



# ***Gorilla Journal***

*Journal of Berggorilla & Regenwald Direkthilfe*

*No. 65, December 2022*

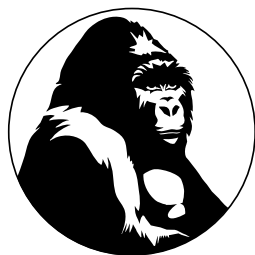


**Oil versus Forest  
in the Congo**

**Community  
Reserves in  
a Retreating  
Environment**

**As Temperatures  
Rise, Mountain  
Gorillas Get  
Thirstier**

**Distribution and  
Habitat Use of  
Gorillas in the Ebo  
Forest**



# BERGGORILLA & REGENWALD DIREKTHILFE

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### **Gorilla Journal 65, December 2022**

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Photo: Martha M. Robbins

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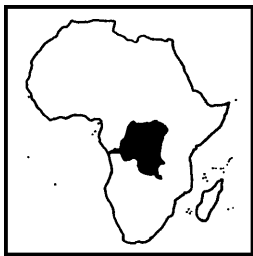
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**Dr. Martha Robbins**, a research associate at the Max Planck Institute for Evolutionary Anthropology, has been studying the behavioral ecology of gorillas since 1990. Since 1998, she has been studying the socioecology and reproductive strategies of mountain gorillas in Bwindi Impenetrable National Park, since 2005 she has been working with the gorillas in Loango.

**Claude Sikubwabo Kiyengo** conducted a gorilla survey in the Maiko National Park, he worked for the ICCN in Goma and for the IUCN. He was chief conservator of the Parc National des Virunga, central sector, the coordinator of the NGO VONA, the PACEBCo expert for conservation and biodiversity in the Virunga region (COMIFAC), and since 2008 he has been our assistant.

## Another Gorilla Gives Birth on Mt. Tshiaberimu

For over a decade, there has been little hope for the survival of the Mount Tshiaberimu (or Tshiabirimu) gorillas. Several great ape experts considered these gorillas to be on the verge of becoming extinct: the population was beyond the point of recovery. Monitoring showed that not a single gorilla was born between 2009 and 2018, and the number of gorillas on Mt. Tshiaberimu fell drastically from 13 to 6 during that



**Ndekesiri's dead baby**

*Photo: Katsuva Wasukundi/ICCN*

time. In 2018, a baby gorilla was born but died only a few days later. In 2019, another individual disappeared, further reducing the number of gorillas to only five (data from ICCN monitoring).

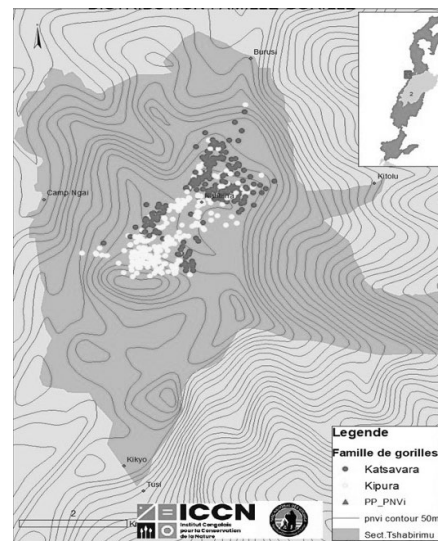
The possibility that the females were infertile began to be considered. However, during 2019, when no one really believed in the future survival of these gorillas, the female Mwengeshali gave birth to a baby, who was named Espoir (Hope). The same female had another baby in late 2021. A sense of optimism started to grow again, although it was still doubtful that a single fertile female could save such a vulnerable population. The population currently consists of seven individuals including two silverbacks, three females, and two youngsters. In the last Gorilla Journal, we wrote: "We hope that Mwengeshali can give birth to more babies, and that the other gorilla females can also become mothers."

Our wish was fulfilled. At 8 am on 11 June 2022, trackers were present when Ndekesiri gave birth for the first time. Unfortunately, the umbilical cord did not detach quickly and became entangled with the vegetation. When the female tried to untangle herself, the cord was torn and the baby died as a result.

## What can we learn from this death?

My opinion on lessons learnt may not be shared by others. The birth of a third gorilla baby by another female gave us further hope because it means that the Mount Tshiaberimu group has two fertile adult females. The first baby, Hope, now a juvenile, is also female. She increases the number of the Mount Tshiaberimu females to four. We know that the death rate among gorilla infants is 1 in 3, so the death of the latest baby gorilla is not surprising. Nonetheless, its birth gives us hope for the future of a population on the brink of extinction. We are waiting with bated breath to determine the sex of Mwengeshali's latest baby. We also know that when a female gorilla loses her baby, she comes back into estrus quickly and may conceive again.

*Claude Sikubwabo Kiyengo*



**Ranges of the two gorilla families (the Kipura family is the same as the Mwasa family) on Mt. Tshiaberimu during the second quarter of 2022**

*Map: ICCN*

**The gorillas on Mt. Tshiaberimu**

**Katsavara family**  
Katsavara, male  
Mukokya, female  
Ndekesiri, female  
Espoir, juvenile female

**Mwasa family**  
Mwasa, male  
Mwengeshali, female  
Kavango, sex not yet identified



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### Growing Mushrooms in Communities Close to Mt. Tshiaberimu

Community members near the Mt. Tshiaberimu, Virunga National Park, were trained in growing mushrooms (*Pleurotus ostreatus*). They were very happy with the results, and other communities expressed their interest in becoming mushroom growers too. Donations are welcome to give them the opportunity!

This project was funded by the organisation Cents for help (an initiative by employees and companies within the Bosch Group).

***The substrate for the mushrooms is prepared. It is made from leftovers of agriculture like dry leaves of beans and bananas.***



### Oil versus Forest in the Congo

In April 2022, Greenpeace reported that the government of the Democratic Republic of the Congo planned to auction off concessions for the extraction of oil. Together with numerous other nature conservation organisations, including Rainforest Rescue, Greenpeace called upon the government not to go through with this, particularly since some of these concessions were located inside national parks. A petition with over 100,000 signatures was handed to the Congolese government on 25 July.

