

Effect of Habitat Alteration on Avifaunal Diversity of the Riparian Mangrove Ecosystems Associated with Nilwala River

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Conservation and management of riparian habitats for wild life and sustainable human use have become challenging tasks amidst the present day development activities and other human influences. Riparian habitats especially closer to the urban areas are severely influenced by garbage dumping. A mangrove ecosystem associated with Nilwala riparian system (Matara) has been recently transformed into a garbage dumping site. We have investigated the diversity and the abundance of avifauna at this dumping site and a *Sonneratia* dominated mangrove habitat associated with Nilwala River. Bird counts were obtained weekly in each habitat along transects for six months (March — September, 2009). Vegetation characters and diversity of each habitat were also investigated. The total number of species recorded at eastern and western areas of the dumping site and mangrove habitat were 33, 48 and 61 respectively. Shannon-Weiner Index calculated for bird diversity were 1.56 ± 0.06 , 2.65 ± 0.03 and 2.77 ± 0.03 for eastern area and western area of the dumping site and mangrove ecosystem respectively. Cattle egrets, Crows, Mynahs and Lapwings were highly abundant at the dumping site while Sunbirds, Bulbuls, Barbets, Flower peckers and loras were abundant in the *Sonneratia* dominated mangrove habitat clearly indicating habitat bird species relationships. These results indicate the importance of the mangrove ecosystem in providing habitat for wider range of species. Bird diversity among the study sites correlated with the magnitude of the vegetation degradation at each site. Birds associated with the dumping site were threatened with fire, obnoxious gases and polythene. Species richness was correlated with the degree of transformation at the dumping site. There was no statistically significant correlation between the bird diversity and plant diversity indicating the other factors affecting the bird diversity patterns. These data will be useful in conservation, and management of riparian and mangrove ecosystems.

Key Words: Nilwala River, Riparian habitats, Mangrove ecosystem, Garbage dumping site, Vegetation, Birds