

**ZOOLOGICAL RESULTS OF THE THIRD DE SCHAUENSEE SIAMESE
EXPEDITION, PART V. — ADDITIONAL FISHES**

BY HENRY W. FOWLER.

The specimens reported in this paper were all obtained in Siam and received subsequent to my report in these PROCEEDINGS on the main collection. The localities are: Kratt, southeast Siam, December 1933; Ban Thung Luang, near Hua Hin, southwest Siam, January 1934; Bangkok, February 5, 1934. They are represented by 149 specimens referable to 41 species, of which 9 appear to be undescribed, one a new genus, and one a new sub-genus. The Academy is further indebted to Mr. Rodolphe Meyer de Schauensee for this gift to its museum.

OSTEOGLOSSIDAE

Scleropages formosus (Müller and Schlegel).

One, 444 mm., Kratt. Recorded from this region by Smith in 1931, who says it reaches 90 cm. in length; he also gives notes on its habits.

NOTOPTERIDAE

Notopterus notopterus (Pallas).

One, 183 mm., Bangkok.

CLARIIDAE

Clarias batrachus (Linnaeus).

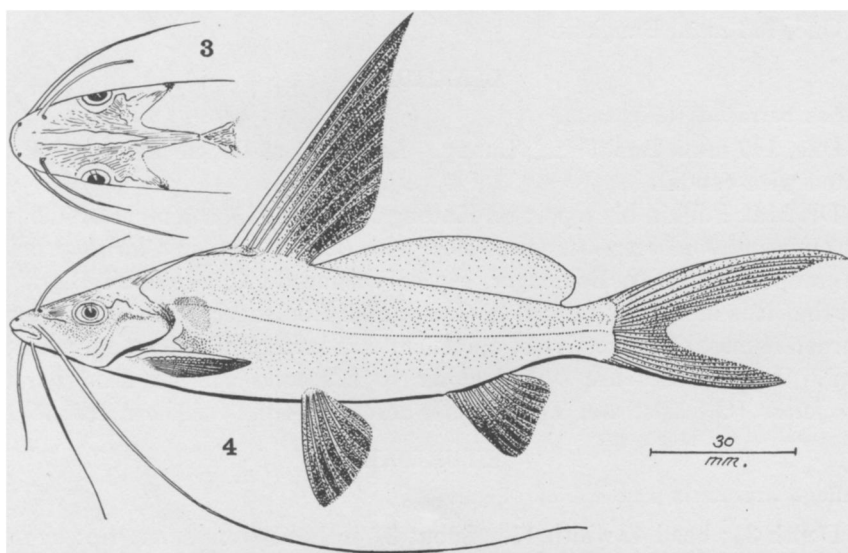
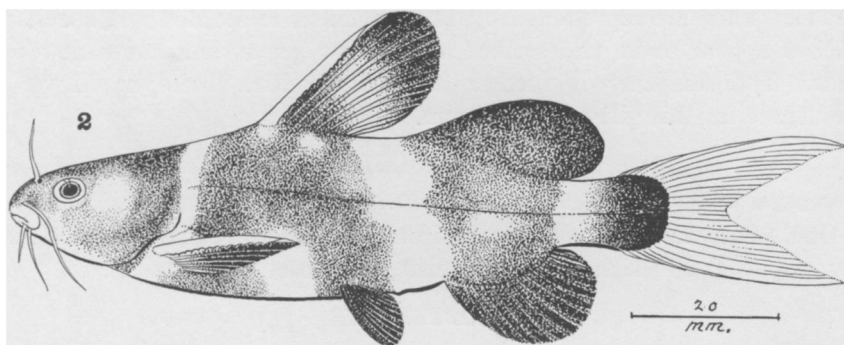
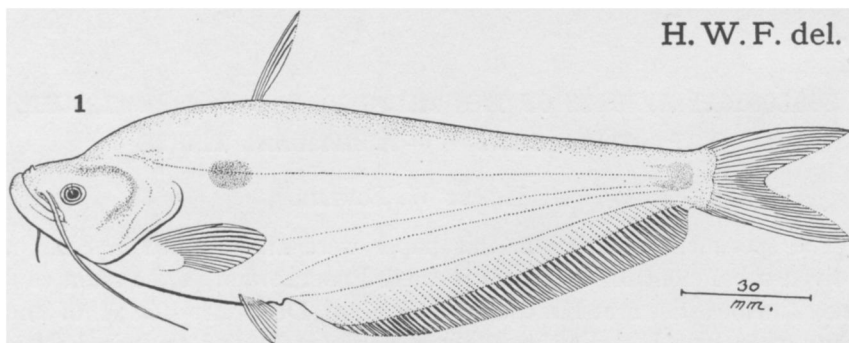
One, 140 mm., Ban Thung Luang. Last rays of dorsal and anal partly united with caudal.

Dr. Max Poll, in his report on Katanga Fishes 1933, attempts to identify my *Dinotopteroïdes prentissgrayi* 1929 with *Clarias* as "un *Clarias* primitif du groupe I de G. A. Boulenger, espèce voisine du *C. Mellandi* Blgr." I feel that it is in no way related to *C. mellandi* Boulenger, and that whatever characters may be suggestive of agreement are largely, if not entirely, superficial. Its affinities are surely closer to a second species, *Dinotopteroïdes jallae* (Gilchrist and Thompson), described from Southern Rhodesia.

SILURIDAE

Wallago krattensis, new species. Figure 1.

Depth $3\frac{1}{3}$; head 4, width $1\frac{1}{3}$. Snout $3\frac{2}{5}$ in head from snout tip; eye $6\frac{1}{2}$, $1\frac{3}{4}$ in snout, 4 in interorbital; maxillary reaches front of eye, length $2\frac{1}{4}$ in head from snout tip; teeth in broad bands in jaws, lanceolate, small, inner longer and little larger, 8 to 10 transversely; maxillary barbel little longer than head, reaches about last fourth of depressed pectoral, mandibular



1. *Wallago krattensis*. 2. *Leiocassis albicollaris*. 3,4. *Prajadhipokia rex*.

slightly longer than eye; interorbital $1\frac{2}{3}$, convex, rather high, junction of predorsal with occiput over hind eye edge. Gill rakers $3 + 9$, slender, lanceolate, $1\frac{1}{2}$ in gill filaments, which $1\frac{1}{2}$ in eye.

Skin smooth, soft. Lateral line distinct, axial, complete.

D. I, 3, spine smooth, flexible, $1\frac{3}{4}$ in total head length; A. 56, fin height $3\frac{2}{5}$; caudal 1, deeply forked, similar lobes pointed, alike; least depth of caudal peduncle 3; pectoral $1\frac{2}{5}$, rays I, 12, slender spine pungent, entire; ventral rays I, 7, spine somewhat flexible, fin $2\frac{2}{5}$ in total head length.

