

Biodiversity Record: The snail, *Taiwanassiminea bedaliensis*, in Singapore

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Subjects: *Taiwanassiminea bedaliensis* (Mollusca: Gastropoda: Assimineidae).

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

Location, date and time: Singapore Island, Jalan Pintau; 26 October 2020; around 1130 hrs.

Habitat: Urban. Weep hole on a concrete boundary wall of a residential compound (Fig. 1).

Observer: Lau Wing Lup.

Observation: At least four live examples, the largest about 3 mm in shell height, were observed crawling about on damp surfaces in the weep hole (Fig. 2). The snails moved slowly with a loping gait.

The heads of the snails vary from light to dark dirty pink (Figs. 3, 4). Black, round eye spots are at the end of short, stout stalks; cephalic tentacles are absent (Figs. 3, 4). The yellowish snout is long and slightly bilobed (Fig. 3). The foot is thick and pale yellow (Figs. 3, 4). Blackish stripes on the snail's flesh are visible through the last whorl of the translucent shell (Fig. 5). The operculum is pyriform, paucispiral, horny, thin, yellowish and transparent (Fig. 5). Some dead shells were found among living specimens. These tend to be whitish and opaque with indistinct bands (Fig. 8), and growth lines that are more prominent (Fig. 7) than on the shells of live snails (Fig. 6).

Remarks: In addition to the featured site, the authors have observed examples of this snail at the following locations on Singapore Island since 1992—Lorong Telega, off Upper Paya Lebar Road, Jalan Girang, East Coast Park, Jurong Lake Park, Punggol Park, Jalan Kukoh, Telok Blangah Rise, Hougang Avenue 9, and along the Sungei Whampoa. These gregarious snails are found in colonies in damp and sheltered areas, always above or near water sources, all in disturbed, urbanised locations. Like most snails, *Taiwanassiminea bedaliensis* tends to be more active on cloudy days, and during or after rain.

Because *Taiwanassiminea bedaliensis* has not been found in mature forest and freshwater swamps in Singapore (see Ng et al., 2011; Lim et al., 2018), it is highly likely that it was introduced there, possibly with the ornamental plant trade. Despite being found in anthropogenic locations, this synanthropic species is seldom noticed possibly due to its small size and cryptic nature. The species has not been depicted in local literature (e.g., Tan et al., 2012; Quek et al., 2017), even though it was first reported in Singapore in 2001 (Maassen, 2001, as “? *Cyclotropis bedaliensis*”).

Literature cited:

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Ng PK, Corlett RT & Tan HTW (eds.) (2011) Singapore Biodiversity. An Encyclopedia of the Natural Environment and Sustainable Development. Editions Didier Millet and the Raffles Museum of Biodiversity Research, National University of Singapore, Singapore, 552 pp.

Quek A, Tan LY, Wang LK & Clews E (2017) A Guide to Freshwater Fauna of Ponds in Singapore. Tropical Marine Science Institute, National University of Singapore, Singapore, 78 pp.

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Fig. 1. Weep hole on a concrete wall.



Fig. 2. Snails of different sizes at the entrance of the weep hole.



Fig. 3. Live snail with the slightly bilobed snout.



Fig. 4. Live snail with reddish head.



Fig. 5. Aperture view of live snail with transparent operculum and dark markings visible through the thin shell.



Fig. 6. Dorsal view of snail shell and pale brown droppings next to it.



Fig. 7. A dead adult shell with distinct growth lines (indicated by arrows).



Fig. 8. Dead shell, in situ, with faded bands.

(Photographs by: Lau Wing Lup).