

**ON THE TAXONOMICAL DESCRIPTION AND DISTRIBUTION OF COPPER MAHSEER, *ACROSSOCHEILUS HEXAGONOLEPIS* (McCLELLAND)**

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**INTRODUCTION**

Being faced with the various technological constraints with respect to the composite fish culture in the hilly area, the extension of an alternate pisciculture practice in such regions is certainly obvious. Moreover, in hilly areas, due to diverse climatic conditions ranging from tropical climate of the foot-hills through temperate to Alpine conditions of the high hills and the varied topographical conditions, no single aquacultural practice can be suggested. In this regard, the practice of hill-stream fisheries and the conservation of the important hill stream fishes will be much valuable. Mahseers among the hill stream fishes form an important group which possesses some fishery potentialities.

The fish *Acrossocheilus hexagonolepis* known as copper mahseer is a commercially important rheophilic teleost of north-eastern India. It is locally known as Katli in Nepal, Bokar in Assamese and Ngara in Manipur. The fish is found to have a good growth rate attaining 134-145 mm. in the first year of its life and generally attains a maximum length of 72 cm. weighing 5.5 kg. It can be used for stocking purpose also.

The genus *Acrossocheilus* is known to be represented in the Indo-Malayan region by the following eight species:

1. *A. bantamensis* (Rendahl)
2. *A. deauratus* (Cuv. & Val.)
3. *A. hexagonolepis* (McClelland)
4. *A. malcomi* Smith
5. *A. manipurensis* Datta, Karmakar & Laishram
6. *A. schroederi* Smith
7. *A. sumatranus* (Weber & Beaufort)
8. *A. vittatus* Smith

In India, the genus is represented by two species viz. *A. hexagonolepis* and *A. manipurensis*. The relationship and their identifying characters has already given by Datta *et al.*, (1984).

*Taxonomic position of A. hexagonolepis :*

McClelland (1839) was the first to identify this species from the large rivers of Assam under the genus *Barbus*. Day (1878, 1889); Misra (1959); and Jayaram (1981) have already described the taxonomic position of this fish.

The genus *Acrossocheilus* was erected by Oshima in 1919 for a Formosan species (*formosanus*) and now is used for the group of fishes of South-eastern Asia formerly called *Lissocheilus* (Myers, 1941 and Smith, 1945). Thus, this species although discovered under the genus *Barbus*, was for sometimes included under the subgenus *Lissocheilus* and now under the genus *Acrossocheilus* as the name *Lissocheilus* is not available for use in ichthyology because it was first employed by Zittel (*Handbuch der Palaeontologie*, 1882) for a genus for fossil molluscs.

### MATERIAL

125 specimens of the fish were collected from Taret hill stream, Tengnoupal District, Manipur. Morphometric measurements were made; the colouration in fresh condition was recorded and their habits were also observed.

### SYNONYMY

1839. *Barbus hexagonolepis* McClelland, *Asiat. Res.* xix, pp. 270, 336 pl. xli, fig. 3 (type locality: large rivers of Upper Assam ).  
1940. *B. (Lissocheilus) hexagonolepis*, Hora, *J. Bom. nat. Hist. soc.*, xlii, p. 78, text-figs. 1-4, pl. (see for synonymy ).  
1945. *Acrossocheilus dukai*, Smith, *Bull. U.S. nat. Mus.*, No. 188, p. 205.

