

Biodiversity Record: Occurrence of the marine snail, *Diala semistriata*, in mangroves

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Subjects: *Diala semistriata* (Mollusca: Gastropoda: Dialidae).

Subjects identified by: Chan Sow-Yan, Lau Wing Lup and Tan Siong Kiat.

Location, date and time: Singapore Island, Pasir Ris Park, Sungei Api Api; 26 June 2023, around 1130 hrs.

Habitat: Mangrove.

Observer: Lau Wing Lup.

Observation: Two live examples of about 3.5 and 3 mm shell height were found among encrustations on mangrove prop roots (Fig. 1).



Fig. 1. Mangrove habitat along Sungei Api Api at low tide where live *Diala semistriata* were found on the roots. Fig. 2. The larger of the two live *Diala semistriata* (about 3.5 mm shell height) in-situ, with a part of its yellowish foot exposed (Photographs by: Lau Wing Lup).

Remarks: *Diala semistriata* has variable shell patterns that consist mainly of rusty-coloured squarish spots that culminate to form squiggly, interrupted axial lines on the entire shell. Some specimens are devoid of colour pattern. The turreted shell has up to seven whorls. Its protoconch varies from milky white to purplish black. The whorls are flat with the last being subangular. The sutures are indented and narrowly channelled. The base is grooved with 6 to 11 spiral lirae, equal in width, while the entire shell is relatively smooth, except for inconspicuous axial growth lines. The peristome is thin. The aperture is ovate-pyriform, angled sharply posteriorly and bluntly angled anteriorly, and less than a third of the shell height. The shell is known to reach 7 mm in height (Ponder, 1992). In live specimens, orange spots or blotches can be seen on the inner flesh through the shell. When disturbed, snails from Australia and Hong Kong have been observed by Ponder (1992) to swing their shells violently from side to side. This behaviour was not reported for Singapore specimens.

Diala semistriata was described from the Red Sea (Philippi, 1849 as *Rissoa semistriata*). According to MolluscaBase (2023), a total of 20 names are listed as synonyms of *Diala semistriata*, which probably hinted at the variable pattern of its shell. This species is widely distributed in the Indo-Pacific, and has been recorded from Japan, Australia, South Africa, Saudi Arabia, and many islands in the Pacific Ocean, including the Hawaiian Islands and Lord Howe Islands (Ponder, 1992). *Diala semistriata* is known to occupy a wide range of habitats such as coral reefs, mangroves, lagoons, brackish water from underseas springs, and lava tide pools. Live examples have been found in the lower intertidal and sublittoral zones, but most specimens obtained deeper than 50 m were empty shells. Fossil records of *Diala semistriata* date back to the Early Miocene at Bikini and Eniwetok Atolls of the Marshall Islands (Ponder, 1992).

In Singapore, *Diala semistriata* was first recorded by Ponder (1992) on islands in the Singapore Strait (Sentosa, Pulau Salu, Pulau Sudong and Raffles Lighthouse) where they were found among algae and stones in water up to 1 m depth. This appears to be the first colour illustration of *Diala semistriata* from Singapore in local malacological literature. It also seems to be the first record, in Singapore, of *Diala semistriata* occurring in mangroves and on Singapore Island.

Fong et al (2018) mentioned the existence of gastropod grazers from the Dialidae family in seagrass meadows of Singapore, but did not identify these to species level. It is possible that these included *Diala semistriata*. The second author has observed *Diala semistriata* at early morning low tide along the estuarine intertidal shore of Changi Beach Park on two occasions in September 2020 and March 2021 around 0730 hrs. Among seagrass, several examples of about 2–5 mm shell height were found motionless on *Placuna* clams. Due to the small shells, and without magnifying equipment, the observer was unable to determine if the specimens were dead or alive.

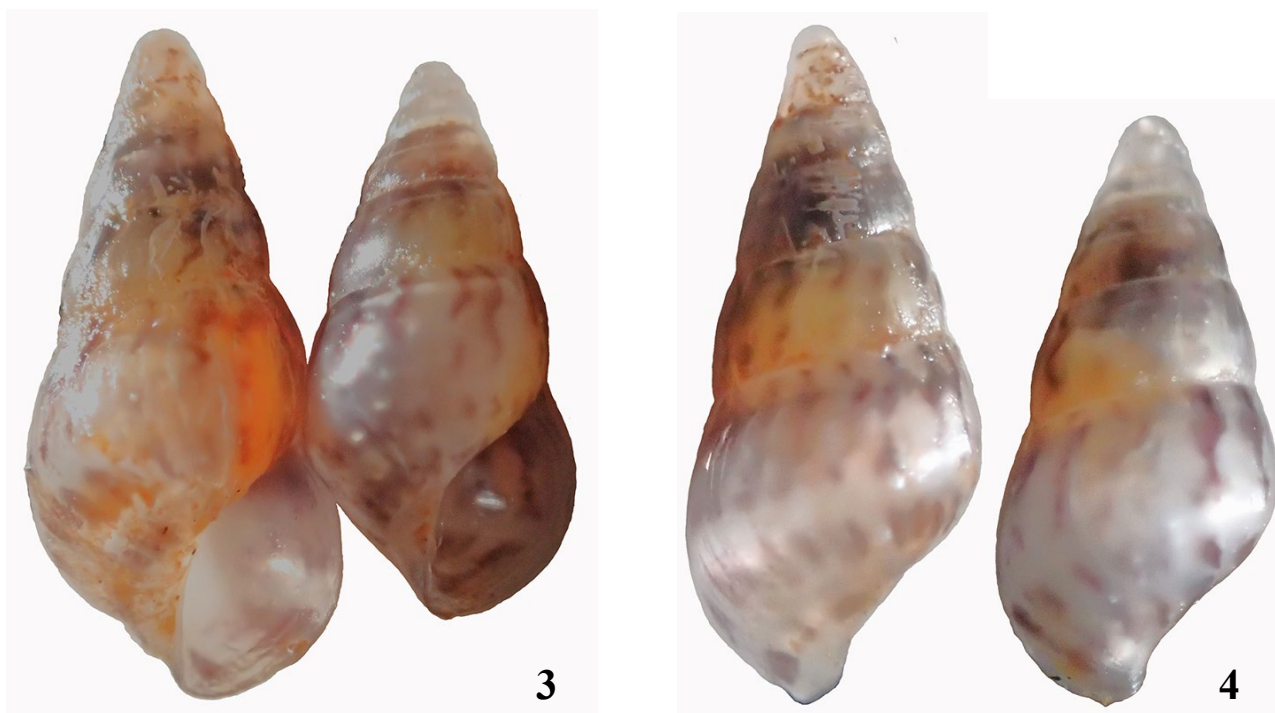


Fig. 3. Apertural view of the two live *Diala semistriata*. Fig. 4. Abapertural view of the same two snails. Shell height of specimen on the left is about 3.5 mm, the one on the right is about 3 mm (Photographs by: Lau Wing Lup).

Literature cited:

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