

*CHANNA MELANOSTIGMA*, A NEW SPECIES OF FRESHWATER SNAKEHEAD  
FROM NORTH-EAST INDIA (TELEOSTEI: CHANNIDAE)

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*Channa melanostigma*, a new channid fish species is described from north-east India. The species is distinguished from all its congeners by a combination of the following characters: 14-15 black zig-zag transverse bars at irregular intervals on caudal fin (when stretched), the interspaces being 2/3<sup>rd</sup> of the bars; dorsal fin inserted after 3-4 scales vertically above the pectoral fin origin, ½7-½8 scales below the lateral line, 5 cheek scales, 27-28 circumpeduncular scales, 50-51 vertebrae, 7 branchial tooth plates, 36-37 branched dorsal fin rays and last dorsal fin inserted in between 41 and 43 vertebrae.

**Key words:** Channid fish, new species, Arunachal Pradesh

### INTRODUCTION

Freshwater snake-headed fishes of the Family Channidae is represented by 31 species, of which 28 are of Asian genus *Channa* Scopoli and three of African genus *Parachanna* Li *et al.* (2005). All species in this genus have cavities in the head which act as a primitive lung enabling them to live for long time out of water (Shaw and Shebbeare 1937).

North-east India having many derelict swamps is rich in channid fauna. Hamilton (1822) described *Ophiocephalus barca* from Brahmaputra river, Assam; *O. gachua* from ponds and ditches of Bengal and *O. marulius* from Gangetic provinces, India. McClelland (1845) described *O. amphibeus* from the vicinity of Chel river, North Bengal. Playfair (1867), Vierke (1991) and Musikasinthorn (2000) respectively described *O. stewartii*, *Channa bleheri* and *C. aurantimaculata* from Assam. Shaw and Shebbeare (1937) and Menon (1954), listed *O. striatus* and *O. punctatus* respectively from North Bengal and Manipur. All the above species are now in *Channa*. The works of Sen (1999), Nath and Dey (2000) and Sen (2006) on the fishes of Arunachal Pradesh did not include any additional species of *Channa*. Vishwanath and Geetakumari (2009) provided diagnostic characters of nine species of *Channa* from North-east India and studied their inter-relationships. Recently, Bagra *et al.* (2009) included an unidentified species, *Channa* sp. 1, in their checklist of fishes of Arunachal Pradesh, which was also collected from the type locality of the new species under description.

Collections from Lohit river (Brahmaputra basin), Arunachal Pradesh, in 2007, included an unnamed species of *Channa* which is herein described as *Channa melanostigma*, a new species.

### MATERIAL AND METHODS

Measurements were made point to point with dial calipers to the nearest 0.1 mm. Counts and measurements were made on the left side of specimens under a PC-based binocular stereozoom microscope with transmitted light. Counts and measurements followed Musikasinthorn (1998). Clearing and staining of specimens for osteology followed Hollister (1934). Identification and nomenclature of bones and vertebral counts followed Greenwood (1976). As the gill rakers in the genus are modified to form toothplate, we use the term 'branchial toothplate count' instead of gill raker count following Greenwood (1976). The count was taken on the first gill arch starting from hypobranchial to epibranchial on the left side of the specimens. Measurements of head length and body parts are expressed as proportions of standard length (SL) while subunits of the head, as proportions of head length (HL). Material examined in this study is deposited in Manipur University Museum of Fishes (MUMF).

#### *Channa melanostigma* sp. nov. (Fig. 1)

**Material examined: Holotype:** MUMF-Per 39, 134.8 mm SL; India: Arunachal Pradesh: Lohit district, Lohit river, Brahmaputra drainage: Tezu, 27° 54' 41" N, 96° 10' 23" E; K. Nebeshwar Sharma, 29.iii.2007.

**Paratypes:** 7 specimens, MUMF-Per 40-46, 6, 82.1-143.0 mm SL; same data as for holotype, MUMF-Per 45 and 46 dissected, cleared and stained for osteology.

**Diagnosis:** *Channa melanostigma* is distinguished from its nearest congener *C. stewartii* in having distinct 14-15 black zigzag transverse bars at irregular intervals (when stretched), the interspaces being 2/3<sup>rd</sup> of the bars on the caudal fin (Fig. 2a) vs. no black zigzag bars in the caudal fin (Fig. 2b);