



<http://dx.doi.org/10.11646/zootaxa.3786.2.6>

<http://zoobank.org/urn:lsid:zoobank.org:pub:814F02DB-E31A-431B-9819-C98F6415875F>

## ***Schistura phamhringi*, a new stone loach from Chindwin Basin in Manipur, India (Cypriniformes: Nemacheilidae)**

BUNGDON SHANGNINGAM<sup>1</sup>, YUMNAM LOKESHWOR<sup>2</sup> & WAIKHOM VISHWANATH<sup>3</sup>

Department of Life Sciences, Manipur University, Canchipur—795003, Manipur, India.

E-mail: <sup>1</sup>[bdshangningam@gmail.com](mailto:bdshangningam@gmail.com), <sup>2</sup>[lokeyum24@gmail.com](mailto:lokeyum24@gmail.com), <sup>3</sup>[wvnath@gmail.com](mailto:wvnath@gmail.com)

### **Abstract**

*Schistura phamhringi*, new stone loach, is described from Dutah Stream, tributary of the Yu River (Chindwin basin), near Larong Village, Chandel District, Manipur, India. It is distinguished from all its congeners by a unique combination of characters: 6–7 black saddles, each continued on both flanks forming broad diamond-shaped black bars with narrow ventral margin; bars superimposed on a grey stripe along lateral line; upper lip with numerous melanophores; black basicaudal bar arc-shaped; complete lateral line; and prominent oar-like suborbital flap on male.

**Key words:** Nemacheilid, Dutah Stream, Yu River

### **Introduction**

The first scientific report of the fishes of Manipur, India, was by Chaudhuri (1912) and included a description of a new species, *Schistura manipurensis*, collected from the Ukhrul District (Chindwin basin) by Rev. Mr. Pettigrew and sent to the Indian Museum in 1910.

Hora (1921) described *S. sikmaiensis* and *S. kangjupkhulensis* from the Chindwin basin and reported that the fish fauna of the basin included an endemic element and a Burmese element, with the endemic element confined to the hill streams and strictly speaking, isolated. Hora (1937) reported *S. vinciguerrae* from the Namya River, a tributary of the Chindwin at Konkan Thana in Manipur near the Myanmar border. Vishwanath & Nebeshwar Sharma (2004) described *S. reticulata*, and Vishwanath & Shanta (2004a & b) described *S. khugae*, bringing the number of species of *Schistura* known from the headwaters of the Chindwin in Manipur to six. Nemacheilid fishes usually inhabit torrential habitats and are not likely to be distributed widely (Kottelat 1990).

A recent collection of fishes from a tributary of Dutah Stream draining into the Yu River (a tributary of the Chindwin) near Larong village, Chandel District of Manipur, India, included an unnamed nemacheilid, which is herein described as *Schistura phamhringi*, new species.

### **Material and methods**

Counts and measurements follow Kottelat (1990). Measurements were made on the left side of specimens with digital callipers to the nearest 0.1 mm. Measurements are presented as proportions of dorsal head length (DHL), or standard length (SL). Fin rays and pores in the cephalic lateralis system and lateral line were counted under transmitted light using a stereo-zoom microscope, and illustrations were made on the images captured by using a digital camera fitted to the microscope. Identification of uncini and taste buds follows Roberts (1982). For high resolution surface topography, selected specimens in preservative were cut into 1 sq cm and observed and photographed under an Environmental Scanning Electron Microscope (ESEM) Quanta™ 250 FEG. The specimens are deposited in Manipur University Museum of Fishes, Manipur (MUMF), and Zoological Survey of India, Kolkata (ZSI). Specimens in the Zoological survey of India Kolkata (ZSI), ZSI Eastern Regional Station Shillong

*Schistura khugae*, MUMF 5013, 1, 67.0 mm SL; India: Manipur: Churchandpur District: Khuga River (Chindwin-Irrawaddy basin). MUMF 5001–5008, 8, 60.0–88.3 mm SL, paratypes; collection site same as holotype.

*Schistura koladyneensis*, MUMF 11048, 1, 64.6 mm SL, holotype; India: Mizoram: Lawntlai District: Koladyne River at Kolchaw (Koladyne basin).

