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COMPARISON OF TERMITE ASSEMBLAGES IN TWO LOWLAND FOREST TYPES IN THE KNUCKLES REGION

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Termites (Order Euisoptera) are an integral part of forest ecosystems playing a key role in the decomposition of plant matter. Lowland rain forests in particular are known to harbour the greatest diversity of termites. This study was conducted in two Lowland forest types in the Knuckles region to examine the species composition, abundance and feeding habits of termite assemblages and to deduce their role in two forest types; namely Lowland semi-evergreen forests (LSE) and Lowland wet evergreen (LWE) forests. Six sites (three sites from each forest type) were selected and belt transects (2 x 100 m) were laid in each site. Known microhabitats of termites were searched. Species were identified using keys for the region. The number of encounters with a species in a transect was considered as the abundance of that species in the transect. Feeding habits were deduced from generic identity using literature.

A total of 38 termite species/morphospecies in 16 genera and three families, Termitidae (33 spp.), Rhinotermitidae (3 spp.) and Kalotermitidae (2 spp.) were found in the two forest types. Termite fauna was richer in LSE (28 spp., 227 encounters) than in LWE (22 spp., 122 encounters). Twelve species were common to both forest types. 16 were restricted to the LSE, and 10 to the LWE. In the Family Termitidae, Subfamily Macrotermitinae was represented by 12 species in LSE and 13 in LWE. Nasutitermitinae was represented by five species in each forest type, while Apicotermitinae (2 spp.) and Termitinae (7 spp.) were restricted to LSE. *Heterotermes ceylonicus* was common to both forests. Each of the other two species of Rhinotermitdae and each of the two Kalotermitidae were restricted to one of the two forest types. The species richness based on the Margalef Index was 4.98 for LSE and 4.37 for LWE.

The 38 termite species comprised primitive wood feeders (5 spp.), fungus growing wood feeders (16 spp.), non-fungus growing wood feeders (9 spp.) soil-wood interface feeders (7 spp.) and a single lichen feeder. Termites in LSE comprised primitive wood feeders (2 spp.), fungus growing wood feeders (12 spp.), non-fungus growing wood feeders (7 spp.) in comparison to primitive wood feeders (4 spp.), fungus growing wood feeders (13 spp.), non-fungus growing wood feeders (4 spp.) in LWE. Soil-wood interface feeders (7 spp.) were restricted to LSE and the single lichen feeder, *Hospitalitermes monoceros* to LWE.

Both forests have distinct termite assemblages, LSE being more diverse, abundant and rich in soil-wood interface feeders. These differences are likely to be due to forest floor conditions and microhabitats, LSE having a rich humus layer in the forest floor and LWE having a poor layer of humus due to the rapid absorption of nutrients.

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