

AMERICAN MUSEUM NOVITATES

Number 182
Published by
THE AMERICAN MUSEUM OF NATURAL HISTORY
New York City

July 17, 1925

59.7,55C(51)

SOME CHINESE FRESH-WATER FISHES¹

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VII.—NEW CARPS OF THE GENERA *VARICORHINUS* AND *XENOCYPRIS*

There are four species of *Varicorhinus* with very small barbels in the collections of the Third Asiatic Expedition. One of these from Fukien seems not to be differentiable from *Varicorhinus tamusuiensis* (Oshima, 1919) described from Formosa. The relationship of these forms is probably close to species figured by Berg, 1916, but it is improbable that any will prove to be identical with same.

***Varicorhinus tamusuiensis* (Oshima)**

Scaphesthes tamusuiensis OSHIMA, 1919, Ann. Carn. Mus., XII, p. 209, Pl. I, fig. 1.

Description of a specimen from streams in the general Min River Basin, near Yenping, Fukien, August, 1920; collected by H. R. Caldwell.

Length to base of caudal, 95 mm. Depth in length, 4.3; head, 4. Eye in head, 3.4; snout, 3.4; interorbital, 2.9; maxillary, 2.7; width of mouth, 2.8; depth of peduncle, 2.8; its length, 1.4; pectoral, 1.2; ventral, 1.3; longest dorsal ray, 1.4; longest anal ray, 1.7; caudal lobe, 1.

Dorsal, 10; anal, 7½. Scales, 48. Teeth, 4 or 5, 3, 2.

Elongate, compressed; the head broad and blunt, rounded above and in front; the lower jaw flat, concave in profile. Mouth inferior, transverse, almost straight, the lower jaw very broad, with sharp, brown, horny edge, and no free lip; two pairs of minute barbels; maxillary horizontal, to under front of eye; front and sides of snout with large, horny warts; gill-membranes narrowly joined to isthmus under posterior margin of eye. Dorsal and anal without spinous rays; dorsal origin equidistant from tip of snout and base of caudal; ventral origin under first third of dorsal; pectoral not reaching ventral, ventral not reaching anal; caudal deeply forked, upper lobe a little the longer. Scales rough, with subparallel slightly radiating striæ; lateral line complete; dropping along the upper part of the opercular margin, little if any curved and near center of side from the tips of the pectorals back.

Color dark, paler beneath; margin of dorsal with black on the membrane.

Such differences as this species shows from *tamusuiensis* are mostly attributable to Oshima's Formosan specimen having been of larger size, 230 mm. The pectoral of our fish is longer, extending two-thirds versus three-fifths the distance to ventral, but this difference is insignificant.

¹Publications of the Asiatic Expeditions of The American Museum of Natural History. Contribution No. 54.

Varicorhinus robustus, new species

DESCRIPTION OF THE TYPE.—No. 8424, American Museum of Natural History, from near Yenping, Fukien; collected by H. R. Caldwell.

Length to base of caudal, 103 mm. Depth in length, 3.7; head, 4. Eye in head, 3.5; snout, 3; interorbital, 2.6; maxillary, 2.5; width of mouth, 2; greatest width of body (at shoulder), 1.5; depth of peduncle, 2.4; its length, 1.4; pectoral, 1.2; ventral, 1.3; longest dorsal ray, 1; longest anal ray, 1.2; caudal lobe, 0.8. Posterior barbel in eye, 6.

Dorsal, 10; anal, 8. Scales, 47. Teeth (in a cotype), 4, 3, 2; hooked.

Not greatly compressed; the head rounded and blunt; breast broad, rounded; ventrals approximately in a horizontal plane. Mouth broad, almost straight across, a little behind tip of the rounded snout; upper lip overhanging front of mouth and overhung in turn by transverse snout flap; lower jaw with a sharp, brown, horny edge; lower lip with slight line of demarkation behind; maxillary to under front of eye; with a small terminal barbel, a trifle longer than a similar barbel on each side of tip of snout flap; interorbital somewhat convex; gill-membranes narrowly adnate to isthmus below corner of preopercle. Dorsal and anal without spinous rays; dorsal origin equidistant from tip of snout and middle of peduncle; ventral base slightly behind middle of that of dorsal; pectoral not nearly reaching ventral; ventral not reaching anal; anal almost to origin of caudal; caudal forked with equal pointed lobes. Scales rough, with somewhat radiating striæ; lateral line complete, straight, in the center, rising a little to meet opercle.

