FISHES OF GUAM, HAWAII, SAMOA, AND TAHITI

BY

HENRY W. FOWLER

BERNICE P. BISHOP MUSEUM

BULLETIN 22

HONOLULU, HAWAII
PUBLISHED BY THE MUSEUM
1925
KRAUS REPRINT CO.
Millwood, New York
1976
HENRY W. FOWLER, of the Academy of Natural Sciences of Philadelphia, served as Bishop Museum Fellow in Yale University for the year 1922-23. Through the courtesy of the Academy, Mr. Fowler is continuing his study of the fishes collected by expeditions under the auspices of the Bernice P. Bishop Museum.

Reprinted with the permission of the Bishop Museum Press
KRAUS REPRINT CO.
A U.S. Division of Kraus-Thomson Organization Limited
Printed in U.S.A.
Fishes of Guam, Hawaii, Samoa, and Tahiti

By Henry W. Fowler

Among the scientific results of field work conducted in the Marianas Islands by Hans C. Hornbostel of the Bishop Museum staff, is a collection of fishes comprising 158 species. This material, together with that obtained by Alvin Sexle in 1900, gives the Museum a fairly representative collection from that region. The specimens recently received from Guam are accompanied by unusually complete data and their interest increased by color sketches from the brush of Mrs. Gertrude Hornbostel.

In addition to the species from Guam, it has been considered desirable to record for purposes of comparative study, forty-five species from Hawaii, thirty-six species from Samoa, and fourteen species from Tahiti, belonging to collections recently examined.

New species in the list from Hawaii have been recorded elsewhere and it is proposed to discuss the distribution and relationship of these and of other Pacific fishes in a more comprehensive work.9

FISHES FROM GUAM

EULAMIDAE

Eulamia melanopterus (Quoy and Gaimard). Habitat: One example. Head 90 mm. long and part of fin showing black tips. July 29, 1923. Reaches 1830 mm.

ELOPIDAE

Megalops cyprinoides (Broussonet).
Two, 242 and 260 mm.

ALBULIDAE

Aleta volpis (Linnae). Aglae. Five, 200 to 111 mm. Bright silvery-white generally, with only faint longitudinal lines on back. July 26, 1923. Reaches 1220 mm.

DUSUMIERIIDAE

Stolephorus deliciatus (Bennett). Aletids.
Serenzeem, 35 to 47 mm. July 27, 1923. Reaches 101 mm.

SYNODONTIDAE

Synodus japonicus (Houttuyn). PEPUPU.
Nine, 151 to 305 mm. July 6, 1923.
Saarida gracilis (Quoy and Gaimard).
One, 90 mm. July 6, 1923.

ANGUILLIDAE

Anguilla nebulosa Bennett. Conger.

MORINGUIDAE

Moringus javanicus (Kleyn). UAC-TAN.
Three, 165 to 286 mm. July 24, 1923. Head contained 11 7/8 to 12 3/4 times in length. Reaches 305 mm.
ECHELIDAE

Muraenichthys macropterus Bleeker. Hagman
Two, 153 to 235 mm. July 18, 1923. Dorsal origin nearer gill-opening than vent. In alcohol uniform pale brown, with some very fine dusky-brown dots on head above and upper side of back. Iris and pharynx pale yellowish. Reaches 2440 mm.

OPHICHTHIIDAE

Myrichthys colubrinus (Pallas). Hagman-Lisardo
Four, 356 to 485 mm. July 22, 1923. Reaches 915 mm.

Myrichthys maculosus Cuvier. Hagman-Lisardo
Two, 210 to 470 mm. July 29, 1923. Reaches 610 mm.

MURAENIDAE

Echidna nebulosa (Ahl). Hagman-Lisardo
One, 265 mm. July 29, 1923. Reaches 610 mm.

Lycoceon picta (Ahl). Hagman
One, 225 mm. July 8, 1923.

Lycoceon undulata (Lacépède). Hagman-Pañepada
Nine, 177 to 665 mm. July 13 and 26, 1923. Head and trunk combined slightly less than trunk and tail; head 13 to caudal base; depth 2 1/3 in head; snout 9 in head; eye 1 3/5 in snout; gape 4 in head. Two rows of teeth below eye; row of three large depressible fangs medially above, followed by single row of short, rounded blunt teeth. Color very pale or light brown in alcohol, uniform on trunk, tail and most of head, except for scattered minute dots of dusky on snout, interorbital, and cranium. Pores along face of each jaw also dusky. Edge of dorsal and anal narrowly and conspicuously milk-white. This is the largest example and interesting as an albin.
Reaches 2440 mm.

Urophycis concors Rüppell. Uló-Tah
Two, 110 to 114 mm. July 4, 1923. Reaches 305 mm.

Urophycis marmoratus (Lacépède). Titohe
One, 123 mm. July 27, 1923. Rather dark, scarcely clouded darker or with fine dusky mottling. Reaches 457 mm.

CLARIIDAE

Clarias fuscus (Lacépède).
One, 265 mm. Dorsal rays 61, anal 90. Introduced.
BELONIDAE

Pelone pisayra Bennett. 

Amako

Femur, 348 to 430 mm. July 24, 1923. Reaches 1015 mm.

Hydrocyclus indicus (Le Sueur).


HEMBRAMPHIDAE

Hemiramphus erythrostictus Le Sueur. 

Ankut

Thirteen, 60 to 290 mm. July 8, 1923. Anal rays 17, 12.

PLEURONECTIDAE

Platophrys pectoralis (Rüppell). 

Tampat

Three, 90 to 78 mm. July 6, 1923. Anal rays 68 to 71. Reaches 231 mm.

HOLOCENTRIDAE

Myripristis fuliginosa (Forskal).

Sacmeleg, Sagac

One. July 30, 1923. Reaches 305 mm.

Myripristis aulonoides Bleeker.

Sacmeleg, Sagac

One, 108 mm. Four said to be in Bishop Museum. July 18, 1923. Reaches 305 mm.

Myripristis unipunctata Günther.

Gunc, Banag, Sanga-n-sodong

Four, 74 to 78 mm. July 18, 1923. Reaches 702 mm.

Holocentrus diana 

Laopéde, Sagac, Sagac

Two, 92 to 103 mm. July 26, 1923.

Holocentrus erythrostigma Günther.

Gunc, Sanaa, Sagac

Five, 94 to 103 mm. July 26, 1923. Reaches 375 mm.

Holocentrus latroeguttatus Valenciennes.

One, 75 mm. July 16, 1923. Black blotch submarginally on first two membranes of spinous dorsal, others with only posterior gray blotch; medially white blotch along each membrane and on posterior membranes dusky, last quite dark.

Holocentrus australis (Forskali).

Tulac

Six, 115 to 130 mm. July 3, 1923. Reaches 303 mm.
Aulostomus chianensis (Linné).
Two, 160 to 258 mm.

FISTULARIIDAE

Fistularia petimba Lacépède. BEDMAG
Two, 322 to 845 mm., without caudal filament. July 15, 1923. Skin smooth to touch. Median keel down back distinct before and behind dorsal, but not separated into scutes. Reaches 1230 mm.

SYGNATHIDÆ

Gastrostomus bicarinatus (Bloch). HILITIA-TASI
Four, 192 to 232 mm. July 16, 1923, and April, 1924. Reaches 305 mm.

Coryphoichthys mataafae Jordan and Seale. HILITIA-TASI
Three, 40 to 55 mm. July 2, 1923.

