A Study of Mangrove Species in Kaluwamodara Tributary and Bentota River, Sri Lanka

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The study was conducted in the Kaluwamodara tributary and Benthara river situated in the Kaluthara District of Sri Lanka. A field survey was carried out to find out the richness of mangrove species, their diversity, abundance and the spatial differences of their diversity. Sampling for the enumeration of mangrove species was performed in three transects along the Kaluwamodara tributary, sub canal of Kaluwamodara tributary and Bentara River. Located sample size is 10 m x 10 m and 200 m gaps were maintained between each sample. Twenty four samples were selected maintaining vegetation density and distribution of species heterogeneity. Only mangrove species were enumerated. Shannon-Wiener diversity index and abundance indexes were calculated to analyse the diversity and abundance of mangrove species. The Inverse Distance Weighted (IDW) interpolation technique in ArcGIS was performed to analyse and prepare spatial distribution maps of mangrove diversity. Total numbers of 1091 mangrove individuals were enumerated during the survey. A total of 11 species belonging to 11 genera and 11 families were recorded. Seven actual mangrove species and four mangrove associates were identified from the area. *Rhizophora apiculata, Sonneratia caseolaris, Nypa fruticans, Acrostichum aureum* and *Hibiscus tiliaceus* are the most common species recorded during the study. *Dolichandrone spathacea* (L.f.) K. Schum is the least common species found in the area. RHIZOPHORACEAE, SONNERATIACEAE, PALME, PTERIDACEAE and MALVACEAE claim for the most common families in the three study sites. The highest mangrove species diversity was identified in the Kaluwamodara tributary and highest species abundance was identified in the sub canal of Kaluwamodara tributary.

Keywords: Mangrove, Species richness and species diversity