Color dark, especially the tips and bases of the scales, paler below the eye and on belly.

This is a more robust fish than *Varicorhinus tamusuiensis* which occurs in the same locality.

Varicorhinus shansiensis, new species

DESCRIPTION OF THE TYPE.—No. 8425, American Museum of Natural History, from Niang-tze-kwan, Shansi; collected by C. H. Pope.

Length to base of caudal, 174 mm. Depth in length, 3.9; head, 4.5. Eye in head, 5; snout, 2.6; interorbital, 2.6; maxillary, 2.9; width of mouth, 2.9; greatest width (at front of dorsal), 1.5; depth of peduncle, 2.4; its length, 1.4; pectoral, 1.2; ventral, 1.2; longest dorsal ray, 1.3; longest anal ray, 1.3; caudal lobe, 0.8. Barbel in eye, 3; distance between gill clefts, 1.2.

Dorsal, 10; anal, 7. Scales, 51. Teeth (in a cotype), stout, slightly hooked, 5, 3, 2, first tooth of the main row small.

Little compressed; breast and belly broad. Mouth inferior transverse almost straight across, a little behind the blunt snout; lower jaw with a sharp, cartilaginous edge, pale in color, without free lip; maxillary almost to under front margin of eye; with a small subterminal barbel; a smaller second barbel at corner of snout flap on one side only; front and sides of snout with a few small horny points; gill-membranes joined to sides of isthmus under edge of preopercle. Dorsal and anal without spinous rays; dorsal origin equidistant from tip of snout and middle of peduncle; ventral under middle of dorsal base; pectoral reaching two-thirds the distance to ventral; ventral three-fourths the distance to anal; caudal well forked with equal pointed

lobes. Scales with rather close-spaced, slightly radiating striæ; scales small on the breast; lateral line complete, rising slightly to meet opercle, otherwise straight in the center.

Dark above, paler below, fins plain.

This species has smaller scales than the two preceding and differs from each of them in other details. We have three specimens from the base of Tai-pei-shan in the Tsingling Mountains, Shensi, which we also refer to it. The position of the dorsal origin is variable, sometimes nearer base of caudal than tip of snout.

Varicorhinus tungting, new species

DESCRIPTION OF THE TYPE.—No. 8426, American Museum of Natural History, from Huping, Tungting Lake, Hunan; collected by C. H. Pope.

Length to base of caudal, 126 mm. Depth in length, 4.5; head, 4.4. Eye in head, 5; snout, 2.4; interorbital, 2.2; maxillary, 2.5; width of mouth, 2.5; width of body, 1.5; depth of peduncle, 1.6; its length, 1.5; pectoral, 1.1; ventral, 1.3; longest dorsal ray, 1.1; height of anal, 1.4; caudal lobe, 0.7; across breast, gill slit to gill slit, 3.6. Barbel in eye, 2.5.

Dorsal, 12; anal, 7. Scales, 45. Teeth (in a cotype), 5, 3, 3, or 5, 4, 2; compressed, bluntly pointed, loosely attached, crowded.

Head somewhat depressed; body increasingly compressed backward. Interorbital gently convex; snout bluntly pointed; extending well beyond the broad inferior, slightly curved, transverse mouth; mouth overhung by a thick membrane with free notched-fluted edge; lower lip free in front, with a similarly notched edge; maxillary not to under front of eye; with a small terminal barbel; an exceedingly minute barbel on the side of snout in advance of corner of snout membrane; gill-membranes broadly joined to side of breast under edge of preopercle. Dorsal and anal without spinous rays; dorsal origin equidistant from tip of snout and base of caudal; ventrals under middle of dorsal; pectorals reaching two-thirds the distance to ventral; ventral to anal origin; caudal large, well forked. Scales rough, with close-spaced subparallel as well as the more marked concentric striæ; lateral line complete, straight in the center; body scaling extending onto caudal base.