Light drab, paler to whitish on under surface of head and abdomen. Pale ochraceous to yellowish tinge on under surface of mandible and adipose or fatty basal regions of paired fins and anal. Iris gray. Maxillary barbel gray, mandibular whitish. Large gray blotch on lateral line, over middle of depressed pectoral, twice size of eye. At caudal base, on caudal peduncle, poorly defined smaller gray blotch. Fins all dull gray.

A.N.S.P., No. 60177. Kratt, southeast Siam. December 1933. Length 190 mm. Type.

Only the type known. Differs from *Wallago leerii* Bleeker and *Wallago miostoma* Vaillant in its much deeper body, short maxillary barbel, fewer anal rays and much shorter snout. The vomerine teeth in the present species are small and consist of 2 small, widely set, rounded areas.

(For Kratt, the type locality.)

Kryptopterus hexapterus (Bleeker).

One, 149 mm., Bangkok. Lower caudal lobe longer.

BAGRIDAE

Mystus nigriceps (Valenciennes).

One, 157 mm., Bangkok.

Mystus micracanthus (Bleeker).

Two, 127 to 133 mm., Ban Thung Luang. Differs from Bleeker's plate in a large dark blotch before the caudal base, also another behind the scapula. Maxillary barbels reach caudal. Smaller example with front of adipose fin mutilated.

Mystus vittatus (Bloch).

One, 124 mm., Bangkok.

Mystus gulio (Buchanan-Hamilton).

One, 83 mm., Kratt.

Leiocassis albicollaris, new species. Figure 2.

Depth $3\frac{2}{3}$; head $3\frac{3}{4}$, width $1\frac{1}{2}$. Snout $3\frac{3}{4}$ in head; eye $5\frac{1}{4}$, $1\frac{1}{2}$ in snout, $1\frac{1}{2}$ in interorbital; maxillary reaches $\frac{3}{4}$ to eye, length $4\frac{1}{2}$ in head; lips rather thick, fleshy, entire; teeth villiform, very small, moderately broad band in each jaw and similar though little narrower band across vomer; nasal barbel $2\frac{3}{4}$ in head, maxillary $1\frac{2}{5}$, outer mental $2\frac{3}{5}$, inner mental $4\frac{1}{5}$; interorbital 3, broadly convex, low. Gill rakers $3 + 10$, lanceolate, slender, $1\frac{1}{2}$ in gill filaments, which $1\frac{1}{2}$ in eye.

Skin largely smooth, though largely spongy or papillate over trunk, especially above. Humeral extension little less than half of depressed pectoral fin, inconspicuous, length $1\frac{3}{4}$ in pectoral spine. Occipital bridge complete. Lateral line axial, complete.

D. I, 7, spine strong, osseous, front edge entire, row of about dozen concealed antrorse denticles along hind edge, first ray 1 in head; A. 16, fin height $1\frac{1}{2}$; least depth of caudal peduncle $2\frac{3}{4}$; pectoral I, 7, spine osseous, strong, front edge entire, 15 strong well-developed, more or less erect, denticles along hind or inner edge, fin $1\frac{1}{2}$ in head; ventral 2, rays 1 simple and 5 branched; caudal $3\frac{1}{2}$ in rest of fish, deeply forked; adipose fin length $3\frac{1}{4}$.

Head largely gray brown, with pale blotch in middle of interorbital, also larger pale postocular area, lips and chin. Maxillary and nasal barbels brownish, mentals whitish. Oblique pale gray collar from occipital extension. Iris gray. Trunk largely gray brown, with pale blotch at spinous dorsal origin and another on back close to base of spinous dorsal. Broad whitish diffuse band across chest and another across belly before ventrals, extending up on side of abdomen level with pectoral. Broad whitish oblique band behind dorsal to vent. Broad dark gray brown area between adipose fin and anal, diffuse pale area medially close below lateral line. Broad whitish band around caudal peduncle, behind with dark gray brown, becoming blackish at caudal base, where strongly contrasted with white caudal. First dorsal with whitish spine, most of fin neutral black with broad oblique whitish median band. Adipose fin gray brown, and becomes neutral black marginally. Other fins all largely neutral black, pectoral spine whitish.

A.N.S.P., No. 60178. Bangkok, Siam. February 5, 1934. Length 114 mm. Type.

Greatly like *Leiocassis bicolor*, differing in a few more anal rays, larger adipose fin, hind dorsal edge with about dozen retrorse serrae, 13 large denticles along inner pectoral edge, and the coloration. Chief in the last is the entirely white caudal and pale nuchal collar.

(*Albus* white + *collare* collar.)

PRAJADHIPOKIA, new genus

Body elongate, rather slender, well-compressed, deepest at first dorsal origin. Head small, nearly pyramidal, sides but slightly converging above. Snout rather long, slightly protrudes beyond lower jaw. Eye moderate, midway in head length. Mouth small, gape short. Lips rather thin, with fine, obscure papillae. Teeth villiform, in rather short band in each jaw, somewhat similar though smaller band each side of vomer, not continuous, little arched and narrowing behind; barbels well developed, maxillary very long or reaching caudal. Top of head rugose striate and with broad, well-marked fontanel. Occipital bridge complete. Gill opening moderately large, gill membranes free from broad isthmus and separate from one another. Shoulder girdle and humeral extension with fine rugose striae, also occipital bridge. Lateral line present. First dorsal greatly elevated, with exceedingly long, slender spine. Adipose fin very long, high. Anal small, post-

median in adipose fin length. Caudal with long slender lobes, lower much shorter. Pectoral small, low. Ventral subequal with pectoral. Coloration largely uniform.

Type *Prajadhipokia rex*, new species.

A very interesting and well-marked genus, differing from *Bagrichthys* Bleeker in the very long maxillary barbel reaching the caudal. It further differs in that all the barbels are better developed and the long dorsal spine entire or without serrae. Just as *Bagrichthys* Bleeker appears as extreme to *Leiocassis* Bleeker, likewise *Prajadhipokia* is extreme to the species of *Mystus*.

(Dedicated to His Majesty Prajadhipok, King of Siam, in grateful appreciation by the Academy for the many courtesies extended to its various natural history expeditions in his Kingdom.)

Prajadhipokia rex, new species. Figures 3 (head above) and 4.

Depth $3\frac{1}{2}$; head $3\frac{1}{2}$, width $1\frac{1}{2}$. Snout $2\frac{2}{5}$ in head; eye $5\frac{1}{2}$, $2\frac{1}{5}$ in snout, $2\frac{1}{5}$ in interorbital; maxillary reaches $\frac{2}{5}$ in snout, length $4\frac{3}{5}$ in head; mouth width 4; interorbital $2\frac{1}{8}$, low; occipital fontanel reaches base of occipital spine. Gill rakers $4 + 9$, slender, lanceolate, $\frac{3}{4}$ of gill filaments, which $1\frac{1}{3}$ in eye.

Skin smooth. Humeral extension reaches first third in depressed pectoral fin. Lateral line axial, complete along side of body.

