

Note
New and Recent Records of Fishes from the Mariana Islands

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Abstract—The most recent checklist of the fishes of the Mariana Islands included 862 inshore and epipelagic species and 35 deep slope and mesopelagic species (Myers 1988). One hundred thirty-four of these were listed as new records without further comment other than to cite this paper or others currently in preparation. Since then, a further four new records were included in the book *Micronesian Reef Fishes* (Myers 1989) without details pertaining to material from the Marianas. Collection data and brief descriptions of 165 of these as well as 46 additional new records are included herein. Twenty-eight of these are based on collected specimens, nine are based on photographs, and nine are based on reliable sightings. Three of the photography-based new records are of specimens of primarily mesopelagic species that could not be retained; the remainder of those collected, photographed, or observed are from inshore or epipelagic habitats. Additional accounts are given for species recently collected that were previously known from sight or photographic records.

Introduction

During the past 27 years, a number of research expeditions and exploratory surveys have been conducted which examined the fish faunas and fisheries resources of several of the Mariana Islands. The first of these, conducted by the Guam Division of Fish and Wildlife (currently the Division of Aquatic and Wildlife Resources, DAWR), concentrated on the waters around Guam and banks within 50 km of Guam (Ikehara et al. 1970). Numerous species previously unknown from the Marianas that were collected or photographed were subsequently reported in the literature (Kami et al. 1968; Kami 1971, 1975; Myers & Shepard 1980; Myers 1988, 1989; Donaldson et al. 1994). Many of these were listed without comment other than to cite this paper.

Subsequent exploratory surveys conducted by the University of Guam Marine Laboratory, National Marine Fisheries Service, Guam Division of Aquatic and Wildlife Resources, Commonwealth of the Northern Mariana Islands (CNMI) Division of Fish and Wildlife, and Chiba Natural History Museum and Institute (Japan), collectively covered the entire Marianas chain as well as a series of offshore banks and seamounts located approximately 150 km to the west. Near-shore and epipelagic as well as deep benthic and mesopelagic habitats were sampled. Numerous species new to the Marianas were collected, photographed, or positively identified in the field or in local fishermen's catches by the authors and their colleagues. Five of these were subsequently described as new: *Naso caesius* Randall & Bell 1992; the deep-dwelling *Ostichthys brachygnathus* Randall & Myers 1992a, *Selenanthias myersi* Randall 1995, and *Parupeneus moffiti* Randall & Myers 1992b; and *Priolepis pallidocincta* Winterbottom & BurrIDGE 1993. Randall & Heemstra (1991) recorded specimens of *Epinephelus octofasciatus* (listed by Myers 1988 as *E. septemfasciatus*) and *Gracila albomarginata* from Guam. Winterbottom & BurrIDGE (1993) recorded specimens of *Priolepis cinctus* from Saipan and Maug. Finally, a number of species previously known from the Marianas on the basis of photographs or sightings have subsequently been collected. The purpose of this paper is to provide collection and descriptive data for species previously listed from the Marianas without adequate comment as well as to report on additional new records, photographs or specimens of species previously reported as sight records, and specimens of species previously known from photographs. Additionally, some species rarely encountered in collections and a few species collected prior to Myers & Shepard (1980) but not recognized previously, are discussed.

Forty-six species are reported from the Marianas for the first time. Including three new records that will be reported separately by T. Pitlik, P. Schupp, and R. F. Myers, two collected by Helen K. Larson, and a new *Eviota* from Guam to be described by Susan L. Jewett, the number of species of fishes known from the Marianas now stands at 983. Excluding forty of these that are primarily mesopelagic, mid-oceanic, or deep slope species, 943 of these are considered to be inshore or epipelagic.

Methods

Most collected specimens are described briefly. Unless otherwise indicated, specimens were counted as follows: the last two dorsal and anal soft fin rays are counted as one if they shared a common basal element; the short upper ray of the pectoral fin, if present, is counted as a separate ray; the upper limb gill rakers are listed first and the raker at the angle is included in the lower-limb count and rudiments are counted even if they are in the form of roundish sessile plates; and pored lateral line scales or lateral scale rows are counted from the upper corner of the operculum to the distal end of the hypural plate. Photographic and sight records were confirmed by comparison with other references. Species are listed in phylogenetic sequence following Nelson (1994). Zoogeographic terminology fol-

lows Springer (1982). Species are considered to be inshore or epipelagic if they normally inhabit depths of less than 200 m or if they are representatives of primarily inshore fish families that dwell in the lower reaches of the mixed layer (100–350 m). Species reported for the Marianas for the first time are indicated by an asterisk.

New and Recent Records of Fishes from the Mariana Islands

CARCHARHINIDAE (REQUIEM SHARKS)

***Carcharhinus longimanus* (Poey, 1861)**

Based on numerous sightings by knowledgeable fishermen and biologists. A single individual ca. 4 m TL was observed at a depth of 62 m off Anatahan on 12 May 1992 (P. Schupp, pers. com.). This species generally occurs well offshore over depths exceeding several hundred meters, but occasionally is observed off steep edges of offshore banks (Gerald Davis, pers. com.). A headless, tailless specimen (UGM 6521) was recovered from one of Guam's highways, apparently after being dumped from, or having fallen off, a vehicle. It is possible that it originated from a distant water tuna vessel, but this is unlikely since any sharks would probably be disposed of at sea. The shark was prepared as if it was intended for home consumption or for sale as food, and was likely caught by a local small vessel. Circumtropical.

Prionace glauca* (Linnaeus, 1758)

Based on a photograph of a specimen caught near the surface by longline set at night, 46–61 km north of Ritidian Point, Guam on 22 June, 1995 by Jim Elliot (Figure 1a). Others have been collected off Guam by longlines set at 80 m by the University of Guam Marine Laboratory staff in 1983 (Amesbury et al. 1986). A specimen approximately 2 m TL was taken at night by handline over 1,300 m of water ca. 32 km WNW of Saipan by P. Bryan and R. Takifuji, on 1 February 1989 and photographed. Circumglobal, but uncommon in warm surface waters of the tropics.

DASYATIDIDAE (STINGRAYS)

Himantura fai* (Jordan and Seale, 1906)

A large specimen speared in Cocos Lagoon on 11 January, 1995 was examined by Guam Division of Aquatic and Wildlife Resources biologist Wayne Krukenberg. The 206 mm TL male specimen had a disc width of 83 cm, body length of 67 cm, a long whiplike tail lacking skin folds or prominent tubercles, a single spine near the base of the tail, and a relatively smooth dorsal surface. The coloration was uniformly light pinkish gray with a black tail. These characters are diagnostic of *Himantura fai* (Last & Stevens 1994). Widespread in the Indo-Pacific.

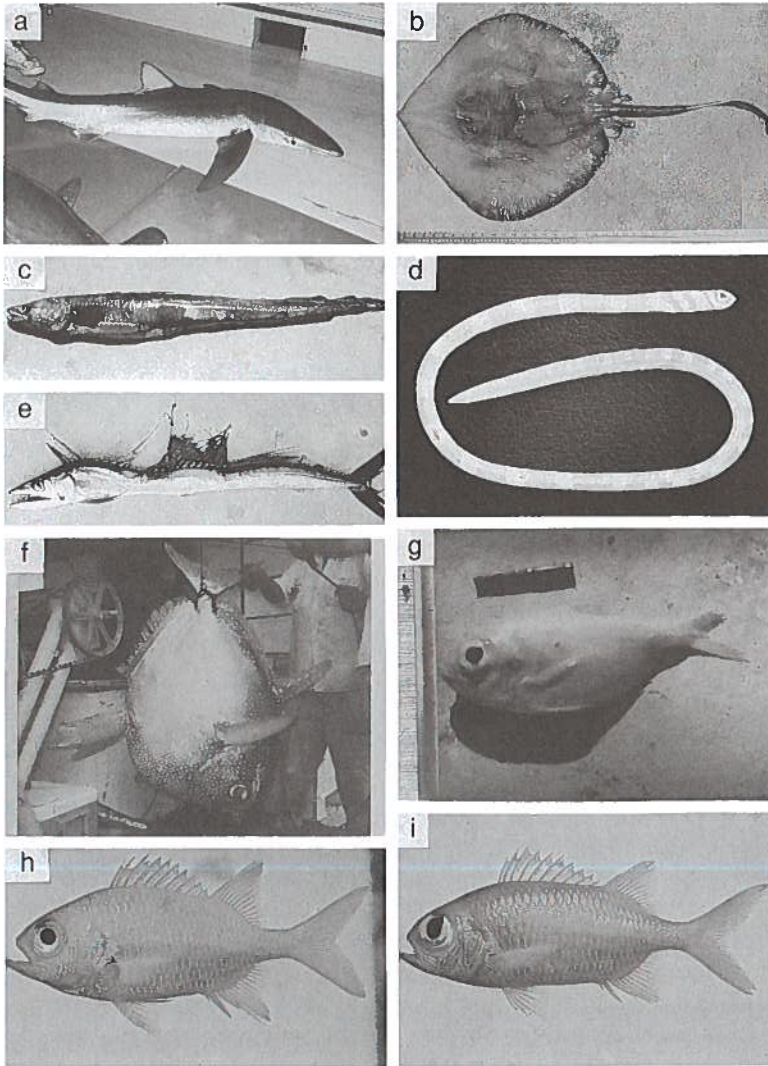


Figure 1. Photographs of new and recent records of fishes from the Marianas. (a) *Prionace glauca* taken near the surface at night by longline, 46–61 km north of Ritidian Point, Guam. Photograph by J. Elliott. (b) *Plesiobatis daviesi*, BPBM 36532, 101 cm TL from ca. 256 m, Esmerelda Bank. (c) *Conger* sp. cf. *macrocephalus*, UGM 6678, 1,590 mm TL from ca. 180–240 m, Guam. (d) *Gorgasia preclara*, UGM 6700, 246 mm TL from mouth of *Variola louti* from ca. 75 m, Guam. (e) *Alepisaurus ferox*, UGM 6419, 732 mm SL from 73–110 m depth, Facpi Point, Guam. (f) *Lampris guttatus*, 1,119 mm FL, 54.4 kg, Guguan. (g) *Beryx decadactylus*, from 548 m, Saipan. (h) *Myripristis woodsi*, UGM 6742, 151 mm SL, Guam. (i) *Myripristis* species, BPBM 36538, 150 mm SL, Guam.

PLESIOBATIDAE (DEEPWATER STINGRAYS)

Plesiobatis daviesi* (Wallace, 1967)

BPBM 36532, male, 54 cm body length, ca. 256 m, Esmerelda Bank, 2–3 June, 1994, hook and line by Kwaë Yun Ha (Fig. 1b).

Total length 101 cm, disc width 54 cm; disc thin and round with pointed snout and most of dorsal and ventral surface covered with small denticles; snout long, the distance from snout tip to orbits ca. twice the distance between spiracles; tail robust and short, slightly shorter than disc length with a single large spine located on its dorsal surface slightly less than half way down and a caudal fin with broad dorsal and ventral cutaneous folds meeting at the tail tip.

This rare, deepwater stingray is otherwise known from a few specimens collected off southern Mozambique, the Kyushu-Palau Ridge, Hawaiian Islands, and Australia. It attains a large size (270 cm total length, 151 cm disc width) and is reported from the depth range of 44 to 440 m (Last & Stevens 1994).

CHLOPSIDAE (FALSE MORAYS)

***Kaupichthys atronasmus* Schultz, 1953**

UGM 5970, 100 mm TL, 4–7 m, among live corals, inner side of North Is., Maug, 19 January 1975.

Basal portion of anterior nostrils dark and eye proportionately smaller than similarly sized *K. diodontus*. Widespread in the Indo-Pacific.

MURAENIDAE (MORAY EELS)

***Enchelycore bikiniensis* (Schultz, 1953)**

UGM 4508, 579 mm TL, reef front, Tanguisson Point, Guam, Chemfish by R. S. Jones and H. K. Larson, 6 May 1970.

Posterior nostrils enlarged and with a crenulated inner rim; head pores with crenulated edges. Widespread on the Pacific Plate.

***Gymnothorax nudivomer* (Playfair & Günther, 1867)**

An individual approximately 1 m TL collected off Guam at a depth of approximately 180 m by J. Eads was examined in an aquarium at the Cushing Zoo. Its coloration was nearly identical to the specimen illustrated in Masuda et al. (1984, plate 28 G) and the interior of its mouth was yellow. The specimen subsequently died and was frozen but lost before it could be procured. Widespread in the Indo-Pacific.

***Rhinomuraena quaesita* (Garman, 1888)**

Based on two sightings by TJD at Guam, one of a blue-phase (male) individual under a small rock on the reef flat at Tumon Bay at a depth of 1.5 m in December 1977, the other of a green and yellow-phase (female) individual on the rubble flat of Western Shoals, Apra Harbor at a depth of 2 m in 1978. Unfortunately both specimens escaped collection attempts. Widespread in the Indo-Pacific.

Scuticaria tigrinus (*Lesson, 1829*)*

UGM 6693 68 cm TL, "Fingers Reef", Orote Peninsula, Apra Harbor, Guam, by M. Rogers, 1989.

Characterized by short tail, ca. 3 in TL, absence of fins except near the tail tip; 2 rows of slender sharp teeth on the jaws, a few depressible teeth on intermaxillary, small teeth in uniserial series on the vomer; and body and head with numerous large round dark spots with smaller spots interspersed.

Widespread in the Indo-Pacific.

Uropterygius macrocephalus (*Bleeker, 1865*)

UGM 4558, 203 mm TL, reef front, Tanguisson Point, Guam, Chemfish by R. S. Jones and H. K. Larson, 6 May 1970.

Head 7.0, depth 14.5, both in length; snout 5.6, jaw 2.7, both in head; eye 2.7 in snout and centered just behind a vertical through middle of jaw; posterior nostril just behind middle of eye; teeth biserial in jaws. Widespread on the Pacific Plate and at Christmas Island, Indian Ocean.

MURAENISOCIDAE (PIKE CONGERS)

Muraenesox cinereus (*Forsskål, 1775*)

UGM 5873, 1005 mm TL, off Tumon Bay, Guam, 11 July 1973.

Lateral line pores in front of a vertical through vent, 45. An insular location so far from the continental shelf is unusual for this species. Since this is the only specimen known to us from the Marianas and such a distinctive fish is unlikely to go unnoticed at local fish outlets, it likely represents a straggler from the west. Widespread on the continental shelf of the Indo-West Pacific from the Red Sea to the Gulf of Carpentaria.

CONGRIDAE (CONGER EELS)

Conger *sp.* *

UGM 6678, 1590 mm TL, ca. 180–240 m, Urunao, Guam, 16 October 1988, hook and line by J. Deville and T. Perez (Fig. 1c).

Pectoral rays 18; lateral line pores before anus 35; 2 supraorbital pores above posterior half of eye; head length 290 mm; greatest depth 170 mm; snout to anal fin origin 695 mm. This species most closely corresponds with *Conger macrocephalus* Kanazawa (1958), known only from the 803 mm holotype collected in the Philippines at 329 m. We have one other specimen (UGM 6523) which may be this species. The genus *Conger* is in great need of revision and it is impossible to assign these specimens to known species at this time.

Gorgasia preclara *Böhlke & Randall, 1981* *

UGM 6700, 246 mm TL, from the mouth of *Variola louti* caught by hook and line at an estimated depth of 75 m, Ritidian Pt., Guam, 22 August 1991 by J. Eads (Fig. 1d).

This species has a unique and unmistakable color pattern of alternating white and ochre bands. Previously known from the Maldives, Philippine, and Ryukyu Islands at depths of 15 to 38 m.

ENGRAULIDAE (ANCHOVIES)

Stolephorus indicus (*Van Hasselt, 1823*)

UGM 6397, 111 mm SL, Apra Harbor, Guam, from a fisherman's catch, 26 August 1982.

Identification provided by W. Baldwin. Widespread in the Indo-West-Pacific.

SYNODONTIDAE (LIZARDFISHES)

Synodus binotatus *Schultz, 1953*

UGM 5961, 110 mm SL, 4–7 m, among live corals, inner side of North is., Maug, Chemfish by M. Gawel, 19 January 1975; UGM 6097, 61 mm SL, same data as above; UGM 4870, 3: 46–90 mm SL, 1.5–15 m, reef front, Unai Magpi, Saipan, poison and spear by R. S. Jones and collaborators, 18 August 1970.

The following counts were obtained from UGM 5961: dorsal rays 12; anal rays 8; pectoral rays 12; pored lateral line scales approximately 56; scale rows above lateral line at origin of dorsal fin, 3 1/2. This species has also been photographed at Guam (Myers 1989, Pl. 12C) where it is occasionally encountered on seaward reefs. Widespread in the Indo-Pacific.

ALEPISAUROIDAE (LANCETFISHES)

Alepisaurus ferox *Lowe, 1833*

UGM 6419, 732 mm SL, 73–110 m, west of Facpi Point, Guam, longline by FV Banana Patch, 11 December 1982 (Fig. 1e).

Dorsal elements 46; anal rays III,12; pelvic rays I,8; pectoral rays 15 (first and last unbranched); gill rakers 7 + 18; body scaleless. Epipelagic, worldwide in all but polar seas.

LAMPRIDAE (OPAHS)

Lampris guttatus (*Brünnich, 1788*)*

Based on a photograph of a 1,119 mm FL, 54.4 kg female specimen (Fig. 1f) taken by longline during night southwest of Guguan Island by the F/V Sun on 2–7 April 1990. A second specimen, 1,210 mm FL, 57.3 kg was also taken by the same method by the F/V Sun northwest of Saipan on 29 July 1990, but not retained or photographed. Attains 2 m TL and 100 kg. In the lower epipelagic waters of all except polar seas, ascending towards the surface at night.

ANTENNARIIDAE (FROGFISHES)

Antennarius maculatus (*Desjardins, 1840*)

Based on a photograph taken at a depth of 4 m, in Tepungan Channel, Guam (Myers 1989, Pl. 13B). The number of skin protruberances and shape of the second

dorsal spine separate this species from *A. pictus*, the only other species that has a similar color pattern. Widespread in the Indo-Pacific.

Antennarius nummifer *Cuvier, 1817*

UGM 6558, 55 mm SL, 20 m, Orote Point, Guam, by hand by H. Conally, December 1984; UGM 6530, 28 mm SL, same data as above except July–August 1984.

The following counts were obtained for UGM 6558: dorsal rays I+I+I+I,11; anal rays 7; pectoral rays 10; pelvic rays I,4; bony portion of first dorsal spine not reaching tip of second dorsal spine when folded back; in life, esca (the “lure” of the first dorsal spine) resembles a small shrimp; a large ocellus present under the 5th to 8th soft dorsal rays. Widespread in the Indo-Pacific.

BELONIDAE (NEEDLEFISHES)

Ablennes hians (*Valenciennes, 1846*)

UGM 6319, 841 mm SL, northwest coast of Guam, trolling by F. Chrisostomo, 8 November 1981; UGM 6368, 309 mm SL, Santa Rosa Bank, surface nightlight above 182–274 m bottom, FV Typhoon, 23 July 1980.

The following were recorded for UGM 6319: dorsal rays I,23; anal rays I,25; pectoral rays 15 (uppermost unbranched); pelvic rays I,6; depth at origin of pelvic fins, 13.8 in SL. Color when fresh: dark blue dorsally becoming silver on sides and on belly with 4 vertical blue bars on upper surface of sides beneath dorsal fin; fins and jaws dark blue. This distinctive species occurs in offshore surface waters where it is occasionally taken by surface trolling with a small lure. Circum-tropical.

