

Biodiversity Record: New Singapore record of the pyram snail, *Morrisonietta bandonensis*

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Subjects: Pyram snail; *Morrisonietta bandonensis* (Mollusca: Gastropoda: Pyramidellidae).

Subjects identified by: Chan Sow-Yan and Lau Wing Lup.

Location, date and time: Singapore Island, Pasir Ris Park, Sungei Api Api; 26 June 2023 at 1216 hrs.

Habitat: Estuarine. Intertidal mudflat along mangrove-fringed river embankments, at low tide.

Observers: Lau Wing Lup and Chan Sow-Yan.

Observation: Eight live examples were found on the underside of a valve of a dead clam (*Geloina* sp.) alongside two live limpets, *Patelloida heroldi*, and a live *Isognomon* sp. bivalve. Some *Morrisonietta bandonensis* congregated on byssus threads (Figs. 1 & 2) left by a bivalve that had detached and fallen off. One snail was found attached to the edge of the *Isognomon* shell (Fig. 3).

The shell of *Morrisonietta bandonensis* is thin and translucent, without periostracum. It is ovate and slender, with up to seven regularly increasing convex whorls, separated by an indented suture. The micro sculpture consists of delicate spiral lines criss-crossed by slightly thicker growth lines. A narrow zone below the suture is devoid of striations. The umbilicus is narrowly open. The last whorl is less than half the shell height. The aperture is ellipsoid and the lip thin (Figs. 4 & 5). Adult specimens can grow to 3.6 mm in shell height (see Brandt, 1974). The outer soft tissue has a pattern of brownish-red spots, while the inner tissue is brownish-red to almost black (Fig. 6). A pair of subepithelial, ellipsoid and close-set eyes are located between the base of the tentacles (Fig. 7).

Remarks *Morrisonietta bandonensis* was described by Brandt (1974) based on material collected from a brackish water creek at Paknam Bandon in the province of Surat Thani, southern Thailand. It is regarded as very rare (see Sri-aroon et al., 2005) and prior to the present record, apparently known only from the type locality. Therefore, this appears to be the first record of *Morrisonietta bandonensis* outside Thailand, as well as a new record of the species in Singapore (see e.g., Tan & Woo, 2010).

Morrisonietta bandonensis lives sympatrically with the confamilial elegant pyram snail, *Evalea elegans*, which differs in having a pale yellow periostracum, thicker shell lip, fewer whorls and a plicate columella. The soft tissue appears yellowish white with yellow blotches (see Chan & Lau, 2023) unlike the reddish-brown spotted pattern of *Morrisonietta bandonensis*. Despite such obvious differences, both species are tiny and difficult to identify in the field without magnifying aids, and a possible reason why this snail was previously overlooked.

Literature cited:

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Fig. 1. View of the underside of a valve of a dead *Geloina* sp., showing a group of live *Morrisonietta bandonensis* congregating on byssus threads (indicated by arrow), flanked by two live limpets, *Patelloida heroldi*, and a live *Isognomon* sp. on the right. Fig. 2. A close-up view of the group of live *Morrisonietta bandonensis* on the byssus threads. Fig. 3. A lone specimen found near the lip of the live *Isognomon*. Fig. 4. Abapertural view of an adult *Morrisonietta bandonensis* shell of about 3 mm. Fig. 5. Apertural view of the same shell. Fig. 6. Live *Morrisonietta bandonensis* ex-situ showing the outer soft tissue with brownish-red spots, and brownish-red to almost black inner tissue. Fig. 7. Dorsal view of the head of a live *Morrisonietta bandonensis* showing a pair of subepithelial, ellipsoid and close-set eyes between the tentacles (Photographs by: Lau Wing Lup).