

## Parasitic snails, *Vitreobalcis* sp., on white sea urchins at Cyrene Reef

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**Subjects:** Parasitic snail, *Vitreobalcis* sp. (Mollusca: Gastropoda: Eulimidae);  
White sea-urchin, *Salmacis sphaeroides* (Echinodermata: Camarodonta: Temnopleuridae).

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

**Location, date and time:** Singapore Strait, Cyrene Reef; 27 May 2017, 0400-0500 hrs.

**Habitat:** Marine. Snails were observed on sea urchins exposed at low tide on the soft sand substrate at the intertidal zone of a coral reef flat.

**Observers:** Author with Neo Mei Lin, Samuel Lee Hsien Rong and Mia Sara Choo.

**Observation:** Single individuals, each of about 1 cm shell length (Fig. A), were found on the aboral surface of two white sea urchins (Fig. B).

**Remarks:** The two snails are tentatively identified as an undetermined species of the genus *Vitreobalcis*, which is a recorded ectoparasite of the sea urchin genus *Salmacis* in the Indo-Pacific region (Britayev et al., 2013; Fujioka, 1985). These parasites feed on their echinoderm hosts by sucking the fluids from the tube feet, and the peristomial membrane (Britayev et al., 2013). *Vitreobalcis* sp. infestations tend to occur as single individuals, so it is common to find only one snail per host (Britayev et al. 2013).

In the shores of Singapore, unidentified species of eulimid snails have been observed on sea stars such as *Archaster typicus* and *Astropecten* spp. and the thorny sea cucumber, *Colochirus quadrangularis*, and there may be more than one snail on each host (see Tan, 2016). The author is not aware of any published report of eulimid snails infesting sea urchins in Singapore.

### References:

- Fujioka, Y., 1985. Population ecological aspects of the eulimid gastropod *Vitreobalcis temnopleuricola*. *Malacologia*. 26: 153-163.
- Britayev, T. A., O. A. Bratova & P. Y. Dgebuadze, 2013. Symbiotic assemblage associated with the tropical sea urchin, *Salmacis bicolor* (Echinoidea: Temnopleuridae) in the An Thoi archipelago, Vietnam. *Symbiosis*. 61: 155-161.
- Tan, R., 2016. Wild Singapore Fact Sheets. Ulimid snails. Family Eulimidae. <http://www.wildsingapore.com/wildfacts/mollusca/gastropoda/eulimidae/eulimidae.htm>. Accessed on 27 September 2017.



Fig A: Close up of a *Vitreobalcis* sp. (indicated by arrow) among the spines of a white sea urchin.

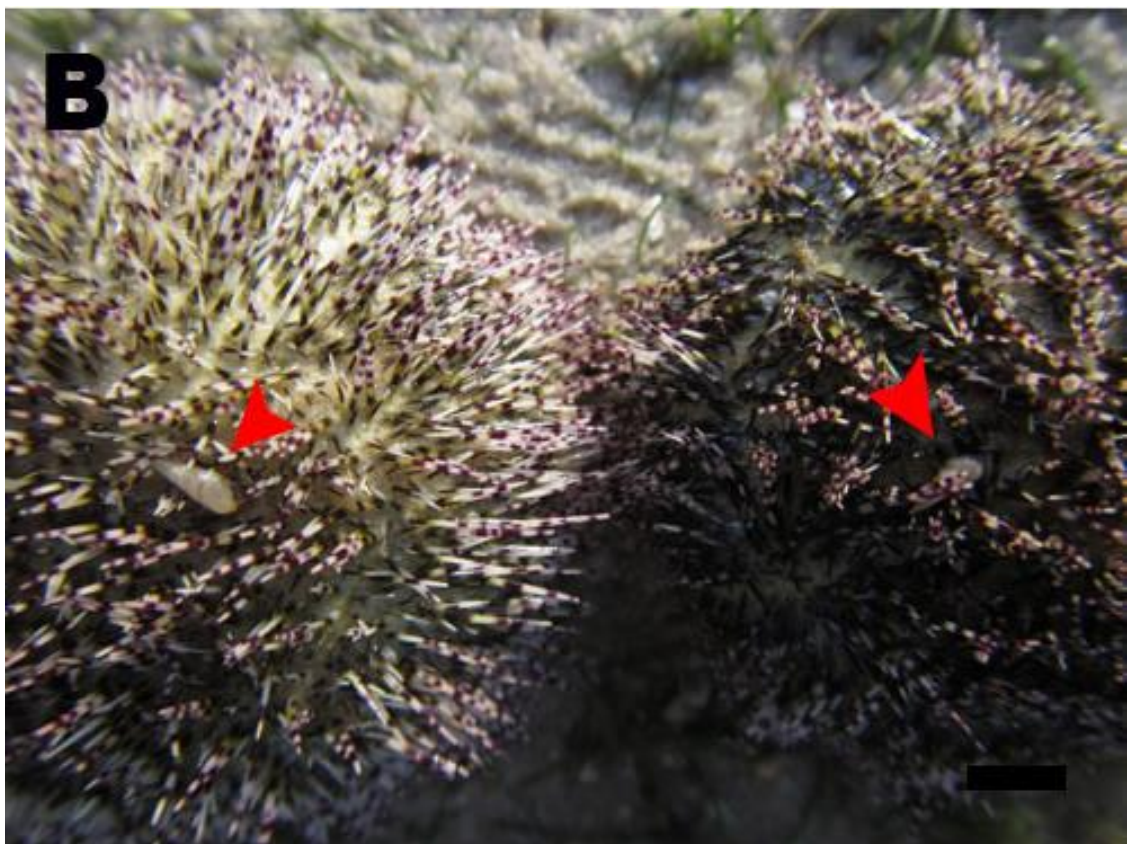


Fig B: One snail on the aboral surface of each of two sea urchins.

Scale bars = 1cm. Photographs by: Lynette Ying Shu Min