EXOCOETIDAE (FLYINGFISHES)

Cypselurus (Hirundichthys) speculiger (*Valenciennes, 1846*)

UGM 6543, ca. 120 mm FL, Rota Banks, from the stomach of a 68 cm FL *Coryphaena hippurus*, 23 January 1982.

Material of this and the following two species is in poor condition due to partial digestion. It was therefore not possible to obtain accurate counts, but enough morphological features remained to permit accurate identification following to Parin (1961). Circumtropical.

Parexocoetus brachypterus brachypterus (*Richardson, 1846*)

UGM 6548, Guam, from the deck of the charter vessel “Chamorita” after being regurgitated by an unidentified fish, 26 December 1981.

Widespread in the Indo-Pacific.

Prognichthys sealei *Abe, 1955*

UGM 6544, 188 mm FL, Ritidian Point, Guam, from the stomach of a 5.0 kg. *Coryphaena hippurus*, 18 January 1982.

Widespread in the Indo-Pacific.

HEMIRHAMPHIDAE (HALFBREAKS)

Euleptorhamphus viridis *Van Hasselt, 1824*

UGM 6351, length indeterminate, from the stomach of a *Coryphaena hippurus* taken near Ritidian Point, Guam, 27 February 1982; UGM 2025, ca. 265 mm SL, "Merizo Reef", Guam, 17 March 1966.

It was not possible to determine the length of UGM 6351 due to partial digestion. However the length of its pectoral fins in relation to the undigested remains clearly identify it as *E. viridis*. UGM 2025 is dehydrated and in poor condition, but readily identifiable as this species. Circumglobal in tropical and temperate seas.

Oxyporhamphus micropterus micropterus (*Valenciennes, 1846*)

UGM 6345, length indeterminate, from the stomach of a *Coryphaena hippurus* taken at Rota Banks, 23 January 1982; UGM 6549, 2: 141–153 mm SL, from the stomach of a 91.5 cm FL *Thunnus albacares* taken off Guam, 10 October 1982.

The enlarged pectoral fins and lack of an elongate lower jaw characteristic of all other Micronesian hemirhamphids readily identify these specimens as *O. m. micropterus*. Circumglobal in tropical and temperate seas.

BERYCIDAE (ALFONSINOS)

Beryx decadactylus *Cuvier, 1892*.

Based on a Polaroid photograph of an adult specimen caught by deep-set gill net at 548 m off Saipan in March, 1981 (Fig. 1g).

HOLOCENTRIDAE (SQUIRRELFISHES)

Myripristis chryseres *Jordan & Evermann, 1903: Myers, 1989 Pl. 14F.*

UGM 6583, 185 mm SL, near Pagat, Guam, speared by free diver, 25 August 1985.

Dorsal rays X-I, 14; anal rays III, 11 (2nd ray present only basally, but fin membrane regenerated around it); pectoral rays 16 m (upper two and lowermost unbranched); tubed lateral line scales 33 (with 4 additional pores past the hypural); gill rakers 12 + 25 (two rudiments additionally on the upper portion and one on the lower portion). This specimen was figured in color by Myers (1989 Pl. 14F). This is the only Pacific species of *Myripristis* with bright yellow vertical fins. Also collected by hook and line off Anatahan at a depth of ca. 125 m on 12–13 May 1992 by the crew of the MV *Stella I*, but subsequently lost after being identified by TJD. *Myripristis chryseres* was originally recorded from Guam by Kami (1971), but considerable confusion has surrounded the identity of this species in recent years. Without being able to locate Kami's specimen, and without comments on coloration, additional material was required to confirm its presence in the Marianas. Widespread in the Indo-Pacific.

Myripristis pralinia *Cuvier, 1829*

UGM 6390, 113 mm SL, ca. 76 m, Rota Banks, obtained from the Guam Fishermen's Cooperative, 3 July 1982.

Dorsal rays X-I, 15; anal rays IV, 14; pectoral rays 15 (upper two and lowermost unbranched); tubed lateral line scales 40; gill rakers 12 + 23; black bar on opercular margin extends slightly below prominent opercular spine. Previously recorded from the "Marianas" by Greenfield (1974) and figured in Myers (1989 Pl. 15D). Widespread in the Indo-Pacific.

Myripristis woodsi Greenfield, 1974*

UGM 6742, 151 mm SL, East Agana Bay, Guam, reef front, speared by T. Palacios, 4 September, 1994 (Fig. 1h).

Dorsal rays X-I, 13; anal rays IV, 11; pectoral rays 15 (upper two and lowermost unbranched); tubed lateral line scales 32; gill rakers 14 + 30; no scales in axil of pectoral fin; a single pair of symphysal teeth outside gape of lower jaw. In life, this species has a characteristic white spot at the top of the pectoral axil. A specimen from Saipan is in the collection of the CNMI Division of Fish and Wildlife. Some of the material Woods (*in* Schultz et al., 1953) identified as *M. murdjan* is *M. woodsi* (Greenfield 1974). It is unknown whether or not this includes two specimens from Rota, but Greenfield did not include any Mariana Islands material under *M. woodsi*. *M. woodsi* differs from *M. murdjan* by lacking scales in the pectoral axil and having a higher modal number lateral line scales and gill rakers. Widespread on the Pacific Plate.

Myripristis species*

BPBM 36538, 150 mm SL, seaward reef under 30 m, East Agana Bay, Guam, hook and line at night, 9 September, 1994 (Fig. 1i).

Dorsal rays X-I, 14; anal rays IV, 13; pectoral rays 15 (upper two and lowermost unbranched); tubed lateral line scales 32 (left side; 31 right side); gill rakers 11 + 27; no scales in axil of pectoral fin. When fresh, this species resembles *M. pralinia*, but it has fewer tubed lateral line scales, dorsal rays, and anal rays (35–42, 15–16, and 14–15 in *M. pralinia*, respectively). Its combination of characters and color do not fit any known species in the genus. When more material becomes available, a complete description will be provided by D. W. Greenfield and J. E. Randall.

Neoniphon aurolineatus (Lienard, 1839)

UGM 6315, 153 mm SL, part of a local bottomfish catch sold to the Guam Fishermen's Cooperative, 24 October 1981 (Fig. 2a).

Dorsal rays XI, 12; anal rays II, 8; pectoral rays 14 (upper two and lowermost unbranched); tubed lateral line scales 46; gill rakers 6 + 12. This species was once thought to be endemic to the Hawaiian Islands, but has since been discovered in southern Japan, the Ryukyu Islands, and the Great Barrier Reef at depths exceeding 30 m (Allen & Cross 1983).

Ostichthys kaianus (Günther, 1880)

UGM 6428, 251 mm SL, 237 m, 45° Bank, bottom fishing by J. Eads, 27 January 1983; UGM 6674, 214 mm SL, Rota Banks, Guam, bottom fishing by T. Perez and party, 10 July 1988 (Fig. 2b).

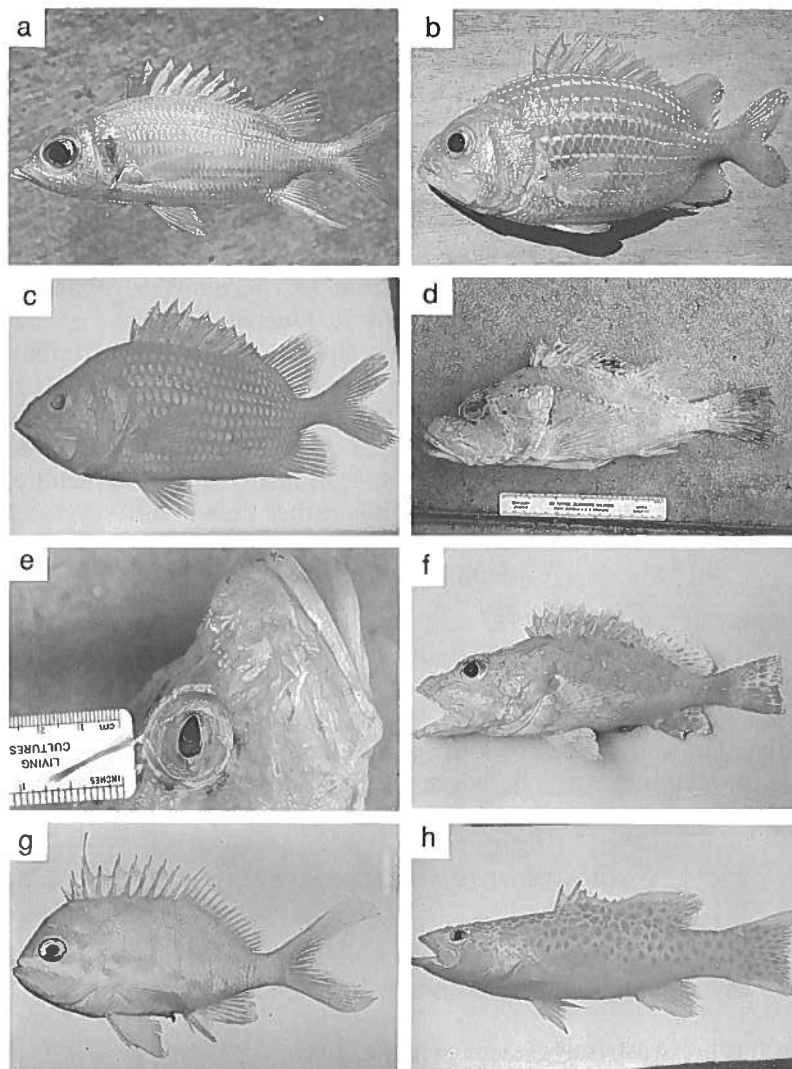


Figure 2. Photographs of new and recent records of fishes from the Marianas. (a) *Neoniphon aurolineatus*, UGM 6315, 153 mm SL, Guam. (b) *Ostichthys kaianus*, UGM 6428, 251 mm SL from 237 m, 45° Bank. (c) *Ostichthys* sp. cf. *archiepiscopus*, BPBM 36535, 194 mm SL from 192 m, Guam. (d) *Pontinus macrocephalus*, UGM 6639, 360 mm SL, Galvez Bank. (e) *Pontinus macrocephalus*, UGM 6639, detail of head. (f) *Pontinus* sp. cf. *nigerimum*, UGM 6582, 173 mm SL from ca. 220 m, Guam. (g) *Holanthias borbonius*, UGM 6703, 119 mm SL, from ca. 230 m, Guam. (h) *Liopropoma maculatum*, 181 mm SL from ca. 150–180 m, Guam.

Dorsal rays XII, 13; anal rays III, 11 (there may be an additional subcutaneous spine anteriorly); pelvic rays I, 7; pectoral rays 15–16 (upper and lowermost unbranched); gill rakers 7–8 + 12–16 = 19–24; tubed lateral line scales 28–30. This species occurs rarely in catches of deepwater bottomfishes from the vicinity of Guam. Otherwise known from the widely scattered localities of Reunion, Indonesia, and Okinawa (Randall et al., 1982).

***Ostichthys* sp. cf. *archiepiscopus* Randall, Shimizu & Yamakawa, 1982**

BPBM 36535, 194 mm SL (235 mm TL) from 192 m, pinnacle off Puguia Patch Reef, Guam, 9 July, 1994, hook and line by R. Duenas (Fig. 2c).

Dorsal rays XII, 13 (last 2 spines nearly equal in length; 1st ray unbranched); anal rays IV, 11; pectoral rays 16 (upper 2 and lowermost unbranched); tubed lateral line scales 28; scale rows above lateral line, 3 1/2; predorsal scales, 7; gill rakers 7 + 13 (excludes rudiments, 2 at each end). This apparently undescribed species resembles *O. archiepiscopus* and fits it in nearly every character except it has 3 1/2 rows of scales above the lateral line rather than 2 1/2.

CAPROIDAE (BOARFISHES)

***Antignonia maylayana* Weber, 1913**

UGM 6570, 44.2 mm SL, 274 m, dredge by V. Tyndzik off Agana, Guam, RV Pescadot, 30 January 1985.

Dorsal rays VIII, 29; anal rays III, 26; pectoral rays 13 (upper two unbranched); lateral line scale rows ca. 61 (including several missing scales); gill rakers 4 + 12. Identification is based on Gloerfelt-Tarp & Kailola (1984: pp. 104–5).

SYNGNATHIDAE (SEAHORSES AND PIPEFISHES)

***Hippocampus hystix* Kaup, 1856**

UGM 6269,—mm TL, reef flat, Piti, Guam, May 1981 (Myers 1989 Pl. 19F).

Extremely rare at Guam. Widespread in the Indo-Pacific.

***Micrognathus brevirostris pygmaeus* Fritsche, 1981**

UGM 5362, 4: 16–21 mm SL, from a dead coral, *Acropora surculosa*, reef terrace, 8–12 m, Tanguisson, Guam.

Identification based on the key in Dawson (1985). In life, the specimens were “dark brown or red with white markings” according to H. K. Larson. Widespread in the Indo-Pacific.

SCORPAENIDAE (SCORPIONFISHES)

***Parascorpaena mossambica* (Peters, 1855)**

UGM 1926, 70 mm SL, Merizo, Guam, B. Sablan and F. Isezaki, June, 1963.

Dorsal rays XI, 9; anal rays III, 5; pectoral rays 15; tubed lateral line scales 23; transverse scale rows along the lateral line ca. 25, scales on the sides cycloid; hind lower preorbital spine hooked slightly forward. Material of this species from

the Marshall Islands was incorrectly identified by Schultz et al. (1966) as *Sebastapistes mcadamsi*, actually another valid species of *Parascorpaena* (Eschmeyer & Rao, pers. com.). Widespread in the Indo-Pacific.

***Pontinus macrocephalus* (Sauvage, 1882)**

Merinthe macrocephala in Kami et al. 1968

UGM 6639, 260 mm SL, Galvez Banks, crew of FV Potluck, 9 September 1986; UGM 6676, 352 mm SL, Rota, bottom fishing by T. Perez and party, 13 August 1988 (Fig. 2d, e).

Dorsal rays XII, 10; anal rays III, 4–5; pectoral rays 17 (all unbranched); tubed lateral line scales 21–25; gill rakers 7 (2 developed) + 9–12, including rudiments (2 + 7 developed on UGM 6639); supraocular tentacle of UGM 6639 21 mm long, with a dusky spot basally and two dusky patches distally. Eschmeyer (1969, 1983) separated *P. macrocephalus* from *P. tentacularis* (Fowler 1938) on the basis of modal differences in dorsal and pectoral ray counts, and considered *P. macrocephalus* to be a Hawaiian endemic. More recently Gloerfelt-Tarp & Kailola (1984) reported a specimen from southern Indonesia identified by Eschmeyer as *P. macrocephalus*. Shimizu (in Masuda et al. 1984) identified Japanese material with dorsal and pectoral ray counts of 9–10 and 16–17, respectively, as *P. macrocephalus*, but state that the “taxonomy of this fish needs further study”. Their illustrated specimen (fig. 279M) has a broad black basal band around each supraocular tentacle, a feature known only in *P. nigerimum* Eschmeyer, and the range in fin ray counts encompasses that given for the only previously reported specimen (9 dorsal rays and 16 pectoral rays).

***Pontinus* sp. cf. *nigerimum* Eschmeyer, 1983.**

UGM 6582, 212 mm SL, ca. 220 m, hook and line by the crew of the charter vessel “Island Girl”, Ritidian Point, Guam, 28 May 1985 (Fig. 2f).

Dorsal rays XII, 9; anal rays III, 5; pectoral rays 16 (all unbranched); developed gill rakers 3 + 8; supraocular tentacles short, about 4 mm long, and black basally; preopercular tentacles about 5 mm long, pigmented the same as ground color. We tentatively identify this specimen as *P. nigerimum*. It has been sent to William N. Eschmeyer for further study. Previously known only from the holotype taken off Natal, South Africa (Eschmeyer 1983).

Scorpaenodes varipinnis* Smith, 1957

Myers, 1989 (p. 96; p. 95 fig. 2h is a misidentification of *Sebastapistes mauritiana*). BPBM 7277, 32 mm SL, 21–39 m, nw Cocos Is., Guam, by W. Stark and party, 25 June 1968 (Eschmeyer & Rao, MS).

Widespread in the Indo-Pacific from East Africa to the Great Barrier Reef and Guam.

***Scorpaenopsis fowleri* Eschmeyer & Randall, 1975.**

BPBM 8446, 21 mm SL (Guam); BPBM 17777, 3:17–22 mm SL (Guam).

A detailed description will be provided in a forthcoming revision of the genera *Parascorpaena*, *Sebastapistes*, and *Scorpaenopsis* (Eschmeyer & Rao, MS). Widespread in the Indo-Pacific.

Scorpaenodes macrochir *Ogilby, 1910*

ANSP 114513, 102 mm SL (Marianas); CAS 17527, 3:77–83.4 mm SL (Marianas); BPBM 4346, 85.3 mm SL (Guam).

A detailed description will be provided in a forthcoming revision of the genera *Parascorpaena*, *Sebastapistes*, and *Scorpaenopsis* (Eschmeyer & Rao, MS). Also photographed at a depth of 4 m, Tepungan Channel, Guam (Myers 1989, Pl. 22B). The pattern of brilliant colors on the underside of the pectoral fin is the easiest way to distinguish this species from the closely related *S. diabolus*. Widespread from the eastern Indian Ocean to the central Pacific.

Scorpaenopsis papuensis (*Cuvier, 1849*)

BPBM 9540, 58 mm SL (Guam); BPBM 9607, 112 mm SL (Guam).

A detailed description will be provided in a forthcoming revision of the genera *Parascorpaena*, *Sebastapistes*, and *Scorpaenopsis* (Eschmeyer & Rao, MS). Widespread in the Indo-Pacific.

Sebastapistes galactacma *Jenkins, 1903*

UGM 5208, 25 mm SL, reef front, Unai Magpi, Saipan, R. S. Jones, R. Tsuda, and R. Struck, 18 August 1970; UGM 5847, 3: 8–39 mm SL, 11–12 m, outer reef slope, Tanguisson, Guam, R. S. Jones and class, 16 September 1972.

The following counts were taken for UGM 5208 and the largest of UGM 5847 with those for UGM 5847 given in parentheses if different from those for UGM 5208: dorsal rays XII, 9; anal rays III, 5; pectoral rays 17 (16); tubed lateral line scales 22 (23), the scales on the side cycloid; coronal spines absent. This species and *S. mauritiana* key out to *Sebastapistes corallicola* in Schultz (1966). Without examining his material from Guam, it is not possible to determine whether or not *S. galactacma* has been reported from the Marianas as *S. corallicola*. Previously reported only from the Hawaiian Islands, but Eschmeyer and Rao have material from elsewhere on the Pacific Plate.

TRIGLIDAE (SEA ROBINS)

Pterygotrigla *sp.* *

UGM 6282, 313 mm SL, ca. 450 m, hook and line by E. Valdevarona off Puga Patch Reef, Guam, 17 June 1981.

Dorsal rays VIII, 11; anal rays 12; pectoral rays 12+3 free rays ventrally; tubed lateral line scales ca. 80 including many obscure and difficult to count. This specimen appears closest to *P. multiocellata* (Matsubara) as featured in Masuda et al. (1984: pl. 300I). We could not find any literature accounts of triglids from Micronesia.

PLATYCEPHALIDAE (FLATHEADS)

Thysanophrys chiltonae *Schultz, 1966*.

