

A NEW NEMACHEILINE FISH OF THE GENUS *SCHISTURA* McCLELLAND  
(CYPRINIFORMES: BALITORIDAE) FROM MANIPUR, INDIA<sup>1</sup>

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A new freshwater nemacheiline fish *Schistura macrocephalus* is described here based on 15 specimens collected from the Khuga river (Chindwin drainage) of Manipur, India. The species has a wide head and body with inflated cheeks and is distinct in having an adipose crest extending between dorsal and caudal fins, 8 branched dorsal fin rays, 15-16 dark transverse bars on body, incomplete lateral line.

**Key words:** Nemacheiline fish, *Schistura macrocephalus* sp. nov., Manipur

### INTRODUCTION

Manipur state, in the northeastern corner of India, has numerous hill streams, the central plain and eastern part drained by the Chindwin drainage, and the western part by the Brahmaputra drainage. The state, thus, has a rich loach fauna. Chaudhuri (1912) described *Schistura manipurensis* from Ukhrul district. Hora (1921) described *S. kanjupkhulensis*, *S. prashadi*, *S. sikmaiensis* from the state. Hora (1937) while writing on a small collection of fish from the upper Chindwin drainage reported the occurrence of *S. vinciguerrae* in the Namyia river at Kongan Thana, Kabo or Shan village, Myanmar. However, the place is now within the boundary of Manipur, India. Menon (1987) also reported the occurrence of *S. peguensis* in the State.

Khuga river originates in the hills of Churachandpur district of Manipur and flows northwards to join the Loktak Lake. A collection of fishes from the river included 15 specimens of *Schistura*, which do not fit into the hitherto described species of the genus. The fish is described here. Counts and measurements follow Kottelat (1990). Type specimens are deposited in the Manipur University Museum of Fishes (MUMF), Imphal, Manipur.

#### *Schistura macrocephalus* sp. nov.

(Figs 1-2)

**Material examined: Holotype:** MUMF 5013, 67.0 mm SL, Khuga R. in Churachandpur District, Manipur, 8.iv.2000. Coll. K. Shanta Devi.

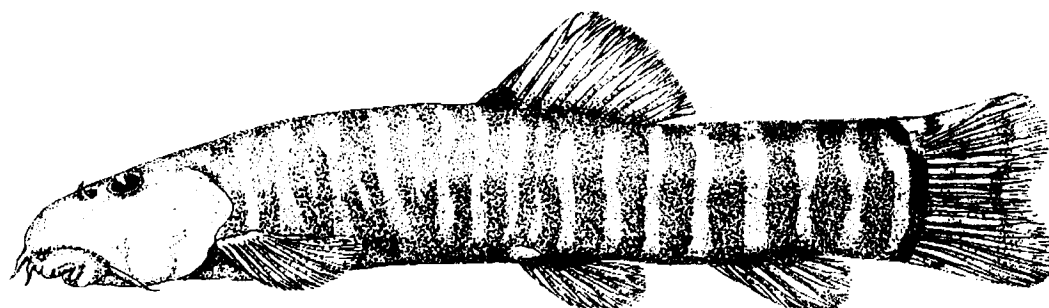
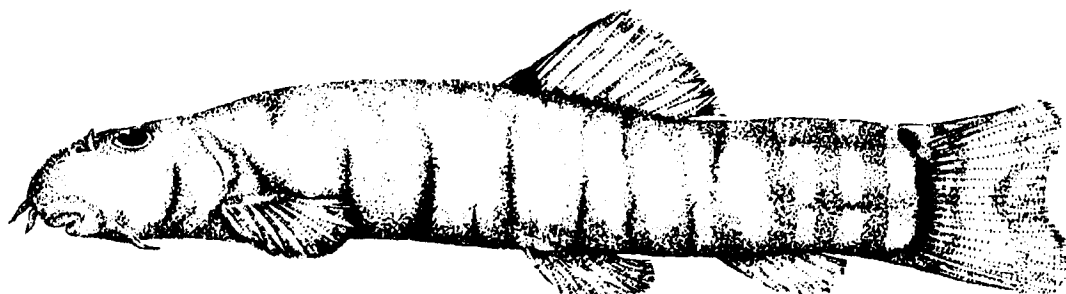
**Paratypes:** MUMF 5001-5008, 8 exs, 60.0-88.3 mm SL, Khuga R. in Churachandpur district, Manipur, 20.iii.2000. Coll. K. Shanta Devi. MUMF 5009-5014, 6 exs, 62-69 mm SL, collection data same as holotype.

**Diagnosis:** A species with the following combination of characters: presence of adipose crest between dorsal and caudal fins, inflated cheeks and swollen anterior body part in males, upper lip without median incision, lower lip interrupted in the middle, presence of processus dentiformes, a median notch in lower jaw, branched dorsal fin rays 8, axillary pelvic lobe, incomplete lateral line.

**Description:** D. iii, 8; A. iii, 5; C. 9+8; P. i, 8; V. i, 6. Body elongate. Body slightly compressed posteriorly. Head depressed, snout broadly rounded and blunt. Anterior nostrils pierced in the front side of a flaplike tube, lower lip interrupted in the middle, processus dentiformes present. A median notch in lower jaw. Cheeks greatly inflated in males. Axillary pelvic lobe present. Pelvic fin origin under last simple or first branched dorsal rays. Distal margins of dorsal fin convex. Caudal fin emarginate. Dorsal adipose crest extends from posterior extremity of dorsal fin base to caudal origin. Lateral line incomplete, reaching at least to anal fin base. In males, it lies in thick skin, making it difficult to locate. Females have a distinct lateral line.

