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MICROHABITAT AFFINITIES OF FIVE SMALL MAMMAL SPECIES IN TWO HABITATS AT LOWER HANTANA, PERADENIYA

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Microhabitat affinities of animals are important in wildlife management and conservation practices. The scale at which they operate dramatically affects the use of habitats by them. The objectives of the study were to monitor microhabitat affinities of small mammals in a pine plantation and a secondary forest and to compare differences in utility of microhabitats by them, between the two habitats. Small mammals were sampled using hair tubes. A total of 80 hair tubes, 40 in each habitat were placed every month for four consecutive days each month from November 2011 to March 2012. Traps were placed in a 10x10 meter grid. For each trap location eighteen descriptive microhabitat variables were recorded, which were analyzed using Principal Component analysis to deduce the microhabitat preferences of small mammals.

Five small mammal species, *Mus musculus*, *Rattus rattus*, *Rattus norvegicus*, *Bandicota indica* and *Ratufa macroura* were recorded from both habitats. In the forest habitat both *M. musculus* and *R. macroura* showed a clear preference for microhabitats without overstorey trees but with fallen logs and shrub cover, while the other three species showed a preference for microhabitats with herbaceous stems, tree stumps, overstorey trees and woody stems. In the pine plantation all five species showed a common preference for areas with exposed soil surface and fallen logs.

Though this was a short term study, it provides important data on the use of two habitats and microhabitats in them by five species of small mammals. Due to the availability of diverse microhabitats in the secondary forest, partitioning of microhabitats among small mammals was observed, while in the more uniform pine plantation all five species used the same microhabitat. Similar use of dense ground cover by *M. musculus* is well documented in previous studies. *Ratufa macroura*, being a strictly arboreal species, was an unexpected record. No previous microhabitat studies are available for this species. *Rattus rattus* is recorded as a finer spatial scale species sharing a common preference for fallen logs and woody plants and to avoid leaf litter, as observed here. In general *R. norvegicus* is regarded as a riparian specialist. Finding more hair samples of this species in the secondary forest, which is closer to the Sarasavi stream, supports this observation. There are no previous studies on microhabitat affinities of *B. indica*. In the present study they preferred relatively open areas with tree stumps and herbaceous stems.