

**EDGE EFFECTS ON A COMMUNITY OF FOREST MONKEYS IN KIBALE**

**NATIONAL PARK**

**BY**

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## **Abstract**

Despite the high rate of forest destruction, the impact of edge effects on primate species is not well understood. The objective of this study was to compare the abundance of primate species at the forest edge and in the forest interior in Kibale National Park, Uganda. Differences in primate species abundance, tree species richness and diversity, tree basal area, human disturbance and leaf nutrients in edges and the forest interior were assessed. The study was conducted by establishing 2km edge and interior transects at 6 selected sites in the park. Animal census was conducted and vegetation plot data were measured at each site in order to compare the abundance of primate species, tree species richness, tree species diversity, nutritional quality of primate food tree species and human activities along the forest edge and in the forest interior. The data were analyzed using paired

t-test for vegetation data and nutritional quality of primate food trees while Mann-Whitney U-test was used for animal censuses and human activity data.

Results shows that there was no significant difference in primate species abundance between the forest edge and the interior ( $P > 0.05$ ). The tree species richness, tree basal area, tree species diversity and nutritional quality did not differ significantly between edge and interior habitat at the study sites. However, when results were combined for all sites, the basal area and species richness were higher in the interior than at the edge ( $P = 0.03$  and  $0.01$ ) respectively. There was a significant difference in human activities between edge and interior transects ( $P = 0.003$ ), with more human impact on edges than interior. It was remarkable that no differences in primate species abundance between edge and interior habitats were found. This could be indicative of a non distinct edge – interior habitat that was seen to be more or less homogeneous and which was characteristic at the study

sites. This could also be related to the flexible life history strategies of the trees in Kibale Forest, or it could be indicative of the little variation in abiotic conditions between forest edge and the forest interior. Using 500m as forest interior might have been a limitation to obtaining significant differences in primate species abundance. There is need for long term monitoring of transects in the study sites to track primate species abundance dynamics for edge and interior habitats.