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Research Note

New record of *Mugilogobius tigrinus*, Larson 2001: (Gobiidae) from a freshwater stream of South Andaman, Andaman Islands, India

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ABSTRACT

This study reports new finding of *Mugilogobius tigrinus* Larson 2001, a finfish from Andaman Islands. The morphological and ecological information of the freshwater gobiid are reported herein. A summary of gobies reported from freshwaters of Andaman is discussed. The new record of *M. tigrinus* extends the previously known distribution range of this fish from Singapore, Malaysia, Thailand and Sri Lanka to Andaman Islands.

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INTRODUCTION

The Andaman and Nicobar (ANI) situated in the Bay of Bengal, between 6°45′ N-13°41′ N and 92°12′ E-93°57′ E falls under the biodiversity hot spot region of Myanmar and Sundaland. The archipelago possesses a rich diversity of fauna having an Indo-Myanmar resemblance. The freshwater fishes of ANI have been studied by Day (1870), Annandale and Hora (1925), Mukerji (1935), Herre (1939), Herre (1940), Herre (1941), Koumans (1940), Sen (1975), Starmühlner (1978), Talwar (1990), Rao *et al*., (2000), Vijay and Priya (2009), Devi (2010), Rajan and Sreeraj (2013), Rajan *et al.*, (2013), Rajan and Sreeraj (2014 a, b and c), Kumar *et al.*, (2016). Various workers had reported diadromous and amphidromous gobies from the freshwater streams of Andaman Islands. Annandale and Hora (1925), described *Sicyopterus garra* from the freshwater streams of Andaman which was synonomised with *S. microcephalus* (Bleeker, 1855) by Koumans (1940). Mukerji (1935) described *Vaimosa koumansi* and *Raogobius andamanicus* from Andaman, where *V. koumansi* was synonomised with *Redigobius tambujon* (Bleeker, 1854), and *R. andamanicus* is believed to be a *Lentipes* sp. (Keith *et al*., 2014). Koumans (1940) exclusively reported marine, brackish and freshwater gobies from Andaman Islands. Palavai and Davidar (2009) reported two news species of goby which are *Sicyopterus* sp. Gill, 1860 and *Schismatogobius* sp. De Beaufort, 1912 and *Acentrogobius caninus* (Valenciennes 1837), which are new record to the freshwaters of Andaman. From the records of previous works, a total of 23 species of gobiids comprising of amphidromous and diadromous forms are known to occur in the freshwater streams and hill streams of ANI (see Table 1). During an icthyological survey conducted at a small stream at Sippighat (11 36' 25"N; 92 40'30"E), South Andaman District, we recorded *Mugilogobius tigrinus*, which is a new record to ANI and an addition to the gobiid species occurring in the freshwaters of Andaman Island.

Material examined

CIARI/FF-07, 1 example, male, 16.8 mm SL, Sippighat stream, south Andaman, Coll. Sainath Dated 12-05-2017 (Fig. 1)

Fig. 1. *Mugilogobius tigrinus* (CIARI/FF-07) from South Andaman

Table 1: Records of Gobies reported from the freshwaters of Andaman and Nicobar Islands

1. *Sicyopterus microcephalus* (Bleeker, 1855)
2. *Redigobius bikolanus* (Herre, 1927)
3. *Redigobius tambujon* (Bleeker, 1854)
4. *Sicyopterus* sp. Gill, 1860
5. *Schismatogobius* sp. De Beaufort, 1912
6. *Acentrogobius caninus* (Valenciennes 1837).
7. *Glossogobius giurus* (Hamilton, 1822)
8. *Glossogobius olivaceous* (Temminck & Schlegel, 1845)
9. *Glossogobius bicirrhosus* (Weber, 1894)
10. *Glossogobius celebius* (Valenciennes, 1837)
11. *Lentipes andamanicus* (Mukerji, 1935)
12. *Pseudogobiopsis oligactis* (Bleeker, 1875)
13. *Bathygobius fuscus* (Rüppell, 1830)
14. *Bathygobius albopunctatus* (Valenciennes, 1837)
15. *Awous grammepomus* (Bleeker, 1849)
16. *Stenogobius gymnopomus* (Bleeker, 1853)
17. *Acentrogobius caninus* (Valenciennes, 1837).
18. *Awaous guamensis* (Valenciennes, 1837)
19. *Awaous melanocephalus* (Bleeker, 1849)
20. *Awaous personatus* (Bleeker, 1849)
21. *Awaous ocellaris* (Broussonet, 1782)
22. *Psammogobius biocellatus* (Valenciennes, 1837)

