

# Diversity of medium and large-sized mammals across habitats and seasons in the Faragosa-Fura landscape, Gamo Zone, Southern Ethiopia

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## Abstract

The survey was conducted from August 2019 to February 2020, aimed at assessing medium and large-sized mammals' diversity, richness, and relative abundance in the Fura-Faragosa Landscape (FFL), Gamo zone, Southern Ethiopia. Fixed-width line transects sampling method was used to collect data among four stratified habitats: forest, wet-land, grass-land and cultivated-land, and between seasons. A total of 685 mammalian records belong to 21 species, six orders and 13 families were identified, including globally vulnerable species such as *Panthera leo*, *Panthera pardus* and *Hippopotamus amphibius*. Overall, *Papio Anubis* and *Chlorocebus pygerythrus* were the four dominant species, while *Civettictis civetta*, *Panthera leo* and *Panthera pardus* were the least abundant in the FFL. The study revealed that the dry season was characterized by higher mammalian species abundance (377 records) but by lower species richness (20) than the wet season. At habitat level, all the species encountered in the three habitats (Except *Panthera leo*, *Panthera pardus*, and *Colobus guereza* - habitat specialists) are subsets of the species recorded in the grass-land habitat. Grass-land had the highest diversity index ( $H = 2.543$ ) even though its area is small except wet-land. Wet-land had the lowest diversity index ( $H = 1.845$ ) but contained species of conservation concern such as vulnerable *Panthera leo* and *Hippopotamus amphibius*. The species abundance was highest in the forest. The similarity index of mammalian species was highest between grass-land and forest (0.609). In general, the findings reveal that FFL is the potential area for mammalian conservation in Ethiopia. The findings will serve as baseline information for stakeholders to make effective conservation decisions and as a baseline for researchers wishing to conduct related ecological studies. As the area is rich in mammalian diversity and abundance, urgent conservation action is highly recommended. Keywords: distribution, diversity, Faragosa-Fura Landscape, mammals, relative abundance

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