

## The periwinkle snail, *Peasiella lutulenta*, in Singapore

Chan Sow-Yan & Lau Wing Lup

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**Subjects:** Muddy periwinkle snail, *Peasiella lutulenta* (Mollusca: Gastropoda: Littorinidae).

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

**Location, date and time:** Singapore Island, Pasir Ris, Sungei Api Api; 18 May 2020, around 1600 hrs.

**Habitat:** Estuarine. Along mangrove-fringed river bank during low tide.

**Observers:** Chan Sow-Yan and Lau Wing Lup.



Fig. 1. Live *Peasiella lutulenta* snail (red circle) in-situ near the hinge of a shell of the mud clam *Geloina* sp. Fig. 2. Close up of *Peasiella lutulenta*.

Photographs by Lau Wing Lup

**Observation:** Two live specimens were found roosting separately in the valves of dead mud clams, *Geloina* sp. (Fig. 1 & 2). The shells are minute (less than 3 mm diameter) and trochoidal. One is yellow while the other is dark brown (Fig. 4). Both shells have an open umbilicus (Fig. 3 & 5), peripheral keel with a strong flange (Fig. 6 & 7) and multispiral operculum (Fig. 7).

**Remarks:** The shell of *Peasiella lutulenta* has the following diagnostic features: 1) thickened columellar base, 2) basal sculpture with one to six ribs, the outermost one being most prominent, 3) fine ribs surrounding the umbilicus, and 4) dark irregular axial stripes and/or spotted pattern on the dorsal side which can be seen on the other side through the aperture (Reid, 1989; Fig. 1-7). The animal has a white snout with black bands and a yellowish-white foot (Fig.3).

The genus *Peasiella* is restricted to the Indo-West Pacific, and each of the different species favours specific habitats which can help in species identification. Where they occur, most *Peasiella* species tend to be abundant. However, *Peasiella lutulenta* is an exception, for it seems to be locally rare (Reid, 1989). The snails are seldom noticed due to their small size and cryptic habits. They inhabit sheltered, mangrove-fringed, muddy coasts with turbid waters. *Peasiella lutulenta* was first recorded in Queensland, Australia, and was also found in Hong Kong (Reid, 1989). It has already been recorded from Singapore (Tan & Chou, 2000; 68; Tan & Woo, 2010: 35).

**References:**

- Reid DG (1989) Systematic revision of the recent species of *Peasiella* Nevill, 1885 (Gastropoda: Littorinidae), with notes on the fossil species. *The Nautilus*, 103(2): 43-69.
- Tan KS & Chou LM (2000) A guide to the common seashells of Singapore. Singapore Science Centre. 168 pp.
- Tan SK & Woo HPM (2010) A preliminary checklist of the Molluscs of Singapore. Raffles Museum of Biodiversity Research, National University of Singapore. 78 pp.