Despite this, 27 oil and 3 gas concessions were offered in an auction in late July. Many conservationists were shocked by this because President Tshisekedi had signed a commitment during the UN Climate Change Conference of the Parties (COP26) in Glasgow in late 2021, promising that the DRC would promote climate protection. Several countries had promised to finance this commitment. How-

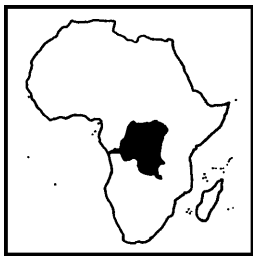
ever, the funds were not directed to the government but rather to conservation projects via international organisations. The funds could not be used directly to finance the work and measures of the government – in contrast to those from oil extraction.

At the beginning of September, Minister of Hydrocarbons for the Congo Didier Budimbu Ntubuanga said the DRC received two offers for the oil blocks.

Oil extraction would have serious consequences for the forests and swamps where most of the concessions are located, areas that are already under severe pressure. In addition, oil extraction would have a detrimental effect on global climate and on the people living in the affected regions. However, the Congolese government rejects criticism from nature and climate conservationists stating that the primary concern of the government is to develop the country and its economy and to lead its population out of poverty. The Democratic Republic of Congo is one of the five poorest coun-

tries in the world. It would be remarkable if this promise was kept – there are numerous similar cases where leaders enrich themselves while the population becomes ever poorer. President Tshisekedi also announced that the revenue generated from oil extraction would be used to fund nature conservation.

In 2016, the country's oil reserves were estimated at 20 billion barrels, the second largest reserves on the African continent after Nigeria. Selling the concessions could generate 600 million dollars immediately. Further, the responsible minister estimates that the exploitation of just two of the planned concessions could procure a monthly income of one billion dollars for the state. However, one opinion (<https://africanarguments.org/2022/08/congo-oil-auction-foiling-climate-colonialism-or-filling-the-coffers/>) is that the Congolese government does not actually intend to exploit the oil reserves, only to sell the rights. The announcement of the auction may be a ploy, exerting



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pressure on the richer states to provide additional funds to support climate protection and biodiversity conservation in the DRC. Experts think that the funds promised during the climate summit in Glasgow are not anywhere near enough to achieve the set goals.

## The End of Virunga National Park?

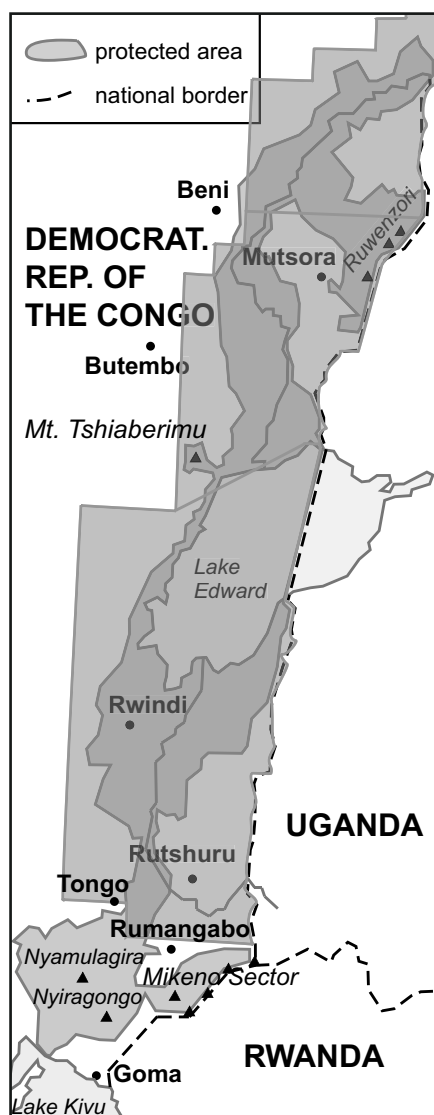
The government of the Democratic Republic of the Congo had already granted oil concessions covering 85% of the area of the Virunga National Park by late 2007. (<https://www.berggorilla.org/en/gorillas/protected-areas-for-gorillas/protected-areas-for-gorillas/oil-exploration-in-virunga-park/>) The plans to drill for oil in the park caused heated argument: WWF initiated a protest campaign, and a website was developed for this purpose (<https://savevirunga.com>). The company SOCO carried out some exploratory drilling but stopped work after strong international protest (including the documentary "Drillers in the Mist" (<https://virungamovie.com/>), which came out on Netflix in 2014. However, work was restarted in 2017 with SOCO again involved, this time indirectly (<https://www.berggorilla.org/en/journal/issues/journal-55-22017/article-view/virunga-park-again-threatened-by-oil/>).

Oil extraction is not permitted in a UNESCO World Heritage Site. The Congolese government has countered this argument by indicating that the areas concerned could be excised from the national park. This would be a serious blow to nature conservation in eastern Congo as this goes against the very reason for Virunga National Park's World Heritage status.

The park is already under strong pressure from the activities of various rebel groups. For example, M23 commenced massive attacks in the region as recently as June. The rebels have settled mainly in the southern part of the park, which is where the mountain gorillas are. This makes it impossible

for the rangers to control the park – so nobody knows how the gorillas are faring. The Congolese government has proposed that the park should be under the control of the military. If that were to happen, the protection of the Natural World Heritage Site would no longer be guaranteed.

Angela Meder



**The Virunga National Park with the oil concession blocks**

Map: Angela Meder with information from the Rain Forest Foundation UK

## For more information

Greenpeace Africa: <https://www.greenpeace.org/africa/en/explore/>, report on the reaction of the population: <https://www.greenpeace.org/static/planet4-africa-stateless/2022/09/38e752f8-oil-blocks-report-english-v1.2.pdf>  
 Rainforest Rescue: <https://www.rainforest-rescue.org/petitions/1261/drc-do-not-sacrifice-congos-rainforests-to-the-oil-industry>  
 Rainforest Foundation UK: <https://www.rainforestfoundationuk.org/press-releasepetition-of-100000-signatures-handed-to-drc-president-to-stop-new-oil-development>  
 Maps indicating the locations of oil concessions etc. posted by the Rainforest Foundation: <https://storymaps.arcgis.com/stories/2890d3426fd485db15f94ea6126a477>

## Community Reserves in a Retreating Environment Can they Guarantee Healthy Ecosystems and Biodiversity?

The natural forests in western North Kivu province and Maniema province, eastern Democratic Republic of the Congo, are very rich in biodiversity of both animal and plant species. While the Virunga, Maiko and Kahuzi-Biega national parks are under the protection of ICCN (Congolese Institute for Nature Conservation), the organisation in charge of protected areas in the DRC, the majority of the forest outside these national parks has remained without legal protection for quite some time.

