NOTES ON FISHES IN THE ZOOLOGICAL MUSEUM OF STANFORD UNIVERSITY, V

NEW OR RARE PHILIPPINE FISHES FROM THE HERRE 1933 PHILIPPINE EXPEDITION

By ALBERT W. C. T. HERRE

Of Stanford University, California

TWO PLATES

Continuing the account of new or rare fishes in the Stanford University Museum collected by me during the past five years, I herewith present seven new species, one new genus, and distributional notes upon a number of rare species, most of them hitherto unknown from the Philippines. Part of November and most of December, 1933, were spent in the Philippines. Stops were made at Davao, Zamboanga, Dumaguete, Cebu, Iloilo, and Manila in the order named. No intensive collecting was done except at Dumaguete, Bais, Oriental Negros, and at Opon, Mactan Island.

The fact that new and distinctive species were obtained at Dumaguete, where I have been working the tide pools at every opportunity for the past sixteen years, speaks volumes for the incredible richness and variety of Philippine fish life. There is no doubt that intensive collecting would yield equally good returns at many points along the coasts of Luzon. Taking a blenny at Paraoir, La Union Province, that was only known from specimens collected in Java nearly eighty years ago, is sufficient proof of my statement.

Evidence is constantly accumulating that many shore fishes as yet known only from the Philippines are widely distributed in the China Sea; if not already known there, they are to be looked for at Hainan, along the coast of Indo-China, and on the shores of the Malay Peninsula and Singapore. In the same way, many more fishes hitherto known only from the Moluccas, Sunda Islands, and even from the far distant Hawaiian Islands, will eventually be found in the Philippines.

In spite of the great number of gobies already reported from the Philippines, the evidence points to the conclusion that many more gobies are to be discovered in Philippine waters. This
is particularly true of certain regions; large collections should be made in brackish waters, in estuaries, and on mud flats exposed at low tide, as well as in tide pools. Nothing has been done as yet towards collecting gobies below low tide, in water from one to eight meters deep. A rich harvest awaits anyone who uses a diving helmet for collecting gobies. Much of what has just been said applies equally to the blennies, which have been but little collected. They are very difficult to catch, but patience and skill will get them.

Other groups meriting special attention are the sharks and rays, catfishes, eels, Sparidae, and Sciaenidae, all of them of much commercial importance and very incompletely known from Philippine waters.

Types of new species are in the Stanford University Museum, and paratypes in the Bureau of Science collection where material allows.

**OPHICHTHYIDÆ**

_Cæcula philippinensis_ sp. nov. Plate 1, fig. 1.

The depth is 38.4, the head 12.166 times in the length; the head is 5.6 in the trunk, which is more than 2.5 times in the total; the tail is longer than the head and trunk together, their length being about 47 per cent of the tail. The eye is 17.3 times in the head, 3 in the very slender, sharp-pointed snout, which is nearly 5.8 times in the head; the gape is 4½ times in the head; the gill openings are unequal in size and position, the right one being anterior to and about 3 times as large as the posterior left one. The dorsal origin is almost over the left gill openings, the distance between being 13 times in the head. The fins are low, of equal height or the anal a trifle higher, their height about 6.5 times in the head. There are vomerine teeth in a single row, smaller than the single row of teeth in the jaws; on the intermaxillary plate are 3 larger teeth.

Color in alcohol uniform brown above, merging into violaceous brown beneath.

The type and only specimen, 365 mm long, was taken at Dumaguete, Negros.

**SYNGNATHIDÆ**

_Syngnathus martini_ sp. nov. Plate 1, fig. 1.

Dorsal 37; pectoral 13; caudal 10; anal 4; rings 19+39; subdorsal rings 5+5.

The depth is 28 in the length, 3½ times in the head, and 8 in the trunk, equal to the caudal; in the figure the artist has in-
cluded the open and expanded brood pouch, thus increasing the apparent depth beyond its true ratio; the head is 8.4 times in the length, 2.4 in the trunk, and 5 in the tail; the trunk is a little more than twice in the tail and the head and trunk together are 1.47 times in the tail; the dorsal base is a little longer than the head. The eye is 6.66 times in the head, twice in the caudal; the snout twice in the head. The egg pouch is on the last trunk and 17 tail rings, and is $1\frac{1}{2}$ of the trunk length or 2.2 times in the tail; it is partly filled with embryos, and is much dilated.

