SINGAPORE BIODIVERSITY RECORDS 2015: 151-153 ISSN 2345-7597
Date of publication: 9 October 2015.

New record of the nudibranch *Doridomorpha gardineri* in Singapore

Subjects: *Doridomorpha gardineri* (Gastropoda: Nudibranchia: Doridomorphidae).

Subjects identified by: Toh Chay Hoon.

Location, date and time: Singapore Strait.

1) Kusu Island, south-west, subtidal at 4 m depth; 24 May 2013; about 1045 hrs.

2) Saint John's Island, south-west, intertidal area; 30 August 2015; 0400-0700 hrs.

Habitat: Marine. Coral reef.

Observers: Contributors.

Observations:

1) Three individuals (approximately 5-10 mm) were obtained from coral brushing. The corals had been taken off Kusu Island at a depth of around 4 m.

2) Two examples (approximately 8-10 mm) were found on blue coral (*Heliopora caerulea*) at a reef flat at Saint John's Island during low tide (Fig. 1). The nudibranchs were well-camouflaged, having similar colouration as their host coral (Fig. 2). The specimens were collected along with the broken piece of blue coral they were on for observation in an aquarium. About two weeks later, a spiral of eggs was found on the coral. In less than five days, the veliger larvae had started to hatch (Fig. 3). Interestingly one of the nudibranchs was always observed near the egg spiral.

Remarks: The present observations represent the first record of *Doridomorpha gardineri* in Singapore waters (see Tan & Woo, 2010). This nudibranch feeds exclusively on the blue coral (*Heliopora caerulea*), and is hitherto the only recognised species in the genus *Doridomorpha* and in the family Doridomorphidae (Gosliner et al., 2008: 316). The animal is oval, with retractable rhinophores, no oral tentacles, and no visible gills (Figs. 4 & 5). The foot is large, almost expanding to the margins of its mantle (Fig. 5). The apparently smooth dorsal surface appears textured with white and brown speckles when viewed under the microscope. As *Doridomorpha gardineri* can appear to be very flat, it can easily be mistaken as an Acotylean flatworm from the family Planoridae, which also has retractable head tentacles. Upon closer examination, the presence of a foot immediately identifies it as a nudibranch.

References:

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. 78 pp.

Gosliner, T. M., D. W. Behrens & A. Valdés, 2008. *Indo-Pacific Nudibranchs and Sea Slugs. A Field Guide to the World's Most Diverse Fauna*. Sea Challengers Natural History Books & The California Academy of Sciences, USA. 426 pp.

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.

Contributors: **Toh** Chay Hoon & Rene **Ong**
Contact addresses: nhmtohc@nus.edu.sg (Toh), rene.ong@gmail.com (Ong)

Fig 1. In-situ photograph of a *Doridomorpha gardineri* on blue coral (*Heliopora caerulea*).

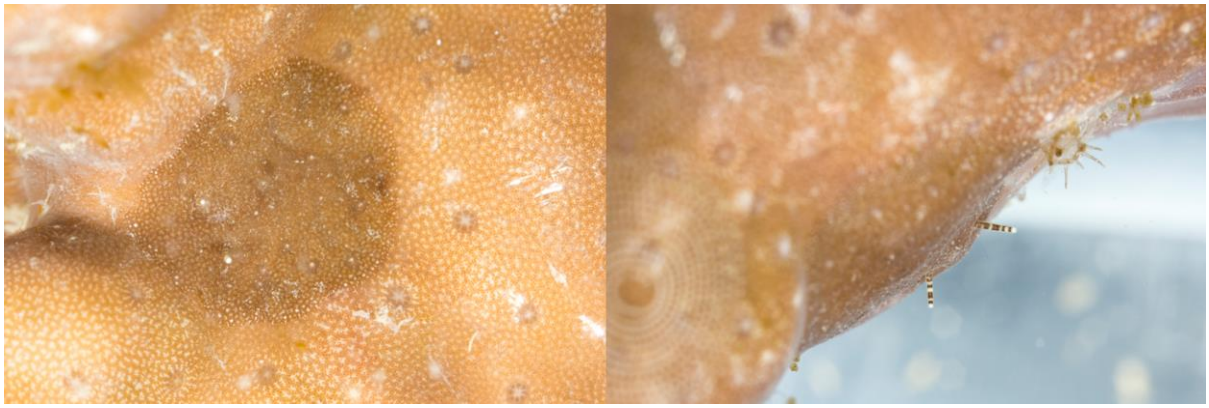

Fig 2. The flattened body of *Doridomorpha gardineri* strongly resembles a flatworm. The only give away is its rhinopores (right).

