

**DIVERSITY, DISTRIBUTION AND ABUNDANCE OF AVIFAUNA IN RESPECT TO  
HABITAT TYPES: A CASE STUDY OF OLDONYO SABUK NATIONAL PARK**

**BY,**

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## **ABSTRACT**

The purpose of this dissertation was to find out the diversity, distribution and abundance of avifauna in respect to habitat types within Kilakala and Bigwa wards in Morogoro. The study was conducted between November and December 2011, by dividing the area into five habitat types which are settlement, farmland, shrubland, woodland and forest. Bird's abundance and diversity were compared between habitat types also related to habitat features. Point count method was used to collect data on bird diversity, abundance and distribution. Nested plots were used to collect data on habitat features. The Kruskal Wallis test was applied to test the difference in bird abundance between habitat types whereas Shannon-Wiener diversity index ( $H'$ ) was used to determine species diversity. On other hand, Sørensen's similarity index was used to find out similarities between habitats while the Spearman correlation coefficient was used to determine the relationship between bird abundance and habitat features within habitat types. A total of 3747 birds from 40 families and 159 species including six endemic species and two threatened species were recorded. The study found no significance differences in bird's abundance neither between habitat types nor between sampling periods. During November, diversity indices ranged from 3.224 to 3.865 with highest being shrub land and lowest being farmland while in December diversity ranged from 2.84 to 3.419 with highest being forest and lowest being settlement. Sørensen's similarity index ranged from 0.475 to 0.071, with the habitats in proximity showing higher similarity than the distant habitats. Spearman correlation analysis suggested that bird abundance is associated with habitat features. The findings from this study provide evidence that settlement areas can serve as a refuge for birds. Therefore, conservation efforts should as well be directed towards making communities view human occupied areas as a habitat for birds, and not as a lost habitat.