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Report of a Pacific water mangrove goby fish, *Wuhanlinigobius polylepis* (Wu & Ni, 1985) from Indian Sunderban

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Abstract
Wuhanlinigobius is a genus of goby fish belonging to the family Gobiidae usually found in mangrove ecosystem. So far, only two species are described under this genus viz., *W. polylepis* and *W. malayensis* both from the Western Pacific Ocean region. The present work reports the presence of *W. polylepis*, from the mangrove ecosystem of Sunderban Biosphere Reserve, as new records for India and the region. Morphological data, coloration and wild habitat are detailed for the new record.

Keywords: *Wuhanlinigobius,* Gobiidae, India, Mangrove, Sunderban.

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Introduction
Wuhanlinigobius, a genus of goby fish belonging to the family Gobiidae, is usually found in mangrove ecosystem. The generic is referred to the Chinese ichthyologist, "Prof. Wu, Han-lin" for his contributions for the gobioid fish research in China. So far, only two species were described under this genus viz. *W. polylepis* (Wu and Ni 1985) and *W. malayensis* Huang et al. 2014, both from the Western Pacific Ocean region (Huang et al. 2013). These species occur in a specified micro-niche in the mangrove habitat. They live in the tiny puddles in the muddy intertidal region of mangrove ecosystem (Froese and Pauly 2021).

Wuhanlinigobius polylepis was described as *Mugilogobius polylepis* from the mangroves of Shanghai, China and later placed under the genus *Eugnathogobius* (Fricke et al. 2021). Even though now allocated in the new genera, the systematic position of this species is still unresolved and we have followed the taxonomy given in Eschmeyer's catalog of fishes (Fricke et al. 2021). So far, *W. polylepis* was reported from China, Taiwan, Vietnam, Singapore, Australia, West Malaysia and Sulawesi (Fig. 1) (Zhang and Zhao 2016; Froese and Pauly 2021). The present work reports the presence of *W. polylepis* from the mangrove ecosystem of Sunderban Biosphere Reserve, as new records for India.

Materials and Methods
During a survey in the Pakhiralaya mangroves of Sunderban Biosphere Reserve, India (22°8'49.55"N; 88°51'11.47"E) on 07.11.2020 a small female example (TL = 2.7 cm) of *W. polylepis* was collected from a tiny tide pool in the mangrove forest. Further survey on 14.11.2020 has resulted in the collection of another example of male fish (TL = 3.4 cm) from the same location. The species was identified based on Larson (2009). The animals were preserved in 70% ethanol and deposited in the National Zoological Collections of Zoological Survey of India (NZC/ZSI/SbRC/KN3109 and KN3117).

Results and Discussion
The body of newly recorded *W. polylepis* are elongate, subcylindrical anteriorly and compressed posteriorly. Pelvic fins are fused - a typical character of family Gobiidae. Caudal fin is rounded. Mouth terminal, slightly oblique, jaws not greatly enlarged in mature males, reaching to below anterior half of eye. Upper lip is more

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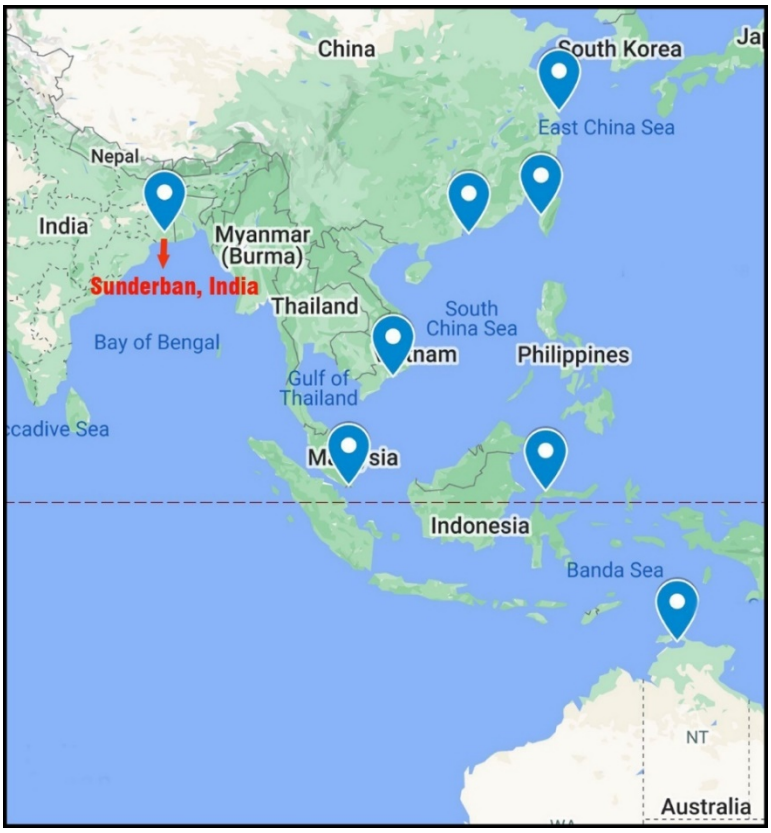

Figure 1. Known distribution of *Wuhanlinigobius polylepis* and its current distribution in India (marked in red). (Map source: Google maps).