Between 1998 and 2004, several local communities in forested areas, anxious to protect the biodiversity of their forests, set about creating community reserves with a view to protecting their natural resources, focussing particularly on lowland gorillas and chimpanzees. Over those 6 years, 9 community reserves were created in these two provinces.

### North Kivu

- Tayna Gorilla Reserve (RGT, 1998)
- Bakumbule Primate Community Reserve (RECOPRIBA, 2001), now called Kisimba-Ikobo Primate Reserve (RPKI)



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### Traces found in the Usala Reserve during a 20 km foot patrol

Number	Species	Traces/km <sup>2</sup>
13	<i>Gorilla beringei graueri</i> (Grauer's gorilla)	0.65
23	<i>Pan troglodytes schweinfurthii</i> (eastern chimpanzee)	1.15
7	<i>Okapia johnstoni</i> (okapi)	0.35
21	<i>Orycteropus afer</i> (aardvark)	1.05
31	<i>Hyemoschus aquaticus</i> (fanged deer)	12.7
54	<i>Potamochoerus porcus</i> (bush pig)	2.7
65	<i>Cephalophus dorsalis</i> (bay duiker)	3.25
5	<i>Panthera pardus</i> (leopard)	0.25
8	<i>Cercopithecus hamlyni</i> (owl-faced monkey)	0.4
16	<i>Cercopithecus lhoesti</i> (L'Hoest's monkey)	0.8
4	<i>Kinixys erosa</i> (forest hinge-back tortoise)	0.2

- Bakano Forest Reserve for Community Conservation (COCREFOBA, 2002)
- Usala Gorilla Reserve (RGU, 2002)
- Utunda and Wassa Gorilla Reserve (REGOUWA, 2003). In recent years, the small reserves making up REGOUWA have changed their name to RENGYIT.
- Primates and Forests of Lova Community Reserve (RECOPRIFOL, 2003)

#### Maniema

- Punia Gorilla Reserve (RGPU, 2002)
- Mukungiti and Kingombe Gorilla Reserve (REGOMUKI, 2003)
- Lubutu Gorilla Reserve (REGOLU, 2004)

Since 1998, the concept of community forests managed by the local population has spread throughout the eastern provinces of the Congo, leading to the creation of these reserves. But not one of these nine reserves has received sufficient support. Those reserves which are accessible because they are near navigable roads have received some support from partners and international NGOs. Those reserves which are more difficult to access

receive no support, despite their activities on the ground. What they are able to accomplish without support is far from guaranteeing the survival of the great apes (gorillas and chimpanzees) and other large mammals in their areas.

We are presenting here information about three community reserves in areas which are difficult to access.

#### Usala Gorilla Reserve (RGU)

The Usala Gorilla Reserve or the Usala Community Forest was created by a team of customary chieftains and local landowners under the leadership of Sultan Eric Mwaka Wa Eliba, who became the managers.

The management is on two levels – the administrative council, made up of chieftains from across the area and forming the decision-making unit, and the co-ordination unit dealing with the daily activities comprising technical staff.

This structure operates for the moment under the terms of Provincial Order No. 016/CAB/GP-NK/2010 of 22 April 2010 which gives it provisional authority, the act of a sympathetic national Minister of the Environment and Nature Conservation.

The RGU is in the equatorial zone, characterised by lowlands as well as

mountains. Its altitude varies between 500 and 2020 m above sea level. It is located in the Usala village grouping in the Wanianga sector in Walikale territory, North Kivu province, with the River Lindi to the north, REGOUWA to the south, RGT and RPKI to the east and Maiko National Park to the west. It has an area of 115,200 hectares. It is drained by several rivers with plentiful fish such as the Lindi, Mandaye, Lubuli, Hunde, Bilate, Rwemo, Kiruchi, Tamarria, Roombo and Ubangire.

**Gorillas, chimpanzees and other flagship animals:** The existing research on gorillas and chimpanzees dates from 2014. There have been no updates since then. At that time there were 0.797 gorillas per km<sup>2</sup>, about 918 in the reserve, and 0.072 chimpanzees per km<sup>2</sup>, 83 in the reserve.

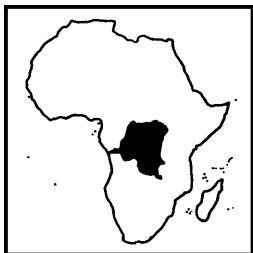
These data do not seem very conclusive, however. There could have been many more in the reserve. In 2019 a patrol team noticed high concentrations of these animals, although no numbers were given, only locations. In June 2022 a team monitoring a very small part of the reserve, with a foot patrol of 20 km:

#### Management objectives:

1. to protect biodiversity, particularly animal species threatened with extinction (gorillas, chimpanzees, etc.)
2. to promote rural development,
3. to promote scientific research and tourism,
4. to introduce the concept of conservation to the local population through community-based activities,
5. to promote the participation of the local population in nature conservation.

#### Challenges:

1. illegal activities in the reserve: poaching, tree-felling to expand agricultural areas, gold mining and the search for minerals,
2. the critical shortage of financing for the organisation of patrols, the lack of field equipment and infrastructure



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such as housing for trackers and rangers,

3. funding of activities: young volunteers are growing and selling cassava, and the money raised is used to organise sensitisation missions and monitoring of the reserve.

### **Kisimba-Ikobo Primate Reserve (RPKI)**

Like the Usala Reserve, RPKI was set up in 2001 by traditional chiefs and local landowners, and it has the same objectives. It covers an area of 200,000 hectares. A 2014 survey showed a density of 0.422 gorillas and 0.05 chimpanzees per km<sup>2</sup>, with an estimated total of 845 gorillas and 100 chimpanzees in the reserve.

There are two ranger stations inside this reserve, and no villages. The reserve also suffers from a critical lack of financial support for patrols, trackers, and educators.

