

## Biodiversity Record: New Singapore record of the micro snail, *Microcystina consobrina*

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**Subject:** Maternal-female-cousin micro snail, *Microcystina consobrina* (Mollusca: Gastropoda: Ariophantidae).

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

**Location, date and time:** Singapore Island, Marsiling Park; 9 December 2022; around 1120 hrs.

**Habitat:** Mangrove forest, on landward edge during high tide.

**Observer:** Lau Wing Lup.

**Observation:** A freshly dead specimen of about 2 mm shell width was found amongst damp leaf litter on the mud substrate. The shiny and translucent brownish yellow shell is small, low-conical, with a rounded apex. Parts of the columella, the snail inner remains, and a long whitish insect larva can be seen through the shell under strong lighting. While the shell protoconch is devoid of micro sculpture, the teleoconch has a reticulate pattern of fine striations along the growth lines, and even finer spiral striations crisscrossing them. These spiral striations are more obvious on the last whorl near the base where the axial ribs reduce in strength. The shell has about 4 convex whorls, increasing regularly and divided by an impressed suture. The suture appears lined by a thin red thread. The shell umbilicus is narrow and open. A minute and whitish tongue-like callus, originating from the slightly reflected columella partially covers the umbilical region. The aperture is oblique and crescent shaped. The peristome is sharp, thin and not continuous. A keel is present on the last whorl.



Fig. 1. Mangrove habitat at Marsiling Park where a dead *Microcystina consobrina* shell was found among the leaf-litter on land. (Photograph by: Lau Wing Lup)



Fig. 2. Apical view of shell. Note smooth and sculptureless protoconch. Fig. 3. Umbilical view of shell. Note tongue-like projection partially covering the umbilical region (black arrow) and maggot-like organism (white arrow) that are visible through the translucent shell. Fig. 4. Dorso-lateral view of shell. The remains of the snail's inner flesh (darker area) are visible through the translucent shell. Fig. 5. Aperture view of shell. Note tilted sickle-shaped aperture; sharp, thin and discontinuous peristome and keel on shell periphery. Fig. 6. View of shell aperture. Note the reflected columellar (black arrow). Figs. 7 & 8. Lateral views of the shell with emphasis on the micro-sculpture on the outer surfaces. (Photographs by: Lau Wing Lup)

**Remarks:** *Microcystina consobrina* is known to occur in Sumatra (Bentham-Jutting, 1959), Bali (Vermeulen & Whitten, 1998) and Sabah in Borneo (Vermeulen et al., 2015). It has been found in primary forest as well as in disturbed environments such as plantations, on granodiorite and volcanic soil, from sea-level up to 3,200 m elevation (Vermeulen & Whitten, 1998; Vermeulen et al., 2015). The single shell featured here represents the first record of the species in Singapore (see Tan & Woo, 2010; Tan et al., 2012). As Singapore falls within its known range, *Microcystina consobrina* is likely to be native there. Its diminutive size, cryptic habits and superficial semblance to other snails may have caused it to be previously overlooked.

Congeners known to occur in Singapore include the micro moss snail, *Microcystina muscorum* (see Chan & Lau, 2021) from which *Microcystina consobrina* can be differentiated by its smaller size, well impressed sutures, presence of a peripheral keel, and reticulate shell micro sculpture. In addition, a yet to be identified species of *Microcystina* was mentioned as a prey item for predatory slugs (Tan & Chan, 2009). There is another locally widespread but unidentified species of *Microcystina* (see Lim, 1969; Ho, 1995) which differs from *Microcystina consobrina* by not having a peripheral keel on the shell.

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