



# ***Gorilla Journal***

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*No. 61, December 2020*



**Zoonoses and  
Apes**

**Why Are We Still  
Studying Gorillas?**

**Deadly Attack on  
the Ranger Post of  
Sarambwe**

**Conservation in  
the Crisis Region  
of Cameroon**



# BERGGORILLA & REGENWALD DIREKTHILFE

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### Gorilla Journal 61, December 2020

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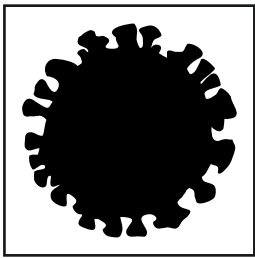
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# COVID-19

## Zoonoses and Apes

Zoonoses are infectious diseases that can be transmitted between animals and humans. Among viruses alone, there are more than 1,000 human pathogens, of which about 60% are zoonotic. Because humans and non-human primates are so closely related, in terms of genetics, almost all human infections can be transmitted to apes – and vice versa.

A distinction is made between:

- Zoonoses caused by viruses, such as rabies, yellow fever, hantavirus, Ebola, swine and bird flu
- Zoonoses caused by bacteria, such as tuberculosis, plague, anthrax, salmonellosis and shigellosis
- Zoonoses caused by parasites, such as fox tapeworm (echinococcosis), trichinosis, leishmaniosis, toxoplasmosis and scabies

The number of known zoonoses is probably in the four-digit range; in this article, only a few selected diseases will be discussed.

### Viruses

In recent years, epidemics and pandemics caused by corona viruses have been particularly topical. Until 2003, these viruses, which cause a range of symptoms in humans, mammals and birds, were not considered to be important zoonoses. Since then, three emerging (newly developed) corona viruses have caused panic worldwide – and are still doing so. A virus is called 'emerging' when it appears for the first time in a population of organisms, or when it spreads in the population unusually fast and with a high incidence (frequency). This can occur when a virus switches to a different host species and adapts to it, or when a new, more pathogenic virus variant develops in the current host species.

- 2002 SARS-CoV-1: severe acute respiratory syndrome, infection prob-



*Fruit bats in a cave in Uganda*

*Photo: Wolfram Rietschel*

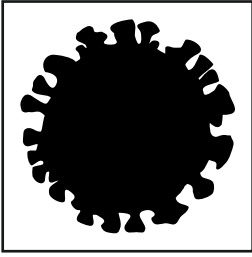
- ably due to contact with viverrids, a family of small, cat-like predators
- 2012 MERS CoV: Middle east respiratory syndrome-related coronavirus, infection via contact with dromedaries
- 2019 SARS-CoV-2: severe acute respiratory syndrome coronavirus 2, infection suspected due to contact with pangolins (?) at a wildlife market in Wuhan, China

All three pathogens have genetic similarities with corona viruses found in bats. Bats and fruit bats are also considered a reservoir for rabies, Ebola and Marburg viruses. Since more than 3,000 different corona viruses have been found in bats, it is only a matter of time before the next pandemic erupts.

The scientific literature includes numerous references to viral zoonoses; it is assumed that almost all viruses detected in humans have their origin in non-human animals. About 100 years ago, the simian immunodeficiency virus, SIV, was transmitted from chim-

panzees to people. It mutated into the human immunodeficiency virus, HIV, and caused the global AIDS pandemic. Thousands of years ago, African apes became infected with SIV through contact with other primate species (probably mangabeys). In the course of evolution, their immune system adapted to the pathogen such that the pathogenicity (disease-causing property) of SIV is minimal compared with that of HIV.

In African national parks, deaths have been observed in groups of habituated chimpanzees and gorillas after the animals were infected with 'banal' human cold viruses. Employees of research projects and tourists are among the possible sources of infection. Viruses may change their pathogenicity when they switch hosts, especially if the immune system of the recipient is not adapted to the pathogen. An example from zoological gardens is the transmission of *Herpes simplex* viruses. This pathogen is widespread in humans and apes in zoos: 80–90% of



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adults carry antibodies to the virus. The infection usually progresses without or with only mild symptoms (cold sores). However, in new-borns and in tupaia, the virus may cause a severe general infection, which may prove fatal. The closely related herpes B viruses are endemic in Asian macaques and are usually asymptomatic. The viruses are transmitted by bites (saliva), scratches or through contact with faeces, urine or the contents of blisters. In humans, an untreated infection is fatal after only a few days in 80 % of cases.

## Bacteria

M'Pungu, the first gorilla to survive transport to Europe, arrived in 1876 and died in Berlin in 1877 when he was about three years old. During the post-mortem, pathologist Rudolf Virchow from the Berlin Charité found that pulmonary tuberculosis was the cause of death, in addition to diarrhoea and intestinal inflammation. Tuberculosis (TBC) resulted from the close contact the young gorilla had had with humans. 'Consumption', as it was called then, was widespread in the 19<sup>th</sup> century, particularly among the poorer population. Sources of infection included people (transmission by coughing), fresh cow's milk and contact with diseased animals. According to the World Health Organization, one third of today's global population is infected with TB, although the disease manifests itself only rarely. Clinical symptoms may occur in stressful situations, for example in the case of malnutrition and a weakening of the immune system (e.g. in the case of AIDS), and the pathogens may then be excreted.

As recorded in *Brehms Tierleben* [Brehm's Animal Life], M'Pungu was fed a terrible diet of buttered bread, cow's cheese, Frankfurter sausages and *Berliner Weisse*, a sour beer. This probably contributed to the outbreak of the disease in the young gorilla. In his

book *Die Krankheiten der Affen* [The Diseases of Monkeys and apes], published in 1870, the zoo veterinarian and zoo director Max Schmidt named tuberculosis as a common cause of death and attributed this to "a change in climate, imprisonment and abnormal diet". By comparative observations of capuchin monkeys and baboons, he was able to refute the idea that "constant excitement and resulting masturbation contribute to the development of tuberculosis", which was widespread in human medicine at the time.

In Africa, tuberculosis is one of the most prevalent infectious diseases, alongside malaria and AIDS. People who suffer from HIV are often also infected with TB.

African apes live in areas where tuberculosis is widespread in the population and among farm animals. It is entirely conceivable that the pathogens are transmitted to gorillas and chimpanzees by local residents and their animals, by paramilitary gangs, refugees, poachers and employees of conservation projects. So far, however, there is only one confirmed report of a *Mycobacterium tuberculosis* infection in a chimpanzee that was found dead in the Tai National Park in Ivory Coast.

In other parts of Africa, the TBC problem is much more serious. In South Africa, for example, 80 % of the lions tested in the southern Kruger National Park were found to be positive for TBC. The source of infection in this case was buffaloes who had been infected by contact with domestic cattle.

## Parasites

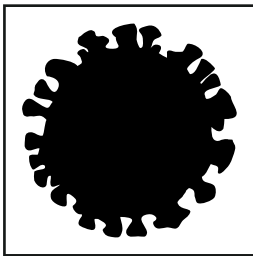
A distinction is made between endo- and ectoparasites, depending on whether they live inside or on the host. There are probably no wild animals without parasites. However, in most species a host-parasite balance has developed in the course of evolution. Parasites, especially intestinal nematodes such as roundworms, hook-

worms and pinworms, are also widespread among the rural human population in Africa. The balance can be disturbed in stressful situations, malnutrition, bacterial or viral diseases, if the immune system is weakened, in old age or if the host is infected with other parasite species. During the early days of keeping apes in zoos, intestinal parasites were a common cause of death, alongside tuberculosis and pathogenic intestinal bacteria.

The scientific literature gives individual reports of the mutual transmission of hookworms between gorillas, the local population and primate researchers. It is not without reason that, when you're trekking gorillas, you are only allowed to follow nature's call using an assigned place with a prepared hole, which is then carefully covered.

One oddity worth mentioning is that the first gorilla infants who arrived in Stuttgart Zoo in 1965 were covered in lice. Unfortunately, the species was not determined, but it was probably the gorilla louse, *Pthirus gorillae*. The human head louse (*Pediculus humanus capitis*) has not yet been found in wild gorillas, but it cannot be ruled out that the gorillas become infected with lice as a result of close contact with the staff members who looked after them. In an outbreak of *Sarcoptes scabiei* (itch mite) in a mountain gorilla group in Bwindi National Park, it was suspected that the mites had been transmitted through direct or indirect contact with domestic animals or the local population.

As settlements and farmland inch closer and closer to the protected areas of East Africa, there is an increasing risk of the mutual transmission of pathogens. This can only be reduced by monitoring the park borders, setting up buffer zones and educating the population. There is an urgent need to improve the medical infrastructure and ban the marketing of wild animal meat (bushmeat).



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**Chimpanuka**

*Photo: Wolfram Rietschel*

Since September 2020, the generally applicable corona virus rules have also been in place for participants in gorilla and chimpanzee trekking: keep your distance (1.5 m between humans but 7–10 m between humans and gorillas, although this is not always observed by the gorillas!), observe hygiene and wear special masks (N95, surgical masks or double-layer cloth masks with filter). Until then, masks had not been mandatory for tourists in Bwindi and Kibale National Park in Uganda, nor in the Volcanoes National Park in Rwanda. It is questionable whether the apes appreciate this change: when tourists visited the Grauer's gorillas in the Kahuzi-Biega National Park in 2010 wearing masks for the first time, the 200 kg silverback Chimpanuka was frightened and retreated to safety in the nearest tree. In 2016, however, the author was able to find out for himself that Chimpanuka has become accustomed to the sight of masks.

*Wolfram Rietschel*

## Literature for further reading

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## COVID-19 Pandemic Cripples Community Livelihoods

For many households around mountain gorilla parks, tourism has been their lifeline. That is until the COVID-19 pandemic affected the tourism industry swiftly and profoundly.

For Gertrude Akankwasa, a porter in Bwindi Impenetrable National Park (BINP), the suspension of tourism came as a shock to her. Never had she imagined that mountain gorilla tourism could be suspended or come to an end. "When I got this job two years back I was certain in my heart that I had finally found a permanent and stable source of employment/income. As long as gorillas and the park existed I was sure nothing would ever hold the tourists back and that my family would always be well provided for".

Different tourism enterprises operate around the parks, including crafts and wood carving, basketry and weaving, tailoring of African print clothing, tour guiding, honey selling, cultural dance and drama, farming of vegetables for tourist lodges, casual labouring as porters for tourists, and as clean-

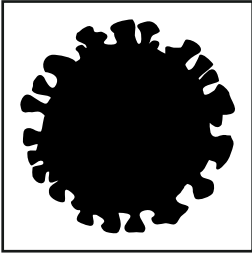
ers, cooks and waiters in tourist lodges among others.

Sabyinyo Community Livelihood Association (SACOLA), a community-based organization in Musanze, Rwanda comprising 67 cooperatives and over 50,000 beneficiaries, is involved in a chain of tourism businesses including 14 show rooms/shops at Kinigi Complex Centre, a lodge, bar and restaurant, tour guiding, music and dance exhibitions and serving as porters for tourists. Unfortunately, all these businesses closed at the onset of COVID-19 in Rwanda. Celestin Nsengiyumva, the SACOLA Chairperson, reveals that these are very hard times for his members. "Without any income coming in most of the members are struggling to survive. While some are working from home, we can only hope that this situation will pass soon and that tourism will stabilize because it is a primary source of income for many members".

