

LIST OF FISHES COLLECTED BY DR. BASHFORD DEAN
ON THE ISLAND OF NEGROS, PHILIPPINES.

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In the winter of 1900 and 1901 Dr. Bashford Dean visited the Philippine Archipelago. On the southern shore of the island of Negros he made a considerable collection of the small fishes of the reefs, this collection being sent by him to the United States National Museum. The present paper contains a list of the species (114 in all) obtained by Dr. Dean. Plates of the new species were prepared by Chloe Lesley Starks and William Sackston Atkinson, with one each by Mr. Robert L. Hudson, Miss Frances Lauderbach, and Mr. Sekko Shimada.

This collection shows that the fish fauna along the shores of the Philippines is essentially identical with that of the East Indies, most of the species being figured in Bleeker's Atlas. A few species belong to the fauna of India proper, and a few of the distinctive species of the South seas are included. The collection is especially rich in small fishes, the species usually overlooked by collectors. For this reason no doubt the number of new species is greater than would have been expected, and larger than a collection made in the market would show.

We are indebted to Dr. Charles H. Gilbert for material assistance in the comparison of specimens.

The following species seem to be new to science:

Eleria philippina.
Caranx (Citula) deani.
Amia gilberti.
Mionorus mydrus.
Foa fo.
Pomacentrus delurus.
Halicharys cymatogrammus.
Slethojulis zatima.
Sebastapistes virifer.

Prosopodusys gogorzse.
Butis leucurus.
Gnatholepis calliurus.
Drombus palackyi.
Glossogobius aglestes.
Salarias deani.
Salarias undecimalis.
Petrosirtes erectus.
Hyppleurochilus torius.

Family ELOPIDÆ.

MEGALOPS Lacépède.

1. MEGALOPS CYRINOIDES (Broussonet).

Four small examples less than 3 inches long were secured.

Anal rays, 27 or 28; the fin, 5 in length of body. Dorsal filament very short, its development probably a matter of age.

These specimens correspond to *Megalops macropterus* Bleeker, a species which is clearly the true *Megalops cyprinoides* of Broussonet, if indeed there be more than one valid species of *Megalops*.

Family CLUPEIDÆ.

HARENGULA Cuvier and Valenciennes.

2. HARENGULA MOLUCCENSIS (Bleeker).

One small specimen, apparently referable to this species.

3. HARENGULA SUNDAICA (Bleeker).

Four small specimens were secured.

Depth 3.25, in length, considerably more than length of head. Thickness of body, 3 in depth. A black spot at base of dorsal.

SARDINELLA Cuvier and Valenciennes.

4. SARDINELLA SIRM (Rüppell).

A small example with the scales strongly striate, apparently referable to this species. It has no trace of black spots along the back.

The three generic names *Sardinella*, *Sardinia*, and *Amblygaster* seem all to belong to the group of sardines. To this group the present species should be referred.

5. SARDINELLA CLUPEOIDES (Bleeker).

Two specimens, length, 2 inches. Scales not striate and not deciduous as in other sardines.

This species is the type of Bleeker's genus *Amblygaster*.

STOLEPHORUS Lacépède.

(*Spratelloides* BLEEKER.)

6. STOLEPHORUS JAPONICUS (Houttuyn).

(*Clupea argyrotenia* BLEEKER; *Spratelloides gracilis* SCHLEGEL.)

Two small specimens were secured.

Lateral band very distinct, but without dark streak above.

These specimens, corresponding to *S. argyrotaenia*, seem to differ from Japanese examples only in having no distinct dark streak along the upper edge of the lateral band. Perhaps this may appear with age, as it is not conspicuous in the smallest of our Japanese examples.

Family ENGRAULIDÆ.

ANCHOVIA Jordan and Evermann.

(*Stolephorus* BLEEKER, not of LACÉPÈDE.)

7. ANCHOVIA COMMERSONIANA (Lacépède).

Numerous specimens of this species were secured.

Family DOROSOMATIDÆ.

ANODONTOSTOMA Bleeker.

8. ANODONTOSTOMA CHACUNDA (Hamilton Buchanan).

Numerous specimens of this species, representing the more elongate form, figured by Bleeker as var. *selangkut*, were taken.

The name *Anodontostoma* may be used for the species of *Dorosoma* which lack the dorsal filament. *Gonostoma* (Kühl and Van Hasselt, 1822) was devised for the same group, but was earlier used by Rafinesque for a different genus.

The generic names *Clupanodon* Lacépède, *Thrissa* Rafinesque, and *Chatoëssus* Cuvier were all primarily based on a species from the West Indies confounded by Linnaeus with *Clupea thrissa*, the type of the latter called *Opisthonema* by Dr. Theodore Gill. For this American genus, and this only, the name *Clupanodon* should be used, and its type species should stand as *Clupanodon oglinus*. Lacépède's account of *Clupanodon thrissa* was based on the American and not on the Chinese species called *Clupea thrissa*. The Chinese species, originally named *Clupea thrissa* by Osbeck, must stand as *Konosirus thrissa* Linnaeus, the specific name *thrissa* having been taken by Linnaeus from Osbeck (1757). As Osbeck counted the fin rays D. 16, A. 24, *Konosirus thrissa* is no doubt identical with *Clupea nasus* Bloch (*Chatoëssus nasus* Cuvier and Valenciennes), the only species of the genus yet known from Hongkong and Canton. *Chatoëssus aquosus* Richardson, from Canton, is based on a dried skin of *Konosirus thrissa*, and there seems to be no trustworthy record of the Japanese species *Konosirus punctatus* (Schlegel) from China.

Family SYNODONTIDÆ.

SAURIDA Cuvier and Valenciennes.

9. SAURIDA BADI (Cuvier).

One specimen was secured. Eyes well veiled by the adipose membrane. Scales, 59. Snout rather blunt. This species seems to differ from *Saurida tumbil* (Bloch) in the large adipose eyelid and the absence of dark cross bands.

Family MYRIDÆ.

MURÆNICHTHYS Bleeker.

10. MURÆNICHTHYS MACROPTERUS Bleeker.

Two small specimens were secured.

Family MURÆNIDÆ.

GYMNOTHORAX Bloch.

11. GYMNOTHORAX PUNCTATO-FASCIATUS Bleeker.

Two specimens corresponding fairly to Bleeker's figure, one specimen darker and with slightly broader cross-bands than the other.

12. GYMNOTHORAX PICTUS (Ahl).

One specimen of this species was secured.

UROPTERYGIUS Rüppell.

13. UROPTERYGIUS CONCOLOR Rüppell.

Tail one-fifth longer than rest of the body. Color a uniform warm reddish brown.

A single small specimen was secured.

ECHIDNA Forster.

14. ECHIDNA NEBULOSA (Ahl).

One specimen of the common moray was secured.

15. ECHIDNA DELICATULA (Kaup).

Head and body anteriorly finely dotted with dark brown. General color brown. Bleeker's figure of *E. delicatula* represents this species fairly. That of *E. amblyodon* apparently represents a different species. *E. kishinouyei* Jordan and Snyder, from Okinawa, Riukiu Islands, seems to be identical with *E. delicatula*.

Family MORINGUIDÆ.

MORINGUA Gray.

16. MORINGUA LUMBRICOIDEA Richardson.

One specimen about a foot long, and one small example.

These differ from most of the species in having the jaws equal. Dorsal and anal fins traceable, depressed mesially; no pectorals. Head, 9 or 10 in length; depth, about 40. Anal beginning close behind the vent.

We hesitate to identify this species with *Aphthalmichthys lumbricoidea*, as our specimens have no trace of pectoral fin.

17. MORINGUA ABBREVIATA Bleeker.

One small example with no trace of fins except at the tip of the tail. Head, 10 in length; depth, 40. As the head becomes relatively shorter with age, this specimen is referable to *M. abbreviata* (head, 2 in length) rather than to *M. macrocephala*, in which the head is 9 in the total length.

Family BELONIDÆ.

TYLOSURUS Cocco.

18. TYLOSURUS GIGANTEUS (Schlegel).

(*Belone annulata* CUVIER and VALENCIENNES.)

Of the names *giganteus* and *annulatus*, of the same nominal date, 1846, *giganteus* is doubtless the older, occurring also on an earlier page in the volume.

One specimen of this widely distributed species.

Family SYNGNATHIDÆ.

GASTEROTOKEUS Heckel.

19. GASTEROTOKEUS BIACULEATUS Bloch.

Six fine specimens. According to Sherborn, the name *biaculeatus* of Bloch (1785) is prior to that of *tetragonus*, given by Thunberg in 1786.

HIPPOCAMPUS Linnæus.

20. HIPPOCAMPUS KUDA (Bleeker).

Two specimens, agreeing well with the account given by Jordan and Snyder.

Family ATHERINIDÆ.

ATHERINA Linnæus.

21. ATHERINA TEMMINCKI (Bleeker).

One example, agreeing fully with Bleeker's description.

Head, 4.50 in length; depth, 6.55, greatest breadth, 8; eye, 3 in head, snout 4.

D. VI-1, 8; A. I, 12. Scales, 42, two series above lateral stripe. Sides with a broad silvery band; upper parts dotted; pectorals pale.

Family SPHYRENIDÆ.

SYPHÆYNA Linnæus.

22. SPHYRÆNA JELLO Cuvier and Valenciennes.

Two young specimens.

Family CARANGIDÆ.

ELERIA Jordan and Seale, new genus.

A new genus, allied to *Scomberoides*, but with a strong diverging horizontal canine on each side of tip of lower jaw; outer teeth in both jaws strong.

The genus is named for the late R. P. Fra Casto de Elera, "Profesor de Amplificacion de Historia Natural," in the University of Santo Tomas de Manila, first local author to write on the fish fauna of the Philippines. Fra Elera's elaborate and painstaking work is entitled "Catologo Metodico de Toda la Fauna de Filipinas conocida hasta el presente, y a la vez de la coleccion del Museo de P. P. dominicos del Colegio Universidad de Santo Tomas de Manila."

23. ELERIA PHILIPPINA Jordan and Seale, new species.

Head, 4.15; depth, 3.10; eye, 4.10 in head; D. VII-1, 20; A. II-1, 18; lateral line slightly curved anteriorly; scales, about 200; snout, 3.50 in head; interorbital 3.50.

