

## Spawning aggregations of waved mitre snails, *Pterygia undulosa*, at Changi

**Subjects:** Waved mitre, *Pterygia undulosa* (Mollusca: Gastropoda: Mitridae).

**Subjects identified by:** Tan Siong Kiat

**Location, date and time:** Singapore Island, Changi, beach near Changi Ferry Terminal; 1 September 2015; around 0600 hrs.

**Habitat:** Estuarine. Intertidal seagrass meadow at low tide, in water around 5 cm deep.

**Observer:** Ria Tan.

**Observation:** Spawning aggregations of waved mitre snails, each measuring about 30 mm in shell length, were seen in the early morning. The first group encountered was initially thought to have converged for feeding. Removing the snails on top for a closer inspection revealed an individual in the process of depositing egg capsules on a broken shell (Figs. 1 & 2). Sometime later, a window-pane shell (*Placuna* species) almost completely covered by egg capsules was encountered, and with a few waved mitre snails presumably the parents beside it (Fig. 3). The attached egg capsules are banana-shaped; each containing some twenty or more white or cream-coloured eggs (Fig. 4).

**Remarks:** The waved mitre snail can be encountered, sometimes commonly, in the area around Changi and Pulau Sekudu. For reasons yet to be known, the species was either exceedingly rare or non-existent on the shores of Singapore from the early 1990s until 2012 (personal observations). Nevertheless this species has already been documented to be part of the malacofauna of Singapore (e.g., Chuang, 1973; Cernohorsky, 1991). Apart from the waved mitre (*Pterygia undulosa*), a second congener, the finger mitre (*Pterygia dactylus*), has also been recorded from Singapore by Way & Purchon (1981). However the latter species has not been observed there in recent times.

The waved mitre is distributed from the eastern Indian Ocean, to Japan and Philippines and south to northern Western Australia (Cernohorsky, 1991). Members of the family Mitridae are known to be carnivorous and thus far, all studies have shown that they are specialised predators of sipunculids or peanut worms (Kohn, 1970; Fukuyama & Nybakken, 1983; Taylor, 1989).

### References:

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Fig. 1. Spawning aggregation of waved mitre snails, *Pterygia undulosa*, at Changi.



Fig. 2. Some snails were removed to reveal an individual apparently in the midst of depositing its egg clusters.

Photographs by Ria Tan



Fig. 3. A window-pane shell (*Placuna*) almost completely covered with egg capsules, and with the adult mitre snails nearby. The shell on the egg clusters is inhabited by a hermit crab.



Fig. 4. A closer look at the banana-shaped egg capsules and the eggs contained within.

Photographs by Ria Tan