UGM 6418, 145 mm SL, 3 m, Tepungan Channel, Guam, handnet by R. Myers, 5 December 1982; UGM 6561, 99 mm SL, 2 m, Tepungan Channel, handnet by

R. Myers, 3 February 1980; UGM 1953, 86 mm SL, NCS Beach, Guam, 23 June 1968; UGM 6598, 99 mm SL, Agana Reef flat, Guam, R. Sakamoto, 1 March 1985.

The following counts were taken on UGM 6418 and 1953: dorsal rays I-VII-11; anal rays 12; pectoral rays 20 (the upper two and lowermost unbranched (UGM 1953 only)); vertical scale rows below lateral line approximately 53; first three scales of lateral line each bearing a spine; developed gill rakers 1 + 1 + 4; maximum interorbital width 4.6–5.8 in maximum orbit diameter. UGM 6418 has been figured *in situ* in color (Myers 1989 Pl. 21C). The most common platycephalid of shallow lagoons and reef flats of Guam. Widespread in the Indo-Pacific.

CHANDIDAE (GLASS PERCHLETS)

Ambassis buruensis Bleeker, 1857

UGM 6375, 11: 33–42 mm SL (less three specimens donated to the Western Australian Museum), Acfayan Bay, Guam, H. T. Kami and collaborators, 7 May 1969; UGM 6376, 17: 23–31 mm SL, Talofofo River, Guam, H. T. Kami and R. J. Lujan, 11 December 1973; UGM 1583, 5: 25–39 mm SL, Apra Harbor, near Piti small boat basin, Guam, F. DeLeon and I. Ikehara, 3 December 1964.

Identification (UGM 6375) was provided by Gerald R. Allen who is reviewing the family. Continental Plate shorelines of the western Pacific.

SERRANIDAE (SEA BASSES)

Aethaloperca rogae (Forskall, 1775)

UGM 6553, 343 mm SL, northern Marianas, hook and line by FV Typhoon, 1980–81.

Dorsal rays IX, 18; anal rays III, 10; pectoral rays 16; pored lateral line scales ca. 86. A pair (male ca. 35 cm TL and female ca. 30 cm TL) was observed and photographed by TJD in a small cave adjacent to a sand-filled groove on the submarine terrace off the west coast of Alamagan on 18–19 May, 1992. An individual was also observed by John W. Shepard off the reef margin at Agat Bay, Guam in 1977. Rare in the Marianas. Widespread in the Indo-Pacific.

Anyperodon leucogrammicus (Valenciennes, 1828)

One or more individuals observed on several occasions by one of us (TJD) off the west side of Alamagan at a depths of 7–9 m on 18–19 May 1992. Widespread in the Indo-Pacific.

Cephalopholis leopardus (Lacepede, 1812)

UGM 5609, 46 mm SL, 6–8 m, Maug, R. S. Jones and collaborators, 10 February 1971.

The distinctive dark saddle on the caudal peduncle as well as a dark spot on the posterior edge of the operculum are among the few remaining markings on this specimen. This species is also recorded from Guam on the basis of photographs taken in 9 m on a large patch reef on the submarine terrace of Agat Bay

(Myers, 1989, Pl. 30D) and individuals observed among *Porites* corals at depths of 10–20 m off Guguan by TJD on 16–18 May 1992. Widespread in the Indo-Pacific.

Cephalopholis sonnerati (*Valenciennes, 1828*)

UGM 6283, 173 mm SL, ca. 120 m, hook and line, Guam, from a fisherman's catch sold to the Guam Fishermen's Cooperative, 17 June 1982; UGM 6559, 157 mm SL, Guam, from a fisherman's catch sold to the Guam Fishermen's Cooperative.

Dorsal rays IX, 15; anal rays III, 9; pectoral rays 18–19 (upper 1–2 and lowermost unbranched); pored lateral line scales ca. 110 (UGM 6283 only); gill rakers 8–9 + 15. A color photograph of UGM 6559 was recently featured on the poster, *Foodfishes of the Mariana Islands*, published by the Guam DAWR and CNMI Division of Marine Resources. Commonly caught in the Marianas by hook and line at depths of about 50 to 200 m, occasionally observed in shallow water. Recently observed off Alamagan at a depth of 9 m by TJD on 18–19 May, 1992. Widespread in the Indo-Pacific.

Epinephelus socialis (*Gunther, 1873*)

UGM 6324, 343 mm SL, 3m, in large pool on shoreward end of surge channel in limestone reef platform, Ligasnik, w. side of Pagan, northern Marianas, spear by R. Myers, 9 March 1982.

Dorsal rays XI, 14; anal rays III, 7; pectoral rays 18 (upper two unbranched); lateral line scale rows well over 100; gill rakers 7 + 17. This specimen was figured in color while alive by Myers (1989 Pl. 32D). This species superficially resembles *E. ongus* (Bloch) but lacks the prominent black area under the maxillary found in that species (Randall, pers. com.). This species is characteristic of exposed seaward reef flats of coral atolls, but is relatively rare on high islands. Widespread on the Pacific Plate.

Holanthias borbonius (*Valenciennes, 1830*)

UGM 6318, 108 mm SL, ca. 182 m, Guam, hook and line by T. Champion, 3 November 1981; UGM 6703, 119 mm SL, ca. 230 m, Guam, hook and line by I. Palacios, 17 November 1991 (Fig. 2g).

Dorsal rays X, 16–17; anal rays III, 7; pectoral rays 16–17 (upper one or two and lower two unbranched); tubed lateral line scales 40; gill rakers 8–11 + 26–27 = 35–37; greatest depth (UG6703 only) 2.20 in SL. Otherwise known from the western Indian Ocean and southern Japan.

Liopropoma maculatum (*Doderlein, 1883*) *

UGM 6681, 181 mm SL, ca. 150–180 m, Luminao Reef, Guam by G. Perez, 17 June, 1989 (Fig. 2h).

Dorsal rays VII, 12; anal rays III, 8; pectoral rays 16 (upper 2 and lower 2 unbranched); GR 5 + 10, the upper and lowermost rakers as an elongate bony ridge; LP 61; depth 3.5 in SL. Previously known only from southern Japan, south-

ern Korea, the Ryukyu Islands, and the Hawaiian Islands (Randall and Taylor, 1988).

***Liopropoma tonstrinum* Randall & Taylor, 1988**

Based on a photograph (Myers 1989 Pl. 36D) taken at a depth of 23 m in a crevice inside of the Blue Hole, a large cave off Orote Peninsula, Guam on 1 June 1985. Widespread in the western and central Pacific.

***Plectranthias rubrifasciatus* Fourmanoir & Randall, 1979**

During late 1991, a 53 mm SL *Plectranthias* was recovered from the mouth of an unidentified bottomfish taken by hook and line at a depth of over 100 m off northwestern Guam by J. Eades. The fresh specimen was brought in to one of us (RFM) by a colleague. After a brief examination, the specimen was returned so that the colleague could photograph it and prepare a description at a later date. The specimen was frozen, then subsequently discarded following the extended power outage due to Typhoon Omar in August, 1992. The following notes were taken during the author's examination: dorsal rays X, 15; anal rays III, 7; pectoral rays 14 including the short upper ray; tubed lateral line scales 29; color pattern identical to that of the only known specimen as figured and described by Fourmanoir & Randall (1979). Otherwise known only from the 41 mm SL holotype taken at a depth of 100 m off New Caledonia.

***Pogonoperca punctata* (Valenciennes, 1830)**

CNMI 021, 205 mm SL, bottom fishing south of Pagan Island, 18 November, 1985; UGM 6718, 179 mm SL, ca. 219 m, Rota Banks, hook and line by R. Duenas, 31 May, 1993 (Fig. 3a).

The following counts were taken for UGM 6718: dorsal rays VII, 13; anal rays III, 8; pectoral rays 17; pored lateral line scales 60 (+2 past hypural). Also known from Guam on the basis of a photograph on file at the Division of Aquatic and Wildlife Resources of a 170 mm SL specimen collected from a depth of 118 m off Uruno Point, and a pair observed at Anatahan at a depth of 60 m by TJD on 12 May, 1992. This species is apparently rare and confined to relatively deep water in the Marianas. Widespread in the Indo-Pacific.

***Pseudanthias ventralis ventralis* Randall, 1979**

Based on a photograph (Myers 1989, Pl. 26D) taken by J. E. Randall at a depth of 50 m on a steep dropoff near the Blue Hole, Orote Peninsula, Guam on 17 July 1986. Widespread in the tropical west and central Pacific.

***Variola albimarginata* Baissac, 1956**

UGM 6526, 223 mm SL, off Tarague, Guam, hook and line by Juan C. Arriola, 1 July 1984.

Dorsal rays IX, 14; anal rays III, 8; pectoral rays 16 (lowermost ray unbranched); gill rakers 8 + 13. A 239 mm SL specimen from Guam that was not retained is figured herein (Fig. 3b). Until recently this species had been hopelessly

confused with the very similar *V. louti* in much of the literature (Randall & BenTuvia 1983). The caudal fin of *V. albimarginata* is blackish posteriorly with a narrow white posterior margin; that of *V. louti* has a broad yellow marginal band posteriorly. Both species are among the dominant groupers taken off Guam by hook and line to depths of over 100 m. However, they are uncommon at safe scuba diving depths of less than 46 m. *V. albimarginata* is reported to be deeper dwelling than *V. louti* (Randall & BenTuvia 1983), but I have examined a specimen of the former taken by a spearfisherman at a depth of approximately 12 m off the northwest coast of Guam. Widespread in the Indo-West Pacific extending into the insular Pacific at Palau, Guam and Samoa.

CALLANTHIIDAE (GOLDIES)

Grammatonotus sp. 1

UGM 6421, 58.0 mm SL, from the stomach of *Seriola* sp. from 177 m, Haputo Point, Guam, 16 May 1968.

Dorsal rays XI, 9; anal rays III, 9; pectoral rays 19 (upper two and lower two unbranched); vertical scale rows ca. 25, tubed lateral line damaged, about 16 scales, including 3 pockets where scales are missing near its anterior end on right side only; caudal fin missing. This specimen was sent to William Anderson who is revising the family. It does not appear to fit any known species, differing from *G. laysanus* Gilbert by having fewer gill rakers (24 vs 28), and from *G. surugarensis* (Katayama et al. 1982) by having a longer third anal spine than first dorsal spine.

Grammatonotus sp. 2

UGM 6509, 29 mm SL, from stomach of a 91.5 cm FL *Thunnus albacares* taken off Guam, 11 December 1982; UGM 6510, 36 mm SL, from stomach of 77 cm FL *Coryphaena hippurus*, Galvez Banks, Guam, 15 March 1982.

These partially digested specimens are uncountable, but have narrower bodies than UGM 6421.

PRIACANTHIDAE (BIGEYES)

Cookeolus japonicus (Cuvier, 1829)*

UGM 6689, 316 mm SL, ca. 180 m, Santa Rosa Reef, Guam, bottom fishing by B. Goodwin and D. Alf, FV Potluck, 16 September, 1989 (Fig. 3c).

Dorsal rays X, 15; anal rays III, 14; pectoral rays 18 (upper 2 and lower 3 unbranched); pored lateral line scales 59 + 2 on caudal peduncle; gill rakers 19 + 6. We also have on file a Polaroid photograph of another specimen caught by long-line at night near a bank off the sw. coast of Guguan Island between 2–7 April 1990 by the FV Sun. It was not measured or retained. Circumtropical.

Priacanthus alalaua Jordan & Evermann, 1904*

USNM 336447, 212 mm SL, ca. 127 m, Adelupe Point, Guam, bottom fishing by J. Mendiola and J. Serville, FV Sweet Judy, 2 September 1989 (Fig. 3d); UGM

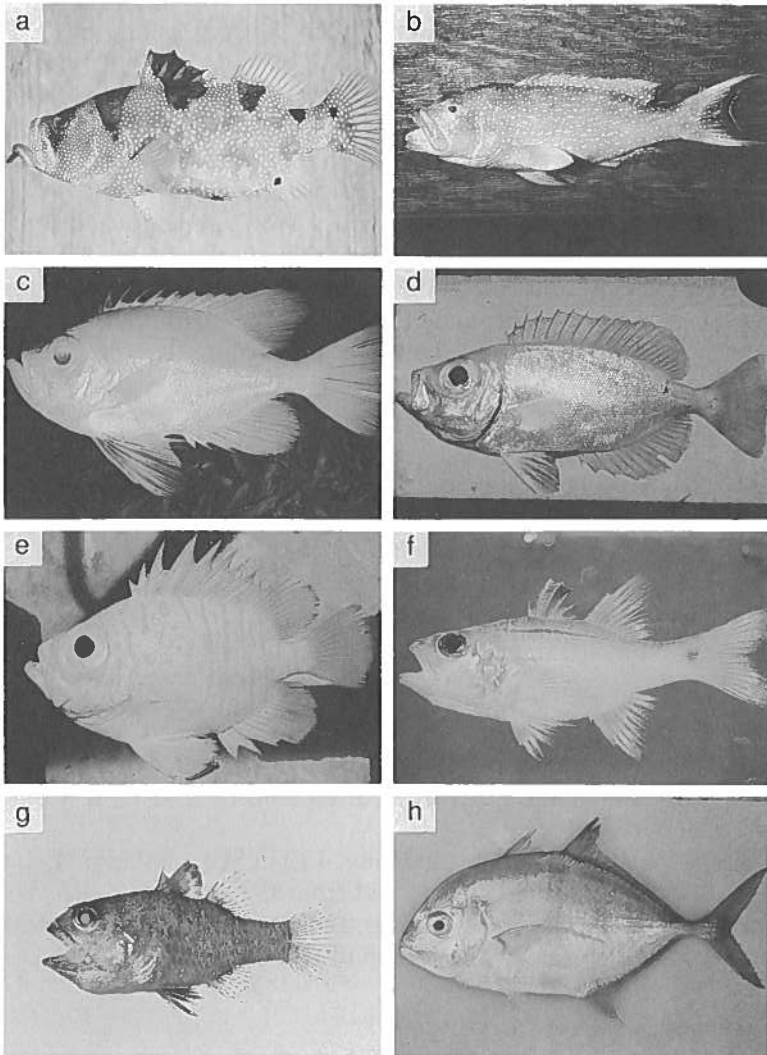


Figure 3. Photographs of new and recent records of fishes from the Marianas. (a) *Pogonoperca punctata*, UGM 6718, 179 mm SL from 216 m, Rota Banks. (b) *Variola albinmarginata*, 239 mm SL, Guam. (c) *Cookeolus japonicus*, UGM 6689, 316 mm SL from ca. 180 m, Santa Rosa Reef. (d) *Priacanthus alalaua*, UGM 6687, 212 mm SL from ca. 127 m, Guam. (e) *Pristigenys meyeri*, UGM 6673, 235 mm SL, Rota. (f) *Apogon semilineatus*, UGM 6704, 128 mm SL from 210–240 m, Guam. (g) *Foa brachygramma*, UGM 6658, 29 mm SL from 0.2 m, Guam. (h) *Carangoides caeruleopinnatus*, UGM 6590, 271 mm FL from ca. 120 m, Guam.

6719, 216 mm SL, ca. 210 m, Cabras Is., Guam, bottom fishing by A. Palacios, 20 July, 1993.

Dorsal rays X, 13; anal rays III, 14; pectoral rays 17–18 (upper 2 and lower 2 unbranched); pored lateral line scales ca. 69–74; gill rakers 14–16 + 5; depth at pelvic fin origin 2.7 in SL; pectoral fin length 1.5–1.6 in head length; upper jaw length 2.0 in head length. This species is otherwise known only from the Hawaiian and Revillagigedo Islands off Mexico (Starnes 1988). It is noteworthy that the eastern Pacific population consists of larger individuals (up to 260 mm SL vs. under 200 mm SL) and occurs in shallower water than the Hawaiian population (9 to 46 m vs. below 100 m). Although the Guam specimens are larger than those known from the Hawaiian Islands, they also came from relatively deep water.

***Pristigenys meyeri* (Günther, 1871)**

UGM 6673, 235 mm SL, southwest coast of Rota, bottom fishing by T. Perez and party, 10 July 1988 (Fig. 3e).

Dorsal rays X, 12; anal rays III, 11; pectoral rays 18 (upper 2 and lower 2 unbranched); pelvic rays I, 5; pored lateral line scales 30; gill rakers 8 + 18. Previously known from Indonesia and southeast Asia northeast to the Ryukyu and Izu Islands in the depth range of 100 to 200 m.

APOGONIDAE (CARDINALFISHES)

***Apogon doryssa* (Jordan & Seale, 1906)**

UGM 6615, 31 mm SL (male orally brooding eggs), 1 m, inner reef flat, Pago Bay, Guam, quinaldine and dip net by T. J. Donaldson and G. B. Constantino, 8 February, 1986.

Dorsal rays VI + I, 9 (the first spine long, 4.13 in SL); anal rays II, 8; pectoral rays 13. This species is easily distinguished from the similar *A. coccineus* by its longer dorsal and anal fin spines, larger eyes, and more elongate body. Widespread in the Indo-Pacific as far east as the Marshall and Samoan Islands.

Apogon evermanni* Jordan & Snyder, 1904

UGM 6744, 72 mm SL, Hanum Cave, 3.5 m depth in inner chamber, Rota, quinaldine and hand-net by T. J. Donaldson, 18 February, 1993.

Dorsal rays VI + I, 9; anal rays II, 8; pectoral rays 12; pored lateral line scales 25; predorsal scales 7; gill rakers 5 + 11; depth 3.4 in SL; head profile concave. During the day, this species typically inhabits the deep recesses of caves at depths of over 20 m. Indo-Pacific and western Atlantic.

Apogon semilineatus* Temminck & Schlegel, 1846

UGM 6704, 128 mm SL, 210–240 m, Orote Peninsula, Guam, hook and line by B. Acfalle, 11 February 1992 (Fig. 3f).

Dorsal rays VI + I, 9; anal rays II, 8; pectoral rays 14 (upper two and lowermost unbranched); tubed lateral line scales 25 (+3 on caudal peduncle); gill rakers 5 + 16; greatest depth 2.8 in SL. Widespread in the Indo-West Pacific. Ap-

parently confined to deep waters in the tropics, but common in shallow warm-temperate waters of Japan.

***Foa brachygramma* (Jenkins, 1903)**

UGM 6658, 29 mm SL, in clump of algae near shoreline, 0.2 m, Tumon Bay, Guam, R. Myers by hand, 18 April 1987 (Fig. 3g).

Dorsal rays VII+I, 9; anal rays II, 8; pectoral rays 12; tubed lateral line scales 8; gill rakers 1 + 1 + 6; greatest depth 2.5 in SL. Occurs in shallow sheltered waters. Widespread in the Indo-Pacific.

MALACANTHIDAE (TILEFISHES)

***Malacanthus brevisrostris* Guichenot, 1848**

UGM 6270, 190 mm SL, Tarague, Guam, hook and line, 3 June 1981; UGM 6415, 181 mm SL, 46 m, Galvez Banks, Guam, hook and line by S. Yorang, 2 July 1978; UGM 6602, 200 mm SL, ca. 40 m, near Pugua Patch Reef, Guam, hook and line by M. Tenbata, 7 December 1985; UGM 5679, 2: 159–160 mm SL, 6m, Pagan, spear and poison by H. Larson and D. Davis, 6 April 1971.

The following counts were taken for UGM 6602: dorsal rays II, 55; anal rays I, 48; pectoral rays 16 (uppermost rudimentary, upper two unbranched); pored lateral line scales ca. 175; gill rakers 4 + 6. Widespread in the Indo- and tropical eastern Pacific.