Body oblong, compressed; depth of caudal peduncle 4.50 in head; lower jaw large and prominent, but scarcely longer than upper when mouth is closed; maxillary narrow, its length 1.75 in head, its distal end under posterior third of eye; teeth on jaws, vomer, palatines, and tongue; lower jaw with 2 strong procurrent diverging canines; upper jaw with 4 smaller diverging canines; outer teeth in both jaws enlarged; head naked; opercles entire, a slight median crest on top of head; a distinct spine directed forward at origin of dorsal; distance from tip of this spine to tip of snout, 3.12 in length of fish with-

out caudal, the longest spine, 2.75 in head; anterior dorsal ray, 1.85 in head; none of rays of dorsal or anal detached; anal with two anterior spines large and distinct from rest of fin; the second spine is the longest, 2.50 in head; pectorals short, 1.75 in head; ventrals, 2 in head; caudal well forked, its upper lobe, 1.10 in head.

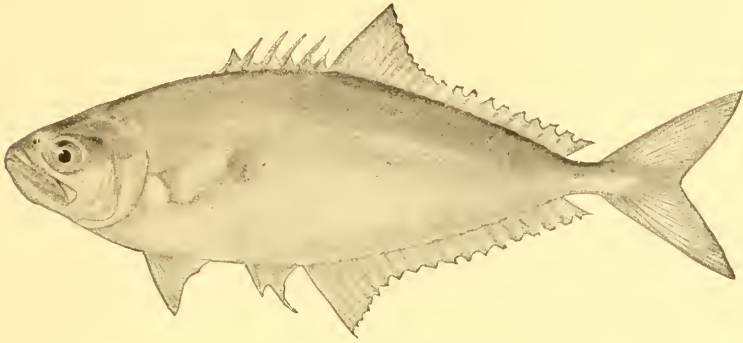


FIG. 1.—*ELERIA PHILIPPINA*.

Color in spirits silvery with a wash of bluish above; no spots or lines, except small black spot in axis of pectorals; fins uniform; an indistinct shade of darker blue at upper margin of opercles and above eye.

Four specimens from island of Negros.

Type.—Cat. No. 51945, U.S.N.M. Length, 4.75 inches.

CARANX Commerson.

24. *CARANX FORSTERI* (Cuvier and Valenciennes).

One specimen.

25. *CARANX DEANI* Jordan and Seale, new species.

Subgenus *Citula* CUVIER and VALENCIENNES.

Head, 3.14; depth, 2; eye, 4 in head; D. VI-I, 22; A. II-I, 18; scales very minute, about 54 in curved portion of lateral line and 44 developed scutes on the straight portion; snout, 3.10; interorbital, 4. Body oblong, compressed, the upper profile more evenly rounded than lower; depth of caudal peduncle equal to its width (including scutes), 5.20 in head; mouth moderate, the lower jaw scarcely longer than upper; maxillary extending to a line with anterior margin of pupil; teeth on jaws, vomer, palatines, and tongue; some of the anterior ones in lower jaw enlarged and canine-like; opercles entire; sides of head scaled; no scales on thorax; gill-rakers sharp pointed, slim, the longest two-thirds width of eye, 18 on lower limb; 2 or 3 small undeveloped spines in front of dorsal and anal, under the skin; adipose

eyelid very slightly developed; longest dorsal spine, 3.10 in head; the anterior rays of dorsal and anal greatly prolonged, being considerably longer than the head; none of dorsal or anal rays detached; base of soft dorsal, 2.25 in length of fish without caudal, its anterior ray, 2.50 in length of fish without caudal; anal spines very small and near

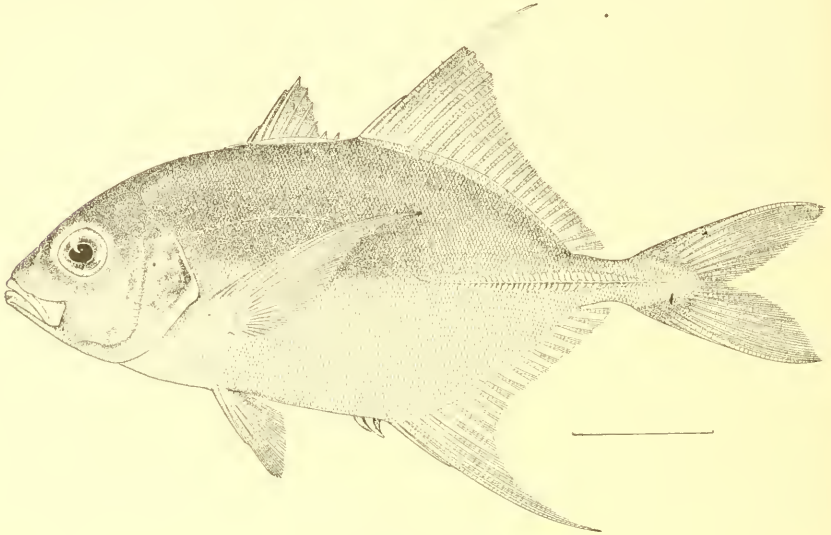


FIG. 2.—*CARANX DEANI*.

the fin; pectoral falcate, 2.85, in length, its tip reaching to the scutes; ventrals, 1.75; caudal deeply forked, about 3 in length.

Color in spirits dull silvery, with a slight wash of light brown above; soft dorsal and anal with slight tip of dusky; no opercular spot.

Two specimens.

Type.—Cat. No. 51951, U.S.N.M. Length, 6 inches.

26. *CARANX IRE* Cuvier and Valenciennes.

(*Caranx praeustus* BENNETT.)

Two specimens. The black lobe of the dorsal in this species is very characteristic.

27. *CARANX HASSELTII* Cuvier and Valenciennes.

One specimen similar to others from Hawaii.

Family EQUULIDÆ.

LEIOGNATHUS Lacépède.

28. *LEIOGNATHUS SPLENDENS* Cuvier.

Five specimens.

29. *LEIOGNATHUS LEUCISUS* (Günther).

Three specimens, the dorsal spine a little shorter than indicated in Günther's description.

EQUULA Cuvier.

30. *EQUULA INSIDIATOR* (Bloch).

One example.

GAZZA Cuvier and Valenciennes.

31. *GAZZA MINUTA* (Bloch).

Seven examples.

Family APOGONICHTHYIDÆ.

AMIA Gronow.

(*Apogon* Lacépède.)

32. *AMIA NOVEMFASCIATA* (Cuvier and Valenciennes).

One specimen, with the lateral bands forming convergent stripes on the caudal fin, as in Samoan examples.

33. *AMIA NOVÆ-GUINEÆ* (Bleeker).

Two specimens, the one plain in color, the other crossed with faint pale bars.

34. *AMIA GILBERTI* Jordan and Seale, new species.

Head, 2.50; depth, 2.45; eye, 2.25 in head; D. VI-I, 9; A. II, 9; scales 2-24-6; lateral line complete; snout 1.75 in eye, 3.75 in head; interorbital 4 in head.

Body compressed, rather short and deep; depth of caudal peduncle 2.75 in head; tip of upper jaw on horizontal line with lower margin of pupil; mouth large; lower jaw slightly the longest; distal end of maxillary reaches to below anterior half of pupil; minute teeth in jaws, vomer and palatines; the posterior lower limb of preopercle is slightly denticulate, otherwise preopercles and opercles entire; gill-rakers slim and sharp pointed the longest equal to one-half of eye, 19 on lower limb; distance from origin of dorsal to tip of snout, 2.45 in length of fish without caudal; second dorsal spine rather elongate, 1.14 in head, base of soft dorsal, 2 in head, the longest ray, 1.90 in head; base of anal, 2.05 in head, the origin of anal is under anterior third of soft dorsal; pectorals, 1.30 in head, their tip below middle of soft dorsal; ventrals short, 2 in head, their tip not reaching base of anal; caudal probably rounded, but the fin is so broken as to render shape uncertain.

Color in spirits yellowish-white, a distinct black spot on middle of caudal peduncle at base of caudal; another distinct black spot on tip of opercles, just above and a little anterior to base of pectorals; some scattered minute black specks like pin-pricks on top of head, shoulders, and posterior of body; fins all yellowish-white, the dorsals with a

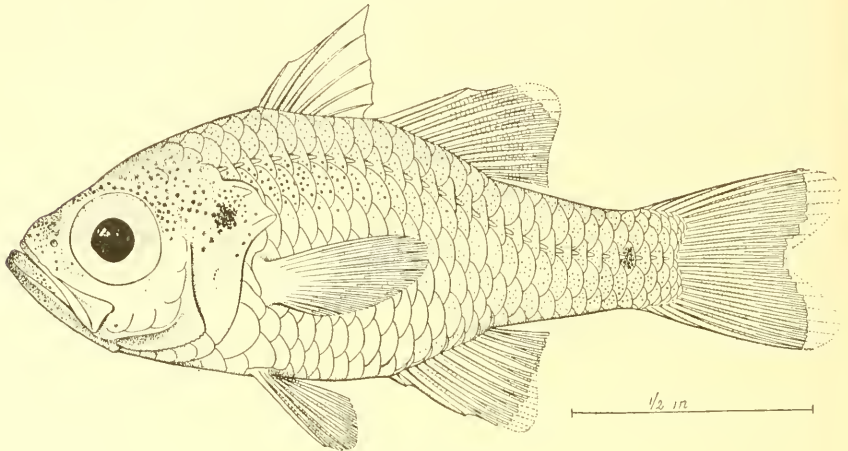


FIG. 3.—AMIA GILBERTI.

slight shading of minute black specks; tip of ventrals also slightly shaded with dusky; belly and cheeks rather brighter yellow, iris golden, darker above.

Three specimens from Negros, Philippine Islands.

Type.—Cat. No. 51941, U.S.N.M. Length, 1.65 inches.

Named for Prof. Charles Henry Gilbert, of Stanford University.

MIONORUS Krefft.

Preopercle entire; lateral line complete; teeth on palatines.