### **Loya Wandu Community Reserve for Development (FLOWADE)**

FLOWADE is situated to the north of the central sector of Maiko National Park. It was set up in 2012 at Opienge. Its mission is 'Conservation for All by All'. Its objectives are the same as for the Usala Reserve.

The co-ordination centre is at Angamapasa, a village on the traditional route connecting Opienge and Loya. The reserve has never received any support. A single mission in the whole of the northern part of the central sector was financed by ICCN for sensitisation. The reserve needs support in the form of field equipment, rations for the patrols and to increase motivation for the trackers to contribute to the documentation of gorillas in this part of the forest.

The activities of this reserve focus mainly on the following:

- educating the population on primate conservation and promoting the

voluntary surrender of 12-gauge shotguns,

- monitoring gorilla groups near the abandoned ranger post at Loya, along the Loyanje stream and in the Lukumwe and Ndufa hills. Numerous gorillas lived in this area between 1989 and 1993, but now only one to four individuals have been recorded there.
- monitoring chimpanzees in the Mube and Ndonga hills.

Monitoring is conducted for only about 45 days per year, which is not frequent enough. The area was not surveyed in 2014. The work done by Claude Sikubwabo and John Hart between 1989 and 1992 provided some information about flora and fauna in that part of the forest. However, thirty years later, with ongoing wars and unrest, this information is out-of-date and may no longer be accurate. An update is urgently needed.

To sum up, community conservation by the local population is a very good initiative. The natural resources and ecosystems can be protected by local efforts. We must support these initiatives because without appropriate funding, especially for the less accessible sites, it is difficult to guarantee the long-term health of the ecosystems and their biodiversity.

*Claude Sikubwabo Kiyengo and Papy Kabaya Mahamudi Eustache*

### **Community Development Micro-Projects around Maiko National Park**

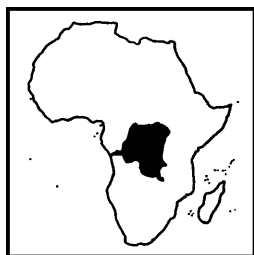
Maiko National Park (MNP) was gazetted in 1970 by the President of what was then Zaire, Marshal Mobutu. Before the creation of the park, the area was part of the Bakumu Hunting Reserve. To create the park, the local population was relocated from the

reserve. In an attempt to establish complete protection, hunting, fishing, trapping and the cutting of timber was prohibited, as was traffic through the park. However, the Government was never able to remove the Simba rebels, who had lived in the park since 1964.

Maiko National Park extends across three different provinces: the southern sector of the park is in Maniema Province, the central sector is part of Tshopo Province, and the northern sector lies in North Kivu Province.

Hunting remains a major activity around Maiko National Park, in particular the hunting of bushmeat to supply the markets of Lubutu, Bafwasende and Manguredjipa. Poaching of protected species is aimed at the capture and marketing of monkeys, baby gorillas and chimpanzees.

In 2020, the provinces of Maniema and Tshopo launched a campaign to collect hunting weapons, particularly 12-gauge shotguns, which are the main weapons produced locally. They are used predominantly for hunting, to provide income and food. The population voluntarily handed in 265 of these weapons, but the people are suffering from food shortages and a lack of income. Alternative livelihoods support was established for the people who handed over their weapons. This was initiated by ICCN (Congolese Institute for Nature Conservation) and supported by its partner Berggorilla & Regenwald Direkthilfe. These support projects include: an initiative for the rehabilitation and construction of fishponds in the southern sector of the park between Lubutu and Osso (or Oso), where people are provided with funds, material for their development, and fry (young fish); a water capture project in Obassa, Uyugu and Tingi Tingi; a mill for cassava flour in Osso in the southern sector; and a project for oil, rice and cassava mills in Manguredjipa in the northern sector, carried out by a women's association.



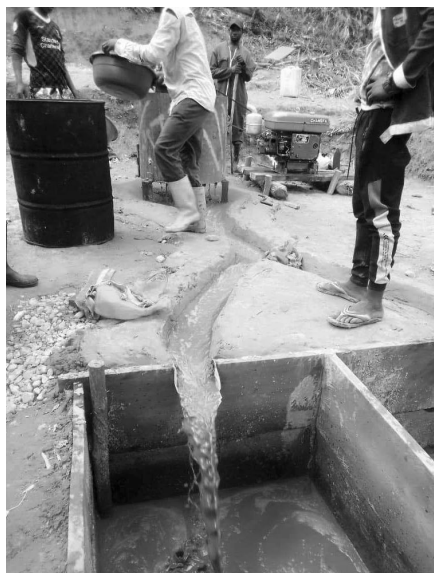
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**A rehabilitated fishpond**  
Photo: ICCN PNM

In addition to supporting the voluntary surrender of 12-gauge shotguns, the project also reduces poaching, sensitises the population by involving them in biodiversity conservation and community development activities, and improves relations between park managers and neighbouring communities.

In order to deliver the project, the Site Manager of Maiko National Park, together with the local chiefs, held consultations with the associations that would benefit from the project. He explained the merits of micro-projects for community development in general,



**Above: captured water source**  
**Left: palm oil production**  
Photos: ICCN PNM

the fishpond project in particular, as well as the benefits of biodiversity conservation.

These projects will support as many as 24,600 direct beneficiaries, as well as other people living in the area who benefit from selling the fish, rice, oil or cassava flour.

In the case of the fishponds, a total

of 18,684 people have benefited from the project. They are the members of ten associations including one forest reserve (REGOMUKI: Mukungiti and Kingombe Gorilla Reserve), two Catholic churches in Osso, two youth associations in Obassa and five local development initiatives on the Lubutu–Osso axis. Eleven fishponds are being reha-

### Project beneficiaries

Beneficiaries/Association	No. of members	Locality	Activity	Participating villages	Quantity
Osso Health Centre	8,000	Osso	Water catchment, small-scale water distribution	Uyugu, Obassa	4 sources
Bapère Development Committee/CGC-ICCN	2,500	Manguredjipa	oil mill rice mill	Manguredjipa	1 1
Association of Mothers for Development	2,000	Osso	flour mill	Osso	1
REGOMUKI	2,200	Lubutu	support for fish farming	Bitule	1
JAGA USIANA	450	Mukwanyama	support for fish farming	Mukwanyama, Batike	3
EKITA-AGANDJA	1,500	Obokala, Djingala	support for fish farming	Bongisia	2
AMKA MABADILIKO	150	Lubutu	support for fish farming	Sanzalisili	1
ULD/LEGA	1,500	Lubutu/EDD	support for fish farming	Mukwanyama	1
Catholic Church	4,500	Osso	support for fish farming	Osso	1
JAFARI Youth Association	1,800	Mengwe	support for fish farming	Lubutu, Osso	1
<b>Total</b>	<b>24,600</b>				





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bilitated and have received fry. Monitoring of the growth of fry is under way and the harvesting of fish is expected to start in April 2023.

