

# Long-term logging study demonstrates impacts on chimpanzees and gorillas in Republic of Congo

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A logging concession in the Republic of Congo. Researchers from Lincoln Park Zoo in Chicago are working with the timber company to understand the impacts of selective logging practices on wild western lowland gorilla and chimpanzee populations. Credit: Sharon Dewar

Research has shown human disturbance can have detrimental effects on great ape populations but now, due to a study published in *Biological Conservation* on Nov. 27 by Lincoln Park Zoo, there is evidence showing how selective logging impacts chimpanzees and gorilla populations differently by utilizing data collected before, during and after timber extraction.

David Morgan, Ph.D., of the Lester E. Fisher Center for the Study and Conservation of Apes, is used to uncharted territory, spending most of his days in a remote region of the Republic of Congo, a one-of-a-kind ecosystem called Goualougo Triangle that chimpanzees and western lowland gorillas call home. Morgan has developed crucial relationships with community and conservation partners, including the Wildlife Conservation Society, but ventured into a new type of uncharted territory by creating an open dialogue and data-sharing relationship with the local timber company. The Forest Stewardship Council (FCS)-certified company offered to provide its timber inventory, and in turn, zoo researchers were able to provide information on ape nesting, feeding ecology and range to help minimize the displacement of these endangered primates.

While the Goualougo Triangle is a protected area, the site for selective logging - 1 to 3 trees per hectare (equivalent to the size of two football fields) - is also inhabited by chimpanzees and gorillas as it borders the Nouabale-Ndoki National Forest.



A logging concession in the Republic of Congo. Researchers from Lincoln Park Zoo in Chicago are working with the timber company to understand the impacts of selective logging practices and human disturbance on wild western lowland gorilla and chimpanzee populations. Credit: Sharon Dewar

Culminating these data provided statistically significant results. Western lowland gorillas avoided areas during timber extraction but returned after logging had passed through the area, in order to feed on the lush herbaceous ground vegetation. On the other hand, chimpanzees who thrive high in the tree's canopy were less likely or slower to return to their native habitat. Crucial to the protection of the returning ape troops are ecoguards who protect the newly-accessible forest due to the human disturbance.

This unprecedented study was only possible due to the long-term dedication of Goualougo Triangle Ape Project staff and cooperation with the local [timber](#) company. Researchers remain in the field year-round studying these complex creatures to continue to find the best ways to preserve their populations.





A chimpanzee rests in the canopy of the Goualogo Triangle in the Republic of Congo. Researchers from Lincoln Park Zoo in Chicago have been conducting a 20+ year study to understand and conserve the western lowland gorilla and chimpanzee populations. Credit: Sharon Dewar

**More information:** David Morgan et al, African apes coexisting with logging: Comparing chimpanzee ( *Pan troglodytes troglodytes* ) and gorilla ( *Gorilla gorilla gorilla* ) resource needs and responses to forestry activities, *Biological Conservation* (2017). [DOI: 10.1016/j.biocon.2017.10.026](https://doi.org/10.1016/j.biocon.2017.10.026)

Provided by Lincoln Park Zoo

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