

Feeding Ecology and Avifaunal Distribution at Henarathgoda Botanical Garden, Sri Lanka

M.P. Gunawardena*, W.P.S.H. Weerasinghe, H.M.I.M. Herath and S.H.M. Manohari

Department of Biotechnology, Faculty of Science, Horizon Campus, Malabe, Sri Lanka

Botanical gardens play a major role in providing habitats and niches to many species. Among the species groups, avifaunal distribution and feeding ecology can be observed simply. Therefore, a study was conducted to assess the avifaunal diversity distribution and feeding ecology at Henarathgoda botanical garden from February 2019 to February 2020. Data were collected in the morning (6:00 a.m. to 8:00 a.m.) and evening (3:30 p.m. to 5:30 p.m.) in different habitats using 7 transect lines of 150 m for 10 minutes in each transect. As a percentage around 17% of the total number of bird species in the country was recorded in the study area. During the study, 6395 individuals belonging to 81 species were recorded (42 families and 16 orders) including 07 endemics and 06 migratory species. The Shannon Weiner diversity, Shannon evenness, Simpson's, Brillouin, Margalef, and Menhinick indexes indicated 3.32, 0.34, 0.94, 3.29, 9.13, and 1.01, respectively. The highest percentage of feeding ecology was indicated by Insectivores (33.33%) bird species while Carnivores, Granivores, Frugivores, Nectivores, Omnivores, and Herbivores were 28.03, 16.67, 12.88, 5.30, 3.03, and 0.76% respectively. The transect which comprises of Paddy field, Aquatic habitat, and Garden had the highest number of individuals (1545) and species (68). Avifaunal distribution on the terrestrial habitats of the understory layer, sub-canopy, canopy, emergent layer, and the ground was 21.37, 17.56, 14.50, 12.98 and 11.45% respectively and 22.14% of the species were aquatic species. According to the study, distribution and feeding ecology of avifauna at Henarathgoda Botanical Garden represent relatively wide-ranging variability while having a considerable avifaunal diversity. Therefore, Botanical gardens' services can be extended to places for biodiversity education/awareness and nature tourism in addition to the ex-situ conservation of flora and recreation.

Keywords: Feeding ecology, Avifauna, Henarathgoda, Botanical garden