Body very elongate, trunk heptagonal, tail 4-sided except along the egg pouch where it is hexagonal; the smooth shields are transversely striated; the superior cristæ of trunk and tail are discontinuous, the inferior cristæ continuous; the lateral median trunk cristæ end at the hind edge of the last trunk ring, the superior cristæ of the tail beginning above, in middle of the last trunk ring.

The snout has a smooth sharp median keel reaching to the concave interorbital; a pair of low smooth lateral ridges extend to the prominent orbital ridges and slightly beyond. At the hind end of the interorbital is a smooth median ridge, followed by another smooth median ridge on the nape, terminating above the pectoral base. The operculum has a very small straight keel on its anterior fourth, with very many minute radiating reticulating ridges.

The color in alcohol is brown, with darker brown crossbands.

Described from the type and only specimen, 168 mm long, from Manila Bay. Though close to *S. eoes*, the dorsal position is very different. It is still closer to *S. yoshi*, from which it differs in several particulars.

I take pleasure in naming it for Mr. Claro Martin, of the Philippine Fish and Game Administration, who is an earnest worker on the Philippine fish fauna.

**GOBIIDÆ**

**VAIMOSA MONTALBANI** sp. nov. Plate 1, fig. 1.

Dorsal VI–1, 7; anal 1, 6 or 7; there are 6 predorsal scales in males, 7 in females, 7 in a transverse series, and 24 or 25 in a longitudinal series, plus 1 or 2 on the caudal base.

Males have a stout body with strongly arched back, the depth 3.5 to 3.65, the head 2.75 to 3.3, the caudal 3 to 3.5 times in the length; the eye is in the anterior half of the head, 3.25 to 3.5, the snout 4.5 to 4.66, the maxillary 1.8 to 2.2, the least depth of the caudal peduncle 2.8 times in the head. The elon-
gated and threadlike first dorsal spine extends upon the second dorsal, sometimes reaching its posterior extremity, 2.5 to 4.5 times in the length; the second dorsal and anal rarely extend to the caudal base when depressed, 1.7 to 2 times, the pectoral 1.4 to 1.5 times in the head; the ventrais extend to the anal origin or beyond, 1.3 to 1.4 times in the head.

Females do not have the back elevated, the low first dorsal does not reach the second dorsal when depressed, the ventrais are shorter, and the second dorsal and anal are noticeably lower than in males.

A female 18 mm long has the depth 3.6, the head 2.8, the caudal 3.6 times in the length; the eye is in the anterior half of the head. The snout is 4, the eye 3.2, the maxillary 3.2, the pectoral and ventral each 1.6 times in the head.

In males the large maxillary extends below the posterior part of the eye or beyond, in some almost to the rear angle of the preopercle. In females the mouth is much smaller, the maxillary extending to the eye or beneath its anterior half.

Males are pale yellowish brown in alcohol, with dark brown spots and scales sprinkled over the upper half; there are a dark brown spot at the upper angle of the opercle, 4 dark brown spots in a row along the middle of the side, a large blackish brown spot at the caudal base (often with a pale center), and a row of black spots under the anal and caudal peduncle; behind the pectoral is a dark brown vertical bar, and a similar bar crosses the belly over the anus; the sides of the head are mottled with yellowish and dusky brown; the first dorsal is deep black above and posteriorly, with a dusky basal crossbar and two black spots on the anterior margin, the rest of the fin clear; the soft dorsal and caudal each have two or three dusky brown crossbars; the anal and the ventral membranes are dusky, the pectorals clear.

Females are similarly marked, but are very much paler, their markings nearly disappearing.

Here described from the type, 20 mm long, and 35 paratypes, 14 to 23 mm long, from Lake Naujan, Mindoro.

