

## Rediscovery of the critically endangered cyprinid fish *Epalzeorhynchus bicolor* (Smith, 1931) from West Thailand (Cypriniformes Cyprinidae)

Sitthi Kulabtong<sup>1,2\*</sup>, Siriwan Suksri<sup>3</sup>, Chirachai Nonpayom<sup>4</sup> & Yananan Soonthornkit<sup>2</sup>

<sup>1</sup>Save wild life volunteer Thailand, Wangnoi District, Ayuttaya Province 13170, Thailand

<sup>2</sup>Fisheries Program, Faculty of Agro-Industrial Technology, Rajamangala University of Technology Tawan-ok Chantaburi Campus, Chantaburi, Thailand

<sup>3</sup>Reference Collection Room, Inland Fisheries Resources Research and Development Institute, Department of Fisheries, Thailand

<sup>4</sup>534/26 Soi Phaholyothin 58, Phaholyothin Rd. Sai Mai, Bangkok, Thailand

\*Corresponding author, email: kulabtong2011@hotmail.com

### ABSTRACT

In the present paper, we report on the critically endangered cyprinid fish, *Epalzeorhynchus bicolor* (Smith, 1931) “rediscovered” in MaeKlong Basin, West Thailand. Moreover, distribution data and biological observations of this species are also provided.

### KEY WORDS

*Epalzeorhynchus bicolor*; Cyprinidae; MaeKlong Basin; Thailand.

Received 01.04.2014; accepted 18.05.2014; printed 30.06.2014

## INTRODUCTION

The freshwater cyprinid fish genus *Epalzeorhynchus* Bleeker, 1855, order Cypriniformes Bleeker, 1859 and family Cyprinidae Cuvier, 1817, has been reported for Southeast Asia only (Kottelat & Whitten, 1996; Doi, 1997; Monkolprasit et al., 1997; Yang & Winterbottom, 1998).

According to the current taxonomic status of this genus, it comprises 4 valid species:

*E. frenatum* (Fowler, 1937) from Chao Phraya Basin, MaeKlong Basin in Thailand and Mekong Basin in Indochina;

*E. kalopterum* (Bleeker, 1850) from South Thailand to Indonesia;

*E. munense* (Smith, 1934) from Mekong Basin in Indochina;

*E. bicolor* (Smith, 1931) from Central and West Thailand (Smith, 1931; Vidthayanon et al. 1997; Kottelat, 2013).

## RESULTS

The cyprinid fish *Epalzeorhynchus bicolor* (Fig. 1) is an endemic fish of Thailand. The distribution of this species is reported only for Lower Chao Phraya Basin, Bangpakong Basin and Lower MaeKlong Basin (Smith, 1931; Vidthayanon et al., 1997; Vidthayanon, 2005, 2011). It has been threatened by mass collecting for aquarium trade, pollution of many sources and habitats destruction (Vidthayanon, 2011) and, according to the IUCN Red List of Threatened Species (Vidthayanon, 2005, 2011), this fish is a threatened species. In 1996, it was even thought to be extinct in the wild since there was no documented evidence of it the last more than 50 years (Kottelat & Whitten, 1996).

Currently, the status of the species is poorly known. In 2011, Dr. Chavalit Vidthayanon assessed that the species is still extant in the Chao Phraya



Figure 1. *Epalzeorhynchos bicolor* from Maeklong Basin, West Thailand, standard length 66 mm.

Basin but strictly localized, nevertheless, its location is still unclear (personal comment). On the contrary, in the same year, the population of *E. bicolor* was reported to be extirpated in Maeklong Basin and Bangpakong Basin (Vidthayanon, 2011).

In a survey project of the first author at Lower Maeklong Basin, West Thailand (carried out during February 2013) the author found only one specimen of *E. bicolor* in the rocky dam around the mainstream of Maeklong River near the water gate of Maeklong Dam, Muang District, Kanchanaburi Province, Lower Maeklong Basin, West Thailand (Fig. 2).