Sunday Charles Ndayakunze, the Assistant Warden tourism for Bwindi Impenetrable National Park, Ruhija sector says the impact of the pandemic has been difficult for the surrounding park communities and especially difficult for the porters who earned daily income from their job and largely live a hand to mouth existence.

About 320 porters work in Volcanoes National Park, 470 in the Bwindi Mgahinga Conservation Area and 15 in Virunga National Park.

With sources of income curtailed, prices of commodities increasing, movements restricted and limited survival options there is evidently looming hunger and vulnerabilities among the communities. In Uganda, for example, a packet of salt (500 g) that previously cost 1,000 Uganda Shillings (0.2 US dollars) now costs 3,000 Uganda shillings (0.8 US dollars) while a kilogram of dry beans that previously cost 3,000 Uganda shillings (0.8 US dollars) costs 6,000 Uganda shillings (1.2 US dol-



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**Porters waiting for tourists in Bwindi Impenetrable National Park**

*Photo: Neil Ever Osborne*

lars) since the onset of COVID-19 in the country.

Altor Musema, IGCP's country Coordinator in the Democratic Republic of the Congo, also revealed that economic life in Goma is equally challenging. Community Based Organisations, like UDASEMINYA, that actively traded in honey have closed their stores and members are now in their homes stuck with the honey. Most porters and other community tourism entrepreneurs are struggling to feed their families: "Most of the porters are home tilling their gardens and hoping that the tourism will resume soon. Some can't help wondering if life will ever get back to normal again".

However, in the bid to support the struggling masses, respective governments, non-government organizations and the private sector have come in to donate and provide emergency food and sanitary supplies to the vulnerable citizens.

Commenting on the prevailing economic challenges facing the park edge communities, Budahera Anaclet, the

tourism warden for Volcanoes National Park, fears that some community members might resort to the park again for survival, making the management of the park and maintaining positive community relationships challenging.

Besides the stay home measures for everybody, the parks have gone ahead to engage the surrounding park communities with information on proper hygiene practices and the potential impact of COVID-19. Anaclet argues that "the compliance of individuals to the anti-COVID measures and the tourism best practices in place will save mountain gorillas from the pandemic. Precisely their safety is dependent on our actions."

The health of mountain gorillas, park staff, and neighbouring communities are interlinked, and integrated strategies are being deployed on site, and across international boundaries to effectively address these.

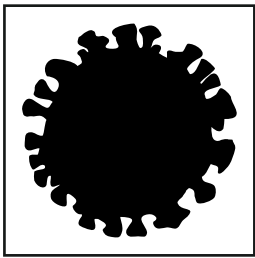
Going forward, the outbreak of COVID-19 and its impact on the livelihoods of people, especially the park edge communities, highlights several

lessons and calls for the development of resilient action plans. Communities should be empowered and supported to invest in other livelihood options besides tourism enterprises, e.g. improved agricultural practices to ensure food supply when tough times set in, adopt and/or improve the culture of saving, training and equipping of park staff in specialised management of epidemics, continued sensitisation of the community on the importance of proper hygiene and sanitation practices and a change of attitude by the community as well as adoption of new skills and knowledge received through training to adapt to non-tourism enterprises. The private sector on the other hand should be mobilized to support/fund viable non-tourism income generating investments among the park edge communities. Only a multifaceted approach can guarantee a resilient park edge community and minimise the impact of future calamities on lower level tourism value chain players.

*Alice Mbayahi*

### **Mitigating the Impact of COVID-19 on Gorillas at Bwindi Impenetrable National Park**

We founded Conservation Through Public Health (CTPH) in 2003 to prevent zoonotic diseases being transmitted between people and wildlife following scabies skin disease outbreaks in the then critically endangered mountain gorillas, which resulted in the death of an infant and sickness in the two gorilla groups that only recovered with Ivermectin treatment. The scabies was eventually traced to people living around the park who have less than adequate access to basic health services. I realised then that you cannot conserve the gorillas without also improving the health of the people with whom they share their fragile habitat.



## COVID-19



**VHCT training**

*Photo: CTPH*

CTPH has three strategic programs that are integrated: wildlife health and conservation, community health and alternative livelihoods. This includes a Gorilla Health and Community Conservation Centre built with support from Tusk Trust, to regularly analyse samples from gorillas, people and livestock to detect and prevent diseases that they could be sharing with each other. Working with the Ministry of Health (MOH) we created Village Health and Conservation Teams (VHCTs) and when the MOH Village Health Team structure came to Bwindi, existing Village Health Teams were trained as VHCTs. They educate their communities about the importance of gorillas and the forest, and how to prevent zoonotic diseases that can spread between people and animals. They also promote good hygiene and sanitation including hand washing tippy taps at every home and referring suspect cases of scabies, TB, HIV and other diseases to the nearest health centres. VHCTs also promote family planning, nutrition and sustainable agriculture to enable people to adequately look after their families.

CTPH works with Gorilla Guardians, who are community volunteers from the Human and Gorilla Conflict Resolution team trained by the Uganda Wildlife Authority (UWA) and the International Gorilla Conservation Programme (IGCP) to safely herd gorillas that forage on community land for

banana plants and eucalyptus trees back to the national park. CTPH also trains the park rangers in gorilla health monitoring and how to manage tourists when they visit the gorillas to prevent a disruption in behaviour and zoonotic disease transmission. The onset of the COVID-19 crisis prompted CTPH to use these already established structures addressing the interface between humans and wildlife over the past 15 years to mitigate the impact of COVID-19 in endangered mountain gorillas and the local communities with whom they share their fragile habitat.

Though Uganda had run out of surgical masks at the beginning of the pandemic, during the COVID-19 National Disease taskforce meetings at the MOH, the US health protection agency Centers for Disease Control and Prevention (CDC) advised CTPH that cloth masks with lining would work almost as well as surgical masks to protect transmission from humans to the gorillas. We brought together all the conservation partners including IGCP who provided cloth masks for the park staff



**Masks being produced by Ride 4 a Woman**

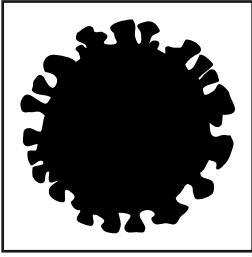
*Photo: CTPH*

made by a local enterprise, Ride 4 a Woman, Max Planck Institute who donated surgical masks, and Mountain Gorilla Veterinary Project – Gorilla Doctors – and Bwindi Community Hospital who provided technical expertise to train the park staff on how to prevent COVID-19 from people to gorillas and among themselves.

We worked closely with UWA to train the park staff to enforce the already existing gorilla viewing rules of maintaining the 7-metre distance, which UWA later increased to 10 metres, and added new rules, notably the mandatory wearing of masks, hand washing and disinfection and taking of temperatures before visiting the gorillas. We also developed posters on preventing COVID-19 between people and gorillas with support from Solidaridad. With funding from the Arcus Foundation, 270 Village Health and Conservation Teams and 119 Gorilla Guardians were trained to prevent the spread of COVID-19 between people and from people to gorillas as well as being given cloth masks, soap, hand sanitizers and posters.

In addition to lockdowns in most countries, the COVID-19 pandemic led to a suspension of primate tourism in Uganda to protect the great apes from human disease and to prevent spread of the virus among people. In the absence of gorilla tourism, the park staff still have to check on the gorillas every day to make sure that they are healthy and safe from poachers. Although not usually hunted in Uganda, gorillas can accidentally get caught in snares set for duiker and bush pigs or come into other harmful contact with poachers. With the loss of tourism, many people lost an income and are not able to feed their families, driving them back to the Bwindi Impenetrable Forest to meet the needs of their families.

In 2016, CTPH started a Gorilla Conservation Coffee ([www.gccoffee.org](http://www.gccoffee.org)) social enterprise to give farmers a steady market and above market



## COVID-19

prices for good coffee, reducing their need to enter the park to look for food and fuel wood to feed their families. A donation from every coffee bag sold supports the community health, gorilla health and conservation education programs of CTPH providing sustainable financing for conservation. The coffee harvesting season began in March and we felt compelled to continue buying the farmers' coffee even if our main customers were no longer able to travel to Uganda as tourists. We were, therefore, delighted to be introduced to Moneyrow Beans, our first UK distributor, who wanted to buy premium and specialty coffee that can protect the gorillas. The coffee was transported on cargo planes from Uganda and is now being sold in the UK, enabling people to support the gorillas without having to visit them.

Tragically, the pandemic led to the shocking and untimely death of the lead silverback of the Nkuringo gorilla group in June, just two months after primate tourism was suspended. Rafiki was speared when he ran into a hungry poacher who was checking on snares he had set for duiker and bush pigs to feed his family and sell in the local market. There has not been a poaching of gorillas since 2011, when Mizano, a playful adult male blackback gorilla from Habinyanja gorilla group, was killed by a poacher in the same way. The poacher who killed Rafiki came from Nteko parish where CTPH has programmes, leading us to intensify our efforts to bring benefits to all members of the Bwindi community.

This close encounter also put the gorillas at risk from human disease. As a result, CTPH resumed an activity that was not considered to be essential, supporting reformed poachers with group livestock projects to discourage them from going back to the park, and encourage other community members not to poach. The reformed poachers were also provided with cloth masks



**At the Gorilla Conservation Café**

*Photo: Challenge Group*

with support from The Gorilla Organization.

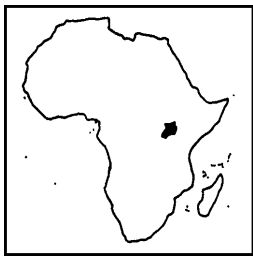
CTPH also started a new emergency food relief program to provide fast growing seedlings to vulnerable community members to address hunger brought about by the lack of tourists and other factors affecting the economy during the pandemic. It also encourages them to go back to sustainable farming methods that they had abandoned to earn a living through the tourism industry. With support from the European Union and the IUCN Save the Species fund, we started a new emergency food relief program to address hunger by providing vulnerable local communities around Bwindi Impenetrable National Park with fast growing food crop seedlings that will be planted sustainably using soil and water conservation to meet basic needs for the family and help to prevent them from entering the park to poach.

The pandemic is still raging on with over 84 million cases and 1.7 million deaths worldwide. Until a vaccine is found, travel is unlikely to return to previous levels. As part of adjusting to the new norm, CTPH is supporting local

communities to earn a living and feed their families in the absence of tourism, with the hope that even when tourism returns, local communities will have become resilient enough to meet their basic family needs through sustainable farming and non-tourism dependent livelihood options. To further mitigate the impact of the pandemic, CTPH received additional funding from IUCN Save the Species Fund, the European Union and the British High Commission to conduct follow up training of the VHCTs, HUGOs (Human-Gorilla Conflict Resolution) and park staff. CTPH also received funding from IUCN to test gorillas and people for COVID-19 who are interacting closely with gorillas, both inside and outside the park. IUCN is also enabling CTPH to support UWA's gorilla monitoring and law enforcement efforts with GPS recorders and camera traps.

The COVID-19 pandemic has provided an opportunity for CTPH to work with IGCP and other stakeholders to advocate for more responsible tourism to great apes in Africa through an Africa CSO Biodiversity Alliance policy brief to governments, donors and tour com-





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panies with a call to adopt IUCN guidelines. The policy brief also emphasised the need to support community health and hygiene and non-tourism dependent livelihoods of people sharing habitats with great apes.

