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A NEW RECORD OF *MITRELLA MOLECULINA* (DUCLOS, 1840) (GASTROPODA: COLUMBELLIDAE) IN SINGAPORE, WITH NOTES ON COLOUR FORMS

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INTRODUCTION

As part of on-going efforts to contribute to the knowledge of molluscan-diversity in Singapore, a number of trips were made to the reclaimed coastlines of East Coast Park to collect and identify small-shelled marine molluscs. About 10 or 11 species of dove shells (Columbellidae) have been recorded from Singapore in historical data in Lim (1969), Chuang (1973), Way & Purchon (1981), Wee & Ng (1994), and Tan & Chou (2000). Of these, none included *Mitrella* species, which are columbellids and generally possess of high-spired, biconic shells. The common Indo-Pacific species, *Mitrella moleculina* (Duclos, 1840) is herein reported as a new record in Singapore.

SPECIMEN DETAILS

Some small columbellids were separated from mud and debris pulled up by tangled fishing lines off Bedok Jetty, East Coast Park, on 30 Aug.2008. They were photographed and dried in 70% isopropanol and subsequently identified as *Mitrella moleculina* (Duclos, 1840) (after deMaintenon, 2008; Okutani, 2000). Representative specimens were deposited in the Zoological Reference Collection, Raffles Museum of Biodiversity Research, National University of Singapore under the catalogue number ZRC.MOL.2842.

The following description is adapted from deMaintenon (2008), to better match the features of the specimens: The shell has four teleoconch whorls. The aperture is almost half the shell length. The shell has a base colour of white overlaid by a broad band of yellowish-tan. Over the middle of the body whorl, there is a band of large, close-set, round white spots. There is an additional row of alternating small and large white spots just below the suture. Below the smaller white spots, there is a narrow dark brown stripe, interrupted by the larger spots so that it becomes a series of dashes. There is also a brown band at the base of the shell interrupted by large white spots. The base of the shell has wavy chestnut axial markings. The aperture is white, with denticles on both the labial edges and usually four large denticles on the parietal wall. The protoconch is usually white, often with a brown suture, and wider than the first teleoconch whorls; it is smooth and has 3.75 to 4 whorls (Fig. 1).

DISCUSSION

Mitrella moleculina is usually easily identified by its unique spotted patterning, from which its name is derived. Although most of the shells examined had typical colours and patterns, it is interesting to note that this species shows considerable colour variation throughout its distribution (K. Monsecour, pers. comm.). This observation is contrary to deMaintenon (2008) who noted that the polymorphism occurs only in specimens from the Philippines. Three such colour variations are pictured in Fig. 2. Despite the differences in overall colour and pattern, the distinctive spotting pattern of this species can usually still be observed, albeit faintly.

Other than Bedok Jetty, faded beach-worn specimens of *Mitrella moleculina* have been found in beach-drift at the high tide line along East Coast Park from the mouth of Bedok Canal to Fort Road. More investigation is needed to determine if this species occurs elsewhere in Singapore. *Mitrella moleculina* has a widespread geographical distribution, occurring throughout the tropical Indo-West Pacific.

Fig. 1 . *Mitrella moleculina* shell; East Coast Park. Scale bar = 1 mm.

Fig. 2. *Mitrella moleculina* shell; colour variations; East Coast Park. Scale bar = 1 mm.

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