35. MIONORUS MYDRUS Jordan and Seale, new species.

Head, 2.50; depth, 2.75; eye, 2.50 in head; D. VI-1, 9; A. II, 8; scales, 2-24-7; lateral line complete; snout 4 in head; interorbital 3.01 in head.

Body compressed, rather short and deep; depth of caudal peduncle, 2.50 in head, 1.50, in its length; anterior of head evenly and dully pointed; gill-rakers sharp-pointed, less in length than eye, 12 on lower limb; small sharp-pointed teeth in jaws, vomer, and palatines; preopercle entire; opercle with a sharp point on margin, being the end of a short bony stay; distance from tip of snout to origin of dorsal 2 in length of fish without caudal; the second dorsal spine is longest, 2 in head; base of anal, 2.50 in head, its longest ray, 2.75; pectorals, 1.20 in head; ventrals reach to base of anal, their length, 1.30 in head.

In type specimen the fins are frayed and broken at ends so that it is

impossible to tell with certainty the shape of the caudal or its length. The caudal is, however, doubtless, rounded in life.

Color in spirits bluish-black; on anterior half of head the ground color seems to be yellowish covered with black dots or narrow reticulating lines, the black markings predominating and gradually hiding

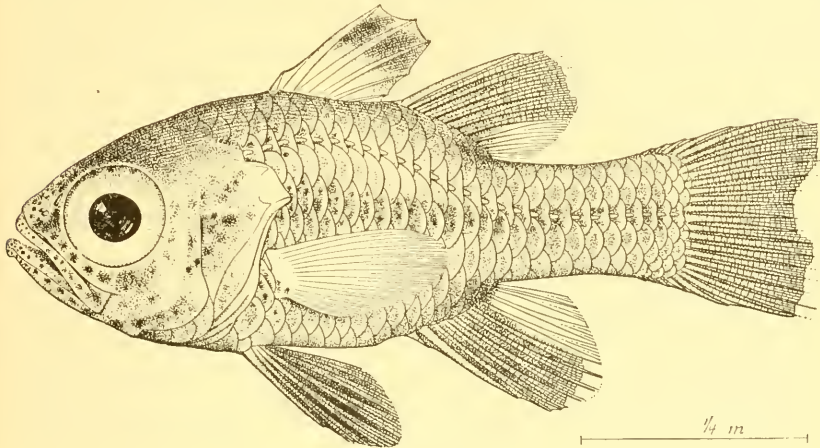


FIG. 4.—MIONORUS MYDRUS.

the yellow coloring on posterior half of head; fins are black, the three posterior rays of soft dorsal and anal are yellowish, base of pectoral yellow, the pectoral itself gray; iris golden.

One specimen Cat. No. 51946, U.S.N.M., from Negros. Length, 0.78 inch.

FOA Jordan and Evermann, new genus.

Preopercle entire; lateral line incomplete; teeth on palatines.

This genus contains small species allied to *Amia*, but with the preopercle entire and the lateral line incomplete. From *Apogonichthys* (= *Fowleria*; type *aurita*), *Foa* differs in the presence of teeth on the palatines, these being absent in *Apogonichthys*. *Mionorus* differs in having the lateral line complete. In *Amia* (*Apogon*) the posterior limb of the preopercle is serrate; in *Pristiapogon*, both limbs. *Fo* is the Samoan name for fishes of this family.

36. FOA FO Jordan and Seale, new species.

Head, 2.25; depth, 2.75; eye, 2.80 in head; D. VII-1-9; A. II, 8; scales 2-23-6, lateral line not complete; snout 4.85 in head; interorbital equal to snout.

Body compressed, of moderate depth, the dorsal outline much more convex than ventral, the greatest depth being at origin of dorsal fin; depth of caudal peduncle equal to orbit; head rather pointed, the lower jaw slightly the longer; mouth large; distal end of maxillary below posterior margin of orbit; minute teeth in jaws, vomer and

palatines; preopercle entire; gill-rakers very short, the longest equal to pupil, 7 on lower limb; distance from tip of snout to origin of dorsal, 2.12 in head; spines of dorsal not elongate, its longest spine, about 2 in head; longest rays of soft dorsal, 2 in head; base of anal, 3.75 in head, its longest ray, 2.50 in head; ventrals short, 2.25 in head; caudal probably rounded.

Color in spirits, yellowish-white, mottled with brownish, the mottlings assuming a more or less irregular band-like arrangement over back and sides; a dark stripe from lower posterior margin of orbit to

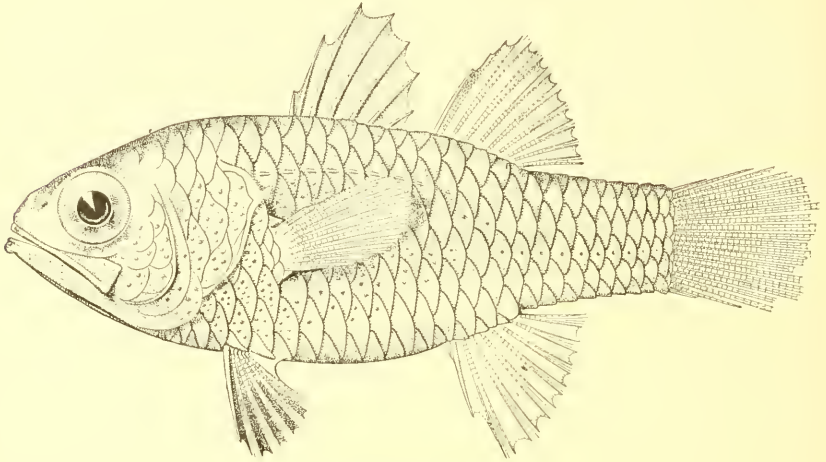


FIG. 5.—*FOA BRACHYGRAMMA*.

lower limb of preopercle; a dark band over posterior part of nuchal region; about 5 very indistinct darker bands around under part of head; spinous dorsal with two dusky blotches; soft dorsal yellowish; anal yellowish with about 5 indistinct brownish lines; ventrals with inner half and posterior part deep black; pectorals yellow; caudal yellow with four indistinct cross-bands of dusky; iris golden, darker above.

One specimen, $1\frac{1}{2}$ inches long, from Negros, Philippine Islands. We have also a specimen collected by Dr. George A. Lung, U. S. N., at Cavite.

Family PARAMBASSIDÆ.

PRIOPIS Kuhl and Van Hasselt.

37. PRIOPIS GYMNOCEPHALUS (Lacépède).

One specimen. The genus *Priopis* (Kuhl and Van Hasselt) may be defined as *Chanda* (*Ambassis*) with the lateral line interrupted. The name *Chanda* Hamilton-Buchanan (1822) has priority over *Ambassis* (1828).

Family SERRANIDÆ,

EPINEPHELUS Bloch

38. EPINEPHELUS TAUVINA (Forskåål).

One large specimen.

CROMILEPTES Swainson.

39. CROMILEPTES ALTIVELIS Cuvier and Valenciennes.

One fine specimen.

PHAROPTERYX Rüppell.

(*Plesiops* CUVIER.)

40. PHAROPTERYX MELAS (Bleeker).

Three specimens, agreeing with specimens obtained by Jordan and Kellogg in Samoa.

Family PSEUDOCHROMIDÆ.

PSEUDOCHROMIS Müller and Troschel.

41. PSEUDOCHROMIS TAPEINOSOMUS (Bleeker).

One specimen, agreeing fairly with the description.

Family LUTIANIDÆ.

LUTIANUS Bloch.

42. LUTIANUS JOHNI Bloch.

One specimen.

43. LUTIANUS DECUSSATUS (Cuvier and Valenciennes).

One specimen.

NEMIPTERUS Swainson.

44. NEMIPTERUS ISACANTHUS (Bleeker).

One small example, the teeth less prominent than in Bleeker's figure.

Family ILEMULIDÆ.

TERAPON Cuvier.

45. TERAPON JARBUA (Forskåål).

(*Terapon serrus* (BLOCH).)

One specimen.

SCOLOPSIS Cuvier.

46. SCOLOPSIS CILIATA (Lacépède).

One specimen.

Family SPARIDÆ.

LETHRINUS Cuvier.

47. LETHRINUS BONHAMENSIS (Günther).

Four specimens, agreeing with this species better than with *L. harak* or any other figured by Doctor Bleeker.

Family GERRIDÆ.

XYSTÆMA Jordan and Evermann.

48. XYSTÆMA PUNCTATUM (Cuvier and Valenciennes).

(*Gerris filamentosus* CUVIER and VALENCIENNES.)

Two specimens.

Family SILLAGINIDÆ.

SILLAGO Cuvier.

49. SILLAGO SIHAMA (Forskål).

Five examples. Dorsal unspotted.

Family MULLIDÆ.

PSEUDUPENEUS Bleeker.

50. PSEUDUPENEUS BARBERINUS (Bloch).

One specimen.

MULLOIDES Bleeker.

51. MULLOIDES AURIFLAMMA (Forskål).

Two specimens.

UPENEUS Cuvier.

52. UPENEUS TRAGULA (Bloch).

Several specimens.

Family OPHICEPHALIDÆ.

OPHICEPHALUS Bloch.

53. OPHICEPHALUS STRIATUS (Bloch).

One specimen.

Family ANABANTIDÆ.

ANABAS Cuvier.

54. ANABAS TESTUDINEUS (Bleeker).

One specimen from the stomach of an Iguana.

Family POMACENTRIDÆ.

POMACENTRUS Lacépède.

55. POMACENTRUS LIVIDUS (Forster).

Three specimens.

56. POMACENTRUS DELURUS Jordan and Seale, new species.

Head, 3; depth, 2.10; eye, 2.10 in head; D. XIII, 13; A. II, 13; scales, 2-18-9; snout, 3.75; interorbital, 3.50; preopercle strongly denticulate.

