

Species Diversity and Relative Abundance of Migratory Waterbirds in Abijata Lake, Central Rift Valley, Ethiopia

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Abstract : The aim of this study is to investigate the species diversity and relative abundance of migratory waterbirds in Abijata Lake, an Important Bird Area and potential Ramsar site located in the Central Rift Valley of Ethiopia. The study was carried out, using line transect method along the shoreline and open area of the Lake. The data was analyzed with different diversity indices; t-Test and descriptive statistics. Thirty-two migratory waterbird species grouped into twelve families consisting of globally threatened birds were identified and recorded. Family Scolopacidae (12 species) had the highest number of species. The lowest number of species was observed under the families Ciconidae, Accipitridae, Laridae and Falconidae with one species each. The recorded bird species comprised 19 Palearctic, 5 Intra-African, 2 local migrants as well as 6 resident Palearctic migratory waterbird species. The dry season had higher species diversity ($H'=1.01$) compared to the wet season ($H'=0.76$). The highest and lowest diversity of migratory waterbirds were recorded during January ($H'= 1.28$) and June ($H'= 0.52$), respectively. However, the highest evenness (E) of bird species was recorded during wet season ($E=0.21$) and lower during the dry season ($E=0.09$). The computed seasonal effect reveals that there is significant effect of seasons on species diversity ($t=2.80$, $P < 0.05$), but the effect of seasons on individuals of migratory bird species was not significant ($t=1.42$, $P > 0.05$). Even though Lake Abijata is the sanctuary of several migratory waterbirds, anthropogenic activities are rigorously threatening their survival. Therefore, it needs an urgent conservation concern.

Keywords : migration, important bird area, species diversity, wetland birds

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