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## ON THE OCCURRENCE OF TWO BALITORID FISHES OF THE GENUS *SCHISTURA* McCLELLAND FROM SIMILIPAL BIOSPHERE RESERVE, ORISSA

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### INTRODUCTION

The Similipal Biosphere Reserve located in the North-East part of Orissa (Dist. Mayurbhanj) is famous for its undulating terrain with diverse genetic resources (Patra and Tripathy, 1997). The biogeographical conditions provide a high potential habitat for the variety of fish fauna inhabiting the locality. Previous studies pertaining to fish fauna of Similipal Biosphere Reserve (Anon, 1999) records 31 species only, of which the family Balitoridae (Order-Cypriniformes) is represented by an unidentified species of the genus *Nemacheilus* Bleeker, 1863. Ramakrishna *et al.* (2006) also included only one Balitorid fish as *Nemacheilus* species, with indication of it being a new distributional record. Incidentally, two species of fishes were collected during the study of invertebrate faunal groups in the Biosphere Reserve. On identification these two species turned out to belong to the genus *Schistura* McClelland, 1839, hitherto not reported. Its report earlier as *Nemacheilus* sp. is due to the fact that in earlier literature the genus *Schistura* was considered as a subgenus under *Nemacheilus*. The identified specimens were deposited with EBS, ZSI, Berhampur (presently at Gopalpur-on-Sea, Orissa). The taxonomic accounts of these two species are given here to record their occurrence from this Biosphere Reserve and as well as from Orissa state.

#### 1. *Schistura dayi* (Hora)

1935. *Nemachilus dayi* Hora, *Rec. Indian Mus.*, 37 : 57 (Hills near Raniganj, Chotanagpur).

1987. *Noemacheilus denisoni dayi* : Menon, *Fauna of India, Pisces*, 4(1) : 99, pl. 16, fig 6.

1991. *Nemacheilus denisoni dayi* : Talwar and Jhingran, *Inland fishes of India*. 1 : 478.

1999. *Schistura denisoni dayi* : Jayaram, *The freshwater fishes of the Indian Region* : 181, 188.

*Material examined* : 2 ex., 54-66 mm in total length. Locality – Chahala (775 in altitude), Similipal Biosphere Reserve, Collected by – P.G.S. Sethy, during April. 2004.

*Diagnostic features* : D iii, 8; A ii, 5; P i, 10; V i, 6, C 18. Body depth 6.6 to 6.8, head length 5.0 to 5.4 in total length (5.5 to 5.6 and 4.1 to 4.6 in standard length). Body of uniform depth, dorsal profile slightly arched while the ventral profile is almost straight and horizontal. Head almost as broad as high at occiput. Snout somewhat rounded, shorter than postorbital distance. Eyes small, not visible from ventral surface. Mouth semicircular, lips fleshy, lower lip weakly furrowed. Nostrils close to each other. Three pairs of barbels are well developed, thread like almost as long as eye diameter. Lateral line incomplete, ending below middle of dorsal fin. Dorsal fin small, almost as high as head length; edge of dorsal fin straight; origin of dorsal fin equidistant between tip of snout and caudal fin base. Pelvic fin origin opposite that of dorsal fin; its length shorter than pectoral fin, almost reaching anal opening. Pectoral fin shorter than head. Caudal fin slightly shorter than head, deeply emarginate, with rounded lobes. Body marked with 10-12 broad vertical bands with an equal number of narrow pale interspaces. A black band at caudal base, a blackish spot at base of the dorsal fin origin. Dorsal and caudal fins with two rows of well-marked spots, other fins without spots.

*Distribution* : Chhota Nagpur plateau, Jharkhand; Bastar, Chhatisgarh. Inhabits small shallow swift streams with sandy or pebbly bottoms.

*Remarks* : The generic allocation of this species is in parlance with current nomenclature and the validity of this species is in accordance with Banarescu and Nalbant (1995). Although Menon (1987), Talwar and Jhingran (1991) and Jayaram (1999) placed this as a sub-species of *Schistura denisoni*, the original combination of Hora (1935) is considered here as valid. The lateral line in *S. denisoni* ends before dorsal fin origin, while that extends to below middle of the dorsal fin in *S. dayi*.

The type locality, “Chhotanagapur Plateau” is geographically in continuation with the Similipal forest range and hence, its distribution in Similipal Biosphere Reserve is well in expected line. Dutta *et al.* (1993) reported *S. denisoni* Day, a species well distributed in peninsular India, from Orissa. That probably refers to the species *S. dayi*, as *S. denisoni* is unlikely to occur in this part. Further collection and study of *Schistura* species from Orissa may reveal the distributional boundaries of these two species and probably add more number of species to the ichthyofauna of Orissa.

## 2. *Schistura scaturigina* (McClelland)

1839. *Cobitis (Schistura) scaturigina* McClelland, *Asiat. Res.*, **19** : 308, 443, pl. 53, fig., 6 (from a figure from Hamilton's collection, Darjeeling).
1987. *Noemacheilus scaturigina* : Menon, *Fauna of India. Pisces*, **4(1)** : 86.
1991. *Nemacheilus scaturigina* : Talwar and Jhingran, *Inland Fishes of India*, **1** : 501.
1999. *Schistura scaturigina* : Jayaram, *The freshwater fishes of the Indian Region* : 183, 187.

*Material examined* : 1 ex., 25 mm in total length, Locality – Chahala, Similipal Biosphere Reserve, Collected by – P.G.S. Sethy, during April, 2004.

*Diagnostic features* : D iii, 8; A i, 5; P i, 9; V i, 7, C 18. Body depth about 8.0. head length 5.0 in total length (6.5 and 4.0 in standard length). A small elongate species with both dorsal and ventral profile almost horizontal. Head slightly broader than high at occiput, long narrow and pointed anteriorly. Snout somewhat equal to postorbital distance. Eyes small, dorso-laterally in position, not visible from ventral surface. Mouth semicircular; lips moderately fleshy, poorly furrowed. Barbels well developed; inner rostral shorter, outer rostral and maxillary subequal; outer rostral extending to margin of eye; maxillary extended to the posterior border of eye. Lateral line complete. Dorsal fin small, its origin equidistant between tip of snout and caudal base. Origin of pelvic fin slightly behind that of dorsal fin. Pelvic fin longer than head and shorter than pectoral fin. Pelvic fin not reaching anal opening. Caudal fin longer than head, deeply forked, lobes pointed. Body grayish above, olivaceous below with 9 to 12 dark vertical bands broader dorsally, narrowing down on sides and not extending to ventral surface. A narrow black bar on base of the caudal fin with one or two series of dots forming a V-shaped pattern on the fin itself. A black spot at base of the anterior dorsal ray.

*Distribution* : Darjeeling and Assam in eastern Himalayas, India; Nepal, Bangladesh and Bhutan.

*Remarks* : The generic allocation is in accordance with current nomenclature (Banareescu and Nalbant, 1995). Gunther (1868) recorded this species from Bengal. Day (1869) described it from Cossye river at Midinapur as *N. mugah*, and later Day (1889) also reported this from Orissa as *N. zonatus* (McClelland), both considered as synonyms of *S. scaturigina* by Menon (1987). The above synonymy certainly indicates the availability of *S. scaturigina* in Southern Bengal and Orissa. The present report confirms its occurrence in Northern Orissa close to Southern Bengal differing from the distributional range “eastern sub-Himalayas” as stated in the Talwar and Jhingran (1991) and Menon (1987). These small hill stream fishes from Orissa are poorly studied and so, might have escaped the eyes of earlier scientists.

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