

Ebola has profound effects on wildlife population dynamics

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This image shows gorillas in an Ebola study. Credit: Céline Genton, University of Rennes 1

New research in gorillas that were affected by an Ebola virus outbreak shows that disease can influence reproductive potential, immigration and

social dynamics, and it highlights the need to develop complex models that integrate all the different impacts of a disease.

This approach requires long-term monitoring of wildlife populations to understand the responses of populations to emerging changes in the environment, according to the *Journal of Animal Ecology* study.

"Along with the decrease in survival and in reproduction, Ebola outbreak perturbed [social dynamics](#) in gorilla populations. During outbreak, transfers of both males and females between social units increased. Some [adult females](#) have been observed transferring to non-breeding groups, which is unusual in non-affected population. Although, six year after outbreak, most of vital rates returned to pre epidemic rate, recovery of the population is slow, especially because no compensatory immigration occurred after outbreak indicating that the neighboring populations might have been also affected," said Dr. Pascaline Le Gouar, senior author of the study.

More information: Genton, C., Pierre, A., Cristescu, R., Lévréro, F., Gatti, S., Pierre, J.-S., Ménard, N., Le Gouar, P. (2014), How Ebola impacts social dynamics in gorillas: a multistate modelling approach. *Journal of Animal Ecology*. [DOI: 10.1111/1365-2656.12268](https://doi.org/10.1111/1365-2656.12268)

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