

## Biodiversity Record: The amber snail, *Indosuccinea minuta*, in Singapore

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**Subjects:** Amber snail, *Indosuccinea minuta* (Mollusca: Gastropoda: Succineidae).

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

**Location, date and time:** Singapore Island at two locations –

1. Punggol Park in Hougang; 3 June 2019; 1725 hrs.
2. Buangkok Medical Park; 29 July 2020; 1430 hrs.

**Habitat:** Urban parkland.

**Observers:** Chan Sow-Yan and Lau Wing Lup.

**Observations:** At Punggol Park, three live examples were seen after rain. Two were moving on live and dead grass, and one was found on the knees (emergent woody-stem projections) of bald cypress trees (*Taxodium distichum*) at the edge of a freshwater pond (Fig. 1).

At Buangkok Medical Park, around 12 individuals of various sizes and growth stages were observed after rain. One was crawling on a metal railing beside some planter pots. Most were found on pillars of a pavilion, under shade (Fig. 2). Some were aestivating while others were grazing. The snails were far from any large water body and about 1.5 to 2 m above the ground. Their shells were coated with their own excrement, organic debris and algae (Fig. 5). Aestivating specimens retracted completely into their shells, with the apertures sealed with an epiphragm of dried mucus (Fig. 5).

All the snails observed are small, the largest only about 5 mm in shell height. Their shells are thin and translucent, with few whorls and a rapidly expanding last whorl (Figs. 3–5). The surfaces are glossy with numerous radial growth lines (Figs. 3, 4). The colour of the shells is amber (Fig. 3), but some appear dark grey in life (Fig. 4) if the animal in the shell is dark. The animals have black eyes on tips of dark grey tentacles, and light grey or yellowish feet. The colour of the body and head varies from pale greyish yellow (Fig. 3) to dark greyish blue (Fig. 4), with black spots and stripes on some parts of the body.

**Remarks:** Although presented here as *Indosuccinea minuta*, the identification of the featured snails is actually tentative. This is because identification of members of the Succineidae to species, and even genera, based on external morphology is barely possible without detailed examination of anatomical features (Vermeulen & Whitten, 1998; Dumrongrojwattana et al., 2007). Nevertheless, the featured specimens appear to be morphologically similar to the examples of *Indosuccinea minuta* illustrated in Benthem-Jutting (1952), Vermeulen & Whitten (1998) and Tan et al. (2012), and are thus provisionally treated as this species. Another species, *Indosuccinea taylori*, was described from Singapore by Pfeiffer (1853, as *Succinea taylori*) without a figure. The species was illustrated later (Pfeiffer, 1855), but the figure does not match the specimens featured here.

*Indosuccinea minuta* was listed by Ho (1995, as *Succinea minuta*) from many places in Singapore without an illustration, including Tanjong Rhu on dead leaves and mud, Thomson Road and Bukit Timah in plant nursery flower pots, and East Coast Park in leaf litter. It has been found in imported vegetables (Tan et al., 2012), and a live example was reported crawling on raw lettuce in a diner's bowl of minced pork noodles (Ng, 2017). As it has thus far been locally found in urban and disturbed environments, it is possible that this species was introduced. Despite being terrestrial pulmonates, amber snails are prone to desiccation, and hence are typically found in very moist areas.



Fig. 1. An amber snail (in red oval) on the knees of a bald cypress tree along the edge of a pond in Punggol Park. (Photograph by: Lau Wing Lup).



Fig. 2. Amber snails (circled in yellow) on a pillar in a garden pavilion at Buangkok Medical Park. (Photograph by: Lau Wing Lup).



Fig. 3. Dorso-lateral view of an amber-coloured amber snail. (Photograph by: Lau Wing Lup).



Fig. 4. Dorso-lateral view of a dark-coloured amber snail. (Photograph by: Lau Wing Lup).