Body compressed, elevated; profile rather evenly rounded; depth of caudal peduncle, 2.35 in head; mouth small; teeth in a single series in each jaw; interorbital very narrow, about one-half as wide as pupil,

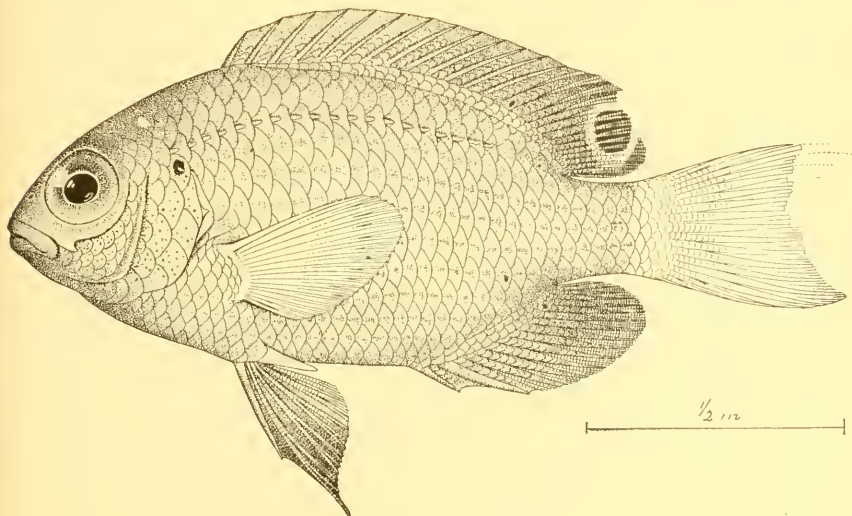


FIG. 6.—POMACENTRUS DELURUS.

the preorbital twice as wide as interorbital; angle of mouth is under the anterior margin of orbit; top of head covered with very small scales; dorsal spines graduated; the last spine not differing to any degree in length from the first ray; base of caudal, 1.30 in head; pectorals about equal to length of head, the outer rays slightly filiform, bilobed, 1.12 in head.

Color in spirits dark brown; fins, except caudal and pectoral, blackish; the caudal is a bright yellow, the line of demarcation very abrupt and sharp at base of fin; a large blue-edged black ocellus on outer half of fifth to tenth rays of dorsal; a small black dot above opercle at origin of lateral line; no black dot at axis of pectoral or on upper part of caudal peduncle.

Two specimens from Negros, Philippine Islands.

Type.—Cat. No. 51, U.S.N.M. Length, 1.50 inches.

ABUDEFDUF Forskål.

57. ABUDEFDUF UNIMACULATUS (Cuvier and Valenciennes).

(*Glyphisodon dispar* GÜNTHER.)

Five specimens.

Family LABRIDÆ.

CHÆROPS Rüppell.

58. CHÆROPS SCHENLEINI (Agassiz).

One specimen, apparently identical with the original *Cossyphus schenleini* of Agassiz and Cuvier and Valenciennes from Celebes, but not the *Charops schenleini* of Bleeker.

Head, 3; depth, 2.50; eye, 6.75 in head; D. XIII, 7; A. III, 10; scales, 4-29-6, the tubule of each scale in lateral line with many branches, 7

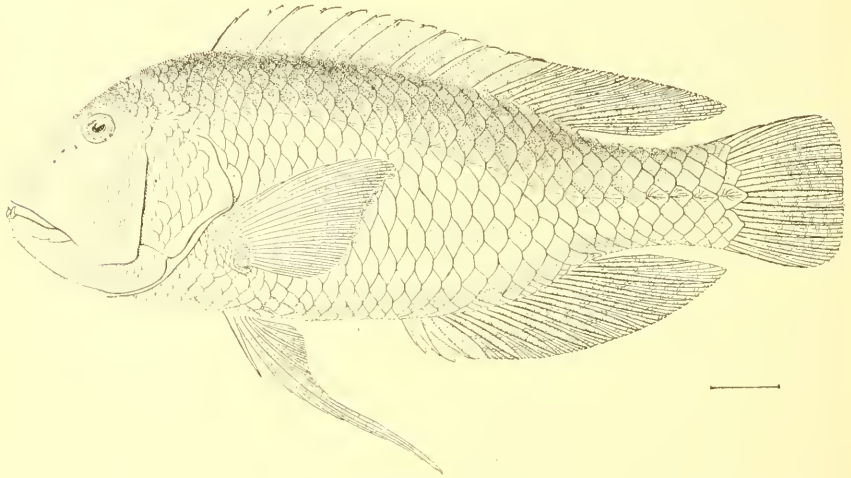


FIG. 7.—CHÆROPS SCHENLEINI.

rows of scales on cheeks; preopercle limb bare; snout, 2.10 in head; interorbital, 5 in head.

Body oblong, compressed; anterior profile of head rather abrupt, the snout having an angle of more than 45°; depth of caudal peduncle, 2.20 in head; mouth of moderate size, the angle is below the anterior nostril; teeth as usual in the genus, a posterior canine on each side of upper jaw, the four anterior canines in each jaw rather large; six rows of scales in front of dorsal with some additional rudimentary scales on nuchal region; the ventral fins and the posterior rays of dorsal and anal elongate; the posterior rays of dorsal reaching to caudal, the longest ray being, 1.30 in head; base of anal, 1.15 in head, about 2 in base of dorsal, its longest ray, 1.50 in head; ventrals greater than

length of head, 2.40 in length of fish without caudal, their tip extending to third ray of anal; caudal truncate, 1.30 in head.

Color in spirits dull yellowish-white; grayish on head, with distinct markings slightly darker on nuchal region, the fins distinctly and irregularly marked with brownish lines, some, especially on spinous dorsal and tip of caudal, taking the form of circles; ventrals unmarked; iris yellow; no black spot on dorsal.

One specimen in good condition. Length, 11.75 inches.

Two species of this genus are described by Cartier^a from young examples from Cebu. One of these, *Charops meander*, has three white cross-bands on the body, which anastomose below, forming an irregular network. The other, *Charops unimaculata*, has a large black spot on the last two spines of the dorsal fin. Both are based on specimens less than 3 inches long and scantily described. The scales in *C. meander* are 3-26 or 27-9, in *C. schauinslandi* 4-29-6. *C. meander* and *C. unimaculata* are both said to have no posterior canine. Without much doubt *Charops meander* is the young of *Charops anchorago*, while *Charops unimaculata* must be the young of Bleeker's *Charops schauinslandi*. Bleeker's figure resembles the Chinese species, *Charops cyanostola* (Richardson) = *Charops ommoptera* (Richardson), but it shows a large yellow spot behind and below the black dorsal spot. This is wanting in *C. cyanostola*. Probably Bleeker's species should stand as *C. unimaculata*.

HALICHÆRES Rüppell.

59. HALICHÆRES BINOTOPSIS Bleeker.

A dozen specimens were secured.

60. HALICHÆRES PSEUDOMINIATUS (Bleeker).

Two specimens were secured.

61. HALICHÆRES MINIATUS Bleeker.

A single specimen was secured.

62. HALICHÆRES PÆCILUS (Lay and Bennett).

(*Halichæres hartloffi* BLEEKER, *Halichæres annulatus* FOWLER.)

Head, 3; depth, 3.50; eye, 4.50 in head; D. IX, 11; A. III, 11; scales, 2-27-9; snout, 2.75 in head; interorbital, 4.50 in head; head naked; a posterior canine tooth.

Body compressed, oblong; anterior of head evenly pointed; depth of caudal peduncle, 2.30 in head; lips with folds; teeth, small canines, the anterior ones enlarged curved canines, a small posterior canine;

^a Verh. Phys. Med. Ges., Würzburg, V, 1873, p. 102.

ten rows of scales in front of dorsal fin; origin of dorsal directly above anterior axis of pectoral, longest dorsal ray, 3 in head; base of anal, 1.10 in head, 1.95 in base of dorsal, its longest ray, about 3 in head; pectorals, 1.60 in head; ventrals 1.90 in head; caudal rounded, 1.75 in head.

Color in spirits dull yellowish-white with slight bluish wash, a large blue blotch above the posterior of pectoral fin, which occupies more or less distinctly the upper anterior part of body, the posterior part of this blotch is indistinctly divided in three or four bands which descend to the ventral surface; three dark blotches along median line of posterior half of body; six dusky bands over back with narrow white lines between them, as in *H. opercularis*, these bands and lines obsolete in some specimens; nuchal region with 5-6 short longitudinal lines; a blue line from posterior margin of upper lip to eye. A deep-blue bar back of eye, from which a line of equal width and deep blue in color extends to origin of lateral line; lobe of opercle with a large deep-blue spot, the upper part of which is black; a wide curved blue line from upper posterior margin of preopercle, running down to lower posterior margin of opercle, a round circle of blue on cheek, either complete or in shape of a horseshoe (*hartloffii* or *pacilus*), in one case (*annulatus*) complete on one side and not on the other; two blue lines on upper part of snout and three short longitudinal lines on interorbital; axis of pectorals bluish white; dorsal fin with large black spot on anterior rays, no spot between anterior spines, the base of soft dorsal with circles of light coloring and narrow tip of bluish; anal quite similar to that of *Halichares daedalma*, (Jordan and Seale MS. from Samoa) a row of round spots at base of fin, a light line through center, the fin itself bluish. Caudal with some dusky ring-like spots; pectorals and ventrals uncolored.

Two specimens from Negros, Philippine Islands. Length, 2.75 inches.

63. HALICHERES CYMATOGRAMMUS Jordan and Seale, new species.

Head, 3; depth, 4.20; eye, 3.75 in head; D. IX, 10; A. III, 11; scales, 2-28-6; no scales on head or cheeks; snout, 3.52 in head; interorbital 5.10 in head.

Body compressed, oblong, the ventral surface almost straight, dorsal surface convex; depth of caudal peduncle, 2.75 in head; snout rather pointed; lips with folds; teeth small canines, the anterior ones in each jaw curved and somewhat projecting, a single small posterior canine at angle of jaws; origin of dorsal directly above axis of pectorals, its longest ray is, about 3.25 in head; base of anal is, 1.15 in head, 2 in base of dorsal, its longest ray, 3.50 in head; pectorals, 1.75 in head; ventrals, 2.50 in head; caudal rounded, 1.75 in head.

