



HARA NARESHI, A NEW SPECIES OF CATFISH (PISCES: ERETHISTIDAE) FROM THE BARAK RIVER SYSTEM OF ASSAM, INDIA

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INTRODUCTION

Fishes of the genus *Hara* Blyth belonging to the family Erethistidae are characterised in having a robust body, moderate gill opening and extend onto venter, anterior margin of pectoral spine with serrations point towards tip and arranged in outwardly directed, anterior margin of dorsal spine smooth to granulate, upper lip papillate, anal fin rays 8-12 and thorax with no adhesive apparatus (Hora, 1949, Thomson and Page, 2006).

Viswanath & Kosygin (2000) mentioned five species of this genus, of which *Hara serratus* Viswanath & Kosygin is merged with *Hara hara* (Ng and Kottelat, 2007) Only eight species of the genus is known so far, they being *Hara filamentosa* Blyth, 1860, *H. hara* Hamilton, 1822, *H. horai* Mishra, 1976, *H. jerdoni* Day, 1870, *H. longissima* Ng & Kottelat, 2007, *H. mesembrina* Ng & Kottelat, 2007, *H. minuscula* Ng & Kottelat, 2007, *H. spinulus* Ng & Kottelat, 2007 as reported (Ng & Kottelat, 2007).

A survey was made on the fishes of Barak river. The river originates in the southern spurs of Mt. Japvo and flows through the western hill tracts of the state of Manipur. It enters the southern part of Assam and then Sylhet district of Bangladesh until it flows in the Meghna, the old bed of Brahmaputra. A collection of fishes from the Katakhal and Barak river of the southern Assam included 5 specimens of *Hara*, which do

not fit into the hitherto described eight species of the genus. The present species is being described as *Hara nareshi* in this paper.

MATERIAL AND METHODS

Fishes were collected from the different streams viz., Katakhal river belonging to Barak river system of southern Assam by using various fishing methods. After noting the fresh colour of the specimens, fishes were preserved in 10% formalin. Type specimens were deposited in the Zoological Survey of India (ZSI), Kolkata and their registration numbers are also given in this paper. Counts and measurements are followed as in Jayaram (1999). Measurements were made with a dial calliper to the nearest 0.1 mm. Identification was carried out following Mishra (1976), Tilak (1978), Jayaram (1979, 1999, 2006 & 2010), Ng & Kottelat, 2007, Talwar and Jhingram (1991).

***Erethistes nareshi* sp. nov.** (Fig. 1)

Holotype: ZSI FF/ 3966; 34 mm TL, 24 mm SL, Katakhal and Barak River, Hailakandi District, Assam, India, 07.xii.2004. Coll. B.K. Mahapatra.



Fig. 1. *Erethistes nareshi* sp. nov., Holotype: ZSI FF/3966; 24 mm SL, Katakhal river, Hailakandi District, Assam, India.

Paratype: ZSI FF/ 3967, 4 exs, 30-34 mm TL, 21-25 mm SL, Katakhal and Barak River, Hailakandi District, Assam, India, 07.xii.2004. Coll. B.K.Mahapatra, collection data same as holotype.

Local Name: Kauwa Maach (Assam)

Diagnosis: A Erethistid catfish of the genus *Hara* can be distinguished by the following unique combination of characters: Rayed dorsal with a strong spine serrated along both the sides; pectorals equal to head with a strong flattened spine; pectoral spine serrated anteriorly, denticulated posteriorly; serration on outer edge directed towards tip and teeth on inner edge directed towards base; caudal deeply forked, upper lobe with a filamentous prolongation.

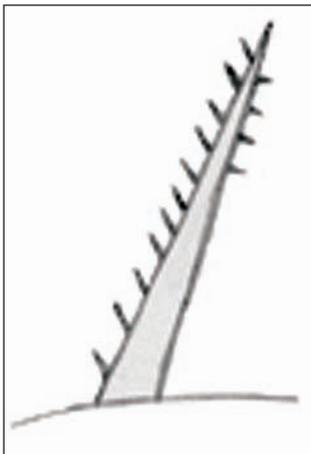


Fig. 2. Dorsal spine showing anterior and posterior serrae of *H. nareshi*.