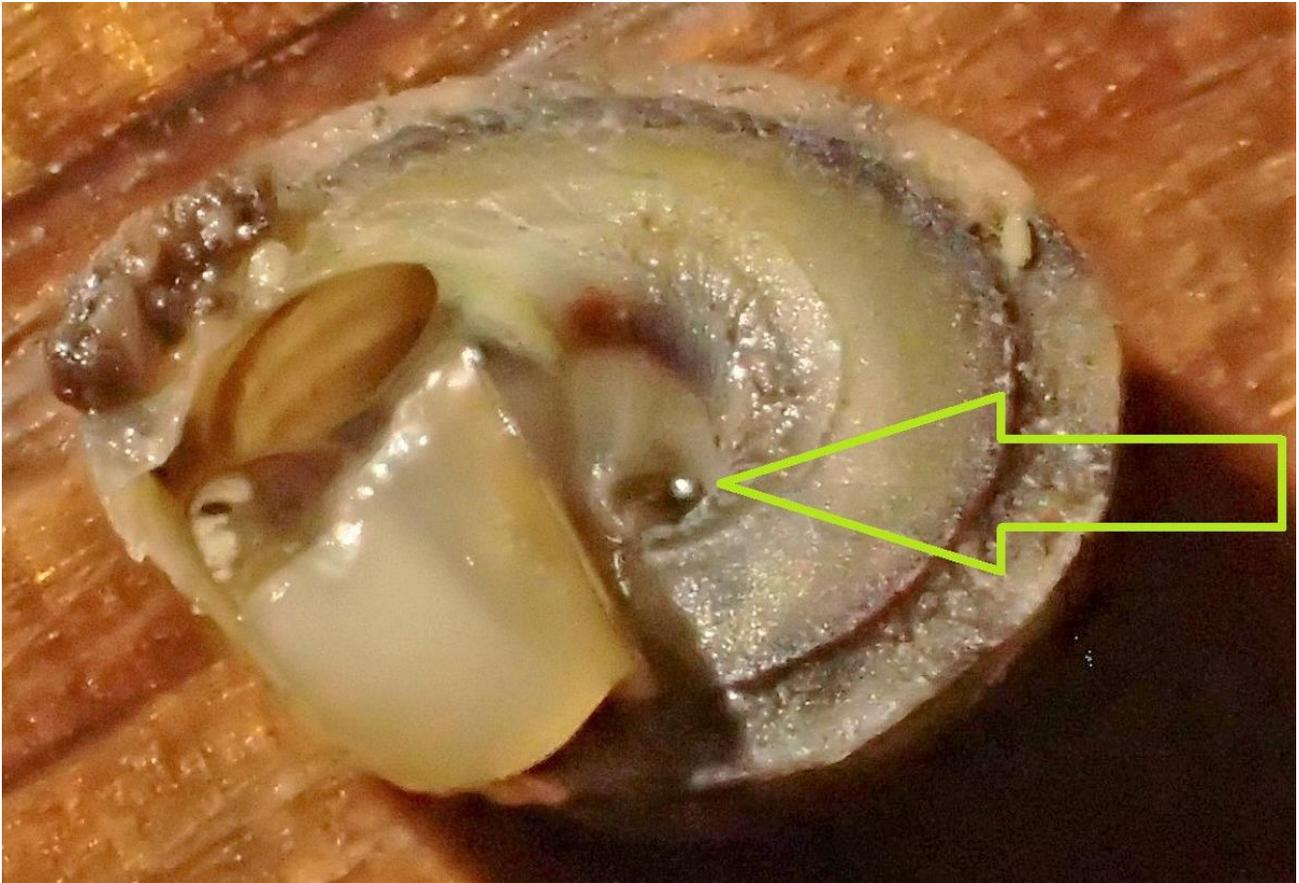


Fig. 3. The foot of *Peasiella lutulenta* is yellowish-white and the shell has a large open umbilicus (arrow).



Fig. 4. Apical views of the two specimens of *Peasiella lutulenta*. Note differences in shell colour pattern and sculpture. Distance between black bars = 1 mm.