Color dusky.

This species is well differentiated from the three preceding by the notched free membranes surrounding the mouth.

A number of species of *Xenocypris* have been described from China, and to draw up a satisfactory synonymy of this genus will be difficult and require more time than is now available. *X. microlepis*, *macrolepis* and *dauidi* Bleeker, 1871, and *lamperti* Popta, 1908, are probably good species. *X. tapeinosoma* Bleeker, 1871, *argentea* Günther, 1868, *nitidus* Garman, 1912, *ænea* and *guntheri* Sauvage and Dabry de Thiersant, 1874, *argenteus* (Basilewski, 1855) and *simoni* (Bleeker, 1865) which may not belong in this genus, and *jesella* (Cuvier and Valenciennes,

1844) which is unidentifiable, are probably not good species. Mr. Caldwell has collected a species in Fukien which is quite distinct from all these, and is here described as new. It resembles *Distæchodon tumirostris* Peters, 1880, from Ningpo, Oshima, 1919, from Formosa, but is deeper, with a longer pectoral, etc. *Distæchodon* Peters, 1880, is said to be separated from *Xenocypris* by the character of the teeth, 2 rowed,—7,3.

***Xenocypris compressus*, new species**

DESCRIPTION OF THE TYPE.—No. 8427, American Museum of Natural History, from near Yenping, Fukien; collected by H. R. Caldwell.

Length to base of caudal, 103 mm. Depth in length, 3.8; head, 3.9. Eye in head, 3.5; snout, 3.1; interorbital, 3.3; maxillary, 4.3; width of mouth, 3.6; greatest width of body (at back of head), 2; depth of peduncle, 2.6; its length, 2; pectoral, 1.3; ventral, 1.6; longest dorsal ray, 1.3; longest anal ray, 1.8. Mouth to tip of snout in eye, 2.7.

Dorsal, II, 7; anal, 12. Scales, 74. Teeth broken.

Compressed, pointed before and behind; top and bottom of head flat, slanting. Interorbital flattish; mouth inferior, transverse, almost straight across; gill-membranes narrowly joined to isthmus behind posterior margin of eye. Last simple dorsal ray a slender spine, its tip soft; dorsal origin equidistant from base of caudal and front of eye; ventral origin under that of dorsal; pectoral narrow and pointed, reaching two-thirds the distance to ventral; ventral two-thirds to anal; caudal forked. Scales with conspicuous concentric and wide-spaced slightly radiating striæ; lateral line complete, somewhat bent down behind head, running in center of peduncle.

Pale below and on sides, darker on back; sides with more or less distinct, fine dark streaks following the rows of scales, in one of which the lateral line is situated; fins plain.

VIII.—CARPS REFERRED TO THE GENUS *PSEUDORASBORA*

The type of *Pseudorasbora* Bleeker, 1859, is *Leuciscus parvus* Temminck and Schlegel, 1844, from Japan. A small fish, widely distributed on the mainland of eastern Asia, is generally considered identical therewith. We have also a closely related form which is distinct, collected by Mr. Granger in Szechwan.

Secondly there is to hand a fish from Anhwei, described and figured by Fowler, 1924, and referred by him to *Aphyocypris chinensis* Günther. An authentic specimen of *Aphyocypris*, courteously sent us more recently by Mr. J. R. Norman of the British Museum, shows this to be a quite different genus apparently related to the Abramidinæ. Fowler's species may be provisionally referred to *Pseudorasbora*, as may also a form resembling it from Shansi.

Thirdly, an undescribed fish from Fukien, is here included in *Pseudorasbora*.