This little goby is close to *Vaimoso dispar* Peters, but differs markedly in scaplation and color markings, and the elongated first dorsal spine. It agrees with *V. dispar* in the large mouth and elongated maxillary of males, and in the males being larger than females.

I take pleasure in naming this goby for Mr. H. R. Montalban, who was my associate in an exploration of Lake Naujan.
CTENOGHIALIS VILLADOLIDIS sp. nov. Plate 2, fig. 4.

Dorsal I, 12; anal I, 12 or 13; scales in longitudinal series 27 or 28 plus 1 on the caudal base and 8 in transverse series; predorsal none.

The depth is 6.4 to 6.7, the head 3.4 to 3.5, the caudal 4.14 to 4.4, the pectoral 3.9, the ventral 3.6 to 3.9 times in the length; the eye is 3.9 to 4.1, the snout 5 to 5.5, the maxillary 3.3 to 3.5, the least depth of the caudal peduncle 4.1 to 4.3 times in the head.

The body is slender, elongate, the breadth greater than the depth, wedge-shaped viewed from above, with pointed head, the breadth of the head 1.45 to 1.5 in its length; the prominent dorsolateral eyes project above the dorsal profile, are longer than the steeply descending snout, and meet or nearly meet at their inner margins; the mouth is oblique with projecting lower jaw, the maxillary angle beneath the front margin of the pupil; the teeth are minute, no canines; the tongue is rounded to truncate, the head is entirely naked, without scales above the opercles; the breast is naked, the rest of the body covered with large ctenoid scales of uniform size, their cilia very minute. The first dorsal barely reaches the second dorsal when depressed, both dorsals of the same height, 2.1 to 2.3 in the head; the anal is a little lower, 2.9 to 3 in the head; the slender, round-pointed caudal shorter than the head; the broad, well-developed ventrals extend to or beyond the anal origin.

The color in alcohol is whitish with blackish scale margins on the upper half, some of them on the sides enlarged to form a row of five black spots, the last on the caudal base; the entire head and body are more or less thickly sprinkled with black specks; the first dorsal is sprinkled with black dots and white or clear spots, and in males also has one to three large elongated black spots along the fourth or third, fourth, and fifth spines; the second dorsal is densely sprinkled with black dots, often with a clear margin; the anal has a broad black longitudinal band, the tips of the rays white; the caudal is barred by several rows of black spots, the tip black with a white margin; a black bar on the upper part of the pectoral base, the fin clear or speckled with black; the ventrals are black with a broad white margin or may be colorless.

Described from the type, 31 mm long, and 14 paratypes, 17 to 31 mm long, collected from a tide pool near Dumaguete, Oriental Negros.
This species is close to *Ctenogobius nuchipunctatus* but differs in many respects.

I take pleasure in naming it in honor of Dr. Deogracias Villadolid, student of Philippine fishes for many years, to whom I am indebted for much valuable assistance.

**SchismatoGobius Roxasi** sp. nov. Plate 2, fig. 8.

Dorsal VI–I, 9; anal I, 8; no scales.

The depth of the naked, robust, well-rounded body is contained 5 times, the caudal, pectoral, and ventral each 4.4 times in the length. The large, broad, flattened head is 2.75 times in the length, its breadth 1.75 times in its own length. The small eye is 8 times in the head, twice in the bluntly pointed snout; the flat interorbital is 6.4 times in the head; the postorbital region is 1.8 times in the head or one and two-thirds times the eye and snout together. The large mouth is oblique, its angle beneath the front of the pupil, but the maxillary is greatly widened and lengthened and reaches almost to the angle of the preopercle, its length equal to that of the caudal or to the postorbital part of the head, 1.6 times in the head; the tongue is notched; the small teeth are in bands of 5 or 6 rows in both jaws. The dorsals and anal are all low; the first dorsal height is 3.7, the second dorsal 2.46, and the anal height 2.66 times in the head.

The color in alcohol is brown to yellowish brown, mottled with irregular flecks and streaks of blackish, and with three dark brown dorsal crossbands, the first beneath the first dorsal, the second under the middle of the second dorsal, and a third narrower one on the caudal peduncle. Both dorsals, the caudal, and pectorals are crossbarred by rows of black spots; the ventral rays are colorless, but the membranes between are black with a mass of dusky spots; the ventrals are colorless.

