

# A NEW CYPRINID FISH SPECIES OF *BARILIUS* HAMILTON FROM THE CHATRICKONG RIVER, MANIPUR, INDIA<sup>1</sup>

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(With one text-figure)

**Key words:** New species, *Barilius chatricensis* sp. nov., Manipur

A new species of *Barilius* is described based on ten specimens from Chatrickong river, flowing through Chatrick village of the Ukhrul district, Manipur, India. The species is characterised by 15 rows of scales in front of the dorsal fin, 7-8 distinct dark blue bands on the side of the body, absence of a dark spot at the base of the caudal fin, and absence of barbels on the snout. The maxilla does not reach the base of the pectoral fin. The dorsal fins do not commence midway between the eye and base of caudal fin, and the last short dorsal fin-ray does not reach the caudal peduncle. Lateral line is complete with 38 scales, and predorsal scales are 15 in number.

## INTRODUCTION

The bariline fishes of the genus *Barilius* Hamilton (Family Cyprinidae: Cyprininae) inhabit medium to fast torrential mountain streams of the Indian subcontinent, Thailand and Myanmar. The fishes are characterised by a compressed body, blue-black transverse bars or spots on the body and dorsal fins inserted beyond the middle of the body (Hamilton 1822). Howes (1980) made detailed study on the systematics of the genus, based on anatomical and osteological characters. The genus, as now restricted, includes only those species occurring in India, Nepal, Bangladesh, Sri Lanka, Myanmar and Thailand, with 25 species of the genus *Barilius*, 15 being in the Indian region (Talwar and Jhingran 1991). Only three species of *Barilius* were hitherto known from Manipur, India, namely *B. barila* (Hamilton 1822), *B. bendelisis* (Hamilton 1822) and *B. dogarsinghi* Hora 1921. A new species of *Barilius* is described here from Chatrickong river, that flows in the Ukhrul district of Manipur, India. The river is formed by two important tributaries: Khunukong and Sanalok; both of which meet at Dha-ado and flow as Chatrickong for about 5 km on Indian soil and then into Myanmar, finally meeting the

Chindwin near Homalin, a township in Myanmar (about 24° 40' N, 94° 45' E).

## MATERIAL AND METHODS

The new species was collected by cast net. Type specimens are deposited in the Manipur University Museum of Fishes (MUMF). Standard measurements and counts were made following Jayaram (1981). Body proportions are expressed as percentage of standard length (SL) and head length (HL). Transverse scales were counted as scaled between lateral line and dorsal fin origin and from lateral line to pelvic fin origin.

### *Barilius chatricensis* sp. nov.

**Holotype:** MUMF 530/1, 86.4 mm (SL), Chatrickong river, Ukhrul District, Manipur, India. 150 km from Imphal. Coll. Keishing Selim; 16.xi.1995.

**Paratype:** MUMF 531/9 58.6-89.00 mm (SL). Data same as Holotype.

**Diagnosis:** A species of *Barilius* with 7-8 thick blue-black transverse bands on the body which do not extend to lateral line; lateral line scales 38; predorsal scales 15. Maxilla does not reach the base of pectoral fin. Dorsal fins do not commence midway between the eye and base of caudal fin. Barbels absent on snout and no dark spots at the base of caudal fin.

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NEW DESCRIPTIONS

**Description:** D. II, 7; P. i, 11; V. i, 8; A. ii, 10; C. 18; L.l. 38; L.tr 7/1/2; PDS. 15. Proportional measurements and counts of the fish are shown in Table 1. Body compressed, abdomen rounded, snout blunt, cleft of jaws with numerous pores. Upper jaw longer than lower. Eyes large, situated in the anterior half of the head. Barbels absent on snout. Maxilla does not reach the base of pectoral fin, and dorsal fins do not commence midway between eye and base of caudal fin. Dorsal profile in front of the dorsal fin relatively straight, slightly curved towards the base of the caudal fin. Dorsal fin inserted beyond middle of standard length; its insertion reaches the base of pelvic fin and its last fin ray short, not reaching caudal peduncle. Ventral fin does not reach anal fin. Vent opens just above base of anal fin. Caudal fin deeply forked, lower lobes longer than upper lobes.