*Gladys Kalema-Zikusoka*

For more information about our work, please visit [www.ctph.org](http://www.ctph.org)

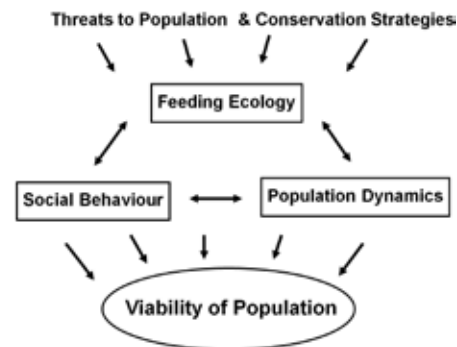
## Why Are We Still Studying Gorillas? The Value of Long-Term Research of Bwindi Mountain Gorillas

A few years ago, when I was well into my now 30-year career studying gorillas, my father asked me, 'Don't we know enough about gorillas by now?' Instead of getting disgruntled by what a daughter of a mechanical engineer could perceive as a personal affront on the utility of my choice of profession, I realized that was a valid question, not only because he wished I wasn't so far from home so much. Gorillas have been the focus of extensive research since the late 1950s, so after

so many decades, is there more to learn? The short answer is yes, long-term research on gorillas is valuable for many reasons.

For any research topic, some questions take a long time to answer, whereas other questions can only be addressed when previous questions are answered (studies build on each other), certain knowledge is attained, or new methods become available. For endangered species, research can be viewed along a continuum of 'pure' research, or research for the sake of increasing our knowledge about something, to 'applied' research that examines topics that relate directly to conservation or management.

In the case of my pure research focus, I am interested in the behavioural ecology of gorillas, which is the study of how animals respond behaviourally to variation in their environments. One of the more fascinating aspects of behavioural ecology, particularly for a socially living species is how the ecology, behaviour, and life history/population dynamics of a species all influence one another. However, studying the behavioural ecology of endangered species



**Relationship among anthropogenic factors and aspects of behavioural ecology on the sustainability of a population**

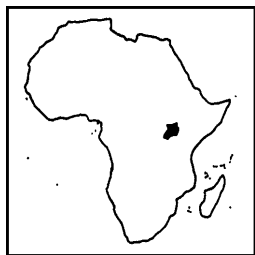
requires an understanding of the anthropogenic (human induced) influences on their behavioural ecology, so the two go hand in hand. In other words, conservation would suffer without considering the behavioural ecology of a species, and the behavioural ecology would suffer without understanding the impact of external factors inducing change, including those human induced.

The end result is that attaining a viable population is best achieved by un-



**Mukiza has been observed regularly since his birth in November 1999. These portraits show him in 2004, 2012 and 2018 – when he was the dominant silverback of the Mukiza group.**

*Photo: Martha M. Robbins/MPI-EVA*



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derstanding the interactions among human induced and natural changes that influence the behaviour, ecology, and population dynamics of a species. Having a viable population makes it possible to learn more about them. Furthermore, for conservation to be effective, we need what is referred to as 'evidence-based conservation management', or management decisions that are based on knowledge or evidence, rather than best guesses or opinions.

Gorillas live in a variety of habitats across 10 countries in Africa. In 1998, I started a research project on the mountain gorillas of Bwindi Impenetrable National Park, Uganda. At the time, the vast majority of our knowledge about gorillas came from the Karisoke Research Center in Rwanda, which was established in 1967. However, as scientists began to study gorillas elsewhere in the 1980s and 90s, it became obvious that the findings from Karisoke were not always the same in other locations. In fact, Karisoke represents one of the extreme habitats that gorillas occupy and there were many differences between them and mountain gorillas living in Bwindi, only about 30 km away. Because of the wide range of ecological conditions under which gorillas live, we cannot assume that the findings from one study or population are valid for all gorillas.

Short-term studies inform us of many things, but for a long-lived animal such as the gorilla, long-term studies are necessary. Over the past 22 years, we have learned a great deal about the Bwindi mountain gorillas that contribute to their conservation as well as for understanding the diversity of gorillas across Africa. However, there are still many things to learn and we must be vigilant in studying changes over time to ensure a future for gorillas. Here I give just a few examples of research topics that have benefitted from long-term studies on behaviour, feeding ecology, and population dynamics.

### Ongoing Research on Bwindi Gorillas

**Development of gorillas:** We are collecting longitudinal data on all gorillas born into the four groups from which we collect behavioural data. This includes measurements of body size and growth taken with a non-invasive photogrammetry method, acquisition of dietary patterns, weaning, and social interactions. This work will help us to understand how gorillas develop social relationships as well as how ecological conditions can influence their patterns of growth and attaining maturity.

**Long-term social relationships:** To understand a key component of the lives of gorillas, social living, we are conducting long-term analysis on the friendly and aggressive social interactions among individuals. We also collect long-term data on behaviours that are considered potential cultural traits. Information on the social behaviour of gorillas is useful for monitoring if tourism is having a negative effect on the gorillas and provides knowledge that piques people's interest in one of our closest living relatives.

**Using areas outside the park and crossing a public road:** Bwindi is a small protected area (330 km<sup>2</sup>) and some of the gorillas will exit the park and crop raid. Also, a public road runs through the area used by the gorilla groups ranging in the north-eastern part of the park. We collect data on the location of these groups and record cases of when these groups leave the park and how frequently they cross the road. This information is very important for guiding park management decisions.

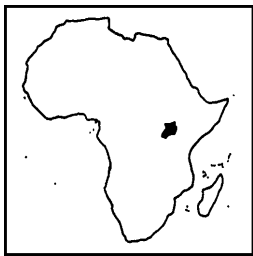
**Population dynamics:** We work in close collaboration with the Uganda Wildlife Authority to monitor all the habituated gorillas in Bwindi to maintain a database of all births, deaths, and dispersal events. This database goes back to 1992 and currently contains about 350 gorillas. Continuing to assess the birth and mortality rates as well as variables such as group size are important for understanding how the population is changing in size over time.

### Social Behaviour

Gorillas are very social creatures, just like humans. Being social means that life is full of friendships as well as conflicts. Male gorillas compete for the alpha position in groups. Females may have conflicts over where to feed. However, particular gorillas may live in the same social groups for a decade or longer, leading to the question of how they manage their social relationships. We have learned that in Bwindi, there is more competition over fruit resources than other widely distributed food resources, which is different from behaviour in the Virunga mountain gorillas. We have learned that there is a lot of variability in the

social relationships among gorillas that may live in the same group for years. People are always fascinated to hear about the dynamic social lives of the gorillas.

The Bwindi mountain gorillas also have been part of a study comparing the occurrence of particular behaviours by gorillas in different populations that can be considered as potential cultural traits, or those that are learned and transmitted to others via social learning. For example, Bwindi gorillas have a unique habit of lightly biting into trees as they climb them, which has not been observed elsewhere. While this may not serve any function, it is indicative of social learning and culture, but to study



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if gorillas have cultural patterns that are similar to some of those in humans, we need long-term observations of who does it and how often.

### Feeding Ecology

From a conservation standpoint, it is important to know what foods the gorillas eat in a particular location and monitor if availability of those foods changes over time. Bwindi gorillas spend about 15 % of their feeding time consuming fruit, which is much more than the Virunga mountain gorillas eat but less than the approximately 30 % of the diet of western gorillas. Not all of the fruits that Bwindi gorillas consume are available every year.

One key concern of climate change is that a change in temperature could lead to changes in fruiting patterns and the ability for certain plants to grow, which could have negative consequences for the gorillas that rely on them. It is also crucial to understand how much habitat gorillas need and if the particular areas they use (home ranges) are stable over time. Together,



***In 2015 Mukiza was injured severely during a fight with another silverback. The left photo shows the most serious wound. Everything healed without veterinary intervention. In 2016 he became the dominant silverback in his group. The photo at the right shows him in 2018.***

*Photos: Martha M. Robbins/MPI-EVA*

er, these factors help us to determine how much habitat is suitable for a particular number of gorillas. We can learn a lot about diet and habitat use from short-term studies, but it is only through long term studies that we can monitor changes in the environment and de-

termine how the gorillas react to such changes.

### Life History/Demography

In addition to monitoring the total number of gorillas in a population, it is important to study patterns of births,

## Support for Research Needed!

Martha Robbins leads a team that has discovered many new aspects of gorilla behaviour and ecology (we reported their results in several Gorilla Journal issues). But there is much more to discover!

The Department of Primatology at the Max Planck Institute of Evolutionary Anthropology is going through a reorganisation following the retirement of the former director and the ongoing efforts to hire a new director. As a result, funding for the research conducted by the department has been greatly reduced for 2021. In order to ensure that the long-term field research on mountain gorillas in Bwindi Im-

penetrable National Park, Uganda and western gorillas in Loango National Park, Gabon can continue, there is need for additional external funding. The research at both sites contributes to both our scientific understanding of gorillas as well as conservation efforts to protect them.

**We want to help Martha Robbins and her team continue their long-term re-**

### Bank Details:

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You are also welcome to donate via PayPal if you prefer this:  
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c/o Burkhard Broecker  
Juedenweg 3  
33161 Hoevelhof, Germany  
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deaths, and dispersal events between social units. We can learn a lot about the dynamics of a population of group living animals by following individuals that are habituated to humans over the course of their lives. A key finding in studying Bwindi gorillas in the long-term is that the interval between successive births by females is 5 years, compared to only 4 years in the Virunga mountain gorillas. This longer interbirth interval will lead to a slower population growth rate if everything else is constant. We are still trying to understand why there is this difference, with variation in ecological conditions being a likely cause. We have also

learned that Bwindi mountain gorillas live in both one-male and multi-male groups, similar to the Virunga mountain gorillas, but differing from western gorillas that live almost exclusively in one-male groups. It takes decades to collect enough data to understand their life history patterns because gorillas take such a long time to reach maturity, have slow reproductive rates, and live for a long time. There are several things that we still cannot say much about conclusively since we need more data, such as the length of dominant male tenures and longevity of the gorillas. For example, Mukiza, a male who was born into one of the research groups in

1999 became a dominant male of his own group in 2016, so he's currently four years into his dominance tenure at age 21. Genetic analysis is underway to confirm if he is the father of the four offspring born during his reign.

Overall, the more than two decades of research on the Bwindi mountain gorillas has shown that they are a unique population of gorillas and warrant protection for their continued survival. The Bwindi Gorilla Project continues to focus on several different aspects of research with the aim to not only further our understanding of the gorillas, but also to contribute to their conservation.

*Martha M. Robbins*

### SaveBwindi

When Astrid Ebert and Thomas Schulz visited Bwindi National Park and its gorillas 10 years ago, they were delighted. In view of the Corona pandemic and the halt to tourism, they now want to support those who are particularly affected by the lack of revenue. Thomas Schulz has created his own website for this purpose.

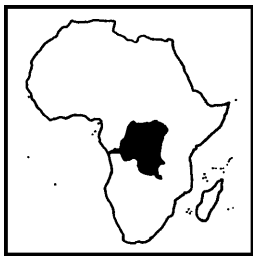
On the new website [savebwindi.de](http://savebwindi.de) they write: "We have thought long and hard about how we want to use the donations. The rangers are the guarantors for the safety of the animals. They and the trackers, who always know where the groups are, are concerned, also the helpers and porters who enable the tourists to get to the re-



motest corners of the rainforest to experience the gorillas up close. They all live from the fees of the tourists, who unfortunately do not come to the same extent due to the travel restrictions caused by the Corona pandemic. The money we collect should primarily benefit the rangers, trackers and porters because only if they are able to feed their families, they will be able to continue to look after the animals."

