

## Colour forms of the tapestry turban snail in Singapore waters

**Subjects:** Tapestry turban, *Turbo petholatus* (Mollusca: Gastropoda: Turbinidae).

**Subjects identified by:** Tan Siong Kiat.

**Location, date and time:** Singapore Straits, Pulau Satumu, western reef; 18-20 April 2014; evening.

**Habitat:** Coral reef, just beyond rocky breakwaters at between 2 and 5 m depth.

**Observer:** Contributors.

**Observation:** During a series of night dives to observe mass coral spawning, several *Turbo petholatus* were observed grazing or moving along the substratum in depths ranging from 2 to 5 m. Several colour forms were observed, including a green variety without any hint of brown pigmentation. Six examples were collected as vouchers and deposited in the Zoological Reference Collection of the Lee Kong Chian Natural History Museum at the National University of Singapore, and catalogued as ZRC.MOL.5718 and ZRC.MOL.5721.

**Remarks:** The tapestry turban is widely distributed in the Indo-Pacific, from Madagascar and the Red Sea, across the Indian Ocean, to the West Pacific (Japan to Australia), and east to the southern Pacific islands (Poutiers, 1998). It is also one of the most variable in shell colouration, patterns and shape (Alf & Kreipl, 2003). However, it is unlikely to be confused with other turbinids found in Singapore, except perhaps the green turban, *Turbo marmoratus* (see Tan & Low, 2013).

In Singapore, the tapestry turban is occasionally common around the waters of Pulau Satumu, but appears to be very rare elsewhere. It is regarded as a nationally endangered species by Chou & Tan (2008).

The recently collected shells shown here illustrate the local forms of this variable species, which have seldom been figured. This series may be broadly separated into three colour forms. The most unusual and thus far undocumented is the green form, which lacks all traces of brown or reddish-brown pigment on the shell and operculum, and has an orange apex (see Fig. 1 & 2 [shells on right]; ZRC.MOL.5721). The usual colour forms seen in Singapore are generally reddish- to dark greenish-brown, with narrow green to very dark brown spiral bands, and sometimes with broad axial streaks (see Fig. 2 [shells on left], 3 & 4 [shells on right]; ZRC.MOL.5718). Thus far, shells with a prominently angulated shoulder have not been noted in the Singapore population.

### References:

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- Tan S. K. & M. E. Y. Low, 2013. A record of the green turban *Turbo marmoratus* in Singapore. *Singapore Biodiversity Records*. 2013: 102-103.

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Fig. 1. In-situ image of the green form of *Turbo petholatus* (ZRC.MOL.5721) in life.

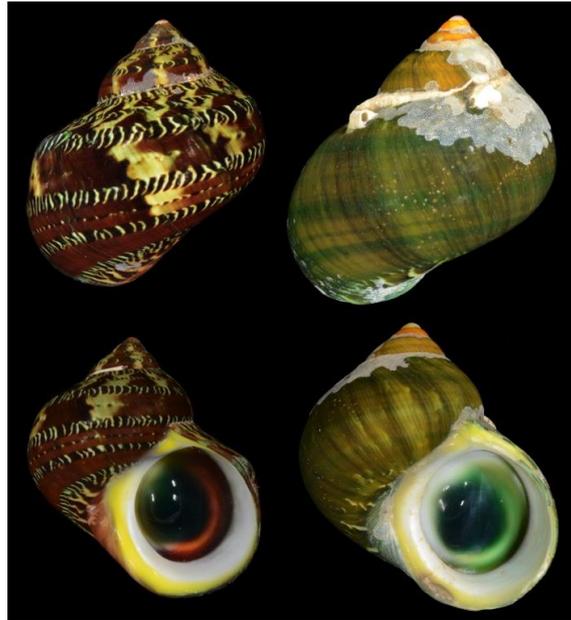


Fig. 2. *Turbo petholatus* (ZRC.MOL.5721) - normal form of 51.0 mm shell height on left, green form (lacking brown colour) of 56.0 mm shell height on right.

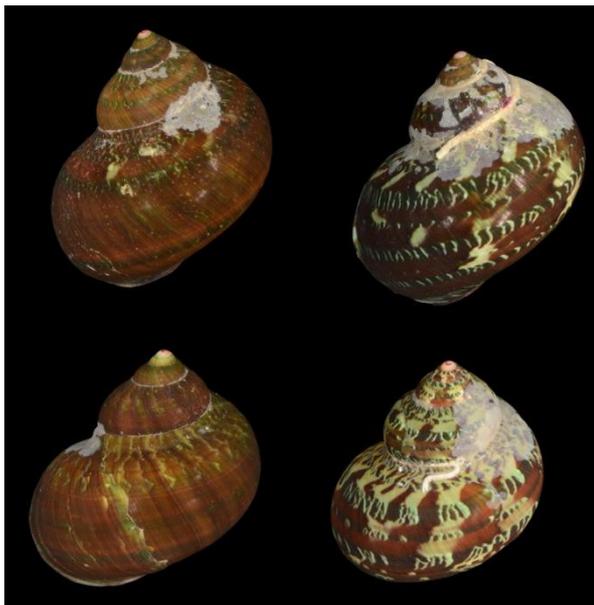


Fig. 3. *Turbo petholatus* (ZRC.MOL.5718) - dorsal views of brown form on the right, and normal form on the left. Clockwise from top left: 59.5 mm, 59.0 mm, 58.4 mm, 59.5 mm shell height.



Fig. 4. *Turbo petholatus* (ZRC.MOL.5718) - apertural views of brown form on the right and normal form on the left. Clockwise from top left: 59.5 mm, 59.0 mm, 58.4 mm, 59.5 mm shell height.

Photographs by Tan Heok Hui