As for the water projects, Osso Health Centre benefited from four captured sources. The 2,000 members of the Association of Mothers for Development of Osso benefited from a cassava flour mill. In the northern sector, the 2,500 members of the Bapere/ ICCN Development Committee benefited from a palm oil press and a rice husker.

### Perspective for the future

The population of Osso-Obassa-Kingombe, about 10,000 people, wants Maiko National Park to provide all

population centres with drinking water and thanks Berggorilla & Regenwald Direkthilfe for the capture of four water sources thus far. The need remains urgent and the further water distribution network has already been mapped.

*Claude Sikubwabo Kiyengo and Jean Claude Kyungu Kasolene*

*These community projects were mainly funded by the Deutsche Postcode Lotterie.*

### Climate Change in the Congo Basin

The Congo Basin covers an area of more than 4 million km<sup>2</sup> and is home

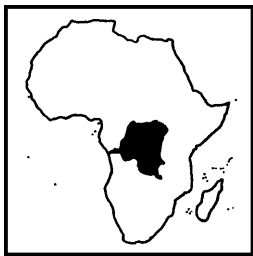
to a number of different ecosystems. Grassy savannas in the North and South enclose a huge swath of tropical forest in the heart of the continent. These forests stretch a vast distance, from the East African Rift Valley in eastern Democratic Republic of the Congo to the Atlantic coasts of Gabon and Cameroon. But not all forests within this region are the same: the forest belt is composed of lowland, montane, and swamp forests, but also dry woodlands—dominated by the so-called *Miombo* tree species.

The mighty Congo River meanders more than 4,700 km through this area in a large arc before flowing into the Atlantic Ocean at an average discharge of 41,000 m<sup>3</sup> per second. This river is



*Rain forest in eastern Democratic Republic of the Congo*

*Photo: Matti Barthel*



## D. R. CONGO

so massive that it has formed a natural boundary on the continent, allowing chimpanzees and bonobos to co-evolve in separate parts of the basin. The latter live south of the river and, like the Congo peacock and okapi, are found exclusively in the Democratic Republic of the Congo.

Congolese tropical forests are not only important for safeguarding unique fauna. The forests also absorb enormous amounts of carbon dioxide (CO<sub>2</sub>) from the atmosphere through photosynthesis, thereby playing a major role in climate processes. At the moment tropical forests are still a net sink for CO<sub>2</sub>, meaning that they absorb more CO<sub>2</sub> than they release. Intact African rainforests take up as much as 0.3 petagrams (1 Pg = 10<sup>15</sup> g) of C per year (Hubau et al. 2020). This is equivalent to twice Germany's total annual emissions from fossil fuel burning and industry and double the CO<sub>2</sub> uptake in intact forests in the Amazon basin! But the CO<sub>2</sub> uptake of these forests is not the only important process for the global climate. Methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) are two other important atmospheric greenhouse gases that are also exchanged by tropical forest soils (Barthel et al. 2022). For example, flooded swamp forests release enor-

mous amounts of methane while non-flooded forest areas absorb methane. Thus, tropical forests are extremely important to help buffer or mitigate the ongoing climate change caused by the release of anthropogenic greenhouse gases.

In turn, climate change also affects the Congo Basin itself, as can be seen from long-term air temperature data. Since 1960, the Meteorological Institute of the research station, Congolese Institute for Agronomic Research (INERA) in Yangambi, D. R. Congo has been recording the daily air temperature by hand – on tables provided for this purpose. These measurements have been written out by hand every single day since 1960. Through some rather painstaking work, an international team of scientists have now digitized and evaluated these temperature data. These six decades of handwritten temperature data show that the Congo Basin has warmed steadily over the past decades (Kasongo et al. in review). In addition to rising temperatures in the Congo Basin, the duration of the dry season has also increased over the past decades (Jiang et al. 2019), together with an increase in the yellowing of Congolese forests (Zhou et al. 2014). Both the rising temperatures

and longer dry seasons can increase tree mortality, which would likely reduce the CO<sub>2</sub> sink capacity of forests and alter forest structure and composition. However, how exactly these rapid changes in climate will affect other ecosystem functions, such as habitat for the resident bonobos, remains to be seen. Only one thing is sure: increasing our conservation efforts is essential to give the forest the best chance to survive and remain healthy. Climate change already compromises these systems, while we are in such dire need of them to absorb our emitted carbon.

*Marijn Bauters and Matti Barthel*

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## GRACE Celebrates World Gorilla Day

It was early morning on 24 September, 2022, but the GRACE Education Team was already on the move. They had been planning for weeks: Zoom meetings, community invitations, hours of preparation, and even a new video about gorillas led to this day. Now, it was “go” time and the team was headed out into communities near GRACE to start the celebrations.

After all, 24 September is a big deal at GRACE ... it's World Gorilla Day! Initiated by the Dian Fossey Gorilla Fund,



**Logging has been an important factor of forest destruction for decades – recently climate change has become another strong factor.**

*Photo: Matti Barthel*



# D. R. CONGO



**A procession through Kagheri to celebrate World Gorilla Day**

*Photo: GRACE*

World Gorilla Day brings together people from around the world to raise awareness of gorillas and their conservation. For GRACE staff, who dedicate their passion and purpose to caring for rescued Grauer’s gorillas daily, there is so much to celebrate.

It is also an important time to recognise the communities living near GRACE which help make our gorilla rehabilitation and conservation work possible. Therefore, they are the first to be invited to celebrate with us every World Gorilla Day. This year, GRACE Educators expanded their festivities to three villages: Katoyo, Kasugho, and Kagheri. More than 11,000 people came to learn about and take conservation action for Grauer’s gorillas and the forest.