Berggorilla & Regenwald Direkthilfe will collect the donations generated by the website and pass them on to Martha Robbins, who is in direct contact with the authorities through her team in Bwindi. This will ensure that the funds will get to those for whom they are intended.

***The first donation by SaveBwindi arrived in Ruhija: food is distributed to the porters.***



# D. R. CONGO

## Deadly Attack on the Ranger Post of Sarambwe Nature Reserve

In this article we will give an overview of the management of Sarambwe Nature Reserve (SNR) and a history of the attacks that have taken place in the vicinity of the SNR. We will report on the strategies for conservation and monitoring during these troubled times, the most recent attacks and the role of the trackers in the monitoring of the reserve.

### General Summary of the Management and Protection of the Reserve

The SNR is located in the east of the Democratic Republic of the Congo. It shares a boundary (the state border) with Bwindi Impenetrable National Park in Uganda. It comprises 500 ha and at present its area is undisturbed by human activity. For the last couple of months, we have noticed that the northern zone (Mt. Sarambwe) has been visited by elephants, a first for the reserve. At the moment there are



**A tracker cuts grass in front of the Sarambwe ranger post before the attacks.**

*Photo: Mumbere Nzanzu Getride*

7 elephants in parts of the area that had been cultivated by Ugandans before the international border was marked.

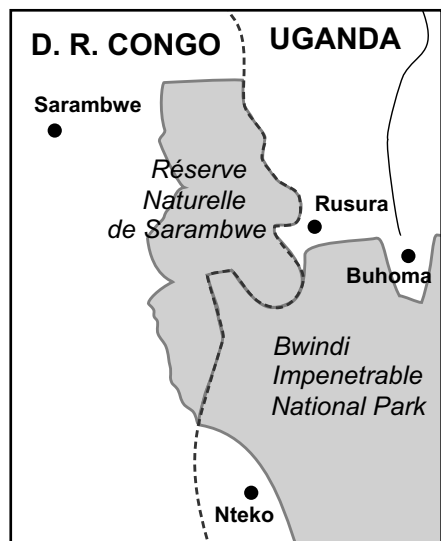
The SNR has only one post inhabited by rangers. The military loyalists (the joint force) who support the rangers and several trackers also live there. Other trackers live in the nearby villages. Weekly activities are launched from the Sarambwe ranger post, such as monitoring and anti-poaching patrols, observations of the flora and fauna, maintenance of the patrol trails and demarcation between fields and the reserve. Two cooks provide food for the patrols.

the rangers' work. In April and May 2012, the Sarambwe ranger post was attacked three times and one ranger was seriously wounded. The ICCN felt obliged to protect its staff by evacuating them from the post. At the time, there was intense traffic through the area, first the Mai Mai militia and the M23 rebels, then the Nyatura militia. A few days after the rangers had left, two civilians were killed in a nearby village. The vast majority of the population fled the area, including the trackers. The SNR was encroached for logging, the cultivation of crops and the grazing of domestic animals.

### Brief History of Attacks and Monitoring during the Period when Permanent Rangers Were Absent

The SNR has sometimes been the target of armed attacks: the aims were to seize weapons, loot the ranger post and, perhaps, try to sabotage

Six months after the rangers' departure, and based on experience from the Parks for Peace Project, a warning system was put in place to monitor and inform the ICCN of illegal activity in the reserve. This permitted the ICCN to launch prompt and targeted action by patrols made up of rangers and mili-



**Map of the Sarambwe Reserve**

*Map: Angela Meder, adapted from an ICCN drawing*



## D. R. CONGO

tary loyalists. This was made possible because the trackers were returning to their villages. The trackers' role was to collect information about illegal activities in the reserve and to maintain the post. This would then allow the reinstallation of rangers at the Sarambwe post.

In April 2014, about two years after the withdrawal of the Sarambwe rangers, ICCN reinstalled four eco-guards in Sarambwe. This team was reinforced by a group of soldiers from the joint forces. As the number of rangers was quite low and the trackers were well trained, the eco-guards were called back from Sarambwe and the trackers worked with the soldiers instead. It was only in July 2018 that ICCN created two posts, an Assistant Conservator and a Head Ranger, to manage activities and serve as officers of the judicial police. As such, their mission was to record offences and raise awareness among the offenders against nature conservation laws.

### The Recent Murderous Attacks on Sarambwe Post and its Surroundings

Between 1 and 13 October 2020, the Sarambwe ranger post and two nearby villages were attacked three times. The attacks were aimed at the trackers and members of partner associations of the reserve, the eco-guards and soldiers. One fatality occurred.

On Sunday, 1 October 2020 at 1 am, while everyone was asleep, a group of four forced their way into the home of the head tracker by threatening him. He was tied up, beaten and robbed. The robbers demanded his September salary. A neighbour of his who was watching managed to slip away and run to the ranger post to alert the soldiers. They intervened and the bandits fled, taking with them US dollars 20 but releasing a goat and two chickens, which they had just taken from the head tracker's home.

On Saturday, 10 October 2020

### Bagurubumwe Chuhoze Deogene

During one of the attacks on the Sarambwe ranger post the Virunga National Park ranger Bagurubumwe Chuhoze Deogene was killed on 10 October 2020.

Deogene was 47 years old at the time of his death. He held the position of Head of Section and had worked for the Institut Congolais pour la Conservation de la Nature since 1996. He leaves behind a wife and 3 children.

Virunga National Park offers its sincere condolences to the family, friends and colleagues. His death once again emphasises our debt of gratitude towards the ICCN rangers who put their lives on the line to protect the park and help bring peace in North Kivu.

*From a Virunga National Park Press Release*

at 6.30 pm, an unknown number of armed men burst into the Sarambwe ranger post and fired several bullets at the ranger house, the kitchen, the toilets and the soldiers' accommodation. Everyone scattered, but unfortunately the officer, Diogène Bagurubumwe, could not escape and was killed. The post was badly damaged by bullets: all the glass panes in the doors and windows were broken, the corrugated iron sheets of the kitchen and the depot were riddled with holes, six plastic chairs were wrecked, the outside lighting destroyed, the provisions looted, tarpaulins on the new toilets, the soldiers' huts, and the solar panel

were riddled with bullets, and the transformer and battery carried off. Nearly 65 % of the goods were recovered and brought back to the Lulimbi station for safekeeping.

Nyarubugu village was also visited by bandits, who were surprised by Messieurs Munyemana and Kwatiraho, members of AJACAR (Actions des Jeunes Animés pour la Conservation de la Nature et Accompagnement au développement Rural). Munyemana is the treasurer of AJACAR and a Sarambwe plumber. He was badly beaten up and was taken to Kisharu hospital for inpatient treatment.

After the incident at the Sarambwe ranger post, the ICCN decided temporarily to suspend the activities of the rangers and soldiers of the joint forces in the reserve. The soldiers were taken to Lulimbi.

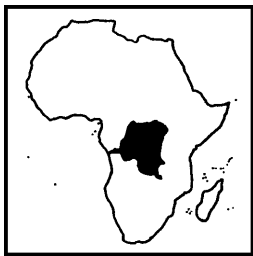
As for the trackers, they remained confident and preferred to continue working on their own, as they did in 2013 and during part of 2014 when the SNR had no staff. They are kept busy maintaining the post, the main trails in and around the reserve, making monthly reports and providing information about incursions, woodcutting, poaching, cultivation and all other threats to the reserve.

After the soldiers and rangers had left the RNS, illegal human activities



**Chairs at the ranger post destroyed during the attack**

*Photo: Mumbere Nzanzu Getride*



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**Damaged window at the ranger post**

*Photo: Mumbere Nzanzu Getride*

started up again on a massive scale. People from Uganda entered the reserve with chainsaws, pad-saws, machetes and axes to fell trees and cut them to planks. They felled 14 trees, cut 10 of them to planks and left 4. They took the planks to Uganda. The trackers found them 5 days after the start of their activities and were able to confiscate 2 pad-saws and one machete. The trackers went on patrol by themselves and wrote their reports each evening which were then sent directly to the responsible person of ICCN.

The Congolese population started to hunt again with dogs and traps after the soldiers had left. Several traps were destroyed and a squirrel was freed from a trap. Five villagers were seen from a distance and finally identified as hunters. After the trackers had talked to the hunters they did not continue their poaching.

We are grateful to ICCN, especially the Principal Conservator Sekibi-bi Biriko Bongé, who encouraged the Forces Armées of the Democratic Re-



**The corrugated iron roof of the kitchen riddled by bullets**

*Photo: Mumbere Nzanzu Getride*

public of the Congo to quickly send soldiers to the Sarambwe post again. The arrival of the soldiers at the Sarambwe post definitely stopped the encroachment by Ugandans who had cut trees and the hunting by the Congolese.

At the moment, the reserve is well monitored and the trackers are using the post again. The villagers are calm and have returned to their usual occupations.

*Claude Sikubwabo Kiyengo*

landscape, which includes MNP, Kahuzi-Biega National Park, Itombwe Nature Reserve and community conservation reserves to ensure the connectivity of landscape ecosystems.

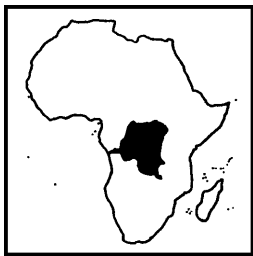
MNP is divided into three management areas: the southern sector near Lubutu, the central sector near Loya and the northern sector near Etaito. The management office is located in Oso in the Oso/Madimba area in the Lubutu territory, Maniema Province.

## Maiko National Park: Site Management and Conservation

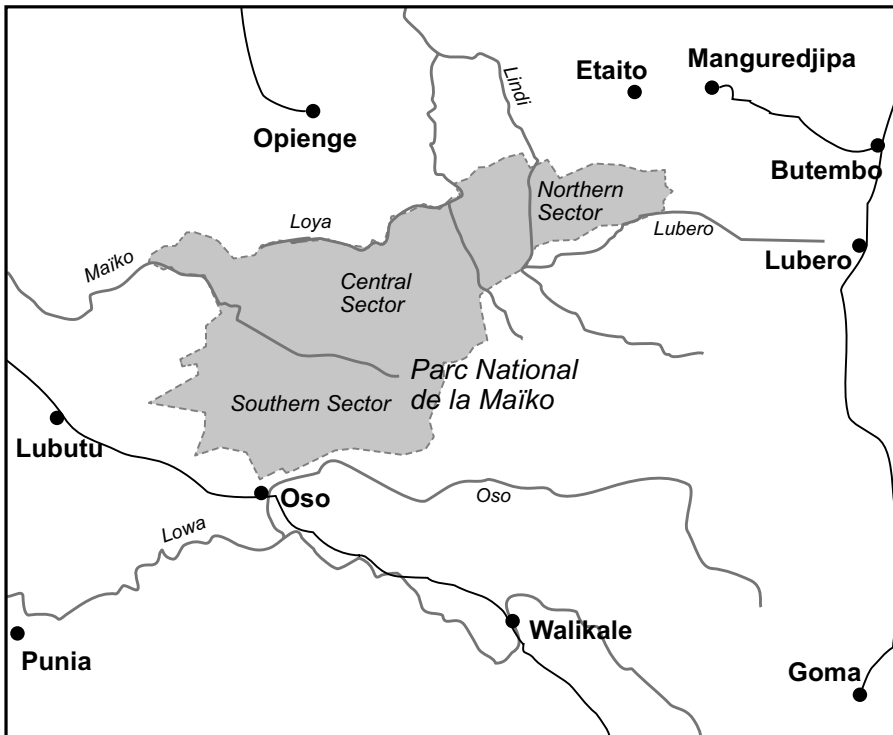
Maiko National Park (MNP, BDMAP 1080) was gazetted in 1970. It is located in the east of the Democratic Republic of the Congo and is part of the Maiko-Tayna-Kahuzi-Biega CARPE

### Vision and Objectives

The MNP's vision, outlined in its General Management Plan, is to ensure the stability of the outstanding global values of the MNP. This includes the conservation of flagship endemic species and the maintenance of biological and cultural diversity that contributes to the mitigation of the effects of climate change and supports



# D. R. CONGO



### The Maiko National Park and its sectors

Map: Angela Meder adapted from ICCN maps and other information

local and national development. The objectives for 2020 are:

- Intensify patrols and monitoring to cover more of the park's accessible areas;
- Locate more groups of gorillas and chimpanzees to ensure that they are monitored regularly and also to define intensive protection zones;
- Maintain safety in the park through local contacts and stakeholder sensitization;
- Strengthen the collaborative structures of communities in the areas adjacent to MNP;
- Rehabilitate tourism infrastructure and develop strategies for attracting more tourists.