Coryphoichthys flavofasciatus Rüppell. HILITIA-TASI
Five, 125 to 135 mm. July 18, 1923, and April, 1924. All show the pale or whitish snout, though finely spotted with blackish.

SPHYRAENIDÆ

Sphyraena picuda (Schneider). ALU

MUGILIDÆ

Mugil dussumieri Valenciennes.
Six, 66 to 190 mm. July 11, 1923.

POLYNYMIDÆ

Polydactylus sexfiliis (Valenciennes).
Two, 240 mm. Pectoral filaments 6.
CARNIDAE

Stomochirus sancti-petri (Cuvier). HACO
Three, 80 to 87 mm. July 25, 1923. Depth 3 1/2 to 3 1/2 times in length to caudal base.

Catarax ignabilis (Forsskål). Tverskot
Up to 75 mm. called je, 72 mm to 640 mm. tverkto, above 640 mm. memala.

Catagolus festiva (Forsskål). Tverskot
One, 2150 mm. July 5, 1923. Nine in Bishop Museum. Head 3 3/4; dorsal, 2 1/2; O. VII, 81, 1; A. II, II, 26, 1; scales 74, 90, 91 white about 28, body tests; mouth 3 1/7 in head; eye 2 2/8; maxillary 2 1/2; introcular 3. Gilfertami 9790.
Pectoral three in combined head and trunk; soft dorsal like 3 7/8; soft anal below 2 1/2. No dark opercular spot. Back silvery, silver to white on sides and below. Soft dorsal and anal lobes dark. Central denticle. Pectoral pale yellowish.

Ephelis ciliaris (Bloch).
One, 92 mm.

Trachinotus stratus (Linne). Palaueta
Four, 34 to 62 mm. July 18, 1923.

CHEILODIPTERIDAE

Apogonichthys asarius (Valenciennes). ATU-PAI. FORSCH. FORSH
Two, 62 to 65 mm. July 19 and 27, 1923. Reaches 122 mm.

Apogonichthys parisi Bleeker. FORSCH. FORSCH. FORSCH
One, 50 mm. July 27, 1923. Palatine teeth present.

Anna novemfasciata (Cuvier).
Three, 31 to 44 mm. July 3, 1923. Fins all orange, black stripes very distinct.

Anna flavicauda (Valenciennes).
Two, 69 to 81 mm.

Synagrops stegos (Gilbert and Cramer).
One example.

KUHLMIDES

Xambis rapax (Lacépède). NUHU
Two, 137 to 182 mm. Three in Bishop Museum. July 3, 1923.
SERRANIDAE

Epinephelus maculatus (Bleeker).
One, 155 mm.

Epinephelus terra Bleeker. GALAPAGS. GALAP.
Three, 155 to 160 mm. July 9 and 29, 1923.

Phareuctorx nigricans Rüppell.
Two, 112 and 148 mm. The figure of Phareotorx meles by Jordan
and Seale1 shows the membranes of the spinous dorsal intact and ter-
ninal between the tips of the dorsal spines. In the specimens of the
present species these membranes are very deeply notched, reaching at
least half way in the depth of the spine following.

Gymnoplex octolissus (Thunberg). SAUl
One, 155 mm. July 20, 1923.

LUTJANIDAE

Lutjanus kasmira (Forskål). SALAGAI
Three, 35 to 113 mm. July 6, 1923. Reaches 226 mm.

Lutjanus mosqitima (Cuvier). KAKAKA
One, 230 mm. July 23, 1923. Reaches 610 mm.

Lutjanus marginatus (Cuvier). BuA
Four, 178 to 320 mm. July 16, 1923. Reaches 305 mm.

HAEMULIDAE

Casio ut Valemusnes.
Nine, 80 to 96 mm. Most with sides and lower region blushed pale
purple in alcohol.

Electorhisicus diagrammus (Lacepède). SHHG
Five, 40 to 464 mm. July 8, 1923. These have but three blackish
longitudinal stripes along back and black blotch at front of spinous
dorsal, otherwise white.

Scolopsis cancellatus (Cuvier). SHHG
Three, 177 to 196 mm. July 3, 1923. Reaches 203 mm. Differs
slightly from Elektor's figure of Scoloplosis cancellatus in the membranes
of first two dorsal spines blackish and pectoral and dusky. The dark
longitudinal bands on the back are broken, much as he indicates.

SPARIDAE

Pontinus aurinolus (Lacépède). AAGA, SALAGEI
Four, 100 to 204 mm. July 6, 1923. Reaches 305 mm.

Lethrinus havik (Forsskål). MAFUTI
One, 183 mm. July 8, 1923. Three in the Bishop Museum. Reaches 915 mm. When full grown called Bluag.

Lethrinus mosambicus Beecker. MAFUTI
Two, 150 and 207 mm. July 8, 1923. Reaches 915 mm. Three in Bishop Museum.

GERRIDAE

Gerres gigas Günther. GUAGUAS
Three, 276 to 272 mm. July 13, 1923. Reaches 752 mm. Cheek with three rows of scales. Color when fresh bright silvery-white, back slightly pale olive.

LEIOGNATHIDAE

Leiognathus ocellatus (Bleeker). KAMU
One, 150 mm. July 20, 1923. Reaches 203 mm. Ascends rivers to lay eggs.

MULLIDAE

Mullidens samoanus Günther. SALMONETE
One, 137 mm. July 4, 1923. Reaches 457 mm. Gill-rakers 20 on lower branch of first arch. When small called mud.

Upeneus chrysurus (Lacépède). SALMONETE-U-LADO
One, 277 mm. July 28, 1923. Reaches 610 mm.

Upeneus muelleri (Quoy and Gaimard).
Three, 198 to 202 mm.

Upeneus barbatus (Lacépède). TIADAATSE
Two, 146 to 150 mm. July 9, 1923. Reaches 610 mm. Dark band from snout to eye, then along upper front course of lateral line, but sloping above and parallel with back profile below soft dorsal.

CIRRITIDAE

Paracirrhites polystictus (Günther). ALADOC
One, 227 mm. July 26, 1923. Reaches 610 mm. Agrees with Günther's figure of Cirrhitus polystictus except that the lower side of the
body shows seven close-set longitudinal rows of dark spots, instead of four. The spot below the posterior dorsal spines is very light pink, nearly flesh-color.

Paracirrhites forsteri (Schneider).
One, 146 mm.

Cirrhites marmoratus (Lacépède). PALAGHI
One, July 9, 1923. Reaches 305 mm.

SCORPAENIDAE

Sebastapistes criottis (Klunzinger). NUFI
Four, 58 to 61 mm. July 2, 1923. Mandible whitish, with five transverse deep brown bands.

Sebastopis guamensis (Quoy and Gaimard).
One, 33 mm. April, 1924. No palatine teeth.

Scorpaenopsis gibbosa (Schneider). NUFI
Three, 65 to 114 mm. July 3, 1923.

Pterois volitans (Linne). NUFI PABO
One, 112 mm. February 14, 1924. Caught in lagoon, in 127 mm. of water.

Pterois antennatus (Bloch). NUFI PABO
Two, 120 to 165 mm. July 4, 1923. Reaches 610 mm.

Synanceja verrucosa Schneider. NUFI MALULUA
One, 240 mm. July 29, 1923. Reaches 305 mm.

PLATACIDAE

Platax orbicularis (Forsskål).
Five, 63 to 199 mm. Dorsal fin with five spines and 35 to 40 rays. Scales 24 or 25 above lateral line.