Described from the type and only specimen, 44 mm long, from San Jose, Antique Province, Panay. It is close to *Gobiosoma insignum*, but differs in the extraordinary development of the maxillary. From *SchismatoGobius* as defined by de Beaufort it differs markedly in the character of the teeth, and I am therefore uncertain as to its exact generic position.

I am pleased to name this in honor of Dr. Hilario A. Roxas, chief of the Philippine Fish and Game Administration, who is devoting his energies to studying the greatest natural food resource of the Philippines, the fishes of the Philippines waters.
Dorsal VI–I, 12; anal I, 12; about 65 scales in a longitudinal series.

The body is slender, with nearly horizontal dorsal and ventral profiles, the depth 6, the head and rounded caudal each 3.55, the pectoral 4.5, the ventral 5.3 times in the length. The eye is in the anterior half of the head, equal to the convex blunt snout, 4.5 times in the head; the eyes are very close together, their inner margins touching, very high up, dorsolateral; the mouth is oblique, the maxillary extending beneath the anterior part of the pupil, 3 times in the head; the upper jaw has an outer row of enlarged teeth, and behind it a band of four rows of minute teeth; there is a similar band in the lower jaw with an outer row of much larger teeth ending in a small lateral canine on each side; the vomer has two broad teeth; the cheek is margined by sensory papillae and has two longitudinal rows also, while the opercle has two perpendicular and some marginal rows. A low median ridge extends from the first dorsal to the interorbital. The scales are eeloid posteriorly, becoming much smaller above the pectoral but not extending forward beyond the hind margin of the opercle, where they are apparently cycloid; the head, pectoral base, and breast naked.

The fins are low, the third dorsal spine 6 times in the length or 1.63 in the head; the penultimate second dorsal ray 2.25 in the head, the anal scarcely as high; the least depth of the caudal peduncle 2.6 in the head; the ventral reaches to the anus, the pectoral a little beyond the ventral tip.

The color in alcohol is pale olive-brown with nine darker crossbands across the back and down the sides, the first two over the head and nape, the next two under the first dorsal, the four following under the second dorsal, and the last on the caudal peduncle; the sides of the head and anterior half of the body are sprinkled with circular black or dark brown dots; the caudal is crossed by several broad dark bands on its basal half, the outer and upper portion barred by rows of black dots; the whitish first dorsal has two longitudinal dark brown bands; the whitish second dorsal has a basal dark band, and two longitudinal rows of elongate black spots on its middle and upper portions; the anal and ventrals are uniformly blackish; the clear pectoral is a little dusky basally.

Described from the type and only specimen, 32 mm long, which I caught on the tide flats at Bais, Oriental Negros. From the
other members of *Mars* this species differs in its fins, poorer development of sensory papillae and vomerine teeth, and in its occipital ridge.

I take pleasure in naming this species after Dr. J. Ralston Hayden, of the University of Michigan and formerly Vice Governor General of the Philippine Islands, in recognition of his knowledge and appreciation of all phases of Philippine life.

**BLENNIIDÆ**

**SALARIAS FOWLERI** sp. nov. Plate 2, fig. 7.

Dorsal XII, 19 or 20; anal II, 20. Minute simple nasal, orbital, and nape tentacles present, or any one or two pairs may be absent; no occipital crest, and no canines.

The depth is 6 to 6.2, the head 4.8 to 5.1, the pectoral 4 to 4.4, the ventral 7.75 to 8 times in the length.

The eye, snout, and least depth of the caudal peduncle each 3 times in the head. The body is elongate compressed, with bluntly rounded head, which is broader than deep; the anterior profile is nearly vertical, the mouth slightly projecting, the maxillary extending beneath the posterior portion of the prominent eye. The dorsal is moderately notched, of nearly uniform height, 2 in the head, the anal 3 times. The dorsal and anal do not extend to the caudal and are free.

