

## Two new records of freshwater fishes (Cypriniformes, Balitoridae and Atheriniformes, Phallostethidae) from Thailand

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### ABSTRACT

A balitorid fish, *Hemimyzon nanensis* Doi et Kottelat, 1998 (Cypriniformes, Balitoridae) is newly recorded from Ngim River, Yom Basin, North Thailand and a priapium fish, *Neostethus lankesteri* Regan, 1916 (Atheriniformes, Phallostethidae) is newly recorded from the estuary of Petburi Basin, West Thailand. Description and distribution data of the two freshwater fish are provided here.

### KEY WORDS

*Neostethus lankesteri*; *Hemimyzon nanensis*; Balitoridae; Phallostethidae; Thailand.

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### INTRODUCTION

Freshwater fish genera *Hemimyzon* Regan, 1911 and *Neostethus* Regan, 1916 are scarcely distributed in Thailand. The balitorid fish genus *Hemimyzon* has been reported for China, Taiwan and Indo-China archipelago (Doi & Kottelat, 1998). According to the current taxonomic status of this genus, it comprises 14 valid species, *H. macroptera* Zheng, 1982, *H. megalopseos* Li et Chen, 1985, *H. pengi* (Huang, 1982), *H. pumilicorpora* Zheng et Zhang, 1987, *H. sheni* Chen et Fang, 2009, *H. taitungensis* Tzeng et Shen, 1982, *H. yaotanensis* (Fang, 1931) from China and Taiwan, *H. confluens* Kottelat, 2000, *H. khonensis* Kottelat, 2000, *H. papilio* Kottelat, 1998 from Laos, *H. ecdyonuroides* Freyhof et Herder, 2002, *H. songamensis* Nguyen, 2005 from Vietnam and Thailand, *H. formosanus* (Boulenger, 1894) from Thaungyin River, Salween Basin, at the boundary between Thailand and Myanmar and *H. nanensis* Doi et Kottelat 1998, reported only from Nan Basin in Nan Province, North Thailand (Doi & Kottelat, 1998).

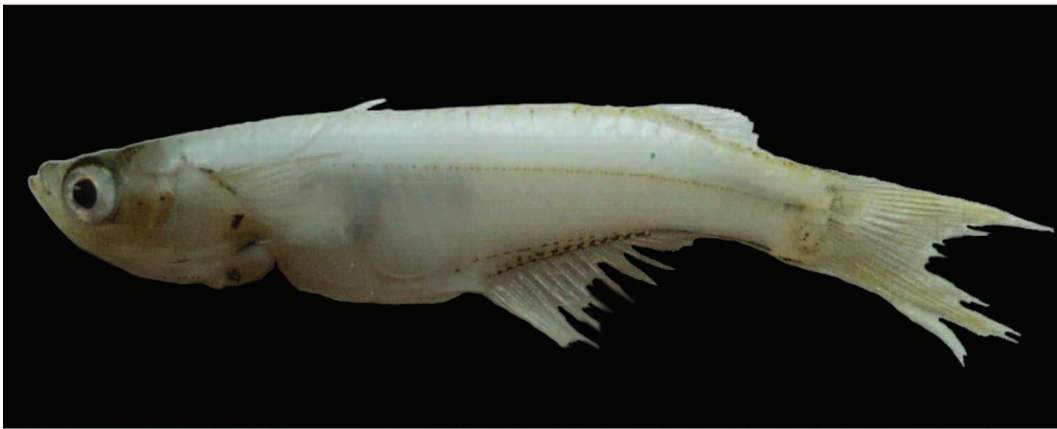
The priapium fish genus *Neostethus* is distributed in Southeast Asia only (Myers, 1928; Parenti, 1984). First record of *Neostethus* in Thailand was reported by Myers (1937) under the name *N. siamensis* (Siam refers to the old name of Thailand) from the estuary of Chantaburi River, Southeast Basin, Thailand, field collection by Dr. Hugh M. Smith. In 1989, this species was considered a junior synonym of *N. lankesteri* Regan, 1916 (Parenti, 1989). Currently, in Thailand, the genus *Neostethus* comprises only one species, *N. lankesteri* Regan, 1916.

In a survey project involving first and second authors (K.S. and K.S.) in Petburi River, West Thailand during 21-25 April 2012, we found several specimens of *N. lankesteri* Regan, 1916 in the estuary of Petburi River, Banlam District, Petburi Province, West Thailand. This is a new record of *N. lankesteri* Regan, 1916 in Petburi Basin, Thailand.

