

Confirmation of the occurrence of the snail, *Assiminea nitida*, in Singapore

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Subjects: Shiny assimineid snail, *Assiminea nitida* (Mollusca: Gastropoda: Assimineidae).

Subjects identified by: Chan Sow-Yan and Lau Wing Lup.

Locations, dates and time: Three locations on Singapore Island –

- 1) Changi Creek on 12 February 2017 at mid-afternoon.
- 2) Pasir Ris Park along Api Api River on 18 May 2019 at 1606 hrs, 25 May 2019 at 1048 hrs, and 14 September 2019 at 1615 hrs.
- 3) East Coast Park Area B on 23 December 2019 at 1338 hrs.

Habitats: Mangroves at Changi Creek and Pasir Ris Park. Intertidal monsoon drain at East Coast Park.

Observers: Chan Sow-Yan & Lau Wing Lup.

Observations: In the mangroves of Changi Creek and Pasir Ris Park, many examples were seen crawling on mud, debris, dead leaves and rotten wood (Fig. 1). Some were also noted near the stilt roots of *Rhizophora* trees at Changi Creek. Snails at East Coast Park were observed in the tidal sections of a monsoon drain alongside confamilials *Optediceros breviculum* and *Hydrocena* cf. *pyramis* (Fig. 2).

Some voucher specimens from Changi Creek (Fig. 3) have been deposited in the Zoological Reference Collection of the Lee Kong Chian Natural History Museum, at the National University of Singapore. The largest of the specimens has a shell height of 2.5 mm and shell diameter of 2.0 mm. They bear the catalog number ZRC.MOL.9480.



Fig. 1. In-situ images of *Assiminea nitida* snails in mangrove habitat on rotten wood (left and centre) and on dead leaf (right). Note their glossy dark shells. Photographs by Lau Wing Lup



Fig 2. In-situ image of the interior of an intertidal monsoon drain at East Coast Park Area B showing a single *Assiminea nitida* (indicated by black arrow) alongside two confamilial species, *Optediceros breviculum* (red arrows) and *Hydrocena* cf. *pyramis* (yellow arrows).

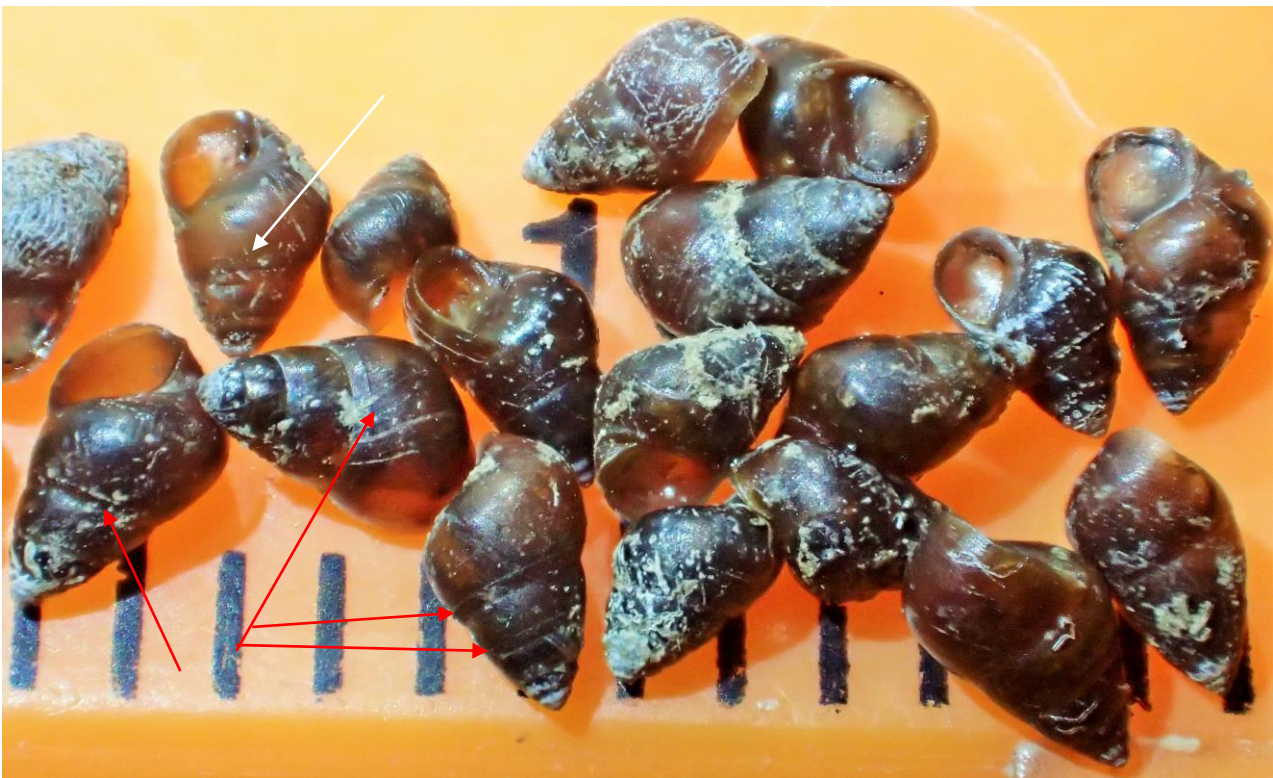


Fig. 3. Shells of *Assiminea nitida* with subsutural spiral threads (indicated by red arrows) and dark reddish brown zone below the suture (indicated by white arrow). Distance between the black bars is 1 mm.

Photographs by Lau Wing Lup

Remarks: The shiny assiminiid snail was apparently first reported in Singapore by Chou et al. (1980) as ‘*Assiminaea* [sic] ? *nitida*’. The examples featured here (Fig. 4) match the original description of the species by Pease (1865). The present record verifies the occurrence of this species in Singapore. Previously overlooked, it appears to be widespread in mangroves and inland tidal channels there.

Like most assiminiid snails, *Assiminea nitida* is amphibious and inhabits brackish waters. The shells of live specimens appear black and glossy, hence the specific epithet *nitida*, which means ‘shiny’ in Latin. This species can be identified by the presence of a subsutural spiral thread, and the subsutural zone may sometimes appear reddish brown (Fig. 3). According to Brandt (1974), *Assiminea nitida* is widespread along the coasts of the Indian and Pacific Oceans, from Mauritius northwards through Southeast Asia to Hong Kong and the Philippines, and is common in nipah swamps and mangroves in Thailand.

References:

- Brandt R (1974) The non-marine aquatic Mollusca of Thailand. *Archiv für Molluskenkunde*, 105: i-iv, 1-423.
- Chou LM, Ho SH, Khoo HW, Lam TJ, Murphy DH & Tan WH, 1980. The Present State of Mangrove Ecosystems in Southeast Asia and the Impact of Pollution - Singapore. South China Sea Fisheries Development and Coordinating Programme, Manila. Food and Agriculture Organization of the United Nations and United Nations Environment Programme. SCS/80/WP/94d (Rev.): vi + 76 pp.
- Pease WH (1865). Descriptions of new species of land shells from the islands of the Central Pacific. *Proceedings of the Zoological Society of London*. 1864: 668-676.