The color in alcohol is whitish, with seven brown spots along the middle of the side, each spot containing three or more conspicuous black dots; between the spots are dots and specks, and along the lower side is a row of prominent black dots; rather faint brown dorsal bands composed of minute dots are opposite the lateral spots; the head and upper anterior half are more or less covered with minute brown specks. There are three or four rows of black dots on the dorsal rays, the intervening portions white, the membrane clear; nine or ten black dots are beneath the anal which is clear with a black submarginal band and a white margin; the caudal has four black crossbars.

Described from the type, 31 mm long, and 9 paratypes, 16 to 28 mm long, taken from a tide pool at Dumaguete, Oriental Negros.

I take pleasure in naming this pretty blenny for Henry W. Fowler, who has made notable contributions to our knowledge of Philippine fishes.
ANGUILLIDÆ

ANGUILLA SPENGEII M. Weber.

A number of evers, 60 to 80 mm in length, seem to be this species. They were taken from a brook at the San Ramon Penal Colony, Zamboanga, Mindanao.

MYRIDÆ

MURÆNICHTHYS SIBOGÆ Weber and de Beaufort.

A specimen of this very rare eel, 102 mm long, was caught at Dumaguete, Negros. It is a small species hitherto known only from the Dutch East Indies. A specimen 103 mm long, taken by the Siboga Expedition, was fully mature.

OPHICHTHYIDÆ

CIRRIMURÆNA OLIVERI (Seale).

Four young specimens, 70 to 88 mm long, were taken on Pasay Beach, Manila Bay. Previously known only from the type, 380 mm long, from Zamboanga, Mindanao, and a specimen 500 mm long from Tablas.

CLUPEIDÆ

ALOSA PLATYCASTER (Günther).

A specimen 55 mm long, from the southern coast of Tayabas Province, Luzon, agrees with the description by Weber and de Beaufort. New to the Philippines.

MUGILIDÆ

MUGIL STRONGYLOCEPHALUS Richardson.

Two specimens, 102 and 110 mm in length, agree with specimens I collected in Kwangtung Province, China. New to the Philippines, and previously known only from the southern coast of China.

GEMPYLIDÆ

RUPTITUS SULPHURUS Cocco.

New to the Philippines. Three specimens of the singular oilfish were seen, caught on the Pacific coast of Camarines Norte Province, Luzon. I was able to get but one, 620 mm long. A much larger specimen had been cut up for food, and the third specimen was in such condition as to be useless for scientific purposes.
This circumtropical deep-sea fish is readily recognized by its large eyes, large mouth filled with sharp teeth, its very rough scales, black color, and oiliness. After several years in alcohol specimens still cover one's hands with oil when handled. Specimens long preserved gradually change to uniform brown, losing their original black color.

The oilfish is the object of a remarkable long-line fishery throughout Polynesia and Melanesia. It reaches a length of at least 3 meters, and is caught off-shore in the open sea at depths of 100 to 800 meters or more. It is taken on dark nights, when there is no moon and the sea is perfectly calm. The flesh is very toothsome, but is very rich in an oil that has an extraordinary and exceedingly rapid purgative effect when eaten.

LEIOGNATHIDÆ

LEIOGNATUS BREVIROSTRIS (Cuvier and Valenciennes).

New to the Philippines. Five specimens, 66 to 80 mm in length, were dredged from Manila Bay. There are no scales on the breast, and in other respects the specimens agree with Weber and de Beaufort's description.

LEIOGNATUS LINEOLATUS (Cuvier and Valenciennes).

Two small examples, each 51 mm long, were obtained at Iloilo, Panay. New to the Philippines.

SERRANIDÆ

ANTHIAS HUCHII Bleeker.

A typical example, 48 mm long, was taken from a Dumaguete, Negros, tide pool. New to the Philippines.

POMADASYIDÆ

Genus LUZONICHTHYS novum

Fowler described and figured a fish which he called Mirolabrichthys waitei. The chief characteristic of the genus Mirolabrichthys Herre is the proboscislike, fleshy, pointed papilla on the tip of the snout. This flexible pointed tip is entirely lacking in Mirolabrichthys waitei Fowler, and it also differs in some other particulars, lacking filaments on the ventrals and having the jaws even. I therefore propose the name Luzonicthys, with Luzonicthys waitei (Fowler) as its type.