D. I, 7, spine straight, slender, smooth, $1\frac{1}{2}$ in fish without caudal; adipose fin length $2\frac{1}{5}$; caudal $2\frac{1}{10}$, lower lobe $1\frac{1}{3}$ in upper; least depth of caudal peduncle $3\frac{1}{4}$ in head; A. III, 8, first branched ray 2; pectoral $1\frac{1}{2}$, rays I, 11, spine with outer edge entire, 16 antrorse denticles on inner edge; ventral rays I, 5, fin $1\frac{1}{3}$ in head.

Largely gray brown or drab, under surface of head, belly and abdomen whitish. Iris gray, with narrow whitish border all around. Nasal and maxillary barbels brownish, mentals whitish. Dorsal and pectoral spines pale. Outer portions of first dorsal, paired fins and anal, neutral black. Caudal dark gray. Gray blotch on lateral line, larger than eye, rather close behind suprascapula.

A.N.S.P., No. 60179. Bangkok, Siam. February 5, 1934. Length 170 mm. Type.

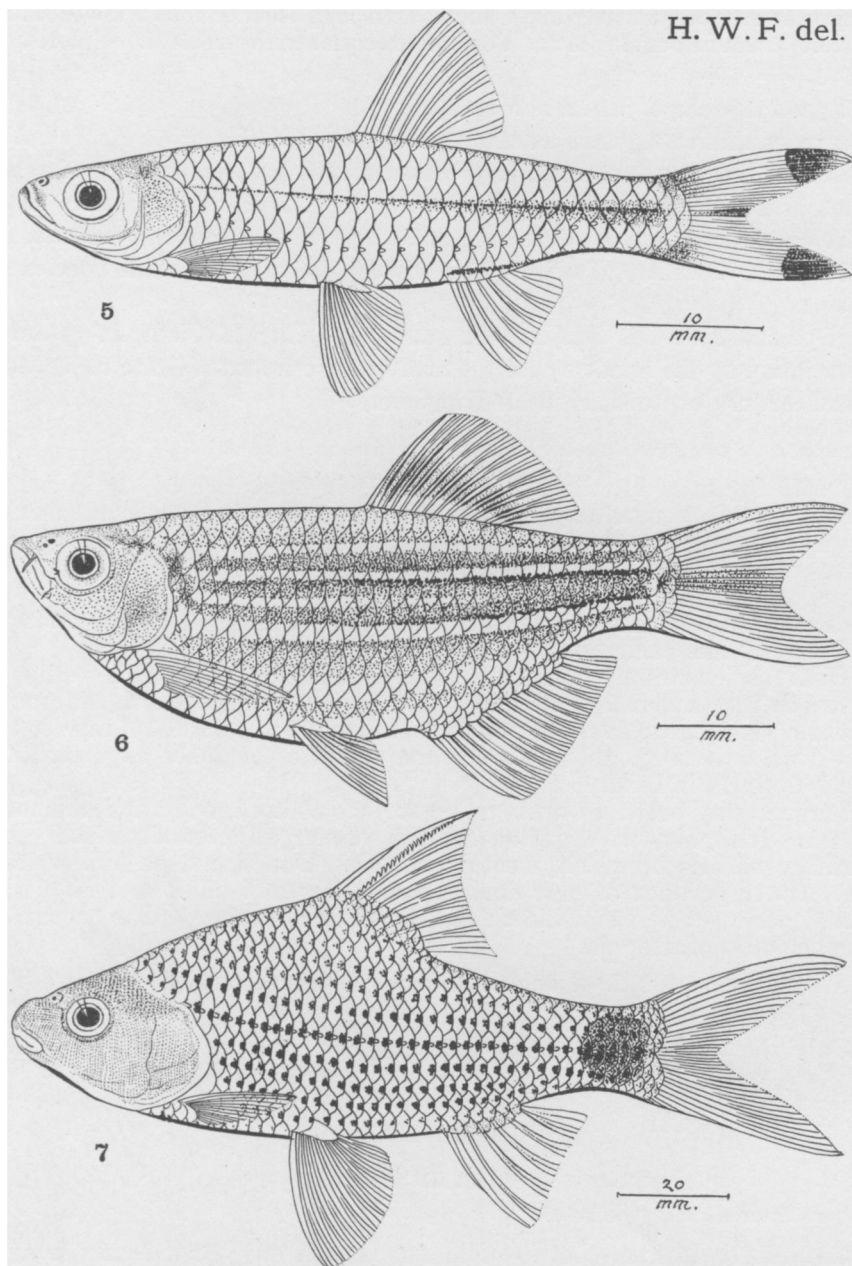
Only the type known. The characters of the species included in the generic account.

CYPRINIDAE

RASBORINAE

Rasbora lateristriata (Bleeker).

Two, 43 to 45 mm. (both caudal fins broken off), Ban Thung Luang. Lateral line complete. Dorsal origin nearer caudal base than snout tip, behind ventral origin. Black lateral band present, widens on tail. Dark band down middle of back. Faint bar of dusky dots along anal base.



5. *Rasbora stigmatura*. 6. *Danio regina*. 7. *Cyclocheilichthys rubripinnis*.

Rasbora stigmatura, new species. Figure 5.

Depth 4 to $4\frac{1}{2}$; head $3\frac{1}{2}$ to $3\frac{3}{4}$, width $2\frac{1}{2}$ to $2\frac{5}{8}$. Snout $3\frac{1}{2}$ to $4\frac{1}{2}$ in head from snout tip; eye $2\frac{4}{5}$ to 3, greater than snout, 1 to $1\frac{1}{2}$ in interorbital; maxillary reaches eye, length 3 to $3\frac{3}{8}$ in head from snout tip; no barbels; interorbital $2\frac{4}{5}$ to 3, low, broadly convex; suborbitals largely cover cheek. Gill rakers $3 + 8$, lanceolate, slender, $\frac{1}{2}$ of gill filaments, which $\frac{2}{3}$ of eye. Pharyngeal teeth 2, 3, 5—5, 3, 2, hooked, with entire grinding surfaces, rather broad.

Scales 26 or 27 in lateral line to caudal base and 2 more on latter; 5 above, 1 below, 13 predorsal. Lateral line complete, greatly decurved, tubes simple. Scales with 8 to 10 long radiating apical striae, 10 to 15 short parallel marginal basally; circuli fine and numerous apically, fewer or coarser basally.

D. II, 7, first branched ray $1\frac{1}{2}$ to $1\frac{3}{4}$ in total head length; A. II, 5, first branched ray $1\frac{3}{8}$ to $1\frac{4}{5}$; least depth of caudal peduncle $2\frac{1}{2}$ to $2\frac{3}{8}$; pectoral $1\frac{1}{2}$ to $1\frac{3}{8}$, rays 1, 14; ventral I, 7, fin $1\frac{1}{2}$ to $1\frac{3}{8}$ in total head length; caudal $2\frac{3}{4}$ to $3\frac{1}{8}$ in rest of fish.

Very pale or light brown, upper surface of head and scales on back with darker or olivaceous. Iris slate (evidently silvery white in life). A dark to blackish brown axial streak, most distinct and broader along side of tail, where also more expanded due to dark or blackish dots. Fins all pale or whitish, each caudal lobe with large subterminal blackish blotch, also narrow black streak on median rays as extension from axial dark streak on body. At bases of upper and lower caudal rays dark color of caudal peduncle invades short distance, lower as black line along anal base.