CORYPHAENIDAE (DOLPHINFISHES)

***Coryphaena equiselis* Linnaeus, 1758**

UGM 6634, 155 mm SL from the stomach of a *Thunnus albacares*, 111.5 cm FL, Galvez Banks, Guam, 19 July 1982; UGM 6635, 2: 118–140 mm FL, from the stomach of a *Coryphaena hippurus*, 98 cm FL, Rota, 28 May 1983; UGM 6636, 177 mm SL, from the stomach of a *C. hippurus*, 78.5 cm FL, Guam, 29 December 1983; UGM 6637, 201 mm SL, from the stomach of a *T. albacares*, 110.5 cm FL, Galvez Banks, Guam, 19 July 1982.

All of this material is in poor, partially digested condition. The shape of the tooth patch on the tongue as well as counts of pterygiophores identify them as *C. equiselis*. This species has previously been recorded from the vicinity of the Marianas by Shcherbachev (1963). Circumtropical.

CARANGIDAE (JACKS)

***Carangoides caeruleopinnatus* (Rüppell, 1830)**

UGM 6590, 250 mm SL (271 mm FL), ca. 120 m, near Pugua Patch Reef, northwestern coast of Guam, hook and line, 21 November 1985 (Fig. 3h).

Dorsal rays VII-I, 20; anal rays II-I, 18; pectoral rays 21; gill rakers 5 + 1 + 17; maximum depth 2.4 in FL; naked area of breast extending dorsally to the entire anterior base of pectoral fin and ventrally past the pelvic fin origin; when fresh, numerous yellow spots on sidea aligned in vertical rows. This species differs from

other yellow spotted Indo-Pacific species of *Carangoides* by possessing a deeper body (<2.4 vs. 2.7 to 2.8 in FL). Tropical West Pacific from Malaysia to the Marianas.

***Carangoides ferdau* (Forsskål, 1775)**

This distinctively marked species has been observed by RFM on more than one occasion off Gabgab Beach, Apra Harbor, Guam. Widespread in the Indo-Pacific.

***Carangoides plagiotaenia* (Bleeker, 1857)**

UGM 6515, 509 mm FL, 201–219 m, between Merizo and Umatac, Guam, 16 May 1967; UGM 6677, ca. 280 mm FL, ca. 44 m, Uruno Point, Guam by M. Tenbata and party, 16 October 1988.

The following counts were taken for UGM 6515: Dorsal rays VIII-I, 24; anal rays II-I, 18; pectoral rays, 20 (excluding upper rudimentary ray); gill rakers 14+23; scutes 13 (14 on right side); depth 3.7 in FL; breast completely scaled, vomerine teeth present. Observed among fishermen's catches on rare occasions. At Palau, this species was observed and photographed by the authors in as little as 10 m off vertical outer reef dropoffs. Otherwise known from East Africa, the Seychelles, the Philippines, and Marshall Islands.

***Carangoides talamparoides* Bleeker, 1852**

UGM 6516, 330 mm FL, 82 m, south of Cocos Is., Guam, 1 December 1966; UGM 6517, 293 mm FL, Facpi Point, Guam, February 1967; UGM 6518, 316 mm FL, data lost.

Counts given for UGM 6516 and 6517 only; those for UGM 6517 in parentheses if different from those for UGM 6516: dorsal rays VIII-I, 21(22); anal rays II-I, 17; pectoral rays 19; gill rakers 7+19(20); depth 2.2 in FL. This species can easily be separated from the very similar *C. malabaricus* by its lower gill raker count (32–38 in *malabaricus*; Williams & Venkataramani 1978). The specimens of *C. malabaricus* recorded by Kami et al. (1968) from Guam could not be located, and may well be *C. talamparoides* which has frequently been lumped with *C. malabaricus* in the literature. Widespread in continental plate waters of the Indo-West-Pacific from Oman to the Philippines and Borneo.

***Caranx papuensis* Alleyne & MacLaey, 1877**

UGM 6614, 444 mm FL, 1 m, gill net in surf zone by T. J. Donaldson and R. N. Clayshulte, Rizal Beach, Guam, 19 February 1986.

Dorsal rays VII-I, 22; anal rays II-I, 18; pectoral rays 21; depth 3.39 in SL; breast naked; when fresh, ground color silver with a greenish-yellow hue, some black spots dorsally, and yellowish trailing edge to posterior lower lobe of caudal fin. A 94 mm FL specimen from Guam was figured by Myers (1989 p. 129 fig. 1g). This species closely resembles *C. melampygus*, but lacks scales on the breast, has a more elongate body, and differs slightly in coloration. Widespread in the Indo-Pacific.

Caranx tille* Cuvier, 1833

A 58.5 cm FL specimen in a fisherman's catch was examined by one of us (RFM) on 2 October, 1994, but not retained. The combination of elongate body (max. depth 3.7 in SL), strongly convex head profile with short snout (4.0 in HL), and dark opercular spot larger than 1/2 the diameter of the pupil is diagnostic of *C. tille*. Widespread in the Indo-West Pacific, primarily in coastal continental shelf waters, but rare near oceanic islands.

***Decapterus maruadsi* (Temminck & Schlegel, 1844)**

Based on a photograph taken off an FAD (fish aggregating device) approximately 3 km west of Uruno, Guam on 16 June 1982 (Myers 1989 Pl. 45A). Diagnostic features visible on this and other photographs are: scutes along the entire straight portion of the lateral line and a relatively deep and compressed body (max. depth ca. 23% of FL). Known otherwise from southeast Asia as far north as southern Japan.

***Decapterus macrosoma* Bleeker, 1851**

UGM 6271, 233 mm SL, trolling off Pati Point, Guam, 3 June 1981.

This specimen was figured in Myers (1989 p. 129 fig. 1a). Counts were not obtained, but certain diagnostic features noted included a serrated preopercular margin, a maxillary shaped as shown by Kimura & Suzuki (1981, fig. 1), and a max. depth/SL ratio of 0.20. Other uncatalogued material is also available, but it was all obtained from the stomachs of pelagic gamefishes and is in too poor a condition to yield accurate counts. This species was the most common *Decapterus* found in the stomachs of pelagic gamefishes caught in the vicinity of Guam. Widespread in the Indo-Pacific.

***Seriola dumerili* (Risso, 1810)**

A color photograph of UGM 6559 was recently featured on the poster, *Foodfishes of the Mariana Islands*, published by the Guam Division of Aquatic and Wildlife Resources and CNMI Division of Fish and Wildlife. Based on a photograph of a 51.5 cm FL specimen at the Guam Fisherman's Cooperative that was caught at Santa Rosa Reef, Guam in February 1983. This species differs from *S. rivoliana* by having a more convexly curved forehead from the eye to the tip of the snout, and having a differently shaped maxillary. It also has a higher modal number of soft dorsal rays (29–35 vs. 27–33) and tends to be more reddish-brown to purple in coloration than *S. rivoliana*. In the Marianas, *S. dumerili* is generally found at depths exceeding 100 m. Circumglobal in tropical and sub-tropical seas.

Uraspis uraspis* (Günther, 1860)

Based on a photograph of a specimen presumably from Guam taken in January 1967 by H. T. Kami and on file at the Guam Division of Aquatic and Wildlife Resources (Fig. 4a). The photograph clearly shows that the curved portion of the lateral line is longer than the straight portion, a character that distinguishes *Uraspis uraspis* from *U. helvolus* and *U. secunda*. The photograph also shows a dark

stain of unknown origin on the breast that corresponds with the naked area of the breast characteristic of *U. uraspis*. Species of *Uraspis* are occasionally caught off Guam by hook and line at depths of over 50 m. Widespread in the Indo-Pacific.

LEIOGNATHIDAE (SLIPMOUTHS)

***Leiognathus stercorarius* Evermann & Seale, 1907**

UGM 6646, 3: 43–67 mm SL, Naval fuel pier, inner Apra Harbor, Guam, beach seine by R. Sakamoto and party, 17 October 1986.

Guam material has an SL/body depth ratio of $>.293$, diagnostic of *L. stercorarius* as defined by Dunlap & McFall-Ngai (1984). Otherwise known from the Philippines, Indonesia, and Papua New Guinea.

BRAMIDAE (POMFRETS)

***Brama myersi* Mead, 1972**

UGM 6584, 2: 166–181 mm SL, surface trolling shortly after nightfall approximately 10 km off Ritidian Point, Guam, 27 August 1985 (Fig. 4b).

Counts for the 181 mm specimen are in parentheses if different from those of the 166 mm specimen: dorsal elements 35 (34); anal elements 29 (28); pectoral rays 19 (20); lateral line scale rows ca. 54 (53) to end of hypural + 7 on caudal fin base; gill rakers 4(3) + 1 + 9 (8) (excluding rudiments); narrow bands of small teeth in both jaws, those on symphysis of lower jaw canine-like; posterior margin of preopercle not serrated, but striated near the edge. These specimens differ from other known specimens *B. myersi* (based on pl. 144 A of Masuda et al. 1984) primarily in the condition of the preopercle and in size. The preopercular striations of the two UGM specimens look as though they could have been serrations at an earlier stage. A serrated preopercle might be a juvenile condition. More specimens of this rare species are needed for study. *B. myersi* is known in the literature only on the basis of a few young and juvenile specimens taken in the central and western Pacific (including the Ogasawara Islands). Offshore pelagic.

***Pterycombus petersii* (Hilgendorf, 1878)**

UGM 6666, 53 mm SL, regurgitated by *Thunnus albacares* caught by trolling off Guam by G. Landrum, 19 June 1988 (Fig. 4c).

Dorsal rays 49; anal rays 40; pectoral rays 22. An offshore pelagic species with juveniles probably extending to 200 m (Smith and Heemstra, 1986). Widespread in the Indo-Pacific.

***Taratichthys steindachneri* (Döderlein, 1883) ***

Based on a photograph of a 60 cm SL (76 cm FL), 5.9 kg specimen taken off w. Saipan by handline at night at a depth of 300 m by J. Taitano on 8 August, 1990 (Fig. 4d). Widespread in the Indo-Pacific.

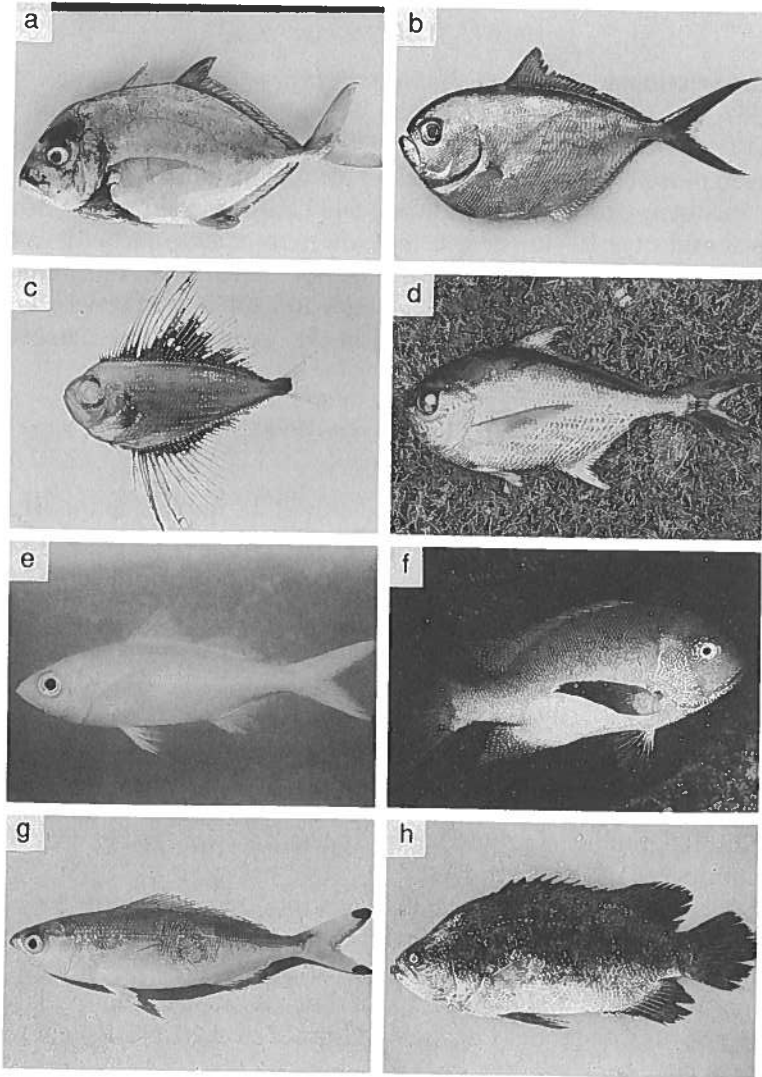


Figure 4. Photographs of new and recent records of fishes from the Marianas. (a) *Uraspis uraspis*, size unknown, Guam. Photograph by H. T. Kami. (b) *Brama myersi*, UGM 6584, 166 mm SL, Guam. (c) *Pterycombus petersii*, UGM 6666, 53 mm SL, regurgitated by *Thunnus albacares*, Guam. (d) *Taractichthys steindachneri*, 600 mm SL, 5.9 kg, Saipan. (e) *Erythrocles scintillans*, UGM 6437, 285 mm SL, Galvez Bank. (f) *Macolor macularis*, 18 m, Blue Grotto, Saipan. (g) *Pterocaesio marri*, UGM 6427, 189 mm SL, from ca. 24 m, Guam. (h) *Lobotes surinamensis*, UGM 6579, 316 mm SL, at surface off Galvez Bank.

EMMELICHTHYIDAE (ROVERS)

Erythrocles scintillans (*Jordan & Thompson, 1912*)

UGM 6437, 285 mm SL, Galvez Banks, Guam, hook and line by K. Nagao, 6 July 1983 (Fig. 4e); UGM 6552, 2: ca. 97–105 mm SL, partially digested, from the stomach of a *Makaira nigricans* taken off Guam, 20 June 1982.

The following counts apply to UGM 6437 only: dorsal rays XI, 10; anal rays III, 10; pectoral rays 19 (upper two and lower three unbranched); tubed lateral line scales 69; gill rakers 25 + 11; The brilliant golden orange coloration of a fresh specimen is well figured in Masuda et al. (1984, Pl. 145 F). Otherwise known only from the Hawaiian Islands and Okinawa in the depth range of 180–280 m.

LUTJANIDAE (SNAPPERS)

Macolor macularis (*Bleeker, 1850*)

Based on a photograph taken at a depth of 18 m outside the Blue Grotto, Saipan on 29 March 1987 (Fig. 4f). In addition specimens from Guam have been examined but not kept. Previously confused with the very similar *M. niger*. The exposed portion of the maxillary of adults is smaller and the eye and interspaces of the dark reticulations on the face are a lighter yellow in *M. macularis*. Widespread in the Indo-Pacific.

CAESIONIDAE (FUSILIERS)

Caesio teres *Seale, 1906*

UGM 5522, 103 mm SL, Agrihan Is., northern Marianas, speared by R. S. Jones and collaborators, 12 February 1971.

Dorsal rays XI, 14; anal rays III, 12; pectoral rays 21 (upper two and lower two unbranched); pored lateral line scales ca. 60 (+ 10 more on caudal peduncle); gill rakers 10 + 1 + 24. This species was previously recorded from Saipan on the basis of an underwater photograph (Amesbury & Myers 1982 p. 58b) and has been observed off Guam and Pagan. Widespread in the Indo-Pacific.

Pterocaesio marri *Schultz, 1953*

Pterocaesio chrysozona (*non-Cuvier*) Amesbury & Myers 1982 (p. 59, text, not fig.)

UGM 6427, 189 mm SL, ca. 24 m, south side of Camel Rock, Guam, speared by L. Strandridge, 10 February 1983 (Fig. 4g); UGM 4444, 213 mm SL, ca. 19 m, Tanguisson, Guam, spear by R. S. Jones, 16 April, 1970.

The following counts apply to UGM 6427 only: dorsal rays IX, 15; anal rays III, 12; pectoral rays 23 (upper two and lowermost unbranched); gill rakers 10 + 24 (right side only due to spear damage on left side); tubed lateral line scales ca. 82. Previously reported from Guam as *P. chrysozona* on the basis of underwater sightings (Amesbury & Myers 1982). Widespread in the Indo-Pacific.

LOBOTIDAE (TRIPLETAIL)

Lobotes surinamensis (*Bloch, 1790*)

UGM 6579, 316 mm SL, tangled in a drifting segment of net floating at the surface off Galvez Banks, Guam by crew of the fishing vessel "Pot Luck", 4 May 1985 (Fig. 4h).

Dorsal rays XII, 15; anal rays III, 16; pectoral rays 16 (upper two and lowermost unbranched); tubed lateral line scales 50. This species occurs pelagically in the vicinity of drifting objects. It appears to be more common near continental land masses than near oceanic islands. Circumtropical.

GEREIDAE (MOJARRAS)

Gerres oyena (*Forsskål, 1775*)*

UGM 1650, 104 mm SL, NCS Beach, Guam, explosives by H. T. Kami, 9 October 1968; UGM 5726, 81 mm SL, Piti, Guam, spear by H. T. Kami, 12 August 1971; UGM 6408, 150 mm SL, along shoreline, Gun Beach, Guam by castnet, 15 October 1982 (Fig. 5a).

The following counts are from UGM 1650 and UG5726: dorsal rays IX, 10; anal rays III, 7; scale rows between 5th dorsal spine and lateral line, 3 1/2. This species differs from its congeners in the Marianas by having fewer scale rows above the lateral line and a dark dorsal fin tip. Widespread in the Indo-Pacific.

HAEMULIDAE (SWEETLIPS AND GRUNTS)

Plectorhinchus albovittatus (*Rüppell, 1835*)

Plectorhinchus albovittatus Myers 1989 (*Pl. 52C*)

Plectorhynchus schotof (*non-Forsskål*) Kami, 1975

Plectorhinchus obscurus (*Günther, 1871*): Myers 1989 (*p. 141, fig. 3b-c*)

UGM 6664, 2: 92–102 mm SL; Agana River mouth, Guam, R. Sakamoto, February 1988; UGM 6692, floating dead at Agana Boat Basin, Guam, R. Myers, 13 March 1991.

The following counts were taken for UGM 6664: dorsal rays XIII, 18; anal rays III, 6–7; pectoral rays 17; lateral line scales ca. 70; gill rakers 6–8 + 19–20; Myers (1989) figured the smaller specimen in color. UGM 6692 has 18 pectoral rays. (no other counts taken). This species was originally recorded from Guam on the basis of two juvenile specimens identified as *Plectorhinchus schotof* (Kami 1975). More recently, two large adults (688 and 807 mm SL, the largest weighing 14.1 Kg.) were examined at the Guam Fishermen's Cooperative, but not retained. Both were speared by L. Standrich at a depth of ca. 24 m on the outer reef slope off Camel Rock on 10 February 1983. The following counts were taken: dorsal rays XIII (XII for the smallest), 17; anal rays III, 7; pectoral rays 17 (upper two unbranched, 15 rays on the right side of the largest specimen); gill rakers 6 + 23. The largest was figured by Myers (1989) and misidentified as *P. obscurus*. This is the largest member of its family. The change in color pattern from late juvenile to large adults is well figured by Smith (1962, as *Gaterin hawawayi*). Widespread in the Indo-Pacific as far east as the Marshall Islands (Randall 1986).

