



<http://dx.doi.org/10.11646/zootaxa.3962.1.10>

<http://zoobank.org/urn:lsid:zoobank.org:pub:D9E04CA2-2D64-4A71-8FE9-87C35AB177AD>

***Aperioptus pictorius* Richardson 1848 is a senior synonym of *Acanthopsoides molobrion* Siebert 1991, and *Aperioptus* is a senior synonym of *Acanthopsoides* Fowler 1934 (Cypriniformes: Cobitidae)**

LAWRENCE M. PAGE¹ & WEERAPONGSE TANGJITJAROEN²

¹Florida Museum of Natural History, Gainesville, Florida, 32611, USA. E-mail: lpagel@ufl.edu

²Faculty of Veterinary Medicine, Chiang Mai University, Chiang Mai, Thailand 50100; Email: weerapongse@yahoo.com

Corresponding author: Lawrence M. Page, lpagel@ufl.edu

Abstract

Aperioptus pictorius was described by Richardson in 1848 with limited textual information but with an illustration sufficient to confirm the species as one currently recognized as *Acanthopsoides molobrion* making *Aperioptus* a senior synonym of *Acanthopsoides* Fowler 1934 and *A. pictorius* a senior synonym of *Acanthopsoides molobrion* Siebert 1991. Species to be recognized in *Aperioptus* in addition to *A. molobrion* are *A. gracilis* (Fowler 1934), *A. gracilentus* (Smith 1945), *A. delphax* (Siebert 1991), *A. hapalias* (Siebert 1991), and *A. robertsi* (Siebert 1991). *Aperioptus* also is a senior synonym of *Neacanthopsis* Smith 1945, type species *Neacanthopsis gracilentus*.

Key words: *Acanthopsoides*, *Neacanthopsis*, Teleostei, loaches

Aperioptus pictorius was described by Richardson (1848) with a line drawing and the following text:

“Of this fish I can give no details. There were two specimens which I unfortunately placed in the hands of the artist before I had examined them, except very cursorily. While he was employed in sketching, he put them into a plateful of water for the purpose of expanding their fins more perfectly, and forgetting that he had not returned them into the spirits, they were thrown out and lost. The general aspect of the fish is that of a slender *Galaxias*, but there are no teeth on the jaws. The orifice of the mouth is a narrow vertical oval, which is restricted on the sides by membranous processes. The figure is of the natural size. Hab. Borneo.”

Although the lack of type specimens and the limited text in the original description has caused confusion over the identity of *A. pictorius*, the name has appeared several times in print. It was listed by Gunther (1868), and Popta (1906) listed *A. pictorius* as a species found in Sarawak. Vaillant (1902) revised the diagnosis of *Aperioptus*, but did so based on his description of *Aperioptus megalomycter*, now considered valid as *Ellopostoma megalomycter* (Vaillant 1902) and placed in the family Ellopostomatidae (Bohlen & Šlechtová, 2009; Chen, *et al.*, 2009). Weber and de Beaufort (1916:238–239) described *A. pictorius* as a species of “doubtful systematic position and habitat” and reproduced the figure from Richardson's (1848) original description. Roberts (1972) expressed the opinion that the original description of *A. pictorius* was insufficient to identify the species, and most recently Kottelat (2012) treated *Aperioptus* and *A. pictorius* as questionable synonyms of *Acanthopsis* and *Acanthopsis dialuzona*, respectively.

Although Richardson's text provides little diagnostic information, the accompanying figure, which Richardson noted was of the same approximate size as the two specimens he examined, is more informative. The figured specimen (Fig. 1) is long and slender with a somewhat elongated snout and many small dark spots on the upper side from the head to the caudal peduncle. All of these characteristics are consistent with those of species now assigned to the genus *Acanthopsoides* Fowler 1934 as described mostly recently by Siebert (1991a).