A.N.S.P., No. 60180. Kratt, southeast Siam. December 1933. Length 58 mm. Type.

A.N.S.P., Nos. 60181 to 60186, paratypes, same data. Length 35 to 42 mm.

A species somewhat suggestive of *Rasbora trilineata* Steindachner, but differs in the subterminal black contrasted blotch on each caudal lobe, besides the other details of its coloration.

(Στίγμα spot + οὐρά tail.)

DANIO Buchanan-Hamilton

RAMBAIBARNIA, new subgenus

Body rather deeply ovoid, lower profile more convex, strongly compressed, deepest at ventral base. Head small, compressed. Snout conic. Eye advanced, rather high, with small short spine at front edge. Mouth subterminal above, lower jaw protruding. Pair of rostral and pair of maxillary barbels. Interorbital low, broad. Suborbitals cover cheek. Gill rakers short. Scales large, smaller on breast and caudal base. Scaly flaps in pectoral and ventral axils. Lateral line complete, greatly decurved, median at caudal base. Dorsal postmedian, little in advance of anal origin, fins similar. Caudal emarginate. Pectoral rather long, low, not reaching ventral. Ventral short.

Type *Danio regina*, new species.

In the possession of the preorbital spine this subgenus approaches *Danio spinosus* Day, which has "a sharp spine directed forwards above the anterior superior margin of the orbit, and a second broader and blunter before the centre of the eye on the preorbital." It differs further in its larger scales, barbels and fin rays.

(Dedicated to Her Majesty Rambaibarni, Queen of Siam.)

Danio regina, new species. Figure 6.

Depth $2\frac{3}{4}$ to $2\frac{3}{4}$; head $3\frac{3}{4}$ to $3\frac{3}{4}$, width $1\frac{9}{10}$ to 2. Snout $3\frac{1}{2}$ to $3\frac{4}{5}$ in head from snout tip; eye $3\frac{1}{8}$ to $3\frac{3}{8}$, little greater than snout, $1\frac{2}{5}$ in interorbital; maxillary reaches opposite front of eye, length $2\frac{1}{3}$ to $2\frac{2}{5}$ in head from snout tip; front barbel $1\frac{1}{2}$ in eye, hind one 2; interorbital $2\frac{1}{3}$ to $2\frac{1}{2}$ in head from snout tip, low, broadly convex; suborbitals cover cheek. Gill rakers 1 + 6, low, short points, $\frac{1}{3}$ of gill filaments, which $\frac{1}{2}$ of eye. Pharyngeal teeth 2, 3, 4 — 5, 3, 2, hooked, with slight or narrow entire grinding surfaces.

Scales 32 or 33 in lateral line to caudal base and 2 more on latter; 8 above, 1 below to ventral, 2 below to anal origin; 13 to 15 predorsal. Scales with 15 to 17 apical radiating striae; circuli very fine.

D. III, 11, 1, first branched ray $1\frac{1}{4}$ to $1\frac{2}{5}$ in total head length; A. III, 14, 1, first branched ray $1\frac{2}{5}$; least depth of caudal peduncle 2 to $2\frac{1}{5}$; pectoral $1\frac{1}{5}$ to $1\frac{1}{4}$, rays, 1, 11; ventral rays I, 5, fin $1\frac{2}{5}$ to $1\frac{3}{5}$ in total head; caudal 3 in rest of fish.

Brown on back and above, paler to whitish below. Snout and edges of lips dark. Barbels brownish. Iris slate (evidently silvery white in life). On side of body 5 pale or whitish, parallel, longitudinal bands, interspaces of dark color forming alternate bands broader, also third pale line obscure or absent on tail. Third dark longitudinal band reflected out on median caudal rays. Dorsal pale with longitudinal dark band subbasal. Other fins all pale to whitish.

A.N.S.P., No. 60187. Nakon Sritamarat, peninsular Siam. May 21, 1933. Length 80 mm. Type.

A.N.S.P., No. 60188, paratype, same data. Length 74 mm.

Closely related to *Danio malabaricus* (Jerdon), but that species without the preorbital spine. Day describes "three or four blue bands along the sides, the caudal ones coalescing so as to form a broad bluish band along the middle of the caudal fin." My specimens of the present species are a little different from the figure of *Danio malabaricus* of Day, in which all three lower dark bands coalesce. Moreover the dark median band of my species does not extend continuously on the caudal. Another feature is its up-turned head. Most figures of *Danio malabaricus*, as given in publications on aquaria, show the dark bands broken by pale vertical variable bars, a condition not seen in my species.

CYPRININAE

Mystacoleucus marginatus (Valenciennes).

Two, 168 to 204 mm. (caudal fins broken), Ban Thung Luang.

Osteochilus hasseltii (Valenciennes).

No pores on snout. Scales 30 to $34 + 2$ or 3; 6 above, 4 below to ventral, 4 or 5 below to anal. D. III, 15, 1 to III, 17, 1. Brown above, pale to whitish below. Each row of scales on back and side wide dark longitudinal band made up of row of dark spots, one on each scale and each preceded by an orange-red blotch. Iris slate. Under surface of head, breast, belly and region about lower surfaces of fins golden. All fins with more or less rosy terminally. Dorsal and hind caudal edges gray. Base of each dorsal ray blackish.

One, 160 mm., Kratt; two, 123 to 147 mm. (caudal fins damaged), Ban Thung Luang.

Osteochilus melanopleurus (Bleeker).

Scales $45 + 3$. D. III, 18, 1. All fins dusky or dark gray terminally. Dorsal dark neutral gray, rays red. Anal like dorsal, white basally. Caudal dark gray, with red tinge medially. Ventral white basally, outer half red and dark gray terminally.

Two, 118 to 125 mm., Bangkok.

Hampala macrolepidota (Valenciennes).

One, 185 mm., Kratt.

Cyclocheilichthys apogon (Valenciennes).

Depth $2\frac{1}{2}$. No barbels. Each scale with dark basal spot, forming dark longitudinal rows. Front of dorsal, and anal bases, also bases of caudal lobes, with orange tints. Ends of dorsal and caudal lobes dark gray. Lower fins whitish.

One, 127 mm., Ban Thung Luang.

Cyclocheilichthys rubripinnis, new species. Figure 7.

Depth $2\frac{2}{3}$ to $2\frac{3}{4}$; head $2\frac{1}{2}$ to 3, width $1\frac{2}{10}$ to 2. Snout $2\frac{3}{4}$ to $3\frac{1}{2}$ in head; eye $4\frac{1}{2}$ to $4\frac{3}{4}$, $1\frac{1}{2}$ to $1\frac{3}{4}$ in snout, $1\frac{3}{4}$ to $1\frac{1}{2}$ in interorbital; maxillary reaches $\frac{3}{4}$ to eye, length $3\frac{1}{4}$ to $4\frac{1}{2}$ in head; no barbels; lips rather thin; interorbital $2\frac{1}{8}$ to 3, low, broadly convex. Gill rakers $4 + 7$, lanceolate, $1\frac{1}{3}$ in gill filaments, which 2 in eye. Pharyngeal teeth 2, 3, 4 — 5, 3, 2, hooked, with entire and rather broad or well-developed grinding surfaces.

