

***Dario kajal*, a new species of badid fish from Meghalaya, India (Teleostei: Badidae)**

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Abstract

Dario kajal, new species, is described from Seinphoh stream in the Jaintia Hills of Meghalaya, India. It can be distinguished from all other congeners by the presence of a postorbital stripe that continues behind the eye in line with the preorbital stripe and by the presence in males of a series of double bars restricted to the upper half of the body. The discovery of *D. kajal* in the Meghna River drainage raises the number of *Dario* species to five and raises interesting questions about the biogeography of the genus.

Key words: Northeast India; disjunct distribution; vicariance; Indo-Burma biodiversity hotspot

Introduction

The percomorph fish family Badidae comprises 21 species distributed in freshwater in southern Asia, from eastern India and Nepal east to the Mekong drainage in Thailand and Laos. The family was revised by Kullander & Britz (2002) who distinguished two genera, *Badis* and *Dario*. The latter is characterized by its small size (maximum standard length between 15 and 28 mm) and various reductions, such as absence of the postcranial lateral line. Three species of *Dario* (*D. dario* Hamilton, *D. dayingensis* Kullander & Britz, *D. hysginon* Kullander & Britz) are distributed in the Brahmaputra and Ayeyarwaddy drainages in India and Myanmar (Kullander & Britz 2002), and an unusual, recently-described, fourth species (*D. urops* Britz, Ali & Philip) is known from streams in south India (Britz *et al.* 2012). We recently obtained material of a differently-looking *Dario* collected from Meghalaya in northeast India, which prompted a closer study. The present paper demonstrates that this is a new species, the fifth in the genus, and the formal description is given herein.

Material and methods

Ten measurements and 12 counts were taken from a series of ten specimens following Kullander & Britz (2002). Measurements are point to point and were taken with a digital caliper, usually under a stereomicroscope, and were recorded to the nearest 0.1 mm. Vertebrae and fin rays of dorsal and anal fin of BMNH.2006.8.2.1 (holotype) and BMNH 2006.8.2.2-26 (25 paratypes) were counted from radiographs. Presence of teeth in the oral cavity was checked with the stereomicroscope on alcohol specimens. Presence and shape of the parasphenoid tooth patch was observed in a dissected specimen stained with an alcoholic alizarin solution. Colour pattern terminology follows Kullander & Britz (2002). Specimens of *Dario* used in this study are deposited in the collections of The Natural History Museum (BMNH), London, the Swedish Museum of Natural History (NRM), Stockholm, and National Museum of Natural History (USNM), Smithsonian Institution, Washington DC. The distribution map in figure 4 is based on *Dario* material listed in Kullander & Britz (2002), Britz *et al.* (2012), USNM 376118, 376120, 376433, 376434, and the type series of *Dario kajal*.

