

# Investigating the health threats to endangered eastern gorillas

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Dr Alisa Kubala

A Murdoch University PhD student is working in a mountainous region of the Democratic Republic of Congo (DRC) to investigate the health of endangered eastern gorillas, the humans and other primates living near them.

Dr Alisa Kubala is examining faeces and [blood samples](#) from two sub species – Grauer's (or eastern lowland) and mountain [gorillas](#) – as well as from people and other primates living in the area to determine whether cross-species disease transmission is occurring in the eastern gorilla habitats.

She is also studying the species of mosquito and fly which are thought to

be responsible for the transmission of malaria and microfilariae.

"As humans encroach further into gorilla habitat, the threat of zoonotic disease transmission increases for these species," said Dr Kubala, who is a qualified vet.

"Humans and gorillas share 98.5 per cent of their genetic makeup, which makes them susceptible to many of the same [infectious diseases](#). However, while humans have traveled around the world and built up resistance to many diseases, gorillas remain isolated and immunologically naïve and are at greater risk of acquiring new infections.

"Malaria, microfilaria and retroviruses like HIV, which has an ape equivalent Simian Immunodeficiency Virus (SIV), are endemic in human populations in eastern gorilla host countries, where they are the leading causes of morbidity and mortality.

"Some evidence suggests that co-infection with all three of these diseases in humans may lead to increased parasite/viral loads, faster disease progression and increased [disease transmission](#).

"This project will investigate whether the gorillas are infected by malaria, microfilaria and retroviruses, and if so, the potential health risks associated with the infections.

"These health pressures coupled with stressors caused by humans in the area like animal trafficking, climate change and illegal snare setting for smaller mammals which entrap young gorillas, threaten the survival of these amazing creatures.

"The best way to combat, treat and prevent diseases in these regions is to understand them better and that is what I hope to achieve with my

collaborators."

Dr Kubala has been working in Kahuzi-Biéga National Park in DRC and studying samples collected in Virunga National Park, DRC.

She has spent the last four months trekking to gorilla nest sites with experienced trackers to collect faeces and set traps for mosquitos and flies nearby. Blood samples are collected in conjunction with the Gorilla Doctors, an international team of veterinarians that monitor the health of wild, habituated mountain and Grauer's gorillas in Rwanda, Uganda and DRC. They also provide medical care for eastern gorillas orphaned by poachers, and conduct wildlife disease surveillance to look for emerging pandemic threats at high-risk human-wildlife interfaces.

"Gorillas are incredibly calm animals in general," said Dr Kubala. "But like any species you need to be respectful. They will usually warn you if they feel threatened but the trackers jumped between me and the gorillas if they were ever worried about any aspect of their behaviour. So I felt very safe at all times."

Provided by Murdoch University

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