



<http://dx.doi.org/10.11646/zootaxa.3964.4.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:5982F525-B457-4B18-BE95-7D4E9E7E31EC>

The identity of Hamilton's Ticto Barb, *Pethia ticto* (Teleostei: Cyprinidae)

UNMESH KATWATE¹, RAJEEV RAGHAVAN^{2,3,5} & NEELESH DAHANUKAR^{3,4}

¹Bombay Natural History Society (BNHS), Hornbill House, Opp. Lion Gate, Shaheed Bhagat Singh Road, Mumbai, Maharashtra 400 001, India

²Conservation Research Group (CRG), Department of Fisheries, St. Albert's College, Kochi, Kerala 682 018, India

³Systematics, Ecology & Conservation Laboratory, Zoo Outreach Organization (ZOO), 96 Kumudham Nagar, Vilankurichi Road, Coimbatore, Tamil Nadu 641 035, India

⁴Indian Institute of Science Education and Research (IISER), G1 Block, Dr. Homi Bhabha Road, Pashan, Pune, Maharashtra 411 008, India

⁵Corresponding author. E-mail: rajeevraq@hotmail.com

Abstract

While describing the fishes of Ganges, Hamilton described *Cyprinus ticto* (now allocated to *Pethia*) from south-eastern parts of Bengal. The unavailability of type material and insufficient diagnostic characters in the original description resulted in ambiguities in the identity of this species. In this paper, we clarify the identity of *P. ticto* through an integrative-taxonomic approach. *Pethia ticto* can be distinguished from all other known species of the genus by a combination of characters that includes an abbreviated lateral line with 6–12 pored scales; 23–26 scales in lateral-scale row; 9 predorsal scales; ½4/1/3½–4 scales in transverse series; and a pigmentation pattern that includes a small black humeral spot covering the third and fourth lateral-line scales, a prominent spot on the caudal peduncle on the 16th–19th scales of the lateral-line scale row, and two rows of black spots scattered on the dorsal fin.

Key words: Integrative taxonomy, India, Small barbs, *Puntius*

Introduction

In *An account of the fishes of River Ganges and its branches*, Hamilton (1822: 314) described *Cyprinus ticto* (now allocated to *Pethia*) from “south eastern parts of Bengal” (now parts of West Bengal, India, and Bangladesh) as “an opaque *Cyprinus* of the *Puntius* kind, with one black spot on the lateral line above each pectoral fin, and another near the end of the tail; and with the back fin spotted, and its second ray indented behind”. Hamilton (1822: 314–315) described the species in detail as “the dorsal is marked with two rows of dark spots”; “the spots on the sides are large, well defined, and deep black”; “the head is blunt, short, rather narrower than the body, and devoid of tendrils” and “the lateral line is scarcely distinguishable”.

McClelland (1839) redescribed the species and suggested that it was common in ponds in Bengal and Assam. Misunderstandings and confusions regarding the identity of the species appear to have started with Day (1878), who considered it widely distributed in India and Sri Lanka. Subsequently, Hora (1939) placed *Barbus* (*Puntius*) *stoliczkanus* Day, 1871, from Myanmar, and *Puntius punctatus* Day, 1865, from southern India, in the synonymy of *P. ticto* and suggested that *P. ticto* was widely distributed in India, Myanmar and Sri Lanka, though with population variations. Subsequent taxonomic studies have shown *P. stoliczkanus* and *P. punctata* to be valid species (Rema Devi *et al.* 1996; Linthoingambi & Vishwanath 2007; Katwate *et al.* 2014a). This suggests that the widespread *P. ticto* as conceived by Day (1878) and Hora (1939), followed by most subsequent authors (e.g., Talwar & Jhingran 1991; Jayaram 1991; Menon 1999) in fact comprises a ‘complex’ of several distinct species (Linthoingambi & Vishwanath 2007; Mercy & Jacob 2007; Knight *et al.* 2012; Katwate *et al.* 2014b, c). Although, Linthoingambi & Vishwanath (2007) redescribed *P. ticto*, their material originated from the Brahmaputra River system in Assam and Manipur. Given that their description was not based on material from south-eastern Bengal, there remains a need for elucidating the identity of *P. ticto* based on specimens from this area (Lalramliana *et al.* 2014) so as to aid the differentiation of the other members of this species complex. The present paper addresses that deficiency.