Plectorhinchus species*

Plectorhinchus schotaf (*non-Forsskål*) Randall, Allen & Steene, 1990

A 50 cm TL specimen speared of Uruno, Guam on 29 November, 1992 by David Nelson was briefly examined by one of us (RFM) but not retained. It was dark grey grading to black on the fins and had a thin orange-red hind margin of the opercle and a smoothly convex head profile. It was clearly distinct from *P. gibbosus* which has a straight head profile above the mid-snout. Kami's (1975) specimens of *Plectorhynchus schotaf* are juvenile *P. albovittatus*. This likely undescribed western Pacific species is considered to be distinct from *P. schotaf* from the Indian Ocean.

LETHRINIDAE (EMPERORS)

Gymnocranius euanus Günther, 1879

Gymnocranius griseus Myers & Shepard 1980 (p. 320, fig. 8)?

Gymnocranius japonicus Myers 1989 (p. 144, fig. 1b).

This is the only species of *Gymnocranius* that possesses 4 1/2 rather than 5 1/2 scale rows above the lateral line (Carpenter & Allen 1989). Widespread in the West Pacific.

Gymnocranius grandoculis (Valenciennes, 1830)

Gymnocranius griseus (*non-Schlegel, 1843*) Myers 1989 (p. 144, fig. 1a)

UGM 6580, 252 mm SL, 45–60 m, Ritidian Point, Guam, hook and line by J. DeVillie and B. McClellan, 25 May 1985.

Dorsal rays X, 9–10; anal rays III, 9–10; pectoral rays 14 (upper 1–2 and lowermost unbranched); 5 1/2 scale rows above the lateral line; pored lateral line scales 49–52 (+ 1–2 on caudal peduncle); gill rakers 2–4 + 5–6 (all nodular with small spines); depth 2.4 in SL. This species usually has horizontal blue lines on the snout. Widespread in the Indo-Pacific.

Gymnocranius griseus (Schlegel, 1843)*

TC 83-00067, Santa Rosa Reef (Fig. 5b).

Previous records of this species from the Marianas are based on misidentifications of other species. Bay of Bengal to the western Pacific as far east as the Marianas.

Gymnocranius microdon (Bleeker, 1879)*

UGM 6411, 219 mm SL, Ritidian Point, Guam, hook and line, 16 October 1982; UGM 6695, 400 mm SL, an unknown island or bank within the CNMI, ca. 1982; UGM 6443, 417 mm SL, hook and line with night light by crew of RV Townsend Cromwell, 17 Mile Bank, Guam (TC-78-02-Sta. 14).

Dorsal rays X, 9–10; anal rays III, 9–10; pectoral rays 14 (upper 1–2 and lowermost unbranched); 5 1/2 scale rows above the lateral line; pored lateral line scales 49–52 (+ 1–2 on caudal peduncle); gill rakers 2–4 + 5–6 (all nodular with small spines); principle caudal rays 17 (UGM 6443 only); greatest depth 2.64 in

SL (UGM 6411 only). After freezing, snout of UGM 6443 with numerous bluish spots, the largest surrounding the nostrils and extending along the lower front of the orbit. West Pacific.

Gymnocranius sp.

Gymnocranius griseus Myers & Shepard 1980 (p. 320, fig. 8)?

Gymnocranius lethrinoides (non-Bleeker): Myers 1989 (p. 144, fig. 1c).

Based on a photograph of a 402 mm SL specimen caught hook and line off Guam. Other specimens have been examined, but none kept. Superficially resembles *G. euanus*, but has 5 1/2 scale rows above the lateral line. Apparently an undescribed species (Carpenter & Allen 1989). West Pacific.

Lethrinus amboinensis Bleeker, 1854

UGM 6702, 212 mm SL, Guam, hook and line off Puga Patch Reef, Guam, 15 September 1991 (Fig. 5c).

Dorsal rays X, 8; anal rays III, 7; pectoral rays 13 (upper two and lowermost unbranched; tubed lateral line scales 48; 4 1/2 scale rows above lateral line; inner axil of pectoral fin naked. Myers (1991 p. 146) included Guam in the distribution of this species. Widespread in the West-Central Pacific.

Lethrinus atkinsoni Seale, 1909

Lethrinus mahsena (non-Forsskål) Myers & Shepard 1980 (p. 323, fig. 9).

Lethrinus mahsenoides (non-Valenciennes, 1830) Myers 1989 (p. 147, Fig. 8a).

UGM 6577, 135 mm SL, 1–2 m, moat on n. side of Pago River Channel, Pago Bay, Guam, spear, 30 April 1985; UGM 6603, 147 mm SL, 2–3 m, mixed sand, rubble, and seagrass (*Halodule uninervis*), n. side of Cocos Is., Cocos Lagoon, Guam, spincasting by G. Davis, G. Grimm, and R. Myers, 11 December 1985.

Originally recorded from Guam as *L. mahsena* on the basis of a photograph of a fresh specimen that was not retained. Counts for UGM 6603 are given in parentheses if different from those for UGM 6577: dorsal rays X, 9(8); anal rays III, 8; pectoral rays 13 (upper two and lowermost unbranched; tubed lateral line scales 49(46); 4 1/2 scale rows above lateral line; gill rakers 6(5) + 6(5)(all rudimentary); inner axil of pectoral fin scaled. Widespread in the West-Central Pacific.

Lethrinus erythracanthus Valenciennes, 1830

Lethrinus kallopterus Sato, 1978; Myers 1989 (Pl. 56B).

UGM 6576, 182 mm head length, the posterior portion of body removed by a shark or barracuda, Pati Point, Guam, hook and line, 18 April 1985.

Sato's specimen (UGM 1967, 285 mm SL) could not be located. This is the only other specimen in the UGM collection. Widespread in the Indo-West Pacific.

Wattsia mossambicus (Smith, 1957)

UGM 6519, 310 mm SL, Guam or its offshore banks, data lost (Fig. 5d).

Dorsal rays X, 10; anal rays III, 8; pectoral rays, 14; pored lateral line scales 46; gill rakers 5 + 7. This specimen was discovered in a tub of preserved fishes

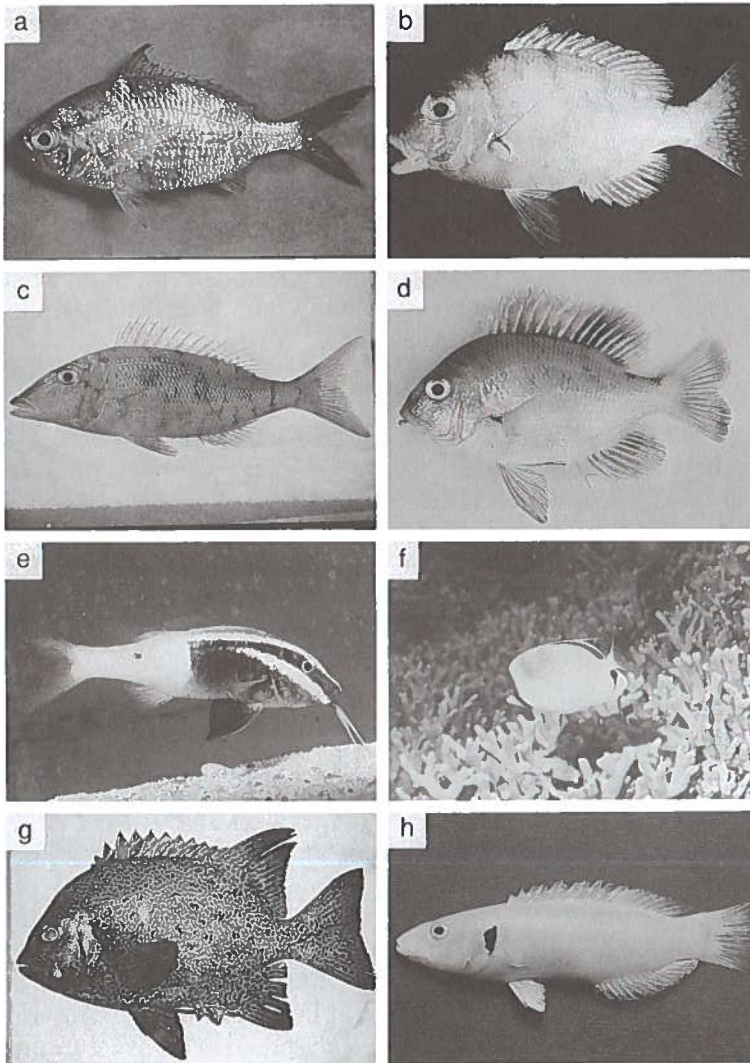


Figure 5. Photographs of new and recent records of fishes from the Marianas. (a) *Gerres oyena*, UGM 6408, 150 mm SL, Guam. (b) *Gymnocranius griseus*, TC 83-00067, Santa Rosa Reef. Photograph by R. Moffit. (c) *Lethrinus amboinensis*, UGM 6702, 212 mm SL, Guam. (d) *Wattsia mossambicus*, UGM 6519, 310 mm SL, Guam or its offshore banks. Photograph by H. T. Kami. (e) *Parupeneus barberinoides* from Cocos Lagoon, Guam. (f) *Chaetodon semeion*, 3 m, Piti, Guam. Photograph by D. M. Ford. (g) *Oplegnathus punctatus*, UGM 6683, 271 mm SL, Guam. (h) *Bodianus tanyokidus*, 157 mm SL from 182–200 m, Guam. Photograph by H. T. Kami.

stored at the Division of Aquatic and Wildlife Resources. All other fishes in the tub that had intact data labels were collected at Guam or its offshore banks from 1966 to 1970. Some of these were catalogued but many were not. This species is otherwise known from the Mozambique Channel, Laccadive Is., East Burma Sea, Ryukyu Is., South China Sea, and Samoa in the depth range of 90 to 150 m.

NEMIPTERIDAE (THREADFIN BREAMS)

Pentapodus caninus (Cuvier, 1830)

Pentapodus macrurus Myers & Shepard 1980; Amesbury & Myers 1982; Myers 1988, 1989.

UGM 6279, 151 mm SL, handlined from ca. 60 m by unidentified fisherman, Tumon Bay, Guam, 14 June 1981.

Dorsal rays X, 9; anal rays III, 7; pectoral rays 15 (upper two and lowermost unbranched); tubed lateral line scales, 49; gill rakers 5+5. Previously recorded from Guam as *P. macrurus* on the basis of underwater photographs taken in Apra Harbor where it is quite common to depths as shallow as 3 m (Myers & Shepard 1980; Amesbury & Myers 1982 Pl. 58C). Widespread in the Indo-West Pacific (Russell 1990).

MULLIDAE (GOATFISHES)

Parupeneus barberinoides (Bleeker, 1852)

Based on a photograph (Fig. 5e) of an aquarium specimen caught in shallow water in Cocos Lagoon, Guam in 1988 by S. Amesbury and party.

Parupeneus heptacanthus (Lacépède, 1802)

Myers 1989 (p. 149 fig. 3)

UGM 6393, 212 mm SL, ca. >30 m, northwest coast of Guam, hook and line, 8 August 1982.

The specimen could not be located for further examination, but a photograph of it was published by Myers (1989, p. 149, fig. 3). The dark red scale above the mid-lateral line clearly identifies this specimen as *P. heptacanthus*. This species is occasionally caught by hook and line. Widespread in the Indo-Pacific.

CHAETODONTIDAE (BUTTERFLYFISHES)

Chaetodon semeion Bleeker, 1855.

Based on a photograph taken at a depth of about 3 m at the "Piti Bomb Holes", Piti, Guam by D. M. Ford in February, 1993 (Fig. 5f). Previously reported from Guam on the basis of individuals observed by P. Gates and T. Potter (Myers 1989). Elsewhere this species often occurs as pairs. All four sightings at Guam were of solitary individuals at different locations and times, indicating that this species occurs there only as waifs. Widespread in the Indo-Pacific.

POMACANTHIDAE (ANGELFISHES)

Centropyge bicolor (*Bloch, 1787*)

Based on sightings by D. Scaife and J. Eads in the Mamoan Channel area of southern Guam during the late 1970s. Both of these individuals have collected tropical fish commercially for a number of years and are familiar with the unmistakable color pattern of *C. bicolor*. It seems likely that *C. bicolor* occurs in the Marianas as an occasional waif from the Caroline Islands where it is reasonably common. Widespread in the Indo-Pacific.

Genicanthus melanospilos (*Bleeker, 1857*)*

Based on multiple sightings by TJD of members of a harem social group (one male and at least 2–3 females) at Sasanhaya Bay, Rota between 15–17 February 1989. The group inhabited a patch of heavy *Porites rus* coral growth at a depth of 23–25 m on the outer reef slope at a place known locally as “Coral Gardens”.

PENTACEROTIDAE (ARMORHEADS)

Pseudopentaceros wheeleri *Hardy, 1983*

UGM 6511, 41.6 mm SL, from the stomach of an 84.5 cm FL *Thunnus albacares*, Rota Banks, 28 September, 1982.

Dorsal rays XIV; anal rays III (possibly one is missing); depth at first anal spine 3.44 in SL. Nearly all the scales are missing from this partially digested specimen and the fin rays cannot be counted without loss or severe damage. This species has generally been referred to as the “lean” and “intermediate” morphotypes of *Pentaceros richardsoni* in the recent literature. Nomenclature follows Humphries et al. (1989). This may be the southern most record of this pelagic species. Known otherwise from the North Pacific from Japan to North America, north to the Aleutian Islands, south to the Emperor Seamounts and Hawaiian Islands.

KYPHOSIDAE (RUDDERFISHES)

Kyphosus bigibbus *Lacépède, 1802*

UGM 6715, 173 mm SL, speared, from Saipan market sample by J. Gourley, 15 March 1993.

Dorsal rays XI, 12; anal rays III, 11; pectoral rays 20 (upper 2 unbranched); pored lateral line scales 58; gill rakers 6 + 17. We have also examined numerous photographs of xanthic individuals taken at the northern Marianas islands of Pagan and Maug by P. Schupp. This is the only Indo-Pacific species *Kyphosus* known to have a xanthic phase. Normal phase individuals may be distinguished from the superficially similar *K. vaigiensis* on the basis of their lower soft dorsal ray (11–13, usually 12 vs. 13–15, usually 14), soft anal ray (10–12, usually 11 vs. 12–14, usually 13), and lower limb gill raker (17–20 vs. 22–24) counts. Previously reported from the Marianas on the basis of specimens from Guam with 12 dorsal

soft rays and 11 anal soft rays that were not retained (Myers 1989). Primarily antiequatorial but widespread in the Indo-Pacific.

OPLEGNATHIDAE (KNIFEJAWS)

Oplegnathus punctatus (*Temmink & Schlegel, 1844*)*

UGM 6683, 271 mm SL, Pagat, Guam, spear by free diving by L. Peters, 3 August 1989 (Fig. 5g)

Dorsal rays XII, 16; anal rays III, 12; pectoral rays 19 (upper 2 unbranched); gill rakers 4 + 16; depth at pelvic fin origin 1.9 in SL. This distinctive species has also been photographed at Uracas Island, northern Marianas and observed at Maug Island (by TJD). It is a primarily subtropical-warm-temperate species known otherwise from southern Japan to southeast China and northern Luzon, and the Hawaiian Islands (Randall et al. 1993).

KUHLIIDAE (FLAGTAILS)

Kuhlia marginata (*Cuvier, 1829*)

Observed among an aggregation of *K. mugil* inside the Blue Grotto, Saipan by RFM on 21 February 1988. Widespread in the Indo-Pacific as far west as Sri Lanka.

CIRRHITIDAE (HAWKFISHES)

Oxycirrhites typus *Bleeker, 1857*

Based on sightings made at Guam by John Eads, who has collected this species commercially in Hawaii. All were observed on the black coral *Antipathes* sp. at depths exceeding 46m. Widespread in the Indo- and tropical east Pacific.

POMACENTRIDAE (DAMSELFISHES)

Chromis ternatensis (*Bleeker, 1856*)

Based on a photograph (Myers 1989 Pl. 76H) of one of two individuals observed at a depth of 16 m on a coral pinnacle off Gabgab Beach, Apra Harbor, Guam on 17 August 1982. Apparently quite rare in the Marianas although common throughout the remainder of Micronesia.

Lepidozygus tapienosoma (*Bleeker, 1856*)

UGM 6344, 59.3 mm SL, ca. 18 m, terrace on outer reef slope, s. tip of Cocos Barrier Reef, Guam, handnet by D. Baker, 26 March 1982; UGM 6507, 38.4 mm SL, regurgitated from an unidentified fish, seamount "B", west of Anatahan Is., northern Marianas, by R. L. Kock, RV Typhoon, 17 June 1980.

The following counts were taken on UGM 6344 only: dorsal rays XII, 14; anal rays II, 14; pectoral rays 22 (upper two and lower five unbranched); lateral line incomplete, ending beneath the base of the 7th soft dorsal ray, tubed scales, 19; gill rakers 8 + 18. Several other individuals were observed by the collector of UGM 6344. This planktivorous species typically occurs in aggregations along the

upper margins of current-swept promontories of outer reef slopes. Widespread in the Indo-Pacific.

Neopomacentrus violascens (*Bleeker, 1856*)

Myers 1989 (Pl. 82H).

UGM 6433, 18.5 mm SL, 29 m, GORCO Pier, Apra Harbor, Guam, handnet by R. Myers, 30 April, 1983.

Dorsal rays XIII, 11; anal rays II, 11; pectoral rays 17; pored lateral line scales 17 in upper series, 10 in lower series (excluding the second scale which lacks a pore). This species was among several found on a large encrusted concrete block resting in fine silt at a depth of 29 m in a very turbid area of Apra Harbor. Since then, large swarms of this species have been observed elsewhere in Apra Harbor under mooring buoys and around their anchor chains to a depth of 32 m. This habitat does not seem to be utilized by other planktivorous pomacentrids. Although widespread along continental coasts of southeast Asia and the Indo-Australian region, *N. violascens* is not known elsewhere in Micronesia. Considering this as well as its complete absence from natural substrates, it seems likely that its presence in Apra Harbor is the result of an accidental introduction via bilge water or from a coral-encrusted naval barge.

LABRIDAE (WRASSES)

Bodianus anthioides (*Bennett, 1831*)

UGM 5421, 3: 81–110 mm SL, Anatahan Is., northern Marianas, speared by R. S. Jones and collaborators. 14 February 1974.

Counts for the smaller two specimens are given in parentheses if different from those of the largest specimen: dorsal rays XII, 11 (10); anal rays III, 13 (12); pectoral rays 16 (16–17; uppermost (or upper two) and lowermost unbranched); pored lateral line scales (68 mm SL specimen only due to spear damage on the other two), 30 (+2 on caudal peduncle). This distinctive species has also been observed at a depth of 42 m along a vertical wall adjacent to the "Blue Hole", off Orote Peninsula, Guam. It appears to be extremely rare at Guam but may be more common and shallow-dwelling in the northern Marianas. Widespread in the Indo-Pacific.

Bodianus loxozonus (*Snyder, 1908*)

Myers 1989 (p. 177, fig. 2: UGM 6638)

UGM 6638, 245 mm SL in terminal color phase, ca. 50–56 m, e. side of Galvez Banks, Guam, hook and line by J. Benevente, 10 August 1986.

Dorsal rays XII, 10; anal rays III, 11; pectoral rays 16; tubed lateral line scales 32 (+2 on caudal peduncle); gill rakers 6 + 13. Apparently quite rare in the Marianas, where this specimen is the only one encountered by RFM during 18 years of diving and examining fishermen's catches. Tropical West Pacific.