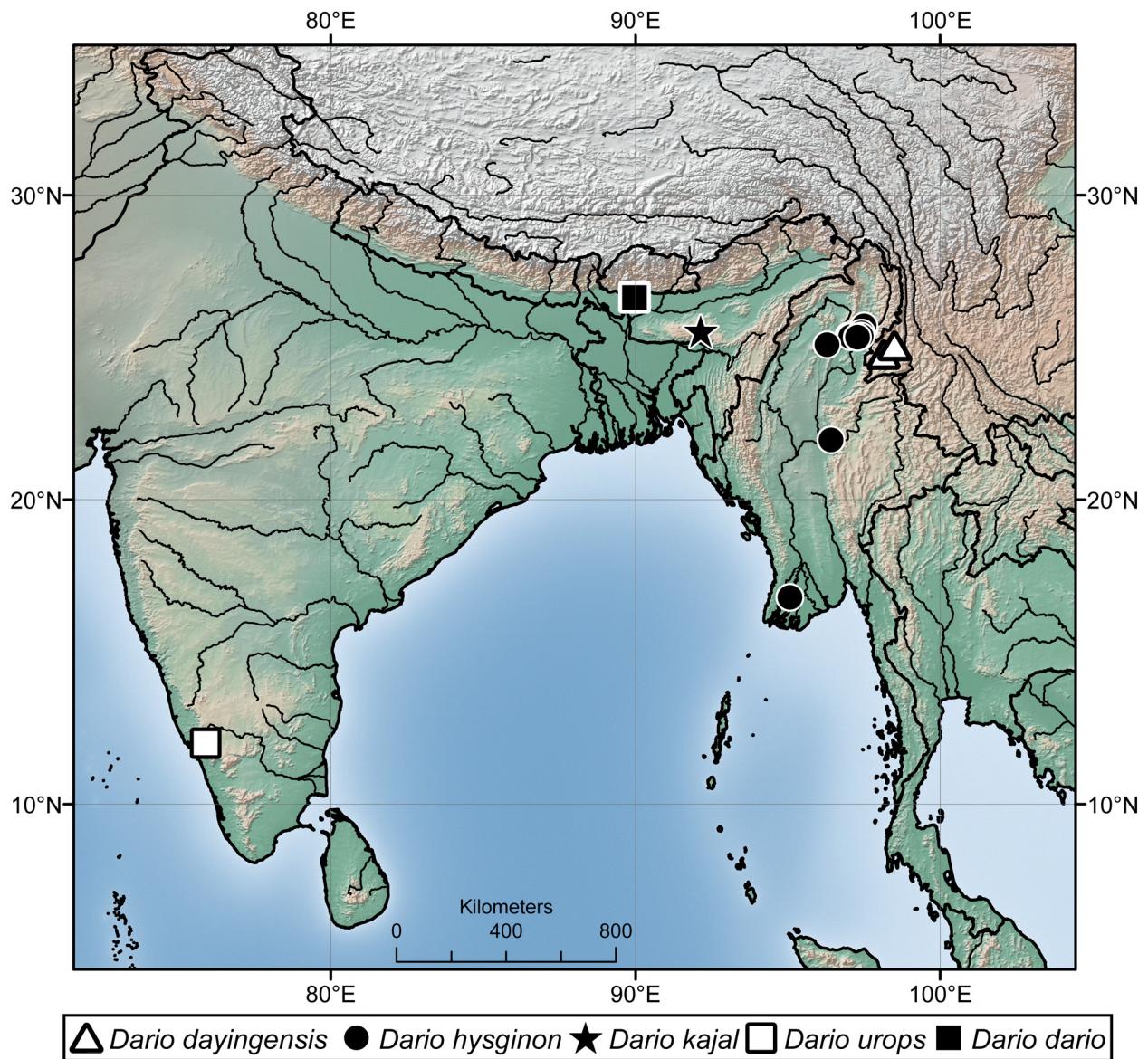


FIGURE 4. Distribution of *Dario* species in India and Myanmar.

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References

- Britz, R., Ali, A. & Philip, S. (2012) *Dario urops*, a new species of badid fish from the Western Ghats, southern India (Teleostei: Percomorpha: Badidae). *Zootaxa*, 3348, 63–68.
 Karanth, K.P. (2003) Evolution of disjunct distributions among wet-zone species of the Indian subcontinent: testing various hypotheses using a phylogenetic approach. *Current Science*, 85, 1276–1283.

- Kullander, S. & Britz R. (2002) Revision of the family Badidae (Teleostei: Perciformes), with descriptions of a new genus and ten new species. *Ichthyological Exploration of Freshwaters*, 13, 295–372.
- Rüber, L., Britz, R., Kullander, S.O. & Zardoya, R. (2004) Evolutionary and biogeographic patterns of the Badidae (Teleostei: Perciformes) inferred from mitochondrial and nuclear DNA sequence data. *Molecular Phylogenetics and Evolution*, 32, 1010–1022.
<http://dx.doi.org/10.1016/j.ympev.2004.04.020>
- Weitzman, S.H. & Vari, R.P. (1988) Miniaturization in South American freshwater fishes; an overview and discussion. *Proceedings of the Biological Society of Washington*, 101, 444–465.
- Werth, A. (2009) Importnachrichten. *Dario* sp. “Jaintia Hills”. *Die Aquarien- und Terrarienzeitschrift*, 62, 14.