

Three new records of freshwater fishes (Cypriniformes Cyprinidae, Atheriniformes Phallostethidae and Perciformes Osphronemidae) from Thailand

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ABSTRACT

A priapium fish, *Neostethus lankesteri* Regan, 1916 (Atheriniformes Phallostethidae) is newly recorded from the estuary of MaeKlong Basin and estuary of Chao Phraya Basin, Central Thailand; the mouthbrooder betta, *Betta prima* Kottelat, 1994 (Perciformes Osphronemidae) is newly recorded from the small stream in Chonburi Province, East Thailand, and *Rasbora daniconius* (Hamilton, 1822) is a new record for Tenasserim Basin, west Thailand. Description and distribution data of the three freshwater fish are provided here.

KEY WORDS

Neostethus lankesteri; *Betta prima*; *Rasbora daniconius*; Phallostethidae; Osphronemidae.

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INTRODUCTION

The mouthbrooder betta, *Betta prima* Kottelat, 1994 is distributed in Southeast Basin, Thailand and some areas of Mekong basin in Thailand, Cambodia and Laos. First record of *B. prima* in Thailand was reported by Kottelat (1994) in Creek on the road to Nam Tok Phliu, after leaving Chantaburi-Trat highway in Chantaburi Province. Currently, in Thailand, *B. prima* was reported in Southeast Basin (Rayong Province; Chantaburi Province; Trat Province) (Sontirat et al., 2006).

The priapium fish genus *Neostethus* Regan, 1916 is distributed in Southeast Asia only (Myers, 1928; Parenti, 1984). First record of *Neostethus* in

Thailand was reported by Myers (1937: sub *N. siamensis*), where Siam refers to the old name of Thailand, from the estuary of Chantaburi River, Southeast Basin, Thailand, this species was considered a junior synonym of *N. lankesteri* Regan, 1916 (Parenti, 1989). Currently, in Thailand, *N. lankesteri* Regan, 1916 is known only from estuary of Chantaburi River, Southeast Basin and estuary of Petburi Basin, Thailand (Kunlapapuk et al., 2012).

The cyprinid fish, *Rasbora daniconius* (Hamilton, 1822) is distributed from India to Indochina. In Thailand, *R. daniconius* is known only from Chaophaya Basin, Mekong Basin, Salween Basin and Suratthani Province, South Thailand.

In a survey project involving second author (K.S.) in MaeKlong and Chao Phraya Basin, Central

Thailand during February–August 2013, the author found several specimens of *N. lankesteri* in the estuary of Maeklong Basin, Meuang District, Samut Songkhram Province and estuary of Chao Phraya Basin, Meuang District, Samut Prakan Province, Central Thailand, which is a new record of *N. lankesteri* in this region.

Moreover, during a survey project, carried out from October 2013 on Chon Buri Province, East Thailand, involving the second author (K.S.), it was found two specimens of *B. prima* in a small hill stream of Khao Krew mountain, Srisacha District, Chon Buri Province. These specimens are new record of *B. prima* in Chon Buri Province. Currently, the specimens of *N. lankesteri* and *B. prima* are deposited into the reference collection room, Inland Fisheries Resources Research and Development Institute, Department of Fisheries, Thailand (NIFI), and the authors re-examined all specimens of the cyprinid fishes *R. daniconius* stored in NIFI. The authors found that the specimens of *R. daniconius* from Tenasserim Basin, west Thailand is a new record for the region.

ACRONYMS AND ABBREVIATIONS. Standard length: SL; head length: HL; Inland Fisheries Resources Research and Development Institute, Department of Fisheries, Thailand: NIFI.

RESULTS

SYSTEMATICS

Order ATHERINIFORMES Rosen, 1966
Family PHALLOSTETHIDAE Regan, 1913

Neostethus lankesteri Regan, 1916

EXAMINED MATERIAL. NIFI 04975, 25 specimens, estuary of Maeklong Basin, Meuang District, Samut Songkhram Province, Central Thailand, II–IX.2013, legit Sitthi Kulabong (Fig. 1); NIFI 04976, 7 specimens, estuary of Chao Phraya Basin, Meuang District, Samut Prakan Province, Central Thailand, II–X.2013, legit Sitthi Kulabong.

DESCRIPTION. *Neostethus lankesteri* is compress, body depth is 26.6–29.3 %SL. Body width is 8.6–11.2 %SL. Scales in lateral series are medium to large, lateral series scales include 24–27 scales, predorsal scales are 10–12. Head length is 26.8–31.1

%SL. The eyes is large, eye diameter is 35.7–37.9 %HL (8.6–11.1 %SL). Post orbital length is 43.8–46.4 %HL (10.1–14.6 %SL), snout length is short, with 17.9–20.1 %HL (5.0–7.1 %SL) and interorbital width is 46.9–50.4 %HL (10.9–11.8 %SL). Dorsal fin origin is anterior anal fin origin, predorsal fin length is 57.7–62.8 %SL, prepectoral fin length is 30.6–32.2 %SL, prepelvic fin length is 46.5–51.1 %SL and preanal fin length is 64.1–66.9 %SL. Caudal peduncle depth is 10.0–10.9 %SL. Pectoral fin is short not reaching beyond anus, the pectoral fin length is 14.3–16.2 %SL and 8–9 branched fin rays. Pelvic fin is short not reaching beyond anus, the pelvic fin length is 8.0–9.2 %SL with 7 branched rays. Anal fin base is longer than dorsal fin base, the anal fin base length is 10.6–13.4 %SL, dorsal fin with 2 unbranched rays and 7 branched rays and anal fin with 3 unbranched rays and 5 branched rays. The dorsal fin base length is 8.3–9.5 %SL.