Bodianus tanyokidus *Gomon & Madden, 1981*

Based on a photograph on file at the Division of Aquatic and Wildlife Resources of a terminal male, 157 mm SL, taken from a depth of 182–200m off

Haputo, Guam on 27 May, 1970 (Fig. 5h). The specimen has apparently been lost.

Halichoeres ornatissimus* (Garrett, 1863)

Based on a photograph taken at a depth of 12 m on the seaward reef slope west of Managaha Is., Saipan on 8 October 1990 (Fig. 6a). This species was relatively common at this site and occurred with *H. biocellatus* which was also relatively common. Recently observed in Apra Harbor at the end of the Glass Breakwater, Guam. Both species have a similar color pattern when small. However the anterodorsal green dots of *H. ornatissimus* have a metallic iridescence not apparent in *H. biocellatus*. Widespread in the West-Central Pacific.

***Labroides pectoralis* Randall & Springer, 1975.**

UGM 5524, 45 mm SL, Agrihan Is., northern Marianas, speared by R. S. Jones and collaborators, 12 February 1971.

Dorsal rays IX, 11; anal rays II, 10; pectoral rays 12; pored lateral line scales 18 + 7 (including one missing scale prematurely pored). RFM has also observed and photographed this species at Guam (Amesbury & Myers 1982) and observed it at Pagan. Widespread in the tropical west Pacific and eastern Indian Oceans.

***Oxycheilinus arenatus* Valenciennes, 1840**

Cheilinus arenatus Myers 1989 (Pl. 89D)

UGM 6276, 106 mm SL, 24 m, inside the Blue Hole, s. side of Orote Peninsula, Guam, handnet by R. Myers, 10 June 1981.

Dorsal rays, IX, 10; anal rays III, 8; pectoral rays 12 (distal 2/3 of all rays lost after sojourn in aquarium); tubed lateral line scales 15 in upper series, 7 on lower series (+1 on caudal peduncle); gill rakers 5 + 7. One to three individuals of this species are generally present at a depth of 24 to at least 30 m inside the Blue Hole on any given visit, but it has not been observed by RFM elsewhere in the Marianas. Widespread in the Indo-Pacific.

***Oxycheilinus bimaculatus* Valenciennes, 1840**

Based on an observation by RFM of a solitary male at a depth of 30 m over sand and rubble at the base of a steep channel slope at the south side of the entrance to Apra Harbor, Guam on October 2, 1978. Widespread in the Indo-Pacific.

***Oxycheilinus digrammus* (Lacépède, 1801)**

Cheilinus digrammus Myers 1989 (Pl. 90C)

UGM 6442, 228 mm SL, ca. .5 km n. of Gun Beach, Guam, speared by L. Standridge, 21 October 1983.

Dorsal rays IX, 10; anal rays III, 7; pectoral rays 11 (uppermost unbranched); pored lateral line scales 15 + 8 (including one past the hypural); gill rakers 3 + 10. This species has also been observed and photographed in Apra Harbor. It is relatively uncommon in the Marianas. Widespread in the Indo-Pacific.

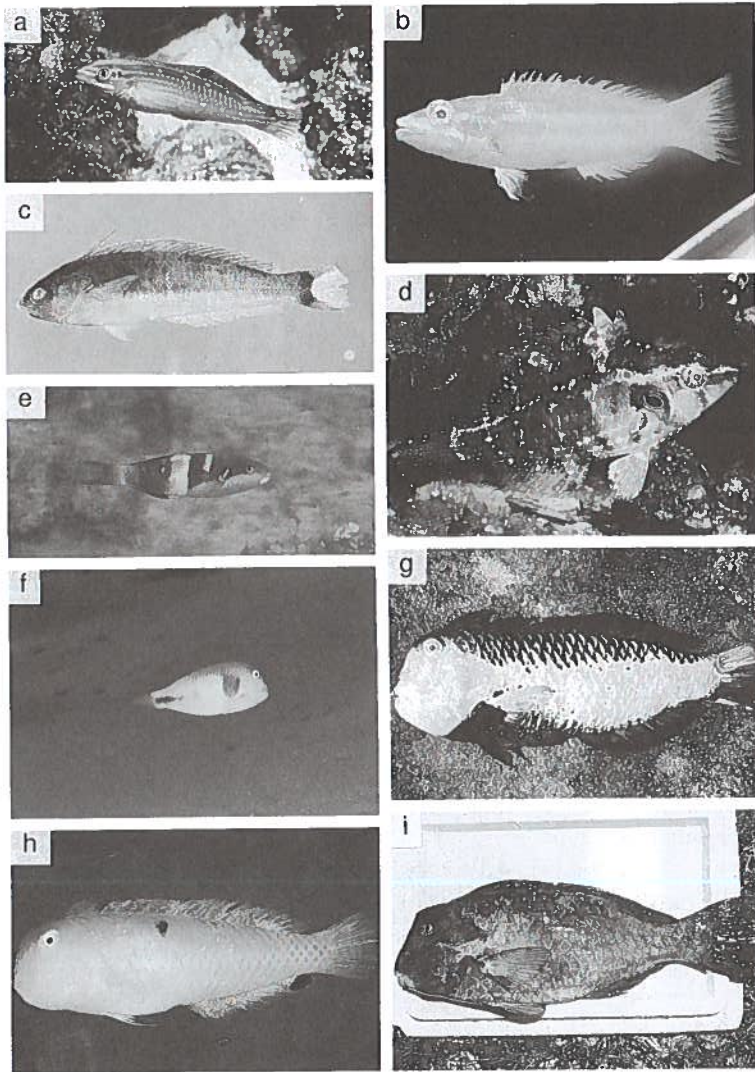


Figure 6. Photographs of new and recent records of fishes from the Marianas. (a) *Halichoeres ornatissimus*, 12 m, Saipan. (b) *Polylepion russelli*, NMFS lot no. 83-00090-2, 203 mm SL from 353 m, Anatahan. Photograph by R. Moffit. (c) *Pseudocoris yamashiroi*, UGM 6706, 98 mm SL from ca. 20 m, Guam. (d) *Pteragogus emeacanthus*, ca. 4 cm SL, Apra Harbor, Guam. Photograph by R. H. Kuitert. (e) *Thalassoma janseni*, 1 m, Guam. (f) *Xyrichtys celebicus*, ca. 9 cm SL, 8.5 m, Guam. (g) *Xyrichtys geisha*, BPBM 36533, 360 mm SL, Guam. (h) *Xyrichtys melanopus*, UGM 6708, 121 mm SL from 64 m, Guam. (i) *Bolbometapon muricatum*, 486 mm SL, 3.75 kg, Guam.

Oxycheilinus orientalis *Günther, 1862*

Cheilinus celebecus (*non-Bleeker*) *Randall & Myers 1983* (p. 89, fig. 110).

Common on outer reef slope habitats. Widespread in the western and central Pacific.

Polylepidion russelli (*Gomon & Randall, 1975*)

NMFS lot no. 83-00090-2, 203 mm SL, 353 m, shrimp trap, off Anatahan Is., northern Marianas, (TC 82-02 sta. 47: 16° 21.6'N, 145°43.9'E), crew of the RV Townsend Cromwell, 28 April 1983.

Identification based on a photograph (Fig. 6b) of the above mentioned specimen kindly provided by R. Moffit. This deepwater species is extremely rare in collections. Widespread in the Indo-Pacific.

Pseudodax moluccanus (*Valenciennes, 1839*)

Myers 1989 (Pl. 89C).

At least three adults have been observed and photographed (Myers 1989) at a depth of about 20 m outside the Blue Grotto, Saipan on separate occasions during 1987–88. Also observed by one of us (RFM) at a depth of 3 m off the northwest coastline of Pagan Island, northern Marianas on March 7, 1981. Widespread in the Indo-Pacific.

Pseudocoris yamashiroyi (*Schmidt, 1930*)*

UGM 6706, 98 mm SL, male, handnet by B. Cornelius, e. side of Cocos Lagoon, ca. 20 m, 1 March 1992 (Fig. 6c).

Dorsal rays IX, 12; anal rays III, 12; pectoral rays 14 (upper 2, lowermost unbranched). Widespread in the Indo-Pacific from the Chagos Archipelago to the Marshall Islands.

Pseudojuloides atavai *Randall & Randall, 1981*

Myers 1989 (Pl. 100G).

An initial phase fish was recently photographed at Saipan. The photographic records from the Marianas as well as a photograph of an initial phase fish taken at Wake Island (in the possession of RFM, but too poor to reproduce) are the only evidence of this species occurring north of the equator. Widespread on the Pacific Plate.

Pseudojuloides cerasinus (*Synder, 1912*)

Based on an observation by RFM of a terminal male and several primary phase individuals at a depth of 24 m on the submarine terrace off Aluton Island, Agat Bay, Guam on September 17, 1978. Widespread in the Indo-Pacific.

Pterogogus enneacanthus (*Bleeker, 1852*)*

Based on a photograph (Fig. 6d) taken at a depth of 12 m inside Apra Harbor near the west end of Calalan Bank, Guam during August, 1990. Several individuals were observed in the area which consisted of a gently sloping bottom with

low profile corals, sand patches and relatively thick algal growth. This species differs from *P. cryptus* and *P. guttatus* by having IX, 11 rather than X, 9–10 dorsal rays, a better defined opercular spot, and males with filamentous extensions on the first two rather than the first four interspinous dorsal membranes. We follow Kuitert (1993) in regarding *P. amboinensis* (Bleeker, 1856) as the male and a synonym of *P. enneacanthus*. Western Pacific from Indonesia to the Coral Sea, south to southeastern Australia.

***Thalassoma janseni* (Bleeker, 1856)**

Based on a photograph (Fig. 6e) taken at a depth of 1 m on the reef margin at Gabgab Beach, Apra Harbor, Guam on 17 August 1982. Another solitary individual observed once along the reef margin at Tanguisson Point, Guam constitutes the only other observation of this species by the authors in the Marianas. This species appears to occur there only as non-reproducing waifs. Widespread in the Indo-West Pacific.

***Xyrichtys aneitensis* (Günther, 1882)**

Myers 1989 (Pl. 93A–B)

UGM 6438, 199 mm SL, from a local fisherman's catch sold to the Guam Fishermen's Cooperative, 12 September 1983; UGM 6633, 2: 45–57 mm SL, over open sand, 17 m, Hap's Reef, Agat Bay, Guam, handnet, 30 June, 1986; UGM 6709, 165 mm SL, hook and line by Billy Wong, 5 July 1992.

Counts are for UGM 6438 and UGM 6709. Dorsal rays IX, 12; anal rays III, 12 (1st spine not visible); pectoral rays 11 (uppermost unbranched); pored lateral line scales 20–22+4–10 (including one past the hypural); gill rakers 7+10 (UGM 6438 only). This species periodically shows up in local hook and line catches. Widespread in the Indo-Pacific.

Xyrichtys celebicus* (Bleeker, 1856)

BPBM 36534, 2: 68–85 mm SL, large expanse of carbonate sand, 8.5 m, Calalan Bank, Guam, handnet by R. Myers and G. Davis, 1 September 1989.

The collected specimens came from a group of four to six, at least two of which were photographed *in situ* (Fig. 6f). They are currently under study by John Earle who is revising the genus. Otherwise known from the Moluccas, Philippines, Samoa, and Bikini Atoll.

Xyrichtys geisha* Araga & Yoshino 1986

BPBM 33483, 278 mm SL, ca. 160 m, Dump Coke, Tinian, bottom fishing, 15 January 1988; BPBM 36533, 360 mm SL, bottom fishing by E. Aquai and C. Mendiola off Tarague, Guam, 25 April 1989 (Fig. 6g).

Counts for UGM 6680 are in parentheses if different from CNMI 025: Dorsal rays IX, 12; anal rays III, 12; pectoral rays 12 (including rudimentary upper ray; all rays divided to base); pored lateral line scales 19+5 (+1 on caudal peduncle base on UGM 6680); lateral scale rows 25; gill rakers 4+7, all rudimentary (6+11, including rudiments, but most more developed); greatest depth 2.7–3.0 in

SL. This distinctive and large *Xyrichtys* apparently occurs at depths greater than 160 m. It is caught seasonally, from "winter through spring" off Okinawa, its only other known locality (Masuda et al. 1984).

Xyrichtys melanopus* Bleeker, 1857

UGM 6708, 121 mm SL, 64 m, off Ague point, Guam, hook and line by M. Rendall, 2 July 1992 (Fig. 6h).

Dorsal rays IX, 12; anal rays III, 12; pectoral rays 12; pored lateral line scales 20 + 5. Widespread from scattered localities in the Indo-West Pacific.

SCARIDAE (PARROTFISHES)

***Bolbometapon muricatum* (Valenciennes, 1839)**

Amesbury & Myers 1982 (p. 101).

Based on a photograph (Fig. 6i) of a specimen 486 mm SL and 3.75 kg speared off Ritidian Point, Guam during the summer of 1980 and sold to a local fish outlet. This relatively uncommon species is extremely wary and difficult to approach during the day. Large catches, including some individuals as large as 52 kg, are occasionally made by spearfishermen at night. Widespread in the Indo-Pacific.

Scarus atropectoralis* Schultz, 1958

UGM 6710, 347 mm SL initial phase, spear at 36 m depth, outer reef slope off Inarajan, Guam by D. Nelson, 5 August, 1992 (Fig. 7a).

Characterized by 3 scale rows on the cheek, 6 predorsal scales, a lunate caudal fin, and bright red initial phase color. The collector reported that he had seen a few other individuals on rare occasions at the same site. Previously reported from Taiwan, Sulawesi, Palau, and the Ryukyu and Marshall Islands.

Scarus dimidiatus* Bleeker, 1859

UGM 6745, 208 mm SL terminal phase, spear at 3 m depth, Cocos Lagoon, Guam by J. and B. Anderson, 3 April, 1995 (Fig. 7b).

Characterized by 3 scale rows on the cheek, 6 predorsal scales, absence of canines on the sides of the dental plates, lips nearly completely covering the dental plates, and truncate caudal fin in adults. This distinctively patterned species is common in Palau and occurs eastward through the Federated States of Micronesia to the southern Marshalls. The previous absence of records from the relatively well-sampled Marianas indicates that it probably occurs there only as a waif. Western Pacific, from Indonesia and the Philippines to Samoa, n. to the Ryukyus.

***Scarus festivus* Valenciennes, 1840**

Based on a photograph (Fig. 7c) taken at a depth of 11m on the outer reef slope off Orote Peninsula approximately 0.5 km east Orote Island, near the entrance to Apra Harbor, Guam on 31 August 1985. A specimen speared near Ritidian Point, Guam was also examined but was sold before it could be retained.

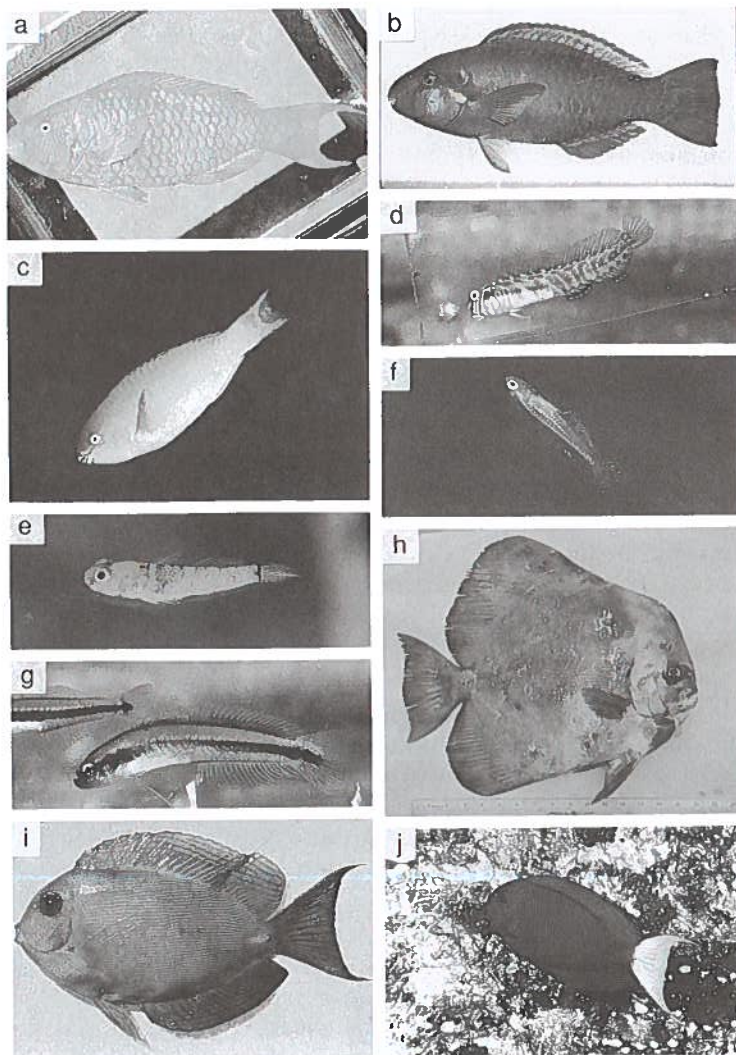


Figure 7. Photographs of new and recent records of fishes from the Marianas. (a) *Scarus atropectoralis*, UGM 6710, 347 mm SL, initial phase from 36 m, Guam. (b) *Scarus dimidiatus*, UGM 6745, 208 mm SL, terminal phase from 3 m, Guam. (c) *Scarus festivus*, 11m depth, Guam. (d) *Omobranchus elongatus*, UGM 6712, 24.5 mm SL, Guam from underside of hull of U. S. Navy drydock towed from Subic Bay, Philippines. (e) *Cabillus tongarevae*, 21 mm SL, from a tidepool, Guam. (f) *Trimma taylori*, Palau. Photograph by Hiroshi Nagano. (g) *Parioglossus philipinus*, 30 mm SL, Guam, from beneath hull of U. S. Navy drydock towed from Subic Bay, Philippines. (h) *Platax teira*, 332 mm SL, Saipan. Photograph by J. Gourley. (i) *Acanthurus nubilus*, UGM 6701, 140 mm SL, Guam. (j) *Acanthurus nubilus*, 40–45 m, Guam. Photograph by R. H. Kuiter.

This species is relatively rare in the southern Marianas. Widespread in the Indo-Pacific.

Scarus frenatus *Lacépède, 1802*

UGM 6591, 201 mm SL, terminal phase, reef front at Agat Bay, Guam, speared by S. G. Nelson, 1982.

The distinctive terminal phase color pattern shows up well on this specimen after 13 years in preservative. A juvenile has been photographed at a depth of 1m inside the reef crest of Luminao Barrier Reef, Guam. This species is apparently rare in the southern Marianas. Widespread in the Indo-Pacific.

Scarus oviceps *Valenciennes, 1839*

Based on numerous observations by RFM of both primary and terminal phase individuals on the subtidal lagoon reef platform of Luminao Reef, Guam. Widespread in the Indo-Pacific.

Scarus n. sp.

Myers 1989 (Pl. 111G).

This species is being described by J. E. Randall and R. F. Myers.

PINGUIPEDIDAE (SANDPERCHES)

Parapercis multiplicata *Randall, 1984**

UG6717, 5: 28–72 mm SL, Sasanhaya Bay, Rota, 8–9 July, 1991 by T. J. Donaldson and J. E. Gourley; quinaldine and hand nets.