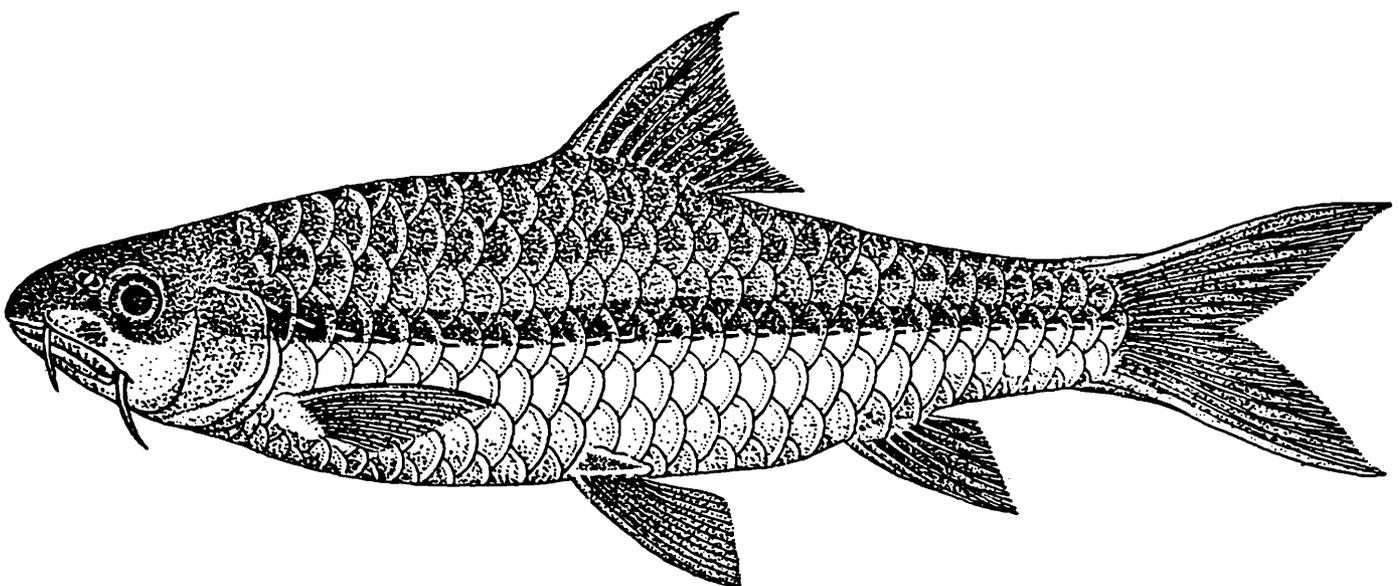


Fig 1. *Acrossocheilus hexagonolepis* (McClelland)

## DESCRIPTION (Fig.1)

D.3/9; P.14; V.9; A.2/5; C .19; L.1. 26-28

Body elongated, not very deep and compressed. Dorsal and ventral profiles more or less equally arched. Head relatively shorter and bluntly rounded in front. Several rows of horny tubercles present on sides of the snout, in front and below eyes. Lips thick, continuous round the angle of mouth, but labial groove widely interrupted in the middle. Lower jaw covered by a sharp horny covering. Two pairs of barbels maxillary pair longer than rostral.

Length of head 4.9 - 5.1; of caudal 5.7 - 6.0; and depth of body 4.7 - 5.2 times in total length. Least height of caudal peduncle 2 times in its length. Diameter of eye 1.8 - 1.9 from the tip of snout; 1.75 - 2.4 times in inter-orbital space and 4.4 -5.5 times in length of head.

*Fins* : Dorsal inserted opposite or slightly in advance of pelvics, its spine strong and entire. Pectoral fins low and pointed. Caudal deeply forked with pointed lobes.

*Scales* : Large and hexagonal, lateral line complete with 26-28 scales. Pre-dorsal scales 8; circumpeduncular scales 9; 5/2 scales between lateral line and base of pelvic fin and 9/2 scales between lateral line and base of dorsal fin.

*Colour* : Body beautifully coloured with olive green superiorly and silvery white below with a dark yellowish green lateral band above lateral line. Sides of head golden. In large sized individuals, back and head, base of fins and scales blackish grey; but opercular plates, fins and scales tipped with yellow.

*Distribution , Habit and Habitat* : Widely distributed in the fresh waters of Southern China, Thailand, Burma, Malay Peninsula and Archipelago.

In India, the fish is generally distributed in the hill streams of Eastern Himalayas, Assam, Garo Hills, Naga Hills, Khasi Hills and Manipur. The fish is purely an inhabitant of hill stream, where it takes freely worms and other baits. During the day time, they move in shoals in the area where current is not very fast but the fish is considered a fast swimmer. It has wide tolerance of water temperature 10° c to 31° c.

## SUMMARY

A detailed study on taxonomic characters including synonymy of the copper mahseer, *Acrossocheilus hexagonolepis* (McClelland) from Taret hill stream, Tengnoupal District of Manipur has been made here with a view to add additional data to the existing description of the species. The colouration, habit and habitat with its distribution in India and extra-Indian regions are also given.

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