

# SPECIES DIVERSITY AND HABITAT USE OF BIRDS IN MENAGESHA SUBA STATE FOREST, CENTRAL HIGHLANDS OF ETHIOPIA

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## Abstract

This study was carried out to investigate the species diversity and habitat use of birds in the Menagesha Suba State forest and surrounding farmland. The study was conducted from July 2018 to January 2019 during the wet and dry seasons. The study area was stratified based on the dominant habitat types. A standardized survey technique was employed using systematically established point counts for all habitat types. EstimateS software (version 9.1) and Chi-square test were applied to analyze the data. A total of 122 bird species belonging to 14 orders and 49 families were identified in the study area during the two-season surveys. There was a statistically significant difference in the relative abundance of species among habitat types ( $\chi^2=81.928$ ,  $df = 2$ ,  $p<0.05$ ). During both seasons, the highest bird diversity was observed in farmland ( $H'=3.65$ ), followed by plantation forest ( $H'=3.52$ ). The lowest and highest distributions were observed in natural forests ( $J=0.77$ ) and plantation forests ( $J=0.89$ ), respectively. Variations in the number of bird species were observed among the three habitats. Species similarity was highest between natural forests and plantation forests during both the dry and wet seasons. There was a statistically significant difference in habitat use of bird species among the three habitat types either when seasons were considered separately (dry season:  $\chi^2 = 22.825$ ,  $df = 6$ ,  $P<0.05$ ; wet season:  $\chi^2 = 22.186$ ,  $df = 6$ ,  $P<0.05$ ) or when combined ( $\chi^2 = 26.658$ ,  $df = 6$ ,  $P<0.05$ ). The Menagesha Suba State forest is rich in endemic bird species to Ethiopia and shared with Eritrea, and more than 15% of bird species distributions are locally rare. There is a need for a detailed study of long duration on the diversity and other ecological aspects of forest bird species should be conducted to get exhaustive information.

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