LUZONICHTHYS WAIKEI (Fowler).
A typical specimen, 47 mm long, was collected at Dumaguete, Negros.

Sparidae

NEMIPTERUS TAMBOLOIDES Bleeker.
A specimen from the southern coast of Luzon, 109 mm long, seems to belong here. New to the Philippines.

Sciaenidae

OTOLITHES ORIENTALIS Sasa.
This species is well represented by two specimens from Manila Bay, 94 and 140 mm long. Previously known only from the type, 235 mm long, from Sandakan, British North Borneo.

Cirrhitidae

CIRRHITUS MARMORATUS (Lacépède).
A fine example of this wide-spread Indo-Pacific species, 125 mm long, from the coast of Batangas, Luzon. New to the Philippines.

Scorpaenidae

MINUS TRACHYCEPHALUS Bleeker.
An excellent example, 53 mm long, was obtained from Subic Bay, Luzon. Bleeker had but 8 specimens, 49 to 80 mm in length, from the Dutch East Indies. New to the Philippines.

Platyccephalidae

ROGADIUS POLYODON (Bleeker).
A young specimen, 51 mm long, from Batangas Bay, Luzon, belongs here, corresponding in detail to Bleeker's description and figure. New to the Philippines. Bleeker had but 4 specimens, 118 to 180 mm long, from Java, Celebes, Ceram, and Amboina.

Eleotridae

HYPSELEOTRIS BIPARTITA Herre.
Hypseleotris bipartita Herre, Gobies of the Philippines (1927) 39, pl. 3, fig. 1.
A fine adult specimen, 37 mm long, and 25 juvenile examples, from 14 to 20 mm in length, from San Agustin River, a tributary of Lake Naujan, Mindoro. This easily recognized little eleotrid has been collected previously only in Albay Province, Luzon.
PARVIPARMA STRAMINEA Herre.

*Parviparma straminea* Herre, Gobies of the Philippines (1927) 82, pl. 6, fig. 2.

This very rare electrid, hitherto known only from the type, 65 mm long, from Saug River, southern coast of Cotabato Province, Mindanao, is represented by an elegant specimen, 85 mm long, from Aparri, Luzon.

The depth is 7 times, the head and caudal each 4.7, the pectoral and ventral each 7 times in the length; the width of the head is 1.5 times in its own length. The eye is 9 times in the head and twice in the snout; the interorbital and snout are equal, 3.6 times in the head. The other characters are as given in my original description.

GOBIIDÆ

HERREA PRODUCTA (Herre).

*Galera producta* Herre, Gobies of the Philippines (1927) 104, pl. 7, fig. 3.

This unique goby was described from the type and only specimen, 49 mm long, from Puerto Galera, Mindoro. From a Dumaguete tide pool I collected 3 fine examples, 52 to 66 mm in length. They are plumper than the type, which was much shriveled by strong preservative.

The depth is 6.5 to 7.4 times, the caudal 2 to 2.36, the head 4 to 4.7, the pectoral 3, the ventral 5 times in the length. The eye is 4 to 4.33, the snout 4 times in the head; the interorbital is twice in the eye. The second dorsal and anal rays are much elongated posteriorly, 1.5 times as high as the anterior or middle rays, and nearly equal to the head.

The color in alcohol is yellowish, densely sprinkled with dark brown, which becomes a uniform coat above; from the eyes a blackish band extends above the opercles to the pectoral angle and curves up to the dorsal origin to meet its fellow from the other eye; beneath the first dorsal a blackish band extends downward and forward to the abdomen; a similar band extends downward and backward from the middle or posterior part of the second dorsal to the posterior rays of the anal; a vertical blackish band on the caudal base; the caudal is black or blackish, the other fins all crossbarred by many rows of dark brown spots or blotches.

GLADILOGOBUS ENSIFER Herre.

Gladiogobius ensifer Herre, Copeia (April, 1933) 23.

