Diversity of avifauna in residential landscape during south west monsoon season: A preliminary case study in Belihuloya village in Balangoda

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Abstract

Avifauna is one of the integral components of an ecosystem and provides direct and indirect benefits to humans. This study was an attempt to identify the habitats and diversity of different bird species in a residential landscape of Belihuloya village. The study was conducted using seven habitats; three aquatic habitats (pond area, water canal, river bank) one semi aquatic habitat (paddy field) and three residential landscapes (two home gardens and vegetable garden). The average distance between the sampling sites was about 250m. A field survey was conducted to observe birds and the species were identified using a bird guide. Each habitat was observed ten times in five successive days. Observations were conducted in the morning (07.00h to 09.00h) and evening (16.00h to 18.00h) during the South West monsoon. Quadrat with 5m radius was considered as the sampling area. GPS coordinate of habitats were recorded for mapping purposes. Shannon-Wiener diversity index was calculated to identify bird diversity of each sample. Total of 95 individual birds were enumerated under sixteen different bird species belonging to 16 genera and 15 families. Among them two species, namely, *Gallus lafayetii* and *Zosterops ceylonensis* are endemic. The most common species in the area were *Pavo cristatus*, *Copsychus saularis*, *Mesophoyx intermedia* and *Alcedo atthis*. Shannon-Wiener diversity index (H') of selected habitats were, 1.5001 for aquatic habitat, 1.009 for semi-aquatic habitat and 2.0342 for residential habitats, which is the highest and most likely due to abundance of food. The bird diversity of individual habitats ranged from 0.8675-1.2900. A relatively high diversity was identified in vegetable gardens while the lowest was from pond area. Giant trees such as *Magnolia champaca*, *Cedrus deodara*, *Pericopsis mooniana*, *Mangifera zeylanica* and *Artocarpus heterophyllus* provided shelter for rare bird species like *Columba livia*, *Celeus brachurus* and *Gracula ptilogenys*. Overall bird diversity gradually increased from home garden towards forest areas. Thus, the home gardens could be identified as an acceptable habitat for both humans and birds between urban and natural environmental gradient, where the population pressure is substantial. Information derived from the study will help to understand the importance of village level bird diversity and to enhance the conservation measures for birds, while ensuring residential activities in the area.

Keywords: *Avifauna, Bird diversity, Home gardens*

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