This fish lives in gaps between the rocks and its habitat is characterized by large rocks and a sandy bottom. This area is fast flown by tides and the depth of water is more than 1 meter. In the same area, we found many other fish species, including:

#### CLUPEIFORMES CLUPEIDAE

*Clupeichthys goniognathus* Bleeker, 1855

#### OSTEOGLOSSIFORMES NOTOPTERIDAE

*Notopterus notopterus* (Pallas, 1769)

#### CYPRINIFORMES CYPRINIDAE

*Rasbora aurotaenia* Tirant, 1885

*Barbonymus schwanenfeldii* (Bleeker, 1854)

*Cirrhinus molitorella* (Valenciennes, 1844)

*Opsarius koratensis* (Smith, 1931)

*Mystacoleucus marginatus* (Valenciennes, 1842),

*Osteochilus vittatus* (Valenciennes, 1842)

*Osteochilus microcephalus* (Valenciennes, 1842)

#### CYPRINIFORMES BALITOLIDAE

*Nemacheilus masyae* Smith, 1933

*Homaloptera smithi* Hora, 1932

#### CYPRINIFORMES COBITIDAE

*Acanthopsoides gracilentus* (Smith, 1945)

*Pangio oblonga* (Valenciennes, 1846)

#### SILURIFORMES BAGRIDAE

*Pseudomystus siamensis* (Regan, 1913)

#### BELONIFORMES HEMIRAMPHIDAE

*Dermogenys siamensis* Fowler, 1934

#### SYNBRANCHIFORMES MASTACEMBELIDAE

*Mastacembelus favus* Hora, 1924

## PERCIFORMES NANDIDAE

*Pristolepis fasciata* (Bleeker, 1851)

## PERCIFORMES AMBASSIDAE

*Parambassis siamensis* (Fowler, 1937)

## CONCLUSION

In conclusion, at present, the occurrence of *E. bicolor* in the wild is certainly confirmed in Lower MaeKlong Basin, Kanchanaburi Province, West Thailand, whereas it is still unclear in the Chao Phraya Basin due to the lack, to date, of documented evidence.

## ACKNOWLEDGMENTS

We wish to thank the anonymous reviewers for their invaluable editorial advice. A very special thank to Dr. Chavalit Vidthayanon and Mr. Anuratana tejavvej for providing available data for this species; and to Mr. Adisorn Nonpayom and Mr. Varin Pornrojngangkool for helping us during the field survey.

## REFERENCES

- Doi A. 1997. A review of taxonomic studies of cypriniform fishes in Southeast Asia. Japanese Journal of Ichthyology, 44: 1–33.
- Kottelat M. & Whitten T., 1996. Freshwater biodiversity in Asia, with special reference to fish. World Bank Technical Paper, 343: 1–59.
- Kottelat M. 2013. The fishes of the inland waters of south-east Asia: a catalogue and core bibliography of the fishes known to occur in freshwaters, mangroves and estuaries. The Raffles Bulletin of Zoology, Supplement 27: 1–663.
- Monkolprasit S., Sontirat S., Vimollohakarn S. & Songsirikul T., 1997. Checklist of Fishes in Thailand. Office of Environmental Policy and Planning, Bangkok, Thailand, 353 pp.
- Smith H.M., 1931. Descriptions of new genera and species of Siamese fishes. Proceedings of the United States National Museum, 79 (2873): 1–48.
- Vidthayanon C., Karnasuta J. & Nabhitabhata J., 1997. Diversity of freshwater fishes in Thailand. Office of Environmental Policy and Planning, Bangkok. 102 pp.
- Vidthayanon C., 2005. Thailand red data: fishes. Office of Natural Resources and Environmental Policy and Planning, Bangkok, Thailand, 108 pp.
- Vidthayanon C., 2011. *Epalzeorhynchos bicolor*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <<http://www.iucnredlist.org>>. Downloaded on 28 March 2014.
- Yang J.X. & Winterbottom R., 1998. Phylogeny and zoogeography of the cyprinid genus *Epalzeorhynchos* Bleeker (Cyprinidae: Ostariophysi). Copeia, 1: 48–63.



Figure 2. Study area: Lower MaeKlong Basin, Kanchanaburi Province, West Thailand.