

**First Record of *Abbottina rivularis* (Cyprinidae:
Gobioninae) from the Mekong Basin**

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The cyprinid subfamily Gobioninae (sensu Banarescu and Nalbant, 1973) occurs from the Amur River basin in the north to the Red River basin (northern Viet Nam) in the south. In the Mekong basin, it has only been known by a single record of the probably introduced *Pseudorasbora parva* in the Yangbi River in Yunnan (Kottelat, 1989). Recently, three specimens of *Abbottina rivularis* have been obtained from the upper and middle Mekong River. As these specimens seem to be the first record of the species from the Mekong basin, we provide here their description, along with some comments on distribution.

Abbottina rivularis (Basilewsky, 1855)
(Fig. 1)

Material examined. NIFI (National Inland Fisheries Institute, Thailand) 2385, 2 specimens, 61.4 (female) and 69.1 (male) mm SL (standard length); Thailand: Chiangrai Prov.: Mekong River at Chiangkong; C. Vidthayanon, 5 May 1989.—CMK (second author's collection) 5615, 1 specimen,

21.8 mm SL (sex unknown); China: Yunnan: Yangbi district, shallow backwater pool along Yangbi River, an affluent of the river connecting the Mekong and Erhai (Tali) Lake; M. Kottelat, J. X. Yang and Y. R. Chen, 2 June 1986.

Description. Body elongate. Mouth subterminal with horse-shoe shaped lips and heart-shaped pad behind lower lip (Fig. 2). No papilla on lips. One pair of short maxillary barbels. Dorsal contour of snout concave. Body contour gradually convex dorsad and straight ventrad, more elongated caudad. Anus closer to ventral-fin base than to anal-fin base. Dorsal fin rounded, larger in adult male. Pectoral fin positioned horizontally, pelvic and anal fins elongate. Caudal fin moderately forked. Swimbladder with two chambers, anterior chamber divided into a pair of bony cusps, posterior chamber much reduced in size.

Body color greenish-gray dorsally, silver ventrally, with eight rounded dusky blotches along lateral line. Posterior edge of scales on upper body dusky.

Habitat. The Thai specimens were collected at a depth of 0.8–1.0 m over a sand and gravel bottom covered with green algae; the Chinese specimen was from a backwater pool along a steep gradient river. The species is known to inhabit shallow zones of lentic rivers and lakes with sandy or muddy bottoms (Hosoya, 1986, 1989).

Notes on Distribution

Abbottina rivularis has been originally reported from the Amur River and Japanese islands in the north to Fukian and Yunnan provinces of China in

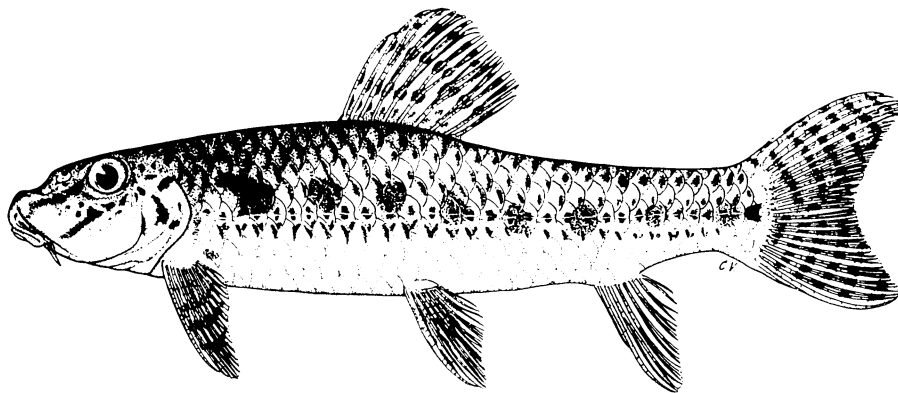


Fig. 1. *Abbottina rivularis*, NIFI 2385, 69.1 mm SL, Thailand: Mekong at Chiangkong.

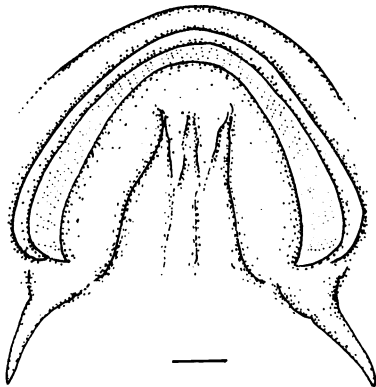


Fig. 2. Mouth of *Abbottina rivularis*, NIFI 2385, 69.1 mm SL.

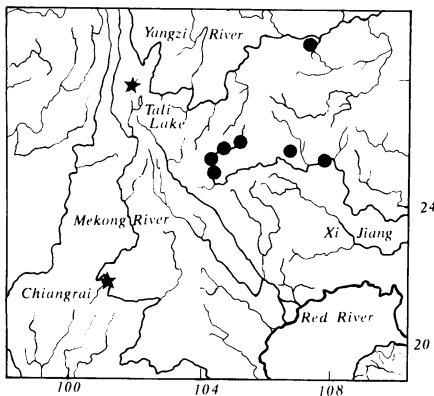


Fig. 3. Distribution of *Abbottina rivularis* in southern China (from Chen and Li, in Chu and Chen, 1989; solid circles) and new localities in the Mekong basin (asterisks).

the South, as shown in Figure 3 (Banarescu and Nalbant, 1973; Chu and Chen, 1989).

There are two possible explanations for the presence of *A. rivularis* in the Mekong basin. One explanation is that it is indigenous to the upper part of the Mekong. Gregory (1925) hypothesized an earlier connection between the present upper Yangtze with the Red River through Erhai Lake (Yangbi River is a tributary of the outlet of Erhai Lake). The present Yangtze results from the capture of the headwaters of this former river by the lower Yangtze. Several genera and species which had previously been known only from the upper Yangtze, the Nanpang or the Red rivers have been discovered in the upper Mekong in recent years, highlighting the paucity of our knowledge of the latter area. Examples are the genera *Homatula* (*Paracobitis* of Chinese

authors; *H. anguillioides* in the upper Mekong, about 5 species in Yangtze and Nanpang rivers; Yang, in Chu and Chen, 1990), *Luciocyprinus* (with *L. striolatus* in the upper Mekong and *L. langsoni* in the Nanpang and Red rivers; Chu and Cui, in Chu and Chen, 1989), *Percocypris* (with *P. retrodorsalis* in the upper Mekong and two species in the Yangtze, Nanpang and Red rivers; Cui and Chu, 1990) and the species *Vanmanenia tetraloba* (see Chen, in Chu and Chen, 1990) and *Triplophysa stenura* (see Yang, in Chu and Chen, 1990; MK, pers. obs.). The record of *Pseudorasbora parva* from Yangbi river by Kottelat (1989) may or may not belong to this category.

The alternative explanation is that the presence of *A. rivularis* is due to an accidental introduction, mixed with transplanted species used for stocking or aquaculture, in either China, Laos, or Burma; from there they (or their offspring) may have moved downriver to Thailand. As information on aquaculture or species introductions in the Mekong outside Thailand is limited, we are unable to critically assess this possibility. The introduction of *A. rivularis* in Thailand seems unlikely as the only Chinese fishes introduced to the country are the major Chinese carps which have been imported for 60 years and have been reproduced by induced breeding for more than 20 years in Bangkok. No Chinese carp other than *Cyprinus carpio* has ever been collected in the Mekong in Chiangrai.

Acknowledgments

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