

GORILLA POPULATION DYNAMICS AFTER AN EBOLA OUTBREAK

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Our long-term study of a western lowland gorilla (*Gorilla gorilla gorilla*) population enables us to monitor the gorillas' capacity to recover after an Ebola outbreak. A gorilla population (~400 individuals) that visits the Lokoué clearing (Odzala-Kokoua National Park in Republic of Congo) has been monitored since 2001. This population suffered from an Ebola epidemic in 2004 when more than 95% of individuals died, mainly females and immature individuals (Caillaud et al., 2006). The gorilla population that visits the Romani clearing (~200 individuals) is located 20km from Lokoué and has been monitored since 2005. This population does not seem to have been affected by the Ebola virus. At Lokoué, five years after the epidemic, we noticed that several surviving solitary blackback and silverback males progressively left this site and now the population is very small. So, despite the formation of new reproductive groups and a high birth rate within these groups, population recovery is slow. Group encounters are rare and the lack of immigrants indicates a slow rate of dispersal at the regional level. Lokoué and Romani are separated by a wide river that could prevent a possible recolonizing of the affected zones. Although male and female gorillas disperse, migrants may be discouraged from staying in an affected zone because of the low possibility of meeting potential partners. Understanding the mechanisms of recovery of gorilla populations and their dynamics after a demographic crash is of a great importance in a context of preservation of this species and of management for ecotourism.

Keywords: Gorilla gorilla gorilla, population recovery, recolonization