

## First Record of the Bumblebee Catfish, *Leiocassis poecilopterus* (Valenciennes, 1840) from Thailand

PASAKORN SAENJUNDAENG<sup>1\*</sup> AND CHAVALIT VIDTHAYANON<sup>2</sup>

<sup>1</sup>*Khonkaen University, Nongkhai Campus 112/7 Amphoe Mueong , Nongkhai Province 43000, THAILAND*

<sup>2</sup>*World Wildlife Fund Thailand 104 Outreach Building, AIT Klong Nung, Klong Luang, Pathumthani 12120, THAILAND*

**ABSTRACT.**—The bumblebee catfish, *Leiocassis poecilopterus* (Valenciennes, 1840) (Teleostei: Bagridae) is firstly known from Thailand at Bala-Hala Wildlife Sanctuary, Narathiwat Province. This species is distinguished by elongated snout, inferior mouth and slender caudal peduncle. Observations of some biology are provided.

**KEY WORDS:** *Leiocassis poecilopterus*, Narathiwat, Thailand

### INTRODUCTION

Jayaram (1968) divided genus *Leiocassis* into two subgenera; subgenus *Leiocassis* and *Pseudomystus*. He explained that subgenus *Leiocassis* is different from subgenus *Pseudomystus* by having inferior mouth, snout angular and produced beyond inferior mouth. Mo (1991) elevated subgenus *Leiocassis* and *Pseudomystus* to generic rank because the phylogenetic characters of the two subgenera are remoted. In the Sundaic subregion, there are 8 and 13 species of genus *Leiocassis* and *Pseudomystus* found, respectively. The authors have recently discovered a species of the genus, *Leiocassis poecilopterus* from Bala-Hala Wildlife Sanctuary, Narathiwat Province, Thailand.

The genus *Leiocassis* is closely related to *Pseudomystus* which occurred 3 species in Thailand; *Pseudomystus siamensis*, *P. stenomus* and *P. leiacanthus*, but it differs by having

more elongated snout and caudal peduncle. The geographic range of *L. poecilopterus* is known only from Sundaic subregion; Java, Sumatra (Indonesia); Borneo and Peninsular Malaysia (Roberts, 1989 and 1993). Smith (1945) and Monkolprasit et al. (1997) reported 3 species of bumblebee catfish from Thailand namely *Leiocassis poecilopterus* (base on misidentified of *P. siamensis*), *P. siamensis* and *P. stenomus*. Vidthayanon et al. (1997) reported 4 species; *L. poecilopterus* (base on misidentified of *P. leiacanthus*), *P. siamensis*, *P. fuscus* and *P. stenomus*. Saenjundaeng (2001) reported *Leiocassis poecilopterus* (base on misidentified as *P. leiacanthus*) from peat swamp in Narathiwat Province. The data of specimens were received from the Inland Fisheries Resources Bureau, Department of Fisheries and Kasetsart University Museum of Fisheries. The authors have examined all specimens of *P. siamensis* and *P. leiacanthus* which were labeled as *Leiocassis poecilopterus* from both places. We find that these specimens differ from *L. poecilopterus* by having blunt snout and subterminal mouth. The bumblebee catfish,

---

\*Corresponding author:  
Tel: +66-42-495123-7  
E-mail: pasafish@yahoo.com

*Leiocassis poecilopterus* had not been recorded in Thailand previously.

In March 1998, the junior author collected two specimens of *Leiocassis poecilopterus* from the small stream of the Bala-Hala Wildlife Sanctuary, Kolok River basin, Waeng district, Narathiwat Province. These specimens have been deposited in the Reference Collection of the Inland Fisheries Resource Bureau, catalogued as NIFI, Department of Fisheries, Bangkok.

#### MATERIALS AND METHODS

The method for morphometric measurement and meristic counting follow Roberts (1994), Ng and Ng (1995) and Saenjundaeng (2001). Measurement of head length (HL) and standard length (SL) of fishes were made to the nearest mm, and morphometric characters were calculated as percentages of HL and SL. Vertebral counts were made from radiographs. The anteriormost rib-bearing vertebra was considered to be the fifth vertebra and the counts of total vertebrae have been made accordingly.

