Garra robertsi, a new cyprinid (Cypriniformes: Cyprinidae) fish species from Borneo

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Abstract

Garra robertsi is described from specimens collected from the Sungai Bongan and Tempassuk rivers in Sabah, Borneo. The species is differentiated from G. borneensis, its only congener on the island of Borneo, in having five (versus four) transverse scale rows above lateral line, the first branched dorsal-fin ray extending beyond the posterior-most extent of any other part of the dorsal fin when depressed (versus not extending posteriorly beyond last ray when depressed), breast with deeply embedded scales (versus exposed scales), fewer tubercles on snout, thin (versus thick) anteromedial fold on the lower lip, absence (versus presence) of a lateral stripe, absence (versus presence) of a stark, contrasting black stripe on lower caudal-fin rays, and other pigmentation characteristics.

Key words: Garrinae, Malaysia, Sungai Bongan River, Tempassuk River

Introduction

Fishes of the genus Garra are diverse, widely distributed, and are of economic and cultural importance. There are more than 100 species throughout its trans-Afro-Asian range (Eschmeyer 2015), with the species diversity being the greatest in south and Southeast Asia (Kottelat 2013). Despite being a source of immense biodiversity, Borneo is disproportionately depauperate with regard to species of Garra. Only one species has been recognized, G. borneensis (Vaillant). There are no other species that have been synonymized with G. borneensis, suggesting that variation in Garra throughout Borneo has remained largely unstudied and G. borneensis has been treated as a name used for all Garra encountered on the island. While examining specimens of G. borneensis collected throughout the island, a unique and distinct form was found from several lots collected at localities in the northern river drainages in Sabah. One locality referred to as Marak Parak, likely refers to a road named Marak Parak which parallels the Sungai Bongan River in Kota Manudu Sabah, has several lots collected by R.B. Stuebing in October, 1988. Additionally, P. K. Chin collected a single lot of this form in February 1950 from the Tempassuk River. This species is described herein as Garra robertsi.

Methods

Museum abbreviations follow Sabaj Perez (2014). Measurements were taken using digital calipers to the nearest 0.1 mm. All measurements follow Kullander and Fang (2004) and Nebeshwar et al. (2009). Meristic data used in this analysis include the following: lateral-line scale rows were taken from the first pored scale to the posterior-most scale on the hypural plate; predorsal scale rows were counted from the first scale at occiput to the posterior-most predorsal scale at dorsal-fin origin; transverse scale rows above lateral line were those horizontal scale rows beginning at dorsal-fin origin and continuing ventrally to include the scale row above lateral line; transverse scale rows below lateral line were those one horizontal scale row beneath the lateral line to the vent; circumpeduncular scale rows above the lateral line included scale rows from the left lateral line scale row dorsally to, and including,