

## A New Cyprinid Fish, *Garra manipurensis*, from Manipur, India

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**Abstract** A new cyprinid fish *Garra manipurensis* is described from the Manipur River of Manipur State, India. The species differs from *G. annandalei* Hora of Darjeeling Himalayas in the interorbital distance, number of rows of scales and position of vent. The fish is also different from *G. lissorhynchus* (McClelland) of the Brahmaputra Drainage and the Assam Himalayas in the coloration of dorsal and caudal fins and scales on the belly.

Hora (1921) described two new species of *Garra* Hamilton, viz., *G. abhoyai* and *G. naganensis* from Manipur State, India. Menon (1945), while reporting on the fishes known from the State, listed six *Garra* species including *G. abhoyai* Hora, *G. gotyla* (Gray), *G. lissorhynchus* (McClelland) and *G. rupeculus* (McClelland). Later, Menon (1964) considered *G. abhoyai* as a synonym of *G. rupeculus*. Thus, only five species of the genus were hitherto known from Manipur.

While collecting endemic fishes from the confluence of the Chakpi and Manipur Rivers for

studies of the biology of fishes, the authors came across three specimens of *Garra* which do not come under any of the so far known species of the genus. The description of the fish is given in this paper.

### *Garra manipurensis* sp. nov.

(Manipuri name: Nagamu sangum/Nung-nga)

(Fig. 1)

**Holotype.** MU/LSD/F-130, male, 63.2 mm SL, Manipur River, Sherou (24°18'N, 93°54'E), Manipur,

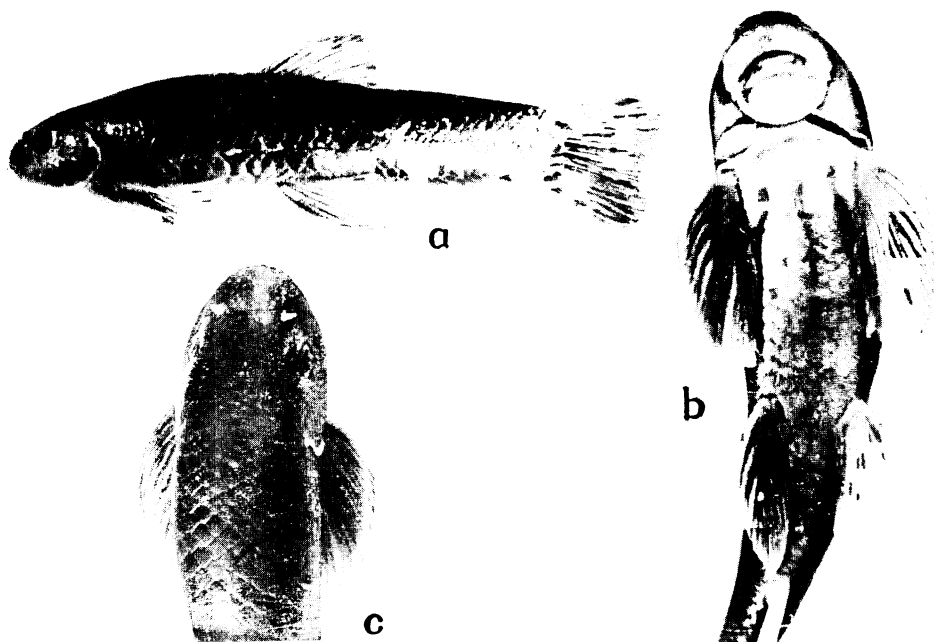


Fig. 1. Holotype (MU/LSD/F-130) of *Garra manipurensis* sp. nov., male, 63.2 mm SL. a, side view; b, ventral view; c, dorsal view of head showing the plain snout.

India.

**Paratypes.** MU/LSD/F-131, female, 65.0 mm SL (submitted to the Museum of the Zoological Survey of India, Madras), MU/LSD/F-131A, female, 64.8 mm SL, same locality and date.

**Diagnosis.** A *Garra* with no transverse groove and proboscis on snout, no scales on chest, no dark bands on the dorsal and caudal fins and distance between vent and anal fin origins one fourth of the distance between ventral and anal fin origins.

**Description.** D. II, 7; P. I, 12; V. I, 8; A. II, 4; C. 10+9; L.1. 34; L. tr. 4.5/3.5. Body rounded, flat from mouth to region between ventral fins, deepest just in front of dorsal fin origin. Snout semicircular, without transverse groove and proboscis. Large number of tubercles present on snout and cheeks, also extends to the scales of anterior region. Interorbital region slightly convex. Barbels two pairs, one rostral and one maxillary, both shorter than the diameter of eyes. Oral disc well developed, posterior border broad.

Table 1. Comparison of morphological characters of *Garra manipurensis* sp. nov., *G. annandalei* and *G. lissorhynchus*.

