SOME ECOLOGICAL STUDIES OF DE BRAZZA'S MONKEY

(*CERCOPITHECUS NEGLECTUS*) AND ITS HABITAT PRIOR TO

TRANSLOCATION

By

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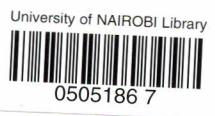
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ABSTRACT

The ecology of De Brazza's monkey (*Cercopithecus neglectus*) and its habitat, prior to translocation, was studied at Sinyerere Farm forest patch in the environs of the Cherangani Hills, and in Buyangu National Forest Reserve (BUNAFOR) located in main Kakamega Forest. This species is endangered in Kenya with only about 200 individuals reported to occur in the wild. Majority of them live in small isolated and unprotected forest patches in private land where they are killed for raiding crops and skins that are used for making ornaments. Therefore, there is need to translocate groups of this species that are most threatened in their present habitats to a safer area. One such group is found in Sinyerere Farm forest patch and need to be translocated to BUNAFOR. However, before the intended translocation the ecology of this group of De Brazza's monkeys and its present and proposed release habitats needed to be studied. This study was aimed at obtaining the ecological and behavioural information to be used as a baseline, in designing a De Brazza's monkey translocation procedure, and to establish the most suitable release site in BUNAFOR. This forest reserve was considered to be suitable for De Brazza's monkeys because it has most of the traits necessary for a successful translocation programme. However, it was necessary in this study to establish a suitable release site within the reserve. The study was carried out from December 1996 to May 1997 and mid-November 1997 to July 1998.

Socio-ecology of a group of De Brazza's monkeys, comprising of 16 individuals to be translocated, was studied at Sinyerere Farm forest patch, measuring 1.5 hectares. The Scan sampling technique was used to investigate their home range, vertical and horizontal habitat use and activity patterns. Convex polygon method was used to estimate their monthly home range sizes. These ranged from 0.20 to 0.85 ha and their daily home

range sizes per month differed significantly. The daily horizontal habitat use per month in terms of the mean distance travelled from the river and group spread was significantly different. Time spent at various heights above the ground in the forest was neither significant nor influenced by the hour of the day. The activity pattern of the De Brazza's monkeys was observed to have a diurnal rhythm as reported on its congeners in Kakamega Forest. They spent 47.15% of their time feeding on fruits and 32.2% on leaves. Feeding peaks occurred in the morning and evening hours.

The effective population size (N_e) of the De Brazza's monkeys in Kenya was estimated to be 81. This was above the minimum number below which inbreeding is eminent. However, it was below the level necessary to maintain genetic variation of the De Brazza's monkey population. Five gastro-intestinal tract (GIT) parasites comprising of two helminth genera and two protozoa genera were found to be infecting the De Brazza's monkeys at Sinyerere Farm forest patch in the environs of the Cheranagni Hills. GIT parasites from non-human primate species at BUNAFOR were not investigated. Therefore, this needs to be investigated before the monkeys are translocated.

To establish the most suitable release site in BUNAFOR, density, percentage crown-cover and Shanoon-Wiever diversity index (H') of ten plant species fed on by De Brazza's monkeys were used. Six transects that presented potential release sites were systematically selected at 1-Km intervals along Isiukhu River and twenty 20 m by 20 m quadrats established in each transect. Ten quadrats were randomly selected and the density, percent crown-cover and Sahnnon-Wiever diverisity index determined in each quadrat. To establish the most suitable release site among the six selected sites in BUNAFOR, the three parameters were used to determine the significant difference in the six transects. No significant difference was however, found in the six sites in terms of

these parameters. Nevertheless, after considering other parameters, that is, proximity of potential release sites to more rivers and streams, distance of the sites from the forest edge, and accessibility, site number four of the six selected sites was found to be the most suitable release site.