Photographs by Lau Wing Lup

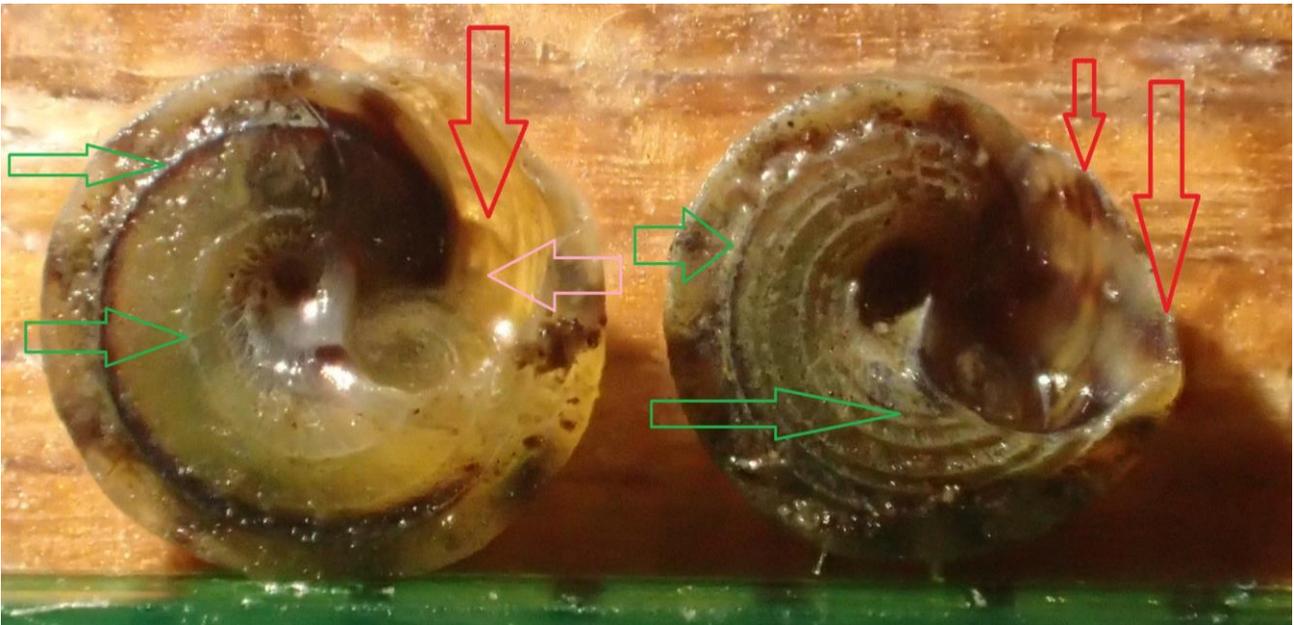


Fig. 5. Umbilical views of *Peasiella lutulenta*. Note prominent outermost spiral rib of each shell. The number of smaller spiral ribs after the first are variable - two on the left shell and six on the right shell (green arrows). External oblique axial stripes (red arrows) and spots (pink arrow) can be seen through the layer of shell.



Fig. 6. Lateral views of *Peasiella lutulenta* showing differences in shell sculpture, colour and pattern. Peripheral keel with strong flange (green rectangles) is a constant and diagnostic feature for this species.

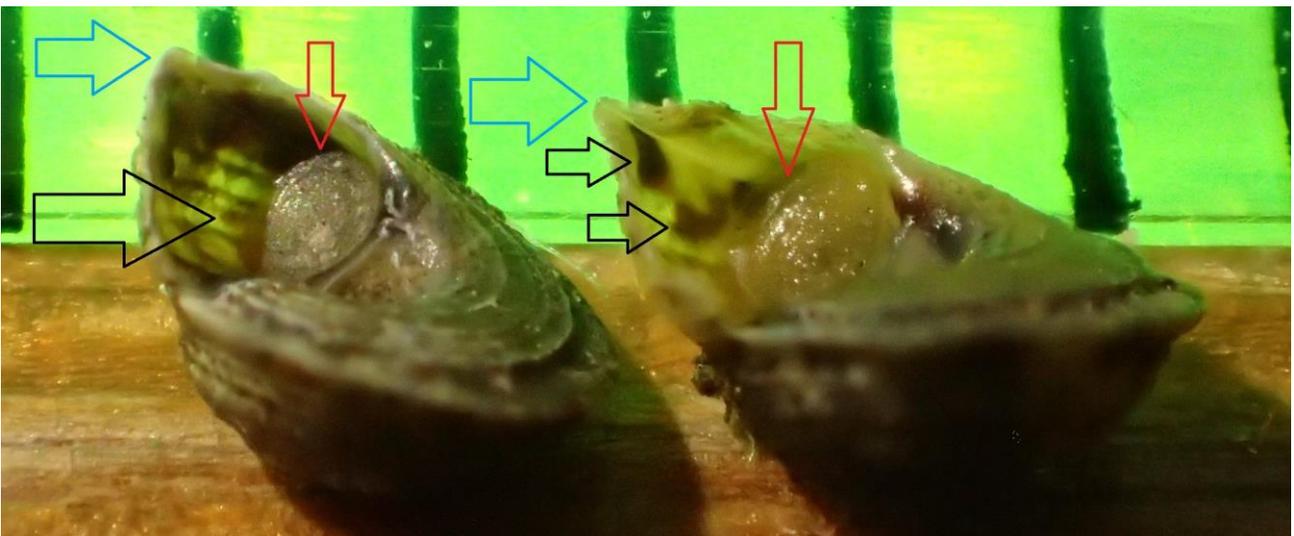


Fig. 7. Inverted apertural views of *Peasiella lutulenta* showing the operculum (red arrows), peripheral keel (blue arrows), and external patterns visible through the thin shell inside the aperture (black arrows).

Photographs by Lau Wing Lup