

Seed dispersal by western lowland gorillas (*G. g. gorilla*) in South East Cameroon

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Plant biodiversity and forest dynamics of tropical ecosystems are strongly influenced by animals through seed dispersal, however many important dispersers are declining in population size, such as the western lowland gorilla (WLG). From September 2009 WLG seed dispersal has been investigated in south east Cameroon through faecal analysis and germination experiments. Frequency of seed deposition in different habitat types has been also calculated each month since October 2009. This study demonstrated that WLG are effective dispersers as they disperse viable seeds of many species: 52 plant species were identified (including *Erythrophleum suaveolens*, a highly valuable commercial tree previously thought to be autochorous) and 42 unidentified with 3.9 species/dung pile. These species are found in large quantities in faeces: average of 67 seeds/100g of faeces, over potentially large distances: mean retention time: 54.7 h; mean daily path length: 1,923 m. Most of them (65%) will be dispersed in open canopy habitats. Preliminary results of the germination experiments revealed a significant increase in probability of emergence of ingested seeds, independent of retention time, for two out of four species tested so far: *Pseudospondias microcarpa* and *Trichoscypha abut* (Chi-squared, $p < 0.05$). Conservation of WLG is therefore highly relevant to ensure ecological and commercial function of the concerned forest ecosystems, and for natural forest regeneration, a consideration which should encourage logging companies to strengthen wildlife management in their concessions.

Keywords: western lowland gorilla, seed dispersal, seed germination, forest regeneration, logging.

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