

## Two species of sponge shells found at Changi Beach

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**Subjects:** Brown sponge shell, *Coriophora fusca* (Gastropoda: Triphoroidea: Triphoridae);  
Corrugated sponge shell, *Viriola corrugata* (Gastropoda: Triphoroidea: Triphoridae).

**Subjects identified by:** Chan Sow Yan & Lau Wing Lup.

**Location, date and time:** Johor Strait, Changi Beach Park; 3 August 2019, around 0707 hrs.

**Habitat:** Estuarine beach. On the shell of live saddle oysters (*Placuna ehippium*) in seagrass meadow exposed during morning low tide.

**Observer:** Lau Wing Lup.

**Observation:** Examples of *Coriophora fusca* and *Viriola corrugata* were observed crawling on saddle oysters. Figure 1 shows four *Coriophora fusca* and one *Viriola corrugata* alongside keel worms, barnacles and other marine organisms on the shell of one saddle oyster. The shells of both species are elongated and blackish, with *Viriola corrugata* being bigger and longer. *Coriophora fusca* was the more common of the two species of sponge shells.

**Remarks:** Members of the family Triphoridae are sponge feeders. At least 24 genera consisting of 156 species have been reported in the Indo-Pacific region (Laserson, 1954, 1958; Brandt, 1974; Chen et al., 2012).

*Coriophora fusca* is very common in the intertidal areas of the tropical West Pacific (Marshall, 1983). In New South Wales, Australia, it occurs in estuaries and has been found among shell grit washed up on beaches (Des Beechey, 2015). The featured specimens were found in a similar habitat. The shell is identifiable by its dark reddish brown colour (Fig. 2), strong nodules (Fig. 3), single protoconch spiral, strong basal spirals (Fig. 4), and oblique axial costae before the body whorl (Marshall, 1983). They appear identical to the type specimen of the species housed at Muséum national d'histoire naturelle in France (see MolluscaBase, 2019).

*Coriophora fusca* is herein regarded as a new record for Singapore, and is the fourth triphorid species to be found there. The other three species previously recorded are *Inella maxillaris*, *Mastonia rubra* and *Viriola corrugata* (see Tan & Woo, 2010).

*Viriola corrugata* is originally described from the Strait of Malacca and New Guinea (Hinds, 1844-1845). There are presently 27 known species in the genus *Viriola* distributed in the Indo-Pacific and tropical Eastern Pacific (Angelidis & Polyzoulis, 2018). Singapore material of *Viriola corrugata* is herein illustrated for the first time (Fig. 1, 5 & 6).

*Coriophora fusca* has a uniformly coloured shell with 14 to 18 whorls and grows to 12 mm in shell height. It differs noticeably from *Viriola corrugata* in having fewer and stronger axial costae, which are strongly nodular at intersections with the spiral cords (Fig. 1-4). *Viriola corrugata* is larger, with a maximum shell height of 30 mm, and its shell colour may be variable (Fig. 5 & 6; see Conchology, 2019a, 2019b).

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Fig. 1. Four examples of *Coriophora fusca* (top left circle) and a *Viriola corrugata* (smaller circle) attached to the shell of a live saddle oyster (*Placuna ehippium*). Photograph by Lau Wing Lup



Fig. 2. Shells of *Coriophora fusca*. Note the distinctive dark reddish brown colour, strong nodules, and strong basal spiral cords.



Fig. 3. Dorsal view of *Coriophora fusca*.



Fig. 4. Apertural view of *Coriophora fusca*.



Fig. 5. Dorsal view of *Viriola corrugata*.



Fig. 6. Apertural view of *Viriola corrugata*

Photographs by Lau Wing Lup