

## Biodiversity Record: Marine leech on shadow goby

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**Subjects:** Marine leech, unidentified genus and species (Annelida: Clitellata: Piscicolidae); Shadow goby, *Yongeichthys nebulosus* (Teleostei: Gobiiformes: Gobiidae).

**Subjects identified by:** Jiayuan Lin.

**Location, date and time:** Singapore Strait, Saint John's Island, lagoon beside main jetty; 3 March 2023; 1146 hrs.

**Habitat:** Marine. Sandy shore with sparse patches of coral rubble.

**Observer:** Jiayuan Lin.

**Observation:** A shadow goby of around 6 cm total length (Fig. 1) was landed with hook and line baited with octopus tentacle, from a depth of approximately 1.2 m. Upon closer inspection, a marine leech of about 1.2 cm length (when fully extended) was found clinging to the goby below its second dorsal fin (Figs. 1 & 2). The leech detached its oral sucker from the goby and moved its head around. However, it did not detach its caudal sucker throughout the period of observation which lasted about half a minute. The goby was released with the leech still attached to it.

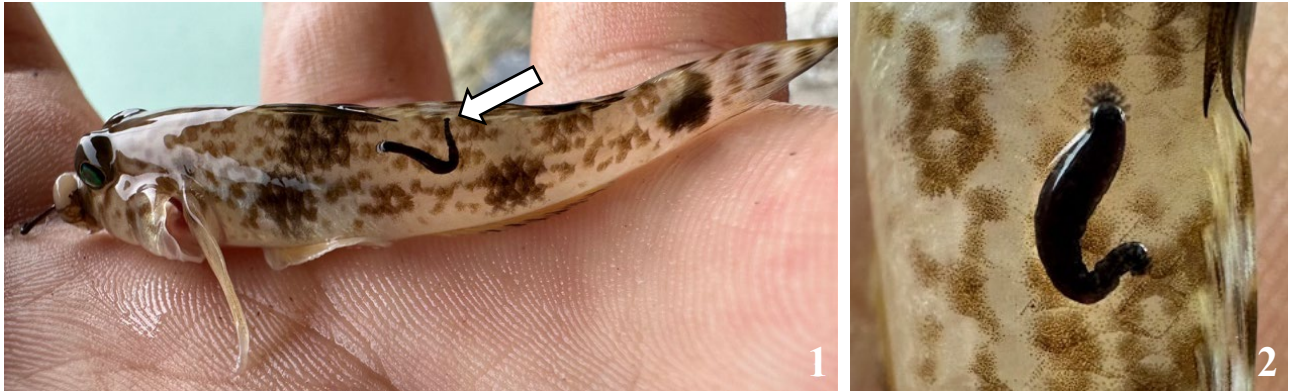


Fig. 1. Lateral view of shadow goby with marine leech (indicated by arrow) attached. Fig. 2. Dorsal view of the leech with its caudal sucker at the top end. (Photographs by: Jiayuan Lin).

**Remarks:** The shadow goby is a common fish in sandy and muddy coastal waters of Singapore (Lim & Low, 1998). It is known to be poisonous, containing tetrodotoxin (Hashimoto & Noguchi, 1971 as *Gobius criniger*; Lin et al., 1999). It cannot be determined if the leech was feeding off the goby or simply anchored to the fish. If it had been feeding, this may suggest that the leech possesses some resistance or immunity to tetrodotoxin. Unlike their freshwater and terrestrial relatives, very little seems to be known of marine leeches. Examples of marine leech have also been seen infesting reef fish (such as blennies of the genus *Meiacanthus*) collected for the ornamental fish trade (Kaithefishguy, 2013).

### Literature cited:

- Hashimoto Y & Noguchi T (1971) Occurrence of a tetrodotoxin-like substance in a goby *Gobius criniger*. *Toxicon*, 9: 79–84.
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- Lim KKP & Low JKY (1998) A Guide to Common Marine Fishes of Singapore. Singapore Science Centre, 163 pp.
- Lin SJ, Chen JB, Hsu KT & Hwang DF (1999) Acute goby poisoning in southern Taiwan. *Journal of Natural Toxins*, 8: 141–147.