***Pseudorasbora parva* (Temminck and Schlegel)**

Leuciscus parvus TEMMINCK AND SCHLEGEL, 1844, 'Fauna Japonica,' p. 215, Pl. CII, fig. 3. Japan.

Pseudorasbora parva FOWLER, 1924, Bull. Amer. Mus. Nat. Hist., L, p. 382, Chihli.

***Pseudorasbora altipinna*, new species**

DESCRIPTION OF THE TYPE.—No. 8428, American Museum of Natural History from Yen-ching-kao, Szechwan; collected by Walter Granger.

Length to base of caudal, 55 mm. Depth in length, 4; head, 3.8. Eye in head, 4; snout, 3; interorbital, 2.6; maxillary, 4.6; width of head and of body, 1.9; depth of peduncle, 2; its length, 1.1; pectoral, 1.3; ventral, 1.3; longest dorsal ray, 1; caudal lobe, 0.8; longest anal ray, 1.8.

Dorsal, 9; anal, 8. Scales, 38. Teeth (in a cotype), 5, small, hooked, in one row.

Compressed; nape slightly elevated; breast broad and belly rounded. Mouth small, transverse, vertical; lower jaw projecting; maxillary not reaching nearly to front of eye; no barbels; interorbital flattish; eye slightly infralateral; gill-membranes joined to side of isthmus well behind edge of preopercle. Dorsal and anal without spinous rays; dorsal origin equidistant from tip of snout and middle of peduncle; ventral origin under that of dorsal; pectoral not quite reaching ventral, and ventral not quite reaching anal; caudal forked, with equal lobes. Scales with faint, slightly radiating striæ; lateral line complete, in or slightly below the center, rising gently to meet opercle.

Color uniform. Several specimens were taken, of which this is one of the largest.

***Pseudorasbora fowleri*, new species**

Aphyocypris chinensis FOWLER, 1924, Bull. Amer. Mus. Nat. Hist., L, p. 383, Fig. 1. Anhwei. Not of Günther.

***Pseudorasbora depressirostris*, new species**

DESCRIPTION OF THE TYPE.—No. 8429, American Museum of Natural History, from Chin-Ssu, Shansi; collected by C. H. Pope.

Length to base of caudal, 49 mm. Depth in length, 3.8; head, 3.6; eye, 4.2; snout, 3.3; interorbital, 2.5; maxillary, 4; depth of peduncle, 2; its length, 1.4; pectoral, 1.5; ventral, 1.5; longest dorsal ray, 1.3; longest anal ray, 1.6; caudal lobe, 1.2.

Dorsal, 9; anal, 8. Scales, 38. Teeth (in a cotype), 5, small, hooked, in one row.

Body compressed; interorbital broad, very slightly convex; nape elevated, snout depressed. Snout pointed; mouth small, transverse, almost vertical; lower jaw projecting; maxillary reaching about half the distance to eye; no barbels; opercle with a membranous edge; gill-membranes joined to breast behind edge of preopercle; 2 pairs of horny points on the chin, 2 such points in line back of angle of mouth, and one near maxillary higher up. Dorsal and anal without spinous rays; dorsal origin equidistant from tip of snout and base of caudal; very slightly in advance of ventral origin; pectoral short, reaching two-thirds the distance to ventral, ventral not reaching anal; caudal moderately forked. Scales with close-spaced, conspicuous, radiating

striae; lateral line complete, dropping slightly behind opercle, thence straight to caudal base in center of side.

Dark above, pale below; scales of back and sides bordered with dark; fins plain, ventrals somewhat yellowish; an obscure dark band from eye to base of caudal, scarcely indicated in the type, but better marked in some individuals, of which we have several of about the same size.

***Pseudorasbora monstrosa*, new species**

DESCRIPTION OF TYPE.—No. 8430, American Museum of Natural History, from near Yenping, Fukien; collected by H. R. Caldwell.

Length to base of caudal, 62 mm. Depth in length, 4; head, 4. Eye in head, 4; snout, 3.2; interorbital, 2.7; maxillary, 4; depth of peduncle, 2.2; its length, 1.2; pectoral, 1.5; ventral, 1.5; longest dorsal ray, 1.4; longest anal ray, 1.8; caudal lobe, 1.1.