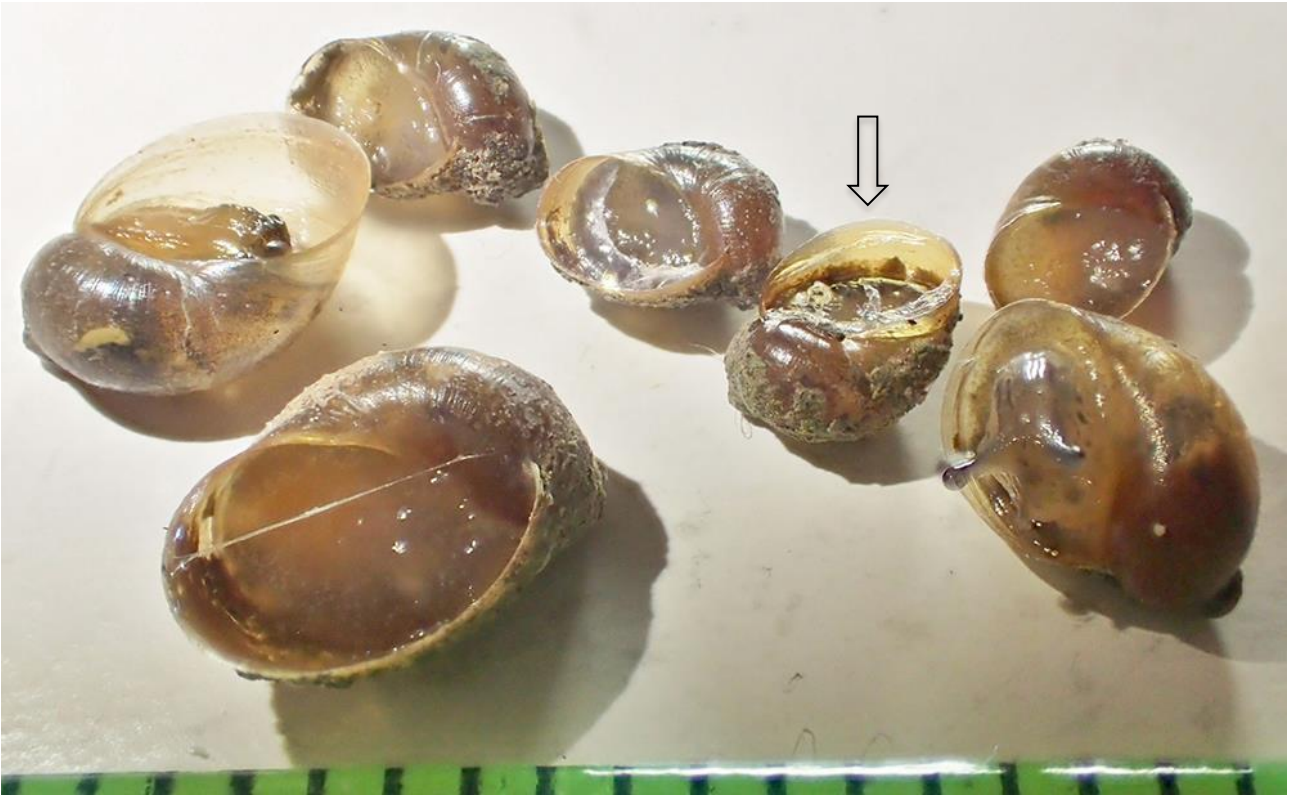


Fig. 5. Apertural view of some live amber snails from Buangkok Medical Park. Note that some of the shells are coated with excrement, organic debris and algae. Aestivating snails (such as the example indicated by arrow) are able to retract fully into their shells and seal the apertures with an epiphragm of dried mucus. Spaces between the black bars at bottom margin of picture = 1 mm. (Photograph by: Lau Wing Lup).

**Literature cited:**

- Bentham-Jutting WSS (1952) Critical revision of the Javanese pulmonate land-snails of the families Ellobiidae to Limacidae, with an appendix on Helicarionidae. Systematic studies on the non-marine mollusca of the Indo-Australian Archipelago. Treubia, 21: 291–435.
- Dumrongrojwattana P, Chaijirawong R, Matchacheep S & Moolenbeek RG (2007) Comparative anatomy of land snail genus *Succinea* from Eastern Thailand (Pulmonata: Succineidae). Kasetsart Journal (Natural Science), 41: 229–238.
- Ho WH (1995) A review of the land-snail fauna of Singapore. Raffles Bulletin of Zoology, 43: 91–113.
- Ng C (2017) This is why you should focus on your food instead of phone when eating. Stomp, The Straits Times, 20 December 2017. <https://stomp.straitstimes.com/singapore-seen/this-is-why-you-should-focus-on-your-food-instead-of-phone-when-eating> (Accessed 28 May 2021).
- Pfeiffer L (1853) Monographia heliceorum viventium. Sistens descriptiones systematicas et criticas omnium huius familiae generum et specierum hodie cognitarum. Volumen tertium. F. A. Brockhaus, Lipsiae, viii + 711 pp.
- Pfeiffer L (1855) Die gattungen *Daudebardia*, *Simpulopsis*, *Vitrina* und *Succinea*. Systematisches Conchylien-Cabinet, 11: 1–59, 6 pls.
- Tan SK, Chan SY & Clements GR (2012) A Guide to Snails and Other Non-marine Molluscs of Singapore. Singapore Science Centre, Singapore, 176 pp.
- Vermeulen JJ & Whitten AJ (1998) Fauna Malesiana Guide to the Land Snails of Bali. Backhuys Publishers, Leiden, 164 pp.