

# Study finds the forgotten ape threatened by human activity and forest loss

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A recent range-wide study of the bonobo conducted by University of Georgia, University of Maryland, WCS, the Congolese Wildlife Authority, and other groups has found that the endangered great ape is quickly losing space to human populations in the Democratic Republic of Congo, the only country where the bonobo is found. Credit: Crispin Mahamba/Wildlife Conservation Society-DRC Program.

The most detailed range-wide assessment of the bonobo (formerly known as the pygmy chimpanzee) ever conducted has revealed that this poorly known and endangered great ape is quickly losing space in a world with growing human populations. The loss of usable habitat is attributed to both forest fragmentation and poaching, according to a new study by University of Georgia, University of Maryland, the Wildlife Conservation Society, ICCN (Congolese Wildlife Authority), African Wildlife Foundation, Zoological Society of Milwaukee, World Wildlife Fund, Max Planck Institute, Lukuru Foundation, University of Stirling, Kyoto University, and other groups.

Using data from nest counts and remote sensing imagery, the research team found that the bonobo—one of humankind's closest living relatives—avoids areas of high human activity and forest fragmentation. As little as 28 percent of the bonobo's range remains suitable, according to the model developed by the researchers in the study, which now appears in the December edition of *Biodiversity and Conservation*.

"This assessment is a major step towards addressing the substantial information gap regarding the conservation status of bonobos across their entire range," said lead author Dr. Jena R. Hickey of Cornell University and the University of Georgia. "The results of the study demonstrate that human activities reduce the amount of effective bonobo habitat and will help us identify where to propose future protected areas for this [great ape](#)."

"For bonobos to survive over the next 100 years or longer, it is extremely important that we understand the extent of their range, their distribution, and drivers of that distribution so that conservation actions can be targeted in the most effective way and achieve the desired results," said Ashley Vosper of the Wildlife Conservation Society. "Bonobos are probably the least understood great ape in Africa, so this paper is pivotal in increasing our knowledge and understanding of this beautiful and

charismatic animal."



Smaller than the common chimpanzee, the bonobo (formerly the pygmy chimpanzee) is losing vital habitat due to both forest fragmentation and poaching. Credit: Crispin Mahamba/Wildlife Conservation Society-DRC Program.

The bonobo is smaller in size and more slender in build than the common chimpanzee. The great ape's social structure is complex and matriarchal. Unlike the common chimpanzee, bonobos establish social bonds and diffuse tension or aggression with sexual behaviors.

The entire range of the bonobo lies within the lowland forests of the Democratic Republic of Congo, the largest country in sub-Saharan

Africa and currently beset with warfare and insecurity. The research team created a predictive model using available field data to define bonobo habitat and then interpolated to areas lacking data. Specifically, the team compiled data on bonobo nest locations collected by numerous organizations between the years 2003-2010. This produced 2364 "nest blocks," with a block defined as a 1-hectare area occupied by at least one bonobo nest.

The group then tested a number of factors that addressed both ecological conditions (describing forests, soils, climate, and hydrology) and human impacts (distance from roads, agriculture, forest loss, and density of "forest edge") and produced a spatial model that identified and mapped the most important environmental factors contributing to bonobo occurrence. The researchers found that distance from agricultural areas was the most important predictor of bonobo presence. In addition to the discovery that only 28 percent of the bonobo range is classified as suitable for the great ape, the researchers also found that only 27.5 percent of that suitable bonobo habitat is located in existing protected areas.

"Bonobos that live in closer proximity to human activity and to points of human access are more vulnerable to poaching, one of their main threats," said Dr. Janet Nackoney, a Research Assistant Professor at University of Maryland and second author of the study. "Our results point to the need for more places where bonobos can be safe from hunters, which is an enormous challenge in the DRC."

Dr. Nate Nibbelink, Associate Professor at the University of Georgia, added: "The bonobo habitat suitability map resulting from this work allows us to identify areas that are likely to support bonobos but have not yet been surveyed, thereby optimizing future efforts."

"By examining all available data provided by a team of leading

researchers, we can create the kind of broad-scale perspective needed to formulate effective conservation plans and activities for the next decade," said Dr. Hjalmar S. Kühl of the Max Planck Institute for Evolutionary Anthropology.

"The fact that only a quarter of the bonobo range that is currently suitable for bonobos is located within protected areas is a finding that decision-makers can use to improve management of existing protected areas, and expand the country's parks and reserves in order to save vital habitat for this great ape," said Innocent Liengola, WCS's Project Director for the Bonobo Conservation Project and co-author on the study.

"The future of the bonobo will depend on the close collaboration of many partners working towards the conservation of this iconic ape," said Dr. Liz Williamson of the IUCN/SSC Primate Specialist Group and coordinator of the action planning process which instigated the [bonobo](#) data compilation for this study. In 2012, the International Union for Conservation and Nature (IUCN) and the Congolese Wildlife Authority (ICCN) published a report titled Bonobo (*Pan paniscus*): Conservation Strategy 2012-2022.

Provided by Wildlife Conservation Society

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