CHAETODONTIDAE

Chaetodon setifer Bloch. ABABANG
Three, 50 to 98 mm. July 4, 1923. Reaches 152 mm.
The smaller examples do not show any soft dorsal filament, though with large black occluded spot. Also black band from below eye not extending posteriorly in its boundary beyond preopercle ridge.

Chaetodon hamulatus (Lacépède). ABABANG
Seven, 28 to 140 mm. July 4, 24 and 30, 1923. Reaches 202 mm.
Charaotis uncinatastrus Buch. **ABARANG**
One, 55 mm. July 4, 1923. Reaches 154 mm.

Charaotis trifasciatus Mungo Park. **ABARANG MATTIENCA**
One, 99 mm. July 30, 1923. Reaches 151 mm.

Charaotis rhizophyllum Cowier. **ABARANG**
Five, 70 to 144 mm. July 4, 1923. Reaches 158 mm.

Charaotis prionopterus Kroy.
One, 20 mm. Hovers from Gemmara's figure in the trunk more completely spaced with brown. The rays appear in rows, slightly oblique or inclined longitudinally; the upper, upward and lower part of which all smaller, curving slightly downward. Traces of about six dark streaks in posterior half of trunk, though these slope slightly forward from vertex on left side of body, while on right they appear as at least two dark streaks parallel with soft dorsal edge, in other respects the fundamental microform remains.

*ZANCIIIDAEE*

*Zancus parvus* (Linné). **AQUIAS-PAGOSO, ABARANG**
Eight, 64 to 150 mm. July 2, 1923.

*ACANTHINAE* D.

*Hepatus alicia* (Linton).
One, 139 mm.

*Hepatus leucopephalus* (Jenkins). **GUINNAN**
Head 2 2/5 to 3 1/2; depth 1 2/5 to 1 4/5; D. IX, 25 or 26; A. III, 44; snout 2 2/5 to 2 1/2 in head; eye 2 2/5 to 2 1/2; mandible 3 1/2 to 4 1/3; interorbital 3 1/4 to 3 1/3.

Body strongly compressed, deeply cleft, distinct at anal origin. Canals parallel at middle, branch on sides. Head width 2 1/2 to 2 1/3 in its length. Snout compressed, with half its length. Eye with a blunt edge, short in the middle of the head length; diameter 1 1/2 to 1 3/4 in snout, greater than interorbital. Mouth small, terminal. Teeth compressed, oblong, edges straight all around. Nourishment close together, close before eye. Interorbital canals. Gill-opening 1 1/2 in head. Scales minute. Lateral line complete, parallel with profile of body. Second dorsal spine 3 1/3 to 4 1/3 in head; second dorsal ray 2 to 2 1/3; third and spine 2 1/3 to 2 1/2; second anal ray 2 to 1 3/4; third anal spine 1 1/1 to 1 1/3; pectoral 1 1/3 to 1 1/4; ventral 1 2/3 to 1 1/2. General color in alcohol bisected, with mouse-gray tint on breast, belly and lower surface of head. Teeth white. Details and scales dirty. Canals pair 1 whitish, bluish terminally with narrow white edge behind.

Four, 31 to 33 mm. July 8 and 13, 1923.

*Hepatus minimus* (Linné). **HIBAO**
Three, 118 to 202 mm. July 9, 1923. Reaches 355 mm.
Hepatus guttatus (Schneider).
Three. 98 to 158 mm.

Hepatus triostegus (Linné). POLOLON-LAGO
Two. 103 mm. July 28, 1923.

Ctenochaetus viridus (Bennett). HUGUFAU
Three. 132 to 233 mm. July 12, 1923. Reaches 457 mm.

Acanthurus unicorne (Forskal). GUASA. HANGUM
Three. 72 to 203 mm. July 4, 8 and 16, 1923. Reaches 772 mm. The smaller examples agree in many ways with Günther's figure of Nasua unicorne* in general appearance. My example has the entire head and trunk with parallel vertical striæ, though the dorsals largely as in Günther's figure. There are no dark spots on the back now.

Acanthurus incipiens Jenkins. GUASA
One. 133 mm. July 2, 1923. Reaches 305 mm.

Acanthurus lituratus Schneider. HANGUM
Four. 148 to 160 mm. June 30 and July 1 and 4, 1923. When full grown about 458 mm, then called fatafa.

Acanthurus meteprosophcon (Jenkins). GUASA
Eight. 40 to 75 mm. July 8, 1923. In all, though young, the dark longitudinal bands are present on the dorsals, especially the spine fìn, as in Jenkins' figure. Reaches 305 mm.

SIGANIDAE

Siganus marmoratus (Quey and Gaimard). SENDON
Thirteen. 50 to 126 mm. July 8, 1923. Reaches 305 mm. Called monståh just after hatching; when beginning to eat and changing color, data, 76 mm. or more in size, called sendon.

Siganus fuscescens (Houttuyn).
Three. 129 to 150 mm.

Siganus latifrons (Valenciennes). FOMHO, FOMHO
Three. 40 to 115 mm. July 16, 1923.

POMACENTRIDAE

Amphiprion sebae (Kleekier).
Two. 26 and 27 mm. July 19 and 30, 1923. Reaches 152 mm.

* Journal des Nauzees Godesco, vol. 21, book 8, pl. 7a, fig. D, 1851.
Amphiprion ephippium (Bloch). *C.9.0.24, 5.0.0.4.4*  
One, 75 mm. July 18, 1923. Reaches 76 mm.

Amphiprion melanopus (Bleeker). *C.9.0.24, 5.0.0.4.4*  
One, 60 mm. July 23, 1923. Reaches 70 mm.

Dascyllus aruanus (Linne). *F.0.0.0, 3.0.0.0*  
Six, 40 to 56 mm. July 3, 1923. Reaches 76 mm.

Chromis caeruleus (Cuvier). *F.0.0.0, 3.0.0.0*  
Thirty-four, 19 to 61 mm. July 19, 1923. Reaches 76 mm.

Pomacentrus paro (Bloch). *F.0.0.0, 3.0.0.0*  
One, 22 mm. July 19, 1923. Reaches 77 mm.

Pomacentrus lividus (Schneider). *F.0.0.0, 3.0.0.0*  
One, 50 mm. July 2, 1923. Reaches 76 mm. No black spot at bases of last dorsal rays.

Ableforh cuningia (Forskål). *D.0.0.0*  
One, 54 mm. July 18, 1923. Reaches 203 mm.

Ableforh septemfasciatus (Cuvier). *D.0.0.0*  
Two, 48 and 141 mm. July 18, 1923. Reaches 203 mm. Young with black saddle in last transverse band on caudal peduncle above.

Ableforh browni (j. W. Bennett). *F.0.0.0, 3.0.0.0*  
Five, 25 to 51 mm. July 2 and 27, 1923. Reaches 101 mm. All with blue line close along lower eye edge.

**LABRIDAEE**

Hemigymnus melapterus (Bloch). *A.0.0.0*  
One, 133 mm.

Stethojulis axilaris (Quoy and Gaimard). *A.A.0.0*  
Seven, 63 to 100 mm. July 12, 1923. Of these, two are females or the aberrant form.

Stethojulis striigvans (Bennett). *A.A.0.0*  
Three, 59 to 68 mm. July 20, 1923. Reaches 101 mm.

