

Biodiversity Record: New Singapore record of the false wheel snail, *Pseudoliotia pulchella*

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Subjects: Beautiful false wheel snail, *Pseudoliotia pulchella* (Mollusca: Gastropoda: Tornidae).

Subjects identified by: Lau Wing Lup.

Location, date and time: Singapore Island / Johor Strait, Punggol Beach Park; 15 February 2026 at about 1640 hrs and 5 July 2026 at around 0827 hrs.

Habitat: Estuarine. Intertidal shore, under rocks at low tide.

Observer: Lau Wing Lup.

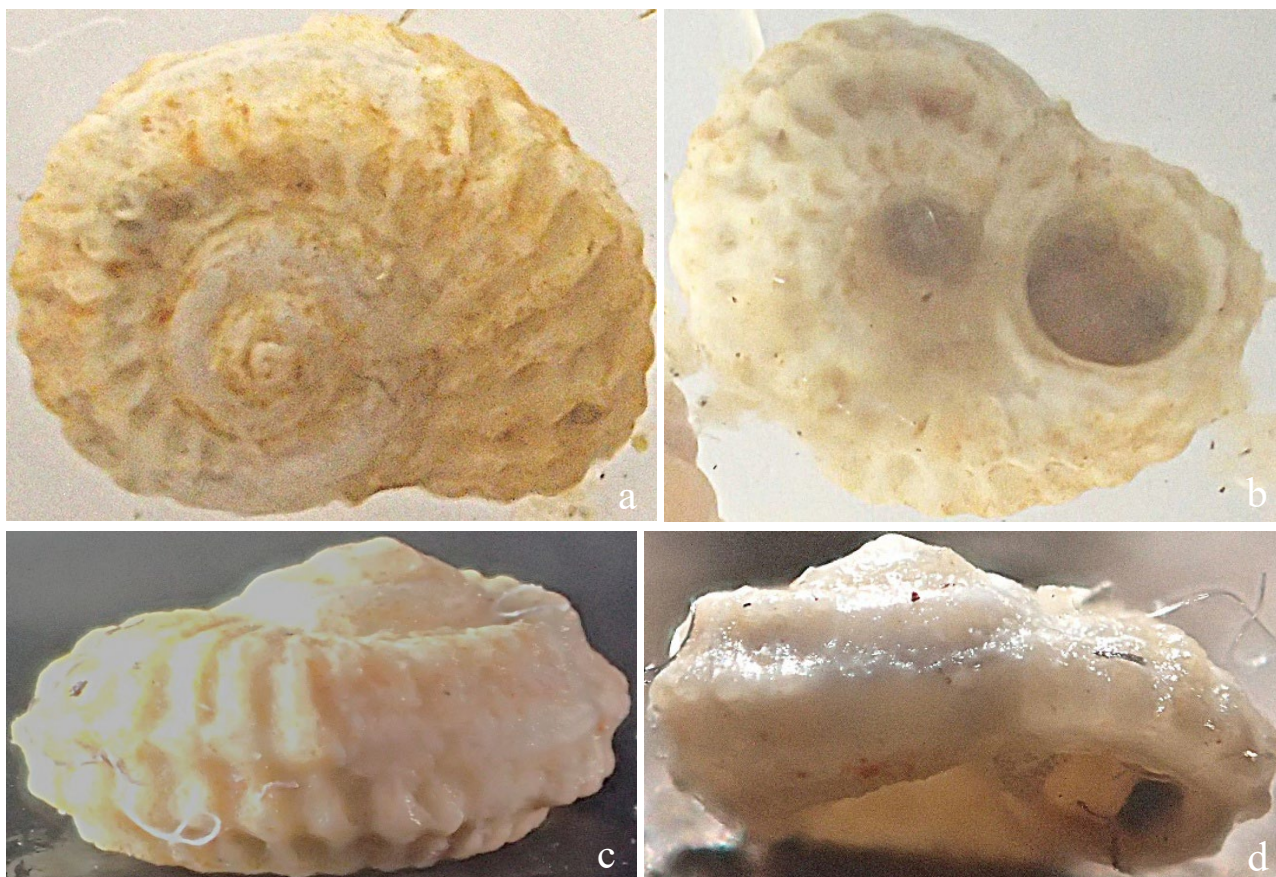


Fig. 1. Dead and worn *Pseudoliotia pulchella* of about 2 mm shell diameter in apical (a), umbilical (b), abapertural (c) and apertural (d) views. (Photographs by Lau Wing Lup).