Scales 32 or 33 in lateral line to caudal base and 2 or 3 more on latter; 7 above, 4 below to ventral, 4 or 5 below to anal origin; 14 or 15 predorsal. Lateral line complete, axial, tubes simple. Head largely covered with parallel vertical striae, few horizontal before eye. Scales with 11 to 14 apical radiating striae, each more or less finely waved; 4 to 9 straighter radiating basally; circuli fine.

D. IV, 8, 1, third simple ray as robust spine, its front edge entire, hind edge with 20 to 23 rather large, long, antrorse denticles, spine length $1\frac{1}{2}$ to $1\frac{3}{4}$ in head; A. III, 5, 1, first branched ray $1\frac{3}{4}$ to 2?; least depth of caudal peduncle $2\frac{1}{4}$ to $2\frac{1}{2}$; pectoral $1\frac{2}{3}$ to $1\frac{3}{4}$, rays 1, 12; ventral 1, 9, fin $1\frac{1}{2}$ to $1\frac{1}{2}$? in head; caudal $2\frac{3}{4}$ in rest of fish, deeply forked.

Head and back brown above, under and lower surfaces whitish. Large black blotch at caudal base, equals $1\frac{1}{2}$ times eye. Each scale on side of

body with small blackish brown spot, formed as even longitudinal rows, largest and most distinct along middle of side. Iris slate (evidently whitish in life). Fins all with red tinge, less so on pectoral. Later dorsal and caudal faded brownish and others whitish.

A.N.S.P., No. 60189. Ban Thung Luang, southwest Siam, January 1934. Length 128 mm. Type.

A.N.S.P., Nos. 60190 to 60199, paratypes, same data. Length 108 to 125 mm.

Compared with Hora's figure of a Burmese example of *Cyclocheilichthys repasson* in 1931, the present species is seen to differ in the presence of 4 rows of scales between the lateral line and the ventral fin origin. However Weber and Beaufort 1916 give 4 rows at the same location. Hora's figure shows but a single maxillary barbel and the dorsal spine much longer than the head. Though damaged in all my examples the dorsal spine of the present species is apparently less than the head and they are without any barbels.

(*Ruber* red + *pinna* fin.)

Barbus partipentazona, new species. Figure 8.

Depth $2\frac{1}{3}$ to $2\frac{1}{5}$; head $3\frac{1}{3}$ to $3\frac{1}{5}$, width $1\frac{1}{3}$. Snout $3\frac{1}{4}$ to $3\frac{1}{2}$ in head; eye $3\frac{1}{4}$ to $3\frac{1}{2}$, subequal with snout, $1\frac{1}{3}$ to $1\frac{1}{5}$ in interorbital; maxillary reaches $\frac{1}{2}$ to $\frac{3}{8}$ in snout, length $3\frac{3}{8}$ to $4\frac{1}{2}$ in head; maxillary barbel $1\frac{1}{3}$ to 2 in eye; lips rather thin; interorbital $2\frac{1}{5}$ to $2\frac{1}{3}$ in head, convex; suborbitals form rather narrow rim below eye. Gill rakers 1 + 7, short points, $\frac{1}{4}$ of gill filaments, which 2 in eye. Pharyngeal teeth 2, 3, 4 — 5, 3, 2, hooked, with small, entire grinding surfaces.

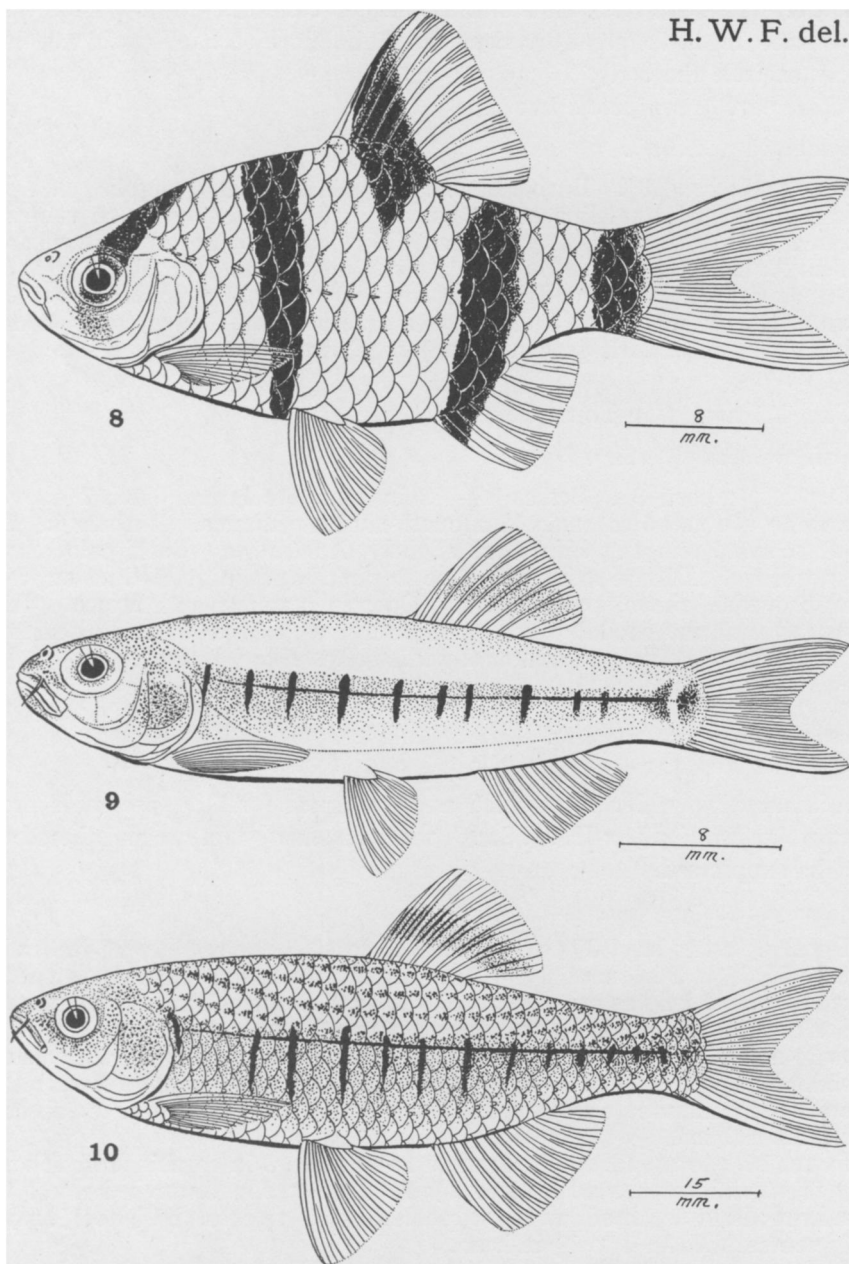
Scales 10 or 11 tubular in lateral line which extends until just before vent, in same row 8 or 9 more to caudal base, with 1 or 2 more also on latter; 6 above, 4 below to ventral origin; 8 or 9 predorsal. Tubes in lateral line simple. Scales with widely divergent radiating striae, 5 apical and 3 basal; circuli fine.

