

A possible COVID-19 silver lining for great ape conservation

February 11 2022, by Amy Bond



Mountain gorillas in Rwanda's Volcanoes National Park have experienced better respiratory health since the COVID-19 pandemic began, due in part to protective health measures in the park. Credit: Gorilla Doctors

Respiratory illness outbreaks among wild mountain gorillas in Volcanoes National Park have declined since the start of COVID-19, according to a Correspondence report in the journal *Nature* from Gorilla Doctors and the Rwanda Development Board.

Mountain [gorillas](#) are susceptible to human-transmitted respiratory pathogens. Respiratory illness is the second leading cause of death in wild, human-habituated populations.

In the five years prior to March 2020, the Volcanoes National Park population averaged 5.4 respiratory illness outbreaks in gorilla family groups annually. In contrast, from March 2020 through December 2021, the population averaged 1.6 respiratory illness outbreaks in the family groups each year. To date, SARS-CoV-2 has not been detected in samples collected from [mountain gorillas](#) with respiratory illness.

The decline in respiratory illness outbreaks in mountain gorillas during the COVID-19 pandemic correlates with an overall reduction in the number of people coming into close proximity of the gorillas, and with additional health protection measures taken to reduce the risk of disease transmission from humans to gorillas.

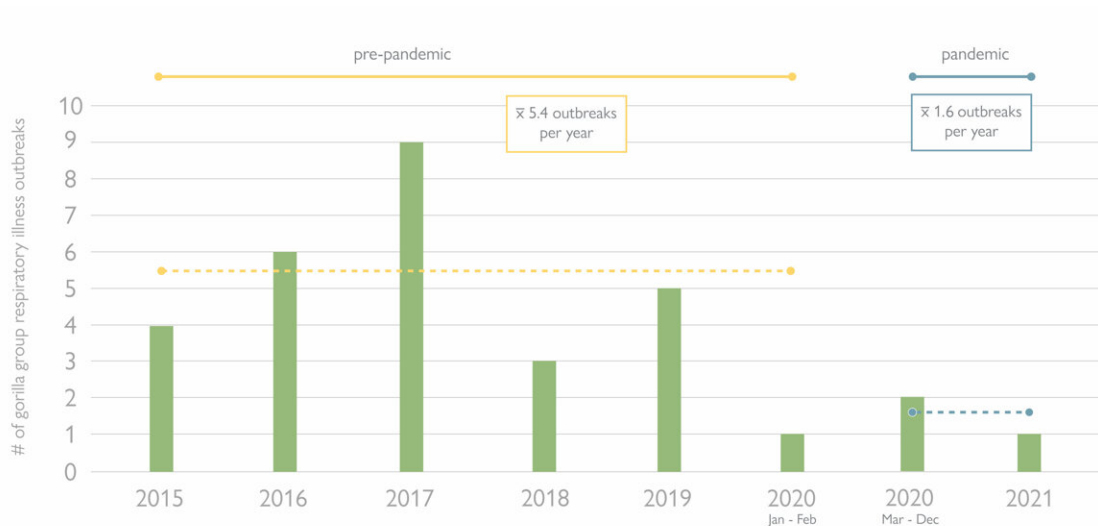
"Respiratory illness outbreaks are common in wild, human-habituated mountain gorillas, and considering that gorillas are susceptible to SARS-CoV-2, this preliminary analysis is such a welcome finding," said co-author Kirsten Gilardi, [executive director](#) and chief veterinary officer for Gorilla Doctors, and the director of the Karen C. Drayer Wildlife Health Center at the UC Davis School of Veterinary Medicine. "It is a testament to the early and decisive action of park authorities to help protect mountain gorillas and humans."

The additional safety measures are in accordance with the IUCN Best Practice Guidelines for Health Monitoring and Disease Control in Great Apes, which state: "... disease prevention should be regarded as a top priority ... programs should be centered on monitoring health parameters, and modifying human activities accordingly, in order to reduce the risk of disease transmission to great apes."

Gorilla ecotourism was temporarily suspended at the start of the COVID-19 pandemic. The Rwanda Development Board mandated mask-wearing at all times when in close proximity of gorillas and increased the minimum distance to 10 meters, or nearly 33 feet.

Jean Bosco Noheri, a Gorilla Doctors field veterinarian who compiled the data for this comparison cites other potential correlating factors to consider as additional lines of inquiry.

"Variation in pathogenicity of viruses, gorilla group dynamics, [climate conditions](#) and a variety of other factors may also be impacting the decrease in respiratory illness outbreaks we have seen," Noheri said.



Numbers of mountain gorilla groups experiencing respiratory illness outbreaks in Volcanoes National Park, Rwanda from 2015 – 2021. Prior to the pandemic era (January 2015 – February 2021), there was an average of 5.4 outbreaks affecting gorilla groups annually; since the start of the pandemic in March 2020, there has been an average of 1.6 outbreaks affecting gorilla groups annually. Gorilla Doctors defines 'respiratory outbreak' as respiratory illness that affects >1/3 of a gorilla family group for at least seven days (Spelman et al., 2013. *Jo. Zoo and Wildlife Medicine* 44(4): 1027-1035). The reduction in average annual respiratory outbreaks correlates with an overall reduction in the number of people coming into close proximity of the gorillas and with best practice requirements for use of face masks and safe distancing among people and gorillas. Human-habituated mountain gorillas in Volcanoes National Park are monitored daily by park personnel and the Dian Fossey Gorilla Fund International, and Gorilla Doctors veterinarians conduct routine health checks for signs of injury or illness, including respiratory illness. Gorilla Doctors' veterinarians follow-up on all gorilla health reports and observations, and conduct clinical interventions in situ when injuries or illness are life-threatening.

This bar graph shows numbers of mountain gorilla groups experiencing respiratory illness outbreaks in Volcanoes National Park in Rwanda between 2015 and 2021, showing steep declines after the COVID-19 pandemic began. Credit: Gorilla Doctors

These findings illustrate the imperative for best practice measures that minimize human disease transmission to great apes. Particularly in light of the omicron variant surge and the return of gorilla tourism, Gorilla Doctors and the Rwanda Development Board recommend these measures be made permanent.

More information: Kirsten Gilardi et al, Keep mountain gorillas free from pandemic virus, *Nature* (2022). [DOI: 10.1038/d41586-022-00331-z](https://doi.org/10.1038/d41586-022-00331-z)

Provided by UC Davis

Citation: A possible COVID-19 silver lining for great ape conservation (2022, February 11) retrieved 25 April 2024 from <https://phys.org/news/2022-02-covid-silver-lining-great-ape.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.