

Sightings of pretty ear-snails, *Melampus pulchellus*, in Singapore

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Subjects: Pretty ear-snail, *Melampus pulchellus* (Mollusca: Gastropoda: Ellobiidae).

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

Location, date and time: Three locations on Singapore Island -

1) Pasir Ris, Sungei Api Api; 4 April 2020; around 1631 hrs.

2) East Coast Park, Area B; 2 May 2019; around 1544 hrs.

3) Coney Island; 10 June 2017; around 1540 hrs.

Habitat: Back mangroves during low tide at Pasir Ris and Coney Island. Under a slab of concrete by a tidal drain in urban parkland at East Coast Park.

Observers: Chan Sow-Yan and Lau Wing Lup.

Observation: At East Coast Park, more than nine live individuals were found on the undersurface of a slab of concrete beside a drain (Fig. 1). At the mangroves of Pasir Ris and Coney Island, many live examples were seen grazing amongst breathing roots of mangrove vegetation (Fig. 2), under damp dead leaves, among organic debris, and on stiff mud. One freshly dead shell was found among live individuals in the mangrove undergrowth (Fig. 4 & 5).



Fig. 1. A group of *Melampus pulchellus* on the underside of a concrete slab at East Coast Park. Photograph by Lau Wing Lup

Melampus pulchellus is obovoid in shape, has a mucronate apex and has its last whorl about two-thirds of the entire shell height. The outer lip is thin even in adult specimens. The shell's palatal wall has a white callus deep in the aperture, with seven to 13 teeth on its crest (Fig. 6). The surface of the shell has spiral rows of tiny pits, and some shells bear hair-like projections on the periostracum around the spire (Fig. 3-5). The shells also have distinctive reddish brown spiral bands of varying widths, spots and wavy streaks. The animal's foot is yellowish-white, the eyes are black, and the head, body, and tentacles are blackish-brown.



Fig. 2. A group of snails grazing in the back mangrove along the Api Api River. Photograph by Lau Wing Lup

Remarks: The featured observations show that *Melampus pulchellus* is gregarious and somewhat polymorphic. The species was described as *Auricula pulchella* in 1842. The species epithet means pretty, which is probably in reference to the attractive markings on the shells. Although the shell attains a height of around 9 mm (Tan et al, 2012), this is one of the tiniest *Melampus* species in South East Asia (Raven & Vermeulen, 2007). Images of live *Melampus pulchellus* are featured here because the species is seldom mentioned and illustrated in literature, and the authors were unable to find images of living animals online.

Melampus pulchellus has been recorded in Singapore (Pfeiffer, 1856; Maassen, 2001; Raven & Vermeulen, 2007; Tan & Woo, 2010; Tan et al, 2012), Malaysia (Raven & Vermeulen, 2007), Vietnam (Dautzenberg et al, 1905), the Philippines (Pfeiffer, 1857), India (Dautzenberg & Fischer, 1905) and the north-eastern coast of Australia (Brazier, 1877). Singapore records in Raven & Vermeulen (2007) were based on dead shells washed ashore at Changi Village.

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Fig. 3. Two *Melampus pulchellus* in-situ at Pasir Ris mangrove. Note yellowish-white foot and dark-brown eye stalks of animal.



Fig. 4. Dorsal view of a freshly dead specimen. Note hair-like periostracum, growth lines, spiral bands, spots and wavy stripes on the shell.



Fig. 5. Ventral view of the same shell in Fig. 4. Note pitted surface, thin outer lip, white callus deep in the aperture, with about eight teeth on its crest.

Photographs by Lau Wing Lup



Fig. 6 (three pictures). Three groups of *Melampus pulchellus* ex-situ showing polymorphism among individuals. Note the shells' obovoid shape, mucronate apex, height and colour pattern variations.

Photographs by Lau Wing Lup