D. III, 8, 1, third simple ray spine-like, front edge smooth, end flexible, and about 10 small denticles on inner edge, length of first branched ray $1\frac{1}{3}$ to $1\frac{2}{3}$ in head; A. III, 5, 1, first branched ray $1\frac{1}{3}$ to 2; least depth of caudal peduncle $1\frac{1}{3}$ to 2; pectoral $1\frac{1}{4}$ to $1\frac{1}{3}$, rays 1, 13; ventral 1, 7, fin $1\frac{1}{4}$ to $1\frac{1}{3}$ in head; caudal $2\frac{2}{3}$ in rest of fish, deeply forked.

Generally very light or pale brown above to whitish below. On upper surfaces base of each scale with brownish crescent. Black band obliquely forward from nape to eye and reflected more faintly below on cheek. Second black band from middle of predorsal down close before ventral base. Third as black blotch on front of dorsal and as black triangle from dorsal base. Fourth black band from middle of postdorsal down to front base of anal. Black transverse band at caudal base. Iris slate (evidently brownish in life). Fins, unless as noted, whitish.

A.N.S.P., No. 60200. Kratt, southeast Siam. December 1933. Length 45 mm. Type.

A.N.S.P., No. 60201, paratype, same data. Length 45 mm.



8. *Barbus partipentazona*. 9, 10. *Barilius huahinensis*.

Differs from *Barbus pentazona* Boulenger from the Malay Peninsula and Borneo, in the different arrangement of the blackish bands, said to completely encircle the body.

(*Pars* part + *pentazona* five zone.)

Barbus brevis (Bleeker).

Depth $3\frac{2}{5}$; head $3\frac{1}{2}$. Barbel at end of each maxillary, length $\frac{1}{2}$ of eye. Scales $25 + 2$ in lateral line, which complete; 6 above, 4 below to ventral, 5 to anal, 15 around caudal peduncle. D. III, 8, 1, spine pungent, entire, slender; A. III, 5, 1, small. Back pale olive, below whitish. Head gray or brown above, white below. Iris slate (evidently white in life). Upper lip brown. Barbel white. No dark spots or blotches. Dorsal and caudal gray, pale basally, dark gray marginally. Lower fins whitish, anal edged dusky below.

One, 111 mm., Ban Thung Luang.

Barbus javanicus (Bleeker).

Depth $2\frac{2}{5}$; head $3\frac{1}{2}$. Scales $28 + 2$ in complete lateral line; 7 above, 4 below to ventral, 5 to anal; 17 around caudal peduncle. Barbels 4. D. III, 8, 1, spine pungent, hind edge slightly denticulate. Back pale olive, below whitish. Diffuse axial pale lilac to pink band, most distinct on tail. Head brownish above, paler below. Opercle coppery and brown. Iris white. Dorsal and caudal grayish terminally, whitish basally. Paired fins and anal whitish. Ventral and anal with slight yellowish tinge.

One, 138 mm., Bangkok.

Barbus proctozysron (Bleeker).

Three, 118 to 128 mm., Bangkok.

Adamacypris, which I proposed as a subgenus for this species, is pre-occupied by *Puntioplites* H. M. Smith with the same genotype and therefore must be suppressed.

Morulius pectoralis (Sauvage).

Depth 3 to $3\frac{2}{5}$; head $3\frac{1}{4}$ to $3\frac{2}{5}$, width $1\frac{2}{5}$ to $1\frac{3}{4}$. Snout $2\frac{1}{2}$ to $2\frac{3}{5}$ in head; eye 4 to $5\frac{1}{4}$, $1\frac{1}{3}$ to 2 in snout, $1\frac{1}{5}$ to $2\frac{2}{5}$ in interorbital; mouth 4 to $4\frac{1}{5}$ in head; 4 barbels, about long as eye; interorbital 2 to $2\frac{1}{8}$ in head, broadly convex.

Scales 41 to $42 + 2$ in lateral line; 8 above, 6 below to ventral origin, 6 below to anal; 17 or 18 predorsal. End of snout and preorbital with cluster of moderate tubercles, 4 or 5 series transversely; top of head and interorbital covered with minute, close-set, feeble, granule-like pearl organs, absent where skin rubbed.

D. III, 16, 1 to III, 18, 1, first branched ray $2\frac{2}{3}$ to 3 in combined head and body to caudal base; caudal $2\frac{1}{2}$ to $2\frac{3}{5}$; A. III, 5, 1, first branched ray 1 to $1\frac{1}{5}$ in head; least depth of caudal peduncle $2\frac{1}{4}$ to $2\frac{1}{2}$; pectoral $1\frac{1}{10}$ to $1\frac{1}{6}$, rays 1, 17; ventral 1, 8, fin 1 to $1\frac{1}{4}$ in head.

Body dark gray brown or with slate tinge. Each scale with dark spot and trace of yellow spot posteriorly on scale exposure. Iris slate gray. Under surface of head pale or drab. Fins blackish slate, well contrasted with paler body, more blackish terminally, especially folded.

Six, 94 to 155 mm., Bangkok. *Robita pectoralis* Sauvage from Cambodia seems to represent my material. Its fins are of similar shape, contrasted blackish according to the figure. It is described with D. 20, A. 8, and most of its characters in agreement. Its scales differ a little in that they are 46 to 48.

Weber and Beaufort's figure of *Labeo* (*Morulius*) *chrysophekadion* shows the dorsal and anal both with concave upper or outer edges, also the last simple dorsal ray extended, a condition not found in any of my specimens, all of which have the dorsal and anal edges straight.

Labeo bicolor H. M. Smith.

One, 46 mm., Silom Canal, Bangkok.

Head and body largely brown, paler below. Around end of snout from front of each eye blackish brown band. Front barbel black, hind one white. Mandible and upper lip pale to whitish. Above fifth scale of lateral line black spot, about half size of pupil of eye. Dark brown transverse bar just before caudal base. Dorsal, anal and ventral neutral black, apex of dorsal marginally narrowly pale. Caudal and pectoral white.

Smith's figure does not show the dark band around the snout.

LEUCISCINAE

Barilius huahinensis, new species. Figures 9 (young) and 10 (adult).