**Colour:** Body silvery white, slightly dark dorsally. 7-8 dark blue bands on the sides of the body. Bands short, thick, tapering towards the lateral line but not extending to it. Pectoral, ventral and anal fins tinged with orange colour in fresh condition.

**Distribution:** Chatrickong river, Ukhrul district, Manipur, India.

**Etymology:** The species name refers to the Chatrickong river from where the type material was collected.

**Remarks:** *Barilius chatricensis* sp. nov. is similar to *B. dogarsinghi* Hora in some of its body proportions. But it differs from the latter in

TABLE I  
MORPHOMETRIC CHARACTERS

Characters	Holotype	Paratypes N=10	Mean
<b>In % of standard length:</b>			
Body depth	28.00	24.57-29.21	26.89
Head length	25.23	25.23-27.07	26.15
Caudal length	24.07	24.07-28.27	26.15
Predorsal length	53.33	51.43-55.46	53.43
Dorsal fin height	18.23	17.51-20.85	19.18
Pectoral fin length	20.13	18.31-21.84	20.07
Pelvic fin length	15.50	15.50-18.25	16.87
Anal fin height	15.39	14.34-18.65	16.49
<b>In % of head length:</b>			
Head width	50.45	46.47-52.90	49.68
Head height at occiput	75.22	73.82-82.22	78.02
Snout length	30.73	29.82-34.85	32.33
interorbital space	50.91	45.34-53.10	49.22
Eye diameter	28.89	25.72-29.82	27.77
Caudal peduncle length	71.55	71.78-79.79	75.78
Caudal peduncle depth	38.99	38.01-43.60	40.80
Mouth width	33.02	30.81-38.22	34.51
<b>In % Caudal peduncle length:</b>			
Caudal peduncle depth	54.44	48.76-57.00	52.88
<b>Counts</b>			
D rays	ii, 7	ii, 7	
P rays	i, 11	i, 11	
V rays	i, 8	i, 8	
A rays	ii, 10	ii, 10	
L.l.	38	38	
L.tr.	7/1/2	7/1/2	
Predorsal scales	15	15	
Circumpeduncular scales	14	14	
Transverse bands on body	7	7-8	

L.l. = Lateral line longitudinal scales  
L.tr. = Lateral transverse scales

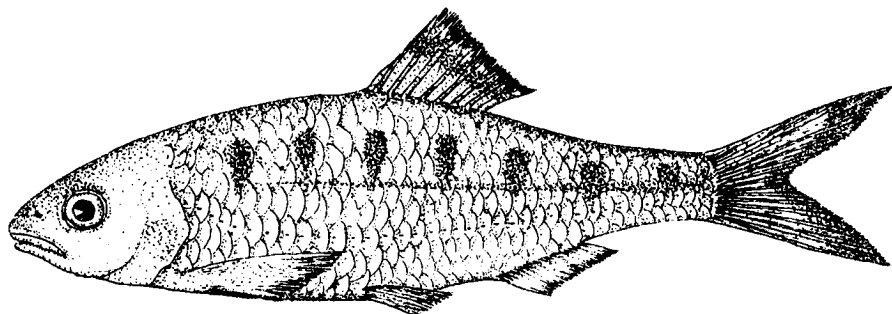


Fig. 1: *Barilius chatricensis* sp. nov., MUMF 530/1, 86.4 mm (SL)