BIOLOGY AND DISTRIBUTION. In this study all specimens of *N. lankesteri* were found in mangrove and estuary (salinity more than 20 ppt; depth about 1 m or more, mud on the bottom). In Thailand, this species is known only from estuary of Chantaburi River, Southeast Basin and estuary of Petburi Basin, Thailand. It is a new record for estuary of Maeklong and Chao Phraya Basin, Central Thailand.

Order PERCIFORMES Bleeker, 1859
Family OSPHRONEMIDAE Bleeker, 1859

Betta prima Kottelat, 1994

EXAMINED MATERIAL. NIFI 04977, 2 specimens, small hill stream of Khao Krew mountain, Srisacha District, Chon Buri Province, East Thailand, X. 2013, legit Sitthi Kulabong (Fig. 2).

DESCRIPTION. *Betta prima* is compress, body depth is 35.6–36.3 %SL. Body width is 8.7–12.1 %SL. Scales in lateral series are medium to large, lateral series scales are 26–28, predorsal scales are 21–22. Head length is 31.8–32.1 %SL. The eyes are large, eye diameter is 30.7–31.9 %HL (9.5–10.3 %SL). Post orbital length is 50.1–52.4 %HL (16.2–16.6 %SL), snout length is short, with 19.2–19.4 %HL (6.2–7.1 %SL). Dorsal fin origin is anterior anal fin origin, predorsal fin length is 67.5–67.8



Figures 1. *Neostethus lankesteri*, 22 mm SL (male) from MaeKlong Basin, Central Thailand. Figures 2. *Betta prima*, 32 mm SL from Khao Krew mountain, Chon Buri Province, East Thailand. Figures 3. *Rasbora daniconius*, 52 mm SL from Tenasserim Basin, West Thailand.

%SL, prepectoral fin length is 32.6–33.7 %SL, pre-pelvic fin length is 40.5–42.4 %SL and preanal fin length is 53.7–54.6 %SL. Caudal peduncle depth is 18.0 – 19.1 %SL. Pectoral fin is long reaching beyond anus, the pectoral fin length is 23.3–24.7 %SL. Pelvic fin is long reaching beyond anus, the pelvic fin length is 35.2–35.7 %SL. Anal fin base is longer than dorsal fin base, the anal fin base length is 44.7–45.6 %SL and dorsal fin base length is 12.3–12.5 %SL.

BIOLOGY AND DISTRIBUTION. *Betta prima* were found at a small hill stream in the Khao Krew mountain. The stream is transparent, running slowly, average depth about less than 50 cm, stream ground is made of rough sand. In Thailand, this species is known from Southeast Basin in Rayong Province, Chantaburi Province and Trat Province. It is a new record for Khao Krew mountain, Chon Buri Province, East Thailand.

Order CYPRINIFORMES Bleeker, 1859
Family CYPRINIDAE Cuvier, 1817

Rasbora daniconius (Hamilton, 1822)

EXAMINED MATERIAL. NIFI 03044, 2 specimens, Tenasserim Basin, Thailand, no collecting date, legit Dr. Chavalit Vidthayanon (Fig. 3).

DESCRIPTION. *Rasbora daniconius* is compress, body depth is 24.6–29.1 %SL. Body width is 7.6–10.4 %SL. Scales in lateral series are medium to large, lateral series scales are 24–27, predorsal scales are 28–33. Head length is 25.4 – 29.3 %SL. Snout length is 28.4–32.1 %HL and interorbital width is 45.7–51.1 % HL. Dorsal fin origin is posterior anal fin origin, predorsal fin length is 56.7–58.2 %SL, prepectoral fin length is 26.5–26.8 %SL, prepelvic fin length is 52.5–52.7 %SL and preanal fin length is 77.3–78.9 %SL. Caudal peduncle depth is 10.2–13.3 %SL. Pectoral fin is short not reaching beyond anus, the pectoral fin length is 14.2–16.5 %SL. Pelvic fin is short not reaching beyond anus, the pelvic fin length is 16.1–16.4 %SL. Anal fin base is shorter than dorsal fin base,

the anal fin base length is 9.5–10.1 %SL and dorsal fin base length is 16.3–17.1 %SL.

BIOLOGY AND DISTRIBUTION. In Thailand, this species is known only from Mekong Basin, Chao Phraya Basin, Salween Basin and Peninsular Thailand. It is a new record for Tenasserim Basin, west Thailand.

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