

Avifaunal species richness and diversity at the Giritale nature reserve of North-Central province, Sri Lanka

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A study on avifaunal species richness and diversity of the Giritale Nature Reserve of North-Central Province, Sri Lanka was carried out from March 2006 to February 2007. Three line transects (length 750m each) were marked using a global positioning system per habitat in four different habitat types. Variable Circular Plot (VCP) method (Reynolds et al. 1980) was used to survey the birds. Hundred and seven avifaunal species were recorded during the study period. These included three migratory bird species, Forest wagtail (*Dendronanthus indicus*), Barn swallow (*Hirundo rustica*) and Indian pitta (*Pitta brachyura*). The eight endemic species, recorded were Crimson-fronted barbet (*Megalaima rubricapilla rubricapilla*), Sri Lanka junglefowl (*Gallus lafayettii*), Sri Lanka grey hornbill (*Ocyrceros gingalensis*), Pompadour green pigeon (*Treron pompadora pompadora*), Brown-capped babbler (*Pellorneum fuscicapillum*), Indian Scimitar-babbler (*Pomatorhinus horsfieldii melanurus*), Black-headed yellow bulbul (*Pycnonotus melanicterus*) and five threatened species. The total number of birds recorded was highest in the shrub lands with 1279 ± 328.81 (Mean \pm SD) birds and the lowest number of birds was recorded in the tank habitat with 576 ± 147.71 (Mean \pm SD) birds. Forest habitat had 818 ± 209.48 (Mean \pm SD) birds and the man made habitats had 1122 ± 287.85 (Mean \pm SD) birds. December had the highest avifaunal population of 501 birds and June 2006 had the lowest avifaunal population of 106 birds. Avifaunal population and species diversity for the period of March 2006 to August 2006 was significantly low 3.17 ± 0.07 (Mean \pm SD) compared to the period from September 2006 to February 2007, 3.41 ± 0.05 (Mean \pm SD), ($t= 4.239$, $p<0.01$, $df=5$). Highest species richness of 69 was recorded in the man made habitats followed by the shrub-lands ($S=63$) and forests ($S=58$). Lowest species richness of 37 was observed in the tank habitat. However, the Shannon Weiner

evenness (J) was highest in the tank habitat (J= 0.86) and was lowest in the man made habitats (J= 0.74). Relative abundance and indicated that Red-vented bulbul was the most common avian species followed by the Spotted dove. Since the Giritale Nature Reserve provides a suitable habitat for hundred and seven avian species including eight endemic species and five threatened species every effort should be taken by the management to preserve this prime habitat for birds.

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