Color in spirits yellowish white, the belly and lower half of head bluish white; a distinct dark brown wavy stripe slightly wider than pupil from posterior margin of eye to base of caudal; a light brown stripe from origin of dorsal to interorbital, where it divides into two, which extend down to tip of snout; two short brown lines from upper

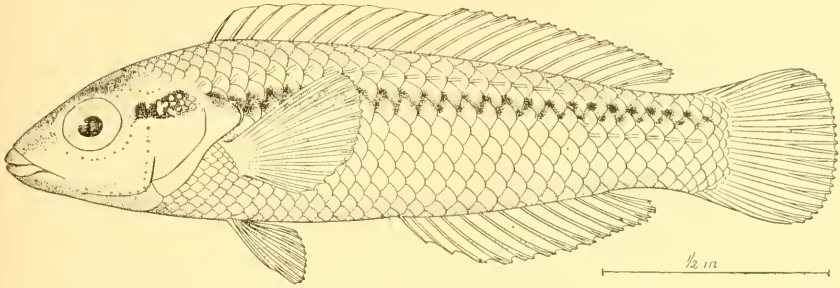


FIG. 8.—HALICHÆRES CYMATOGRAMMUS.

orbitals to back part of head; indistinct brown line from front of eye along sides of snout and around upper lip; a similar, but less distinct, line around lower lip; the tips of lips yellow, fins yellowish without markings; iris yellow.

One specimen from Negros, Philippine Islands.

Type.—Cat. No. 51947, U.S.N.M. Length, 1.80 inches.

64. HALICHÆRES ARGUS (Bennett).

Labrus guttatus Bloch, Ichthyologia, 1791, pl. cclxxxvii, fig. 2, (not of Gmelin 1789).

Julis argus BENNETT, Zool. Journal, III, p. 577, pl. XIII, fig. 7 (not *Labrus argus* Bloch and Schneider).

One fine specimen of this beautifully colored species.

STETHOJULIS Günther.

65. STETHOJULIS PHEKADOPLEURA (Bleeker).

One specimen, with a distinct spot at base of caudal, similar to Samoan examples, but a little deeper in body than Bleeker's figure of *phekadopleura*. Head, 3 in length; depth, 3.10.

66. STETHOJULIS BANDANENSIS Bleeker.

Two specimens.

67. STETHOJULIS KALOSOMA Bleeker.

One specimen.

This species has the black line along sides almost obsolete; only a short dusky line from back of eye to about tip of pectorals; eye larger than in following species, being 4.50 in head, four lines of dots along lower sides, with some fine dark specks between them and with indistinct oblique lines.

68. *STETHOJULIS ZATIMA* Jordan and Seale, new species.

Head, 2.95; depth, 4; eye, 5 in head; D, IX, 11; A, III, 11; scales, 2-26-9; head naked; lateral line bent but continuous; snout, 3.10 in head; interorbital, 5.10.

Body oblong, compressed; depth of caudal peduncle, 3 in head; snout pointed, the jaws protractile; lips with folds; teeth small canines, the anterior ones somewhat enlarged, not extremely projecting; a small posterior canine at angle; origin of dorsal is directly above upper axis of pectorals, its longest ray is 2.75 in head; base of anal, 1.20 in head; 1.90, in base of dorsal; its longest ray, 3.50 in head; pectorals, 1.80 in head; ventrals, 2.75 in head; cauda rounded, 1.75 in head.

Color in spirits; light brown on upper half of body and head; yellowish white on lower half with five rows of brown dots on scales; no dots on belly proper; no fine specks between rows of dots; a distinct

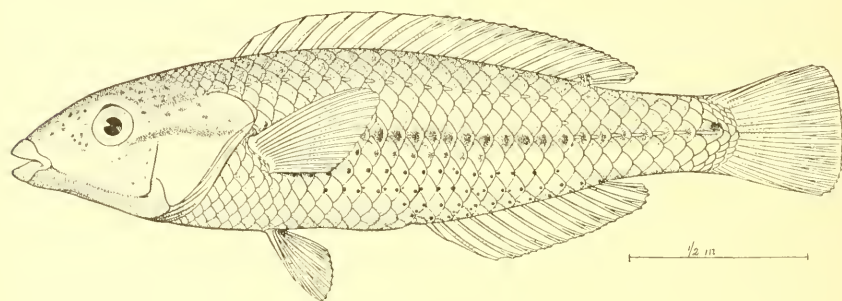


FIG. 3.—*STETHOJULIS ZATIMA*.

brown band around snout and extending posteriorly to base of caudal; width of this band about equal to pupil; a black spot on caudal peduncle just above end of this band; a black spot between last two dorsal rays; dorsal fin with minute dark specks on its webs, all the other fins yellowish white; iris golden.

Two specimens from Negros, Philippine Islands.

Type.—Cat. No. 51943, U.S.N.M. Length, 2.35 inches.

This species is near *S. kalosoma*, but has a smaller eye, a distinct brown stripe the entire length of body; a black spot on caudal peduncle and on posterior dorsal, with dark specks on the fin, all of which *S. kalosoma* lacks.

NOVACULICHTHYS Bleeker.

69. *NOVACULICHTHYS KALLOSOMUS* (Bleeker).

One line specimen, identical with others from Pago Pago and Honolulu.

70. *NOVACULICHTHYS MACROLEPIDOTUS* (Bloch).

One small specimen.

CHEILIO Lacépède.

71. CHEILIO INERMIS (Forskål).

One specimen.

Family SCARICHTHYIDÆ.

CALOTOMUS Gilbert.

72. CALOTOMUS MOLUCCENSIS (Bleeker).

One small example of this common species well marked by the black band across the pectoral.

73. CALOTOMUS VAIGIENSIS (Quoy and Gaimard).

(*Calliodon spinidens* CUVIER and VALENCIENNES.)

One small specimen.

CALLYODON Gronow.

(*Scarus* Forskål.)

74. CALLYODON MURICATUS (Cuvier and Valenciennes).

Two specimens.

Family EPHIPPIDÆ.

EPHIPPUS Cuvier.

75. EPHIPPUS ARGUS (Gmelin).

One specimen.

Family CHÆTODONTIDÆ.

PARACHÆTODON Bleeker.

76. PARACHÆTODON OCELLATUS (Cuvier and Valenciennes).

(*Chaetodon oligacanthus* BLEEKER.)

One fine specimen.

Family SIGANIDÆ.

SIGANUS Forskål.

77. SIGANUS CONCATENATUS (Cuvier and Valenciennes).

Two large specimens.

78. SIGANUS ORAMIN (Bloch and Schneider).

Six examples.

Family TRIACANTHIDÆ.

TRIACANTHUS Cuvier.

79. TRIACANTHUS STRIGILIFER Cantor.

One specimen apparently corresponding to this species, besides a very small one deeper in body, but probably of the same species.

Family MONACANTHIDÆ.

MONACANTHUS Cuvier.

80. MONACANTHUS CHINENSIS (Bloch).

One small example.

81. MONACANTHUS SUROTHURA Van Hasselt.

(*Monacanthus hajam* BLEEKER.)

Four specimens, corresponding to *Monacanthus hajam* of Bloch, a species apparently distinct from *Monacanthus tomentosus*. The manuscript name of Van Hasselt, *surothura*, published by Bleeker in an earlier paper, seems to claim priority over his own name *hajam*.

CANTHERINES Swainson.

82. CANTHERINES MACRURUS (Bloch).

One specimen. This species is the type of *Pseudomonacanthus*, a subgenus differing from *Cantherines* in the unarmed dorsal spine, a character apparently of less than generic importance.

Family OSTRACIDÆ.

LACTORIA Jordan and Evermann.

83. LACTORIA CORNUTA (Linnæus).

One large example.

Family TETRAODONTIDÆ.

SPHEROIDES (Lacépède) Duméril.

84. SPHEROIDES LUNARIS (Bloch and Schneider).

Four examples.

TETRAODON Linnæus.

85. TETRAODON IMMACULATUS (Bloch and Schneider).

Five specimens, the smaller ones corresponding to *Tetraodon maillensis* Procé, with lengthwise lines of black above and below; these lines, obsolete on the larger example; caudal sharply edged with black.

86. TETRAODON RETICULARIS (Bloch and Schneider).

One specimen.

87. SPHEROIDES OCELLATUS (Osbeck).

Six small specimens apparently referable to this species, pale spots honey-comb like, hexagonal surrounded by blackish reticulations; a blackish bar across the back behind pectorals.

CANTHIGASTER Swainson.

88. CANTHIGASTER COMPRESSUS (Procé).

(*Tetraodon striolatus* QUOY and GAIMARD.)

Two specimens. The name *compressus* is prior to that of *striolatus*, given by Quoy and Gaimard to this species.

Family SCORPENIDÆ.

SEBASTOPSIS Gill.

89. SEBASTOPSIS SCABRA Ramsey and Ogilby.

One specimen.

SEBASTAPISTES Gill.

90. SEBASTAPISTES NIVIFER Jordan and Seale, new species.

Head, 2.20; depth, 3; eye, 3.50 in head; D. XI, 1, 10; A. III, 5; about 64 series of scales; interorbital in orbit; snout, 3 in head; a distinct fringed orbital tentacle about equal in length to width of eye.

Body compressed posteriorly, head large, spiny, naked, with some distinct skinny flaps; depth of caudal peduncle 4 in head; small teeth in jaws, vomer, and palatines; preorbital ends anteriorly in three spines the lower one of which extends downward and slightly directed backward over the maxillary; beneath this third spine is a large compound skinny flap; orbital and nuchal spines distinct, the orbital tentacle much more distinct than any of the spines; opercle has two distinct spines at posterior margin, these being the ends of two fan-like stays; the proopercle has five distinct spines at its posterior margin, the upper and largest one being opposite the posterior end of the bony stay of cheeks; the interorbital is rather narrow with two distinct ridges; gillrakers very short and thick, ten on lower limb; origin of dorsal is slightly in advance of origin of ventral, its longest spine, 2.10 in head, the eleventh dorsal spine is about one-half the length of the twelfth, the last ray of soft dorsal united by a membrane to caudal peduncle; base of anal, 2 in head; the second anal spine the longest, its tip, however, extending only to middle of fin, the length of the

spine being but little greater than orbit; pectorals, 1.50 in head; ventrals, 1.50 in head; caudal rounded, 1.50 in head.

