

New Singapore record of island-doll snail, *Nesopupa malayana malayana*

Chan Sow-Yan & Lau Wing Lup

chansowyan@gmail.com (Chan), suiseki1984@yahoo.com.sg (Lau)

Subjects: Malayan island-doll snail, *Nesopupa malayana malayana* (Mollusca: Gastropoda: Vertiginidae).

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

Location, date and time: Singapore Island, Outram area, Jalan Kukoh; 12 October 2018, 1130 hrs.

Habitat: Urban environment. On a concrete staircase, among dead leaf debris and on algae/moss-covered concrete surfaces.

Observers: Chan Sow-Yan & Lau Wing Lup.

Observation: Live *Nesopupa malayana malayana* snails of about 2 mm shell length (Fig. 1 & 2) were seen crawling on twigs and dead leaves about half an hour after a heavy downpour. Also seen in the same location are typical urban snails like *Taiwanassiminea bedaliensis*, *Liardetia doliolum*, *Opeas hannense* and *Allopeas gracile*. Twenty specimens of *Nesopupa malayana malayana* were deposited as voucher specimens in the Zoological Reference Collection of the Lee Kong Chian Natural History Museum, National University of Singapore, under the catalogue number ZRC.MOL.14442.

Remarks: The genus *Nesopupa* (*Neso* – island in Greek, *pupa* – doll in Latin) occurs on islands throughout the Pacific Ocean (Gargominy, 2008), but three species are known from East Africa in Mozambique (Muratov, 2010). The featured nominate subspecies of *Nesopupa malayana* is recorded in Malaysian Borneo, Indonesia (Java, Seribu Islands, Bali, Nusa Penida, Sumbawa, Sumba, Komodo, Timor & Tanimbar), Thailand (Krabi), Philippines, India and Australia (see Vermeulen & Whitten, 1998; Maassen, 2003; Mujiono, 2015). It has also been recorded from Tanzania in East Africa (Gittenberger & Bruggen, 2013). *Nesopupa malayana* was described from Borneo without precise location by A. Issel in 1874 (see Thompson & Dance, 1983). In the Malaysian Borneo state of Sabah, Phung et al. (2017) found it to be widespread on islands and Gopalasamy (2007) found the species, as well as its congener *Nesopupa moreleti*, in karst habitats. There are no records thus far of the genus *Nesopupa* on Peninsular Malaysia (see e.g., Maassen, 2001; Foon et al., 2017).

Nesopupa moreleti and *Nesopupa malayana samuiana* are two congeners known to occur in Southeast Asia. *Nesopupa moreleti*, which has been found ‘in a decaying cocoa-nut shell on the beach’ in Sumatra (see Benthem-Jutting, 1959), has a less cylindrical shell with more apertural teeth (see Phung et al, 2017). The subspecies *Nesopupa malayana samuiana*, described from Samui Island in the Gulf of Thailand (see Thompson & Upatham, 1997; Zilch 1983), also has a less cylindrical shell (see Panha et al, 2002). However, Panha & Burch (2005) wrote that they ‘... haven’t found this subspecies (*Nesopupa malayana samuiana*) on Thailand’. They were probably referring to the mainland part of the country. Dumrongrojwattana et al. (2007) found two unidentified species of *Nesopupa* from eastern Thailand.

Nesopupa malayana malayana, as well as its family Vertiginidae, are herein documented as new records for Singapore (see Tan et al, 2012). Although Singapore falls within the presumed natural range [see Vermeulen & Whitten (1998) and Mujiono (2015)], it is uncertain if the featured population is native there, or if it is a recent introduction. As live specimens of *Nesopupa malayana malayana* (Fig. 1) are rarely seen, the featured population would be of considerable interest.

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Fig. 1. Lateral view of a live *Nesopupa malayana malayana* in-situ at Jalan Kukoh on 12 October 2018.



Fig. 2. Dorsal and aperture views of retracted *Nesopupa malayana malayana* (from left - 1.9, 2.1 & 1.8 mm).

Photographs by Lau Wing Lup