*Schistura manipurensis*, MUMF 2079, 1, 56.5 mm SL; India: Manipur: Ukhrul District: Challou River at Thetsi (Chindwin basin). MUMF 2155–2159, 5, 38.0–56.0 mm SL; India: Manipur: Ukhrul District: Tizu River at Zesami (Chindwin basin).

*Schistura minuta*, ZSI FF 3749, 1, 35.0 mm SL, holotype; India: Manipur: Tamenglong District: Iyei River at Noney (Brahmaputra basin). MUMF 1001–1003, 3, 26.2–38.3 mm SL, paratypes; collection site same as holotype.

*Schistura nagaensis*, ZSI/ SRS/ F 574, 1, 55.4 mm SL, holotype; India: Nagaland: Phudung River tributary of Tizu River (Chindwin-Irrawaddy basin). —ZSI/ SRS/ F 575, 3, 43.3–57.6 mm SL, paratypes; collection site same as holotype.

*Schistura porocephala*, MUMF 11092, 1, 51.5 mm SL, holotype; India: Mizoram: Lunglei District: a stream of Mat River near Thualthu (Koladyne basin). MUMF 11090–11101, 8, 46.6–53.5 mm SL, paratypes; collection site same as holotype. —ZSI FF 4614, 2, 46.0–48.0 mm SL, paratypes; collection site same as holotype.

*Schistura reticulata*, MUMF 4400, 1, 62.0 mm SL, holotype; India: Manipur: Maklang River in Ukhrul district (Chindwin basin). MUMF 4410–4411, 2, 58.0–77.0 mm SL, females; India: Manipur: Chandel district: Lokchao River at Moreh (Chindwin basin).

*Schistura sikmaiensis*, MUMF 11100–11103, 3, 57.5–74.5 mm SL; India: Manipur: Ukhrul district: Sanalok stream at Kultuk (Chindwin drainage). MUMF 1012/2, 2, 41.1–41.4 mm SL; India: Manipur: Chakpi stream at Mombi (Chindwin drainage).

*Schistura sijuensis*, ZSI VF/ERS 2629, 1, 42.8 mm SL; India: Meghalaya: West Garo Hills: Stream from Achingre Nokrek Biosphere Reserve (Barak-Surma-Meghna River system); (labeled as *S. reticulofasciata* at ZSI/ERS Shillong).

*Schistura tigrina*, MUMF 4105, 1, 84.5 mm SL, holotype; India: Manipur: Tamenglong District: Tamei Subdivision: Barak River at Khunphung (Brahmaputra basin). MUMF 4106/7, 3, 83.0–84 mm SL, paratypes; same as holotype.

*Schistura vinciguerrae*, MUMF 3001, 1, 54.0 mm SL; India: Manipur: Tamenglong District: tributary of Irang River (Brahmaputra basin).

## Acknowledgements

We are grateful to the late BD Phamhring Anal for the collection of specimens and submission to MUMF, to K. Venkataraman and L. Kosygin of ZSI, and to K. Ilango and J. Thilak of ZSI/SRS for providing access to specimens under their care. We are also thankful to H. Basantakumar and N. Manoranjan of the Department of Physics, Manipur University, for the Scanning Electron Microscopy. The second author is thankful to the authority of Manipur University for providing financial support as a university fellowship.

## References

- Bohlen, J. & Šlechtová, V. (2011) A new genus and two new species of loaches (Teleostei: Nemacheilidae) from Myanmar. *Ichthyological Exploration of Freshwaters*, 22, 1–10.
- Bohlen, J. & Šlechtová, V. (2013a) Two species of *Schistura* from Myanmar (Teleostei: Nemacheilidae). *Ichthyological Exploration of Freshwaters*, 24, 21–30.
- Bohlen, J. & Šlechtová, V. (2013b) *Schistura puncticeps*, a new species of loach from Myanmar (Cypriniformes: Nemacheilidae). *Ichthyological Exploration of Freshwaters*, 24, 85–92.
- Chaudhuri, B.L. (1912) Description of some new species of freshwater fishes from north India. *Records of Indian Museum*, 7, 437–444.
- Chen, X-Y. & Neely, D.A. (2012) *Schistura albirostris*, a new nemacheiline loach (Teleostei: Balitoridae) from the Irrawaddy River drainage of Yunnan Province, China. *Zootaxa*, 3586, 222–227.

