

## BEES OF THE KNUCKLES MOUNTAIN REGION MAB FOREST RESERVE

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Knuckles forest reserve lies in the central hills of Sri Lanka. The altitudinal range and the ecotonal boundary between the wet and intermediate climatic zones have given rise to a diversity of habitats and vegetation types with a rich floristic composition of 1033 documented flowering plants. Home gardens and cardamom plantations enrich the natural vegetation. These flowering plants form a rich source of pollen and nectar for flower-visiting bees. Bees in five selected habitats (montane forest, sub-montane forest, pathana, scrubland, and home gardens) were sampled using a standard sweep-net at monthly intervals. In a given habitat, all the flowering plants were examined for bees, and bees on flowers were collected individually. In addition, ground vegetation was swept using the sweep net. The identity of bees was confirmed using reference collections, taxonomic descriptions and with the help of bee taxonomists.

One-year survey of bees in the different habitats of the Knuckles reserve yielded 49 species of bees in 22 genera and 4 families. The species diversity in the different habitats ranged from 39 species in the semi-evergreen forest, 19 in the sub-montane forest and 8 species in the montane forest. Two subgenera of bees were confined to above 900m elevation in the montane and sub-montane forests.

Bees were collected from flowers of 40 plant species that consisted of trees, shrubs, spices, cultivated vegetable crops and weeds. Many of the bees recorded form the different floral hosts were generalists, where only two bee species, *Lithurgus atratus* and *Systropha tropicalis* being pollen specialists carry pollen of *Hibiscus tiliaceus* and *Urena lobata*. Five species of buzz-pollinating bees were recorded from several weeds and vegetable crops. The honeybee, *Apis cerana* and solitary bees, *Amegilla subinsularis* and *Lassioglossum aulacophorum* collected pollen and nectar from cardamom flowers.

Ground nests of *Lassioglossum alpheneum* and *L. carnifrons*, nesting gregariously in sunny slopes at high elevation and of *Halictus lucidipennis* along the sandy footpaths in a home garden were recorded. Nests of two other species, *Megachile hera* and *Xylocopa collaris* were recorded on decaying tree trunks of *Azadirachta indica* and *Neolitsea cassia* in the semi evergreen forest.

The rich diversity of bees at the Knuckles forest reserve may play an important role in the maintenance of its flora. The nesting sites and the floral hosts of bees need to be conserved if the bee diversity in this reserve is to be maintained

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