

Assessment of Avifaunal Diversity in a Municipal Waste dumping site: A case study from Karadiyana, Sri Lanka

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Waste disposal sites have become factitious feeding sites for some avifauna, especially in the urban and suburban ecosystems. Tentatively these sites are assumed not only to provide the organic food sources but also refuge to different prey species such as invertebrates and small mammals for the avifauna composed of different feeding requirements. As a consequence of this rich and easy food availability, a significant number of bird species are assumed to be allured to these dumping grounds. On account of this phenomenon, a study was designed to ascertain the bird species diversity at Karadiyana in the Colombo District, of the western province of Sri Lanka to assess the overall avifaunal diversity and abundance. Two different habitat types viz. Drainage channel along with terrestrial land habitat and dumping area habitat were studied using variable plot count method. Two plots were allocated to each of the habitats with equal intervals between the two stations respectively. Bird species were observed within 50 m either side were recorded twice per day, 6.30-8.30 h and 15.00- 17.00 h., from January to May 2019. A total of 2586 individuals belonging to 18 species, 14 families, and 8 orders were recorded in an area of 10.12 ha. For the Simpson's index and Shannon diversity index, 0.86/2.08 and 0.74/1.44 were obtained for the two habitats respectively. The most dominant bird species recorded were the House Crow (*Corvus splendens*) and Black-headed ibis (*Threskiornis melanocephalus*) with relative abundances of 34.1% and 28.5%. The least abundant bird species recorded was Common Sandpiper (*Actitis hypoleucos*). The abundance of certain bird species is very high and therefore causes overpopulation, which causes a threat to other avifauna in the area. Therefore, proper management practices should be implemented on direct and open dumping of waste in urban ecosystems to control the indirect impacts of the adjacent wildlife communities.

Keywords: Karadiyana, Avifauna, Waste dumping, Diversity, Shannon diversity