and *Opistognathus variabilis* Smith-Vaniz, 2009 (Opistognathidae), were collected, and these have separately been reported with morphological descriptions and taxonomic information (Hibino et al. 2016; Yoshida et al. 2016). Additionally, two new Japanese records of *Gymnothorax breedeni* McCosker & Randall, 1977 and *Uropterygius fasciolatus* (Regan, 1909), were collected during the present survey that lasted only two days. These new findings are indications that the fish species diversity around Yonaguni-jima Island is still not completely understood, and further taxonomic studies combined with extensive field surveys around this island are urgently required.

#### Acknowledgements

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## 日本最西端の島，与那国島の魚類追加種

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**要旨**．先行研究により日本最西端の島である与那国島には104科603種が分布することが明らかにされていた．2016年7月におこなわれた魚類採集調査により，同島より新たに30種が採集された．また，7種はこれまで水中写真による記録に限られていたため，標本に基づく初めての記録となった．さらに，ナガブダイ *Scarus rubroviolaceus* Bleeker, 1847 は幼魚に基づく記録に限られていたが，今回，成魚の標本が得られた．また，キミオコゼ *Pterois radiata* Cuvier, 1829 は標本の写真が示されたいなかったが，今回，新たに標本が得られた．そこで，これら39種を鮮時の標本写真とともにリストとして報告した．本報告により，与那国島から記録された魚種は105科633種となった．

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