*Leiocassis poecilopterus* (Valenciennes, 1840)  
(Fig. 1)

*Bagrus poecilopterus* Valenciennes in Cuvier and Valenciennes, 1840. Type locality: Hebak River, Java.

*Leiocassis micropogon*: Roberts, 1989; Kottelat et al., 1993.

*Leiocassis poecilopterus*: Roberts, 1993.

Material examined- NIFI 3168 (2 specimens, 64.8-121.1 mm SL) collected from Klong Ai Kading, Bala-Hala Wildlife Sanctuary, Waeng District, Narathiwat Province, Thailand, March 1998. Collector: Chavalit Vidthayanon.

*Description*: *D.I* 7; *A.iii-iv* / 11-13; *C.8/7*; *P.I* 8, *V.i*5

Head slightly compressed. Mouth small, subterminal position. Barbels short, maxillary barbel reaching only behind eye, maxillary barbel length 33.8-44.9 %HL, nasal barbel length 14.4-16.8 %HL, outer mandibular barbel length 21.6-31.6 %HL and inner mandibular barbel length 14.8-16.1 %HL. Adipose fin origin slightly anterior to anal fin origin. Depressed dorsal fin reaching adipose fin. Caudal fin forked; tip of upper and lower lobe pointed. Posterior border of anal fin slightly round. Head depth at eye 38.0-39.8 %HL, head width at eye 47.6-50.0 %HL. Snout produced, tip of snout pointed when look from below head, snout length 36.6-36.7 %HL.

Eye small with subcutaneous, eye diameter 14.4-16.3 %HL. Interorbital length 26.0-28.0%HL. Supraoccipital process not reaching predorsal plate, supraoccipital process base length 11.2-12.5 %HL, supraoccipital process length 25.8-26.0 %HL. Body moderately compressed, body depth at dorsal fin origin 21.5-25.8 %SL and body width at dorsal fin origin 14.5-16.6 %SL. Prepectoral length 27.4-

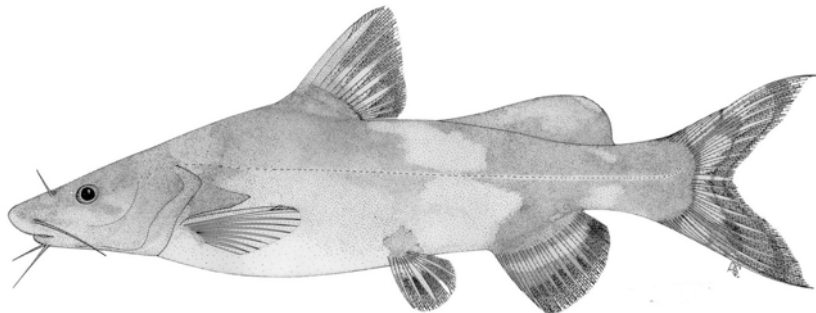


FIGURE 1. *Leiocassis poecilopterus*, NIFI 3168, 121.1 mm. SL, male, Bala-Hala Wildlife Sanctuary.

28.2 %SL, predorsal length 43.5-44.4 %SL, prepelvic length 53.1-55.2 %SL and preanal length 68.6-69.3 %SL. Dorsal fin base length 11.1-11.9 %SL, adipose fin base length 17.6-20.8 %SL and anal fin base length 14.3-15.7 %SL. Post adipose distance 16.0-16.7 %SL. Pectoral spine length 16.6-17.6 %SL and dorsal spine length 16.0-18.2 %SL. Posterior border of dorsal and pectoral spine with 8-9 and 10-11 serrae respectively. Caudal peduncle slender, caudal peduncle length 16.3-17.7 %SL and caudal peduncle depth 9.4-9.9 %SL. Gill rakers on first left gill arch 15-16, vertebrae 39, branchiostegal ray 10.