Observation: On 15 February 2026, a worn shell of about 2 mm in width (Fig. 1) was found under a rock. Despite much cleaning, the dirty white shell appears covered with yellow crust. The shell is depressed conical and round with about four whorls separated by distinct grooved sutures. The body whorl is angled by four ridges (Fig. 1c); the peripheral ridge is the largest one, while the smallest one surrounds the wide umbilicus. There is a deep concave sulcus between the

peripheral spiral keels and the shell is adorned with uniformly strong radial ribs. The thickened peristome is rounded with the aperture angled downwards. The umbilicus is open and deep.

On 5 July 2026, a live example, also about 2 mm in shell diameter (Fig. 2), was found on the smooth underside of a rock that was relatively free of encrustations. The reddish crust on the shell exterior (Fig. 2a) appears to be of the same colouration of the rock that it was adhering to. The snail's foot is translucent and creamy white, and the tentacles are white (Fig. 2c). The circular and amber-brown operculum is thin, chitinous, and matches the aperture (Fig. 2b).



Fig. 2. The live *Pseudoliotia pulchella* of about 2 mm shell diameter in apical (a), umbilical (b, c, d), abapertural (e) and apertural (f) views. Note rusty red crust on the shell (a, e). The central translucent, milky-white mass is the foot (c). Foot retracted (d). (Photographs by: Lau Wing Lup).

Remarks: *Pseudoliotia pulchella* is herein documented as a new record for Singapore (see Tan & Woo, 2010; Sanpanich & Tan, 2016; Tan & Low, 2022; Chan & Lau, 2022). The featured specimens match the original description of the species from Japan by Dunker (1860, as *Cyclostrema pulchellum*). It has also been recorded from Seogundo Island in South Korea (Noseworthy & Choi, 2010), Tangshan in China (Qi et al., 2023), Tai Tam Bay in Hong Kong (Che & Morton, 1991), and

the Gulf of Thailand (Wells et al., 2021). The present record represents the southernmost extension of its known distribution. Prior to this record, it seems that none of the *Pseudoliotia* species known in Singapore had been found alive intertidally (e.g., Chan & Lau, 2022).

Pseudoliotia pulchella attains a shell width of up to 3.26 mm (Qi et al., 2023). It has been found under rocks on sandy gravel bottoms in intertidal zones in sheltered areas (Qi et al., 2023) and on mudflats (Peng et al., 2024), as well as in subtidal zones (Che & Morton, 1991).

Literature cited:

- Chan S-Y & Lau WL (2022) Biodiversity Record: New Singapore record of the snail *Pseudoliotia godeti*. Nature in Singapore, 15: e2022102. DOI: 10.26107/NIS-2022-0102
- Che RGO & Morton B (1991) Macrobenthic community of Tai Tam Bay, Hong Kong. Asian Marine Biology, 8: 193–216.
- Dunker W (1860) Neue japanische Mollusken. Malakozoologische Blätter, 6: 221–240. [Published Jan. 1860, see pages 209 & 225].
- Noseworthy RG & Choi KS (2010) The diversity and ecology of mollusks in Seogundo off the southern Jeju Island, Republic of Korea. Korean Journal of Malacology, 26(1): 19–31.
- Peng HB, Zhu Z & Chi Y-C TP (2024) China's aquacultural practices on intertidal mudflats support a shorebird flyway. Listening to the Mud. Exploring Shorebird Conservation from on and in the Mudflats, 41: 41–62.
- Qi L, Xu B, Kong L & Li Q (2023) Checklist of the micromolluscs in the intertidal zone of the Yellow Sea and Bohai Sea, China. Biodiversity Data Journal, 11: e105444. <https://doi.org/10.3897/BDJ.11.e105444>
- Sanpanich K & Tan SK (2016) Shell-bearing gastropod molluscs of the Singapore Strait. The Raffles Bulletin of Zoology, Supplement 34: 528–538.
- Tan SK & Low MEY (2022) An Inventory of the Molluscs of Pulau Satumu (Raffles Lighthouse), Singapore: With Notes on the Etymology and History of the Islet. Lee Kong Chian Natural History Museum, National University of Singapore, 82 pp. Uploaded 31 August 2022. <https://lkcnhm.nus.edu.sg/wp-content/uploads/sites/11/2024/02/2022-LKCNHM-EBOOK-2022-0002-Tan-Low.pdf> (Accessed 28 August 2026).
- Tan SK & Woo HPM (2010) A Preliminary Checklist of the Molluscs of Singapore. Raffles Museum of Biodiversity Research, National University of Singapore, 78 pp. Uploaded 2 June 2010. https://lkcnhm.nus.edu.sg/wpcontent/uploads/sites/11/2024/02/preliminary_checklist_molluscs_singapore.pdf (Accessed 28 August 2026).
- Wells FE, Sanpanich K, Tan SK & Duangdee T (2021) The Marine and Estuarine Molluscs of Thailand. Lee Kong Chian Natural History Museum, National University of Singapore, Singapore, 195 pp.