In Katoyo and Kasugho, over 4,000 people, including GRACE staff and their families, gathered to celebrate gorillas. GRACE Educators Gracianne Basyanirya and Guy Simisi (Sims) Mumbere led the celebrations in these two villages. They organised speeches, songs, processions, educational presentations and more. According to

Sims, “to see the local authorities, kids, and women all participating together on this day – seeing everyone dancing and singing for gorillas – really made me happy.”

Students from GRACE Conservation Clubs read stories and poems to

the group. They shared their thoughts on why gorillas are important, how people can protect gorillas, and what makes the community-managed Tayna Nature Reserve near GRACE special. Everyone in the audience cheered as these young conservation heroes spoke.

Led by GRACE Educators, community members also shared their dedication to gorillas and conservation on the local radio station, *Radio Tayna*. Their voices carried throughout the Tayna area, reaching thousands of listeners on World Gorilla Day.

Gracianne and Sims led each village in a community-wide cleanup. Together, they collected over 1,000 pieces of rubbish (including plastic bottles and bags) from homes and common areas and brought it to a community disposal site. This reinforced the importance of working together to clean up the environment. After so much planning, Gracianne was “proud that the team brought World Gorilla Day celebrations to three villages at the same time.”

In all three villages, over 300 community members participated in a Pride Wall where Educators posed three



**Residents of Kasugho gather with GRACE Educator Sims (second from left) to celebrate World Gorilla Day**

*Photo: GRACE*



## D. R. CONGO

questions: 1) “What do you know about gorillas?” 2) “How do you feel about gorillas?” and 3) “What have you done to protect the forest for people and gorillas?” Community members shared their responses by writing answers on the Pride Wall. This allowed people of all ages and backgrounds to express their ideas and share how they take action to protect gorillas.

GRACE Educators worked with local officials, women’s groups, churches, community associations and students from 22 schools to make these expanded celebrations possible. GRACE Education Manager Honoré Kambale Masumbuko said, “working in collaboration with local associations and communities helped us reach our goals.” This was especially true in Kagheri, where GRACE Educators celebrated World Gorilla Day for the first time.

A drama about gorilla conservation presented in the center of Kagheri drew in large crowds to watch. Later that day, a film created by the GRACE Education Team taught more than 5,800

people about gorillas. For some in attendance, this was their first time seeing footage of Grauer’s gorillas. Brochures were also distributed for people to learn more about gorillas and GRACE.

In partnership with GRACE, the community organisation SPEED-RDC led a procession for gorillas through the center of Kagheri, getting people of all ages involved in the celebration. A representative from Tayna Nature Reserve was invited to speak to the residents of Kagheri and answer their questions about gorillas and the forest. This was an important moment for building trust and understanding between the community and the different conservation groups working in the region.

Asked to share his favourite highlight from World Gorilla Day, GRACE Communications Manager Josias Kambale Kamaliro said, “all of the community – including the soldiers, local leaders, teachers – everyone was involved in the activities throughout Kagheri. Since that day, people have

known what GRACE is, where we are located, and what we do. They have promised to welcome us for future activities in Kagheri.”

As deforestation and habitat loss continue to threaten Grauer’s gorillas in eastern Democratic Republic of the Congo, GRACE Educators are working to address these threats by bringing conservation education to more communities. Honoré explained: “Kagheri is a new area for us, but it was memorable and something we have been thinking about for a long time. Now, the community here really respects and understands our mission and message as GRACE Educators. This event gave us roots in Kagheri and will help us continue to grow into additional villages.”

Located in a biodiversity hotspot and one of the last remaining strongholds for Grauer’s gorillas, GRACE is on a mission to inspire 100,000 hearts to take conservation action. Thanks to the dedication of the GRACE Education team and the support of local communities, we are proud to report that over 11,000 people (including 5,800 new contacts) were connected with Grauer’s gorillas this World Gorilla Day! The GRACE Education team is already planning for next year’s events, with a goal to expand the celebrations even further. Their commitment to community-led conservation is making a difference for people and Grauer’s gorillas in eastern D. R. Congo.

*Laurie G. Cummins and Honoré Kambale Masumbuko*

*GRACE’s 2022 World Gorilla Day celebrations would not be possible without the planning, coordination and support of the entire GRACE Team, including: Gracianne K. Basyanirya, Guy Simisi Mumbere, Josias Kambale Kamaliro, Faustin Muhindo Kibwana, Jackson Kabuyaya Mbeke, Katie Fawcett, Tommi Wolfe, and the communities of Katoyo, Kasugho and Kagheri.*



**Residents of Katoyo gather to add their thoughts on gorillas to the Pride Wall.**

*Photo: GRACE*



## D. R. CONGO



*The GRACE Education team outside the radio station*

*Photo: GRACE*

### GRACE Uses Radio for Conservation Education

The Tayna Nature Reserve, eastern Democratic Republic of the Congo, is managed in partnership with the local community and is home to the critically endangered Grauer's gorilla (*Gorilla beringei graueri*). In response to Ebola and COVID-19, the Gorilla Rehabilitation and Conservation Education (GRACE) Center opted to utilise radio for conservation education as an alternative to in-person programming in 2021.

Very little data exists on the ability of radio programming to positively impact conservation knowledge, attitudes, and behaviours, so GRACE used this time to evaluate our efforts. GRACE educators and international zoo advisors created a new radio campaign focused on the threats of human-wildlife disease transmission. Pre-/post-evaluations were conducted with 200+ individuals across 21 community neighbourhoods (Barazas). Solar-powered radios were provided. Programming was delivered in local languages and a variety of formats.

Knowledge increased, when the

campaign was run, as was shown in the post-evaluation scores: 100% of respondents reported that gorillas can get sick; 99% said gorillas and humans can get the same diseases; and 89% said practicing good hygiene can prevent gorillas from getting sick. In addition, 88% of respondents correctly reported information, which was only delivered through lyrics of a song

written specifically for the campaign. Furthermore, post-evaluation data indicated that radio can be effective at encouraging action: 100% of people surveyed told friends to listen to conservation programming on the radio. In the context of community led conservation, spreading awareness amongst the community is an important action for gorilla conservation. Findings support the use of radio, including the use of culturally relevant song, as an important and effective tool for conservation education.

Building on our findings, GRACE educators have designed and plan to launch and evaluate a new radio campaign in 2022 focused on the connection between human, forest, and gorilla health. The new campaign is expected to air beginning in October 2022. "Stay tuned" for updates on this exciting new radio outreach program!

