

Recent record of the turban snail, *Turbo heterocheilus*, at Changi

Subjects: Turban snail, *Turbo heterocheilus* (Mollusca: Gastropoda: Trochoidea: Turbinidae).

Subjects identified by: Contributors.

Location, date and time: Singapore Island, Changi coast; 5 & 6 June 2016; 0500-0730 hrs.

Habitat: Estuarine. Seagrass patch exposed during low tide.

Observers: Chan Sow Yan & Leo Nguang.

Observation: A few *Turbo heterocheilus*, around 30-35 mm in shell length, were encountered over two days in a patch of seagrass exposed at low tide. The shells were heavily encrusted with keelworms and other marine growth (Fig. 1). The similar-looking *Turbo intercostalis* was also found in the same habitat (Fig. 2), and is noticeably more numerous.

Remarks: *Turbo heterocheilus* appears to be very rare in Singapore, and only a few empty shells have been obtained in the past two decades of surveys in various locations (unpublished data). The discovery of living ones at Changi is thus noteworthy. Three specimens were deposited as vouchers in the Zoological Reference Collection (ZRC) of the Lee Kong Chian Natural History Museum at the National University of Singapore. One example collected on 5 June 2016 was catalogued as ZRC.MOL.7632. Two examples obtained on 6 June 2016 were catalogued as ZRC.MOL.7633.

Although the presence of *Turbo heterocheilus* in Singapore was first reported only recently by Tan & Woo (2010), there is a single lot present in the ZRC that was collected from Siglap in 1934, before the area was reclaimed. The lot, ZRC.MOL.8067 (ex ZRC 1975.5.6.97-100), is comprised of four specimens, and the presence of accompanying opercula indicates that they were obtained alive.

Turbo heterocheilus can be easily distinguished from its congeners in Singapore by its white operculum (Fig. 2), and sculpture of beaded spiral cords (Fig 3). *Turbo marmoratus* is the only other species recorded in Singapore with a similarly white operculum. However it has a smooth shell devoid of spiral ribs (see Tan & Low, 2013).



Fig. 1. *Turbo heterocheilus* in situ. Photograph by Chan Sow Yan

References:

- Tan, S. K. & M. E. Y. Low, 2013. A record of the green turban *Turbo marmoratus* in Singapore. *Singapore Biodiversity Records*. 2013: 102-103.
- Tan, S. K. & H. P. M. Woo, 2010. *A Preliminary Checklist of the Molluscs of Singapore*. Raffles Museum of Biodiversity Research, National University of Singapore. 78 pp.



Fig. 2. Distinctly different colouration of the soft body and operculum of *Turbo heterocheilus* (left) and *Turbo intercostalis* (right). Photograph by Chan Sow Yan

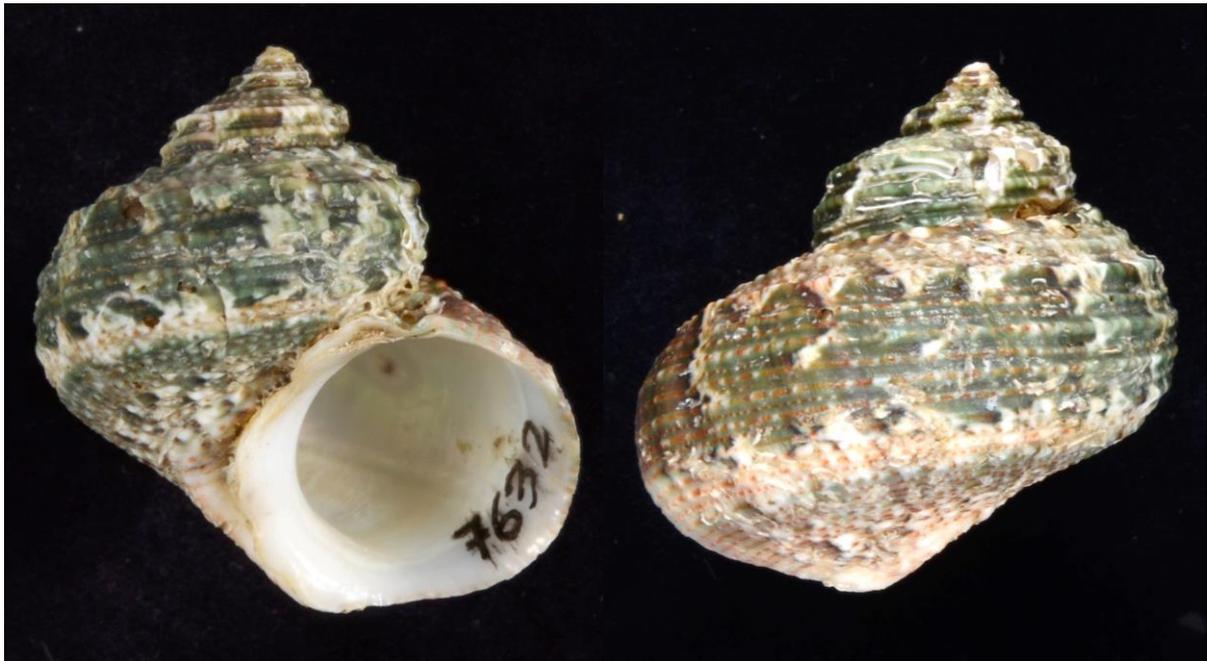


Fig. 3. Shell of *Turbo heterocheilus* (ZRC.MOL.7632), with encrustations removed to reveal its colour pattern and sculpture. Photographs by Tan Siong Kiat

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