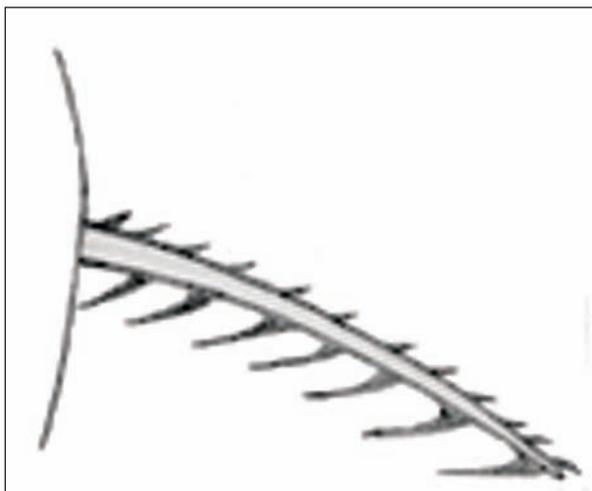


Fig. 3. Pectoral spine showing internal denticulation and external serration of *H. nareshi*.

DESCRIPTION

D I 5-6; P I 6-7; V i 5; A ii 6-7; C 15.

Body moderately elongate, flattened ventrally; head width less or equal to length, flattened ventrally; snout depressed, bluntly pointed; eyes small, subcutaneous, in the middle of head, superior; mouth inferior, upper jaw slightly longer; maxillary barbels with broad bases, reaching middle of pectoral bases, outer mandibular to base of pectoral spine, inner mandibulars to gill opening, the nasals not reaching to orbit; rayed dorsal with a strong spine serrated along both the sides; teeth serrations on the anterior side 11 and on posterior side 4 nos (Fig. 2), size of the serrations gradually smaller from tip to base, teeth on the anterior side directed towards tip; origin nearer to adipose dorsal origin than to snout end; adipose dorsal base smaller than rayed dorsal base, separated from rayed dorsal and caudal fin with considerable distance; pectorals equal to head with a strong flattened spine bearing 7 forwardly directed internal denticulations and 12 backwardly directed external serrations (Fig. 3); caudal deeply forked, upper lobe with a filamentous prolongation; lateral line is complete.

Measurement of in percent of SL of holotypes and paratypes (in parentheses)

Depth of body 25.00 (24.00 to 28.57), depth of head 20.83 (23.80 to 24.00), width of head 20.83 (20.00 to 24.00), length of head 25.00 (24.00 to 28.57), predorsal length 37.50 (32.00 to 42.85), adipose dorsal fin length 16.66 (12 to 19.04).

Measurement of in percent of HL of holotypes and paratypes (in parentheses)

Snout length 50.00 (50.00), head height at occiput 83.33 (83.33 to 100), head width 83.33 (83.33 to 100), eye diameter 13.33 (13.33), dorsal height 83.33 (66.66 to 83.33), pectoral length 100.00 (100.00), pelvic fin length 66.67 (66.67), anal fin height 66.66 (66.66 to 83.33), caudal fin length 116.66 (100.00 to 133.33), interorbital 36.66 (36.66 to 48.33) maxillary barbel length 100 (83.33 to 100.00), nasal barbel length 33.33 (16.66 to 33.33), outer mandibular barbel length 66.66 (83.33), inner mandibular barbel length 50.00 (50.00).

Diameter of eye 26.66 (26.66) in length of snout, least height of caudal peduncle 50.00 (50.00) in length of caudal peduncle.

Colouration: Body dark or yellowish brown with 3 or 4 faint broad dark band. Rayed dorsal and adipose dorsal fins with pale white outer edge. Pectoral, pelvic, anal and caudal fin with two distinct irregular broad brown bands.

Distribution: India : Katakhal River, Hailakandi Dist. Assam

Etymology: The fish is named after a renowned Ichthyologist Dr. Naresh Chandra Datta. former Professor and Head of the Department of Zoology, University of Calcutta

DISCUSSION

The species is similar to *Hara hara* from Barak river in Manipur, in having dorsal spine serrated both the sides. The new species, however, can be easily distinguished from *Hara hara* in having upper lobe of caudal fin with a long filamentous prolongation vs. absent (table 1), shorted head length (25.00% SL vs. 27.25%), shorter predorsal length (37.50% SL vs. 44.00%), longer adipose dorsal fin length 16.66 % SL vs. 11.80 %), shorter dorsal fin height (74.00% SL vs. 82.90%), shorter pectoral length (100% SL vs. 106.70%), longer pelvic fin length (66.67% SLvs. 63.30%), shorter anal fin height (73.33% SL vs. 81.80%), longer

caudal fin length (116.67% SL vs. 98%), deeper head height at occiput (90% HL vs. 84.30%), narrower head width (90% HL vs. 100.10%), shorter maxillary barbel length (93.33% HL vs. 96.90%), nasal barbel length (30%HL vs. 21.10%), outer mandibular barbel length (80% HL vs. 65.20%), inner mandibular barbel length (50% HLvs. 45.40%), shorter interdorsal length 75 % adipose dorsal base vs. 76.9%.

