

*A Further Study on Amblyceps mangois
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A Further Study on *Amblyceps mangois* (Hamilton, 1822) Recorded from Paschim Medinipur

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Fish diversity in Indian freshwater is very high and comprises 1027 species, among which 858 are primary freshwater fishes belonging to 167 genera, 40 families and 12 orders, remaining 137 species are secondary freshwater and 32 are alien [1]. Among the primary freshwater species 60% or more are endemic to India. Jayaram [2] reported 930 species in the Indian subcontinent are freshwater dwellers. North-Eastern and Western Ghat region of the country contains most of the fish diversity. Most of the fish research works were conducted in the northern region of India, followed by the southern part of India. Goswami *et al.* [3] compiled a list of 422 freshwater species belonging to 133 genera under 38 families in the north-eastern region of India. Rema and Indra [4] studied in southern India and found 667 freshwater fish species belonging to 149 genera and 35 families. According to fish base (ver.10, 2015), India is home to 950 species of freshwater fishes. Examination to the freshwater fish research report of West Bengal reveals that virtually little research has been conducted.

Sen [5] reported 171 freshwater fish species in West Bengal. Few years later, a significant alteration was noticed in the freshwater fish species number. Mishra *et al.* [6] studied on the freshwater fishes of Midnapur, Bankura and Hooghly districts and recorded 103 freshwater fish species. Barman [7] reported 239 freshwater fishes under 147 genera, 49 families and 15 orders. 70 indigenous ornamental fish species belonging to 45 genera, 30 families and 9 orders were reported by Basu *et al.* [8]. The majority of works produced in West Bengal are based on native freshwater ornamental fishes. However, research on small native freshwater fishes is limited. Major fish faunal record in the south-western part of West Bengal were done by Paul and Chanda [9-16]. Present work is the result of a

recent fish faunal survey in the south-western part of the state under study. The importance has given on the occurrence as well as distributional range extension and taxonomic consideration of *Amblyceps mangois* in the study area. Previously the species was reported in the north-eastern part of India and from the Himalayan foot-hill streams [17-18]. Therefore, the present discovery is certainly be the distributional range extension of *Amblyceps mangois* to the plane of the state.

Throughout all of Paschim Medinipur's blocks from May 2013 to November 2022, samples were taken from various rivers, ponds, bills, and markets using various commercial fishing techniques. Early morning fish fauna was collected, and quickly preserved in 4% formalin before sending it to the departmental laboratory. Specimens were properly washed before permanent preservation in 6% formalin solution. Detailed synonymies have been provided for the species, as well as its diagnosis, distributional range, and taxonomic comments are added. Beside the above-mentioned points, a stapes was taken to give a complete list of sources in bibliography. Author's name and publication year were included for all taxon citations in the article.

Amblyceps mangois (Hamilton, 1822) [19]

Amblyceps mangois (Hamilton, 1822) [19] belonging to family Amblycipitidae Day [20] and was originally described as *Pimelodus mangois* Hamilton-Buchanan 1822 [19]. Menon [21] replaced the species to the genus *Amblyceps* Bathy [22]. Below is a short history on the synonym of the species, with special emphasis on Indian one.

1. *Pimelodus indicus* McClelland, 1842 [23]
2. *Amblyceps mangois* Menon 1999 [21]

Type species: *Pimelodus mangois* Hamilton-Buchanan, 1822 [19], *Fishes of Ganges*: 199, 379.

Type locality: Nathpur, Kosi River, northern Bihar, India.

