D-19: Some preliminary observation on the ecology of Kirinda sand dune in Southern Sri Lanka

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Present paper reports the results of an ecological study conducted at Kirinda sand dune. The objective was to identify the principal plant communities of the dune system. Fifty 5 x 5 m plots were laid approximately 10 m apart along 5 line transects established across the dune and depending on the habit of the species, either the number of individuals, number of clumps or number of runners per plot was noted for each species. A multivariate data matrix was prepared, and analysed by hierarchical classification procedure using SPSS PC + Statistical Package to classify the stands.

Four major plant communities were identified. The plant community of Group I may be referred to as *Ipomoea pescaprae, Launaea sarmentosa, Hydrophylax maritima,* and *Remirea maritima* Community. Group II stands are characterized by the dominance of *Spinifex littoreus* or *Calotropis gigantia,* each become dominant at different stages in the same cycle of vegetation change. Such cycles start initially as small sand-mounds formed around small plants such as *Remirea maritima,* pass through *Spinifex littoreus* period, and reach the culmination after *Calotropis gigantia* dominates the community. Group III is also dominated by *Spinifex littoreus* and *Calotropis gigantia,* however, here the stands also contain a few individuals of tree species. Group IV is an association of tree/shrub community, composed of *Manilkara hexandra, Diospyros ferrea, Azadirachta indica,* and *Walsura piscidia, Salvadora persica* etc, usually entangled with *Cissus quadrangularis* and *Cuscuta chinensis.*

Heterogeneity of Kirinda sand dune vegetation can be summarized to four different groups. A vegetation cycle involving *Remirea maritima, Spinifex littoreus* and *Calotropis gigantia* seems to be operating in the plant communities of the middle areas of the sand dunes.