Depth $3\frac{2}{3}$ to 4; head $3\frac{1}{2}$ to 4, width $1\frac{1}{3}$ to $2\frac{1}{3}$. Snout $3\frac{7}{8}$ to $4\frac{1}{2}$ in head; eye 3 to 4, greater than snout in young to subequal with age, 1 to $1\frac{1}{2}$ in interorbital; maxillary reaches eye to $\frac{1}{2}$ in eye, length 3 to $3\frac{1}{2}$ in head; rostral barbel 2 in eye in young, subequal to eye with age; maxillary barbel small, short, apparently not present in young; lips thin, narrow; interorbital $2\frac{2}{3}$ to 3, rather low, broadly convex; suborbitals cover cheek. Gill rakers $2 + 9$, lanceolate, $\frac{1}{4}$ of gill filaments, which $1\frac{1}{2}$ in eye. Pharyngeal teeth 2, 3, 5 — 5, 4, 2, hooked, with well-developed, entire grinding surfaces.

Scales 33 or 34 in lateral line to caudal base and 2 or 3 more on latter; 7 above, 1 below to ventral, 2 below to anal origin; 16 predorsal. Lateral line strongly decurved and all series of scales above in parallel series. Scales with 12 to 18 apical radiating striae, 4 to 26 short parallel marginal basal ones; circuli very fine.

D. IV, 6, I, or III, 7, I, first branched ray $1\frac{2}{3}$ to $1\frac{1}{2}$ in head; A. III, 10, I, fin origin below sixth or seventh dorsal ray base, first branched ray $1\frac{2}{3}$ to 2; least depth of caudal peduncle $2\frac{1}{3}$ to $2\frac{2}{3}$ in head; pectoral $1\frac{1}{2}$ to $1\frac{2}{3}$, rays I, 12 or I, 13; ventral rays I, 7, fin $1\frac{1}{3}$ to $1\frac{3}{4}$ in head; caudal $3\frac{1}{3}$ to $3\frac{1}{2}$ in rest of fish.

Back brown, under surfaces whitish. Narrow neutral black axial line along side, above which all scale rows marked by dark spot on each scale to form curved longitudinal series. Side of head and body shaded with close-set neutral gray dots as broad lateral area from below dark axial lateral line or streak down till level with pectoral. On body and chiefly below dark axial lateral streak 12 to 14 similarly dark or blackish short vertical bars, most of posterior as blotches. Iris slate (evidently silvery in life). Lips and chin gray, also rostral barbel. Dorsal and caudal grayish, former with broad, dark-gray, longitudinal band. Lower fins whitish.

A.N.S.P., No. 60202. Ban Thung Luang, southwest Siam. January 9, 1934. Length 91 mm. (caudal broken). Type.

A.N.S.P., Nos. 60203 to 60233, paratypes, same data. Length 38 to 83 mm. (caudals broken).

Apparently unique in its color pattern, especially the curved rows of spots marking the scale courses above the lateral line. *Barilius koratensis* H. M. Smith is somewhat suggestive in other respects, but is without barbels and is shown with a ventral fin of different shape.

(For Hua Hin.)

CYPRINODONTIDAE

Panchax panchax (Buchanan-Hamilton).

Nine, 26 to 42 mm., Kratt.

ANABANTIDAE

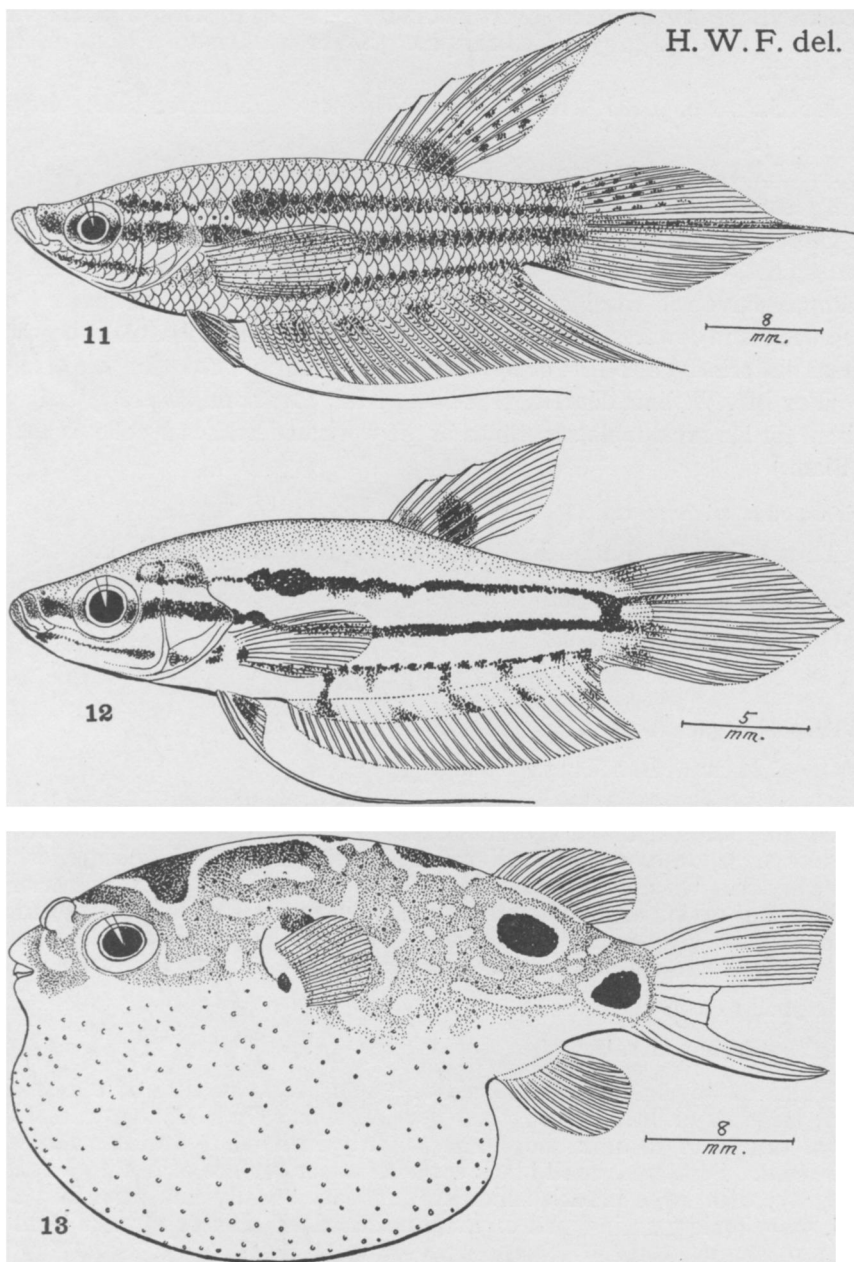
Trichopsis harrisi, new species. Figures 11 (adult) and 12 (young).

Depth $3\frac{1}{2}$ to $3\frac{3}{8}$; head $2\frac{3}{8}$ to $2\frac{1}{2}$, width $2\frac{1}{8}$ to $2\frac{1}{4}$. Snout 4 in head from snout tip; eye $3\frac{1}{2}$ to $3\frac{1}{4}$, exceeds snout, subequal with interorbital; maxillary reaches $\frac{3}{4}$ to eye, length 4 to $4\frac{1}{2}$ in head from snout tip; lips rather broad, fleshy; teeth villiform, in narrow bands in jaws, none on palate; interorbital 3 to $3\frac{1}{4}$ in head from snout tip, low, convex; preorbital finely denticulate on lower edge in young, nearly entire with age; preopercle edge with few small denticles along hind edge. Gill rakers 6, $\frac{1}{3}$ of gill filaments, which $\frac{1}{2}$ of eye.