The following counts and measurements were taken from the largest specimen: dorsal rays V, 21; anal rays I, 16; pectoral rays 15; lateral line scale rows, 58; gill rakers 4 + 8; depth 5.9 in SL. The presence of faint spots dorsally on the head indicate that this specimen is a male, while others in the collection with well-developed spots are probable females. The color pattern when fresh and after preservation matches that given by Randall (1984). The narrower body of the specimen examined (5.9 vs 5.1–5.7 in SL) could be due to shrinkage after nearly 2 years preservation in 95% ethanol prior to fixing in formalin. Our specimens were collected from several social groups inhabiting a mound of coral rubble on a sand flat at the base of the reef slope at a depth of 26–28 m. Other individuals were also observed on a rubble flat at a depth of 30 m off Songsong Village, Rota. Details of social organization and ecology will appear elsewhere (Donaldson, in prep.). Previously reported from New Caledonia, northwestern Australia, Okinawa, the Coral Sea, and Indonesia (Randall 1984; Randall et al. 1990).

BLENNIIDAE (BLENNIES)

Glyptoparus delicatulus *Smith, 1959*

Istiblennius gibbifrons (non-Quoy & Gaimard) Randall & Myers 1983 (p. 80, fig. 107); Myers 1989 (Pl. 115C).

We concur with Springer's (pers. com.) suggested identification. Widespread in the Indo-West Pacific.

***Omobranchus elongatus* (Peters, 1855) ***

UGM 6712, 24.5 mm SL, inner Apra Harbor, Guam from underside of hull of U. S. Navy drydock recently towed from Subic Bay, Philippines, 3 June 1992 (Fig. 7d).

Dorsal rays VIII, 18; anal rays 22 elements; pectoral rays 13. Presumably introduced to Guam after being transported among biofouling on the hull of the drydock. Widespread in the Indo-West Pacific from East Africa to Ambon, Indonesia and the Philippines.

***Xiphasia matsubaraii* Okada & Suzuki, 1952**

UGM 6348, unmeasured, from the stomach of a *Coryphaena hippurus* collected off Guam, 15 February 1882; UGM 6508, 236 mm TL, above Pathfinder Reef (16°32' N, 143°07' E), northern Marianas, RV Typhoon, 1980; UGM 5677, 214 mm TL, from the buccal cavity of a *C. hippurus*, west of Anatahan, northern Marianas, 10 April 1971.

This highly specialized blenniid apparently rises near the surface at night when it may be attracted to light. It is frequently found in the stomachs of pelagic gamefishes. Previously recorded from the northern Marianas (Smith-Vaniz 1976). Widespread in the Indo-West Pacific.

CALLIONYMIDAE (DRAGONETS)

***Synchiropus morrisoni* Schultz, 1960**

Myers 1989 (Pl. 117B, Guam).

Based on a photograph of a presumed female approximately 3 cm SL taken at a depth of 29 m off Cabras Island, Guam on 5 August 1984. Widespread in the Indo-Pacific.

***Synchiropus* sp.**

Myers 1989 (Pl. 117D, Rota).

Photographs of a courting male and female, each approximately 2 cm SL were taken at a depth of 9 m on the bottom of the west harbor, Rota on 4 September, 1982. This probable undescribed species closely resembles *S. kiyooae* Fricke & Zaiser 1983.

GOBIIDAE (GOBIES)

***Amblyeleotris fasciata* (Herre, 1953)**

Amblyeleotris sp. Myers & Shepard 1980 (p. 323, fig. 13)

UGM 5611, 2: 59–65mm SL, 6–7.5m, Maug, northern Marianas, 10 February 1971, hand grenade by R. S. Jones and collaborators.

The following counts were made on the larger of the two specimens (now 63mm SL): dorsal rays VI-I, 12; anal rays I, 12; pectoral rays 19 (all branched); vertical scale rows to end of hypural, ca. 75. Widespread in the Indo-Pacific.

Bryaninops erythroptus (*Jordan & Seale, 1906*)*Myers 1989 (p. 232)*UGM 6250, 4: ca. 14–15 mm SL, 1–3 m, Sasa Bay, Guam, on *Porites cylindrica*, 31 July, 1980.

The following counts were taken from two specimens, 14.1–14.9 mm SL: D VI + 8; 8 anal elements (possibly I,7); P 14; LR ca. 37. Widespread in the Indo-Pacific from the Chagos Archipelago to Samoa.

Bryaninops natans *Larson, 1985**Myers 1989 (Pl. 122J)*

UGM 6648 (formerly 6242), 2: 8.4–14.0 mm SL, 14 m, Western Shoals, Apra Harbor, Guam, 28 Mar. 1980.

Common at depths of 12 to Over 20 m in Apra Harbor, Guam where it hovers above *Acropora* corals. Widespread in the Indo-Pacific.

Cabillus tongarevae (*Fowler, 1927*)*

Based on a photograph of a 21 mm SL specimen taken from a tidepool at Gun Beach, Guam, ca. 1979 (Fig. 7e). The specimen has since been lost. Identity based on the photograph determined by H. K. Larson. Color light tan with dark brown markings including a thin bar at the base of the caudal fin. Widespread in the Indo-Pacific.

Coryphopterus signipinnis (*Hoese & Obika, 1988*)*Fusigobius signipinnis* *Myers 1989 (Pl. 123J, Guam)*

UGM 6265; 6: 20.3–33.5 mm SL, 1–3m, Sasa Bay, Guam, handnet by R. Myers, 30 July 1980.

Dorsal rays 6 + 10–12; anal rays 10–11; pectoral rays about 16–17 (for 3 specimens, 20.3–33.5 mm SL). Abundant over silty-sand patches near reefs in Apra Harbor, Guam. Widespread in the Indo-Pacific.

Cryptocentrus caeruleomaculatus (*Herre, 1933*)*Cryptocentrus octofasciatus* *Myers 1989 (Pl. 120B, Guam)*.

UGM 6392, 2: 42.1–43.0 mm SL, 3m, Fouha Bay, Guam, spear by R. Myers; UGM 6405 44.2 mm SL, fish kill, Togcha reef flat, Guam, 27 September 1982; UGM 6597, 4: 41–50 mm SL, same data as UGM 6405.

The following counts were taken for UGM 6405 only: dorsal rays VI–I, 10; anal rays, I, 9; pectoral rays 16; pelvic rays 5. This species is common in protected nearshore waters subject to silt-laden terrestrial runoff. It inhabits burrows constructed by an olive alpheid prawn in dark silty sand from the lower intertidal to a depth of 4m or more. *C. octofasciatus* is a junior synonym of *C. cryptocentrus*, an Indian Ocean species. Widespread in the Indo-West Pacific.

Cryptocentrus strigiliceps (*Jordan & Seale, 1906*).

Based on a photograph taken at a depth of 6 m, Toguan Bay, Guam on 2 January 1984 (*Myers 1989 Pl. 120C*). Widespread in the Indo-Pacific.

Ctenogobiops feroculus *Lubbock & Polunin, 1977*

Myers 1989 (Pl. 120E, Guam).

UGM 5804, 26.0 mm SL, Tepungan Channel, Piti, Guam, 26 September 1972; UGM uncatalogued 27.2 mm SL. The following counts are for the uncatalogued specimen only: Dorsal rays VI-I,11; anal rays I,11; pectoral rays 19 (upper two and lowermost unbranched). Abundant in sheltered lagoon waters free of terrestrial runoff where the substrate consists of fine to moderately coarse white carbonate sand from depths of 1 to at least 25m. It usually occurs in pairs in a burrow constructed by *Alpheus* sp. Widespread in the Indo-Pacific.

Ctenogobiops pomastictus *Lubbock & Polunin, 1977*

Myers & Shepard 1980 (p. 329, fig. 15); Myers 1989 (Pl. 120F, Guam).

UGM 6604, 2: both 39 mm SL, 1.5 m, Luminao Barrier Reef, 4 m from ocean side of the Glass Breakwater, ca. 1985.

Dorsal rays VI+I, 10; anal rays I, 9; pectoral rays 20; lateral scale rows >50. Abundant in the same habitat as *C. feroculus*. Widespread in the Indo-West Pacific.

Exyrias puntang (*Bleeker, 1851*)

UGM 6656, 2: 38–41 mm SL, inner Piti Channel, Guam, R. Myers, 30 July 1980.

Dorsal rays VI+I, 10; anal rays I, 9; pectoral rays 16–17; lateral scale rows ca. 28; predorsal scales 8 on midline + 2 more on sides adjacent to dorsal fin origin; cheek scaled. Widespread in the Indo-West Pacific.

Gnatholepis scapulostigma *Herre, 1953*

Based on an underwater photograph taken at a depth of 4 m in Tepungan Channel, Guam on 20 October 1985 (Myers 1989, Pl. 124B). Known otherwise from the Philippines, Ryukyu, and Marshall Islands, and Great Barrier Reef.

Gnatholepis *sp.*

Based on an underwater photograph taken at a depth of 18 m Agat Bay, Guam on 11 March 1980 (Myers 1989, Pl. 124C). Common on sandy patches of outer reef slopes below the effects of surge.

Mahidolia mystacina (*Valenciennes, 1837*)

Based on a photograph taken at a depth of 16 m Toguan Bay, Guam on 8 June 1985 (Myers 1989, Pl. 121A). The identity was determined by J. E. Randall (pers. com.). This species inhabits the burrow constructed by an olive prawn. The dorsal fin shape and color pattern of this species is apparently sexually dimorphic with that of the Guam specimen corresponding with the female condition. Masuda et al. (1984 Pl. 245B) presented a color photograph of a specimen exhibiting the male condition. Widespread in the Indo-Pacific.

Paragobiodon lacunicolus (*Kendall & Goldsborough, 1911*)

UGM 6596, 18.0 mm SL, in *Pocillopora eydouxi*, 10 m, submarine terrace, Tan-guisson, Guam, quinaldine by T. J. Donaldson, 20 September 1985; UGM 6616,

1 m, reef flat, Piti, Guam, shaken from a piece of *Pocillopora damicornis* by R. F. Myers, 2 March 1986.

The following counts are for UGM 6596 only: dorsal rays VI-I, 9; anal rays I, 9; pectoral rays 20; pored lateral line scales 22. Widespread in the tropical west Pacific.

***Trimma caesiura* Jordan & Seale, 1906**

Trimma sp. 1 Myers & Shepard 1980 (in part).

UGM 6647 (formerly UG4234 in part), 2: 19.1–19.8 mm SL, 3–8.5 m, Double Reef, Guam, fishnox by R. S. Jones and class, 6 Dec. 1969.

The following counts are for the larger of the two specimens: D V-VI+I, 9; A I, 8; P 17; preD scales ca. 8, but midline naked. Identification provided by R. C. Winterbottom who is revising the genus. Otherwise known from Samoa and the Marshall islands.

***Trimma naudei* Smith, 1956**

UGM 4234, 24.9 mm SL, ca. 61 specimens, (8 donated to the Royal Ontario Museum), 3–8.5 m, Double Reef, Guam, fishnox by R. S. Jones and class, 6 Dec. 1969; UGM 6067, 3: 20–24 mm SL, Maug Island, 4–7 m among live corals, chem-fish by M. Gawel and W. Zolan, 19 Jan. 1975.

The following counts were obtained from two specimens of UGM 4234, 21.1–24.9 mm SL: D V-VI+I, 8–9; A I, 8; P 16–17; preD scales ca. 8–9; LR ca. 22–24. Identification provided by R. C. Winterbottom and provisional. Widespread in the Indo-Pacific.

***Trimma okinawae* (Aoyagi, 1949)**

Trimma sp. 1 Myers & Shepard 1980 (in part)

Identification provided by R. Winterbottom (pers. com.). Widespread in the West-central Pacific.

***Trimma taylori* Lobel, 1979**

Based on close observations and a poor photograph taken at a depth of 25 m inside a large cave, the “Blue Hole”, off Orote Peninsula, Guam on 1 June 1985 by RFM. A better photograph from Palau is included to illustrate the species (Fig. 7f). Widespread in the Indo-Pacific.

***Trimma tevegae* Cohen & Davis, 1969**

unid. apogonid Myers & Shepard 1980 (p. 320, fig. 6).

Based on photographs taken at depths of 25–38 m inside a large cave, the “Blue Hole”, off Orote Peninsula, Guam (Myers & Shepard 1980; Myers 1989 Pl. 124J). Widespread in the western Pacific.

***Trimma* sp.**

Based on material sent to R. C. Winterbottom and determined to be an undescribed species known in the literature as DFH sp. 17 (Myers 1988).

Trimmatom eviotops (*Schultz, 1943*)*Trimma eviotops* Myers 1988.

UGM 5607, 12.3–15.7 mm SL, Maug Island, hand grenade by R. S. Jones and party, 10 Feb. 1971; UGM 6063, 4: 11–12 mm SL, Maug Island, 4–7 m among live corals, Chemfish by M. Gawel and W. Zolan, 19 Jan. 1975.

The following counts were taken from the larger specimen of UGM 5607: D 1,9; A I, 8; P 17; outer margins of dorsal, anal, and caudal fins of small specimen of UGM 5607 dusky. Identification confirmed by R. C. Winterbottom, who is revising the genus. Widespread in the Indo-Pacific.

Vanderhorstia ambanoro (*Fourmanior, 1957*)

Based on a photograph taken at a depth of 11 m in Agat Bay, Guam on 25 February 1985 (Myers 1989, Pl. 121C). Unlike most prawn-associated gobies, this species hovers above the entrance of its burrow. Widespread in the Indo-Pacific.

Vanderhorstia *sp.**Vanderhorstia ornatissima* (Myers 1989 Pl. 121B)

Based on a photograph taken at a depth of 4 m in Tepungan Channel, Guam. This species is undescribed (J. E. Randall, pers. com.).

XENISTHMIDAE (WRIGGLERS)

Xenisthmus polyzonatus (*Klunzinger, 1871*)

UGM 6110, 2: 19–22 mm SL, 4–7m, among live corals, inner side of North Island, Maug, northern Marianas, 19 January 1975 by M. Gawel.

The following counts were taken on the larger of the two specimens: dorsal rays VI-I-11; anal rays I, 11; pectoral rays 16. Widespread in the Indo-West-Pacific.

MICRODESMIDAE (DARTFISHES)

Parioglossus philippinus (*Herre, 1945*)*

Uncatalogued, 2: ca. 30 mm SL, inner Apra Harbor, Guam from beneath hull of U.S. Navy drydock recently towed from Subic Bay, Philippines, 3 June 1992 (Fig. 7g).

Dorsal rays VI+18 (at least first 3 rays unbranched); anal rays 19 (last 2 unbranched); pectoral rays 19; head pores ca. 5; body scaled posteriorly. Identification determined by H. Larson (pers. com.). Presumably introduced to Guam after being transported among biofouling on the hull of a drydock. Widespread in the Indo-West Pacific (Rennis & Hoese 1985).

EPHIPPIDAE (SPADEFISHES)

Platax teira (*Forsskal, 1775*)*

CNMI catalogue number unknown, 332 mm SL, Forbidden Island, Saipan, speared by J. Kochi, 28 September, 1993 (Fig. 7h).

Dorsal rays V, 30; anal rays III, 24; pectoral rays 16; pored lateral line scales ca. 44, lateral scale rows ca. 58; paired mandibular pores 5; teeth tricuspid with the central cusp barely larger than the cusp on each side; dorsal contour of nape obtusely angular. Rare individuals observed in Guam's fisheries catch may also be this species, but could not be retained for closer examination. This species is apparently rare in the Marianas and juveniles have not been reported from the area. Previously reported from Micronesia only from Palau. Widespread in the Indo-West Pacific east to Papua New Guinea, north to the Ryukyus.

SIGANIDAE (RABBITFISHES)

Siganus corallinus (*Valenciennes, 1830*)

A single individual observed at Piti Reef Holes, Guam by B. D. Smith in 1988. Probably a waif.

Siganus randalli *Woodland, 1990*

Siganus sp. Myers 1989 (p. 253; no specimens retained).

UGM 6717, 106 mm SL, Cabras boat basin, inner Apra Harbor, Guam, handnet at night by H. Sanger, K. Sonoda, F. Te, and D. Hopper, 10 March 1989.

Pectoral rays 16; gill rakers 5 + 1 + 14, depth 2.0 in SL. Additional specimens from Guam are on deposit at the Bishop Museum. The species is being cultured by the Guam Aquaculture Development and Training Center. At Guam, juveniles occur in mangrove-lined channels in inner Apra Harbor and adults occur in pairs or small aggregations around sheltered coastal reefs. Woodland (1990) included Guam in the distribution of this species based on Myers' (1989) sight record, but did not examine any Guam material. Otherwise known from Pohnpei, Kosrae, Papua New Guinea, and the Solomon Islands.

ACANTHURIDAE (SURGEONFISHES)

Acanthurus dussumieri *Valenciennes, 1835*

UGM 6323, 251 mm SL, Pugua Patch Reef, Guam, speared by P. Lujan, 16 January 1982.

Dorsal rays VIII, 26; anal rays II, 24; pectoral rays 17 (uppermost unbranched). Large specimens are occasionally observed or brought in by spearfishermen working outer reef slopes at depths below 10m. Widespread in the Indo-Pacific.

Acanthurus nubilus (*Fowler & Bean, 1929*)*

UGM 6701, 140 mm SL, w. end of Tumon Bay, Guam, hook and line ca. 75 m, 15 September, 1991 (Fig. 7i).

Dorsal rays X, 24; anal rays II, 23; pectoral rays 16 (uppermost and lower 2 unbranched); depth 2.0 in SL; color when fresh purple with dark brown spots anteriorly and dark brown stripes on sides. Also photographed by R. H. Kuitert at a depth of 40 to 45 m off Cabras Island, Guam in June, 1990 (Fig. 7j). In life, this species often has a white caudal fin and closely resembles *A. thompsoni*, a

planktivore which also occurs along deep dropoffs. Widespread in the tropical western and central Pacific.

Ctenochaetus strigosus (*Bennett, 1828*)

Acanthurus pyroferus *juv.* Myers 1989 (*Pl.* 127E).

Based on photographs of a juvenile taken at a depth of 20 m on 11 May 1980, and an adult taken at a depth of 16 m, both off "Gun" Beach, upper Tumon Bay, Guam on 13 March 1982 (Myers 1989, Pls. 127E and 128F, respectively). Fowler's (1925) listing of this species from Guam was undoubtedly based upon a misidentification since the size given for at least one of his three specimens (233 mm) is considerably larger than any known specimen and his stated maximum size of "457 mm" is considerably larger than any species in the genus. This species is rare in the Marianas. The closely related and more abundant *C. striatus* has a more deeply forked caudal fin and differs in coloration. Widespread in the Indo-Pacific.

Naso brevirostris (*Valenciennes, 1835*)

UGM 6751, 2: 184–217 mm SL, 12 m outer reef slope, west side of Cocos Barrier Reef, Guam, spear at night by A. Torres, and J. Parham, 8 June 1995; UGM 6535, 3: 39–54 mm SL, from the stomach of a *Thunnus albacares* taken off Ritidian Point, Guam, 29 October 1977; UGM 6498, 55.5 mm SL, from the stomach of a 3.7 kg *Coryphaena hippurus* taken off Guam, 1 March 1982.

The following counts are for UGM6751 only: Dorsal rays VI, 28–29; anal rays II, 29–31; pectoral rays 16 (upper two and lowermost unbranched); greatest depth 2.5–2.7 in SL; caudal peduncle with two pairs of fixed blades, each blade barely visible in the smaller specimen, well developed and retrorse in the larger one. Widespread in the Indo-Pacific.