Coris guttulosa (Gunther). *A.A.0.0*  
One, 275 mm. July 28, 1923. Reaches 205 mm.

Coris sprogulosa (Bennett). *G.0.0.0, 5.0.0.0*  
One, 25 mm. July 30, 1923. Five black parallel longitudinal bands, of which one extends from mouth through eye.
Corys gremovi (Bennett). AAGA-MAYTINGAN
One, 60 mm. July 4, 1923. Reaches 152 mm. Brilliant red. Differs from Jordan and Evermann’s figure in that the pectoral and ventral both are bright red and very little tint of purplish behind last light blotch on upper surface of caudal peduncle.

Chelino inermis (Forskål).
Two, 227 and 270 mm.

Halichoeres opercularis (Giünther). AAGA
One, 73 mm. July 29, 1923. Reaches 153 mm.

Halichoeres tricaculatus (Quoy and Gaimard). AAGA
Five, 66 to 117 mm. July 11, 1923.

Pristiglossus vicinus (Giünther).
One, 132 mm.

Thalassoma trilobata (Lacépède). LALATJA-MAMATI
One, 182 mm. July 26, 1923. Reaches 437 mm.

Chelinus undulatus (Rüppell). TANGGEREN

Chelinus chlorurus (Bloch). PALAGI, GADOAS
Two, 188 and 134 mm. July 4 and 16, 1923. Reaches 610 mm.

Chelinus trilobatus (Lacépède). GALOPEG, SAIMA-W-DOBAG
Two, 158 and 185 mm. July 16 and 19, 1923.

Xenacanthichthys kallosoma (Bleeker).
One, 58 mm.

Cymoleutes leclus (Quoy and Gaimard). AAGA
Nine, 60 to 123 mm. July 6, 1923. Reaches 305 mm.

CALLYODONTIDAES

Scarichthys auritus (Valenciennes). PALAGI
One, 185 mm. July 29, 1923. Reaches 457 mm.

Calicoedon cellicus (Bleeker). MADAGASAM
One, 230 mm. July 8, 1923. Reaches 457 mm.

Calicoedon gilberti (Jenkins). MADAGASAM
One, 215 mm. July 8, 1923. Reaches 457 mm.

Lips cover most of mouth. Canines 2-2 above, 1-1 below. Cheek with two rows of scales, none on posterior flange. Caudal lunate, hind median edge convex as expanded.
According to color-chart, largely greenish-blue. Bright blue upper lip with line from rictus to lower eye border. Lower lip broadly blue and mother brook blue band crosses chin still lower down. Caudal peduncle more deeply bluish. Dorsoals and anal broadly blue marginally, former with broad modern pale purplish longitudinal band. Anal largely purplish over greater basal portion. Caudal with median rays tawdward, kind blue narrowly pale blue, upper and lower edges deep blue. Prismatic bluish basally, dull purplish terminally. Ventral with front edge blue, otherwise pale purple. Iris yellowish-gray.

*Callyodon rubroviolaceus* (Bleeker).

**Palaeocichlidae**

Two 154 and 137 mm. July 3, 1923. Reaches 458 mm.

*Callyodon hornibosteli* new species. Palaeocichlid.

**Head.** 2 7/8; depth 2 7/8; D. IX, X, XI; A. II, 9, 7; P. 1, 12; V. I, 5; scales 17 in upper section of lateral line, 4 in lower section to caudal base and 2 more on caudal base; 2 scales above lateral line, 6 below; 4 preopercular scales; snout 2 3/4 in head; eye 6 1/2; maxillary 1 5/8; interorbital 2 1/8.

Body compressed, eliptic apparently deepest middle in length. Caudal peduncle well compressed; last depth 4/5 its length which 2 1/2 in head.

Head moderate, compressed, width 2 1/5 in its length. Snout convex over surface and in profile, though lower with slight depression before eye, long as eye. Eye small, hind edge midway in head length; 2 1/2 in snout, 2 1/4 in interorbital. Mouth small, when closed shows gap side forwards. Maxillary extends quite half way in snout, concealed. Lips broad, largely cover jaws. Canines 2 3/4. Notothylal small, new together, front one about last third in snout. Interorbital convexly curved.

Gill-opening extends forward opposite front eye edge. Gill-rakers 24, uniform 4 1/2 in gill-filaments, which 2 1/6 in snout.

Scales 31 or 45 radiating from basal, 30 to 38 spirally; circuli very fine. Cheek with two rows of scales rows on preopercle. Caudal with three large scales. Ventral interorbital scale 2 1/2 in fin length. On cheek scales all well exposed, in ever longitudinal series. Lateral line incomplete, nearly slender, each with but few slight puffs or branches.

Spinous dorsal height opposite pectoral origin, slighty posterior, in only tips slightly flexuous; free spine 3 7/8 head; first dorsal ray 3; first anal ray 3 1/8; pectoral 1 1/4. Caudal reaches opposite spine; ventral 1 3/4 in head, reaches 1 1/2 in anal.

Caudal emergence slightly convex behind as convex, tips extended. Length 1 1/3 in eye.


Length 407 mm.


Only the type known, though Mr. Horrobowel's notes say the species reaches 305 mm. Related to *Callyodon bromicola* Jenkins, but differs from it in coloration, likewise from all the known species of the genus in the presence of a black spot on the front of the spinous dorsal. Named for Lieutenant Hans G. Hornibostel, who collected the type.
**Electridae**

**Electra fusca** (Schneider).  
**Ayur**  
Seven, 112 to 152 mm.  
July 20 and 21, 1923.

**Gobiidae**

**Amblyglyphis phalaena** (Valenciennes).  
**Aaga**  
Nine, 59 to 128 mm.  
July 19, 1923.

**Bathygobius fuscescens** (Rüppell).  
Three, 40 to 65 mm.  
July 19, 1923.

**Gobichthys papuanus** (Valenciennes).  
One, 92 mm.

**Gobiodon citrinus** (Rüppell).  
Three, 30 to 36 mm.  
July 30, 1923.  
Four pale lines on side of head vertically and one across preopercular base and parallel.  
Upper corner of opercle dusky.  
Vertical fins bright yellow basally, but without lines.  
Body pale yellowish-brown generally.  
No canines.  
Said to reach 31 mm.

**Gobiodon ceramensis** (Bleeker).  
Two, 25 mm.  
July 30, 1923.  
Pair of lower canines present.  
Head and trunk brownish.  
Doradals and anal dusky terminally.

