

ABSTRACT

Semi-arid wooded-shrublands are important and critical habitats that provide breeding and feeding grounds for a variety of bird species, some of which are endangered, vulnerable or threatened with extinction. Habitat type and size influence abundance and diversity of birds globally and particularly in developing countries that are characterized by rapid human population growth and haphazard urban, agricultural and industrial development. The objective of this study was to assess avian and habitat diversity at Chemeron, a semi-arid land in the northern rangelands of Kenya. The study was guided by four questions: What kind of Habitat types are present at Chemeron study area? What kind of birds are found at Chemeron area? What is the conservation status of birds found at Chemeron area? What are the functional feeding guilds of birds that are found in the study area? How does the habitat type influence bird species abundance and diversity at Chemeron? Four 2-km long transects radiating from a central point within the study area were selected for a ground survey of birds that was conducted on foot. The surveys were conducted between 06:30 and 09:30 and 16:00 and 18:00 from October 2019 to April 2020. Bird species were observed and identified to the species level using high-resolution binoculars, field guidebooks and available taxonomic keys. Our surveys documented two main habitat types: *Acacia-Balanites-Boscia* woodlands dominated by *Acacia senegal*, *Acacia mellifera*, *Acacia nilotica*, *Boscia angustifolia*, and *Balanites aegyptica*. The second kind of habitat consisted of the invasive *Acalypha fruticosa* and *Indigofera arrecta* with *Acacia reficiens*-*Acacia brevispica* overstorey. A total of 53 bird species were sighted and identified the vulnerable Yellow necked spurfowl (*Fringilla leucoscepus*). Seventy-nine percent of the birds were sighted as singles or in pairs except for the gregarious white browed sparrow weaver (*Plocepasser mahali*), *Apus caffer*, *Numida meleagris*, *Streptopelia senegalensis*, *Dinemellia dinemelli* and *Corythoides leucogaster*. Significant differences in the various species diversity indices among the six transects were observed ($p < 0.05$). Approximately 60% of the birds belong to the insectivorous and omnivorous feeding guild. Charcoal burning and uncontrolled harvesting of wood are the major threats to the avian habitats in the study area. The high diversity of bird species in the study area can be attributed to the varied diversity of habitats that provide feeding, nesting, refuge and breeding grounds for the birds. From the foregoing findings, we can conclude that the ASALs of Baringo South offer ample habitat for a large number of bird species including the vulnerable Yellow necked spurfowl. The variations in various bird diversity indices can be attributed to the observed heterogeneity of habitats in the study area. We recommend wise use of rangeland resources and protection of critical avian habitats within the ASALs. Efforts should be geared towards livelihoods diversification and empowerment of the Lake Bogoria communities. This will reduce the pressure on the wooded shrublands that is widespread in the study area.

Keywords

Habitat, Avian Diversity, Extinction, Acacia Woodlands, Rangelands