

# Description of a New Baril Carp, *Barilius lanceolatus* (Cypriniformes, Cyprinidae, Danioninae) from Dehra Dun, Uttarakhand, India

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## ABSTRACT

A new cyprinid fish, *Barilius lanceolatus*, collected from river Song (a tributary of river Ganga), Eastern Doon Valley, District Dehra Dun, Uttarakhand has been described here and distinguished in many characters from the allied species, *Barilius radiolatus* Gunther.

*Key words:* *Barilius lanceolatus*, Nov., Dehradun

## INTRODUCTION

The fish fauna of Dehra Dun and adjoining areas has attracted the attention of various workers (Fowler, 1924; Hora and Mukerjee, 1936; Lal and Chatterjee, 1963; Singh, 1964; Tilak, 1969, 1970, 1975; Grover, 1970; Tilak and Husain, 1974, 1976, 1977, 1978a, b, 1980, 1990; Husain, 1975, 1995, 2001; Husain and Tilak, 1995; Uniyal and Kumar, 2006) during the past but the present findings from river Song (a tributary of river Ganga), Satyanarain, Eastern Doon valley, District Dehra Dun (Uttarakhand) has been found interesting in view of the fact that its identity does not agree with any of the species reported earlier under the genus *Barilius* Hamilton-Buchanan from Dehra Dun and elsewhere and hence described here as new to the science.

## MATERIAL AND METHODS

The cyprinid fish, *Barilius lanceolatus*, collected from river song was examined for morphometric characteristics. Standard methods were utilized for recording the morphometric features.

## RESULTS AND DISUCSSION

The observations are presented as:

### Material Examined

Holotype:

Length: 53 mm in total length, 42 mm in standard length.

Locality:	Song river (a tributary of river Ganga), Satyanarain, District Dehra Dun, Uttarakhand (then part of Uttar Pradesh).
Date of Collection:	3. iii. 1973.
Collectors:	Raj Tilak and Akhlaq Husain.
Regd. No. :	V - 1196 (Northern Regional Station, Zoological Survey of India, Dehra Dun)

## Description

### Meristic Characters

B. iii; D. III / 7, P. I / 13, V. I / 8, A. III / 10, C. 19.

L. I. 61, D. - L. I. 12.5, L. I. - V. 4.5, L. tr. 12.5 / 7.5, P. D. S. 24 (approx.)

P. T. 5, 4, 3 / 3, 4, 5.

### Morphometric Characters

In Total Length: Head length 4.61; body depth 4.82, its width 9.64, pre dorsal distance 2.28; post dorsal distance 2.86; pectoral - pelvic fin distance 5.89; pre pelvic distance 2.59; post pelvic distance 2.65; pelvic - anal distance 6.63; pre anal opening distance 1.89; post anal opening distance 3.53; height at anal origin 5.89; caudal fin length 4.82.

### In Standard Length

Head length 3.65; body depth 3.28, its width 7.64; pre dorsal distance 1.81, post dorsal distance 2.27; pectoral - pelvic fin distance 4.69; pre pelvic distance 2.05, post pelvic distance 2.10; pelvic - anal fin distance 5.25; pre anal opening distance 1.50; post anal opening distance 2.80; height at anal fin 4.67; caudal fin length 3.82.

### In Head Length

Head width 1.92, its height 1.35, its post orbital length 2.30; eye diameter 3.29; inter orbital width 3.11; snout length 3.83; dorsal fin height 1.49, its base 1.92; pectoral fin 1.35; pelvic fin 1.92; height at anal origin 1.28, anal fin height 2.30, its base 1.64.

### Other Proportions

Eye diameter 0.86 in snout length, 1.06 in inter orbital width; inter orbital width 1.62 in head width; dorsal fin height 1.43 in body depth; pectoral fin 1.06 in pectoral - pelvic fin distance; pelvic fin 1.33 in pelvic - anal fin distance; anal

fin height 1.80 in height at anal origin, 0.86 in dorsal fin base, caudal peduncle least height 1.78 in its length.

### **Descriptive Characters**

Body lance-shaped (and hence named the fish accordingly), compressed with both dorsal and ventral profiles slightly arches almost to the same extent. Dorsal profile rising gradually till the origin of dorsal fin and then descending gently to the caudal base; ventral profile descending gradually (giving a convex shape to the abdominal edge) up to the base of pelvic fins and then ascending with a very shallow concavity. Head compressed; snout pointed; mouth terminal with its cleft extending to slightly behind the anterior margin of eye; lower jaw very slightly prominent; barbels two pairs, short, maxillary pair slightly longer than the rostral pair; eyes large. Major part in the anterior half of head; 3<sup>rd</sup> suborbital slightly wider than the uncovered part of cheek below and nearly extending to the hind edge of pre operculum; gill-openings wide.

Dorsal fin origin behind pelvic base, midway between middle of eye and caudal base; fin higher than its base which latter is less than that of anal fin, margin slightly concave, last ray extending to the vertical from middle of anal base. Pectoral fins obliquely concave, not reaching the pelvic fins which are slightly emarginated, not reaching anal opening which latter lies just in front of anal insertion; a thin axillary appendage at the angles of both the paired fins present, pectoral appendage more prominent. Anal fin emarginated, not reaching caudal base as falling short of the distance equal to the eye diameter, origin below the last ray of dorsal fin. Caudal fin forked with its upper lobe slightly longer than the lower lobe.

Scales minute, in front of pectoral bases indistinct; lateral line concave passing through the lower half of the caudal peduncle.

### **Colouration**

Colour silvery with upper 1/3<sup>rd</sup> brownish, 14 – 17 short dark bars descending from the upper brownish part of body towards the silvery lateral sides but remaining much above the lateral line, especially those in the middle; dorsal fin grayish, except for the tips of anterior a few rays; lower half of caudal fin also grayish.

Maximum Size: 53 mm.

### **Distribution**

Uttarakhand: Ganga drainage system, Dehra Dun.

### Relationship

It is closely allied to *Barilius radiolatus* Gunther but can readily be distinguished from it in a number of characters as given below (Table 1):

**Table 1. Differences between *Barilius lanceolatus*, sp. Nov. and *Barilius radiolatus* Gunther**

Sl. No.	<i>Barilius lanceolatus</i> , sp. nov	<i>Barilius radiolatus</i> Gunther
1.	Head length 3.65 times in standard length.	4.25 – 4.50 times in standard length.
2.	Eye diameter slightly more than snout length.	Equal to snout length.
3.	Dorsal fin origin midway between middle of eye and caudal base, its last ray extending just above the 1 <sup>st</sup> ray of anal fin; branched rays 7.	Midway between eye and caudal base, its last ray before the vertical from the anal origin; branched rays 8.
4.	Pectoral fin with 13 branched rays.	16 branched rays.
5.	Pelvic fins not reaching anal opening.	Reaching anal opening
6.	Body depth 4.82 times in standard length.	4.50 times in standard length.
7.	4.5 rows of scales between lateral line and pelvic fin base.	2 rows of scales.
8.	Lateral transverse scales 12.5 / 7.5 (up to middle of abdomen).	9 – 10 / 6 scales.

### Habitat and Commercial Importance

It inhabits slow moving hill stream with clear water and stony bed. The fish is not of any commercial importance as food, due to its smaller size and rare occurrence.

### ACKNOWLEDGEMENTS

The author feels grateful to the Director, Zoological Survey of India, Calcutta for encouragement and the Officer-in-charge, Northern Regional Station, Dehra-Dun for facilities

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