By far the best specimen of this unique goby seen was taken on the tide flats at Bais, Oriental Negros. It is the largest one yet collected, its length 40 mm; its proportions do not differ materially from those published. It has a low but conspicuous occipital crest from the eyes to the dorsal origin. The color markings are as given in the original account.

OLIGOLEPIS MOLONUS (Herre).

Aparrius moloanus Herre, Gobies of the Philippines (1927) 207, pl. 16, fig. 3.

An example 37 mm long from the mud flats at Opon, Mactan Island, establishes a new Philippine record. Hitherto it has been taken in the Islands only in Iloilo and Antique Provinces, Panay.

Dr. Hugh M. Smith obtained 8 specimens, 55 to 66 mm long, in the estuary of Chantaban River, southeastern Siam. This greatly extends the range of the species and is in line with the recent discovery in Singapore and the Malay Peninsula of other gobies previously known only from the Philippines.

APOCRYPTODON SEALEI Herre.


This very distinct species was known only from a damaged specimen, 52 mm long, from the Manila market. I have a small but perfect specimen, 32 mm long, gathered from the mud flats at Opon, Mactan Island. The caudal is rounded rather than pointed, and is not as long as the head but is equal to the head without the snout.

CALLIONYMIDÆ

CALLIURICHTHYS FILAMENTOSUS (Cuvier and Valenciennes).

A fine male specimen, 76 mm long, or 107 mm with the caudal, was dredged from Manila Bay. New to the Philippines and known previously from Celebes and Amboina.

Dorsal I–III, 9; anal 9; caudal 14 (?).

The very large pointed head is as broad as long, measured to the gill opening, 3.8 times in the length; the caudal is almost half as long as the head and body; the hairlike first dorsal spine reaches to the posterior half of the second dorsal, 2.7 times, the last dorsal ray 5, the last anal ray 6.3, the pectoral 5, the ventral 4.47 times in the length. The eye is 3.33, the snout
2.85 times in the head; the straight opercular spine is slightly serrated above, about as long as the snout, and has a forward-pointing process above, near its base. The last dorsal and anal rays and the two middle caudal rays are much elongated, with more or less filamentous tips.

The color in alcohol is uniform reddish brown, the upper half with paler lobate spots; on the side, below the lateral line, are four irregular rows of black dots. The first dorsal has four black wavy crossbands; the second dorsal and pectoral are barred with black dots, the caudal by dark bands; the anal is clear with a dusky margin; the ventrals are reddish brown, with dark dots and mottlings.

**TRICHONOTIDÆ**

**TRICHONOTUS SETIGERUS** (Bloch and Schneider).

Two perfect specimens, 50 and 78 mm long, of this rare and elongate little fish were caught in Pansipit River, near the outlet of Lake Bombon, Batangas Province, Luzon. Previously known in the Philippines from specimens obtained on the east coast of Mindoro.

Dorsal 46 to 49; anal 36 to 38; scales in the lateral line 55 to 58, plus 2 on the caudal base.

The depth is 13, the breadth 15.6, the head 4.9, the caudal 7 times in the length; the eye is 5.33, the snout 3.55, the maxillary 3.2 times in the head. The strongly projecting lower jaw has a terminal papilla projecting upward above the snout tip; the mouth is large, the maxillary reaching beneath the front margin of the pupil.

The color in alcohol is yellowish gray thickly strewn with dark brown above, and with thirteen broad brown crossbands over the back; the first two are before the first dorsal, the last one on the caudal base; the sides of the head are clear with five large dark brown circular spots, evidently ocelli in life. The first four dorsal rays are black with a white or colorless crossband on the upper half; the other fins colorless, except the caudal which is dark brown with crossbands of white spots.

**BLENNIIDÆ**

**ANDAMIA CYCLOCHEILUS** M. Weber.

*Andamia cyclocheilus* M. Weber, Fische Siboga Exped. (1913) 533, pl. 3, fig. 3.

Dorsal XV, 19 or 20; anal 24 to 26.

A specimen of this strange blenny, 66 mm long, was taken at Puerto Galera, Mindoro. New to the Philippines. Its color is
uniformly blue-black, without spots or bands, the fins brownish black.

