

**BOTIA SPLENDIDA, A NEW SPECIES OF LOACH
(PISCES: COBITIDAE) FROM THE MEKONG BASIN IN LAOS**

Tyson R. Roberts

ABSTRACT. - *Botia splendida*, new species, recently discovered in the Se Kong watershed of the Mekong basin in southern Laos, is most similar and presumably most closely related to the widely distributed Southeast Asian mainland species *Botia morleti* Tirant, 1885. It differs from *B. morleti* mainly in having no dorsomedian dark stripe; a complete pale ring immediately anterior to dark ring on caudal peduncle; larger dark spots on caudal fin; and in other details of coloration.

INTRODUCTION

In March and April 1995, the author did an ichthyological survey of part of the Se Kong watershed in southern Lao Peoples Democratic Republic in connection with a proposed Xe Nam Noy-Xe Pian hydropower project on the Bolaven Plateau. Several collections were made in tributaries along or near the base of the plateau, three of them each yielding one specimen of a distinctively colored new species of *Botia* that evidently is closely related to *Botia morleti* Tirant, 1885.

The specimens have been deposited in the following institutions: CAS, California Academy of Sciences (San Francisco); TISTR, Thailand Institute for Scientific and Technologic Research (Bangkok); and ZRC, Zoological Reference Collection, Department of Zoology, National University of Singapore. Specimen lengths are standard length.

DESCRIPTION

Botia splendida, new species
(Figs. 1, 2)

Material examined. - Holotype - ZRC 39215, 56.5 mm, Xe Pian 5-6 km upstream from Ban Hin Lat and 1 km downstream from Se Pa Waterfall, Attapeu province, Lao PDR, 14°45'10"N, 106°27'50"E, coll. T. R. Roberts, 8 Apr.1995.

Paratypes. - CAS 82353, 62.0 mm, Houay Samong about 1 km upstream from its mouth into Xe Pian near Ban Hin Lat, Attapeu province, Lao PDR, 14°43'45"N, 106°29'30"E, coll. T.R. Roberts, 10 Apr.1995; TISTR 2667, 48.1 mm, Se Kaman at Ban Saiseththir, 12 km E of Attapeu Town, Attapeu province, Lao PDR, coll. Ian Baird, 13 Apr.1995.

Diagnosis. - *Botia splendida* belongs in the subgenus *Botia* of *Botia* Gray, 1831 (type species *Botia almorhae* Gray, 1831), and differs from all other species in having a large dark mark on caudal peduncle forming a complete ring (i.e. going completely around caudal peduncle) and outlined anteriorly as well as posteriorly by complete pale rings. It differs from all species except *Botia morleti* in having dorsal, anal, and caudal fins pale or bright yellow, with distinctive round, oval, or oblong dark spots on caudal fin. It entirely lacks the complete dorsomedian black stripe diagnostic of the species *B. morleti*. Spots on caudal fin fewer but larger, and submarginal dark stripe on dorsal and anal fins better defined than in *B. morleti*.

Color in life. - Head and body overall varying from dark greyish to pale bluish green. Lower two-thirds of lateral body surface with numerous (14-19) thin vertical bars or streaks (similar streaks occur in *B. morleti*, but are fewer and restricted to anterior half of body; see Hora, 1941, fig. 4). A row of 3-4 close-set, small roundish or vertically oval spots on anteriormost part of body just above lateral line canal and slightly separated from anteriormost vertical bands or streaks which lie entirely below the canal (similar spots present in *B. morleti*). Dark ring on caudal peduncle jet black; pale rings yellowish (lighter than yellow on caudal fin).

Dorsal, pelvic, anal and caudal fins varying from pale yellowish to bright canary yellow, with black markings. Dorsal, pelvic and anal fins with a narrow white marginal band and a jet black submarginal band. Submarginal black band of dorsal fin expanded anteriorly. Entire caudal fin with rounded, oval, or oblong jet black marks. Pectoral fins uniformly dusky.

Proportional measurements. - Proportional measurements (as times into standard length) of the type specimens are as follows: head 3.3-3.7, snout 5.4-6.7, eye 14.5-16.8, suborbital spine 9.4-10.0, anterior rostral barbel 17.9-18.2, posterior rostral barbel 22.1-22.6, body depth 2.6-3.2, caudal ped. depth 4.8-5.5, dorsal fin base 5.0-5.9, anal fin base 5.2-5.8, pectoral fin length 4.0-4.1, pelvic fin length 5.4-6.7, predorsal length 1.5-1.8, prepelvic length 1.6-1.8, preanal length 1.2-1.4.

Meristics. - Only those characters differing among species of *Botia* are mentioned. Dorsal fin rays $iv8\frac{1}{2}$. Pectoral fin rays $i12$. Holotype with 18 abdominal+13 caudal = 31 total vertebrae (method as in Roberts, 1989). In *Botia morleti*, ZRC 1482, four specimens from Kuala Tahan, Pahang, Malay peninsula, vertebrae $17+12 = 29$ (2), $18+12 = 30$ (2). These are near the lowest vertebral count (28) known in the Cobitidae and in Ostariophysi.