Dorsal, 9; anal, 8. Scales, 33. Teeth, 5, raised, hooked, in one row.

Moderately compressed; head blunt, its top broad and flattish, the nape slightly elevated; breast and belly rounded. Maxillary vertical; mouth small, almost strictly transverse; lower jaw very little projecting; no barbels; tip of snout before nostrils slightly swollen and set off by a groove; 2 large horny warts on side of snout, 2 or 3 smaller ones below eye; also a large two-pronged wart on one side of mandible; gill-membranes adnate to breast behind edge of preopercle. Dorsal without spinous rays, the 2nd (last) simple ray stiffened at base; dorsal origin equidistant from tip of snout and center of peduncle, directly over ventral origin; pectoral not reaching ventral, ventral not reaching anal; caudal forked with equal pointed lobes. Scales with conspicuous radiating striae; lateral line straight to over anal origin, absent on peduncle.

Scales with dusky borders; the fins bordered with blackish.

This may be an abnormal, large individual of a variable species. Smaller ones which we refer to it, with some hesitation, are less elongate, especially the peduncle, have the lateral line complete, and the ventral origin before that of the dorsal. Mr. Pope, who is now in the field, is likely to obtain additional material bearing on this point.

IX.—THREE NEW ABRAMIDIN CARPS

***Rasborinus fukiensis*, new species**

DESCRIPTION OF THE TYPE.—No. 8431, American Museum of Natural History, from near Yenping, Fukien; collected by H. R. Caldwell.

Length to base of caudal, 69 mm. Depth in length, 3.4; head, 4. Eye in head, 3.5; snout, 4; interorbital, 3.4; maxillary, 3.6; depth of peduncle, 2.5; its length, 2; pectoral, 1.2; ventral, 1.5; longest dorsal ray, 1.4; longest anal ray, 1.5; caudal lobe, 1.

Dorsal, 10; anal, 17. Scales, 39. Teeth (in a cotype), 5, 4, 1, slightly hooked.

Compressed, the head rather blunt; breast broadly rounded; a low, sharp, naked keel between ventrals and anal. Mouth oblique; lower jaw broad, slightly projecting, with a raised inner edge; maxillary to under front margin of eye; no barbels; inter-

orbital somewhat convex; gill-membranes narrowly united and free from isthmus at base. Dorsal and anal without spinous rays; dorsal origin equidistant from base of caudal and hind margin of eye, nearer anal origin than ventral axil; pectoral reaching ventral origin; ventral not reaching anal; caudal shallowly forked with equal lobes; upper ray of pectoral thickened, with fine tooth-like papillæ above on the inside. Scales with a few widely radiating striæ; lateral line complete, bent down, rising on peduncle to terminate in its center; anal with a broad sheath of scales.

Color uniform.

This species is closely related to one found in the island of Hainan, but is less deep, lower jaw slightly projecting, versus included, etc. Both species are close to *Rasborinus takakii* Oshima, 1920, from Formosa, with scales, 36, interorbital broader, 2.5, etc.

Hemiculterella engraulis, new species

DESCRIPTION OF THE TYPE.—No. 8432, American Museum of Natural History, from Huping, Tungting Lake, Hunan; collected by C. H. Pope.

Length to base of caudal, 148 mm. Depth in length, 5; head, 3.7. Eye in head, 4.4; snout, 3.4; interorbital, 3.6; maxillary, 2.5; depth of peduncle, 3.5; its length, 2.5; width of body (the back of head), 2; pectoral, 1.4; ventral, 2.1; longest dorsal ray, 2.3; longest anal ray, 2.8; lower caudal lobe, 1.2.

Dorsal, 9; anal, 22. Scales, about 50. Teeth, 4, 4, 2, hooked, pharyngeal bone heavy.