Color in spirits grayish, mottled with light brown and whitish, a distinct white spot the size of eye on the posterior lobe of opercle; two distinct brown bands across interorbital space; two wide brown bands from lower margin of orbit, and an indistinct one from posterior margin of orbit; there are three short brown marks on each side of lower lip; also similar marks on premaxillary, but the throat and under part of

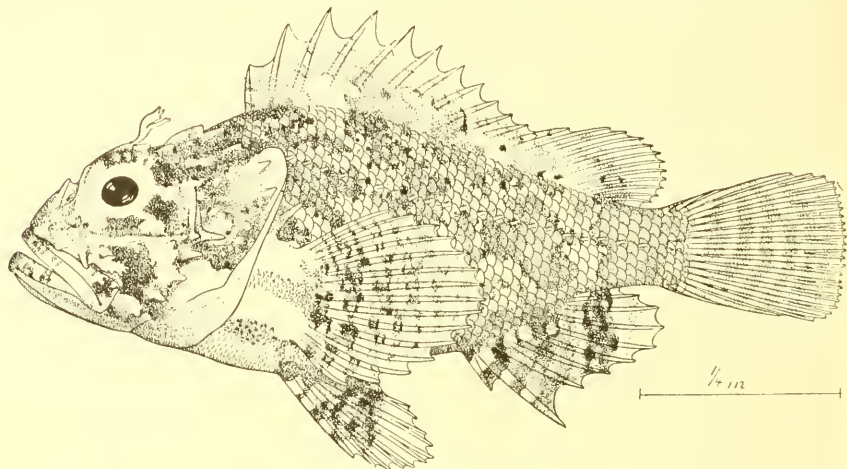


FIG. 10.—SEBASTAPISTES NIVIFER.

the head is unmarked; the dorsal fin is irregularly dotted with a few black and white spots; the posterior tip of the anal is gray, the middle is blotched with dusky; the spines have three dark bands across them; the pectoral is distinctly but irregularly banded by rows of black spots, with a few white spots intermixed; basal half of ventrals darker than posterior half; caudal gray, with slightly darker mottlings.

One specimen, Cat. No. 51954, U.S.N.M., from Negros, Philippine Islands. Length, 1.15 inches.

SCORPÆNOPSIS Bleeker.

91. SCORPÆNOPSIS NOVÆ-GUINEÆ (Cuvier and Valenciennes).

One specimen.

PROSOPODASYS Cantor.

92. PROSOPODASYS GOGORZÆ Jordan and Seale, new species.

Head, 2.75; depth, 3; eye, 4 in head; D. III, X, 4; A. III, 4; interorbital equal to eye; snout, 4.

Body compressed; depth of caudal peduncle, 3.10 in head, preorbital ending anteriorly in 2 hooked spines; 2 spines at posterior margin of opercles; 4 spines on posterior margin of preopercle. The

upper one, which is also the longest, is situated at distal end of bony stay of cheek. Spines of the head not strongly developed; 3 or 4 small spines posterior of eye and 2 or 3 inwardly curved spines on nuchal region; scales on sides of head and body more or less rudimentary; small teeth on jaws vomer and palatines; mouth large, opening on dorsal profile; maxillary extending to below posterior margin of pupil; the first 3 spines of dorsal separate and situated on nuchal region directly above the opercle; distance between the two portions of the spinous dorsal about equal to eye. The last ray of the dorsal is attached by membrane to caudal peduncle. Base of anal, 1.50 in head; third spine of anal longest and strongest, its length, 1.50 in head; pectorals reaching to a line with origin of anal, its length equal to head; ventrals broadly attached to belly, their length, 1.50 in head; caudal rounded equal to head.

Color in spirits dull grayish, more or less marbled with pale brown;

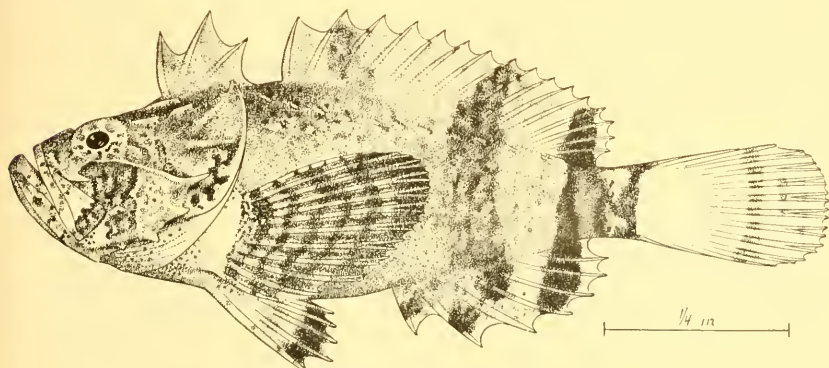


FIG. 11.—*PROTOPODASYG GOGORZE*.

two rather distinct brown bands on posterior of body, the posterior one occupying the caudal peduncle; a rather indistinct irregular brown band across interorbital and from eye obliquely down cheeks; another irregular line near posterior margin of opercles; dorsal fin grayish, the black bands of the posterior part of the body extending into the fin; posterior third of anal fin dusky with white tip; the middle portion of the fin is white; the anterior portion gray; caudal with black line at base and two dark lines on its posterior third, otherwise fin white; pectorals dusky with irregular rows of black spots; ventrals black at tip, grayish anteriorly.

One specimen, Cat. No. 52054, U.S.N.M., from island of Negros, Philippine Islands. Length, 1.15 inches.

(Named for José Gogorza y Gonzalez, of Madrid, author of an excellent preliminary list of the vertebrate animals of the Philippines, 1888, entitled *Datos para la Fauna Filipina*.)

Family PLATYCEPHALIDÆ.

PLATYCEPHALUS Bloch.

93. PLATYCEPHALUS INSIDIATOR (Forskål).

One large specimen.

Family GOBIIDÆ.

PERIOPHTHALMUS Bloch.

94. PERIOPHTHALMUS BARBARUS (Linnæus).

Numerous specimens.

SCARTELAOS Swainson.

(*Bolcops* GILL.)

95. SCARTELAOS VIRIDIS (Buchanan-Hamilton).

One fine specimen.

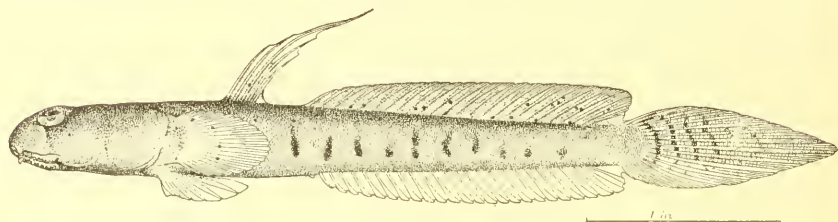


FIG. 12.—SCARTELAOS VIRIDIS.

VALENCIENNEA Bleeker.

96. VALENCIENNEA sp.

Four specimens, similar to others from Samoa.

HYPSELEOTRIS Günther.

97. HYPSELEOTRIS CYPRINOIDES Cuvier and Valenciennes.

Seven specimens, in good condition.

BUTIS Bleeker.

98. BUTIS LEUCURUS Jordan and Seale, new species.

Head, 3; depth, 5; eye, 5 in head; D. VI-9; A. 10; scales 29 from posterior margin of opercle to caudal; snout, 2.75 in head; interorbital 6 in head; tongue rounded; no posterior canines; head covered with minute scales; smooth bony ridges on head without serrations.

Body elongate, moderately compressed, the snout pointed and broad; lower jaw the longer; depth of caudal peduncle, 3.50 in head; mouth large, the angle under the anterior margin of orbit; bands of minute teeth in jaws, none on vomer or palatines; distance from tip of snout to origin of dorsal, 2.60 in length without caudal; longest dorsal spine, 3.20 in head, the rays slightly longer; base of anal, 2.10 in head; the longest ray, 3 in head; pectorals, 1.30 in head; ventrals, 1.75 in head; caudal rounded, 1.75 in head.

Color in spirits brownish with very indistinct brown longitudinal lines, lights on chin and belly, some small scattered black dots over body, 3 wide oblique brown lines on sides of head, the posterior one usually dividing into 2 on opercles; a brown line from anterior of orbit along sides of snout; 2 large irregular blotches on base of pectoral rays with a fine brown dot below each spot, top of snout slightly mottled with brownish lines; spinous dorsal gray with about 3 brownish bands; soft dorsal with some irregular dusky blotches; anal plain brown with white margins, caudal with very characteristic

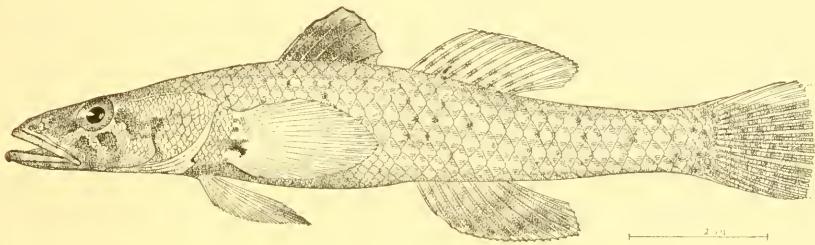


FIG. 13.—*BUTIS LEUCURUS*.

marking, having the 4 upper rays white, the remainder of the fin dusky with blackish vertical bands; pectorals yellowish white; ventrals yellowish white with indistinct brown cross-bands.

One specimen Cat. No. 51953, U.S.N.M., from Negros, Philippine Islands. Length, 3 inches. Several others of larger size and sharper markings with the pectoral spot very conspicuous have been received from Cavité from Surgeon George A. Lung, U. S. N.

This species, having no serrated crests on the head, may not be congeneric with *Butis butis*.

AMBLYGOBIUS Bleeker.

99. AMBLYGOBIUS BYNOËNSIS (Richardson).

One fine specimen agreeing well with Day's figure of this species.

100. AMBLYGOBIUS SPHINX (Cuvier and Valenciennes).

One specimen of this strikingly marked species.

GOBIICHTHYS Klunzinger.

101. GOBIICHTHYS PAPUENSIS (Cuvier and Valenciennes).

Three specimens.

RHINOGOBIUS Gill.