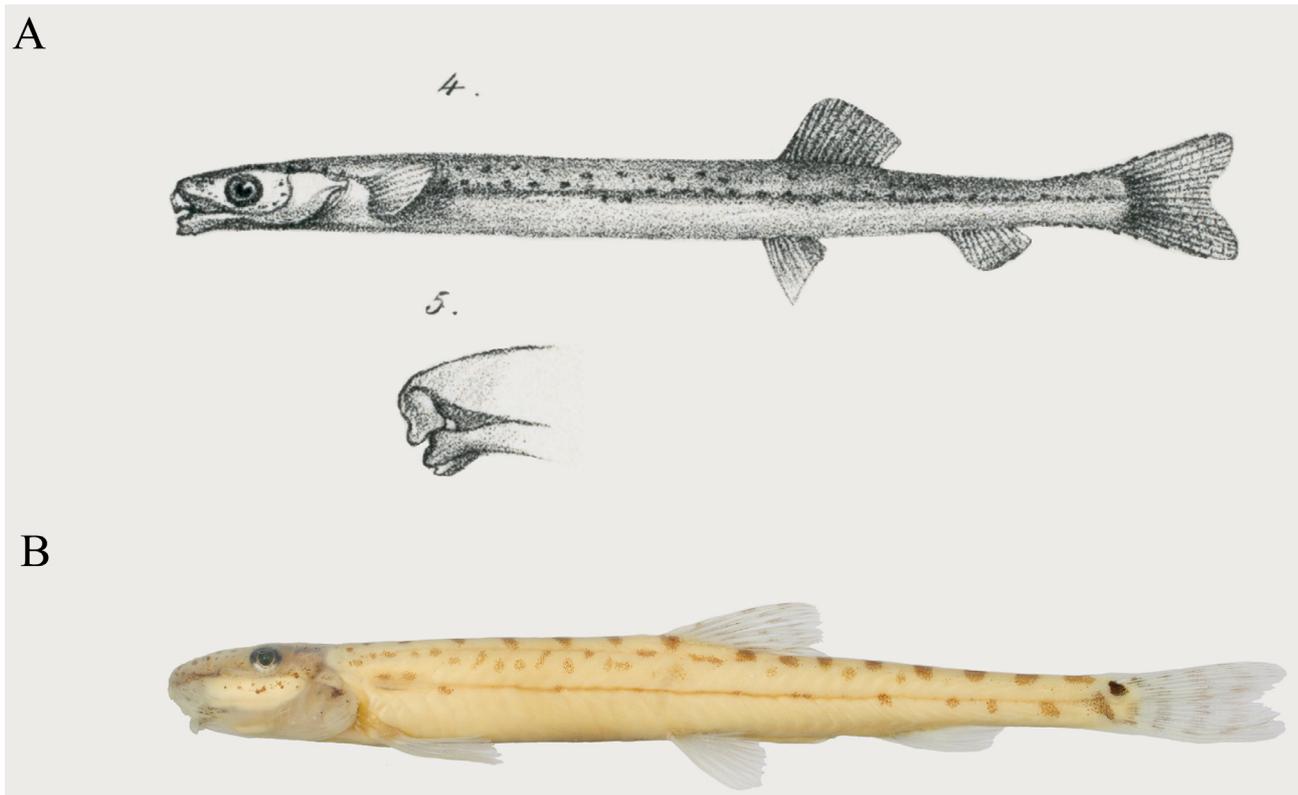


FIGURE 1. *Aperioptus pictorius*. Upper) Plate X. figs. 4–5, reproduced from Richardson (1848). Lower) UF 166889, 39.8 mm standard length, Way Ketimbang, 4.572S, 105.026E, Lampung Province, Sumatra, L. Page, R. Hadiaty, A. Thomson, 30 July 2006.

In his revision of *Acanthopsoides*, Siebert (1991a) discussed at length the distinctive color pattern of the genus. He described the pattern as consisting of a mid-dorsal row of dark spots from the snout to the caudal fin, a mid-lateral row of dark pigment from the snout to the caudal fin, and a less well-defined "field" of dark spots between the mid-dorsal and mid-lateral rows. The "field" of spots above the mid-lateral stripe is especially characteristic of this genus and is clearly shown in the illustration of *A. pictorius*. Other characteristics of *Acanthopsoides*, as described by Siebert, that are consistent with the drawing of *A. pictorius*, include a terete body, slender caudal peduncle, moderately long snout—2 to 2.5 times in head length, and a symmetrical and emarginated caudal fin.

The type locality given by Richardson for *A. pictorius* was Borneo. However, the introduction to the book in which the description appeared noted that the expedition stopped in Sarawak (twice) and in Brunei, and "proceeded along the east coast of Borneo to the province of Unsang." There is no indication in a fuller description of the voyage by Marryat (1848) that inland intrusions were made other than in Sarawak, and it seems likely that Richardson's specimens were collected in Sarawak, as assumed by Potpa (1906).

According to (Siebert 1991a), only two species of *Acanthopsoides* occur in Borneo, and only *A. molobrion* is found in Sarawak. *Acanthopsoides molobrion* Siebert 1991 was described from the Mahakam River basin in Kalimantan Timur, and occurs throughout Borneo and the Malay Peninsula as far north as the Mae Nam Tapi basin in Thailand. *Acanthopsoides robertsi* also occurs in Borneo, but is not known from Sarawak and has a distinctive black color pattern on the fin that Richardson's artist might have been expected to include in his image of *A. pictorius* (although the artist did not show the black spot at the upper caudal-fin base that is prevalent on both *A. molobrion* and *A. robertsi*).

Characters in the illustration of *Aperioptus* that appear inconsistent with those of *A. molobrion* and all other species of *Acanthopsoides* include the number of dorsal-fin rays, which appears to be about 9–10 in the figure. This is higher than the number of rays given by Siebert (1991a) for *Acanthopsoides* (7, rarely 8, branched rays); however, the count is not clear on the illustration, and the number of rays drawn by the artist could have been incorrect. Also, Siebert (1991a) noted that the origin of the dorsal fin is slightly before to over the origin of the

pelvic fin, but the figure of *A. pictorius* shows the origin of the dorsal fin behind the origin of the pelvic fin. The only other genus with a similar body shape and color pattern is *Acantopsis*, in which the origin of the dorsal fin is far in front of the origin of the pelvic fin. Also, the snout and head of *Acantopsis* are much longer than shown in the drawing and longer than those of *Acanthopsoides*, and the body is deeper and arched predorsally (Siebert 1991b, Sontirat 1999, Viswanath & Laisram 2004).

