

ON TWO SPECIES OF FISHES FROM THE YALU RIVER, CHINA.

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The United States National Museum has received, through the kindness of Mr. Arthur de C. Sowerby, a very desirable and representative series of fresh-water fishes from Manchuria collected by himself. The following descriptions of two species from the Yalu River are deemed of sufficient interest to ichthyologists to warrant their publication.

HEMIBARBUS LONGIROSTRIS (Regan).

Acanthogobio longirostris REGAN, Proc. Zool. Soc. London, 1908, p. 60, pl. 3, fig. 3.

Hemibarbus labeo BERG, Faun. Russ. Poiss., vol. 3, 1914, p. 631 (in synonymy).

Two specimens 105 and 155 mm. long are evidently this species. Berg places it in the synonymy of *Hemibarbus labeo* Bleeker with a query. However, it seems to be a valid species. Compared with specimens of the same size of *H. labeo* and *H. maculatus*, the following differences are found. The scales are larger, the formula being 41-44, $\frac{5\frac{1}{2}}{3}$, while in the older species it is 47-52, $\frac{6\frac{1}{2}-8}{4-5}$. The sub-orbital ring and preopercle are much wider, and contain large muciferous cavities. The exposed muscular part of the cheek at the angle of the preopercle is one-half or less the vertical diameter of the pupil, while in the other species it is equal to the vertical diameter of the pupil or more than that. In coloration the present species is nearest to *H. maculatus*. The dorsal and caudal fins are spotted with black, but there is no regular row of large black spots on the sides. The sides are dotted irregularly with small black spots which, in the smaller specimen, are connected with more or less indistinct lines forming reticulations.

Regan records the pharyngeal teeth as being in two rows, and on that account placed the species in *Acanthogobio*. However, the pharyngeal bone from one side of the large specimen was dissected out and the teeth were found to be 5. 3. 1. The small tooth of the

inner row of the type was probably broken off in dissecting, or else the pharyngeal teeth in this species are subject to variation. Since the other species of *Hemibarbus* uniformly have three rows of pharyngeal teeth the first assumption is probably correct.

RHINOGOBIUS SOWERBYI, new species (Gobiidae).

D. VI, 9; A 9; Sc. 35-36/9-10.

Body elongate, cylindrical anteriorly, compressed posteriorly. Head depressed, longer than wide and wider than deep. Snout blunt, rounded, gibbous. Mouth somewhat oblique, medium; maxillary reaches to a vertical through anterior third of eye. Lips thick, cheeks tumid. Interorbital space concave, about as wide as horizontal diameter of eye. Teeth in three rows in each jaw, erect; outer row somewhat enlarged, compressed, usually truncate, slightly bent backward. Outer row extends to somewhat less than an eye diameter before the angle of mouth, inner rows end considerably before. Tongue entire, rounded. Anterior nostril with a very short tube placed in a slight depression; it is almost but not quite on a level with the lower margin of the eye, and is nearer the posterior margin of the upper lip than the anterior margin of the eye. Posterior nostril without raised border placed in front of eye and on a horizontal through its middle. Cheeks, opercles, top of head, and nape, scaleless and without raised muciferous papillae, the naked area extending to a vertical through insertion of pectoral; 6-8 embedded cycloid scales on dorsum before spinous dorsal. At the sides of the dorsum directly over opercle two rows of embedded scales extend further forward, to the cheeks. Belly entirely naked to origin of anal. Scales on body well developed, imbricated; all are ctenoid and of nearly the same size, except those on the dorsal aspect anterior to the origin of the spinous dorsal. 35-36 scales from upper, posterior angle of the opercle to base of caudal. 9-10 rows from origin of anal to second dorsal, counting upwards and backwards. Gill openings restricted; isthmus wide, the insertion of the gill membrane on the isthmus on a vertical through about the middle of opercle. Outer edge of shoulder girdle with neither a fleshy ridge nor papillae. Pectoral fins with a scaleless, somewhat muscular base; the fins rounded, reaching vent; the upper rays connected by membrane, not silklike. Ventrals completely united, infundibuliform, the interspinal membrane well developed, emarginate; the disk is broader than long and reaches midway between its origin and vent. Dorsal fins separated by a space about equal to diameter of eye. The fourth spine the longest, about two in head, the second, third, and fifth spines nearly as long as fourth, first spine considerably shorter, last spine shortest. The posterior rays of second dorsal and anal longest; they reach the base of the rudimentary caudal rays in the paratype, but

do not quite reach so far in the type. Origin of anal fin slightly posterior to that of second dorsal, both fins ending on same vertical. Caudal rounded, not prolonged. Anal papilla oblong, triangular, slightly bifid in type, truncate in paratype, its length about equal to half diameter of eye.

Head brownish, nape marbled with darker. One or two very indistinct longitudinal lines on upper part of opercles, two or three such lines on nape directly over opercle, more distinct. The exposed part of every scale with a large brown spot anteriorly, the margin yellowish. Fins dusky, the spinous dorsal darkest. Dorsals, anal and caudal margined with light yellowish; a rather indistinct yellow band at base of pectoral. Five very indistinct crossbars on body behind pectorals. An oblong spot more or less distinct at base of caudal. The entire body and fins are stippled with very minute dark spots.

Two specimens from the Yalu River collected by Arthur de C. Sowerby.

Holotype.—68 mm. long. Cat. No. 76734, U.S.N.M.

Paratype.—65 mm. long. Cat. No. 76734-A, U.S.N.M.

This species is very near *Rhinogobius nagoyae*, Jordan and Seale,¹ from Nagoyae, Japan. It differs from that species in that the fourth dorsal spine is the longest instead of the second. The longest spine in the present species is about one-half the head instead of nearly equal to it. The soft dorsal and caudal lack the regular rows of spots present in the older species.

Measurements.	Holotype.		Paratype.	
	Mm.	Per cent.	Mm.	Per cent.
Total length.....	68	65
Length without caudal.....	55	52
Length of head.....	17.5	31.8	15.75	30.3
Width of head (directly behind eyes).....	12	68.6	10	63.5
Depth of head (directly behind eyes).....	7.5	42.8	7.25	46.1
Length of snout.....	6	33.0	5.5	34.9
Horizontal diameter of eye.....	3	17.1	3	19.0
Greatest height.....	11.5	20.9	9.5	18.3
Least height.....	7	12.7	6	11.5
Length of caudal peduncle (end of anal to base of caudal on mid line).....	13	23.6	11.5	22.2
Tip of snout to spinous dorsal.....	22	36.4	20	38.5
End of second dorsal to rudimentary rays of caudal.....	9.5	17.3	10	19.3
Tip of snout to vent.....	32.5	59.0	29.5	56.7
Vent to rudimentary rays of caudal.....	18	32.7	18	34.6
Base of spinous dorsal.....	10	18.2	9.75	18.8
Base of second dorsal.....	10	18.2	9.5	18.3
Base of anal.....	7.5	13.6	7.5	14.4
Length of caudal.....	13	23.6	13	25
Length of ventral.....	7.75	14.1	7.75	14.9
Length of pectorals.....	13.5	24.6	13	25

¹ Proc. U. S. Nat. Mus., vol. 30, 1906, p. 147.