Description and diagnosis of the Andaman specimen

Body slender and cylindrical with four complete black bands and a rounded black spot on caudal base. Head small with small snout, head length 30.8% of SL (16.8 mm) and head width 51.3% of HL (4.9 mm), body depth 17.2% of SL, body width 13.5% of SL, Caudal peduncle depth 13.8. Mouth sub-terminal. First dorsal fin with six spines, second dorsal and anal rays with one spine and seven rays, pectoral rays 14; caudal fin with four procurrent rays, one caudal ray in the upper lobe followed by 14 branched medial rays and six procurrent and one caudal ray in the lower lobe. longitudinal scales 28; nine scales from the first dorsal fin origin to ventral region, eight scales from second dorsal fin origin to anal fin origin; circumpeduncular scales 11; pre-dorsal scales nine. Scales on body ctenoid; first spine of dorsal fin longest, large rubbery-like eyes about 27.1% of HL.

Ecology

Substratum of the stream; muddy with small pebbles and overlaid with leaf litter. Co-occuring species were *Oryzias* sp., *Caridina* sp., *Aplocheilus panchax, Rasbora cf. daniconius.*

Distribution

Peninsular Thailand, Malaysia, Singapore and Sri Lanka (Larson, 2001; Larson and Lim 2005; Larson *et al.*, 2008; Ott 2011).

In spite of numerous icthyological surveys conducted by previous workers, *M. tigrinus* seems to have been overlooked owing to their small size and cryptic nature of hiding in the substratum, such as leaf litter. In general appearance *M. tigrinus* is closely related to *M. fasciatus* Larson, 2001 from western pacific, but can be differentiated by number of bands (4 versus 5), and presence of black stripe in the eye to mouth versus white stripe in *M. fasciatus.* The present records draw attention for thorough in-depth surveys on the freshwater fishes of Andaman and Nicobar Islands.

REFERENCE

Annandale, N. and Hora, S. L. 1925. The freshwater fish from the Andaman Islands, *Rec. Indian Mus*, 27(2): 33-41.

Bleeker, P. 1854. Ichthyologische waaremingen gedaan op verschillende reizen in de residentie Bantem. Natuurkundig Tijdschrift voor Nederlandsch- Indië, Pp. 7:319.

Bleeker, P. 1855. Specierum piscium Javanensium novarum vel minus cognitarum diagnoses adumbratae. Natuurkundig Tijdschrift voor Nederlandsch Indië, 7: 437pp.

Day, F. 1870. On the fishes of the Andaman Islands, *Proc. Zool. Soc. Lond*, 677-705.

De Beaufort, L. F. 1912. On some new Gobiidae from Ceram and Waigen, *Zool Anz*, Pp. 39:139.

Devi, K. R. 2010. Freshwater fishes of Andaman Islands. In Ramakrishna, C. Raghunathan and C. Sivaperuman (Eds.), Recent trends in Biodiversity of Andaman and Nicobar Islands pp. 329-339, *Rec.Zool. Surv. India, Kolkata*, Pp. 1-542.

Gill, T. N. 1860. Conspectus piscium in expeditione ad Oceanum Pacificum septentrionalem, C. Ringold et J. Rodgers ducibus, a Gulielmo Stimpson collectorum. Sicydianae, *Proceedings of the Academy of Natural Sciences of Philadelphia*, 12: 100–102.

Herre, A.W.C.T. 1939. On a collection of littoral and freshwater fishes from Andaman Islands, *Rec. Indian Mus*, 41: 327-372.

Herre, A.W.C.T. 1940. On a collection of littoral and freshwater fishes from the Andaman Islands, Supplement, *Rec. Indian Mus*, 41:1-8.

