

## Records of Singapore *cardiomya*, *Cardiomya singaporensis*

**Subject:** Singapore *cardiomya*, *Cardiomya singaporensis* (Mollusca: Bivalvia: Cuspidariidae).

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

**Location, date and time:** Singapore Strait –

- 1) Southwest off Pasir Panjang container terminal, between N 01°16.253' E 103°45.151' and N 01°16.164' E 103°45.225', at depth of 25.4 m; 12 June 2012; 0922–0927 hrs.
- 2) Off Tanjong Rhu, between N 01°16.899' E 103°53.825' and N 01°16.897' E 103°54.034', at depth of 24.5 m; 13 January 2013; 1245–1255 hrs.
- 3) Off East Coast Park at eastern side of Bedok Jetty, between N 01°17.517' E 103°57.262' and N 01°17.473' E 103°57.014', at depth of 19.5 m; 14 October 2014; 1143–1153 hrs.

**Habitat:** Marine. Subtidal in a wide range of substrate types (fine mud to gravel), at depths of 19.5–25.4 m.

**Observers:** Rene Ong & Lee Yen-ling.

**Observation:** A small number of *Cardiomya singaporensis*, approximately 5-8 mm in shell length (see accompanying photograph), were obtained during a few dredging surveys of the seabed in the Singapore Strait (see details above). They were kept in a tank for observation and photography before being preserved.

**Remarks:** Unlike most bivalves which are generally filter feeders, *Cardiomya singaporensis* is regarded to be a highly specialised predator that feeds mainly on small crustaceans (e.g., copepods, amphipods, ostracods) and polychaetes (Allen & Morgan, 1981; Morton, 1987; Tëmkin & Strong, 2013). Siphonal tentacles around the relatively large inhalant siphon are very sensitive to movements of potential prey (see accompanying photographs). Once a prey is detected, it shoots out its inhalant siphon rapidly to capture it (Allen & Morgan, 1981; Morton, 1987). Thus far, two species of cuspidariids have been recorded from Singapore (Tan & Woo, 2010 and references therein cited).

Interestingly, this contribution appears to be the first time this species from Singapore, its type locality, is figured. It was originally described as *Neaera singaporensis* without an accompanying illustration by Hinds (1843). The figured specimens are presently kept in the marine laboratory of the Tropical Marine Science Institute (TMSI) on St. John's Island.

### References:

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- Hinds, R. B., 1843. Descriptions of new species of *Neaera*, from the collection of Sir Edward Belcher, C. B., made during a voyage round the world, and from that of Hugh Cuming, Esq., obtained during his visit to the Philippines; with notices of the synonymy. *Proceedings of the Zoological Society of London*. 11: 75-79.
- Morton, B., 1987. Siphon structure and prey capture as a guide to affinities in the abyssal septibranch Anomalodesmata (Bivalvia). *Sarsia*. 72: 49-69.
- 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, Singapore. 78 pp.
- Tëmkin, I. & E. E. Strong, 2013. New insights on stomach anatomy of carnivorous bivalves. *Journal of Molluscan Studies*. 79: 332-339.

**Note:** This is a contribution of the Singapore **Comprehensive Marine Biodiversity Survey** conducted by the National University of Singapore's Tropical Marine Science Institute and the National Parks Board.



*Cardiomya singaporensis* from different locations, showing the distinct form of the shell and its surface sculpture of radiating ribs. The large inhalant siphon and surrounding siphonal tentacles are clearly seen extending from the spout-like rostrum of a few individuals.

Photographs by Rene Ong

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