Are human-modified land-uses important for avifaunal conservation or not? An example from Karanketiya, Rakwana, Sri Lanka

H.W.G.A.S. Weerasinghe*[1], P.A.B.G. Panagoda[1] and P.A.S.U. Panagoda[2]

[1]Department of Zoology and Environmental Management, Faculty of Science, University of Kelaniya

[2]Faculty of Medicine, University of Kelaniya

***Corresponding author: ayomaweerasinghe@gmail.com**

Improving conservation value of human-altered landscapes would be of massive importance, in years to come. The present study intended to assess the contribution of such landscapes in aid of conservation of avifauna. Abundance, species richness, species heterogeneity, evenness and composition of bird communities were analyzed on line transects during three months, including the migratory season, in three different land-use types namely, proposed reserved forest, tea estate and home gardens in Karanketiya, Rakwana. Total of 87 bird species including 79 residents with 15 endemics and 8 migrants were recorded. Species richness and total abundance per transect of three types of land-uses are significantly different ($p<0.05$, ANOVA). Species richness (n=68) was highest in tea estate while species heterogeneity (H'=3.612) and evenness (J'=0.872) were highest in home gardens. Percentage of endemic birds (25.6%) and percentage of migrant birds (12.8%) were highest in the forest and percentage of resident birds (74.6%) was highest in home gardens. The bird species composition in tea estate was highly comparable to that of home gardens (Cj=0.58). Percentage of openland birds (23.5%) was highest in tea estate whereas percentage of forest birds (59%) was highest in forest reserve. In addition, certain specialists were found exclusively within the forest. The higher diversity recorded, in human-modified landscapes has caused by its location in a closer proximity to forested areas and the wider array of different habitat types present. Therefore, such human-modified land-uses contribute for avifaunal conservation in the country. Yet, the long term impacts of such landscapes should be studied further.

Keywords: Rakwana, avifauna, land-uses, diversity, conservation