



## ***Pethia rutila* (Teleostei: Cyprinidae), a new species from Mizoram, Northeast India**

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### **Abstract**

*Pethia rutila*, a new species is described from Karnaphuli drainage, Mizoram, Northeast India. It is distinguished from its congeners in having a complete lateral line with 21–22 scales, an inconspicuous black humeral spot on the scale row below the 3rd and 4th lateral-line scales, a black blotch on the caudal peduncle centered above the insertion of the last anal-fin ray, overlapping lateral-line scales 16–18 or 17–19 and ½4/1/3½ scales in transverse line from dorsal-fin origin to pelvic-fin origin.

**Key word:** Barb, Dampa Tiger Reserve, Bangladesh, Aivapui River, Keisalam River

### **Introduction**

*Cyprinus ticto* Hamilton, a small cyprinid with two spots on the body (a black humeral spot and a caudal blotch), currently assigned to the genus *Pethia* (Pethiyagoda *et al.*, 2012), has been recorded from across South and Southeast Asia (Talwar & Jhingran, 1991). Though the description of *P. ticto* given by Hamilton (1822) was brief, his figure portrayed *P. ticto* (Fig. 1) as a small fish with a spotted dorsal-fin and two black spots on the body, one on the lateral line above the pectoral fin and the other near the end of the tail. Subsequently, Day (1878) gave a more detailed description of *P. ticto* and distinguished it from *P. stoliczkana* and *P. punctata*, which he had described, by the presence of an incomplete lateral line (vs. a complete lateral line in the other two species).

Recent studies have shown, however, that the species previously identified as *Pethia ticto* comprises a complex of superficially similar species from India and Myanmar (see Menon *et al.*, 2000; Beevi & Ramachandran, 2005; Kullander & Fang, 2005; Linthoingambi & Vishwanath, 2007; Mercy & Jacob, 2007; Kullander & Britz, 2008; Kullander, 2008; Knight *et al.*, 2012; Dishma & Vishwanath, 2013).

Recent freshwater faunal surveys of the Aivapui and Keisalam Rivers (Karnaphuli drainage) of Dampa Tiger Reserve, Mizoram, India, resulted in the collection of a colourful species of *Pethia*. Comparison of these specimens with congeners revealed that it was new to science, and we herein describe it as *Pethia rutila*, new species.

### **Material and methods**

Specimens were fixed in 10% formalin and subsequently preserved in 70% alcohol. Counts and measurements were made on the left side of specimens following Kullander (2008). Measurements were taken point to point with digital calipers rounded to nearest 0.1 mm. Fin rays and scales were counted under a stereo-zoom microscope and the former confirmed by clearing and staining following procedures described by Taylor & Van Dyke (1985). Numbers in parentheses after a count indicate the frequency of that count. Measurements are given as percentage of standard length (SL) and subunits of the head are also expressed in proportions of head length (HL). Type

*Pethia expletiforis*: topotypes, PUCMF 12005, 7, 36.4–46.6 mm SL; India, Mizoram: Tuisi River, a tributary of the Kaladan river in the vicinity of Khopai Village.

*Pethia stoliczкана*: MUMF 6120, 10, 45.9–49.8 mm SL; India: Manipur: Lokchao River at Moreh.

*Pethia ticto*: MUMF 6115, 1, 38.0 mm SL; India: Manipur: Jiri River at Jiribam Sub-division. MUMF 6116–20, 5, 40.0–46.0 mm SL; India: Assam: Wetlands of Hajo, North Kamrup District. ZSI/SRC F 8546, 3, 16.0–18.0 mm SL; India; Barjuri Dhan Shree River. ZSI/SRC F 6630, 5, 24.0–33.0 mm SL; India: Kulsi River. ZSI/SRC F 8548, 2, 46.0–48.0 mm SL; India, Assam: ox-bow Lake at Dibrugarh. ZSI/SRC F 8549, 1, 37.0 mm SL; India, Assam: Brahmaputra River at Nimati Ghat, Majuli. MKC 88, 3, 23.0–27.0 mm SL; India, West Bengal: Ponds in Midnapur near Orissa border.

*Pethia pookodensis*: paratypes, ZSI/SRC F 7636, 21, 26.0–42.0 mm SL; India, Kerala: Pookode Lake.

*Pethia manipurensis*: topotypes, ZSI/SRC F 8550, 4, 54.0–62.0 mm SL; India, Manipur: Loktak Lake.

*Pethia punctata*: ZSI/SRC F 8272, 3, 38.0–40.0 mm SL; Mangai Malai, Kulasekaram, Kanyakumari WLS. ZSI/SRC F 8545, 2, 40.0–42.0 mm SL; India, Kerala: Pookode Lake. ZSI/SRC F 4339, 13, 29.0–37.0 mm SL; India; Mathalamparai, Tirunelveli District.

*Pethia muvattupuzhaensis*: topotypes, ZSI/SRC F 8465, 5, 39.0–45.0 mm SL; India, Kerala: Muvattupuzha River.

*Pethia setnai*: ZSI/SRC F 6127, 10, 18.0–40.0 mm SL; India, Karnataka: Kukke Subramanya. ZSI/SRC F 8544, 3, 36.0–41.0 mm SL; India: Stream in Agumbe. ZSI/SRC F 6113, 1, 39.0 mm SL; Sowparnika River.

*Pethia phutunio*: topotypes, MKC 340, 20, 14.0–19.0 mm SL; India, West Bengal: Ponds in Udayrampur Village, P.S. Bishnupur, south 24 Parganas District.

*Pethia shalynius*: topotype, ZSI/SRC F 7150, 1, 40 mm SL; India, Meghalaya: Ri-bhoi district.

*Pethia nigripinna*: holotype, ZSI/SRC F 6628, 45.0 mm SL; India, Kerala: Kalindhi stream of river Kabini, Wynad. ZSI/SRC F 6629, paratypes, 3, 33.0–38.0 mm SL; India, Kerala: Kalindhi stream of river Kabini, Wynad.

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