Boraras naevus, a new species of miniature and sexually dichromatic freshwater fish from peninsular Thailand (Ostariophysi: Cyprinidae)

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Abstract

Boraras naevus, new species, is described from peninsular Thailand. It is distinguished from other congeners by features of its sexually dimorphic colour pattern, principal caudal-fin, pelvic-fin and branched dorsal-fin ray counts, lateral scale row counts, and a number of osteological features.

Key words: Cypriniformes, Danioninae, Taxonomy, Southeast Asia

Introduction

Members of the cyprinid genus Boraras Kottelat & Vidthayanon are small, brightly coloured fishes that inhabit swamps and slow-flowing streams throughout much of Southeast Asia (Kottelat & Vidthayanon, 1993). Reaching maximum adult sizes less than 20 mm in standard length, all members of Boraras are considered miniature fishes (sensu Weitzman & Vari, 1988) and exhibit a number of reductive characteristics, including the absence of the body lateral line, reduced cephalic lateral line system, low numbers of scales, branched fin rays, gill rakers and pharyngeal tooth rows (Kottelat & Vidthayanon, 1993), and the complete absence of a number of skeletal elements (Conway, 2005; Britz & Conway, 2009). Boraras currently includes five species, most of which were formerly placed in Rasbora Bleeker: B. brigittae (Vogt), B. maculatus (Duncker), B. merah (Kottelat), B. micros Kottelat & Vidthayanon and B. urophthalmoides (Kottelat). Several phylogenetic investigations have recovered Boraras as a monophyletic group and suggest that the genus Trigonopoma Liao, Kullander & Fang (=R. pauciperforata-group of Kottelat & Vidthayanon, 1993) may represent the sister group to Boraras (Conway, 2005; Liao et al., 2009; Tang et al., 2010).

The relationships between the five species of Boraras are incompletely resolved (Conway, 2005). Amongst Boraras, two species (B. maculatus and B. micros) exhibit a distinctive blotched pattern, consisting of three blackish brown circular markings in similar positions on the body (one at base of caudal fin, one at base of anal fin and one situated at mid-height of flank, roughly midway between posterior margin of opercle and vertical through pelvic-fin origin). The other three species have a midlateral stripe and a small circular marking at the caudal-fin base (B. urophthalmoides and B. brigittae) or a very elongated blotch on the anterior third of the flank, and a narrow midlateral stripe from above the anal-fin origin to the middle of the caudal-fin base (B. merah). Ichthyological surveys conducted in peninsular Thailand uncovered an additional species of blotched Boraras, similar to B. maculatus and B. micros but differing in a number of characters. In this paper we provide its formal description.