	<i>G. manipurensis</i> sp. nov.	<i>G. annandalei</i> (after Menon, 1964)	<i>G. lissorhynchus</i> (after Menon, 1964)
Standard length (mm)	63.2-65.0	23.5-146.0	31.5-73.5
In SL			
Depth of body	4.71-5.00	4.60 (4.26-5.38)	5.07 (4.45-6.60)
Length of head	4.06-4.90	4.30 (4.16-4.11)	4.18 (3.50-4.50)
Predorsal length	1.97-2.06	2.16 (2.08-2.22)	1.95 (1.85-2.04)
In HL			
Width of head	1.19-1.21	1.27 (1.15-1.39)	1.21 (1.13-1.38)
Height of head	1.41-1.61	1.49 (1.15-1.75)	1.74 (1.58-1.93)
Length of snout	1.68-2.17	1.91 (1.75-2.05)	1.94 (1.71-2.08)
Diameter of eyes	3.46-4.72	4.71 (4.20-5.28)	4.95 (3.71-6.60)
Interorbital distance	1.67-1.83	2.24 (2.10-2.38)	1.95 (1.80-2.40)
Length of pectoral	1.01-1.00	1.07 (1.00-1.14)	1.02 (0.86-1.18)
Length of disc	2.68-2.98	3.61 (3.25-3.89)	2.71 (2.36-3.57)
Length of caudal peduncle	1.05-1.45	1.07 (1.00-1.14)	1.35 (1.20-1.73)
Width of disc in width of head	1.61-1.68	1.82 (1.56-2.07)	1.60 (1.25-1.92)
Length of disc in width of disc	1.44-1.56	1.55 (1.40-1.67)	1.50 (1.20-1.80)
Width of caudal peduncle in length of caudal peduncle	1.18-1.50	1.57 (1.47-1.65)	1.36 (1.18-1.57)
Distance between ventral and anal fin origins in distance between ventral and caudal fin origins	1.74-1.79	1.95 (1.89-2.11)	1.94 (1.72-2.08)
Distance between vent and anal fin origin in distance between ventral and anal fin origins	3.79-4.17	2.89 (2.62-3.21)	3.52 (2.54-4.57)
Counts			
D.	II, 7	III, 7-8	II, 6-7
A.	II, 4	II, 5	I, 5
L.l.	34	33-34	32-35
L.tr.	4.5/3.5	3.5/3.0-3.5	3.5-4.5/2.5-3.5
Gill raker	10	9-12	7-9
Predorsal scale	10-11	9-10	11-14
Colour of fins	Dorsal and caudal fins plain without dark bands	Dorsal and caudal fins plain without dark bands	Dorsal fin with transverse black bar and caudal with W-shaped dark band
Scales on chest and belly	Chest naked, belly scaled	Chest and belly scaled	Chest and belly without scales

Scales absent on chest. Fins fleshy. Narrow longitudinal fleshy thickenings on the outer half of the first five rays of pectoral and six rays of ventral fins. Caudal fin slightly emarginate.

Proportional measurements of holotype and paratypes (MU/LSD/F-131, 131A) in percentage: depth of body 20.3 (20.0, 21.2), length of head 24.6 (20.6, 20.4), predorsal length 50.8 (48.5, 49.2) of standard length. Width of head 84.0 (84.0, 82.6), height of head 62.0 (70.9, 63.0), length of snout 46.7 (59.5, 46.1); diameter of eyes 21.3 (22.4, 21.2), interorbital distance 54.7 (59.7, 54.7), length of pectoral 98.6 (100.0, 99.2), length of ventral fin 90.7 (90.2, 90.6), length of anal fin 60.0 (59.6, 60.2), height of dorsal fin 80.0 (80.0, 80.0), length of disc 34.7 (37.3, 33.6), length of caudal peduncle 70.7 (75.5, 68.8) of the length of head. Width of disc 59.5 (61.9, 59.5) of width of head. Length of disc 63.3 (54.1, 65.2) of width of disc. Width of caudal peduncle 64.9 (66.9, 66.6) of length of caudal peduncle. Distance between ventral and anal origins 55.6 (57.4, 56.6) of distance between ventral and caudal origins. Distance of vent to anal origins 24.0 (26.4, 25.0) of the distance between ventral and anal origins.

Colour in formalin: dark grey dorsally, yellowish white ventrally. Fins pale white.

**Remarks.** *Garra manipurensis* is similar to *G. annandalei* Hora and *G. lissorhynchus* (McClelland) in having a snout without transverse groove and proboscis and in certain body proportions like depth of body and length of head in standard length. But the species under description can be distinguished from *G. annandalei* in its broader interorbital region, one more row of scales (4.5 versus 3.5) between dorsal fin origin and lateral line and backward position of vent and absence of scales on chest. The species is also different from *G. lissorhynchus* in having plain dorsal and caudal fins and presence of scales on the belly (Table 1).

*Garra annandalei*, belonging to the *lamta*-complex is basically a Himalayan form. It is distributed in the Darjeeling Himalayas and the Kosi belt only. *G. lissorhynchus*, on the other hand, belongs to the *lissorhynchus*-complex of the

Brahmaputra System and the Assam Himalayas. These complexes have an affinity towards each other and it is believed that both may have evolved from a common stock (Menon, 1964). The present species is distinct from both the species in its geographical distribution. It might have evolved from the same stock to the present form in an isolated habitat. The species seems to be closely related to the *lissorhynchus*-complex morphologically.

**Etymology.** The fish has been named after the Manipur River in which it is known to occur.

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#### インド産コイ科の1新種 *Garra manipurensis*

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インドのマニプル川から得られたコイ科の1新種 *Garra manipurensis* を記載した。本種はダーズリン・ヒマラヤ産の同属の *G. annandalei* Hora とは両眼間隔が広いこと、側線上方鱗数が多いこと、肛門の位置が後であることなどの点で異なる。また、ブラマプトラ川流域やアッサム・ヒマラヤに産する *G. lissorhynchus* (McClelland) とは背鱗および尾鱗に斑紋を欠くこと、腹部に鱗があることなどの点で異なる。