

Biodiversity Record: New Singapore record of the marine snail, *Vaceuchelus cavernosus*

Chan Sow-Yan* & Lau Wing Lup

Email: chansowyan@gmail.com (* corresponding author), suiseki1984@yahoo.com.sg

Recommended citation. Chan S-Y & Lau WL (2025) Biodiversity Record: New Singapore record of the marine snail, *Vaceuchelus cavernosus*. Nature in Singapore, 18: e2025077. DOI: 10.26107/NIS-2025-0077

Subjects: *Vaceuchelus cavernosus* (Mollusca: Gastropoda: Chilodontaidae).

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

Locations, dates and times: Johor Strait at two locations —

- 1) Changi Beach Park; 17 July 2022; around 0930hrs.
- 2) Punggol Beach Park; 15 December 2024; around 1545hrs.

Habitat: Estuarine. Intertidal zone during low tide. Among seagrass at Changi. Under rock at Punggol.

Observers: Lau Wing Lup and Chan Sow-Yan.

Observations: At Changi Beach, a juvenile shell of about 3.2 mm diameter (Fig. 1) was found on a *Placuna* clam. At Punggol Beach, a slightly larger juvenile shell of about 3.5 mm diameter (Fig. 2) was found under a rock. After cleaning, the shell is solid, globular and yellowish white. The larger shell has reddish brown spots. The sculpture comprises deep pits between the rounded nodulous spiral keels. The base has four spiral cords. The umbilicus is open.

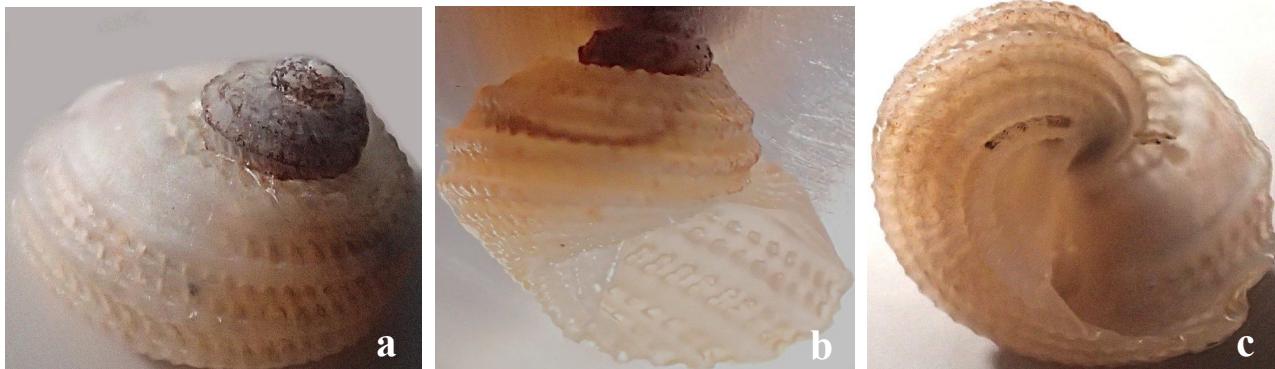


Fig. 1. Dorso-lateral (a), apertural (b) and umbilical (c) views of *Vaceuchelus cavernosus* shell (3.2 mm diameter) from Changi Beach (Photographs by: Lau Wing Lup).

Remarks: The Singapore specimens match well with the original description of *Vaceuchelus cavernosus* by Sowerby III (1905, as *Euchelus cavernosus*), and represent a new record of the species for Singapore (see Tan & Woo, 2010; Sanpanich & Tan, 2016; Tan & Low, 2022). The type locality of *Vaceuchelus cavernosus* is Sri Lanka. The adult shell attains a height of 7.2 mm and diameter of 7 mm, and has up to five whorls (Sowerby III, 1905). This appears to be a poorly documented species (Vilvens, 2017).

Vaceuchelus cavernosus can be differentiated from *Vaceuchelus foveolatus*, a congener recorded earlier from Singapore (Tan & Low, 2022), by being more globose, less spinose, less angular in shape, having an extra basal spiral cord, and possessing nodose spiral keels.

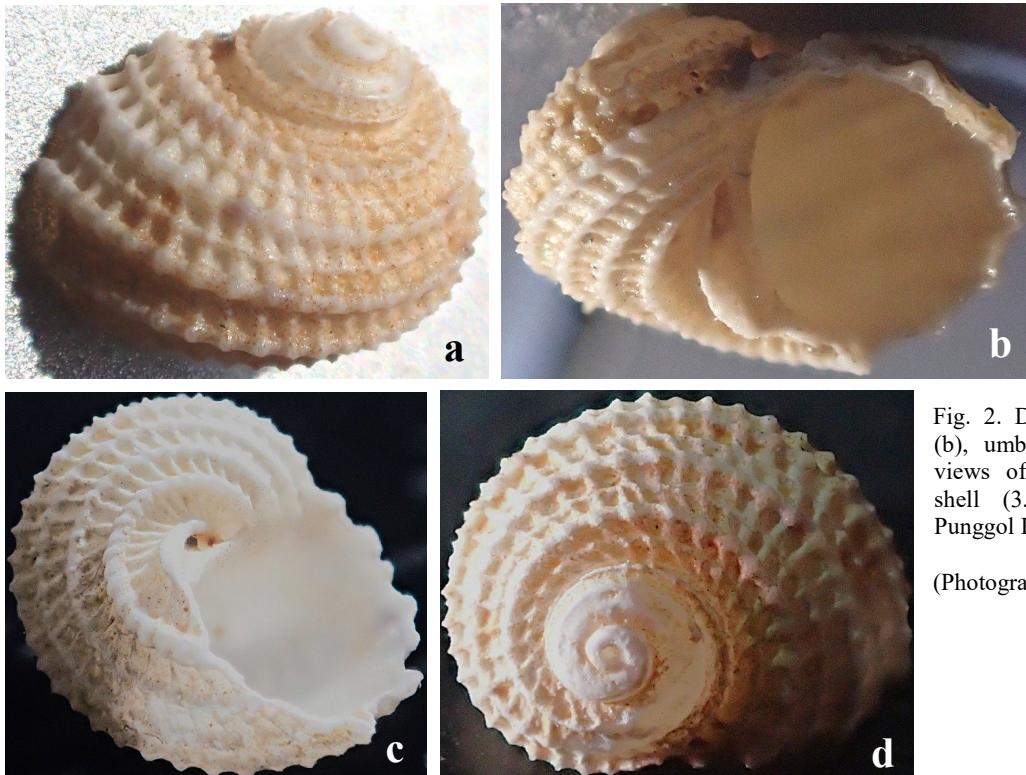


Fig. 2. Dorso-lateral (a), apertural (b), umbilical (c) and dorsal (d) views of *Vaceuchelus cavernosus* shell (3.5 mm diameter) from Punggol Beach.

(Photographs by Lau Wing Lup).

Literature cited:

Sowerby GB III (1905) Descriptions of new species of marine shells, chiefly from Ceylon. Annals and Magazine of Natural History, series 7, 16: 184–192.

Sanpanich K & Tan SK (2016) Shell-bearing gastropod molluscs of the Singapore Strait. 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 30 July 2025).

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/wp-content/uploads/sites/11/2024/02/preliminary_checklist_molluscs_singapore.pdf (Accessed 30 July 2025).

Vilvens C (2017) New species and new records of Chilodontidae (Gastropoda: Vestigastropoda: Seguenzioidea) from the Pacific Ocean. Novapex, 18 (HS 11): 1–67.