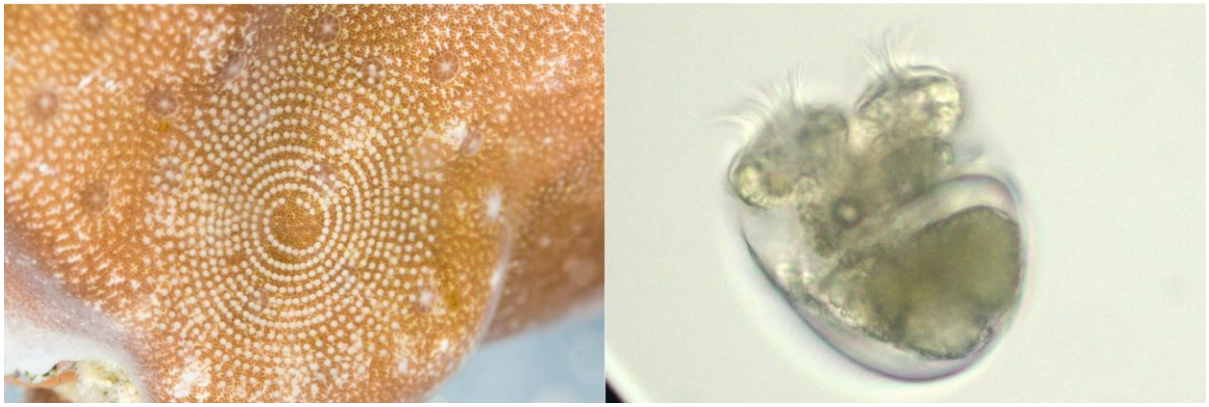

Fig 3. An egg spiral on coral (left) and freshly hatched veliger larvae (right).

Photographs by Rene Ong

Fig 4. Dorsal (left) and ventral (right) views of one of the *Doridomorpha gardineri*, showing the distinct head tentacles and the foot (right).

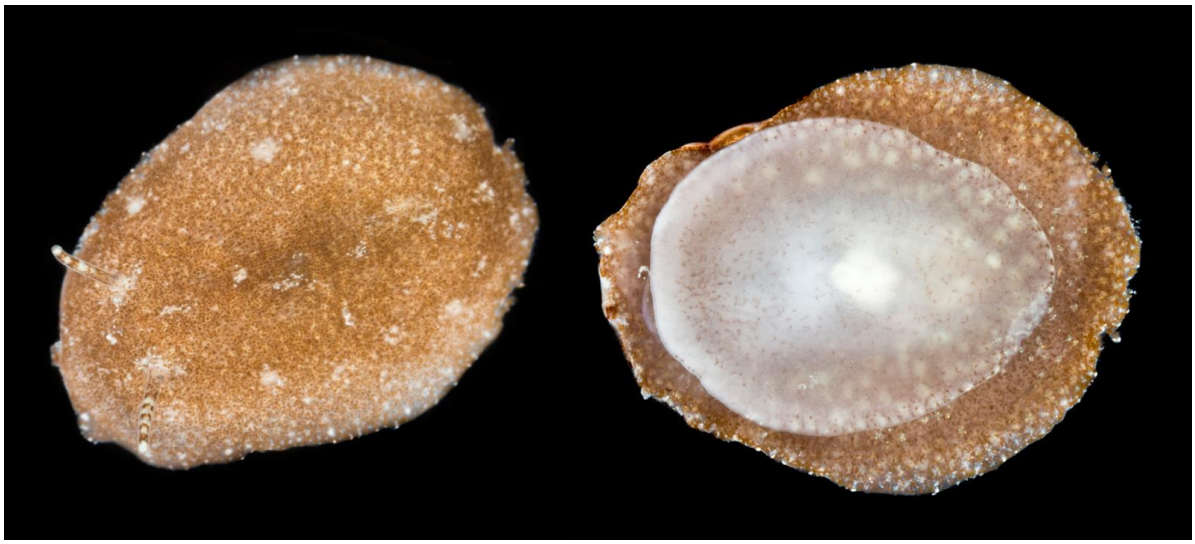

Fig 5. Dorsal (left) and ventral (right) views of another example of *Doridomorpha gardineri*, showing the distinct head tentacles and the foot.

Photographs by Rene Ong