

Distribution extension of *Krobia guianensis* (Regan, 1905) (Teleostei: Cichlidae) to the Araguari river basin, Amapá state, northern Brazil

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ABSTRACT: The present study expands the distribution of *Krobia guianensis* to the Araguari river basin, northern Brazil, previously known only from the coastal rivers basin of Guiana and Suriname. In addition, the correct catalog number of the holotype of *Krobia guianensis* is herein presented, as well a diagnosis for the species.

DOI: 10.15560/10.3.632

The South American cichlid genus *Krobia* Kullander & Nijssen, 1989, is a member of the tribe Cichlasomatini (Smith *et al.* 2008; López-Fernández *et al.* 2010). It was erected to include one species of the genus *Acara* Heckel, 1840 (namely *Acara guianensis* Regan, 1905) and one species of the genus *Aequidens* Eigenmann and Bray 1894 (namely, *Aequidens itanyi* Puyo, 1943), both from rivers draining the Guiana Shield (Kullander and Nijssen 1989; Kullander 2012). More recently, Kullander (2012) described a third species, *Krobia xinguensis* from the Xingu river basin, a southern tributary of the Amazon river in the Brazilian Shield, and Steele *et al.* (2013) described *Krobia petitella* from the Berbice River drainage in northeastern Guyana.

The genus *Krobia* is diagnosed by a combination of several character states listed in Kullander and Nijssen (1989), including: two supraneurals, narrowly scaled or naked dorsal and anal fins, the deep notch on anterior ceratohyal bone, uniserial predorsal squamation, dark lateral band composed of dark blotches extending from head to dorsal-fin base end, and caudal-fin base spot superiorly positioned.

Krobia guianensis was described on the basis of a single specimen (Figure 1) from “Guiana” (Kullander and Nijssen 1989). More recently, Kullander and Nijssen (1989) redescribed it based on 1,345 specimens. Although Kullander and Nijssen (1989) provided a detailed redescription of *Krobia guianensis*, they never presented a formal diagnosis for the species, just furnishing a brief discussion about character states among congeners in a section called “notes”. Herein we present a new diagnosis for *K. guianensis*.

Diagnosis.

Krobia guianensis differs from *Krobia itanyi* and *Krobia petitella* by having lateral band reaching to the end of dorsal-fin base (Figure 2 and Kullander and Nijssen 1989, Figures 80 and 81) (vs. ending anteriorly to dorsal-fin

base; Kullander and Nijssen 1989, Figure 92 and Steele *et al.* 2013, Figures 2 and 3 in *K. itanyi* and *K. petitella*); and from *K. xinguensis* by the absence of dark brown spot anterolaterally on each side of lower jaw (vs. presence; Kullander 2012, Figure 3 in *K. xinguensis*) and by the absence of red or orange marks on the sides of head and trunk in live specimens (Figure 3) (vs. presence; Kullander 2012, Figure 5 and Stawikowski 2007 in *K. xinguensis*).

According to Kullander and Nijssen (1989) and Kullander (2003) *K. guianensis* is distributed along the coastal river basins of Guiana and Suriname, between the Demerara and Cottica river basins. The species distribution may be wider, with possible records in Guiana and French Guiana as presented in recent species surveys (Vari *et al.* 2009; Le Bail *et al.* 2012). Recently collected material (Figures 2 and 3) revealed that *K. guianensis* also occurs in northern Brazil, in the Amapari river drainage of the Araguari river basin (Figure 4). The Araguari is the main river basin in the Amapá state with an area of approximately 38,000 km². From its headwaters located in the Serra do Tumucumaque and Serra da Lombarda to its mouth in the Atlantic ocean it runs through 498 km (PROVAM 1990). *Krobia guianensis* was collected on two distinct localities: a small stream close to the Amapari river main channel and a stream near Cupixi river (see examined material for detailed informations about localities). The stream close to the Amapari main river channel is a lentic clear water body with small amount of sediments and muddy substrate. The species was collected along the watercourse in areas 50 cm deep (Figure 5). The stream near Cupixi river is a lentic clear water body with muddy substrate. The specimens were collected near the margin at 80-90 cm deep.

The generic osteological features of the newly collected specimens from Amapá state were checked up in prepared specimens and are in accordance with the propositions of Kullander & Nijssen (1989: 148) for the genus.