**Paragobiodon schiophthalus** (Rüppell).  
**Aaga**  
Seven, 15 to 23 mm.  
July 3, 1923.  
Found among coral.

**Taenaeoregulus gerridae** new species.  
**Aaga-Radshu, Ulu-unmai**  
Head 7;  
depth 15 3/4;  
D 59;  
A 36;  
snout 4 in head measured from upper jaw tip;  
tail 4 3/5;  
mandibular 2 3/7;  
interbranchial 4 3/5.  
Body robust, moderately compressed, long, slender, trunk uniformly deep.  
Caudal peduncle well compressed, near depth 3 3/4 in total head length.  
Head subcylindrical, width 3 1/4 in its length.  
Snout somewhat zervenous, conic,  
length 7/8 its width.  
Eye well developed, hind edge slightly before center in head length;  
diameter 1 1/2 in snout, equals preopercular.  
Mouth rather small, lower jaw strongly protrudable and robust.  
Lips thin and smooth teeth.  
Maxillary little inclined.  
Reaches opposite 1st third of eye.  
Teeth conic, slender, in bands in jaws, narrowing uniarial near irises,  
over row enlarged and recurved, specially in front of mandible.  
Tongue thick, round, shiny knob,  
Interorbital slightly round, about as long as snout.  
Gill-opening restricted, extends outward only about five fifth in head.  
Body covered with minute, cycloid, skin adherent scales.  
Dorsal in long, even, rather low, of simple flexible rays, base of which not joined to caudal by membrane and ends entire;  
third ray 5 3/4 in total head length.  
Anal origin midway between ventral tip and caudal base;  
fifth ray 3 1/4 in head.  
Caudal small, ends in median point behind, 1 1/2 in head.  
Pectoral round, median ray longest, 2 1/2 in head.  
Ventricle small, together though separate, inserted below pectoral base,  
four in head.  
Ventr close below said.  
Color in alcohol with back light indigo color, paler or more whitish on sides  
and beneath.  
Beginning on lower lip leaden-drab to dusky, close-cut narrow band,
less in width than pupil, extends along side of snout, through eye, thence midway along trunk to caudal base and slightly reflected on median anal rays basally. Narrow dusky band from 1st gill tip to dorsal origin. Dorsal whish, with broad dusky-neutral margin. Anal and caudal whish, latter brownish terminally. Paired fins pale.

Length 37 mm.

Type, No. 3411, Bishop Museum. Guam July 13, 1923.

Differ from the known species in the dark median brown band and the median predorsal brown band. It also has increased dorsal rays. Tetragonus griseus Bleeker approaches, though without barbels and the dorsal and anal fins from the tail.

Named for Mrs. Gertrude Hornbostel, in appreciation of her valuable color-sketches of Guam fishes.

Callynomidae

Callynomidae banosensis new species. PEPUPU

Head to hind edge of opercle, 3 1/4; depth 8 1/4; D. IV—8; A. 7; P. 12; V. 1, 5; vent 2 3/4 in head measured to hind opercle edge; eye 4 1/4; maxillary 2 1/4. Body slender, well depressed, long, deep-set at spinous dorsal origin. Caudal peduncle robust, becoming compressed basally, least depth 1/5 in its length or 5 in head.

Head well depressed, width which also greater body width, 1 7/8 in head length. Snout depressed, upper narrowly triangular as seen from above, width 1 1/5 in its length. Eye larger, posterior, midventral in head length; diameter 1 3/5 in snout. Mouth inferiorly terminal, lower jaw slightly shorter. Maxillary inferior, reaches eye. Teeth fine, in bands in jaws; last one above each side little larger and recurved; one or two enlarged and recurved on each side of mandible medially. Notoles small, at last fifth in snout. Interorbital narrow bony ridge. Proporite spine long as eye, straight, with about eight inverse serrae along upper edge; lower edge entire. Crenum finely rugose-irritate not covered with skin.

Diaphanous, oviparous, short row of papill.

Skin smooth, soft. Lateral line single, median along side. Spinous dorsal begins opposite oblique opercle edge, spinous flexible and 6 1/5 in body. Soft dorsal inserted slightly lower than anus tip than caudal base: first ray 1 1/4 in head, last nearly long as head. Anal begins opposite soft dorsal origin, last ray 2 3/4 in head, last 1 1/6. Caudal long, median rays longest, 2 1/5 in continued head and trunk. Pectoral 1 3/5 in head. Ventral nearly long as head, spinous short and but little longer than proprotic spine.

Color of back, cranial, finely spotted or mottled with darker. About six darker short transverse bars on back. Side and lower surface pale to whitish, uniform below. Side of head with white spots and short bars or lines. Neutral-black blotch below eye, less than its diameter, also with several white spots. Spinous dorsal, cranial, with small white and blackish spots, though terminally largely bright yellow. Soft dorsal transpare-cut, with obscure brownish spots in each ray. Anal grayish, with scattered white spots. Caudal with upper half transparent and lower half whitish, with about eight transverse rows of neutral-black rounded spots of
moderate size. Along side, just below lateral line row of 8 to 10 unpaired black spots, with many small white spots scattered between and all along below. Length 76 mm.

Type, No. 3412 Bishop Museum, Guam.

Two paratypes, same date, one retained in Academy of Natural Sciences of Philadelphia.

Related to Callionymus simplicicollaris Valenciennes, but the species described with the spinous dorsal transparent with a black terminal band parallel to the edge.

(Coarse, yellow; spinous, banded; with reference to the spinous dorsal.)

BLENNIIDAE

Rupicetes fasciatus (Bloch).

One, 66 mm. Two very small lower canines.

Rupicetes papagei new species.

Head 41/5; depth 6; D. XII, 12; A. II, 18; P. 16; V. 2; subm. 4 in head; eye 4; mouth width 27/5.

Body elongate, slender, compressed. Caudal peduncle compressed, partly free, base depth 1/5 in head.

Head robust, width 1 1/2 in its length. Snout broad, convex, front profile rather steep, length 3/4 its width. Eyes high, head edge at first 1/2 in head; preoperculum flattened 3/4 of eye. Mouth broad, lower jaw slightly inferior. Lips thin, thin. Teeth fine, dentate, in single series, single small cusp each side below. Fourth tooth near last third in row, with 5 or 6 spines. Interorbital narrow, belly level. Scales median level or top of head, very few. No costal filaments. Gill openings extend forward opposite first 2/5 in head. Gillrakers 4 to 10 in head; pinnate points, barely 1/5 of Gill-filaments, which 2 1/5 in eye. Jaws broadly convex, free branchiostegal membrane moderately broad. Skin smooth. Lateral line incoincident, arch high along back at first, curves down and median slant after depressed posterior, curves to caudal base.

Dorsal begins above gill opening, spine flexible, last well separated by deep incision from soft dorsal; third spine 2 1/4 in head. Second dorsal ray 2 and last connected with caudal peduncle by membrane. Third anal ray 2 3/4 in head, in edge deeply notched after each ray. Caudal spindled, median rays longest and form point, 1 1/2 in head. Pectoral with median rays longest, 1 1/10 in head. Ventral 1 1/2 in head.

Color is body grayish above, becoming silver-white below, with seven pairs of pale brown transverse bands on middle and lower sides. On back various obscure brown blotches or bluish, from head to caudal base. Spinous dorsal largely d Theory in submarginal longitudinal white band, also tip of each spine whitish. Soft dorsal pale, without spine dark line, little more bluish than rays and rather posteriorly. Caudal white. Caudal pale, with obscure very faint transverse bar of chelron on base. Pectoral and ventral pale, little soiled. Cheek and lower side of head with four rather broad pale gray vertical bars, each with broader line of deep or dark gray. Iris gray.

Length 53 mm.

Type, No. 3413 Bishop Museum, Guam.
Only the type known. Distinguished from the numerous species in the genus chiefly by the presence of four broad pale vertical bars on the cheek.

Named for Dr. Canna M. L. Pogga, of the Leiden Museum, in slight acknowledgment of her East Indian ichthyological studies.

Salaria edestulus (Schneider). Mating, Sali
Three, 77 to 100 mm. July 18 and 29, 1923, and April, 1924.

Petrobrus miritus (Rüppell). Atut
Two, 58 and 64 mm. July 11, 1923.

Cirripectes brevis (Kner). Mating-Lago
Two, 125 and 135 mm. July 28, 1923. Reaches 152 mm.

