

**D-21: Hierarchical classification of the vegetation of Wilpita Forest Reserve using only the dominant undergrowth species**

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A classification of the vegetation at three study-sites (A,B, and C) of Wilpita Forest Reserve of Southern Sri Lanka was carried out. For the present study, three least disturbed areas, each consisting of 16 contiguous set of 25 m x 25 m plots (stands) were selected.

Species present in the stands were collected and identified. Number of individuals (stems), and the stem circumference (between 2-30 cm) were recorded. Importance value index of each species was estimated. The ten most dominant species were selected. Number of individuals of each of the species was used to classify the 48 stands using the SPSS/PC+ Hierarchical Cluster Analysis Technique.

48 stands were separated into five groups at the level 20 of the Re-scaled Distance Cluster Combine. Separated in the first division at the level of 100, Group V (all the five stands from the Site A) contained only *Macaranga digyna* (superior dominant species with about 100 individuals per stand), and *Strombosia ceylanica* (about 5 individuals/stand). A second division separates the rest of the plots (11 stands) of site A (Group 1V) from the stands of site B and site C, at the level of 35 of the scale. Here, although the same two species were present, while the density of *Macaranga digyna* was decreased to about 27 individuals, that of *Strombosia ceylanica* was increased up to about 7.

Hierarchical classification of the vegetation stands of Wilpita Forest Reserve used only the dominant undergrowth species.