#### **Summary of**

*Fawcett, K. et. al. (2022): Radio as a Tool for Conservation Education. International Zoo Educators Journal (International Zoo Educators Association) 58, 32–35*



*GRACE staff educator Gracianne interviewing for radio program*

*Photo: GRACE*



# GORILLAS

## As Temperatures Increase, Mountain Gorillas get Thirstier

Climate change is in the media on a daily basis, but the focus is often on arid ecosystems, while we rarely think about its impact on animals living in tropical rainforests. An increase in temperature may lead to changes in rainfall and patterns of fruit production by trees in rainforests. Additionally, the behaviour of animals may also change, such as their activity patterns or movement patterns. Uganda and Rwanda have already experienced the impact of climate change, with increased temperatures and frequencies of extreme weather events. Specifically, the mean annual temperature has increased by approximately 2.1 °C over the past 50 years, with the trend expected to continue in the coming decades. Additionally, rainfall has become less seasonal.

The goal of our study was to examine the relationship between the frequency of water drinking and maximum temperature and rainfall in habituated

wild gorillas from the two mountain gorilla populations (Bwindi and Virunga). Mountain gorillas very rarely drink water from streams, swamps, or puddles. This is because the plants that mountain gorillas eat contain a large amount of water, often accounting for more than 90 % of the wet weight of the plants. Nonetheless, as temperatures increase and weather patterns change, it is important to examine how endangered species such as mountain gorillas obtain sufficient water.

Using data from 21 gorilla groups in the two populations between 2010 and 2020, we found that the frequency of water drinking significantly increased at higher maximum temperatures than cooler ones. No relationship between water drinking and rainfall was found. The Bwindi gorillas drank water on about 6 % of days observed whereas the Virunga gorillas drank water on only 0.6 % of observation days. This difference between the two populations may be due to the overall lower temperatures in the Virungas (due to higher altitude). However, we also found that Virunga gorillas consumed more foods with higher water content

than Bwindi gorillas, which in part likely explains why they drink water much less frequently.

The results of this study revealed a higher dependence on free-standing water than expected in these rainforest-dwelling mountain gorillas that consume plants with high water content. Additionally, as temperatures are expected to continue to increase, the mountain gorillas may need to work harder to maintain their water balance via sources of free-standing water. Therefore, there are important implications for the conservation and behaviour of the mountain gorillas. First, an increase in the frequency of water drinking may lead to an increase in the risk of parasite exposure and compromise the health of the gorillas, especially in cases where the water sources are also used by local community members. Second, habitat use and ranging patterns of the gorillas may change as they rely more on water sources. Small streams and swamps are not evenly distributed throughout Bwindi and the Virungas and some of these water sources dry up seasonally. Future research to better understand

## GORILLAS our friends FOREVER

Uganda introduced gorilla tourism in Bwindi Impenetrable National Park in the early 1990s. At that time, the silverback Ruhondeza was the leader of the Mubare group, one of two groups that tourists could visit. Dieter Beller launched the campaign *Gorillas our friends forever* in June 2022 to mark the tenth anniversary of the death of this legendary gorilla. As part of the campaign, he is selling an Eco-Box with gorilla figures made of pewter and collecting donations. The proceeds help to fund environmental, nature and species conservation projects (for example,

projects ensuring the water supply for local populations). These projects will help to protect Bwindi and its gorillas in the future.

If you want to find out more about the campaign and the Eco-Box, you can find it at

[www.gorillafriends.org](http://www.gorillafriends.org)





# GORILLAS

the impact of increased water drinking would include monitoring water quality and quantity as well as creating a detailed map of water availability, to ascertain whether water is a limiting factor or not, and if the gorillas' ranging patterns are altered by the search for water.

Lastly, a notable aspect of this project is that it is a result of long-term data collection. Analysis of data leading to these findings would not be possible from data collection over a short period of one or two years. Furthermore, this project emphasises the value of collaborations between different organisations. The data on water drinking was from two long term research projects (Max Planck Institute for Evolutionary Anthropology in Bwindi and the Dian Fossey Gorilla Fund in Rwanda), the weather data for Bwindi was provided by the Institute of Tropical Forest Conservation, and the overall project was supported by the 'Vanishing Treasures' project of GRASP, which is part of the United Nations Environmental Program. By working together and sharing data, we can learn more and provide useful information for conservation management.

Martha M. Robbins

## Original Article

Wright, E., Eckardt, W., Refisch, J., Bitariho, R., Grueter, C. C., Ganas-Swaray, J., Stoinski, T. S., Robbins, M. M. (2022): Higher Maximum Temperature Increases the Frequency of Water Drinking in Mountain Gorillas (*Gorilla beringei beringei*). *Frontiers in Conservation Science* 3, 738820. doi: 10.3389/fcosc.2022.738820

## Study area within the Ebo Forest and recce track distribution

Map: Daniel Mfossa

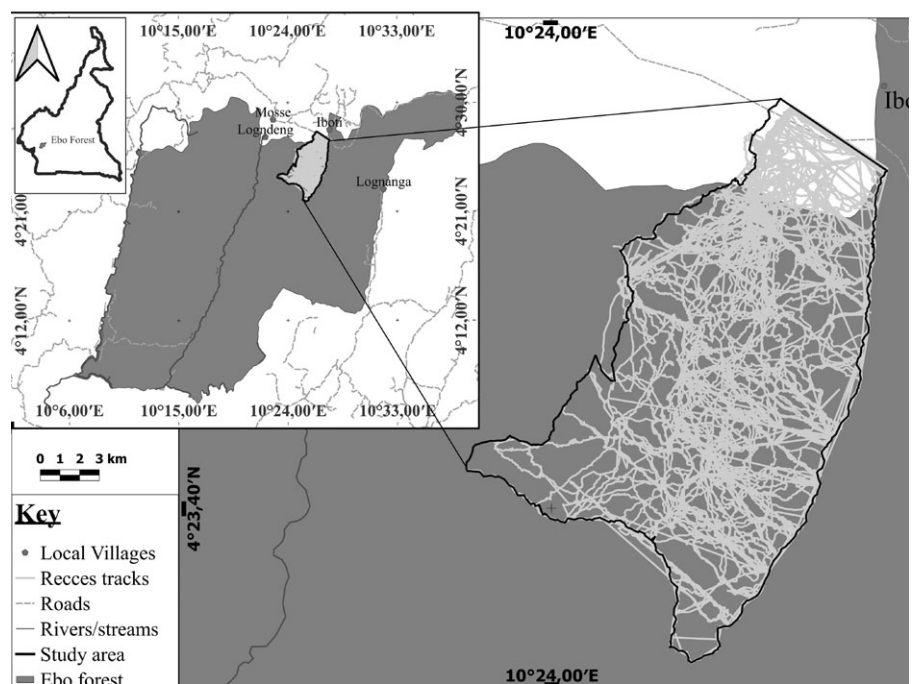
## Distribution and Habitat Use of Gorillas in the Ebo Forest