Broad, moderately compressed only; snout blunt, profile low; a low naked keel between ventrals and anal, traces of which (crossed by scales) continue forward to the pectoral axil. Interorbital convex; snout blunt; jaws equal; the pointed tip of mandible fitting into a notch in the middle of snout; front of jaws with an appreciable, S-shaped curve; upper jaw protractile; mouth strongly oblique; maxillary to under front of eye; no barbels; angle of preopercle bluntly projecting; gill-membranes confluent with one another and center of isthmus behind edge of preopercle. Dorsal and anal without spinous rays; dorsal origin equidistant from base of caudal and posterior margin of eye; well behind ventral base; anal origin slightly behind dorsal axil; pectoral not reaching ventral, ventral not nearly to anal; caudal well forked, the lower lobe decidedly the longer. Scales deciduous; with radiating striæ; lateral line complete, slanting down to over tip of pectoral, thence turning back horizontally, rising in a steep slant over anal axil to run in the center of peduncle.

Dark on the back; pale below; fins plain.

This well-marked species, of which but a single example is to hand, is provisionally referred to *Hemiculterella* Warpachowski, 1888.

Hemiculter clupeoides, new species

DESCRIPTION OF THE TYPE.—No. 8433, American Museum of Natural History, from Tungting Lake, Hunan, December 24, 1921; collected by C. H. Pope.

Length to base of caudal, 127 mm. Depth in length, 4.3; head, 4.6. Eye in head, 3.7; snout, 3.9; interorbital, 3.2; maxillary, 3.9; depth of peduncle, 2; pectoral, 1; ventral, 1.6; height of dorsal, 1.4; height of anal, 2.5; caudal lobe, 0.7.

Dorsal, II, 7; anal, 14. Scales, about 55, the last well on caudal base. Teeth, 4; 4, 2, slightly hooked.

Body moderately compressed; jaws equal; maxillary concealed under pre-orbital, not quite reaching to below front of eye; gill-membranes joined, forming a narrow fold across isthmus. Last dorsal spine slender; ventral origin slightly in advance of that of dorsal; pectoral not reaching ventral, ventral falling far short of anal. A sharp, naked keel from ventrals to anal; scales deciduous; lateral line complete, running low, rising abruptly to center of peduncle over anal axil. Scales on breast pointed, with an appreciable slight keel running forward from ventrals two-thirds the distance to isthmus.

This species differs from others of the genus *Hemiculter* in being less compressed, with more deciduous scales, the anterior flexure in the lateral line less marked. *Hemiculter kneri* Kreyenberg and Pappenheim, 1908, is probably referable to it at least in part, but this is preoccupied by *Hemiculter kneri* Warpachowski, 1888.

REFERENCES

- BASILEWSKI, 1855, Mem. Soc. Nat. Mosc., X, p. 232.
BERG, 1916, 'Poiss. Eaux Douces Russ.', Figs. 189-192.
BLEEKER, 1859, Nat. Tijds. Ned.-Ind., XX, p. 435; 1865, Ned. Tijds. Dierk., II, p. 25; 1871, 'Cyp. Chine,' Verh. Akad. Wet. Amst., Nat., XII, pp. 52-59.
CUVIER AND VALENCIENNES, 1844, 'Hist. Nat. Poiss.,' XVII, p. 360.
GARMAN, 1912, Mem. Mus. Comp. Zoöl., XL, p. 117.
GÜNTHER, 1868, 'Cat. Fishes,' VII, p. 205.
KREYENBERG AND PAPPENHEIM, 1908, Sitzb. Ges. Nat. Berl., p. 105.
OSHIMA, 1920, Proc. Acad. Phila., LXXII, p. 130, Pl. III, fig. 3.
PETERS, 1880, Monats. Akad. Wiss. Berl., p. 924.
POPTA, 1908, Zool. Anz., XXXII, p. 243.
SAUVAGE AND DABRY DE THIERSANT, 1874, Ann. Sci. Nat., (6) I, Art. 5, p. 13.
WARPACHOWSKI, 1888, Bull. Acad. Sci. St. P., XXXII, pp. 17 and 23.