FERASERIDAE

Feraser hoesi (Richardson). Aaga
Seven, 90 to 132 mm. July 26, 1923. Reaches 305 mm.

BALSTITIDAE

Balistes flavimarginatus Rüppel.
Two, 86 and 96 mm.

Balistapus rectangulus (Schneider). Polomon-Lado
Two, 43 and 163 mm. July 4 and 29, 1923. Reaches 610 mm.

Balistapus lineatus (Schneider). Polomon-Haddo
Two, 123 and 190 mm. July 5 and 23, 1923. Reaches 610 mm.

Balistapus aculeatus (Linné). Polohon
Six, 76 to 185 mm. June 30, 1923. Reaches 457 mm.

MONACANTHIDAE

Cantherinus portalis (Rüppell). Polomon-Lado
One, 170 mm. July 26, 1923. Sides of caudal peduncle rough velvety.

Oxyacanthus longirostris (Schneider). Faha
Two, 66 to 70 mm. July 2, 1923. Reaches 305 mm.

CANTHIGASTERIDAE

Canthigaster cinctus (Richardson). Butte, Pallanca
Two, 39 and 41 mm. July 18 and 21, 1923. Reaches 51 mm.
Castrigaster margaritans (Rüppell). **Butete, Faha**
Eight, 37 to 60 mm. July 6, 1923. Reaches 75 mm.
A color-sketch shows very pale bluish spots in the belly, now faded in my examples.

**TETRODONITIDAE**

*Tetodon hispidus* Linné. **Butete-n-Malulasa**
Three, 50 to 140 mm. July 1, 1923. Reaches 457 mm.

*Tetodon immaculatus* Schneider. **Butete-n-Malulasa**
Two, 272 and 275 mm. July 1, 1923. Reaches 457. Considered poisonous by the natives, but eaten by the Caroline Islanders if the poison sinew is removed.

*Tetodon stellatus* Schneider.
One, 140 mm. Gunther has given a figure under *Tetodon cinctus* which agrees with my example. Instead of but two black lines as he shows, the lines indicate the others apparently faded out. My specimen has eight such bands, all more or less parallel along the side. Both the caudal and caudal peduncle are also spotted with black in my specimen.

*Tetodon nigropunctatus* (Schneider). **Butete, Butete-Atulong**
Two, 180 and 210 mm. July 26 and 28, 1923. Reaches 610 mm.

**OSTRACIIDAE**

*Ostracion lentiginosus* Schneider. **Danglum**
Two, 110 and 128 mm. July 28, 1923. Reaches 152 mm.

*Ostracion sebae* Bleeker. **Danglum**
One, 146 mm. July 28, 1923. Reaches 152 mm.

*Ostracion cornutus* Linné. **Danglum, Toro**
Seven, 60 to 233 mm. July 14, 1923.

*Ostracion cubicus* Linné. **Danglum**
One, 25 mm. July 18, 1923. Reaches 152 mm. Body pale brown, with scattered round blackish spots on carapace, rather more numerous on under surface forward.

*Journal des Musées Gabonais, Bd. VI, heft 17, p. 466, 1910.*
Diodon hystrix Linné. Butete-litiuke

ANTENNARIIDAE
Antennarius commersonii (Shaw). Nufu
Four, 27 to 46 mm. July 3, 1923. All with bait reaching middle of second dorsal spine; filaments extending little beyond.
FISHES OF HAWAII

The following species were sent to the Academy of Natural Sciences of Philadelphia in 1923 by Bernice P. Bishop Museum. Nearly all of them were obtained in the markets of Honolulu.

ELOPIDAE
Elops hawaiiensis Regan.

ALBULIDAE
Albula vulpes (Linne).

CHANIDAE
Chanos chanos (Forskal).

ENGRAULIDAE
Engraulis purpureus (Fowler).

SYNODONTIDAE
Trachinotus myops (Schneider).
Synodus japonicus (Houttuyn).

CONGRIDAE
Ariosoma bewerti (Jenkins).

MURAENIDAE
Lycodontis flavimarginata (Rüppell).

BELONIDAE
Strongylura indica (Le Sueur).

PLEURONECTIDAE
Platophrys pantherinus (Rüppell).
Hilothracus lma (Valenciennes).
Ostichthys japonicus (Cuvier).
Myripristis marajen (Forskål).
Holocentrus dielena Lacépède.
Holocentrus microstomus Günther.
Holocentrus lateriguttatus Valenciennes.
Holocentrus samnara (Forskål).

FISTULARIIDAE
Fistularia petimba Lacépède.

SYNGNATHIDAE
Corythoichthys balli new species.
Head 2/3; depth about 1/2; D. 23; A. 12; P. 12; rings 17 + 33; snout 2 2 + 5.

Body robust, teeth all very slight. Dorsal keel of trunk interrupted opposite posterior part of dorsal fin, not continuous with dorsal keel of tail. Median dorsal keel of trunk not continuous on tail and none present on latter. Lower keel of trunk continuous with fin of tail. Base and upper surface of tail flattened.

Head compressed, level with axis of trunk, width 1/3 its length. Snout slightly less than posterior part of head, upper profile deeply concave. Eye large, midway in head length. 1 2 in snout. Mouth subterminal, superior, oblique, small; maxillary level. Opercle crenated, with slight median anterior horizontal seam. Gill-opening small, superior. Ribs and spine strong, spine of skin and single ribs, in moderate, rays subequal long. Caudal (damaged) apparently shorter than two. Pectoral broad, rounded, slightly over half of snout.

Color in alcohol very pale brown, evidently greatly faded. Almost everywhere above head and trunk, mottled obscure brownish markings. Dorsal and tail show to display narrow cross bars, less conspicuous on sides. Under surface of head posteriorly and each side red belly with white fins, brownish cheeks and head as anterior portion at least, becoming more posteriorly on trunk. Fine transparent. Length 60 mm.

Type, No. 3514. Bishop Museum. Wai'Alae reef, Honolulu, March 13-15, 1924. C. H. Edmondson and S. C. Ball. Closely related to Corythoichthys westerfar Jorden and Seale, but differs chiefly in the dorsal keel of the trunk not continuous with that of the tail, more dorsal rays and umbrity-scarred color pattern of breast and belly. The type a male, with the abdominal brood pouch extending over the first twelve rings.
Fowler—Fishes of Guam, Hawaii, Samoa, and Tahiti

Named for Stanley C. Ball, of the Bishop Museum, in slight acknowledgment of his interest in the fishes of Oceania.

**Hippocampus kuda** Bleeker.

**ATHERINIDAE**

*Haplochromis insularum* (Jordan and Evermann).

**MUGILIDAE**

*Magil cephalus* Linné.

**POLYNEMIDAE**

*Polynemus sexfilius* (Valenciennes).

**CARANGIDAE**

*Scymnus sancti-petri* (Cuvier).

*Nauromes dusor* (Lacépède).

*Decapterus sanctae-helenae* (Cuvier).

*Caranx affinis* Rüppell.

*Caranx kulhi* Bleeker.

*Caranx sexfasciatus* Quoy and Gaimard.

*Caranx holbollus* (Schneider).

*Caranxides gymnostomoides* Bleeker.

*Gnathanodon speciosus* (Forskal).

**CHILODIPTERIDAE**

*Amia frenata* (Valenciennes).

**SERRANIDAE**

*Cesioperca thompsonii* Fowler.

*Caprodon longimanus* (Günther).

*Odentanthias transpinus* (Jenkins).