Naso thynnoides (*Valenciennes, 1835*)*

UGM 6714, 230 mm SL, speared at night, w. side of Tinian, 22 February 1991, market sample by T. J. Donaldson and C. M. Falig; UGM 6726: 198–199 mm SL, speared at night among dead coral and rocks along reef front, ca. 12 m, Gun Beach, Guam 12 September 1993 by T. Pitlik.

Dorsal rays IV, 29; anal rays II, 28–29; pectoral rays 17; greatest depth 2.8–3.1 in SL; caudal peduncle with a single pair of flattened, semicircular blades; head without any lump or horn, the dorsal and ventral profiles of head and body nearly symmetrical; remnants of about 30–34 thin dark bars on upper 2/3 of sides. This is the only species of *Naso* occurring in Micronesia that possesses one rather than 2 pairs of caudal blades. Otherwise known from the Indo-West Pacific from East Africa to New Guinea, north to southern Japan.

SPHYRAENIDAE (BARRACUDAS)

Sphyraena flavicauda *Klunzinger, 1870**

UGM 6589, 411 mm SL, 5 m, Cocos Lagoon, Guam, hook and line by H. T. Kami, 30 Oct. 1985 (Fig. 8a).

Dorsal rays V + I, 9, its origin slightly behind tip of pectoral fin; anal rays II, 9; pectoral rays 13; pored lateral line scales 80 (plus 8 on caudal base); 1 gill raker at angle + another on the lower limb; greatest depth, 8.2 in SL; post-orbital length of head 8.6 in SL; orbit 2.2 in post orbital length of head. Widespread in the Indo-Pacific.

Sphyraena qenie *Klunzinger, 1870*

S. qenie *Myers 1989*.

Based on a photograph of a 113.5 cm FL specimen taken between Rota Banks and Guam, date unknown (Fig. 8b). This species differs from other large barracudas with chevron-shaped bars on the sides by the following combination of characters: fins dark, the caudal fin double-emarginate and the last rays of second dorsal and anal fins shorter than the anterior rays; eye relatively large. It is caught more often during early morning, late afternoon, or at night than during the day. Widespread in the Indo-Pacific.

GEMPYLIDAE (SNAKE MACKERELS)

Gempylus serpens *Cuvier, 1831*

UGM 6431, 766 mm SL, nw. coast of Guam, surface trolling at dusk, donated by a fisherman, 12 March 1983 (Fig. 8c); UGM 6490, 4: 74–113 mm SL, from the stomach of an 84 cm FL *Coryphaena hippurus* taken off northern Guam, 14 March 1982; UGM 6491, 295 mm SL, from the stomach of a 44.9 kg *Makaira nigricans* taken in the Rota Banks area, 6 June 1982.

The following counts were taken from UGM 6431 only: dorsal rays XXIX, 12 + 6 finlets; anal rays III, 11 + 6 finlets; pectoral rays 15; pelvic rays I, 3. Although rarely fished, this species is among the most abundant prey of scombroid and coryphaenid fishes taken in the vicinity of Guam. Circumglobal; epi- and mesopelagic.

Lepidocybium flavobrunneum (*Smith, 1843*)*

Based on a photograph of a 1,006 mm SL, 12.7 kg female (Fig. 8d) taken by longline set at night southwest of Guguan Island by the F/V Sun, 2–7 April 1990. Epipelagic, circumglobal in tropical and temperate seas.

Neopinnula orientalis (*Gilchrist & VonBonde, 1924*)

UGM 6524, 305 mm SL, ca. 274m, off Merizo, Guam, by crew of FV Panglao Oro, 6 January 1967

Dorsal rays XVI, 20; anal rays III, 20; pectoral rays 14; gill rakers 4 + 8 (each raker consisting of a clump of 2 to 5 spines and not easily separated from one another). Widespread, but rarely collected, from South Africa to Japan and America; epi- and mesopelagic.

SCOMBRIDAE (TUNAS)

Auxis thazard (*Lacépède, 1801*)

Based on a photograph (Fig. 8e) of a specimen fished from a bridge over a channel in the reef flat at Agana, Guam. The Commonwealth of the Northern

Marianas Division of Fish and Wildlife (CNMI DFW) has a specimen collected at Saipan (P. Bryan, pers. com.). The relatively deep body and narrow posterior extension of the corselet distinguish this species from *A. rochei*, and the widely separated dorsal fins distinguish it from all other tunas (Tribe Thunini; Collette & Nauen 1983). Widespread in the Indo-Pacific.

***Grammatorcynus bilineatus* (Rüppell, 1836)**

A photograph of a 53 cm FL specimen of this species was recently featured on the poster, *Foodfishes of the Mariana Islands*, published by the Guam DAWR and CNMI DFW. Widespread in the Indo-Pacific.

***Thunnus alalunga* (Gmelin, 1789)**

Based on a photograph of a 95 cm FL specimen taken by longline at a depth of ca. 125 m off Facpi Point, Guam by the crew of the FV Banana Patch on December 11, 1982 (Fig. 8f). This was the smallest of four specimens ranging to 103.5 cm FL that were caught by that set. Small numbers of this primarily warm temperate species were taken during longlining trials conducted by the Banana Patch during the 1982–3 cool season. The only *Thunnus* with pectoral fins extending beyond the first detached dorsal and anal finlets. Circumglobal.

ISTIOPHORIDAE (BILLFISHES)

***Makaira indica* (Cuvier, 1831)**

Based on a photograph of a 195 cm FL specimen collected off Merizo, Guam by T. Paine in 1982 (Fig. 8g). The rigid pectoral fins which can not be folded against the body easily distinguish this species, the black marlin, from *M. nigricans*, the blue marlin (Nakamura 1985). The black marlin is rare in the Marianas during any time of the year, while the blue marlin is common seasonally during the summer months, but also present in lower numbers throughout the year. Widespread in the Indo-Pacific. Circumtropical.

***Tetrapturus angustirostris* Tanaka, 1914**

UGM 6392, 1566 mm FL (head only), off Pati Point, Guam, surface trolling, crew of "Barok", 17 July 1982 (Fig. 8h).

The combination of short bill (orbit to bill tip length less than 15% of body length measured from tip of lower jaw to caudal fork) and highly compressed body distinguish this species from all other billfishes. The specimen was photographed and only the head preserved. The following counts were taken before the body was disposed of: dorsal rays 47 + 6; anal rays 7; pectoral rays 18. Infrequently caught in the Marianas throughout the year. Widespread in the Indo-Pacific.

Tetrapturus audax* (Philippi, 1887)

UGM 6690, 4.0 kg, off nw. coast of Guam, trolling by FV Ten III, ca. November 1990.

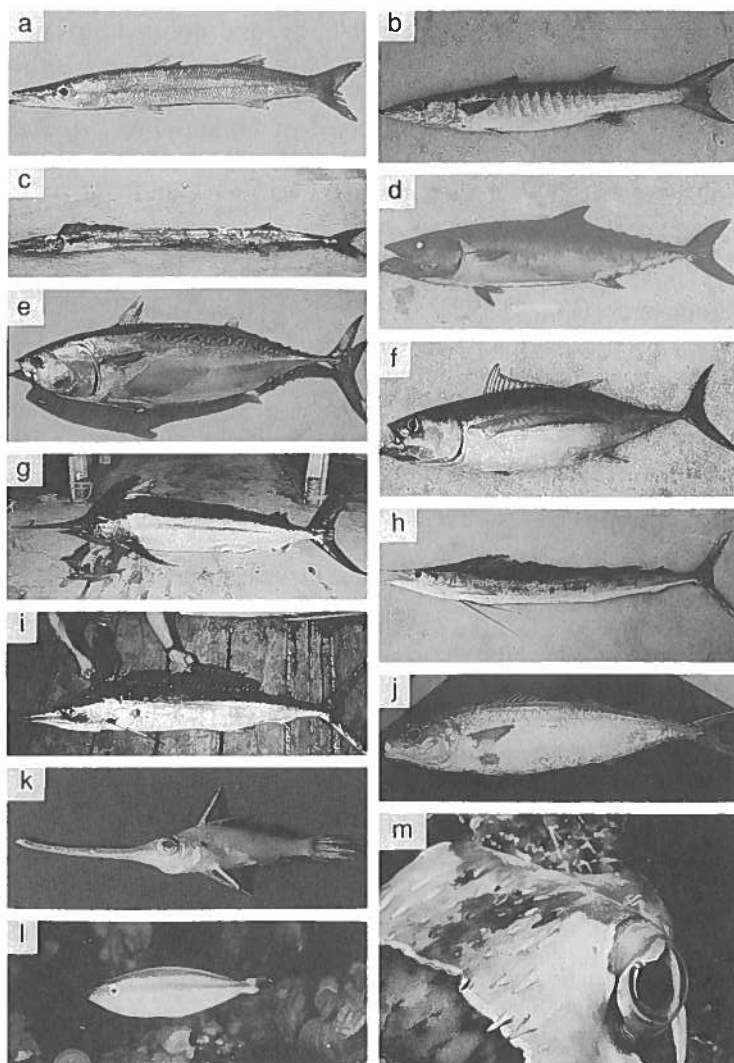


Figure 8. Photographs of new and recent records of fishes from the Marianas. (a) *Sphyræna flavicauda*, UGM 6589, 411 mm SL, Guam. (b) *Sphyræna genie*, 113.5 cm FL, taken between Rota Banks and Guam. (c) *Gempylus serpens*, UGM 6431, 766 mm SL, Guam. (d) *Lepidocybium flavobrunneum*, 1,006 mm SL, 12.7 kg, Guguan. (e) *Auxis thazard*, 38.5 mm SL, Guam. (f) *Thunnus alalunga*, 95 cm FL, from ca. 125 m by longline, Guam. (g) *Makaira indica*, 195 cm FL, Guam. (h) *Tetrapturus angustirostris*, UGM 6392, 1556 cm FL, Guam. (i) *Tetrapturus audax*, ca. 125 cm FL, Guam. (j) *Ariomma evermanni*, 6.4 kg, Rota Banks. Photograph by D. Manley. (k) *Halimochirurgus alcocki*, UGM 6320, 72.8 mm SL from ca. 150 m, Guam. (l) *Pseudalutarius nasicornis*, reef flat, Piti, Guam. Photograph by R. H. Kuitert. (m) *Diodon liturosus*, Guam. Detail of top of head and right eye. Photograph by S. Hughes.

The combination of longer bill, deeper body, and pointed dorsal, anal and pectoral fins distinguish this species from *T. angustirostris*, the only other species in the genus known from the Indo-Pacific. We also have a photograph of a specimen ca. 125 cm FL taken off the west coast of Guam (Fig. 8i). Rare in the Marianas, with landings reported during October and November. Widespread in the Indo-Pacific, but seems to be rare in waters warmer than 27°C.

ARIOMMATIDAE (ARIOMATIDS)

Ariomma evermanni Jordan & Snyder, 1907*

Based on a photograph of a 6.4 kg specimen caught by electric reel at a depth of ca. 18 m over deeper water at Rota Banks by William Manley during July 1994 (Fig. 8j). The identification is based on features in the photograph including a double keel on the caudal peduncle, large cycloid scales with less than 50 forming the lateral line, and an eye diameter of ca. 4.1 in HL. This rare pelagic species has been previously reported from the Hawaiian and Ryukyu Islands.

BOTHIDAE (LEFT EYE FLOUNDERS)

Arnoglossus sp.

UGM 4596, 44 mm SL, regurgitated by an unidentified fish taken off Orote Point, Guam, 16 December 1966.

This and the following specimen will be sent to D. Hensley for further study.

Engyprosopon sp.

UGM 6541, 2: both 34 mm SL, regurgitated by a *Variola louti* taken at ca. 180m, Adelupe Point, Guam, 11 April 1972.

TRIACANTHODIDAE (SPIKEFISHES)

Halimochirurgus alcocki Weber, 1913

UGM 6320, 72.8 mm SL, ca. 150 m, near Pugua Patch Reef, Guam, impaled on a piece of bait, hook and line by T. Campion, 23 November 1981.

The specimen was photographed (Fig. 8k), then sent to J. C. Tyler who confirmed the identification. Previously known from less than 20 specimens from East Africa, Indonesia, the Philippines, and southern Japan (Tyler 1983).

BALISTIDAE (TRIGGERFISHES)

Xanthichthys auromarginatus (Bennett, 1831)

Myers & Shepard 1980 (p. 329, fig. 18); Myers 1989 (Pls. 138C,D)

UGM 6585, 121 mm SL, 33m, Orote Point, Guam, speared by D. Scaife, October 1985.

Dorsal rays II+20; anal rays 26; pectoral rays 13 (upper and lowermost unbranched); principle caudal rays 11; scale rows from upper end of operculum to caudal base 44. This species was previously recorded from Guam on the basis

of a photograph taken off Uca Point (Myers & Shepard 1980). Widespread in the Indo-Pacific.

MONACANTHIDAE (FILEFISHES)

***Aluterus monoceros* (Linnaeus, 1758)**

UGM 6365, 378 mm SL, Mariana Islands, incidental catch by the crew of the RV Townsend Cromwell, May 1982.

Dorsal rays I + 47; anal rays 48; pectoral rays 14 (15 on right side); principle caudal rays 12. Unfortunately, specific locality data was not taken. This specimen was salvaged from a group of fishes used for a public display on board the Townsend Cromwell. Circumtropical, but rare in the Marianas.

***Cantherhines fronticinctus* (Playfair & Günther, 1867)**

Based on an observation by RFM of a solitary individual at a depth of 27m inside the "Blue Hole", a large cavern adjacent to a steep dropoff off Orote Peninsula, Guam on 11 January 1986. The fish, approximately 10 cm SL, exhibited a mottled pattern of dusky blotches on a brown background. When disturbed, a pattern of four diffuse dusky longitudinal bands on a brown background appeared as figured by Gloerfelt-Tarp & Kailola (1984: Fig. 286). At no time was there evidence of prominent white spots on the top and bottom of the caudal peduncle or lighter brown hexagonal spots characteristic of *C. pardalis*. The color pattern initially observed closely resembles that of its likely sister-species, the Hawaiian endemic *C. verrucundus*. Widespread in the Indo-Pacific.

Pseudalutarias nasicornis* (Temminck & Schlegel, 1850)

Based on a photograph (Fig. 81) taken on the reef flat near Tepungan Channel, Piti, Guam by R. H. Kuitert, August 1990.

OSTRACIIDAE (TRUNKFISHES)

***Lactoria diaphana* (Bloch & Schneider, 1801)**

UGM 6476, 2: 20.7–33.9 mm SL, from the stomach of a 127 cm FL *Acanthocybium solandri*, Rota Banks, 24 October 1982; UGM 6479, 6: 20.8–40.0 mm SL, from the stomach of a 133.5 cm FL *A. solandri*, east of Rota Banks, 16 July 1983; UGM 6477, 7: 5.9–15.6 mm SL, from the stomach of a 50 cm FL *Katsuwonus pelamis*, Rota Banks, 1 July 1982; UGM 6478, 22.5 mm SL, from the stomach of a 53.5 cm FL *K. pelamis* taken off northern Guam, 26 December 1981.

Additional material was sent to J. C. Tyler who confirmed the identification. This species was frequently ingested by scombrids and istiophorids. Although it is reported to attain a length of 19 cm SL (Masuda et al. 1984) and adults are known to occur demersally off southern Japan (Moyer 1979), this species has never been observed on coral reefs in the Marianas, and is pelagic in the eastern Pacific (Eschmeyer et al. 1982). All specimens known from the Marianas were obtained from the stomachs of pelagic gamefishes and many of them, some as small as 20 mm SL, contained ripe ova. The largest of these (one of UGM 6476)

is 33.9 mm SL. In the Marianas, *Lactoria diaphana* is apparently able to live its entire life pelagically. Widespread in the Indo- and East Pacific.

***Lactoria fornasini* (Bianconi, 1846)**

Myers 1989 (Pl. 140B)

UGM 6486, 12.4 mm SL, from the stomach of a 52.5 cm FL *Thunnus albacares*, Galvez Banks, 17 July 1982; UGM 6487, 13.1 mm SL, from the stomach of a 61.5 cm FL *T. albacares*, 22 May 1982.

The fins of both specimens have been digested away, but the hard dermal plates and spines are in good condition. The pattern of plates on the back and position of the spines clearly identify these specimens as *L. fornasini*. Unlike *L. diaphana*, this and other ostraciids were rarely encountered in the stomachs of pelagic gamefishes and occur demersally as subadults or adults. Although *L. fornasini* has not otherwise been encountered by us in the Marianas, RFM has examined a photograph of an adult of this species taken in shallow water at Guam by M. Warner. Widespread in the Indo-Pacific.

TETRAODONTIDAE (PUFFERS)

***Arothron mappa* (Lesson, 1826)**

Based on a photograph taken by A. Maben on the reef slope at Gabgab Beach, Apra Harbor, Guam ca. 1980 (Myers 1989 Pl. 142A). This species is apparently quite rare in the Marianas. Widespread in the Indo-Pacific.

***Canthigaster compressa* (Procé, 1822)**

Based on a photograph taken at a depth of 4m in Piti Canal on 16 March 1985 (Myers 1989, Pl. 143C). This species very closely related to *C. solandri* differing primarily in color pattern (Allen & Randall 1977). The individual photographed is the only one ever observed by us, while thousands of *C. solandri* have been observed in the Marianas over an 18 year period. It is quite likely a waif from islands to the south or west. Indo-Australian region from Borneo to the New Hebrides, north to Taiwan.

DIODONTIDAE (PORCUPINEFISHES)

Chilomycterus reticulatus* (Linnaeus, 1758)

Observed by TJD off Anatahan Island at 12 m on 13 May 1992. Probably a waif from more northerly waters. Young under 20 cm SL near surface of open oceans, adults benthic in less than 100 m. Worldwide in warm temperate seas.

Diodon liturosus* Shaw, 1804

Based on a photograph taken at Toguan Bay, Guam at a depth of 4 m on 7 March 1993 by S. W. T. Hughes (Fig. 8m). Widespread in the Indo-Pacific.

MOLIDAE (OCEAN SUNFISHES)

Masturus lanceolatus (*Liénard, 1840*)

UGM 6452, 90 mm SL, from the stomach of a 43.5 kg *Makaira nigricans*, off the vicinity of Pugua Patch Reef, Guam, 8 June 1982; UGM 6391, 103 mm SL (in two pieces), from the stomach of an *Acanthocybium solandri* taken off Guam, 17 April 1982.

All Marianas specimens of the three known species of molids are post-larvae and juveniles retrieved from the stomachs of pelagic gamefishes. Many are in partially digested condition. Circumtropical, strictly pelagic.

Mola mola (*Linnaeus, 1758*)

UGM 6450, 3: 7.9–18.1 mm SL, from the stomach of an 86 cm FL *Thunnus albacares*, Rota Banks, 18 July 1982; UGM 6446, 2: 44–54 mm SL, from the stomach of a *Makaira nigricans*, Rota Banks, 5 July 1983; UGM 6447, 2: 30–33 mm SL, from the stomach of a 99 cm FL *Acanthocybium solandri*, Guam, 22 May 1982; UGM 6448, 17.3 mm SL, from the stomach of an 86.5 cm FL *T. albacares*, Guam, 18 July 1982; UGM 6449, 2: 32–33 mm SL, from the stomach of a 108 cm FL *T. albacares*, 11-mile Bank, 18 July 1982.

Circumtropical, strictly pelagic.

Ranzania laevis (*Pennant, 1776*)

UGM 6451, 118 mm SL, from the stomach of a 35 cm FL *Katsuwonus pelamis*, Rota Banks, 2 May 1982.

Circumtropical, strictly pelagic.

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