Coloration- Color pattern in *Leiocassis poecilopterus* differs from *P. siamensis*. The background color is relatively yellowish, with three dark bars crossing body. Both dorsal and anal fin with dark submarginal band, caudal fin with two W-dark bands. Barbels pale.

Distribution- *Leiocassis poecilopterus* has been recorded from Java, Sumatra, Borneo (Sarawak, Sambas, Kapuas), Banka, Biliton, Peninsular Malaysia (Roberts, 1989 and 1993; Kottelat et al., 1993; Tan and Ng, 2000)

Ecology- This species inhabits small streams with gravel bottoms of the Kolok River. It lives under the rock crevices in 1.5-2.0 m depth. Feeds on aquatic insects and small crustaceans

#### ACKNOWLEDGEMENTS

We are grateful to Prajit Wongrat (Faculty of Fisheries, Kasetsart University) and Apichart Termvidchakorn (Inland Fisheries Resource Institute, Department of Fisheries) for their suggestions; to Siriporn Thong-aree, the Chief of Bala-Hala and Peatswamp Forest Wildlife Research Station, Department of National Park, Wildlife and Flora, for her kindly facilitate and assistant in field survey. The senior author is indebted to the Biodiversity Research and Training Program, which supported his work (Research Program Code BRT 540063).

#### LITERATURE CITED

- Jayaram, K. C. 1968. Contribution to the study of bagrid catfishes (Siluridae: Bagridae). 3. A systematic account of the Japanese, Chinese, Malayan and Indonesian genera. *Treubia*, 27: 287-386.
- Kottelat, M., Whitten, A. J., Kartikasari, S. N. and Wirjoatmodjo, S. 1993. *Freshwater Fish of Western Indonesia and Sulawesi*. Hongkong, Periplus Editions, 221 pp.
- Mo, T. 1991. *Anatomy, relationships and systematics of the Bagridae (Teleostei: Siluroidei) with hypothesis of siluroid phylogeny*. Koeltz Scientific Book, Koenigstein, Germany, 216 pp.
- Monkolprasit, S., Sontirat, S., Vimollohakarn, S. and Songsirikul, T. 1997. *Checklist of fish in Thailand*. Office of Environmental Policy and Planning. Bangkok, Thailand, 353 pp.
- Ng, P. K. L. and Ng, H. H. 1995. *Hemibagrus gracilis*, a new species of large Riverine catfish (Teleostei: Bagridae) from Peninsular Malaysia. *Raffles Bulletin of Zoology* 43: 133-142.
- Roberts, T. R. 1989. *The freshwater fishes of Western Borneo (Kalimantan Barat, Indonesia)*. California Academy of Sciences. San Francisco, 210 pp.
- Roberts, T. R. 1993. *The freshwater fishes of Java, as observed by Kuhl and van Hasselt in 1820-23*. *Zoologische Verhandelingen*, 94 pp.
- Roberts, T. R. 1994. *Systematic revision of Asian bagrid catfishes of the genus *Mystus* sensu stricto, with a new species from Thailand and Cambodia*. *Ichthyological Exploration of Freshwater*, 5: 241-256.
- Saenjundaeng, P. 2001. *Comparative Anatomy and Redescription of Bagrid Catfish from Thailand*. Master thesis. Kasetsart University, 474 pp.
- Smith, H.M. 1945. *The freshwater fishes of Siam or Thailand*. *Bull. U. S. Nat. Mus.* 188 pp.
- Tan, H. H. and Ng, H. H. 2000. *The catfishes (Teleostei: Siluriformes) of central Sumatra*. *Journal of Natural History*, 34: 267-303.
- Vidthayanon, C., Karnasuta, J. and Nabhitabhata, J. 1997. *Diversity of freshwater fishes in Thailand*. Office of Environmental Policy and Planning. Bangkok, 102 pp.

Received: 15 February 2004

Accepted: 16 March 2005