The depth is 7.33, the head 5.5, the caudal 3.3, the pectoral 5 times in the length; the eye is 3, the snout 2.4, the interorbital 4, the ventral 2.4 times in the head. The second and third dorsal spines are a little elongated. There is a fimbriated ocular tentacle.

I also collected 20 examples, 28 to 77 mm long, near Menado, Celebes. Large males have the anterior dorsal spines, or all the dorsal spines, except the first, much elongated. The caudal rays are undivided, their tips filiform and free. A male 77 mm long has the depth equal to the head, 6 times, the caudal 3.85, the pectoral 5.1, the ventral 11, the second dorsal spine 3.2 times in the length; the eye and interorbital are equal, 4.33 times, the snout and ventral each 1.85 times in the head.

The color in alcohol is uniform purplish brown, with or without paler violet or whitish spots and short irregular bars over the head, back, and sides; the dorsal, caudal, and pectoral are brown, violaceous, or colorless; the anal may be colorless, or blackish blue with white margin; the ventral white.

From Andamia expansa Blyth this species is separated by the shape of its adhesive sucker, which is a semicircular or oval disk behind the mouth, instead of the double-pointed one of A. expansa.

Previously known only from one specimen from New Guinea, three from Flores, and one from the "East Indies."

Cristiceps xanthosoma (Bleeker).

Dorsal III–XXVII, 4; anal II, 19.

The depth is 4, the head 3.48, the caudal and pectoral each 5.55, the ventral 6.1 times in the length; the eye is 4.16, the snout 5, the maxillary 2.7, and the interorbital 7 times in the head.

The deep body is laterally compressed, the ventral profile strongly convex; the head is moderately arched from the dorsal origin to the tip of the projecting lower jaw; the eyes are high up, lateral, with a fimbriate tentacle on the margin of each, half or more than half the eye in length; a small simple nasal tentacle; the mouth is strongly oblique, the maxillary extending beneath the front margin of the pupil; the small teeth form a band of five rows in front, dwindling to a single row posteriorly, alike in both jaws; minute teeth on vomer and palatines. The dorsal spines are all hard and sharp-pointed, with only four divided rays at the posterior end of the dorsal fin; the anal spines are
likewise hard and sharp. The vertical fins are low, the first dorsal spine 2.5 in the head; the second dorsal is uniform in height, 3.18 in the head, the first dorsal ray equal to the first dorsal spine; the anal rays are of uniform height, 2.9 in the head.

The color in alcohol is uniform yellow, all fins as well as body.

This handsome blenny, previously unknown in the Philippines, is represented by a specimen 61 mm long, from a reef at Paraon, La Union Province, Luzon. Hitherto known only from Java, from specimens described by Bleeker in 1857.

Petroschistes tæniatus (Quoy and Gaimard).

This lovely blenny is one of the handsomest denizens of the coral reefs of the East Indies and Polynesia. Though not rare it is difficult to collect. A specimen 93 mm long from Calapan, Mindoro, is apparently the first recorded from the Philippines. I have seen it at Dumaguete, and at various places in the Sulu Archipelago, but have been unable to secure specimens.

In life it is a beautiful blue with a black band from the tip of the snout to the tip of the caudal fin, narrow anteriorly and more than twice as wide posteriorly; the dorsal and anal have a narrow white margin. In alcohol the blue fades considerably, the colors otherwise unchanged.

This fish swims with a peculiar rocking and twisting motion, inclined first to one side and then to the other as it speeds swiftly forward.
ILLUSTRATIONS

[Drawings by P. Bravo.]

PLATE 1

FIG. 1. *Crenula philippinensis* sp. nov.; a, under side of head showing irregular position of gill openings.
2. *Sygnathus martini* sp. nov.
3. *Vaimosa montalbani* sp. nov.

PLATE 2

FIG. 4. *Ctenogobius villadolidi* sp. nov.
5. *Schismatogobius rozasi* sp. nov.
6. *Mare haydeni* sp. nov.
7. *Salarias fowleri* sp. nov.

373