

A SIGHTING OF A RARE SNAIL, *TRACHIA PUDICA* (GODWIN-AUSTEN, 1891), IN SINGAPORE (PULMONATA: CAMAENIDAE)

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INTRODUCTION

The occurrence of several *Amphidromus* species from Singapore is often mentioned in the literature (e.g., Laidlaw & Solem, 1961; Ho, 1995; Maassen, 2001). However there is scarcely mention of other genera in the family Camaenidae. At present, two camaenid genera have been recorded from Singapore, namely *Amphidromus* and *Trachia* (see Chan, 1996; Tan & Woo, 2010). This article documents a recent sighting of a living *Trachia pudica* (Godwin-Austen, 1891) in Singapore. Although not a new record, this observation is nonetheless noteworthy as it is, to the best of our knowledge, the first sighting of the living animal in Singapore. Prior to this observation, *Trachia pudica* has only been encountered as empty, or weathered and broken shells. Thus this report also serves as a confirmation of the presence of this species in Singapore.

OBSERVATION AND DISCUSSION

The live *Trachia pudica* (Figs. 1-3) was encountered in the late morning of 3rd October 2010, after a rainy early morning, on a man-made concrete structure at Nee Soon Swamp Forest. The shell of this individual is not yet fully grown, and lacks the typical expanded peristome found in full grown adults (see Fig. 4). Despite this, the shell is readily distinguishable by the subangularly keeled periphery, shallow depression on the body whorl above the periphery, and the flattish spire. The umbilicus is open and bordered by a subangular keel.



Fig. 1. *Trachia pudica* (Godwin-Austen, 1891) from Singapore probably recorded and figured alive for the first time.
(Photograph by: Tan Heok Hui)



Fig. 2. Frontal view of the same animal. (Photograph by: Tan Heok Hui)



Fig. 3. *Trachia pudica* (Godwin-Austen, 1891) has a flatly coiled shell with a depressed spire. (Photograph by: Tan Heok Hui)

Trachia pudica is undoubtedly the most elusive camaenid species in Singapore, and was not mentioned in earlier checklists and treatments of the terrestrial molluscs of Singapore (e.g., Lim, 1969; Chou et al., 1994; Ho, 1995). The first mention of the occurrence of this species in Singapore appears to be Chan [1996; as *Chloritis wrayi* (de Morgan, 1885)], and this was reiterated as *Trachia gabata pudica* in Tan & Woo (2010).

For more than a decade, excursions to various localities around Singapore have uncovered nothing more than empty shells and fragments on the forest floor. Past findings were in MacRitchie Reservoir area (near the Shinto Shrine ruins), and in the forest off Rifle Range Road, near Bukit Timah. Hence the species appears to be rather widespread, albeit restricted to the forests in the Central Catchment Area. Based on observations of congeners in southern Thailand, and peninsular Malaysia, the animals of *Trachia* spp. are arboreal in habit. This may partly explain the absence of sightings and the perceived rarity of *Trachia pudica* in Singapore. Nevertheless, empty shells and fragments have never been found in disturbed secondary forests or rural areas which suggest that the snails are not adaptable to manmade developments and are dependant on the older primary forests for survival. Conservation of the animals' preferred habitat is thus necessary to ensure the continuing existence of this interesting arboreal snail in Singapore.

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LITERATURE CITED

- Chan, S. Y., 1996. Some interesting Camaenidae from Singapore. *Hawaiian Shell News*, **44**(1–2): 7–8.
- Chou, L. M., P. K. L. Ng & K. K. P. Lim, 1994. Animalia. In: Wee, Y. C. & P. K. L. Ng (eds.), *A First Look at Biodiversity in Singapore*. National Council on the Environment, Singapore. Pp 70–106.
- Godwin-Austen, H. H., 1891. On a collection of land-shells made in Borneo by Mr. A. Everett, with descriptions of supposed new species. Part II. Zonitidae and Helicidae. *Proceedings of the Zoological Society of London*, **1891**(1): 22–47.
- Ho, W. H., 1995. A review of the land-snail fauna of Singapore. *The Raffles Bulletin of Zoology*, **43**(1): 91–113. <http://rmbn.nus.edu.sg/rbz/biblio/43/43rbz091-113.pdf>
- Laidlaw, F. F. & A. Solem, 1961. The land snail Genus *Amphidromus*. A synoptic catalogue. *Fieldiana: Zoology*, **41**(4): 505–677. <http://www.archive.org/download/landsnailgenusam414/landsnailgenusam414.pdf>
- Lim, R. K. Y., 1969. *The terrestrial Molluscs of Singapore*. Unpublished thesis. Department of Zoology, University of Singapore, Singapore. i-vi + 241 pp.
- Maassen, W. J. M., 2001. A preliminary checklist of the non-marine molluscs of West-Malaysia. "A handlist". *De Kreukel*, Extra Editie **2001**: 1–155.
- Morgan, J. de, 1885. Mollusques terrestres et fluviatiles du Royaume de Pérag et des pays voisins (presque'le Malaise). *Bulletin de la Société Zoologique de France*, **10**: 353–429.
- 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, Singapore. 78 pp. http://rmbn.nus.edu.sg/raffles_museum_pub/preliminary_checklist_molluscs_singapore.pdf



Fig. 4. Shells of *Trachia pudica* (Godwin-Austen, 1891) dead collected from MacRitchie Reservoir area, illustrated here for comparative purposes. Top: SH 9.4 x SW 17.5 mm. Bottom: SH 9.2 x SW 17.7 mm. SH = Shell Height, and SW = Shell Width.