

Dissertations


Seasonal Home Range Sizes, Transboundary Movements and Conservation of Elephants in Northern Tanzania

[Download](#)

[Alfred P. Kikoti, University of Massachusetts - Amherst](#)
[Alfred P. Kikoti](#)

[Follow](#)

[Follow](#)

 **Included in**
[Animal Sciences](#)
[Commons](#)

[SHARE](#)

Date of Award
9-2009

Document Type
Open Access Dissertation

Degree Name
Doctor of Philosophy (PhD)

Degree Program
Wildlife & Fisheries Conservation

First Advisor
Curtice R. Griffin, Chair

Second Advisor
Todd K. Fuller, Member

Third Advisor
Matthew J. Kelty, Member

Keywords
conservation, corridors, elephants, home range, transboundary, unprotected lands

Subject Categories
Animal Sciences

Abstract
Although the unprotected lands of northern Tanzania support large numbers of elephants, and provide critical linkages for wildlife movements across the region, there is little information on the dispersal patterns of elephants in these unprotected lands. Our home range measures (100% MCP) of 21 elephants with satellite collars in four study regions were highly variable (191 to 3,698 km²). Home range sizes (95% fixed kernel) of bulls were typically larger than those of females, and wet season ranges were typically larger than dry season ranges. There were large differences in average home range sizes reflected varying strategies for obtaining food and water and avoiding humans. All eight radio-collared elephants (3 bulls, 5 females) in the West Kilimanjaro study region crossed the Tanzania-Kenya border, but typically elephants crossed more

Enter search terms:

in this series

[Advanced Search](#)

 [Notify me via email or RSS](#)

[Browse](#)

[Collections](#)

[Disciplines](#)

[Authors](#)

[Author Corner](#)

[Author FAQ](#)



frequently in the wet than the dry season, and bulls crossed 47% more frequently than females. These extensive transboundary movements indicate that the elephant populations of West Kilimanjaro and Amboseli NP constitute a single transboundary population. Based upon 14,287 fixes from eight collared elephants, the vast majority of time was spent in unprotected ($x=91.5\%$) versus protected ($x=8.5\%$) areas. Amboseli NP was visited by all eight elephants and was the protected area most utilized ($x=8\%$, range 2-24%). Based upon the movements of 15 GPS-collared elephants in northern Tanzania, we identified eight areas that we considered important for wildlife conservation corridors/linkages for elephants. Our conservation priorities for these corridors were based upon the levels of threats and conservation potential. Community interviews and hilltop surveys were used in two Maasai villages to determine the extent of wildlife conflict, community attitudes towards elephants, and if elephants were using a vegetation corridor to move between Tanzania and southern Kenya. Elephants were the most problematic wildlife species and were considered a nuisance. However, they believed they attracted tourists, and generally did not believe elephant numbers should be reduced. Based upon elephant conflict and use and the communities' need to maintain areas for cattle grazing and medicinal plant collection, the two communities established the first wildlife conservation corridor in Tanzania.

Recommended Citation

Kikoti, Alfred P. and Kikoti, Alfred P., "Seasonal Home Range Sizes, Transboundary Movements and Conservation of Elephants in Northern Tanzania" (2009). *Dissertations*. Paper 108.
http://scholarworks.umass.edu/open_access_dissertations/108



This page is sponsored by the [University Libraries](#).

© 2009 [University of Massachusetts Amherst](#) • [Site Policies](#)

 DIGITAL COMMONS[®]
powered by bepress