Scales 29 in medial axial series to caudal base and 3 more on latter; 10 perforated scales, each with single pore from lateral line which extends about opposite $\frac{1}{2}$ of depressed pectoral fin; 30 predorsal forward to end of snout; 3 rows on cheek. Anal largely covered with fine scales from base and fewer also on caudal base. Scales with 15 or 16 basal slightly radiating striae; 36 or 37 apical denticles, each with strong basal keel formed of 3 to 5 segments; circuli fine, apically continuous from apical denticles, finer basally.

D. III, 7, fin height in young $1\frac{1}{4}$ in total head, with age forms long slender point reaching middle of caudal; A. VIII, 20 or 21, fin height in young $2\frac{3}{4}$ in total head, last rays with age reaching $\frac{2}{3}$ in caudal; caudal ends in long slender point behind with age, so that about $1\frac{3}{4}$ in rest of fish; pectoral $1\frac{1}{2}$ in head, rays I, 8; ventral rays I, 5, innermost joined by membrane to abdomen, first branched ray extended as long filament reaching caudal base.

Brown above, under surfaces pale to whitish. On sides of head and body 3 broad blackish-brown longitudinal bands; uppermost from above eye, expanded as large blotch over pectoral base and reaches caudal base little over its center; second band widest, runs from side of snout through eye and little below body axis also on caudal base; third band along lower side of head to lower pectoral base and back until over last anal ray bases. Dorsal with large blackish blotch subbasal at first then basal on most of rays, soft fin above with 5 or 6 rather variable rows of dark spots. Caudal with some small dark or blackish spots on upper basal half and



11, 12. *Trichopsis harrisi*. 13. *Tetrodon palembangensis*.

median dark streak back over median rays. Anal with 5 dark basal blotches. Pectoral gray. Ventral pale gray or whitish with most of short rays dark.

A.N.S.P., No. 60234. Kratt, southeast Siam. December 1933. Length 54 mm. Type.

A.N.S.P., Nos. 60235 to 60238, paratypes, same data. Length 29 to 50 mm. (latter with broken tail).

Closely related to *Trichopsis vittatus* (Valenciennes), but with more anal spines, or 8 compared with 6 or 7, and different coloration. All my examples have the third or lowest dark longitudinal band extended along the cheek and lower side of the head, a dark blotch subbasal to basal on dorsal posteriorly, also first or uppermost band continuous at humeral region.

(For Mr. William Harris, of Chiang Mai, to whom we are greatly indebted for his invaluable assistance in the work undertaken by the Academy in Siam.)

Trichopodus trichopterus (Pallas).

Thirteen, 53 to 78 mm., Kratt; seven, 71 to 90 mm., Bangkok.

Trichopodus pectoralis Regan.

One, 145 mm., Bangkok.

OPHICEPHALIDAE

Ophicephalus gachua Buchanan-Hamilton.

One, 124 mm., Ban Thung Luang.

Scales 44 in lateral line, 4 above. D. 34. A. 21, 1. Head and body above gray brown, obscurely and diffusely clouded with darker. Lower surfaces paler, drab, uniform. Vertical fins with narrow white edges, otherwise grayish. On dorsal dark gray oblique bars sloping down posteriorly. On last anal rays 2 or 3 white oblique narrow lines. Caudal with 10 transverse pale or gray-white cross lines. Pectoral gray, dark basally, and followed by 3 whitish and 3 dark transverse bands. Ventral whitish.

Ophicephalus lucius Valenciennes.

One, 180 mm., Kratt.

Scales 62 to caudal base; 6 above. Four rows of alternate blackish spots, large as or little larger than eye, on side. On abdomen and lower side of tail 10 to 12 dark short bars, slightly inclined to vertical and well contrasted. Scattered small black spots on upper surface of head. Vertical fins gray, with large blackish blotches, at least basally and on dorsal and anal, more or less as inclined or longitudinal dark bars or streaks terminally. Paired fins pale or whitish, with few dark spots.

SERRANIDAE

Cephalopholis boenack (Bloch).

One, 180 mm., Bangkok.

Serranus fasciatus (Forskål).

One, 225 mm., Bangkok.

Serranus malabaricus (Schneider).

One, 187 mm., Bangkok.

GERRIDAE

Gerres setifer (Buchanan-Hamilton).

One, 92 mm., Kratt.

NANDIDAE

Nandus nebulosus (Gray).

Two, 82 to 84 mm., Ban Thung Luang.

Pristolepis fasciatus (Bleeker).

Ten, 62 to 132 mm., Bangkok; three, 54 to 77 mm., Ban Thung Luang.

GOBIIDAE

Glossogobius giurus (Buchanan-Hamilton).

Two, 120 to 127 mm., Ban Thung Luang.

TETRODONTIDAE

Tetrodon palembangensis Bleeker. Figure 13.

One, 44 mm., Kratt, with mutilated caudal.

APPENDIX

CERATOPTERINAE, new subfamily

Mouth anterior or terminal. Teeth at dental plate only in lower jaw.

Type genus *Manta* Bancroft.

Cephalopterinae, as proposed by me in these PROCEEDINGS, vol. 86, 1934, p. 163, is wrongly applied and falls a synonym of Mobulinae.

BAGARIIDAE

PTEROPSOGLANIS, new genus

Type *Pteroglanis horai* Fowler.

Dr. George S. Myers calls my attention that my genus *Pteroglanis* in these PROCEEDINGS, vol. 86, 1934, p. 92, is preoccupied by *Pteroglanis* Eigenmann and Pierson, (in Pierson, Indiana University Studies, No. 64, vol. 11, December 1924, p. 9) for a South American siluroid. As it is sufficiently diagnosed, described and figured in the above-mentioned paper, details for characters may be consulted therein.

CHANNIDAE, new family

Body elongated, nearly cylindrical, compressed posteriorly. Mouth large, protractile. Maxillary not forming edge of upper jaw. Maxillaries, mandible, vomer and palatines with curved teeth. Canines always in mandible, sometimes on vomer and palatines. Gills 4. Gill rakers present. No pseudobranchiae. Accessory superbranchial cavity present, without labyrinthiform organ. Scales cycloid, striated, very large, and shield like on head above. Lateral line present. Dorsal and anal long, with articulated rays only. Pectorals moderate. Ventrals present or absent, inserted not far behind pectorals.

Type genus *Channa* Gronow.

Proposed in accordance with the contention of Myers and Shapovalov 1931 "that *Channa* cannot be regarded as a natural genus distinct from *Ophicephalus*." Channidae as given above will therefore replace Ophicephalidae as in present use, with but one genus.