

GUNUNG SANTUBONG

Where Nature Meets Culture



Life from Headwaters to the Coast

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Edited by

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Fig. 1. *Diplommatina* sp.



Fig. 2. *Kaliella busauensis*
(Smith, 1895)



Fig. 3. *Microcystina perlucidum* (Issel, 1874)

Fig. 4. *Parmarion doriae* Issel, 1874



Fig. 5. *Damayantia dilecta* Issel, 1874



Land Snails

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Land snails and slugs belong to the class Gastropoda, within the phylum Mollusca, which is the second most species-rich terrestrial animal phylum, after Arthropoda. Currently at least 25,000 species of land snails and slugs have been described, of which around 1,000 species can be found in Peninsular Malaysia, Sabah, and Sarawak. Unknown to many, the species richness of land snails and slugs is much higher than in other familiar animal groups.

Despite their diversity, the group members are rarely seen in non-limestone forests, where their abundance is low. For example, five days of fieldwork in lowland non-limestone forests may result in fewer than 100 individuals, but a relatively high number of species—around 30–45. Surveys in non-limestone lowland forest in Malaysia are scarce compared to those in limestone forest, especially in Sarawak. For Gunung Santubong, a non-limestone area, only two species have been previously recorded: *Damayantia carinata* Collinge, 1901 and *Isselentia plicata* Collinge, 1901, in a paper published more than a century ago.

Between April 2017 and February 2018, three separate surveys were conducted in Gunung Santubong National Park. During these surveys, living and dead land snails were searched for along the main established trail to the summit, using direct searching methods, which consist of sifting through leaf litter, scanning rock and wood surfaces, and the surrounding vegetation. Live specimens and empty shells were collected for subsequent identification. As a result, a total of 46 individuals of land snails, representing nine species from six families and nine genera were recorded. However, we did not find the two semi-slug species previously recorded. Population density and species diversity of the land snail fauna in Gunung Santubong are relatively low as compared to previous surveys at Lanjak Entimau and Penrissen in Sarawak.

In addition to the low abundance on acidic soils in the forests of Santubong, their small size and cryptic behaviour may also contribute to their elusiveness. In fact, a majority of the land snail species in Malaysia have an adult shell size under 5 mm. In Santubong, we found three such micro snails, *Diplommatina* sp. (Figure 1), *Kaliella busauensis* (Smith, 1895) (Figure 2) and *Microcystina perlucidum* (Issel, 1874) (Figure 3), which are about 3 mm