- Hora, S.L. (1921) Fish and fisheries of Manipur with some observations on those of Naga Hills. *Records of Indian Museum*, 22, 166–214.
- Hora, S.L. (1929) Notes on fishes in the Indian Museum.VIII. On the loaches of the genus *Nemacheilus* from Burma. *Records of Indian Museum*, 31, 311–334.
- Hora, S.L. (1937) Game fishes of India. Part III. *Journal of Bombay Natural Historical Society*, 39, 659–678.
- Kottelat, M. (1990) *Indochinese nemacheilines, a revision of nemacheiline loaches (Pisces: Cypriniformes) of Thailand, Burma, Laos, Cambodia and southern Vietnam*. Verlag, Dr. Friedrich Pfiel, Munchen, 262 pp.
- Kottelat, M. (2012) Conspectus cobitidum: an inventory of the loaches of the world (Teleostei: Cypriniformes: Cobitoidei). *The Raffles Bulletin of Zoology*, Supplement 26, 1–199.
- Kottelat, M., Harries, R.D. & Proudlove, S.G. (2007) *Schistura papulifera*, a new species of cave loach from Meghalaya, India (Teleostei: Balitoridae). *Zootaxa*, 1393, 35–44.
- Lalramliana (2012) *Schistura aizawlsensis*, a new species of loach from Mizoram, northeast India (Cypriniformes: Balitoridae). *Ichthyological Exploration of Freshwaters*, 23, 97–104.
- Lokeshwor, Y. & Vishwanath, W. (2011) *Schistura fasciata*, a new nemacheiline species (Cypriniformes: Balitoridae) from Manipur, India. *Journal of Threatened Taxa*, 3, 1514–1519.  
<http://dx.doi.org/10.11609/jott.o2454.1514-9>
- Lokeshwor, Y. & Vishwanath, W. (2012a) *Schistura koladyneensis*, a new species of loach from the Koladyne basin, Mizoram, India (Teleostei: Nemacheilidae). *Ichthyological Exploration of Freshwaters*, 23, 139–145.
- Lokeshwor, Y. & Vishwanath, W. (2012b) *Schistura porocephala*, a new nemacheilid loach from Koladyne basin, Mizoram, India (Teleostei: Nemacheilidae). *Ichthyological Research*, 60, 159–164.  
<http://dx.doi.org/10.1007/s10228-012-0325-8>
- Lokeshwor, Y. & Vishwanath, W. (2013a) *Schistura ferruginea*, a new species of loach from Northeast India (Teleostei: Nemacheilidae). *Ichthyological Exploration of Freshwaters*, 24, 49–56.
- Lokeshwor, Y. & Vishwanath, W. (2013b) Two new species of stone loaches of the genus *Schistura* from the Koladyne basin, Mizoram, India (Teleostei: Cobitoidei: Nemacheilidae). *Zootaxa*, 3731 (4), 561–576.  
<http://dx.doi.org/10.11646/zootaxa.3731.4.8>
- Lokeshwor, Y., Vishwanath, W. & Kosygin, L. (2013) *Schistura paucireticulata*, a new of loach from Tuirial River, Mizoram, India (Teleostei: Nemacheilidae). *Zootaxa*, 3683 (5), 581–588.  
<http://dx.doi.org/10.11646/zootaxa.3683.5.6>
- Roberts, T.R. (1982) Unculi (horny projections from single cells), an adaptive feature of the epidermis of Ostariphysan fishes. *Zoological Scripta*, 11, 55–76.  
<http://dx.doi.org/10.1111/j.1463-6409.1982.tb00518.x>
- Vishwanath, W. & Nebeshwar Sharma, K. (2004) *Schistura reticulata*, a new species of balitorid loach from Manipur, India with redescription of *S. chindwinica*. *Ichthyological Exploration of Freshwaters*, 15, 323–330.
- Vishwanath, W. & Shanta, K (2004a) A new nemacheiline fish of the genus *Schistura* McClelland (Cypriniformes: Balitoridae) from Manipur, India. *Journal of Bombay Natural Historical Society*, 101, 138–140.
- Vishwanath, W. & Shanta, K. (2004b) *Schistura khugae*, a new replacement name for *S. macrocephalus* Vishwanath & Shanta 2004 (Teleostei: Balitoridae). *Ichthyological Exploration of Freshwaters*, 15, 323–330.