The main aim is to increase visibility of the MNP as a major element in the protection of biodiversity in the landscape, involving the various state services in conservation and adding

value to the available resources through close collaboration with conservation NGOs, community forest managers and the local population.

### Current Situation

#### Protection of the Maiko National Park

Patrols take place every month, depending on available means. It was possible to increase the number of patrols in July 2020, when Berggorilla & Regenwald Direkthilfe and FFI (Fauna and Flora International) provided funds: we were able to cover the three sectors of the park once again (patrols had been suspended in the central and the northern areas since 2016).

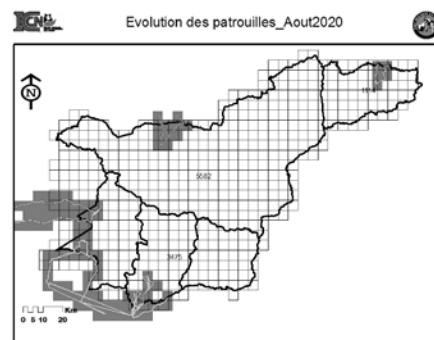
#### Bio-Monitoring

Bio-monitoring activities, most often combined with surveillance patrols, mainly involve the location of gorilla

and chimpanzee nest sites. Monitoring is focused on the objectives of the Conservation Action Plan, which has been defined at the landscape level. Its objectives are aligned with those of the national biodiversity conservation strategy.

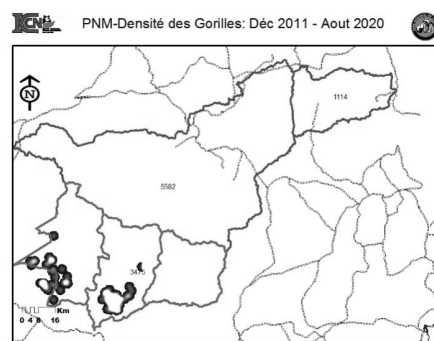
#### Community Sensitization and Enforcement

The MNP is represented on a committee, chaired by the administrator of the Lubutu territory, for the recovery of 12-gauge firearms throughout this territory. This measure is intended to implement the decisions adopted by the Deputy Prime Minister responsible for the interior and the Governor of Maniema Province. Over 160 firearms have been confiscated and are kept under the stewardship of the MNP.



Patrols in August 2020

Map: ICCN



Relative density of gorillas

Map: ICCN





# D. R. CONGO



**Local chiefs handing over hunting weapons recovered during the mission**

*Photo: ICCN*

This will help to reduce poaching and to secure the park.

### **Reinvigoration of Income-Generating Activities**

Mostly community activities had been suspended for some time. In



**Solar street lights were installed in Oso**

*Photos: ICCN*

July 2020, FFI relaunched support for housing improvements in villages close to protected areas, particularly in the vicinity of community reserves (REGOLU and REGOMUKI). Berggorilla has just allocated support to the



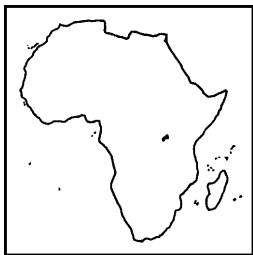
Association of Wives of MNP Rangers. These women want to revitalize the income-generating activities that were originally initiated by FFI through a microcredit scheme. With this support, a crop of rice has been harvested and will be put on the market. The women thank Berggorilla & Regenwald Direkthilfe for this great gesture of generosity.

*Jean Claude Kyungu, Jérôme Amube and Faustin Mahamba*



**Rice harvest**

*Photo: ICCN*



## RWANDA

### Outcomes of Snare-Related Injuries to Gorillas in Rwanda

Wild gorillas face a variety of threats including habitat encroachment due to subsistence farming, political instability in the region, potential exposure to human and livestock pathogens, and trauma from snares set for other wildlife. Two of the most-common causes of mountain gorilla mortality include traumatic injury (e.g. injury from snare entrapment) and respiratory disease. Gorilla Doctors, a US-based non-profit working in Rwanda, Uganda, and the Democratic Republic of the Congo, provides veterinary care to wild, human-habituated mountain and Grauer's gorillas who are ill or injured.

In order to better understand the epidemiology of snare injuries in wild mountain gorillas, Gorilla Doctors conducted a study evaluating the factors associated with snare entrapment of mountain gorillas and whether clinical intervention and the characteristics of

the injury affected gorilla survival in the first month after snare removal (Haggblade et al. 2019). Between 1995 and 2015, Gorilla Doctors conducted 132 clinical interventions in Volcanoes National Park, Rwanda. Snared gorilla cases accounted for 37 of the 132 interventions. Young (less than 8 years old) gorillas had 16 times greater odds of ensnarement compared to older gorillas, and young gorillas comprised 86 % of all snare cases in the study.

Of the 37 snare removal interventions performed, 86 % of gorillas made full recoveries within one month following snare removal. Factors associated with physical impairment or death of snared gorillas within the one-month period included: 1) comorbidity (the presence of one or more additional conditions), 2) delayed interventions, and 3) severity of wounds. Cases exhibiting comorbidity of snared gorillas were 21 times more likely to show a poor survival outcome. Comorbidities in this data set included residual wounds from a previous ensnarement, a swollen eye (not related to ensnare-

ment), and a septic open humeral fracture (not involving the snared limb).

While a majority (78 %) of interventions occurred within two days of the initial observation, interventions that took 3 or more days from the time of initial observation of the snare to execution of the intervention were 16 times more likely to result in physical impairment or death. Of the 36 snare interventions with timeline data available, 22 % were conducted three or more days after the ensnarement was first observed.

Severe wounds with ischemia (restricted blood flow) and necrosis of tissues were 13 times more likely to result in permanent injury or death. Of the 33 snare cases with wound severity data available, six gorillas sustained severe injuries from ensnarement while 27 sustained minimal to no observable wounds.

This study shows that prompt veterinary intervention improved the likelihood of recovery for injured or ill mountain gorillas. In this study population (n = 132), all but 19 individuals recovered completely: an 86 % success rate. For this reason, veterinary care is an important component of effective conservation management of this endangered species. Clinical interventions to treat ill and injured individuals have likely contributed significantly to the recovery of the mountain gorilla population, making it the only great ape whose numbers are increasing in the wild; the habituated mountain gorilla population in the Virunga Massif has increased by 4 % annually, with half of that population growth rate attributable to provision of veterinary care (Robbins et al. 2011).

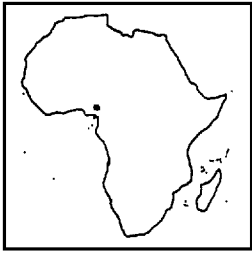
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A ranger destroys a snare in the Sarambwe Reserve.

Photo: Aimé Bararuha



## CROSS RIVER

### Conservation in the Crisis Region of Cameroon

This year, the Norwegian Refugee Council placed Cameroon in the top spot for the world's forgotten crises. The conservation of the Cross River gorillas is shrouded in even deeper darkness, hidden from the public eye.

Cameroon's unrest started in the autumn of 2016. The English-speaking west of the country is poorer than the French-speaking region. The roads are an example of this: despite many promises from the government, even important roads have not been built, and existing roads have not been maintained and are frequently impassable. But anyone using the ailing roads still needs to pay the usual toll to the State. Cameroon is bilingual: all children learn English and French at school. In the churches too, the ministers alternate between languages when delivering their sermons.

English as an official language has been compromised by the fact that the French speaking courts in the capital translated legal claims made in English 'incorrectly', which resulted in legal cases being lost. When the authorities began filling vacancies for English language teachers with French language teachers, the anglophone population had had enough and took to the streets.

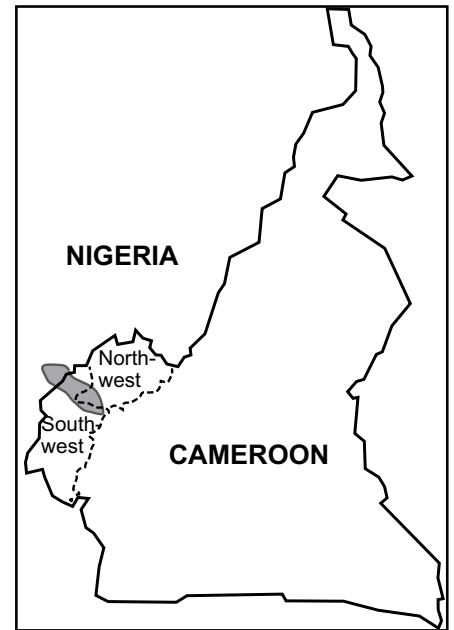
The protests were largely peaceful, but the State reacted harshly. The region's internet was shut down and troops were sent in to end the protests by force. Spokespersons were arrested by government troops forcing their way into their homes. When it was rumoured that rape had been committed, the anglophone population responded with so-called 'ghost towns': the towns closed all markets and shops for a few days each week. Because the military depends on food from the local population, it is hoped that this strategy will drive out the soldiers who are per-

ceived as occupation forces. This protest was also peaceful.

However, this polarisation reactivated the separatist movement that had been believed to be dead – this movement wants an independent, anglophone 'Ambazonia'. The reader should be aware that Cameroon was founded on 1 January, 1960, with the north of the British mandate territory voting for a connection to Nigeria and the south voting for a connection with French Cameroon. Separatists still consider the vote of the south as having been rigged, but this was never investigated and clarified. The result was a bloody 20-year long dictatorship under President Ahidjo, who was advised in his style of government by French extremists.

His successor, President Biya, has been ruling the country with authoritarian anti-terror laws since 1982. Instead of trying to heal the country's festering wounds, Biya has only deepened the divisions during his almost 40 years in office, culminating in the separatists again declaring independence on 1 October 2017. It is not clear how much support the movement has in the population. Meanwhile, the conflict has claimed more than 3,000 lives and caused 679,400 people in Cameroon's Northwest and Southwest regions to flee their homes and settle elsewhere in Cameroon. Bedwin Ngwasina is one of these internally displaced people. She tells us that everyone she meets now knows someone who was injured or killed in the war.