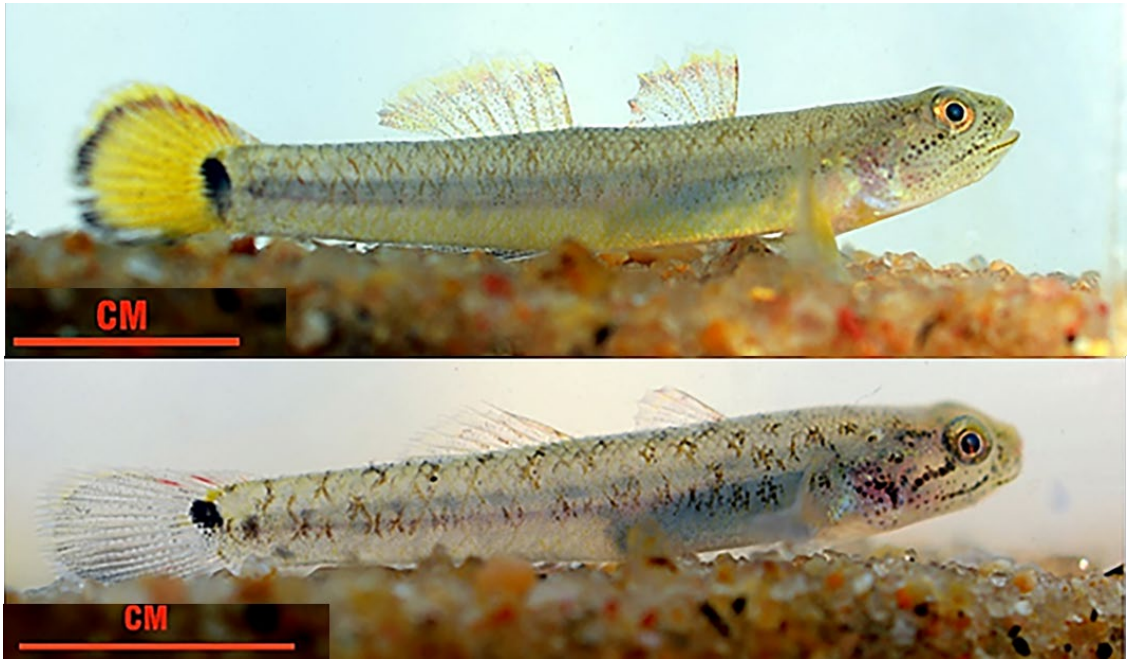

Figure 2. Live specimens of Wuhanlinigobius polylepis collected from Sunderban Biosphere Reserve. Male (top) and female (below)

prominent than lower lip.

Lips having small black dots; lower lip with dark spots forming a line with a pale red colour which more prominent in male. Three horizontal brown stripes on cheek and pre-operculum. Dorsal spines 6+1, dorsal soft rays 8, anal spine 1, anal soft rays 8. Head pores absent; pre-dorsal scales modally absent. Scales small, mostly cycloid but ctenoid scales on caudal peduncle and in small patch under pectoral fin. Body scales with brown to orange scale margin colour (Fig. 2).

Body colour yellowish in male while pale creamy to brown in female with black speckling in both sexes. Black spot on upper caudal fin base in both sexes, larger in male and smaller in female. Adult male with caudal fin membrane yellow and distinct black margin and having 3-5 vertical black lines in caudal fin rays of both sexes. Upper margin of caudal fin with a subterminal reddish colour on 3-4 rays in both sexes. Dorsal fins yellow in male and creamy in female while both have brown speckling. Pectoral fins transparent, rays silvery whitish ventrally. Anal fin transparent to yellowish brown with diffuse brownish submarginal band in male. Body colour of fish very pale during capture and became prominent after keeping in light at captivity.

Like other parts of the world, in Sunderban also this species was found in mangrove area, specifically in the tiny pools in the muddy intertidal areas. The highly cryptic nature of the species makes it difficult to get noticed in the field and this might be the reason for very few reporting of this species. With the current finding it is evident that the mangroves of Sunderban might have many such cryptic goby fishes and more focused studies will help in exploring them. This is the first record of this species from Indian Ocean region and thus adds to our knowledge on the Ichthyofauna.

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