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# Biodiversity Record: New record of pinhead snail, *Paralaoma angusta*, in Singapore

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**Subjects:** Pinhead snail, *Paralaoma angusta* (Mollusca: Gastropoda: Punctidae).

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

**Location, date and time:** Singapore Island, Dairy Farm Nature Park, Dairy Farm Loop, beside Dairy Farm Hut; 21 August 2021; 1630 hrs.

**Habitat:** Secondary forest. Among leaf litter.

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

**Observation:** Around five snails were found aestivating on the underside of dead leaves, shaded by vegetation (Fig. 1). Several freshly dead examples with relatively intact shells were found in the leaf litter (Fig. 3). Mature specimens have about four to five well-rounded whorls with shell width of about 2 mm. The shells are thin, semi-translucent, golden yellowish brown and low conical to lenticular in outline. The apex is rounded and the shell surface is glossy. The protoconch is devoid of any sculpture (Fig. 3A, C, D). However, its periphery, where the teleoconch begins, consists of densely placed radial riblets. These riblets are cut across by finer and rather narrowly placed spiral grooves. The teleoconch periphery has widely spaced radial ribs, often adorned with periostracal crests, which either become thinner or disappear gradually towards the umbilical region. Fine and densely placed spiral threads traverse the periphery of the shell. These spiral striations reduce to widely spaced, distinct grooves towards the narrow and open umbilicus. The outer lip is thin and fragile. The aperture is crescent-shaped (Fig. 3B). The snail's soft tissue is grey. The upper tentacles are longer and a darker shade of grey than the lower ones. The foot is of the same light grey colour like the lower tentacles (Fig. 2). The snails move very slowly and deliberately, and do not travel far from their micro-habitat. The animals also retract slowly into their shells.

Fig. 1. In situ view of a live *Paralaoma angusta* aestivating alone on the underside of an upturned dead leaf at Dairy Farm Nature Park, Singapore. (Photograph by: Lau Wing Lup).

Fig. 2. In situ, close-up view of a *Paralaoma angusta* emerging from its shell. Note the dark grey upper tentacles with eye spots at the ends. The lower tentacles are much shorter and a lighter grey. (Photograph by: Lau Wing Lup).

**Remarks:** The authors also identified examples of *Paralaoma angusta* in the small patch of rainforest at the Singapore Botanical Gardens on 23 August 2021, and along the main road of Bukit Timah Nature Reserve on 28 August 2021. The snails were found among leaf litter beside boardwalks and footpaths.

*Paralaoma angusta* (as well as its family Punctidae) is herein documented as a new record for Singapore (see Lim, 1969; Ho, 1995; Tan & Woo, 2010; Ng et al., 2011; Tan et al., 2012; Lim et al., 2018; Chan & Lau, 2020, 2021). It seems to be a forest-dweller as the authors have not encountered this species in urban parks. It is hence likely to be native in this region, where, due to its small size, it could have previously been overlooked.

Lim (1969: fig. 1A, as *Microcystina* sp.) described and illustrated a snail from the Singapore Botanic Gardens that appears to bear a close resemblance to *Paralaoma angusta*. Without examining the material she referenced, the authors are unable to ascertain its identity.

*Paralaoma angusta* was described from specimens collected from the Crocker Range in Sabah, Malaysia, by Vermeulen et al. (2015). The species has also been found in Sarawak, Kalimantan, and was thought to be endemic to Borneo (Marzuki et al., 2021). Living snails were observed foraging among organic debris and leaf litter near cliffs of a lowland limestone forest (Marzuki et al., 2021). The present record also seems to be the first outside of Borneo, and suggests that this diminutive species could have a wider distribution in Southeast Asia. This is probably the first publication to illustrate live examples of *Paralaoma angusta*.


Fig. 3. Shell of a freshly dead *Paralaoma angusta* of about 2 mm in shell width. A, dorsal view showing the teleoconch with widely spaced radial ribs adorned with periostracal crests, the protoconch devoid of any sculpture; B, umbilical view showing the narrow and open umbilicus; C, lateral view showing the widely spaced radial ribs crossed by finer and densely placed spiral threads that traverse the shell periphery; D, apertural view showing the thin, fragile and partially broken outer lip, round apex and crescent-shaped aperture. (Photographs by: Lau Wing Lup).

**Literature cited:**

Chan S-Y & Lau WL (2020) Barrackpore hive snail, *Kaliella barrackporensis*, in Singapore. Singapore Biodiversity Records, 2020: 121–124.

Chan S-Y & Lau WL (2021) Biodiversity Record: The micro moss snail, *Microcystina muscorum*, in Singapore. Nature in Singapore, 14: e2021084. DOI: 10.26107/NIS-2021-0084

Ho WH (1995) A review of the land-snail fauna of Singapore. The Raffles Bulletin of Zoology, 43: 91–113.

Lim RKY (1969) The Terrestrial Molluscs of Singapore. Unpublished Thesis. Department of Zoology, University of Singapore, Singapore, vi + 241 pp.

Lim WH, Li TJ & Cai Y (2018) Diversity of terrestrial snails and slugs in Nee Soon freshwater swamp forest, Singapore. Gardens' Bulletin Singapore, 70 (Supplement l): 109–121.

Marzuki ME, Liew TS & Mohd-Azlan J (2021) Land snails and slugs of Bau limestone hills, Sarawak (Malaysia, Borneo), with the descriptions of 13 new species. ZooKeys, 1035: 1–113.

Ng PKL, Corlett RT & Tan HTW (eds.) (2011) Singapore Biodiversity. An Encyclopedia of the Natural Environment and Sustainable Development. Editions Didier Millet and Raffles Museum of Biodiversity Research, National University of Singapore, Singapore, 552 pp.

Tan SK, Chan SY & Clements GR (2012) A Guide to Snails and Other Non-Marine Molluscs of Singapore. Singapore Science Centre, Singapore, 176 pp.

Tan SK & Woo HPM (2010) A Preliminary Checklist of the Molluscs of Singapore. Raffles Museum of Biodiversity Research, Singapore, 78 pp.

Vermeulen JJ, Liew TS & Schilthuizen M (2015) Additions to the knowledge of the land snails of Sabah (Malaysia, Borneo), including 48 new species. ZooKeys, 531: 1–139.