(*Porogobius* BLEEKER; *Coryphopterus* GILL.)

102. RHINOGOBIUS CANINUS (Cuvier and Valenciennes).

One specimen.

ZONOGOBIUS Bleeker.

103. ZONOGOBIUS SEMIDOLIATUS (Cuvier and Valenciennes).

One specimen, similar to others from Samoa.

GNATHOLEPIS Bleeker.

104. GNATHOLEPIS DELTOIDES (Seale).

Head, 3.45; depth, 4.50; eye, 3.75 in head; D. VI-11; A. II, 10; scales 24 in series from posterior margin of opercle; cheeks and opercles scaled; tongue forked; snout, 3.50 in head; interorbital less than pupil.

Body moderately elongate, compressed; profile of head rather abruptly pointed, the upper jaw slightly the longer; depth of caudal peduncle, 2.20 in head; mouth small, with two series of small sharp-pointed teeth in each jaw; no posterior canines; angle of mouth is below anterior third of eye, distance from tip of snout to origin of dorsal is 2.75 in length of fish without caudal; longest rays of soft dorsal, 1.25 in head; base of anal, 3 in length of fish without caudal; pectorals, 3.10 in head; ventrals united equal to length of head; caudal distinctly pointed, equal in length to head.

Color in spirits grayish with seven dusky blotches on sides, alternating with dusky blotches over the back, a dark line down from eye around throat, another indistinct line separate from this on lower part of cheek and extending around chin, the two lines thus forming a greek letter delta on the under part of head, dorsal plain dusky or with indistinct darker lines; caudal with dusky bars, anal with dusky blotches; pectorals shaded with small dots.

Two specimens from Negros, Philippine Islands. These seem to agree fairly with our Samoan specimens.

105. GNATHOLEPIS CALLIURUS, Jordan and Seale, new species.

Head, 3 in length; depth, 4.75; eye, 4 in head; D. VI-11; A. 10; scales, 30; snout, 3.75; interorbital, 2 in pupil.

Body moderately elongate, compressed, anterior profile rounded, the lower jaw slightly the longer, the angle under the middle of the

eye; depth of caudal peduncle, 2.40 in head; minute sharp-pointed teeth in jaws, none on vomer or palatines; tongue rounded; opercles and preopercles entire; cheeks with three or four rows of large scales; opercles naked below, with about two series of large scales above; ten rows of scales in front of dorsal; longest spine, 2.10 in head; the longest ray, about 1.50 in head; base of anal, 2.10 in head; pectorals, 1.15 in head; ventrals united, 1.50 in head, the membrane of the cup very thin; caudal rounded, 1.50 in head.

Color in spirits light brownish, the margin of the scales darkest, a round black spot on middle line of caudal peduncle at base of caudal; four similar spots, but lighter in color, along the median line of sides; a dusky spot on opercles directly in front of pectorals; two other small spots on cheeks in front of this spot; a dark spot on lower posterior

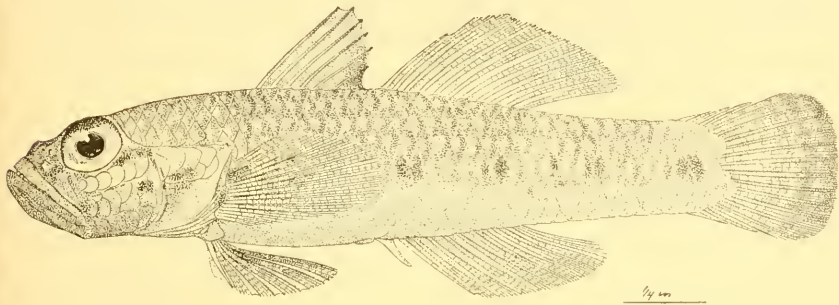


FIG. 14.—GNATHOLEPIS CALLIURUS.

margin of orbit; from this spot up and back along the upper margin of opercle is an indistinct dusky line; the dorsal fins are slightly shaded with dusky, almost black on posterior part of spinous dorsal; anal shaded with dusky; the middle of ventral shaded with dusky; caudal dusky with about six irregular lines of white; pectorals with dusky spot on upper and on lower base of fin.

Five specimens from Negros, Philippine Islands.

Type.—Cat. No. 51944, U.S.N.M. Length, 2.50 inches.

DROMBUS Jordan and Seale, new genus.

This genus differs from *Rhinogobius* in the presence of mucous channels bearing cross lines of minute cirri as in *Gobiomorphus*.

106. DROMBUS PALACKYI Jordan and Seale, new species.

Head, 3.10; depth, 6; eye, 3.75 in head; D. VI-11; A. 9; scales, 31 from posterior margin of opercle to base of caudal; snout, 4; interorbital about equal to pupil; tongue rounded.

Body moderately elongate, compressed; head bluntly pointed, the lower jaw slightly the longer; depth of caudal peduncle, 2.75 in head;

cheeks without scales but with numerous raised lines, probably mucous canals extending over cheeks, opercles, and nuchal region; minute teeth in jaws in several series, the outer row with the largest teeth; angle of jaw is below the anterior margin of eye; opercles and preopercles entire; distance from tip of snout to origin of dorsal, 2.50 in length of fish without caudal; longest dorsal spine, about 1.75 in head; longest dorsal ray, about 2.10 in head; base of anal, 1.75 in head, the origin of the fin equally distant from base of caudal and posterior

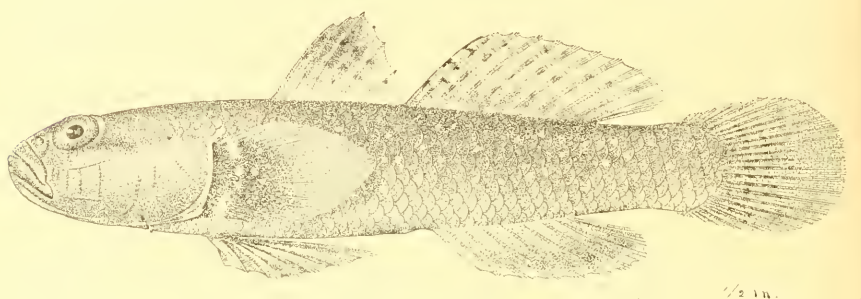


FIG. 15.—*DROMBUS PALACKYI*.

margin of preopercle; pectorals, 1.10 in head; no silky rays at upper part of pectorals; ventrals united, 1.30 in head; caudal, 1.30 in head.

Color in spirits brown, with indistinct whitish specks scattered over body; a dusky blotch on anterior third of pectorals, and with a whitish area on base and in axil of fin; dorsal fins dusky, the spinous dorsal with two or three darker blotches; anal, ventrals, and caudal dusky.

One specimen from Negros, Philippine Islands. Cat. No. 51954, U.S.N.M. Length, 1.85 inches. Named for Dr. J. Palacky, of Prag, author of *Die Verbreitung der Fische*, a work containing a list of the fishes of the Philippines.

GLOSSOGOBIUS Gill.

107. *GLOSSOGOBIUS AGLESTES* Jordan and Seale, new species.

Head, 3.10 (not including lower jaw), depth, 5.25; eye, 4.50 in head; interorbital about equal to pupil; snout, 3.50 in head; D, VI-11; A, 9; the last spine of spinous dorsal some distance from the others; lower jaw much produced, its length from posterior of angle 2 in head, its angle is below posterior margin of eye; scales, about 28.

Body elongate, cylindrical, largest at pectoral girdle; depth of caudal peduncle, 3.75 in head; mouth large, the lower jaw projecting; maxillary, 2.30 in head; two series of sharp, moveable teeth in each jaw, no teeth on vomer or palatines; tongue forked, its bony posterior two-thirds roughened; opercles and preopercles entire; gill-rakers scarcely developed; the eyes are very close together on the dorsal profile; scales on nuchal region are smaller than on other parts of the body; distance

from tip of snout to origin of spinous dorsal, 2.75 in length without caudal; longest dorsal spine about two in head, equal in length to longest dorsal ray; base of anal, 1.65 in head; pectoral, 1.45 in head; ventrals united, the membranous cup rather deep with its anterior margin notched; caudal rounded, 1.50 in head.

Color in spirits a dirty yellowish brown; the colors have almost disappeared in the type, but the species is easily characterized by the rather large white spots on under side of head and the markings of

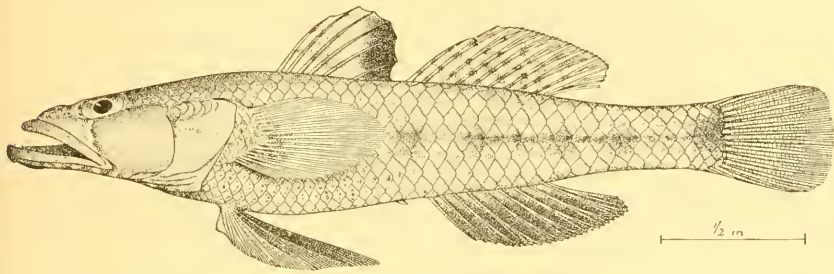


FIG. 16.—GLOSSOGOBIOUS AGLESTES.

the fins, which are as follows: Spinous dorsal dusky with grayish on anterior base; soft dorsal grayish, more or less banded with dusky; caudal dusky with indistinct bars of lighter; anal and ventral dusky; pectorals gray with a short dusky bar on lower rays at base and two rather indistinct spots above; cheeks uniform brown.

One specimen from Negros, Philippine Islands. Cat. No. 51948, U.S.N.M. Length, 2.80 inches.

Family BLENNIIDÆ.

SALARIAS Cuvier.

108. SALARIAS EDENTULUS (Forster).

Four specimens.

109. SALARIAS FASCIATUS (Bloch).

Three specimens.

110. SALARIAS DEANI Jordan and Seale, new species.

Head, 4.10; depth, 5; eye, 3.10 in head. D. XIII, 19; A. 21; no canines; dorsal incised more than one-half its depth; lateral line short, ending under eighth dorsal spine; nasal tentacle double, unfringed; orbital tentacle simple, about as long as width of eye; no nuchal tentacle; head and forehead projected beyond the mouth, the angle of mouth being posterior of eye.

