

Species diversity of aquatic birds in seasonal reservoirs in Anuradhapura and Monaragala districts, Sri Lanka.

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The quantification of species diversity is essential in several aspects of ecology and conservation biology as well as indicators of the well being of ecological systems. However, the species diversity of the aquatic birds in the seasonal reservoirs of dry zone in Sri Lanka has received little attention. In the present study, an attempt was made to determine the species diversity of aquatic birds and the species-area relationships between the species richness of aquatic birds and reservoir area of 20 seasonal reservoirs in Anuradhapura and Monaragala districts during both migratory and non-migratory seasons. The study was carried out during January to October 2003 and the species diversity was analyzed using several species diversity indices.

A total of 46 species of aquatic birds were recorded during the present study in selected seasonal reservoirs in Anuradhapura and Monaragala districts, which belong to 17 families under 7 orders. Among bird species encountered, three nationally threatened species, one globally vulnerable species and three globally near threatened species were recorded. The diversity indices of aquatic birds in seasonal reservoirs of each district during migratory and non-migratory seasons were not significantly different ($p < 0.05$). Also, there were no significant differences in diversity indices between two districts during any one season. (Shannon-Weiner index: Monaragala, migratory = 2.788, non-migratory = 2.986; Anuradhapura, migratory = 2.473, non-migratory = 3.078). Species - area relationships conformed to power curves with higher slopes in Anuradhapura district than in Monaragala district. Reservoir size explained 38 – 64% of the variation of species richness of aquatic birds in the seasonal reservoirs of Monaragala district but only 23 – 33% of Anuradhapura district.

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