Investigations during the current work, revealed that the correct catalog number of the holotype of *K. guianensis* (Figure 1) is BMNH 1861.5.2.8, and not BMNH 1851.5.2.8 as recorded both in Kullander and Nijssen (1989) and Kullander (2003). The correct catalog number was confirmed by the curator of the fish collection of the British Museum of Natural History and by informations presented in the British Museum of Natural History website.

Examined material:

Material is deposited in: BMNH, British Museum of Natural History, London, England; and UFRJ, Instituto de Biologia, Universidade Federal do Rio de Janeiro, Brazil.

Guiana: *Krobia guianensis*: BMNH 1861.5.2.8; Guiana (holotype). Brazil: Amapá state: UFRJ 9367, 1, 82.1 mm SL; road BR-210 between rio Cupixi and Porto Grande near Felicíssimo ranch, Porto Grande, 0°36'42.1"N 51°42'33.8"W, 84 m of altitude; P.H.N. Bragança & E. Henschel, 27 Jul 2012; UFRJ 8842, 1, 72.3 mm SL, road BR-210 between rio Cupixi and Porto Grande near Felicíssimo ranch, Porto Grande, 0°36'42.1"N 51°42'33.8"W, 84m of altitude; P.H.N. Bragança & E. Henschel, 27 Jul 2012; UFRJ



FIGURE 1. Holotype of *Krobia guianensis*, BMNH 1861.5.2.8: Guiana. © The Natural History Museum, London



FIGURE 2. *Krobia guianensis*, UFRJ 9367, 82.1mm SL; Brazil: Amapá: Porto Grande.



FIGURE 3. *Krobia guianensis*, UFRJ 8844, 88.0mm SL; Brazil: Amapá: Serra do Navio (few hours after collection).

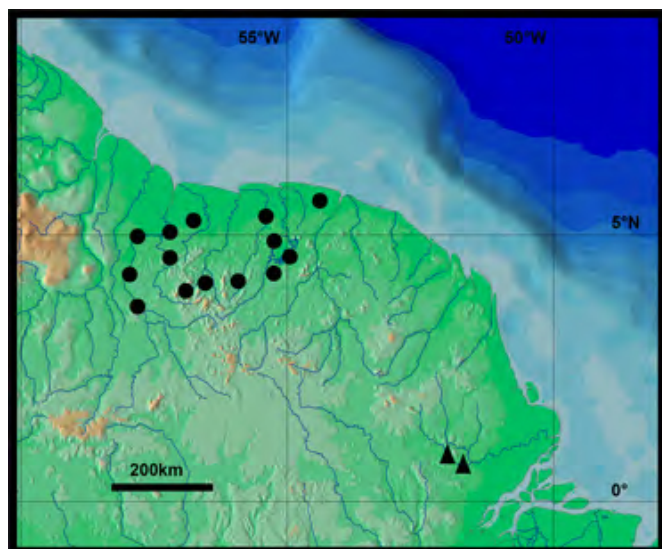


FIGURE 4. Distribution of *Krobia guianensis*: localities of Kullander & Nijssen 1989 (black circle); new records (black triangle). Each point can represent more than one locality.



FIGURE 5. Amapari river near Pedra Preta village (Brazil: Serra do Navio municipality).

8870, 3, 52.0–60.8 mm SL (c&s); road BR-210 between rio Cupixi and Porto Grande near Felicíssimo ranch, Porto Grande, 0°36'42.1"N 51°42'33.8"W, 84 m of altitude; P.H.N. Bragança & E. Henschel, 27 Jul 2012. UFRJ 8844, 2, 68.4–88.0 mm SL; small stream in rio Amapari basin, Pedra Preta village, Serra do Navio municipality, 0°54'26.4"N 52°00'52.2"W, 82 m of altitude; P.H.N. Bragança & E.

Henschel, 27 Jul 2012. Collections were made under the "Autorização para atividades com finalidade científica" ICMBIO permission, number 20735-8.

ACKNOWLEDGMENTS: We are grateful to Orlando Simões and Gilvan da Silva for the daily help and assistance in the laboratory; and to James MacLaine, curator of the fish collection of the British Museum of Natural History, for providing photographs and informations about the holotype of *Krobia guianensis* catalog number. This study was supported by CNPq (Conselho Nacional de Desenvolvimento Científico e Tecnológico – Ministério da Ciência e Tecnologia) and FAPERJ (Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro).

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RECEIVED: September 2013

ACCEPTED: February 2014

PUBLISHED ONLINE: July 2014

EDITORIAL RESPONSIBILITY: Rubens Pazza