



AVIFAUNAL DIVERSITY IN KANDY LAKE, SRI LANKA

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Abstract

Urbanization is a complex socioeconomic process that massively contributes to the loss of biodiversity and biotic homogenization around the world. While some species have been adapting to the continuous changes, others are being threatened. Making ourselves aware of the existing biodiversity would be helpful towards sustainable development in urban planning. Kandy is one of the major cities situated in the central hills of Sri Lanka which holds a prominent place in tourism. This study was conducted to determine the avifaunal diversity in the Kandy city where there were no previous studies recorded. Birds who were perched within the 20 m distance towards the lake, along the 3 km path around the lake (which was considered as the transect) were recorded according to their species name and abundance. Data was collected from January 2019 to March 2019, three days per month (one in the morning from 6 a.m to 8 a.m , one in the afternoon from 12.00 to 2 p.m and one in the evening from 4 p.m to 6 p.m). In total, 3044 individuals belonging to 42 bird species, 23 families and 16 orders were recorded. Shannon – Weiner diversity index was 2.4650 whereas Simpson’s diversity index was 0.8711. The total Dominance Index was 0.1289 while the total Evenness was 0.2868. The most abundant bird species were Little cormorant (*Microcarbo niger*) with a relative abundance of 26.18% followed by House crow (*Corvus splendens*), Indian cormorant (*Phalacrocorax fuscicollis*) and Black crowned night heron (*Nycticorax nycticorax*) with relative abundances of 14.58%, 11.72%, and 10.84% respectively. Spot-billed pelican (*Pelecanus philippensis*) who is considered to be globally nearly threatened was also recorded. The above results stipulate that, suitable measures such as taking opinions of an environment scientist into consideration in urban planning, making policy adjustments from a biological conservation perspective and enlightenment of the community on the importance of protecting avifauna should be implemented immediately to establish a more resilient ecosystem.

Keywords: Urbanization, Diversity, Kandy, Lake, Avifauna