**Sexual dimorphism:** Male specimens have swollen anterior body, triangular head with greatly inflated cheeks. Lateral line indistinct due to thick skin.

**Colour:** Body with 15-16 dark bars on a dull brown background. Bars faintly marked regularly. Bars in front of dorsal fin conspicuously thinner than those behind, usually united in pairs at their upper extremity and less well marked, the bars are wider than interspaces and are well marked behind dorsal fin. Black bar at the base of caudal fin. Head brown, lighter on ventral surface. Black spot at base of simple rays to second branched dorsal rays, and second dark blotch at base of branched rays 2-8.

Fig. 1: *Schistura macrocephalus* sp. nov. (female)Fig. 2: *Schistura macrocephalus* sp. nov. (male)Table 1: Comparison of Morphometric Characters of *Schistura macrocephalus* sp. nov. with *Schistura alticrista* (as % of SL, except TL and SL)

	<i>Schistura macrocephalus</i> sp. nov.			<i>Schistura alticrista</i>		
	mean	range	S.D.	mean	range	S.D.
Standard length		55.0-88.3			46.8-70.9	
Total length	119.0	117.6-123.9	1.62	119.2	117.8-120.7	1.33
Dorsal head length	20.2	16.9-25.4	2.15	22.2	22.0-22.7	0.33
Lateral head length	24.0	20.3-27.4	2.20	25.2	25.0-25.4	0.99
Predorsal length	52.2	50.0-55.8	1.48	51.8	50.9-52.4	0.61
Prepelvic length	55.6	53.3-58.5	1.63	52.6	51.3-54.5	1.38
Pre-anus length	73.3	69.3-58.5	1.66	71.8	70.5-72.6	0.91
Preanal length	79.3	76.9-82.3	1.65	76.2	74.7-77.1	1.07
Head depth (at eye)	12.4	10.2-13.4	1.11	11.0	9.8-11.8	0.85
Head depth (at nape)	13.5	11.2-14.7	1.09	12.6	12.3-13.1	0.36
Body depth	17.9	15.8-20.9	1.77	18.3	17.6-18.8	0.48
Depth of caudal peduncle	15.0	13.3-16.1	0.85	16.2	15.0-17.7	1.12
Length of caudal peduncle	13.1	10.9-14.6	1.11	14.4	13.9-15.0	0.45
Snout length	10.4	8.6-11.7	1.01	10.9	10.3-11.4	0.48
Head width (at nares)	13.6	10.4-17.7	2.17	10.8	9.2-11.6	1.13
Maximum head width	18.5	15.0-21.6	1.92	16.2	14.5-17.3	1.22
Body width (at dorsal origin)	17.5	15.5-20.2	1.75	11.6	11.3-12.1	0.39
Body width (at anal origin)	13.1	10.1-18.4	2.04	6.8	6.2-7.5	0.51
Eye diameter	3.9	3.1-4.8	0.50	4.5	4.2-4.7	0.18
Interorbital width	6.9	5.6-8.3	0.88	5.2	4.3-5.7	0.64
Height of dorsal fin	17.4	13.2-19.3	2.31	15.2	13.4-18.2	2.11
Length of upper caudal lobe	19.5	17.6-22.5	1.38	20.4	19.0-21.1	0.95
Length of lower caudal lobe	19.5	17.6-22.5	1.38	21.8	19.9-22.9	1.33
Length of median caudal rays	15.2	12.9-18.3	1.37	15.2	14.8-16.0	0.55
Depth of anal fin	13.8	11.0-16.6	1.38	17.6	16.8-18.4	0.65
Length of pelvic fin	15.1	13.4-16.9	1.07	17.2	16.8-17.7	0.41
Length of pectoral fin	16.2	13.4-18.3	1.30	20.0	19.2-20.5	0.61

## NEW DESCRIPTIONS

**Distribution:** INDIA: Khuga river (Chindwin basin), Manipur.

**Etymology:** The species name is based on its large and broad head.

greater number of dark transverse bars on body (15-16 vs. 8-9); wider body [body width at dorsal origin 17.5 (15.5-20.2)% vs. 11.6 (11.3-12.1)% of SL; body width at anal origin 13.1(10.1-18.4%) vs. 6.8(6.2-7.5)% of SL].

## DISCUSSION

The species is similar to *Schistura alticrista* Kottelat (1990) from Nam Mae Yunnan basin, a tributary of Salween river in Thailand, in having adipose crest between dorsal and caudal fins. The new species, however, can be easily distinguished from *S. alticrista* in having fewer branched dorsal fin rays (8 vs. 9½);

## ACKNOWLEDGEMENT

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## REFERENCES

- CHAUDHURI, B.L. (1912): Description of some new species of freshwater fishes from North India. *Rec. Indian Mus.* 7: 437-444, pls. 38-41.
- HORA, S.L. (1921): Fish and fisheries of Manipur with some observations on those of Naga Hills. *Rec. Indian Mus.* 22: 166-214, pls. 38-41.
- HORA, S.L. (1937): Notes on the fishes of Indian Museum, 332. On a small collection of fish from the Upper Chindwin drainage. *Rec. Indian Mus.*: 39: 331-350.
- KOTTELAT, M. (1990): Indochinese nemacheilines, a revision of nemacheiline loaches (Pisces: Cypriniformes) of Thailand, Burma, Laos, Cambodia and southern Vietnam. Verlag Dr. Friedrich Pfeil, Munchen, Germany, 262 pp.
- MENON, A.G.K. (1987): The Fauna of India and adjacent countries, Pisces, IV. Teleostei Cobitoidea, Part 1, Homalopteridae. Zoological Survey of India, Calcutta, 259 pp, 16 pls.

