

https://dspace.org/

Disturbance and habitat factors in a small reserve : home range establishment by black rhinocerous (diceros bicornis minor)

Odendaal, Karen

2012-01-18
http://hdl.handle.net/10539/11080

Downloaded from a DSpace repository. https://dspace.org/

DISTURBANCE AND HABITAT FACTORS IN A SMALL RESERVE: HOME RANGE ESTABLISHMENT BY BLACK RHINOCEROUS (*DICEROS BICORNIS MINOR*).

Abstract

Black rhinos are being moved to small protected areas in an attempt to expand their range; and factors commonly found within these small protected areas could influence black rhino ecology. From the literature we understand how biological factors affect rhino resource selection but not in the context of small reserves. This study investigates the home range establishment of black rhinos and those factors commonly associated with small reserves that affect rhino habitat-use as well as weigh the relative importance of each of them. The factors considered were human disturbances such as residences, lodges, roads and fences, slope, elevation, perennial water, burnt areas and vegetation type. Minimum convex polygon, 50% core and 95% local convex hull (LoCoH) was used to generate home ranges from sightings data collected for 17 individuals. The mean 95% LoCoH home range was 3.77 km² (95% CI: 2.92- 4.63, *n*=17), and is comparatively small in relation to the adaptive kernel home ranges of previous studies. A use-availability resource selection function showed that black rhinos avoided areas close to residences, lodges, camps, and perennial water, and these variables played a bigger role than their selection for thicket vegetation. These factors have a highly significant effect on rhino resource selection, and this effect is magnified due to the density of human disturbances and water points commonly found in small reserves. It is essential that this knowledge be applied in the management of reserves protecting black rhinos.

Karen Odendaal