Body elongate, compressed; depth of caudal peduncle, 2.75 in head; teeth in a single series in each jaw; distance from front of head to origin of dorsal, 3.60 in length of body without caudal, longest dorsal

spine, 1.75 in head, longest dorsal ray about, 1.75 in head; posterior ray of dorsal is attached by membrane to base of caudal fin; base of anal fin, 2.50 in length of fish without caudal; the longest anal ray, 1.85 in head; pectorals slightly less than head; ventrals, 1.60 in head; caudal rounded equal to head.

Color in spirits gray, with more or less bluish wash; head apparently without markings; belly deep blue, about seven rather indistinct bands of darker color on sides, these seemingly made up of a double row of brownish spots more or less connected; the color-bands extend

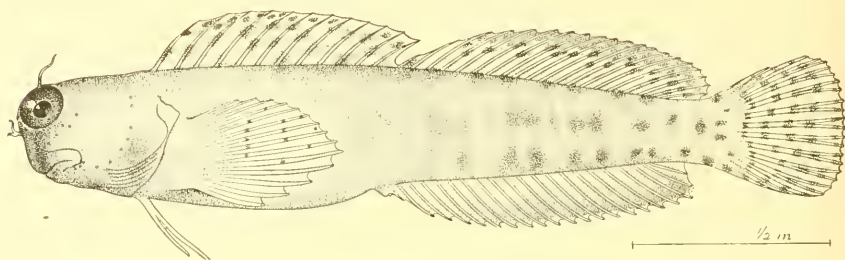


FIG. 17.—*SALARIAS DEANI*.

slightly into base of soft dorsal fin, and to top of fin in spinous dorsal; both dorsals have rather large blackish spots near the margin; caudal with six very distinct bands of blackish; anal white with dusky at margin; pectorals white with three rows of minute dots; ventrals white, uncolored.

One specimen. Length, 2.10 inches. Cat. No. 51950, U.S.N.M. From Negros, Philippine Islands.

111. *SALARIAS UNDECIMALIS* Jordan and Seale, new species.

Head from tip of opercle to most anterior point, 4.45; depth, 5; eye, 3 in head; D. XI, 17; A. 19; dorsal incised to one-half its depth; no posterior canine; lateral line extends to base of 10th dorsal spine.

Body elongate, compressed, the forehead and eye projecting beyond the mouth, the angle of mouth being slightly posterior to eye, a single unfringed tentacle at nostril, another similar, but longer somewhat greater than interorbital, over the eye, and a third short simple tentacle on nuchal region; no distinct crest; a single series of small teeth in each jaw; distance from forehead to origin of dorsal, 5.10 in length of fish without caudal, the longest dorsal spine, 2 in head, the longest ray, 1.50 in head, the posterior ray attached by membrane to base of caudal; base of anal, 2 in length of fish without caudal, the anterior rays the longest, about 1.25 in head; pectorals equal to length of head; ventrals, 1.50 in head; caudal equal to length of head.

Color in spirits dull grayish, with slight wash of pale green, sides of body banded with 12-14 double white bands, with numerous short violet lines and dots along the sides on and above the median line:

these are most abundant on anterior half of body where they almost obscure the white lines which are more or less broken up into white dots, a row of about 19 small black dots along the lateral fold; 8-9 black dots on caudal peduncle; cheeks covered with white dots which are more or less encircled with a purple ring, chin purplish; a brown ring of color at lower base of pectorals; belly uniform bluish gray; blotch of purple at anal opening; dorsal fin mottled with white and brown spots, the brown dots forming oblique lines on soft dorsal; anal

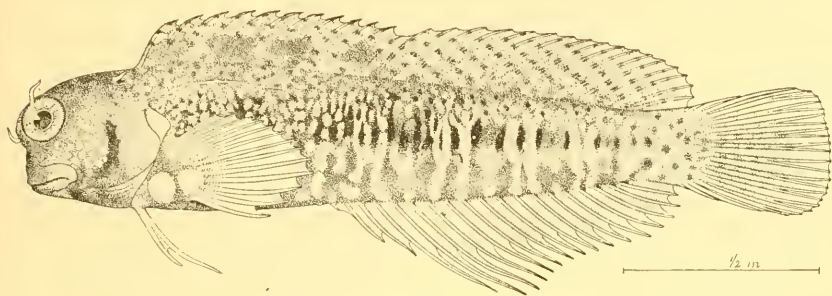


FIG. 18.—*SALARIAS UNDECIMALIS*.

gray without markings except slight wash of dusky caudal with dark dots forming irregular lines, pectorals and ventrals white.

Four specimens, type is Cat. No. 51942, U.S.N.M. Length, 2 inches.

The smallest one of these four specimens, length 1.75 inches, lacks the purplish color of the type but is easily distinguished by the three sets of simple tentacles and the ring of brown on lower base of pectorals.

PETROSCIRTES Rüppell.

112. *PETROSCIRTES ERETES* Jordan and Seale, new species,

Head, 3.85; depth, 5.50; eye, 3.75 in head; interorbital, 4 in head; D. 30; A. 20; several dermal flaps about head, four on under jaw, one on upper part of each eye, a minute one on posterior part of superorbital, one on each side of nuchal region; with exception of the one on eye these are all small and easily overlooked. Young specimens show rather distinct papillæ at nostrils and on anterior interorbital region; four small papillæ on interorbital space.

Body elongate, compressed; upper profile of head evenly rounded; the upper slightly the longer; depth of caudal peduncle, 2.75 in head; teeth generic, about 20 on each side of upper jaw; angle of mouth under the anterior part of eye, 4.50 in length of fish without caudal; the origin of the dorsal being on nuchal region, slightly anterior to line with axis of ventrals; longest dorsal ray, 1.50 in head; base of anal, 2.75 in length of fish without caudal; origin of anal is midway

between pupil of eye and base of caudal fin; pectorals, 1.50 in head; ventrals, 1.50 in head; caudal, 1.10 in head.

Color in spirits yellowish, spotted and mottled with brown and dusky; the brownish markings showing as fine vertical bands over back and down sides usually very indistinct; the bands showing more distinctly in young specimens, becoming almost obscure in adults; under part of head, thorax, and belly yellowish white, a brown line around margin of lower lip; some indistinct short brown lines radiate from eye, the most distinct one being from posterior margin of orbit;

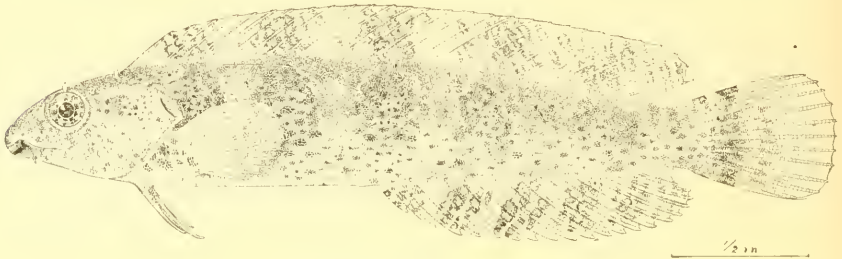


FIG. 19.—PETROCIERTES ERETES.

dorsal fin is grayish with numerous black blotches and dots; anal is whitish with about five dusky blotches made up of black dots; caudal white with dusky blotch at base; some very indistinct indications of brown cross-bands on rays of fin; pectorals and ventrals uncolored.

Six specimens from Negros, Philippine Islands.

Type.—Cat. No. 51949, U.S.N.M. Length, 3.10 inches.

HYPLEUROCHILUS Gill.

113. HYPLEUROCHILUS LOXIAS Jordan and Seale, new species.

Head, 4.25; depth, 6; eye, 2.75 in head; D. XII, 20; A. 20; snout, 5.10; interorbital about equal to pupil; no lateral line; dorsal not notched.

Body elongate, compressed, the anterior of head coming to a blunt rounded point; the mouth is small; the teeth, as in *Blennius*, a somewhat enlarged fang-like curved canine in upper jaw, none in lower jaw, otherwise the teeth consist of a single series in each jaw of rather long, round, curved, sharp teeth about 10 on each side of upper jaw and 7 on each side of lower jaw; opercles and preopercles entire; gill openings small; angle of mouth is under anterior margin of orbit, distance from origin of dorsal to tip of snout, 5.10 in length of fish without caudal, the last ray of dorsal connected by membrane to base of caudal, longest ray of dorsal, 1.85 in head; base of anal, 2 in length of fish, its origin slightly nearer tip of snout than base of caudal; pectorals equal to length of head; ventrals, 1.25 in head; caudal rounded, equal to length of head.

Color in spirits pale greenish white with 14 bluish oblique lines or spots on sides of body, the anterior ones most distinct, sloping obliquely down and back, the 6-7 lines are most vertical, the lines posterior of these slope exactly opposite to ones on anterior of body; over the back are about 12 bands of brownish, made up of double rows of indistinct spots; a large dusky spot on cheeks just posterior and below the eye; about 5 narrow dusky lines on sides of head and around under part of head; top of snout dusky; dorsal fin whitish without

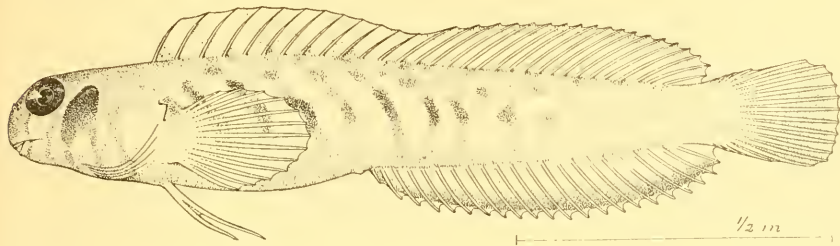


FIG. 20.—HYLEUROCHILUS LOXIAS.

distinct markings; caudal white, the margin slightly shaded with dusky; anal white with dusky margin; pectorals and ventrals white, without markings.

One specimen, Cat. No. 51952, U.S.N.M., from Negros, Philippine Islands. Length, 1.20 inches.

Family PLEURONECTIDÆ.

114. SCÆOPS PÆCILURA (Bleeker).

One specimen. Gill-rakers very short and broad, scales large, deciduous. Caudal with a black spot near the margin above and below.