TABLE 2  
COMPARISON OF *B. CHATRICENSIS* SP. NOV. WITH OTHER BARILINES

Characters	<i>B. chatricensis</i> sp. nov. n = 10	<i>B. dogarsinghi</i> Hora ZSI/F 2208/2 n = 3	<i>B. dogarsinghi</i> Hora MUMF 360/n = 10	<i>B. bendelisis</i> (Ham.) ZSI 4233	<i>B. harna</i> (Ham.) ZSI / 12042 / 12038	<i>B. barila</i> (Ham.) MUMF 545 / n = 6
<b>In % of Standard Length</b>						
Body depth	24.57-29.21	21.69-23.49	24.07-26.91	22.79-24.14	23.37-23.39	23.46-26.12
Head length	25.23-27.07	22.84-23.85	22.44-23.97	23.33-25.95	20.83-21.63	24.66-25.78
Predorsal length	51.41-55.46	61.42-66.41	58.95-62.72	56.65-57.63	55.55-55.59	55.40-59.64
Head height at occiput	73.82-82.22	78.40-82.78	85.00-86.70	73.91-79.18	75.50-78.30	72.06-78.60
Eye diameter	25.72-29.82	24.60-28.64	22.22-25.60	22.49-22.60	25.55-25.80	30.84-33.72
Caudal peduncle length	71.78-79.79	83.33-85.24	81.81-85.45	-	80.55-80.64	-
Caudal peduncle height	38.01-43.60	45.90-52.80	46.06-47.27	-	43.54-50.55	-
Mouth width	30.81-38.22	21.60-25.40	26.06-28.88	-	28.05-29.00	-
Predorsal scales	15	20	20	19	16	20
Barbels	Nil	2 pairs	2 pairs	2 pairs	Nil	2 pairs
<b>Miscellaneous Characters</b>						
Black dots on caudal base	no black dots	a large black dot present	a large black dot present	a black spot present	no black dots	no black dots
Transverse bands on body	7-8 dark blue bands	8-9 dark blue bands	8-9 dark blue bands	8-12 dark blue bands	9-11 dark blue bands	13-14 dark blue bands
Extension of ventral fin	does not reach anal fin origin	reaches anal fin origin	reaches anal fin origin	does not reach the anal fin	does not reach the anal fin	does not reach the anal fin
Extension of pectoral fin	reaches ventral fin origin	does not reach ventral fin origin	does not reach ventral fin origin	reaches the ventral fin origin	does not reach ventral fin origin	does not reach ventral fin origin
Characteristics of transverse bands	bands shorts, thick, tapers towards belly, do not reach lateral line	bands narrower, more or less of uniform thickness, reach lateral line	bands narrower, more or less of uniform thickness, reach lateral line	bands narrower, descending towards the lateral line	bands narrower, more or less uniform thickness, reach lateral line	bands narrower, more or less uniform thickness, reach lateral line

having a longer head, shorter predorsal length, shorter and shallower caudal peduncle, wider mouth, fewer predorsal scales and absence of barbels on the snout. The new species is also distinct from *B. dogarsinghi* in colour pattern and extension of fins (See Table 2).

It also differs from *B. barna* (Ham.) in that the maxilla does not reach the base of pectoral fin and the last dorsal fin ray, being short, does not reach the caudal peduncle. Dorsal fin commences midway between the eye and base of caudal fin in *B. barna*, whereas it does not commence midway between eye and base of caudal fin in *B. chatricensis*. Lateral line complete with 39-42 scales, predorsal scales 16 in *B. barna*, whereas in *B. chatricensis* the lateral line is complete with 38 scales and predorsal scale 15. *B. barna* has 7-11 well defined vertical dark bars and flanks with 7-9 narrow deep blue vertical bands, whereas in *B. chatricensis* there are only 7-8 distinct dark blue bands.

The new species also differs from *B. bendelisis* (Ham.) in lateral line scales numbering 40-45; predorsal scales are 18-20; 2 pairs of barbels; 8-12 dark bands and poorly developed tubercles.

*Barilius guttatus* Day and *B. bola* (Hamilton) were reported by Menon (1952) and Menon (1954) respectively, from Manipur. These species are, however, included in the genus *Raiamas* Jordan by Howes (1980) in view of their greatly expanded kinethmoid, and low and shallow jaws. They are easily separated from

other barilines of the region by their long gape, extending behind the orbit. Although, Howes (op cit.) did not examine *B. dogarsinghi*, it appears that this species along with the species under description belong to the second subgroup of the genus *Barilius*, exemplified by *B. gatensis* in which the body is deep, jaws short, barbels a single pair or absent, and tubercles large, and well developed tubercles.

**Comparative Material:** *Barilius dogarsinghi* Hora: ZSI (Zoological Survey of India) / F-2208/2, 3 specimens, from Manipur (No date or collector's name)

*Barilius dogarsinghi* Hora, MUMF - 360, 10 specimens from Chakpi stream, Manipur, coll. W. Vishwanath and Manoj (No date).

*Barilius barna* (Ham.) ZSI/12038, ZSI/12042, 2 specimen from Banor R. Deoli Ajmere, Mewara, coll. Biddulph & Museum collectors (No date).

*Barilius bendelisis* (Ham.) ZSI/ 4233, 2 specimens from Barak Kangjup, Manipur, coll. A.G.K. Menon on 1.ii.1953.

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