The species is also similar to *Hara filamentosus* from Burma, in having upper lobe of caudal fin with long filamentous prolongation. The new species, however, can also be distinguished from *Hara filamentosus* in having serration on anterior edge of dorsal spine vs. smooth and origin of pelvic fin below middle of rayed dorsal base vs. origin below last dorsal ray, shorter interdorsal length 75 % adipose dorsal base.vs. 98.7%.

The new species of *Hara* differs from other species recorded from Ganga and Brahmaputra drainage by having the following characteristics as given in table 2.

Key to species of genus *Hara*

- 1. Caudal fin emarginated; vertebrae 27-29 [Brahmaputra and Ganges river drainages]....
..... *H. jerdoni*
- Caudal fin deeply forked; vertebrae 30-35...
..... 2

Table 1. Characteristics of caudal fin of *Hara nareshi* sp. nov.

Specimens	Standard length(mm)	Caudal fin(mm)		Total length (mm)
		Upper lobe	Lower lobe	
Holotype	24	10	6	34
Paratype	21-25	8-9	5-6	32-34

Table 2. Comparison of *H. nareshi* sp. nov. with, *H. jerdoni*, *H. horai*, *H. hara* and Recorded from Ganga and Brahmaputra drainage.

Sl. No.	Particulars	<i>H. nareshi</i>	<i>E. jerdoni</i>	<i>E. horai</i>	<i>E. hara</i>
1	Interdorsal length	75% of adipose dorsal base	100% of adipose dorsal base	90.9% of adipose dorsal base	76.9% of adipose dorsal base
2	Caudal fin	Long filamentous prolongation in upper lobe	No filament in upper lobe	No filament in upper lobe	No filament in upper lobe

2. Serrations on anterior edge of dorsal spine present [Brahmaputra and Ganges river drainages] 3
 - Serrations on anterior edge of dorsal spine absent 4
3. Upper lobe of caudal fin simple; inter dorsal length 76.9% of adipose dorsal base
 - *H. hara*
 - Upper lobe of caudal fin filamentous; inter dorsal length 75% of adipose dorsal base....
 - *H. nareshi*
4. Supraoccipital process reaching anterior nuchal plate; posterior process on coracoid extending three quarters distance between bases of pectoral spine and pelvic fins; total soft pectoral fin rays modally 5 [Sittang River drainage] *H. minuscula*
 - Supraoccipital process not reaching anterior nuchal plate; posterior process on coracoid extending two third or less distance between bases of pectoral spine and pelvic fins; total soft pectoral fin rays modally 6-7..... 5
5. Length of adipose fin base 10.0-13.7% SL; eye diameter 8.0-9.8% HL [Brahmaputra River Drainage] *H. horai*
 - Length of adipose fin base 12.9-17% SL; eye diameter 11.2-17.9% HL 6
6. Length of dorsal spine 14.7-19.8 % SL; first principal ray on upper lobe of caudal fin not extended into filament [Baw Di Chaung drainage] *H. spinulus*
 - Length of dorsal spine 20.2-27.6 % SL; first principal ray on upper lobe of caudal fin usually extended into filament..... 7
7. Posterior process on coracoid reaching to two thirds distance between bases of pectoral spine and first pelvic fin ray, its length 23.6-27.0% SL [rivers draining southern extremity of Tenasserim Range]..... *H. mesembrina*.
 - Posterior process on coracoid reaching to midway of distance between bases of pectoral spine and first pelvic fin ray, its length 19.9-23.9% SL..... 8
8. Caudal peduncle length 14.9-17.8% SL, depth 6.1-7.2% SL (depth 2.1-2.9 times in its length); body depth 13.9-19.2% SL [Ataran, Salween and Sittang river drainages].....
 - *H. filamentosa*
 - Caudal peduncle length 18.8-21.3% SL, depth 5.0-6.1 % SL (depth 3.1-3.9 times in its length); body depth 12.5-14.5% SL [Irrawaddy River drainage]..... *H. longissima*

SUMMARY

A new fresh water Erethistid catfish species of the genus *Hara* Blyth collected from the Katakhal and Barak River, Assam, India is described and illustrated under the name *Hara nareshi*. The new species may look similar to *Hara hara* Hamilton and *Hara filamentosus* Blyth, differs from its congeners in having caudal fin with long filamentous prolongation in the upper lobe and depth of caudal peduncle. A key to identification of species of the genus *Hara* is given.

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