Materials examined: 2 females (3.7cm- 3.9cm), 5 males (3.1cm-4.0 cm), Debra (Molighati), Paschim Medinipur, W.B., 23.06.2013, A. Chanda & party. 1 male (3.2 cm), 2 females (3.6

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cm – 4.1 cm), Shiromoni of Garhbeta-I, Paschim Medinipur, W.B., 21.05.2017, A. Chanda & party. 1 female (3.8 cm), 2 males (3.2 cm- 3.6 cm), Garhbeta- II (Agarband), Paschim Medinipur, W.B., 23.06.2022, A. Chanda & party. 1 female (4.6 cm), 2 males (3.4 cm- 3.5 cm), Garhbeta- II (Adalia), Paschim Medinipur, W.B., 18.06.2022, A. Chanda & party. 4 females (3.8 cm-4.1cm), 2 males (3.1 cm- 3.2 cm), Garhbeta- III (Aguidiha), Paschim Medinipur, W.B., 23.06.2022, A. Chanda & party. 1 female (3.6 cm), 3 males (3.1 cm- 3.6 cm), Garhbeta-III (Alkusha), Paschim Medinipur, W.B., 23.06.2022, A. Chanda & party. 5 females (3.8 cm-4.1cm), 2 males (3.2 cm- 3.5 cm), Keshpur (Adam Chalk), Paschim Medinipur, W.B., 26.06.2022, A. Chanda & party. 2 males (7.6 cm – 7.8 cm), 2 females (9 cm – 9.5 cm) Midnapur (Mohanpur dam), Paschim Medinipur, W.B., 05.04.2022, A. Chanda.

Diagnostic characters (Fig 1a-b): The body is long and thin, with a broad, rounded, and depressed head. In front of the pectoral fin, there is a cup-like skin in which the gill membrane rests when the gill openings are closed. This unique quality aids their respiration in the swift water. Eyes are tiny and set dorsolaterally. Four pairs of barbells around the mouth. A thick skin covers the dorsal fin, which has 5-6 rays and a spine. The

adipose fin is present and well-developed, while the anal fin has 8-11 rays. There are eight rays in pectoral fin among which first one is a slender spin, dorsal lob of caudal fin is longer than ventral lob. No lateral line exists. It is different from its congeners by the characters like comparatively short body with 34-36 vertebrae in the vertebral column whereas, the number of vertebrae in its similar species ranges from 38 to 40. Caudal fin is with longer upper and shorter lower lobes. The body has a light brown colour. Fin formula is off DI 5-6; P I 7; V i5-6; A ii-iii 6-7.

Distribution

India: It has been found in India (Arunachal Pradesh, Assam, Bihar, Himachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Uttar Pradesh, West Bengal).

Paschim Medinipur: In the present investigation, species has been recorded in Garhbeta-I, II & III, Keshpur, Debra and Midnapur sadar (Mohanpur dam).

Abroad: South Asian countries like Pakistan, Nepal; Myanmar, Thailand and Bangladesh.



Fig 1a *Amblyiceps mangois* (Hamilton, 1822) preserved specimen
(1). Barbells (2). Gill cup (3). Pectoral fin (4). Dorsal fin (5). Pelvic fin (6). Anal fin (7). Adipose fin (8). Caudal fin



Fig 1b *Amblyiceps mangois* (Hamilton, 1822) live specimen

SUMMARY

Amblyiceps mangois, Indian torrent catfish or biting catfish or even foot hill catfish is a freshwater, bottom dwelling Silluroid fish belonging to order Silluriformes, under family Silluridae of genus *Amblyiceps*. Primary objective of the current investigation is emphasizing on the occurrence and distribution of the species in plane of south-western part of West Bengal as

well as its current taxonomic status. Fishery importance of the species is negligible and not available in the fish market of the study area. The species was first reported from Paschim Medinipur by Paul and Chanda and that was an accidental occurrence of the species in the fish catch from Garhbeta, Paschim Medinipur, West Bengal, India. Present report is the outcome of an extensive fish faunal survey throughout the district to ensure the occurrence of *Amblyiceps mangois* in the

study area and result depicts that the species is restricted in the northern portion of the district and its habitat is in slow running water ways like rivers and streams with pebble bedded. The species inhabit in harsh environmental condition and expend more energy as its habitat is in hill streams ecosystems. It is an air breathing fish and prefers aquatic insect as daily diet. The species is benthic and reside in between gravels of river beds. Though IUCN listed it a least concern category but the species is very rare and confined in the north-western part of Paschim Medinipur district. Fishery importance of the species is not known in the study area and it is available along with other small fishes in the markets.

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