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DO ZEBRA (*EQUUS QUAGGA*) SELECT FOR GREENER GRASS WITHIN THE FORAGING AREA?

Melinda Boyers

ABSTRACT

Spatial patterns in topography and forage distribution clearly determine large herbivore movements but our understanding of the foraging strategies that free-grazing herbivores adopt at different temporal and spatial scales is limited. Different foraging response patterns are displayed at different scales. Here fine-scale foraging strategies of Zebra (*Equus quagga*) were investigated by studying their selection for vegetation greenness in a Southern African savanna. Zebras have high-energy requirements thus the primary productivity and condition of the habitat plays an important role on their movements. Grass greenness was measured by Normalized Difference Vegetation Index (NDVI), a proxy for vegetation productivity and quality. Finer-scale studies are needed to understand the processes leading to a correlation between NDVI and herbivores performance. Data was collected at two different spatial scales, foraging area and feeding station. Food selection was recorded in relation to grass species and grass tuft greenness. Within the foraging area, grass species and greenness within zebra feeding stations were compared with random non used stations. Within the feeding station, species and greenness of grasses eaten by zebra were compared with those of grasses available but not eaten. Zebra selection was not consistent across scales. Although greenness was a factor in selection at feeding station levels and grass tuft levels; feeding station selection was limited to greenness due to season, and selection for species occurred only at the grass tuft level. However, zebra did select for the greener grass tufts within the feeding station even if it meant to eat 'less palatable' species (i.e. *Eragrostis rigidior*) instead of 'very palatable' species (i.e. *Panicum maximum*).