Ms Ngwasina heads the African species conservation organization AWP. It is committed to protecting the Cross River gorillas, which occur in the anglophone part of Cameroon, e.g. in the Takamanda National Park. However, the dense forests are also a refuge for the rebels, which is why the area has been declared a combat zone. WCS and WWF pulled their staff out of this area as early as 2018. Park Director

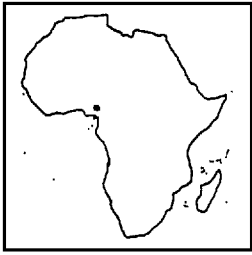


**Cameroon's anglophone regions and the distribution area of Cross River gorillas (gray)**

*Map: Angela Meder*

Egbe, working under the Ministry of the Environment MINFOF, stayed. I was there when he began receiving an increasing number of death threats from the separatists. Egbe could no longer use his office and had to change his phones and his routines almost on a daily basis. The Ministry replaced him in 2020.

Even reaching the vicinity of the park is not easy for a small conservation organization. For example, the road between Bafoussam and Bamenda can only be used at certain times and with an armed escort. The Cameroonian AWP is the only conservation organization that has continued its projects in the area during 2019/20. Doing this means not only putting themselves in danger but also performing a political balancing act. The organisation must comply with the requirements of the Ministry of the Environment, and also meet the conditions of the rebels who are in control of the target area.



## CROSS RIVER

The new Park Manager, Nbi, takes great care to follow the protocols. This means that any exchange of information requires a personal invitation, and that the travel costs and fees of the invited experts are accounted for, which may quickly amount to many hundreds of euros. Every NGO entering Takamanda must also pay for someone from MINFOF to accompany them. In terms of implementation, this is not only cumbersome and expensive, but also extremely dangerous. When AWP

Cameroon arrived in Takamanda with a MINFOF ranger in October 2020, the population in Nfakwe suspected that this person was a government spy and scuffles broke out. Thankfully, Ms Ngwasina was able to negotiate between the rebels and the State and saved the ranger's life. The supposed protector of the NGO had to flee.

You would think that MINFOF would be happy about the NGO's commitment, but the park manager is in a dilemma: his own contacts in Nfakwe tell



**A lesson in environmental education**

*Photo: AWP Cameroon*

Together with AWP Cameroon, Berggorilla & Regenwald Direkthilfe is working to support the Cross River gorillas. We provide technical and financial support to two of Ms Ngwasina's projects.

**The mobile classroom – environmental education where it is urgently needed.** Ms Ngwasina trains local teachers in species conservation and the use of modern teaching methods. With a mobile classroom, these courageous educators then travel to the people who live adjacent to the gorillas in remote species-rich hotspots. They teach local school children aged 7–18 years in order to facilitate a peaceful relationship between humans and gorillas. The project supports individual children, strengthening their motor, social, cognitive and language skills.

In 2017, the project was recognised by the Ministry of Education of Cameroon (MINEDAD) and developed jointly with German experts, WWF and WCS (Wildlife Conservation Society). Today, the project is more important than ever as children have been suffering from a school lockdown for the past 3 years. Some mothers have fled to UNHCR refugee camps in Nigeria so that their children can attend school there.

**The Takamanda cocoa project – helping people and gorillas to survive.** Gorilla conservation is not feasible without the support of local residents. But how can you help the gorillas, if you can hardly get by yourself? The people in Takamanda are at risk of extreme poverty. Some are refugees who have returned to rebuild their homes. The cultivation of cocoa has been their livelihood for generations.

Ms Ngwasina supports farmers in the optimization of cocoa cultivation, using environmentally friendly techniques to obtain higher yields. Simple methods, such as a solar dryer, can be used to mitigate problems like crop failures. Agricultural experts advise farmers on how to raise seedlings, and cocoa experts help them to understand the entire cocoa value chain. The project aims to ensure that small farmers don't go more into debt and that their cocoa gets a higher market price, helping them to overcome poverty – a clear message to residents that their commitment to the protection of gorillas also brings economic benefits.

The project was recommended by WCS and GIZ (German institution for international cooperation) in the regional action plan for the Cross River gorillas.

him that the anglophone population accepts his measures, but he has never entered the area himself and is therefore unable to say which message he should believe. And which truth would be to the taste of his superiors in the military?

The protection of the Cross River gorillas in Cameroon is currently in the hands of a few people. The support of the local anglophone residents is therefore indispensable – and this is only possible if people can look each other in the eye and trust each other. But trust is a rare commodity in times of crisis.

After her visit to Takamanda, Ms Ngwasina was glad that no one had reported any gorilla deaths. Nevertheless, hunting in the forest has become more intensive. Illegal deforestation is also increasing. She hopes for better dialogue and a less complicated exchange of information between all those involved on the ground. She wants a long-term commitment in the region, not just the initiation of some short-term measures which the population has to implement without support. Above all, however, she wants peace for her people.

*Yorick Niess*



# GORILLAS

## Logging Plans Suspended in the Ebo Forest

In the last issue of the Gorilla Journal we reported about Cameroonian Government plans to introduce forest management in the Ebo Forest (instead of conserving this extremely important

area). We also reported that several groups of people, communities and organisations protested against these plans and sent letters and petitions to the Government. In August, we were very happy to hear that the President had signed a decree that suspended the two logging concessions. Although

many suggestions have been made how the area could be conserved and used sustainably, it is not yet clear what the Government is planning for the future. However, at least for the moment, conservationists and local communities are relieved.

## Obituary to Kupe Cowboy

Simon 'Kupe' Ngwese, better known as 'Kupe Cowboy', lived a full life. Born in around 1940, to a poor family in Kupe village, near Tombel, Kupe-Muanenguba division of South West Region, Cameroon, like many around him he grew up as a farmer and opportunistic hunter. Later in life, he worked as a research assistant to the then San Diego Zoo Global project at Mount Kupe in Bakossiland. During the early years of the 21<sup>st</sup> century he provided one of the most valuable recollections of earlier times: when mammals were encountered frequently in the forests of Durrell's writings, when drills were ambushed through camouflage from under a bed of forest floor leaves, and when rudimentary shotguns were no match for the riches of the seemingly endless forests across what is now known as the Gulf of Guinea biodiversity hotspot, which once covered western Cameroon and eastern Nigeria.

His knowledge facilitated multiple researchers to enter the forests and study elusive animals such as the drill, which had long been thought of as being virtually impossible to see in the wild. It led to the publication of research on the persistence and distribution of these rare primates in Cameroon, and the 'discovery' of the Ebo gorillas in the now celebrated Ebo forest of the Littoral Region, Cameroon.

Kupe's patience and forgiveness of the clumsiness of three-dimensional vision in a four-dimensional forest world borne of years of necessity, not academic whim, led to a partnership with a researcher of rare respect. His long-learned understanding of the forest floor allowed him to move almost silently through forest; his oneness with it never failed to amaze or provoke long hours of thoughtful contemplation of the role of animals in God's world, nor our role in admiring and conserving them.

Unlike many around him, he possessed a sharp social intelligence and honesty, apparent after a piercing glance, (often deliberate) pregnant pause before a carefully chosen suite of words, and devastating retort. This led to hilarity as often as anger; particularly when cush-

ioned by a local beer. His formal education was non-existent; his knowledge boundless. He lived surrounded by respectful others.

Much of that respect may have come from his role in the conflict surrounding independence in Cameroon in the late 1950s and early 1960s. At the time, southwestern Cameroon was, in many places, rife in insurrection as struggles for power raged across much of the country. Kupe was directly involved in acts that today would be seen as insupportable under any circumstance. Similar acts, linked to the claims of Anglophone Cameroonian independence, go unreported in today's national and international media. The parallels are chilling, and not lost. But I, and others, respected him as I knew him. It may be that we are all capable of such actions under certain circumstances; it may be that we are all the same humans at our core.

An emotional reunion after a decade of his 'retirement' from active fieldwork was tempered by beers and recollections of near misses with animal sightings, mountainous road collapses and parochial human conflicts, equally challenging in challenging Cameroon.

Simon 'Kupe' Ngwese is survived by his only child Collins Ngwese.

*Bethan Morgan*



*Photo: Bethan Morgan, San Diego Zoo Global*



# GORILLAS

## The Struggle for Survival in the Maiombe Forest Continues

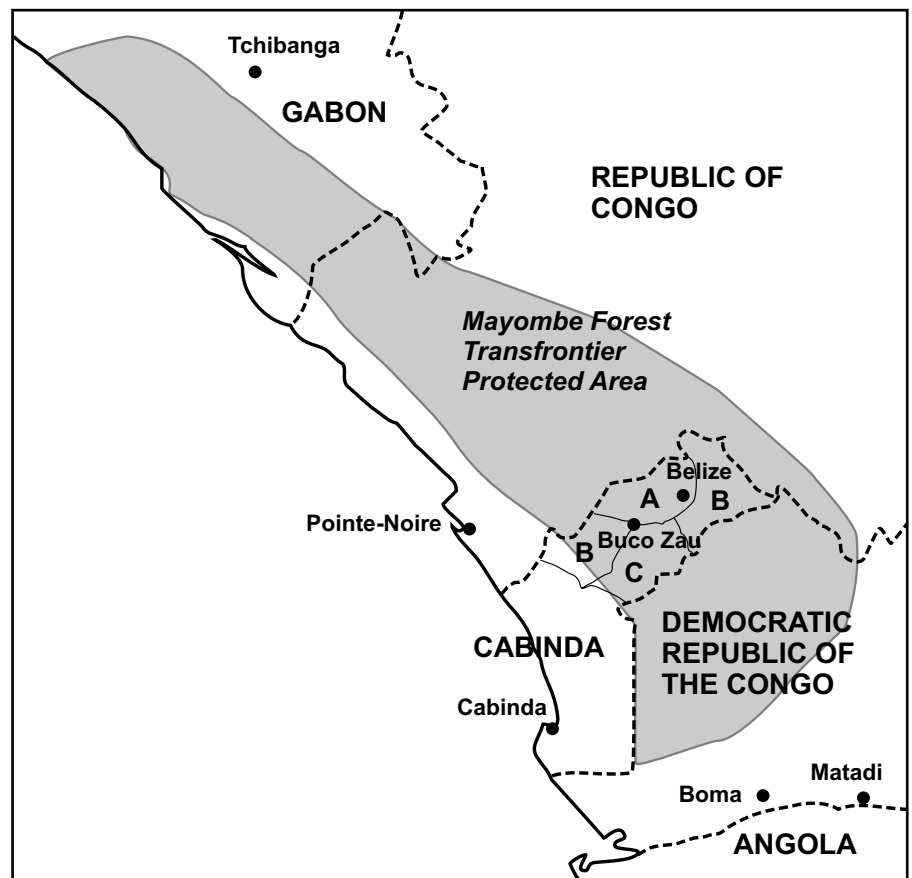
The Maiombe National Park (MNP) covers a large part of the Maiombe forest component of Angola, an area of some 1,930 km<sup>2</sup> in Cabinda Province, an Angolan coastal northern enclave between the Republic of Congo and the Democratic Republic of the Congo (DRC). It is an area of the Guineo-Congolian biome, covered mostly by secondary high dense tropical rainforest with small patches of climax rainforest, lowland drier forest, forest-woodland-savannah mosaics, and riverine gallery forests. It is home to iconic endangered wildlife species such as western lowland gorillas (*Gorilla gorilla gorilla*), central chimpanzees (*Pan troglodytes troglodytes*), forest elephants (*Loxodonta cyclotis*), giant ground pangolins (*Manis gigantea*), tree pangolins (*Manis tricuspis*), forest buffalos (*Syncerus caffer nanus*) and African grey parrots (*Psittacus erithacus*), to name just a few, as well as a number of other primates (white-nosed guenon, red-tailed guenon, golden potto, Bosman's potto), small antelopes (several duiker species, bushbuck, water chevrotain, sitatunga), red river hog, several mongoose species, otters, civets, genets, golden cat, among other species (Ron 2011, 2017).

