

ZOOLOGICAL RESULTS OF THE INDIAN CHO-OYU
EXPEDITION (1958) IN NEPAL

PART 7.—PISCES (CONCLUDED). *Psilorhynchus pseudecheneis*, A NEW
CYPRINID FISH FROM NEPAL.

By

A. G. K. MENON and A. K. DATTA

Zoological Survey of India, Calcutta

(With 2 Plates)

Order CYPRINIFORMES

Family CYPRINIDAE

Subfamily *PSILORHYNCHINAE*

Genus *Psilorhynchus* McClelland

Psilorhynchus pseudecheneis sp. nov.

Material.—2 exs., Panchkhal, ca. 1,800 m., 27. iii. 58 ; 1 ex., Dolaghat, ca. 710 m., 28. iii. 58 ; 2 exs., Raisingo, ca. 2,200 m., 30. iii. 58 ; 2 exs., Phoktey, ca. 2,000 m., 31. iii. 58 ; 5 exs., Sikri, ca. 2,100 m., 2. iv. 58 ; 15 exs., Ghat, ca. 2,950 m., 10. iv. 58 ; 1 ex., Tanga, ca. 2,600 m., 30. v. 58 ; 1 ex., Chinga, ca. 2,438 m., 2. vi. 58 ; 3 exs., Mekchanj, ca. 2,590 m., 4. vi. 58 ; 2 exs., Keranti-chap, ca. 1,829 m., 6. vi. 58 ; all in the Dudh Kosi drainage, Solokumbhu District.

Diagnosis.—A *Psilorhynchus* attaining a standard length of 96.0 mm., with a greatly depressed and flattened body, small dorso-lateral eyes naked ventral surface with three pairs of transverse folds of skin on the belly, ten undivided rays in the pectoral fin, and 48 to 50 scales along the lateral line. Colour pale olivaceous green above, paler below with broad lateral band along the lateral line.

Description (Pl. 16).—Depth of body 7.45 (6.39—10.22) in standard length, length of head 5.97 (5.44—6.39). Width of head 1.08 (1.00—1.16) in length of head, height of head 1.75 (1.41—2.20). Pupil of the eye behind the middle of the length of head. Inter-orbital space somewhat flat. Snout spatulate, obtusely pointed with trenchant margins, the sides of the snout and face studded with fine tubercles in bigger specimens, 2.48 (1.91—2.94) in length of head, diameter of eye 5.49 (4.60—6.10), inter-orbital width 1.62 (1.15—2.20). Nares placed at the upper corner of snout and separated by a membranous flap. 48 to 50 scales in the lateral line ; $5\frac{1}{2}$ from the origin of the dorsal to lateral line ; $3\frac{1}{2}$ between

this and pelvic. The mid-dorsal streak in front of Dorsal with four to eight or nine scales ; the chest, belly and the posterior pelvic region upto vent naked. Dorsal 11, 7 ; distance between its anterior origin and tip of snout 2.18 (2.03—2.45) in standard length ; situated slightly behind the origin of pelvic ; its height much lower than the depth of body below it and its free margin straight and oblique. Pectorals x, 9 ; pedunculate, broad, expanded and fan-shaped with rounded free margin ; shoulder and the undivided rays studded with fine tubercles similar to tubercles of head, horizontally placed, longer than head, the length being about 1.54 (1.39—1.57) times the head. Pelvics shorter, inserted on the ventral surface of body with oblique base which converge when folded back, and truncate free margin extending considerably behind the anal opening, the anal opening being situated somewhat in the middle between the origin of pelvics and their tip. Anal 11, 5, short, with oblique outer margin. Distance from vent to anal fin 1.44 (1.20—1.62) in that between anterior origins of pelvic and anal fins. Caudal fin lunate with unequal lobes, the lower being slightly longer, length of caudal peduncle 1.17 (1.00—1.47) in length of head, width 2.24 (1.83—2.72) in its own length.

Posterior chamber of air-bladder much reduced ; the inner surface of peritonium solid black ; stomach thick-walled lined with numerous fleshy, posteriorly directed papillae arranged in spiral rows. The basipterygium and the structures of the pharyngeal bone and teeth correspond entirely to those of *P. homaloptera* described by Hora and Mukherji¹.

Colour, in alcohol, pale olivaceous green above, paler below with a fairly broad lateral band along the lateral line from operculum to the root of the caudal fin and a similar band dorsally from the occiput to tail ; fins dusky.

Type-specimens.—Deposited in the Zoological Survey of India, Calcutta. *Holotype* : Reg. No. F1928/2, 96.0 mm. in standard length, from a stream 5 km. north of village Ghat in the Dudh Kosi drainage, about 2,950 metres, Solokumbhu District, Eastern Nepal. *A. K. Datta* Coll., 10. iv. 1958. *Paratypes* : Reg. No. F1929/2, 14 specimens, 35.0-92.5 mm. in standard length ; taken along with holotype and with the same data.

Relationships.—*Psilorhynchus pseudecheneis* is evidently closely related to *P. homaloptera* Hora and Mukherji, a species of the Brahmaputra drainage in Assam which resembles the Eastern Nepal form in general facies and build, in the naked ventral surface, the greatly reduced nature of the air-bladder, in the structures of the pharyngeal bone, teeth, and the basipterygium and the inner surface of the peritonium being black. *P. pseudecheneis* is, however, well differentiated from *P. homaloptera* in the larger number (10) of undivided rays in the pectoral fins, the increased number (48-50) of scales along the lateral line and in the presence of three pairs of transverse folds of skin on the belly.

Hora and Mukherji (*op. cit.*) indicated the gradual modifications undergone by the species of *Psilorhynchus*. The larger number of undivided rays in the pectoral fins and the transverse folds of skin along the ventral surface of *P. pseudecheneis* are further specialisations for adhering to rocks in rapid waters. The solid black peritoneal lining

¹ Hora & Mukherjee, *Rec. Indian Mus.*, Calcutta, 37, pp. 391-397 (1935).

of the fish indicates that the fish lives on surfaces of rocks almost in direct sunlight.

Key to the species of Psilorhynchus McClelland

- 1a. Body spindle-shaped ; eyes large, lateral in position complete lepidosis on ventral surface behind base of pectoral ; unbranched rays in the pectoral fin 4 *sucatio*
- 1b. Body not spindle-shaped ; eyes smaller, dorso-lateral in position ; irregular lepidosis or naked ventral surface behind base of pectoral ; unbranched rays in pectoral fin more than 4
- 2a. Body moderately elevated and *Garra*-like in appearance ; irregular lepidosis on ventral surface ; unbranched rays in pectoral fin 6 ; scales along lateral line less than 40 *balitora*
- 2b. Body depressed and flattened ; naked ventral surface unbranched rays in pectoral fin more than 6 ; scales along lateral line more than 40
- 3a. Unbranched rays in pectoral fin 8 ; scales along lateral line 42-44 *homaloptera*
- 3b. Unbranched rays in pectoral fin 10 ; scales along lateral line 48-50 *pseudecheneis*
sp. nov