the two locations (26.3° C in the river and 26.9° C in the stream). High flow rate was measured in the river (50 cm/sec) while it was low (15 cm/sec) in the stream. The riparian vegetation was dominated by grasses and shrubs with little canopy value. The stream is very narrow, having a width of 2-3 m, while the river is 120 m wide. Detritus, mud and sand were the dominant substrates in the stream, whereas in the main river the main substrate was bedrock (80%) with mud and sand. P. boro was reported from the lowland area. At the study site, the substratum was dominated by detritus and mud which may be suitable for the survival of this species.

**Acknowledgements**

We thank the U.S. Fish and Wildlife Service and Ministry of Environment and Forests for sponsoring the project ‘Ecology of Hillstreams of the Western Ghats with special reference to Fish Community’; this paper is a part of the study carried out under the project. We thank Dr. K. Rema Devi, ZSI, Southern Regional Station, Chennai, for confirming the identification of the species and the Principal and Head of the Department of Zoology, Mar Thoma College, Perumbavoor, Ernakulam, for laboratory facilities and encouragement. We also thank Mr. V.O. Varghese, laboratory assistant for his help in the field.

December 2, 1998

M. JOHN GEORGE*
K. RAJU THOMAS
C.R. BIJU
C.R. AJITHKUMAR

Bombay Natural History Society, Hornbill House, S.B. Singh Road
Mumbai 400 023.

*Mar Thoma College for Women, Perumbavoor, Ernakulam, Kerala 683 542.

**References**


18. NEW RECORD OF HETEROPNEUSTES MICROS (GUNTHER) (CLARIIDAE: HETEROPNEUSTIDAE) FROM WESTERN GHATS RIVERS, INDIA

(With one text-figure)

The stinging catfish of the genus Heteropneustes are found in rivers, ponds and shallow water bodies. H. fossilis and H. microps are the two known species of this genus. Among these, H. fossilis has a wide range of distribution and is very common along the Western Ghats.
Fig. 1: A. Heteropneustes fossilis; B. Heteropneustes microps

H. microps is a Sri Lankan form which has a very restricted distribution in India (Uttar Pradesh and Bihar). During a recent survey under the Western Ghats fish diversity programme, a few specimens of H. microps were collected from Mananthavadi puzha near Sulthan Bothery, a tributary of Kabini river (Cauvery basin), Wynaad, Kerala (Nilgiri Biosphere), and from a riverine wetland of Tamiraparani river at Thimarajapuram, Tirunelveli dist., Tamil Nadu. H. microps was originally described by Gunther (1864) from Sri Lanka (type locality). In India, H. microps has been reported only from Dambuva (near Yakvala), Uttar Pradesh and Maltidhar in Khagaria District, Bihar (Datta Munshi and Srivastava 1988). Current literature and reports on Cauvery (Day, 1967; Hora, 1942; Jeyaram et al., 1982; Menon, 1992; Easa and Shaji, 1997) and Tamiraparani (Menon, 1992; Rema Devi, 1992; Arunachalam, 1996, Rema Devi et al., 1997) drainage systems show that this species was not reported from this region by earlier workers. Till now the present distribution of this species is Sri Lanka and Bihar and Uttar Pradesh, India (Talwar and Jhingran, 1991). The present record shows range extension to Western Ghats (that to southern part of Tamil Nadu and Kerala part of Nilgiri Biosphere Reserve) and distribution affinities between Sri Lanka and Western Ghats, India.

**Description**

DI-II/5; PI/5-6; VI/6; A+C 72-74. Body deep, elongate and compressed, its depth 5.4 times in standard length. Head more depressed, broad and 7.4 times standard length; occipital extending to basal bone of dorsal fin. Eyes small, 6.1 times in head length. Mouth terminal, lips well developed. Barbels four pairs. Dorsal fin short, inserted just behind the origin of ventral fin. Pectoral fin with strong spine, serrated along inner edge; the spine is 2/3 as long as head. Anal fin with a long base, confluent with caudal fin. There is no distinct notch between caudal and anal fin.

**Geographical distribution in India**: This species inhabits rivers, canals, ponds, tanks and
shallow water bodies of Uttar Pradesh and Bihar. We have recorded this species from Western Ghats for the first time.

Remarks: *Heteropneustes microps* differs from the only other known species, *H. fossilis*, in having a long-based anal fin which is confluent with the caudal fin. There is no distinct notch between anal and caudal fins (Fig. 1B), whereas in *H. fossilis* (Fig. 1A) anal and caudal fins are separated by a distinct notch.

Acknowledgements

Two of the authors J. Antony Johnson (8/297(9)/98-EMR-I-SPS) and A. Manimekalai (9/652(7)/97-EMR-I-SPS) are grateful to Council of Scientific and Industrial Research (CSIR), New Delhi, for Senior Research Fellowship. We are thankful to Dr. K. Rema Devi, Zoological Survey of India, Southern Regional Station, Chennai, for her kind co-operation.

October 3, 1998

M. ARUNACHALAM,
J.A. JOHNSON,
A. MANIMEKALAI,
SPK Centre for Environmental Sciences,
Manonmaniam Sundaranar University,
Alwarkurichi 627 412, Tamil Nadu.
S. SRIDHAR
Centre for Aquaculture Research and
Extension, St. Xavier’s College (Autonomous)
Palayamkottai 627 002,
Tamil Nadu.

References


19. ADDITIONS TO THE FISH FAUNA OF PAMBAR RIVER, KERALA

Pambar river is one of the three east flowing rivers in Kerala. As a part of the studies on the hill-stream fishes along the eastern side of the Western Ghats, a survey was conducted in the Pambar river and its tributaries in February, 1998. Earlier, Easa and Shaji (1996) studied the freshwater fishes of the Pambar river in the Chinnar Wildlife Sanctuary area. They listed eleven species from the sanctuary part of Pambar river. In the present study, however, more species were collected from the Sanctuary area itself and other parts of the river (Tables 1 & 2).

The present survey indicated that fifteen species belonging to three families were additions to the fish fauna of Pambar river. Thus the total number of species has increased to 26.