Moreover, during a survey project, carried out from February to July 2011 on Ngim River, the tributary of Yom Basin, North Thailand, involving the second author (K.S.), it was found one specimen of



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Figure 1. *Hemimyzon nanensis*, 31 mm SL from Ngim River, Yom Basin, Thailand.

Figure 2. *Neostethus lankesteri*, 23 mm SL (male) from Petburi Basin, Thailand.

Figure 3. Mangrove area, estuary of Petburi River, West Thailand.

*H. nanensis* in Ngim River, Ngim Sub-district, Pong District, Phayao Province.

This specimen is a new record of *H. nanensis* in Yom Basin. Currently, the specimens of *N. lankesteri* and *H. nanensis* are deposited into the Reference Collection of Aquatic Ecology, Silpakorn University, Phetchaburi IT campus (RAESUP).

## RESULTS

Order Cypriniformes Bleeker, 1859  
Family Balitoridae Swainson, 1839

### *Hemimyzon nanensis* Doi & Kottelat 1998

EXAMINED MATERIAL. RAESUP 001, 1 specimen, 31 mm Standard length (SL), Ngim River, Yom Basin, Thailand, 26.II.2011, legit Sitthi Kullabong and the partners (Fig. 1).

DESCRIPTION. *H. nanensis* is compressed, body depth is 11.3 %SL and body width is 18.1 %SL. Pelvic fin extends nearly to pelvic fin origin. Broad head, head length is 21.6 %SL and head width is 20.6 %SL. Interorbital length is 9.4 %SL, snout length is 11.3 %SL. Dorsal fin origin is close to the anterior pelvic fin origin, predorsal length is 45.8 %SL, prepectoral length is 16.1 %SL and pre-pelvic length is 42 %SL. Pectoral fin is very large, with 9 simple and 12 branched rays. Anal fin with 4 simple and 8 branched rays. Lateral line complete, with 62 scales.

BIOLOGY AND DISTRIBUTION. *H. nanensis* was found at a small stream in the mountain. The stream is transparent, running slowly, average depth about less than 1 foot, stream ground is made of rough sand and large stones. This species is known only from Yom Basin and Nan Basin, Chaophaya River System, Thailand.

Order Atheriniformes Rosen, 1966  
Family Phallostethidae Regan, 1913

### *Neostethus lankesteri* Regan, 1916

EXAMINED MATERIAL. RAESUP 002, 10 specimens, 21.4-25.4 mm Standard length (SL), estuary of Petburi River, Bangkok Subdistrict, Banlam District, Petburi Province, West Thailand,

23.IV.2012, legit Sawika Kunlapapuk, Sitthi Kullabong (Fig. 2).

DESCRIPTION. *N. lankesteri* is compressed, body depth is 18.5-22.0 %SL, body width is 5.6-7.1 %SL. Scales in lateral series are medium to large, but scales are very thin and fall easily. Head length (HL) is 28.7-30.4 %SL, head depth (HD) is 13.3-16.8 % SL or 44.8-55.4 % HL. The eye is large, eye diameter is 22.2-27.4 % HL (46.7-58.8 % HD or 6.5-7.9 %SL). Post orbital length is 40.3-54.8 %HL (11.9-15.8 %SL), snout length is short, with 14.9-22.2 HL (4.4-6.5 %SL) and interorbital width is 30.0-32.3 % HL (8.7-9.8 %SL), postorbital width is 35.6-41.3 % HL. Prepelvic fin length is 22.1-25.7 % SL and preanal fin length is 51.2-59.3 % SL. Anal fin is long, with 13-17 branched fin rays. One spine on first dorsal fin and 4-5 branched rays in second dorsal fin. The dorsal fin base length is 4.7-7.5 % SL and the anal fin base length is 16.8-20.8 % SL.

VARIABILITY. Priapium, the reproductive organ, was found in males only.

BIOLOGY AND DISTRIBUTION. In this study all specimens of *N. lankesteri* were found in a blackish canal (salinity, 20 ppt; depth about 20-150 cm, width about 5 m, current is running slowly, mud on the bottom) in mangrove area. This canal is a tributary of Peburi River (nearly estuary) and the canal is nearly a marine shrimp farm (Fig. 3). This species is known only from estuary of Chantaburi River, Southeast Basin and estuary of Petburi Basin, Thailand.

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