As stated by Richardson (1848) in the original description, the types of *A. pictorius* are lost. However, the name seems to be a senior synonym of *A. molobrion* Siebert, and the holotype of *A. molobrion* (RMNH 31273) is here designated as the neotype of *A. pictorius*. *Aperioptus* 1848 is a senior synonym of *Acanthopsoides* Fowler 1934 and, based on Siebert (1991a), other species of *Aperioptus* are: *A. gracilis* (Fowler 1934), *A. gracilentus* (Smith 1945), *A. delphax* (Siebert 1991), *A. hapalias* (Siebert 1991), and *A. robertsi* (Siebert 1991). *Aperioptus* also is a senior synonym of *Neacanthopsis* Smith 1945, type species *Neacanthopsis gracilentus*.

Etymology. *Aperioptus pictorius* is a clever name reflecting Richardson's (1848) circumstance in having only the image to work with in describing the species. *Aperio*: to uncover, expose, open, or reveal; *optus*: seen, visible; *pictorius*, an adjective: belonging to painters, a painting. The details of this species were revealed by means of an illustration.

Acknowledgements

We thank J. L. Crane and C. Scharpf for assistance in deciphering the derivation of the name, *Aperioptus pictorius*, C. J. Ferraris, Jr. for helpful comments on the manuscript, and Z. S. Randall for production of Figure 1. Funding for this study was provided by the All Cypriniformes Species Inventory Project funded by the U.S. National Science Foundation (DEB 1022720).

References

- Bohlen, J. & Šlechtová, V. (2009) Phylogenetic position of the fish genus *Ellopostoma* (Teleostei: Cypriniformes) using molecular genetic data. *Ichthyological Exploration of Freshwaters*, 20, 157–162.
- Chen, W.-J., Lheknim, V. & Mayden, R.L. (2009) Molecular phylogeny of the Cobitoidea (Teleostei: Cypriniformes) revisited: position of enigmatic loach *Ellopostoma* resolved with six nuclear genes. *Journal of Fish Biology*, 75, 2197–2208. <http://dx.doi.org/10.1111/j.1095-8649.2009.02398.x>
- Günther, A. (1868) *Catalogue of the fishes in the British Museum. Vol. 7*. British Museum, London, xx + 512 pp.
- Kottelat, M. (2012) Conspectus cobitidum: an inventory of the loaches of the world (Teleostei: Cypriniformes: Cobitoidei). *Raffles Bulletin of Zoology*, 26 (Supplement), 1–199.
- Marryat, F.S. (1848) *Borneo and the Indian Archipelago: with Drawings of Costume and Scenery*. Brown, Green, and Longmans, London, 232 pp.
- Popta, C.M.L. (1906) Résultats ichthyologiques des voyages scientifiques de Monsieur le Professeur Dr. A. W. Nieuwenhuis dans le centre de Bornéo (1898 et 1900). *Notes from the Leyden Museum*, 27, 1–304.
- Richardson, J. (1848) Fishes. In: Adams, A. (Ed.), *The Zoology of the Voyage of H.M.S. Samarang; under the Command of Captain Sir Edward Belcher, During the Years 1843–1846*. Reeve & Benham, London, pp. 128, pls. 1–10.
- Roberts, T.R. (1972) An attempt to determine the systematic position of *Ellopostoma megalomycter*, an enigmatic freshwater fish from Borneo. *Breviora*, 384, 1–16.
- Siebert, D.J. (1991a) Revision of *Acanthopsoides* Fowler, 1934 (Cypriniformes: Cobitidae), with the description of new species. *Japanese Journal of Ichthyology*, 38, 97–114.
- Siebert, D.J. (1991b) *Acantopsis octoactinotos*, a new species of horse-faced loach (Cypriniformes: Cobitidae) from Sabah, Malaysia. *Copeia*, 1991, 910–915. <http://dx.doi.org/10.2307/1446086>
- Sontirat, S. (1997) Description of a new species of *Acantopsis* (Cypriniformes: Cobitidae) from Thailand. In: Seret, B. & Sire, J.-Y. (Eds.), *Proceedings of the 5th Indo-Pacific Conference, Nouméa, 1997*. Société Française d'Ichtyologie, Paris. pp. 65–68.
- Vaillant, L.L. (1902) Résultats zoologiques de l'expédition scientifique Néerlandaise au Bornéo central. Poissons. *Notes from the Leyden Museum*, 24, 1–166.
- Vishwanath, W. & Laisram, J. (2004) A new fish of the genus *Acantopsis* van Hasselt (Cypriniformes: Cobitidae) from Manipur, India [India]. *Journal of the Bombay Natural History Society*, 101, 433–436.
- Weber, M. & de Beaufort, L.F. (1916) *The Fishes of the Indo-Australian Archipelago. III. Ostariophysi: II Cyprinoidea, Apodes, Synbranchi*. Brill, Leiden, 455 pp.