D-67 **A comparative survey of the mangrove flora at three lagoons (Galle, Dondra and Rekawa) with special reference to their site specific differences**

M P de Silva, D G T Priyadarshana
Dept of Botany, University of Ruhuna, Matara

The most conspicuous macrophytes in the lagoon environs are the mangroves. A study on the distribution of mangroves was carried out at 3 lagoons located along the Southern Coast of Sri Lanka: Unawatuna Lagoon at Galle (mangrove cover = 36 ha), Dondra Lagoon (mangrove cover = 2.4 ha) and the Rekawa Lagoon (mangrove cover = 171.6 ha). The study indicated distinguishing variations in species richness, variations in composition along the intertidal profile and a specific zonation of certain species. The analysis was carried out using line transects (9) and by placing 4m x 4m quardrats (129) along the transects (length of transects varied from 32 m to 124 m). The most important site specific differences included variations in water cover area, tidal magnitudes and area of intertidal zones, physiography and soil characters.

The results indicated a total of 30 macrophytes at the 3 sites out of which 13 were classified as true mangroves and 8 as mangrove associates. The species richness for true mangroves at the 3 sites expressed as a percentage of total true mangroves was 84% for Rekawa, 38.4% for Galle and 53.8% for Dondra. Rekawa Lagoon which showed the highest species richness has a large intertidal area extending upto 125 m whereas Galle and Dondra had this area restricted to less than 30 m. Fresh water inflows into Rekawa Lagoon through Kirama Oya and Urubokka Oya subject the lagoon waters to frequent salinity changes. Communities of species such as *Ceriops tagal,* a high salinity tolerant species and thick bands of *Rhizophora mucronata* which grows on high sedimented and low steepness environs were seen on seaward banks and lagoon mouth respectively. Such clear zonation was not observed both at Galle and Dondra due to physiographic differences. The presence of large communities of the mud crab *Telescopian telescopian* at Galle which feed on mangrove saplings and propagules is attributed to the single growth stage of maturity of the mangrove community at Galle.