Herre, A.W.C.T. 1941. A list of the fishes known from the Andaman Islands, *Memoirs of the Indian Museum*, 13(3): 331-403.

Keith, P., Hadiaty, R., Hubert, N., Busson, F. and Lord, C. 2014. Three new species of *Lentipes* from Indonesia (Gobiidae), *Cybium*, 38(2):133-146.

Koumans, F. P. 1940. On the collection of Gobioid fishes from Andamans, *Rec. Indian Mus*, 42: 15-18.

Kumar, M. A., Venu, S. and Padmavati, G. 2016. Habitat Ecology and Ichthyofaunal Diversity of Two Creeks and Their Associated Streams from Port Blair, South Andaman Islands, *Int. Journal of Ecology*, 2016:1-8.

Larson, H. K. 2001. A revision of the gobiid fish genus *Mugilogobius* (Teleostei: Gobioidei) and its systematic placement, *Rec West Aust Mus*, suppl. no.62.

Larson, H. K. and Lim, K. K. 2005. Guide to gobies of Singapore, *Singapore Science Centre*.164 pp.

Larson, H. K., Jaafar, Z. and Lim, K. K. 2008. An annotated checklist of the gobioid fishes of Singapore, *Raffles Bull. Zool*, 56(1):135-155.

Mukerji, D. D. 1935. Notes on some rare and interesting fishes from the Andaman Islands, with description of two new freshwater gobies, *Rec. Indian Mus*, 37(3): 259-277.

Ott, G. 2011. First records of *Gobiopterus brachypterus* and *Mugilogobius tigrinus* from Sri Lanka (Teleostei,

Perciformes, Gobiidae: Gobionellinae), *Bull. Fish Biol*, 13(1/2):71-75.

Palavai, V., and Priya, D. 2009. A survey of freshwater fishes of Andaman Islands. *J. Bombay Nat. Hist. Soc*, 106(1): 11-14.

Rajan, P. T., and Sreeraj, C. R. 2014c. Invasive freshwater fishes and its threats to the biological diversity in Andaman and Nicobar Islands, *J Andaman Sci Assoc*, 19(1): 88–98.

Rajan, P. T., and Sreeraj, C. R. 2013. Diversity, Distribution and Conservation of Freshwater fishes in Mount Harriet national park, Andaman and Nicobar Islands, *Rec. Zool. Surv. India*, 113(4): 35-55.

Rajan, P. T., and Sreeraj, C. R. 2014a. New record of two species of *Belobranchus* (teleostei: Gobioidei: Eleotridae) from Andaman Islands, *Rec. Zool. Surv. India*, 114(1): 85-188.

Rajan, P. T., and Sreeraj, C. R. 2014b. Seven new records of fishes from Andaman Islands, *Rec. Zool. Surv. India*, 114 (1): 111-117.

Rajan, P. T., Sreeraj, C. R. and Immanuel, T. 2013. Fishes of Andaman and Nicobar Islands: a checklist, *J Andaman Sci Assoc*, 18(1): 47-87.

Rao, D. V., Devi, K. and Rajan, P. T. 2000. An account of Ichthyofauna of Andaman & Nicobar Islands, Bay of Bengal. *Rec. Zool. Surv. India*, *Occ. Paper No.*178: 1–434.

Sen, T. K. 1975. Further lights on freshwater fish fauna of Andaman Islands. *Sea food export journal*, 7(2): 31-33.

Starmühlner, F. 1978. Results of the Austrian-Indian Hydrobiological Mission 1976 to the Andaman-Islands: Part I: Preliminary Report: Introduction, Methods, General Situation of the Islands, Description of the Stations and General Comments on the Distribution of the Fauna in Running Waters of the Islands. *Aquat Biol*, 2: 139.

Talwar, P. K. 1990. Fishes of the Andaman and Nicobar Islands: A Synoptic analysis, *J Andaman Sci Assoc*, 6(2): 71-102.

Valenciennes, A. G. in Cuvier and Valenciennes, A. 1837. Histoire naturelle des poissons. Tome douzième. Suite du livre quatorzième. Gobioïdes. Livre quinzième. Acanthoptérygiens à pectorals pédiculées, 12: 86.