## SINGAPORE BIODIVERSITY RECORDS 2017: 109-110

Date of publication: 31 August 2017. © National University of Singapore

## Two species of pyramidelloid snails new to Singapore

Subjects: Leucotina casta (Mollusca: Gastropoda: Pyramidelloidea: Amathinidae); Monotygma amoena (Mollusca: Gastropoda: Pyramidelloidea: Pyramidellidae).

Subjects identified by: Tan Siong Kiat.

**Location, date and time**: Singapore Island, Changi east, north of Changi Naval Base; 30 October 2005; around 1700 hrs.

Habitat: Unknown for living snails. Dead empty shells were found on the strandline of a sandy beach in a marine area.

**Observer**: Tan Siong Kiat.

**Observation**: Twenty one *Leucotina casta* of between 4.6 and 10.1 mm shell height (Fig. 1), and one *Monotygma amoena* of 5.6 mm shell height (Fig. 2), were sorted from of a sample of sand, shell grit, and debris collected from the strandline. The specimens are deposited in the Zoological Reference Collection (ZRC) of the Lee Kong Chian Natural History Museum, National University of Singapore, and catalogued respectively as ZRC.MOL.10195 and ZRC.MOL.10196.



Fig. 1. 16 of the 21 examples of Leucotina casta in the sample ZRC.MOL.10195. Photograph by Tan Siong Kiat

ISSN 2345-7597

**Remarks**: There is hitherto only one species, *Amathina tricarinata*, of the family Amathinidae that has been previously reported from Singapore (Tan & Low, 2014), and *Leucotina casta* is now the second. Despite being very similar in shell form, the more coarsely sculptured *Monotygma amoena* is presently assigned to a different, albeit related, family Pyramidellidae. It is not one of the several pyramidellids recorded from Singapore (e.g., Way & Purchon, 1981; Sanpanich & Tan, 2016). Although both species are herein first records for Singapore, it should be noted that the identifications are somewhat provisional.

Several *Leucotina* species recognised by Japanese authors (e.g., Kuroda & Habe, 1971; Hori & Tsuchida, 1995; Hori, 2000) were synonymised by Beu et al. (2004). We concur with Beu et al.'s (2004) interpretation of *Leucotina casta* as a variable species, and identify our shells with flat closely spaced spiral ribs as this species.

The only specimen herein identified as *Monotygma amoena* appears to match *Leucotina dianae* (sensu Kuroda & Habe, 1971), *Leucotina digitalis* (sensu Hori & Tsuchida, 1995), and *Leucotina adamsi* (sensu Hori, 2000) well. We follow Beu et al. (2004) in regarding these to be conspecific with *Monotygma amoena* (see Beu et al., 2004 as *Monoptygma amoena*). However it may possibly be a different species as the syntype and possible syntype of *Monoptygma amoena* (= *Leucotina amoena*), figured in Beu et al. (2004: fig. 25B) and Aartsen & Hori (2006: figs. 1-2), have flatter and more closely spaced spiral ribs with less distinct axial ridges in the interspaces.



Fig. 2. *Monotygma amoena* (ZRC.MOL.10196). Photograph by Tan Siong Kiat

## **References**:

- Aartsen, J. J. & S. Hori, 2006. Indo-Pacific migrants into the Mediterranean. 2. Monotigma lauta (A. Adams, 1853) and Leucotina natalensis Smith, 1910 (Gastropoda, Pyramidellidae). Basteria. 70: 1-6.
- Beu, A. G., B. V. Alloway, B. J. Pillans, T. R. Naish & J. A. Westgate, 2004. Marine Mollusca of oxygen isotope stages of the last 2 million years in New Zealand. Part 1: Revised generic positions and recognition of warm-water and cool-water migrants, *Journal of the Royal Society of New Zealand*. 34: 111-265.
- Hori, S., 2000. Family Amathinidae. In: T. Okutani (ed.), *Marine Mollusks in Japan*. Tokai University Press, Tokyo. p. 731, pl. 364.
- Hori, S. & E. Tsuchida, 1995. A revision of the systematic position of genus *Leucotina* (Gastropoda: Heterostropha). *Venus*. 54: 279-293.
- Kuroda, T. & T. Habe, 1971. Sea shells of Sagami Bay. Maruzen, Toky. xvi+741+489+51 pp., 121 pls.
- Robba, E., 2013. Tertiary and Quaternary fossil pyramidelloidean gastropods of Indonesia. *Scripta Geologica*. 144: 1-191.
- Sanpanich, K. & S. K. Tan, 2016. Shell-bearing gastropod molluscs of the Singapore Strait. *Raffles Bulletin of Zoology*. Supplement 34: 528-538.
- Tan S. K. & M. E. Y. Low, 2014. Singapore Mollusca: 4. The family Amathinidae (Gastropoda: Heterobranchia: Pyramidelloidea). *Nature in Singapore*. 7: 9-13.
- Way, K. & R. D. Purchon, 1981. The marine shelled Mollusca of west Malaysia and Singapore. Part 2, Polyplacophora and Gastropoda. *Journal of Molluscan Studies*. 47(3): 313-321.

Contributors: **Tan** Siong Kiat & Martyn E. Y. **Low** Contact addresses: <u>nhmtsk@nus.edu.sg</u> (Tan), <u>martyn.low@nus.edu.sg</u> (Low)