

Comparing Nesting Ecology of Chimpanzees in Two Isolated Populations in Lebialem Division, South West Province, Cameroon

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Abstract

Preliminary research and conservation of great apes has been going on in the Lebialem Division of Cameroon since 2004 when chimpanzees (*Pan troglodytes vellerosus*) and Cross River gorillas (*Gorilla gorilla diehli*) were recorded in this region. Studies have taken place in Andu and Bechati-Bessali-Fossimondi forests (BBF). Very little, or no, scientific information has been collected about the nesting ecology of these subspecies and how they are influenced by anthropogenic activities. This study, conducted between the months of May and August 2007, investigated and compared the nesting ecology of chimpanzees in the above sites, looked at the differences between nesting behaviour of the two apes species in BBF and correlated the influences of anthropogenic activities on nesting behaviour. Reconnaissance walks were carried out along chimpanzee and human trails and intensive and random searches were conducted to locate and count nests. Nest heights were recorded, the nest spread area and the diameter of the nest sites were measured. Distance from any human disturbances, within 100m from the nest site, was also recorded. Data were analysed using both parametric and non-parametric statistical tests. Kolmogorov-Smirnov (K-S) tests revealed that nesting heights were normally distributed around the mean, while distance from human activities was not. Spearman's rho and Pearson correlations revealed that there was a significant positive correlation between nest spread area and nesting heights as well as total number of nests in a nest site. Distance from human activity and hunters' paths significantly influence the observed nesting behaviour in these sites. In BBF, nests were found at a mean height of 20.8 m (standard deviation ± 10.5 m) and average nests site coverage was 885m². At Anadu, nests were found at 15.8 m (sd ± 9.5 m), with nest site coverage being 667m². Of the human activities recorded, 59% occurred in BFF, with 41% in Andu. Gorillas inhabiting BBF were found to prefer secondary habitats and abandoned farmlands for nesting. The differences between the two sites may be because gorillas are found in BFF (and not in Andu), they may also be due to the high number of human settlements around BFF.



The author measuring tree distances with a Laser range finder

Understanding great ape ecology is indispensable in designing and prioritising conservation action plans. However, the plans may not be sustainable if they do not integrate the local people who have been living in close proximity to these species for generations and who rely on the forests for resources and income through agriculture, harvesting of non-timber forest products (NTFPs) and logging activities. As a result, humans and chimpanzees come into increasing conflict due to competition for forest resources and crop raiding behaviour. West African countries are amongst the poorest countries in the world, with fast growing populations that are largely dependent on the forests for their livelihoods. In this respect, any conservation action plan designed without incorporating the local people and also providing them with alternative sources of food or income will not succeed. Generally, conservation education, law enforcement and alternative livelihood programmes should be carried out in a synchronized manner, committing the local people to assuming key roles and embracing the challenges in biodiversity conservation. However long term monitoring, demarcation of farm forest boundaries and the creation of forest corridors linking the two study sites and the nearby Mone forest reserve could improve great ape conservation in this region.