

D-02: A study of Upper montane flora of the Knuckles region

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The Knuckles range is located in the Central Province in the districts of Kandy and Matale. The upper montane zone of the Knuckles region is found between 1300 m and 1900 m and includes Upper montane rain forests (UMRF) and other minor vegetational communities such as pygmy forests, wet patana grasslands, scrubland (secondary vegetation), rock outcrops, aquatic, stream-side vegetation and man-made plantations.

A survey was carried out to prepare a tentative checklist of flowering plants of Upper montane zone and other relevant floristic information that help in conservation and management of these areas.

Several floristic surveys were carried out in the Knuckles region during the period 1988 - 1994. The localities were Midlands, Riverstan, Rangala, Thangappuwa, Corbet's gap, Dickgalpotta, Madulkelle, Nilloomalai, Bambarella, Ratnagiriya, Kalupahana and Selvakande Plateau.

Specimens were collected in the field and they were tagged. Entries were made and various features of the species, that help identification, were noted. Plant specimens were fixed in methyl alcohol and dried in an electric drier. These were made into herbarium specimens and identified referring to standard herbariums

at the National Herbarium, Peradeniya. Also standard checklists, taxonomic keys and taxonomical descriptions were used for authentication. A tentative checklist was prepared for the Upper montane zone of the Knuckles. Floristic richness value was calculated and different life forms were analysed. (Floristic richness value is the sum total of families, genera and species). In the UMRF of the Knuckles region, 379 species belonging to 238 genera and 83 families were recorded. They consist of 103 trees, 77 shrubs, 142 herbs, 22 climbers, 4 liana, 5 stranglers, 16 epiphytic and 11 parasitic plants. Floristic richness value is 700. A total of 116 species were recorded as endemic to Sri Lanka and 9 species were recognized as threatened species. The leading families with largest number of species were *Poaceae* (26) *Rubiaceae* (24) *Euphorbiaceae* (22) *Orchidaceae* (21) and *Astraceae* (20) *Orchidaceae* had 14 species were as epiphytic plants and in that, 8 species were endemic.

The UMRF of Knuckles harbours nearly 14% of the island's endemic flowering plants in approx 3500 ha of land mass. This emphasises the importance of conserving this floristically rich small area. Presence of *Stemonoporus affinis* Thw. *Brachystelma lankana* Dassanayake & Jayasuriya, *Syzygium fergusonii* (Trim.) Gamble confined to UMRF of Knuckles clearly highlights the biotic value of this region. Heterogeneity of life form groups further shows the structural diversity of this vegetation.