

Diversity, relative abundance and distribution of medium and large mammals in Mago National Park, Southern Ethiopia

Girma Mengesha¹

¹Wondo Genet College of Forestry and Natural Resources

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Abstract

The objective of this study was to investigate diversity, relative abundance, and distribution of medium and large mammals in Mago National Park (MNP), Southern Ethiopia. Data collection was conducted during dry and wet seasons. A systematic sampling design was used to establish line transects along the three main habitat types, namely: Woodland, Acacia savanna, and Riverine forest. A total of 45 line transects were established through the habitats, varying in length from 1.5 to 5 km, depending on the size of the habitat. Twenty-eight medium and large mammals species were recorded in the area belonging to 8 families and 5 orders. Order Artiodactyla had the highest number of species (14 species), followed by Carnivora (8 species), whereas Perissodactyla and Proboscidea were represented by one species each. During both seasons, the highest species diversity ($H' = 2.81$, and $H' = 2.96$) was recorded in woodland habitat, but the lowest ($H' = 2.5$ and $H' = 2.67$) in riverine forest. In terms of abundance, *Tragelaphus imberbis* 1773 ± 86 (12%) was the most abundant species, while *Vulpes chama* was the least abundant species 104 ± 13 that contributed less than 1% of the total. Most of the mammals species occurred in woodland habitat as compared to the other habitat types. Seasonal variation in abundance (number) of individuals of medium and large mammals was significantly different ($X^2 = 91.651$, $df = 1$, $p < 0.05$). However, variation in species composition was not significant ($X^2 = 0.018$, $df = 1$, $P < 0.05$). It can be concluded that, Mago National Park harbour high species diversity of medium and large mammals. Conservation efforts that could sustain the high diversity of the species in the area is needed to maintain the diversity.

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