It is also home to an estimated number of 56,000 members of resident local communities; most can recall their origins in this land back to many generations. Following decades of armed conflict, they are still subject to extreme poverty, and access to vocational education and employment is very limited (Ron 2019). More than half of the families engage in the unsustainable practice of slash-and-burn-based household cultivation for subsistence and small scale local commercial use.

The majority of adult men engage in bushmeat hunting for subsistence and small-scale commercial purposes using traditional methods. The main species targeted are blue duikers, black-backed duikers, bushbucks, other small antelopes, red forest hogs, brush-tailed porcupines, cane rats, genets, civets, guenons, tree pangolins, birds, tortoises and snakes. Only a small number of local hunters engage in poaching and logging for the illegal wildlife trade, including iconic species, engaged with

perpetrators from Cabinda city and from the neighbouring countries, mainly from DRC.

Small scale fishing is practiced in the rivers, springs, and lakes in and around the park. Anarchic logging is practiced for subsistence and commercial use, and some anarchic gold mining has also been reported. Small scale husbandry of pigs, goats, sheep, chickens, and ducks is limited to subsistence use. There are two, constantly expanding urban centres within the park's



**The Maiombe Forest Transfrontier Protected area and the proposed expansion and zoning of the Maiombe National Park in Cabinda, developed through stakeholders' consultations and based on ecological, management and social considerations. Categories: A – Core conservation zone; B – Buffer zone, integrating restricted communities' sustainable subsistence activities; C – Transition zone, integrating limited sustainable economic activities**

Map: Angela Meder, adapted from a map by Tamar Ron and Topogis)



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area: Buco Zau and Belize. Furthermore, the park's integrity is threatened by high value mining and logging economic interests.

The conflict is built in. Local residents live off the unsustainable use and continuous depletion of the same natural resources that their survival depends upon. Human-wildlife conflict, in particular elephant damages to crops which aggravates poverty and risks human life, is intensified with the increasing forest degradation. Urban development and infrastructure construction for an expanding population, combined with poor waste management, aggravate degradation of the forest, land and waterbodies. Commercial interests for the extraction of timber and minerals, such as petroleum, quartzite and gold, often over-ride conservation considerations, as well as jeopardize the communities' well-being. Roads and infrastructure constructed for logging and mining operations, with clearing of large forest patches and with employees brought in from outside the forest area, increase the pressure on the forest and natural resources, and negatively impact local communities.

*Chromolaena odorata*, a prominent invasive plant species, creates dense clumps occupying most of the cleared forest areas throughout the Maiombe forest, thereby impeding forest rehabilitation through natural re-colonising by indigenous species. However, a recent study has demonstrated that in the conditions of the Mayombe forest ecosystem, it disappears after 19 years of colonisation, and the local flora develops resilience (Chicaia 2017).

The results of the illegal wildlife trade, in the province and across the border, targeting endangered iconic species, such as live chimpanzee and gorilla infants and parrots for the illegal pet trade, pangolins for meat and scales, extensive and unselective poaching for the bushmeat markets, and illegal timber trade, are devastat-



***A fresh footprint of a forest elephant calf. Human-elephant conflict is a major concern of the local communities in the Maiombe National Park.***

*Photo: Tamar Ron*

ing. The giant pangolin, for example, may already be locally extinct.

All of these threats result in the overwhelming challenges that a small number of dedicated park rangers, with very limited resources, are facing daily. Unfortunately, this is not an uncommon situation for protected areas in the tropical rainforests of the Congo Basin, or elsewhere.

Conservation efforts, initiated in Cabinda Province of Angola in 2000 (Ron 2005), have led to the conceptualizing of the Mayombe – “Maiombe” in Angola; “Mayombe” in Congo, the DRC, as agreed in the transfrontier context; and “Mayumba” in Gabon – Transfrontier Initiative (MTI) (Ron 2003), formalised through an MoU signed between Angola, the Republic of Congo and DRC in 2009, and with Gabon in 2013. A Transfrontier Strategic Plan was elaborated and adopted by all four governments in 2013 (Ron et al. 2011). Expressed political will by all four governments, as well as cross-border cultural, lingual, and ethnic affiliation between the local communities, increase the potential for successful transfrontier cooperation.

The Mayombe forest ecosystem, a relatively dry part of the Guineo-Congolian centre of endemism, stretches

from the coastal area of DRC, through the Cabinda Province of Angola, along the coastal zone of the Republic of Congo and up to southwest Gabon. They form the southwestern margin of the Congo Basin's tropical rainforest in West and Central Africa, and support a large variety of associated flora and fauna species. The Mayombe ecosystems conservation has global biodiversity importance, as well as significant local and regional importance for climate change mitigation and adaptation. The Mayombe area in Angola and the Republic of Congo was defined as a “survey priority” site in the Regional Action Plan for the Conservation of Western Lowland Gorilla and Central Chimpanzee 2015–2025 (IUCN 2014).

Yet, it has been subjected to many decades of extensive unsustainable utilisation, armed conflicts and extreme poverty, with consequential ecological degradation. Nevertheless, the long-armed conflict in the Angolan component has also resulted in reduced utilisation of the forest over several decades, thereby forming an ‘island’ of relatively intact forest area in Cabinda, surrounded by heavily deforested areas in Congo and DRC, clearly marking the border line. Therefore, the conservation of the Angolan component of the Mayombe forest bears not only national importance, but indeed regional and global significance.

Cooperation between the four countries sharing the Mayombe ecosystems is essential for enabling their conservation. Specifically, cross-border and multilateral collaboration is essential for combatting the cross-border illegal trade in wild fauna and flora, mainly between Angola, Congo, and DRC, through the porous borders. This trade is linked to global wildlife crime networks, mainly through the international airports in Cabinda (Angola) and Pointe Noire (the Republic of Congo) and through international seaports in both cities, as well as in Boma (DRC).



# GORILLAS

The seaport of Cabinda is being upgraded and expanded and a new deep-water seaport, Port of Caio, is also under construction in Cabinda. It is expected to increase Angolan trade and serve as a transshipment hub for Africa's west coast. Both may well create major vulnerabilities that could be exploited by wildlife traffickers, and significantly increase the risk of illegal wildlife and timber traffic from Cabinda. Building customs and other seaport officials' control and enforcement capacities is therefore among major priorities for protecting the Maiombe's biodiversity, and in particular the main traded wildlife and timber species (Kapetanacos et al. 2019).

The Maiombe National Park is one of the first three national parks gazetted by the Government of Angola since independence. It was gazetted in 2011 (Decreto Lei nº 38/11 de 29 de Dezembro que cria os Parques Nacionais de Luengue-Luiana, de Mavinga e do Maiombe) and launched in 2013. The Headquarters of the Maiombe National Park is situated in Mbucu Mabele, near Buco Zau, the main urban centre in the Maiombe area of Cabinda, and there are two permanent posts, in Inhuca and Bata Linhuca. Fifteen park rangers staff the Maiombe National Park, including the park's Administrator (Park Manager), José Maria Bizi; the Head of Enforcement, Zacarias Kubola Gomes; and two team leaders. With the exception of the Park Administrator, they function on alternating 21-day cycles, meaning that at any time only up to 7–8 rangers are active in the park. They were all recruited as demobilised soldiers and were trained in 2012 in the first Angolan ranger school, in Kissama National Park, with the help of the Southern Africa Wildlife College (SAWC). The existing staff complement is far below the estimated 50–100 qualified staff required to adequately manage the park (Bizi 2017, 2019).

In addition to foot and road patrols,

recording information, and enforcement activities, the park rangers engage mainly in community outreach and education. They have established good relations with the local communities, and in particular with the traditional leadership. The rangers attend to the communities' grievances, and enforcement is applied with the help of the traditional leaders, in accordance with agreed principles. The limited enforcement capacity is focused on halting poaching of commercial quantities and on protection of endangered species. Furthermore, cooperation has been established with the Provincial, Municipal and Communal authorities for cooperative planning and liaison with the communities, and with the national enforcement agencies in the Province (National Police, Border Police, the Army, Customs, General Prosecution, and the Forestry Institute), which support the enforcement efforts in the park. Cooperation was also established with the National TV channel (TPA) in the province, radio channels and newspapers, for media-based awareness and dissemination of information.

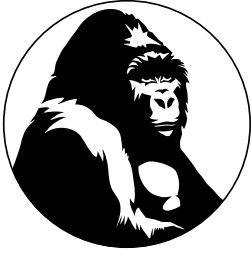
While the establishment and staffing of the Maiombe National Park has increased stakeholders' engagement at all levels, e.g. in awareness and enforcement which has improved protection of the Maiombe forest ecosystems and the wild flora and fauna, illegal activities jeopardising the forest and its biodiversity persist. One of the results of the increased awareness on the one hand, and of the insufficient resources and enforcement capacity on the other, is the confiscation of live wildlife caught for the illegal pet trade, in particular great apes and African grey parrots. The park rangers, with the help of the Provincial and National authorities, have confiscated over several dozen African grey parrots, over a dozen chimpanzees, three gorilla infants, and one elephant calf since 2013. The numbers are constantly increasing, and due

to lack of rehabilitation capacity not all illegally kept individuals known to the authorities are confiscated. The confiscation of adult parrots and chimpanzees reflect mostly improved awareness and enforcement, while the confiscation of young parrots and infant apes are the result of the continuous illegal activities. Parrots are caught locally mainly through traditional methods (climbing, glue), while poachers from the neighbouring countries (mainly from DRC) were reported to be using more destructive methods (even felling entire nesting trees).

Confiscated apes have so far been transferred to rehabilitation facilities in neighbouring countries through cooperation agreements, and mainly through close collaboration with the Jane Goodall Institute and their sanctuary in Tchimpounga, within the Maiombe component of the Republic of Congo. Considering the growing number of chimpanzees that need to be confiscated and rehabilitated, as well as for improving enforcement, for welfare considerations, and for educational purposes, the Angolan authorities are keen to establish a chimpanzee sanctuary in Cabinda. Initial contacts have been made to mobilise technical and financial support for this ambitious initiative. With the support of the World Parrot Trust, Wildlife Impact and the United States Fish and Wildlife Service (USFWS), a parrots rehabilitation aviary and release plan have been developed for the Maiombe National Park, and the park rangers along with relevant Provincial officials have been trained to provide care for confiscated parrots and other species (Kapetanacos et al. 2019). Nine African grey parrots were successfully released back to nature by the park rangers in 2019 and 2020 (Bizi, pers. comm. 2020).

A management plan was developed for the Maiombe National Park in 2019 (Ron 2019). Implementation of specific aspects are being moderately sup-





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**The Maiombe management plan was developed through a process of extensive stakeholder consultation.**

*Photo: Tamar Ron*

ported through several projects, funded by the United Nations Development Programme: Global Environment Fund (UNDP-GEF), Food and Agriculture Organization (FAO), and USFWS, with implementing partners. Several more projects with additional partners are planned including initiatives to strengthen cross-border collaboration in the context of the Mayombe Transfrontier Initiative. The Jane Goodall Institute (JGI) is providing technical expertise support as well as help with the immediate treatment and long-term rehabilitation of confiscated great apes. Significant further funding and support are still needed.