Habitat (Figs. 3, 4). - All three localities where *B. splendida* was collected are swift or moderately swift, clearwater, foothill streams with predominantly rocky or cobblestone bottom. Many other *Botia* including *B. morleti* live in such habitats. Other *Botia* species collected together with *B. splendida* were *Botia (Botia) sidthimunki* and *Botia (Hymenophysa)* sp. Se Pa Waterfall, 20 m high and one kilometer upstream from the collection site of the holotype, probably represents the upper limit of distribution of *B. splendida* in the Xe Pian. There are no other significant physical barriers to fish distribution between Se Pa and the mouth of the Xe Pian into the Se Kong mainstream. No *Botia* were collected in the Xe Pian or other streams sampled on top of the Bolaven Plateau. *Botia* also were absent in a collection in the upper part of the gorge of the Xe Pian coming down the plateau.

Distribution. - *Botia splendida* is known only from the type localities in the Se Kong basin in southern Lao PDR. *Botia morleti* is known from Meklong, Chao Phraya, Tapi (peninsular Thailand) and Pahang (peninsular Malaysia) basins as well as from the Mekong basin, but has not been found in the Se Kong watershed.



Fig. 1. *Botia splendida*, new species. Holotype, 56.5 mm (ZRC 39215).



Fig. 2. *Botia splendida*, new species. Paratype, 62.0 mm (CAS 82353).



Fig 3. Xe Pian 5-6 km upstream from Ban Hin Lat. Collection locality for holotype of *Botia splendida*, new species. 8 Apr.1995.

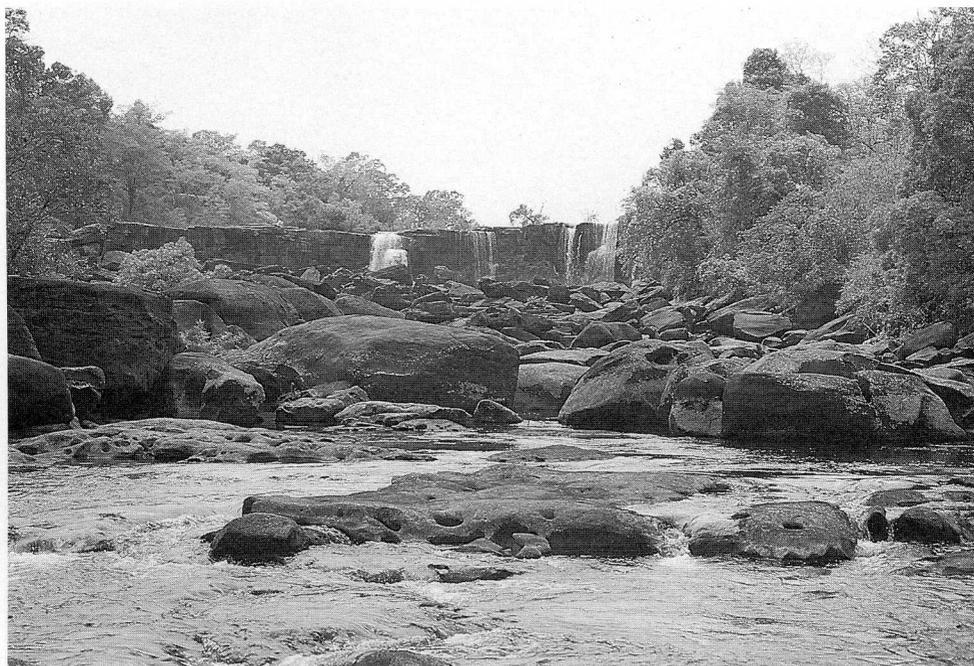


Fig. 4. Se Pa Waterfall, just upstream from collection locality for holotype of *Botia splendida*, new species. 8 Apr.1995.

DISCUSSION

Botia splendida and *B. morleti* are quite similar morphologically and meristically, and share several peculiar features of coloration not observed in any other *Botia*. But they also differ markedly in details of coloration. Judging mainly from its distinctive coloration, *B. splendida* is a distinct species and not just a color variety of *B. morleti*. The possibility that it represents a hybrid between *B. morleti* and some other species of *Botia* can be laid to rest on two counts: 1) no *B. morleti* were collected together with *B. splendida* at any of the three localities in the Se Kong (in fact, as mentioned above, *B. morleti* has not been found in the Se Kong); and 2) two of the three species of *Botia* collected together with *B. splendida* can safely be removed from consideration as possible hybrid parent species because of their radically different coloration and other characters. The third species, *B. modesta*, could possibly hybridize with *B. morleti* to produce offspring similar to *B. splendida*, but was collected together with *B. splendida* at only one of the three known localities. In this connection it is worth noting that if hybridisation is involved, individuals of both parental species generally are expected to be more numerous than those of their hybrid offspring.

For further information on coloration and other characters of *B. morleti*, see Smith (1931, 1945), Fowler (1934: 101, figs. 53-54, Chao Phraya basin, reported as *Botia modesta* Bleeker, 1866), Smith (1931: 4, fig. 2, Meklong basin, reported as the new species, *Botia horae*), and Hora (1941: 53, fig. 4, Pahang basin). For synonymy of *B. morleti*, see Kottelat (1986).

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