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Assessing The Diversity of Coleoptera Using Malaise Trap in Denai Hutan Cadamba UiTM Puncak Alam, Selangor

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Structured Abstract

Background: At Denai Hutan Cadamba UiTM Puncak Alam, Malaise traps are used to study Coleopteran diversity and distribution across two elevation gradients.

Methods: At each study site, one Malaise trap was installed at low (70m) and high (100m) elevations and labelled as Trap 1 and Trap 2, respectively. The traps were left on site for 14 days.

Results: 20 families and 48 morphospecies were represented by the 145 Coleoptera collected. The individuals belong to the suborders Adephaga and Polyphaga. In this study, 18 families from suborder Adephaga were recorded including Aderidae, Bostrichidae, Buprestidae, Cerambycidae, Chrysomelidae, Coccinelidae, Curculionidae, Endomychidae, Elateridae, Hydrophilidae, Lycidae, Mordellidae, Mycteridae, Nitidulidae, Phalacridae, Scarabaeidae, Ripiphoridae, and Staphylinidae. Carabidae and Noteridae are the only two families identified to be part of the suborder Adephaga. Trap 2 recorded the highest number of Coleoptera abundant, with 122 individuals (19 families, 45 morphospecies), while Trap 1 recorded the lowest number, with 23 individuals (10 families, 13 morphospecies). With 27 individuals, the Chrysomelidae family was the most abundant individuals, followed closely by Curculionidae (26 individuals). The least abundant families belong to Aderidae, Buprestidae, Endomychidae, and Lycidae (1 individual).

Conclusion: According to the results of this study, light and vegetation may play a role in explaining why Coleoptera distribution varies across elevations. For future research, it is recommended to extend the sampling period and increase the elevation difference between traps to obtain more accurate results on how elevation affects the distribution of Coleoptera. This research will help to raise awareness about the distribution among several Coleoptera species, which are declining due to forest exploitation, and help the authorities responsible for preserving these species.

Keywords: Coleoptera, Malaise Trap, Denai Hutan Cadamba UiTM Puncak Alam

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