The management plan was developed based on an extensive consultation process with key stakeholders, including the park staff, relevant governmental departments, officials of all relevant sectors of the Provincial, Municipal and Communal administration, the private sector (mainly loggers), the armed forces and enforcement agencies, and with special focus on consultations with the local communities and their traditional leadership. The management plan is composed of proposed actions for the implementation of strategies developed to achieve the

defined management objectives and to mitigate the main identified threats, and of a set of cross-cutting thematic management programmes (or subsidiary plans).

It includes a management zoning plan, with a proposal for the park's expansion and zoning, in accordance with ecological and social considerations identified through baseline studies and stakeholder consultation. Local communities support the expansion and zoning of the park's area that would be accompanied by the development of agro-forestry and other sustainable livelihood options, and with mitigation of human-elephant conflict as a key consideration, including an optional shift to cultivating high-value crops that are not palatable for elephants. Stakeholders of the logging sector, on the other hand, have suggested to fence off only a small area in the north of the park for protection, while removing the conservation status from the rest of the park's area. This option was rejected as it would likely result in the decimation of iconic and other wildlife species of the Maiombe forest into very small and non-viable populations, and finally lead to local extinction.

The management plan for the Maiombe National Park is based on the on-going engagement with the local communities, addressing their considerations and developing sustainable livelihood and benefit opportunities. This is in line with the new legislation regulating environmental conservation areas in Angola (Lei No. 8/20 – Lei das Áreas de Conservação Ambiental, Abril 2020), which includes public consultation, community access, and fair and equal sharing of the benefits from Conservation Areas management among its principles.

The fragile existence of the Maiombe forest and its human and non-human inhabitants alike forms an intense micro-cosmos model. The human population is there to stay. Is this true for the

forest and its biodiversity as well? Can the forest, wildlife, and large human population continue to co-exist in the Maiombe forest? Maybe the odds are not in our favour, but despite the overwhelming challenges, giving up is simply not an option.

*Tamar Ron*

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# GORILLAS

## Thank You!

We are very grateful to you all for your invaluable support! Our Congolese assistant Claude Sikubwabo asked us to forward his message:

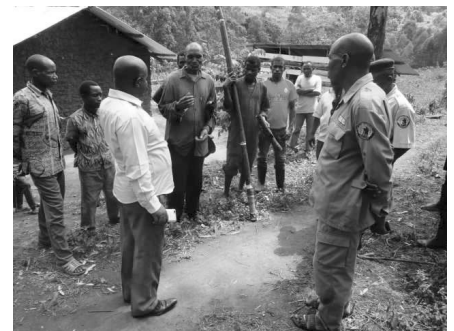
“Thank you greatly for your dedication to the search and mobilization of funds for the safeguard of gorillas and their habitats as well as for the development and support of communities. I would ask you please to present the thanks of the communities and the pride of ICCN for this support to donors.”

We thank Claude for his tireless efforts too!



**Patrol in Maiko National Park**

*Photo: ICCN*



**Claude Sikubwabo with the water committee in Sarambwe**

*Photo: Mumbere Nzanu Getride*



**Mukokya, Mt. Tshiaberimu**

*Photo: Kasereka Neema Gervais*

Some of the activities that we supported recently in eastern Democratic Republic of the Congo – with your donations and organized by Claude Sikubwabo.



**New water supply for the hospital of Burusi, Mt. Tshiaberimu, constructed with B&RD support**

*Photo: Kasereka Neema Gervais*



**Solar street lamps in Kisharu, Sarambwe**

*Photo: Mumbere Nzanu Getride*



**Rangers, military and trackers on patrol, Mt. Tshiaberimu**

*Photo: Kasereka Neema Gervais*



## READING

**Daniel C Miller, Stephanie Mansourian and Christoph Wildburger (eds.)**

**Forests, Trees and the Eradication of Poverty: Potential and Limitations. A Global Assessment Report.** IUFRO World Series Volume 39. Vienna (International Union of Forest Research Organizations) 2020. 240 pages. ISBN 978-3-903345-06-5. More information: <https://www.iufro.org/science/gfep/gfep-initiative/panel-on-forests-and-poverty/>

Download PDF (4.78 MB): <https://www.iufro.org/fileadmin/material/publications/iufro-series/ws39/ws39.pdf>

### FAO

**Global Forest Resources Assessment 2020.** Main Report. Rome 2020. 184 pages. ISBN 978-92-5-132974-0. Download PDF (82.9 MB): <http://www.fao.org/3/ca9825en/CA9825EN.pdf>

### FAO

**Better data, better decisions – Towards impactful forest monitoring.** Forestry Working Paper No. 16. Rome 2020. 72 pages. Download PDF (4.5 MB): <http://www.fao.org/3/cb0437en/CB0437EN.pdf>

**IUCN SSC Primate Specialist Group Regional action plan for the conservation of western chimpanzees (*Pan troglodytes verus*) 2020–2030.** Gland (IUCN) 2020. 86 pages. ISBN (PDF) 978-2-8317-2045-6, ISBN (print) 978-2-8317-2046-3. Download PDF (7.39 MB): <https://portals.iucn.org/library/node/49052>

**Rosamunde Almond, Monique Grooten and Tanya Petersen (eds.)**

**Living Planet Report 2020 – Bending the curve of biodiversity loss.** WWF (Gland), ZSL (London) 2020. 83 pages. ISBN 978-2-940529-99-5. Download PDF (19.5 MB): <https://www.zsl.org/sites/default/files/LPR%202020%20Full%20report.pdf>

**IUCN SSC Primate Specialist Group Regional action plan for the conservation of western chimpanzees (*Pan troglodytes verus*) 2020–2030.** Gland, Switzerland (IUCN) 2020. X, 72 pages. ISBN (print) 978-2-8317-2046-3. More information: <https://portals.iucn.org/library/node/49052>  
Download PDF (7.4 MB): <https://portals.iucn.org/library/sites/library/files/documents/2020-015-En.pdf>

### IUCN SSC

**Position Statement On the Management of Human-Wildlife Conflict.** Gland, Switzerland (IUCN) 2020. 5 pages. Download PDF (3.6 MB): [https://www.iucn.org/sites/dev/files/ssc\\_human\\_wildlife\\_conflict\\_position\\_statement.pdf](https://www.iucn.org/sites/dev/files/ssc_human_wildlife_conflict_position_statement.pdf)

### PPLAAF, Global Witness

**Undermining Sanctions.** Evidence suggests scandal-hit billionaire Dan Gertler is trying to dodge US sanctions using a suspected money laundering network. July 2020. 40 pages. <https://www.globalwitness.org/en/campaigns/corruption-and-money-laundering/undermining-sanctions/>  
Download PDF (3.83 MB): [https://www.globalwitness.org/documents/19913/Undermining\\_Sanctions\\_July\\_2020\\_2hnU5Br.pdf](https://www.globalwitness.org/documents/19913/Undermining_Sanctions_July_2020_2hnU5Br.pdf)

### Secretariat of the Convention on Biological Diversity

**Global Biodiversity Outlook 5.** Main Report. Montreal 2020. 212 pages. ISBN 9789292256883. More information: <https://www.cbd.int/gbo5>. Download PDF (26.9 MB): <https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>

### International Crisis Group

**DR Congo: Ending the Cycle of Violence in Ituri.** Africa Report N° 292. Brussels, July 2020. 37 pages. Download PDF (940 kB): [https://d2071andvip0wj.cloudfront.net/292-drc-ending-violence-in-ituri%20\(1\).pdf](https://d2071andvip0wj.cloudfront.net/292-drc-ending-violence-in-ituri%20(1).pdf)

**United Nations Joint Human Rights Office, OHCHR-MONUSCO Report on violations of human rights and international humanitarian law by the Allied Democratic Forces armed group and by members of the defense and security forces in Beni territory, North Kivu province and Irumu and Mambasa territories, Ituri province, between 1 January 2019 and 31 January 2020. July 2020.** 26 pages. Download PDF (762 kB): [https://www.ohchr.org/Documents/Countries/CD/ADF\\_EN.pdf](https://www.ohchr.org/Documents/Countries/CD/ADF_EN.pdf)

## New on the Internet

### A.P.E.S. Wiki

The A.P.E.S. Wiki is a platform for site-level information on ape research and conservation. Here you will find information on the population status of apes, threats they face, conservation activities implemented, and research conducted. The information is compiled from scientific publications, reports, and experts with work experience at the sites.

[https://apeswiki.eva.mpg.de/index.php/Main\\_Page](https://apeswiki.eva.mpg.de/index.php/Main_Page)

### Forest Defenders Alliance.

The Forest Defenders Alliance started as a transatlantic initiative to bring together NGOs that seek to end the “climate fraud” of logging and burning forest wood for renewable energy. But just as the climate and biodiversity crises are interconnected, work on forests and renewable energy is likewise intertwined with many other policies, regulations, and pieces of legislation. It turns out that NGOs all over the EU, and even the world, want a “forest-first” climate policy that prioritises natural forest protection and restoration. The Forest Defenders Alliance seeks to amplify their voices on critical issues of EU policy.

<http://forestdefenders.eu/>



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## Our Donors

From May to October 2020 we received major donations by Andreas Ahlers, Ravid Aloni, Fredrik Bakels, Emilio Garcia Barea, Manuel Blatter, Achim Christen and Rita Christen-Stuttgen, Angelika Dickmann, Rüdiger Dmoch, Petra Doninger, Fellbacher Weingärtner, Pascal Fliegner, Jürgen and Irmgard Friedrich, Gorilla Gym Hamburg, Arendt Gruben, Martina Hawelka-Lucke, Birgit Höfer, Gabriele Hück, Michael Jähde, Marko Jankov, Trutz von Klodt, Hartmann Knorr, Harald Kranz, Ulrike Kriesten, Tony Udo Kurzweg, Daniela Lachmund, Frank Lehwalder, Stefan Lindner, Isabella Löber, Martina Meßner-Absalon, Michael and Regina Möhring, Felicia Molenkamp, Ingo Müller, Manfred Paul, Eberhard Pinz, Andreas Postert, Birgit Reime, Hans-Joachim Reuter, Heidi Peter-Rocher, Daniela Rogge, Alfred Roszyk, Florian von Rücker, Rainer Schenk, Leslie Schiltz, Dieter Peter Schmitz, Katharina Schmutzsch, Birgit Schüssler, Thomas Schulz, Eva-Maria Schweikart, Franz-Josef Seidensticker, Stephanie Skolik, Tosca Sommer,



**During the grape harvest 2020, Thomas Seibold, Fellbacher Weingärtner, hands over a symbolic check to Angela Meder with the new 1,500 euro donation that was generated by selling gorilla wine. At the left: Wolfram Rietschel who initiated this campaign in 2011.**

*Photo: Fellbacher Weingärtner*

Hartmut Stade, Marion Stahlberg, Michaela Steinhäuser, Tiergarten Heidelberg, Jan Weckwerth, Christof Wiedemair, Wilhelma, Ingo Wolfeneck, Bri-

gitte Wullert, Rebecca Zindler and Zoo Rostock. We thank everybody who has been supporting us and wish you a happy, successful 2021!

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