*Asphrias kelloggi* Jordan and Evermann.
PRIACANTHIDAE

Pria canthus boops (Schneider).
Pria canthus cruciatus (Lacépède).

EMME LIGH THY IDAE

Erythrostomus scintillans Jordan and Thompson.

LUTJIANIDAE

Apolus zonatus (Valenciennes).
Printipomoides sieboldii (Bleeker).
Stelis carbusculus Corver.
Stelis mazzah Jenkins.
Aplochilus furcatus (Lacépède).

SPAKIDAE

Monotaxis grandoculis (Forskål).

KYPHOSIDAE

Kynchosaurus fuscus (Lacépède).

MULLIDAE

Malloloides aurifamna (Forskål).
Malloloides samoensis Günther.
Upeneus perphyreus (Jenkins).
Upeneus chrysoprymna (Lacépède).
Upeneus multifasciatus (Quoy and Gaimard).
Upeneus bifasciatus Lacépède.
Upeneus pleurostigma (Bennett).

MALACANTHIDAE

Malacanthus boedtii Bleeker.

CHEILODACTYLIDAE

Cheirolabrus rutilus (Garrett).
CIRRHITIDAE
Cirrhitoidea dimacula Jenkins.
Paracirrhites forsteri (Schnetler).
Paracirrhites arcatus (Cuvier).
Cirrhites maximus (Lacepède).

CARACANTHIDAE
Caracanthus maculatus (Gray).

SCORPÆNIDÆ
Sebastes mystinus (Bennett).
Menticirrhus maura (Sauvage).
Scorpaenopsis gibbosa (Schneider).
Tetracanthus signifer Jordan and Evermann.
Tetraostracion tricirrhus Lacepède.
Brachirus chlorus (Jenius).
Pterois tibes Jordan and Evermann.

CEPHALACANTHIDÆ
Dactyloptera orientalis (Cuvier).

CAPROIDÆ
Antignus steindachneri Jordan and Evermann.

CHÄETODONTIDÆ
Percipiger longirostris (Brouss.etcet).
Chaeodon setifer Bloch.
Chaeodon lineolatus Cuvier.
Chaeodon lunia (Lacepède).
Chaeodon unimaculatus Bloch.
Chaeodon ovatus Cuvier.
Chaeodon puncticeps Valenciennes.
Chaeodon semilini Bennett.
Chaetodon trifasciatus Mango Park.
Chaetodon miliaris Quoy and Gaimard.
Chaetodon quadrimaculatus Gray.
Chaetodon corallicola Snyder.
Microcanthus strigatus (Valenciennes).
Euniceus acuminatus (Linneé).
Holacanthus arceatus Gray.
Holacanthus ptereri Jordan and Metz.

ZANCLIDAE

Zancus canescens (Linneé).

ACANTHURIDAE

Hepatus achilles (Shaw).
Hepatus silvacrus Schneider.
Hepatus leucopareus Jenkins.
Hepatus fuliginosus (Lesson).
Hepatus dianuméti (Valenciennes).
Hepatus inesolatus (Valenciennes).
Hepatus guttatus Schneider.
Hepatus sandwicensis (Streets).
Zebrasoma veliferum (Bloch).
Zebrasoma flavescens (Bennett).
Ctenochaetus striatatus (Bennett).
Acantthurus brevirostris (Valenciennes).
Acantthurus unicornis (Forskal).
Acantthurus surratus Schneider.
Acantthurus tuberosus (Laepeche).

POMACENTRIDAЕ

Dascyllus trimaculatus (Rüppell).
Chromis ovalis (Steindachner).
Chromis metas (Valenciennes).
Pomacentrus jacksoni Jordan and Evermann.
Abudesdum sorcudus (Forskal).
Abudesdum abdominals (Quoy and Gaimard).

LABRIDAE
Lepidaphelus modestus (Garrett).
Stepto julus acustus (Quoy and Gaimard).
Macrocheilinae geoffroy (Quoy and Gaimard).
Coris pulcherrima Günther.
Coris lepomis Jenkins.
Coris flavovittata (Bennett).
Coris halius Vaillant and Sauvage.
Coris rosea Vaillant and Sauvage.
Checio inermis Forskal.
Gomphocephalus tricolor Quoy and Gaimard.
Anampses cuvier Quoy and Gaimard.
Anampses goddeffrey Günther.
Thalassoma yurpurureum (Forskal).
Thalassoma trilobata (Lacépède).
Thalassoma umbrostigma (Rüppell).
Thalassoma duperyy Quoy and Gaimard.
Thalassoma aequitens (Günther).
Cheilinus hexagonus Günther.
Cheilinus bimaculatus Valenciennes.
Novaculichthys taeniourus (Lacépède).
Novaculichthys kallassona (Bleeker).
Italius paro (Valenciennes).
Cymolutes incluse (Quoy and Gaimard).

CALLYODONTIDAE
Leptoscarus irritans (Jenkins).
Leptoscarus sandvicensis (Valenciennes).
Scardes zonarcha Jenkins.
Scardes baria Jenkins.
Callyodon perspicillatus (Steindachner).
Callyodon borborus (Jordan and Evermann).
Callyodon brunnus Jenkins.
Callyodon dubius (Reedwett).
Callyodon rubroviolaceus (Bleeker).
Callyodon bateviiensis (Bleeker).
Callyodon erythrodes (Valenciennes).

ELEOTRIDAE
Eleotris fusca (Schneider).
Eleotris epiphanes Jenkins.

GOBIIDAE
Clonophorus genivittatus (Valenciennes).

BLENNIIDAE
Rupicarpus gibbifrons (Quoy and Gaimard).
Enchelyopus ater (Günther).

BRUTULIDAE
Brutula multiharacta Schlegel.

BALISTIDAE
Balistes vidua Richardson.
Balistes capistratus (Shaw).
Melichthys busiva (Lacepède).

MOSACANTHIDAE
Cantherhines sandwichensis (Quoy and Gaimard).
Monacanthus spilosomus Lay and Bennett.

TETRODOONTIDAE
Tetrodon hispidus Linne.

OSTRACIIDAE
Ostracion lentiginosum Schneider.
Ostracion frenatus Briasconi.

ANTENARIIDAE
Antenarius commersonii (Shaw).
FISHES OF SAMOA

Of the following, all in the collection of the Academy of Natural Sciences of Philadelphia, largely received from the United States Bureau of Fisheries, a set of duplicates has been sent to Bernice P. Bishop Museum.

ELOPIDAE

Megalops cyprinoides (Broussonet).

ANGUILLIDAE

Anguilla mauritiana Bennett.

MURAENIDAE

Echidna nebulosa (Ahl).
Echidna acutibrachia (Bleeker).
Lycodonte tenuifrons (Lacépède).
Lycodonte flavomarginata (Rüppell).
"epistomus maculosus (Lacépède).

PLOTOSIDAE

Plotosus anguillaris (Bich).

HZMIRAMPHIDAE

Hemiramphus affinis Günther.

HOLOCENTRIDAE

Myripristis murdjan (Forskål).
Myripristis adscitus Bleeker.
Myripristis intermedium Günther.
Myripristis microphthalmus Bleeker.
Myripristis multiradiatus Günther.
Holocentrus diadema Lacépède.
Holocentrus microrhinos Günther.
Holocentrus tiera Cuvier.
Holocentrus lacteognatus Valenciennes.
Holocentrus undulatusus Rüppell.
Holocentrus spinifex (Forskal).
Holocentrus violaceus Bleeker.
Holocentrus sumatra (Forskal).
Holocentrus laevia Günther.

