

FOOD HABITS OF BLACK RHINOCEROS (*DICEROS BICORNIS* L.)  
AND ELEPHANTS (*LOXODONTA AFRICANA* BLUM) IN NGULIA  
RHINO SANCTUARY

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BY  
GEOFFREY G. KARANJA  
(B.Sc. Wildlife Management)

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Department of Wildlife Management,  
Moi University,  
P. O. Box 3900,  
Eldoret,  
Kenya.

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## ABSTRACT

Studies were conducted in Ngulia Rhino Sanctuary ( $3^{\circ} S$   $38^{\circ} 15' E$ ) between September 1992 and March 1993. The main objective of the study was to determine whether black rhinoceros (*Diceros bicornis* L.) and elephants (*Loxodonta africana* Blum.) in the fenced Ngulia sanctuary utilised dissimilar food resources, to permit long-term coexistence. A supplementary objective was to determine the extent of vegetation dissimilarity (if any) between vegetation outside and inside the fence of the sanctuary, to assess the impact of the herbivores within and out of the sanctuary. Microhistological techniques were used to identify plant fragments in faecal samples of the study species. The plant fragments were identified, quantified and preference ratings made. To assess the species richness within and out of the sanctuary, vegetation samples along the fence, within and out of the fence were identified and recorded. No significant differences were detected between the diets of the two herbivores; food usage of the two herbivores was not related directly to food availability; and some plant species within families were over-represented in the faecal material of the two animals. Overall food preference rating for the two herbivores showed that the plant species *Melia volkensii* Guerke and *Astripomea lachnosperma* (Choisy) Meeuse were ranked first and second, respectively. However, food preference was to a less extent species-specific indicating that rhinoceros preferred *Melia volkensii* whereas the elephants preferred *Astripomea lachnosperma*. No significant differences in the plant species richness were recorded within and out of the sanctuary. Features of the current studies suggested that the two herbivore species had the potential to compete for similar resources, so they may not coexist in the sanctuary over a long period of time. Lack of differences in the species richness within and out of the sanctuary suggested that the herbivore population in the sanctuary was similar to that outside.