**Mugilidae**

*Mugil trichilus* Vaillant and Sauvage.
*Mugil scabell* Forskal.
*Mugil enghel* Bleeker.

**Carangidae**

*Scromberoides sanctipetri* (Cuvier).
*Megalaspis cordyla* (Linnaeus).
*Salar crumenophthalmus* (Bloch).
*Carassius auratus* Osbeck.
*Carassius saxatilis* Quoy and Gaimard.

**Cheilodipteridae**

*Apogonichthys variegatus* (Valenciennes).
*Ammia savayensis* (Günther).
*Archamia lineolata* (Cuvier).
*Cheilodipterus quinquelineatus* Cuvier.

**Amphassidae**

*Amphassus lafa* Jordan and Seale.
*Amphassus valavensis* Jordan and Seale.

**Kuhliidae**

*Kuhlia repentina* (Lacépède).
*Kuhlia margarita* (Cuvier).

**Pempheridae**

*Pempheris ocellata* Cuvier,
SCORPIDIDAE

Monodactylus argenteus (Linné).

SERRANIDAE

Variole louti (Forskål).
Cephalopholis argus Schneider.
Epinephelus merra Bloch.
Pharaohgeryx nigricans Rüppell.

LUTJANIIDAE

Lutjanus marginatus (Cuvier).
Lutjanus gibbus (Forskål).

HAEMULIDAE

Scolopsis trilineatus Kner.

SPARIDAE

Lethrinus harak (Forskål).

LEIGONATHIDAE

Leiognathus fasciatus (Lacépède).

MULLIDAE

Mulloides samoensis Günther.
Umpneus indicus (Shaw).
Uponeus bifasciatus (Lacépède).

SCORPAENIDAE

Sebastopsis guamensis (Quoy and Gaimard).
Sebastopsis scabra (Ramsay and Ogilby).
Synanceja verrucosa Schneider.

CHAETODONTIDAE

Chaetodon nitidus Bloch.
Chaetodon lunula (Lacépède).
Chaetodon vagabundus Linné.
Chaeodon unimaculatus Boch.
Chaeodon ornatus Linne.
Chaeodon splendens Cuvier.
Chaeodon striatus Valenciennes.
Chaeodon trifasciatus Mungo Park.
Chaeodon miliaris Quoy and Gaimard.
Chaeodon collaris Bloch.
Holacanthus bicolor (Bloch).
Holacanthus dimidiatus (Beddard).
Holacanthus flavissimus Cuvier.

ZANCLIDAE

Zanclus canescens (Linnæus).

ACANTHURIDAE

Kepatus lineatus (Linnæus).
Kepatus lineolatus (Valenciennes).
Kepatus guttatus (Sauvage).
Kepatus tristis (Linnæus).
Zebrasoma flavescens (Cuvier).
Zebrasoma rhomboides (Gill).n.
Urophycis arborescens (Cuvier).
Acanthurus lituratus Schneider.

SIGANIDAE

Siganus rostratus (Valenciennes).

POMACENTRIDAE

Dascyllus aruanus (Linnæus).
Chromis aenea (Cuvier).
Chromis analis (Cuvier).
Pomacentrus pavon (Bloch).
Pomacentrus nigrofasciatus (Laguède).
Pomacentrus alfonsensis (Schlegel).
Pomacentrus lividus (Sauvage).
Abudelfar coelestis (Cuvier).
Abudelfar glaucus (Cuvier).
Eupomacentrus zonatus (Cuvier).
Abudefduf amabilis (De Vis).
Abudefduf anterior (Cuvier).
Abudefduf leucogrammus (Cuvier).
Abudefduf unilocularis (Quoy and Gaimard).

LABRIDAE

Euphieus insidiator (Pallas).
Hemigynus melapterus (Bloch).
Stethojulis phekadophora Bleeker.
Stethojulis axillaris (Quoy and Gaimard).
Stethojulis haraldensis (Bleeker).
Pistylusoma stenops (Valenciennes).
Halichoeres trivittatus (Quoy and Gaimard).
Halichoeres nubilus (Valenciennes).
Halichoeres opercularis (Günther).
Thalassoma hardwickei (Bennett).
Cheilinus triangulus Lacépède.
Cheilinus fasciatus (Bloch).
Cheilinus chlorurus (Bloch).
Pseudocheilinus hexataenia (Peters).
Novaculichthys tamentius (Lacépède).

CALLYODONTIDAE

Callyodon ovatus (Valenciennes).
Callyodon cavifasciatus (Günther).
Callyodon dubius (Bennett).
Callyodon globiceps (Valenciennes).
Callyodon erythrurus (Valenciennes).
Callyodon tracheli (Peters).
Callyodon frenatus (Lacépède).
Pseudocaranx forsteri (Valenciennes).

ELEOTRIDAE

Eleotris fusca (Schneider).
Ctenocephalus cyanopterus (Valenciennes).
Kynthia zotura Jordan and Seale.
GOBIIDAE
Periophthalmus kaustoteri (Dallas).
Gobioides citrinus (Rüppell).
Paragobioides echinocephalus (Rüppell).

BLNNIIDAE
Rugielartes caudolineatus (Guehrther).
Salaria bicoloratus Valenciennes.
Salaria fasciatus (Bloch).
Salaria septentrinalis (Schneider).
Salaria perioptthalmus Valenciennes.
Encalyptus ser (Günther).

ECHENEIDAE
Leptechenes maculatus (Linné).

BALISTIDAE
Balistasurus caudatus (Linné).
Balistes undulatus (Mungo Park).

MONACANTHIDAE
Osmonacanthus longirostris (Schneider).

CANTHIGASTERIDAE
Canthigaster margaritatus (Rüppell).

TETRAOONTIDAE
Tetradon spiculatus Schneider.
Tetradon nigropunctatus Schneider.
Tetradon melas Schneider.

OSTRACIDAE
Ostracion testigonus Schneider.
FISHES OF TAHIJI

A few species of Tahitian fishes are in the collections of the Academy of Natural Sciences of Philadelphia. Duplicates of these have been sent to Berice P. Bishop Museum.

CIJPEIDAE
Sardinia melanura (Cuvier).

ZOLOCENTRIDEAE
Hocoecranus laxaegegatus Valenciennes.
Hocoecranus tier cervier.

SYGNATHIDEAE
Doryrhamphusarma brachyurus (Bleeker).

KHUHIDAE
Kuhia rupestria (Laépide).
Kuhia marginata (Cuvier).

PSEUDOCROMIDAE
Pseudogymn polyacantha (Bleeker).

MULLIDAE
Upeneidos vitatus (Forshkal).
Upeneus multifasciatus (Quoy and Gaimard).
Upeneus plecostiplo Bleeker.

CARACANTHIDEAE
Caracanthus maculatus (Gray).

SCORPENIDAE
Sebastes grannensis (Quoy and Gaimard).
Pimel rubra (Cuvier).
POMACENTRIDAE

Dascyllus aruanus (Linnei).

LAGRIDAE

Pseudocheilinus hexataenia (Brecher).

ELECTRIDAE

Eileotris fusca (Schneider).

GOBIIDAE

Pachygrapsus fuscus (Péreille).

BLENNIOIDEAE

Salarias ocellatus (Schneider).

CARAPIDAE

Carapus loewi (Richardson).
Jordanius perspicuus (Kemp).