Although gorilla distribution and habitat use are fairly well known for many gorilla populations in Cameroon, very little is known concerning the Ebo population, probably one of the most threatened populations of western gorillas. The traditional threats to this isolated gorilla population include habitat loss and degradation related to settlement and subsistence farming expansion, logging and climate change. For example, in 2020, the entire Ebo forest was proposed for logging by the government of Cameroon. This led to protests and pressure from stakeholders including grassroots communities, leading to the suspension of the logging concession process. With no current legal conservation status for the Ebo forest, there is a continued risk that logging and other land use changes could threaten the local biodiversity.

Preliminary studies and informal interviews with local communities surrounding the Ebo forest from 2002 onwards suggested that the gorilla population is restricted to the north-eastern part of the forest. In our study from January 2013 to November 2017, we wanted to map the distribution of the gorilla population there and to assess habitat use mostly using indirect signs of gorillas including nests, faecal and feeding remains.

The study site (~39 km<sup>2</sup>) was identified from previous records of gorilla signs by the Ebo Forest Research Project between 2005 and 2011, and informal reports from local hunters. We used the recce survey method or random walks as opposed to line transect methods which facilitate future access by hunters and destroy more vegetation.

Recces involve walking in a predetermined direction, allowing for data collection on the spatial distribution of an animal population in remote areas by intentionally taking paths of least resistance which are permitted to devi-





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**A view of the Ebo Forest**

*Photo: Daniel Mfossa/ZSSD*

ate from the initial direction through the study area to some degree.

The study site is characterised by mature forest with sparse undergrowth and late successional large tree species. The forest canopy is generally closed (75–100 % covered), with minimal sapling undergrowth. Primary and very old secondary forest falls into this vegetation category.

Secondary forest covers areas affected by recent or old anthropogenic activities (logging, abandoned plantation or habitation) with the canopy moderately closed (50–75 % covered) or open (25–50 % covered), a relative dense ligneous and/or herbaceous undergrowth and presence of indicator trees or scrubs.

Grassland covers areas ranging from 50–3000 m<sup>2</sup> with scattered young trees and/or shrubs. In this vegetation category the canopy is open (25–50 % covered) or very open (0–25 % covered), and the dense or very dense herbaceous undergrowth is sometimes dominated by ferns and plants in the families Marantaceae and Zingiberaceae.

Swampy areas cover hydromorphic soil seasonally or permanently flooded, with a mixture of species principally characterised by high densities of hydromorphic plants and some water-adapted shrubs or trees.

Over the study period we surveyed 1935.8 km of recces in the study area and detected evidence of gorilla presence on 261 occasions. Based on the distribution of gorilla signs across the forest, the total estimated distribution of the population covered ~22 km<sup>2</sup> and was restricted to the central band of the study area. Both overall and for each season, gorilla signs were concentrated in the northern part of the study area. We observed a slight seasonal variation, with gorilla signs being more clumped during the dry season compared to the rainy season. Except for the southwestern part of the study area, evidence of human activities was prominent across the study area, including within areas with a high gorilla presence.

Mature forest was the most common habitat type throughout the study area (87.04 % coverage of the total),

followed by secondary forest (7.90 %). The extent of grassland and the swampy areas were comparable and covered 2.63 % and 2.43 % of the area respectively. Gorilla signs were recorded in the four main habitat types found in the study area; more than half of the signs were observed in the grassland (53.6 %) followed by the mature forest

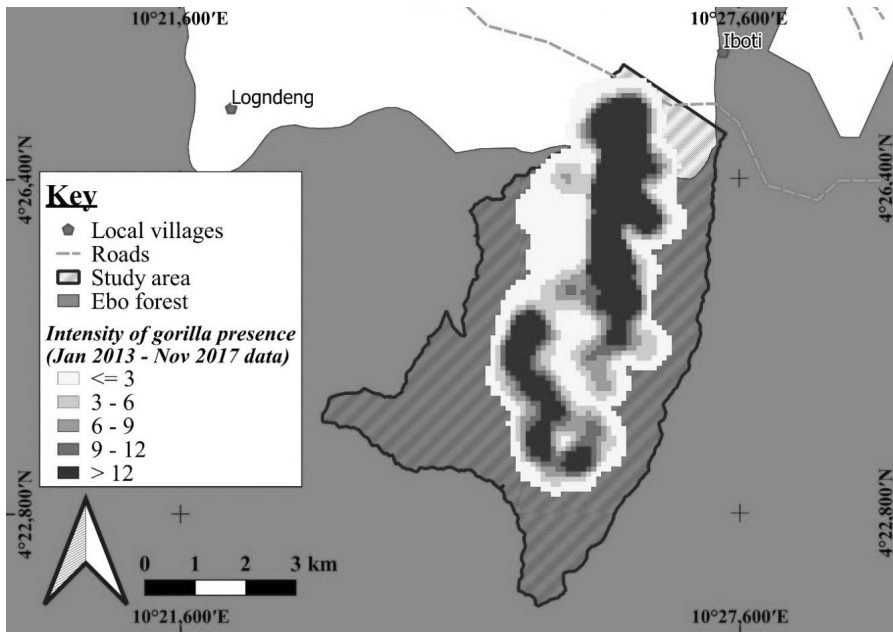
### **Human signs recorded in the study area from 2013 to 2017**

<b>Human signs</b>	<b>Number</b>
Used cartridge shells	340
Wire snares	110
Cut marks or machete cuts	72
Used batteries	52
Hunting trails	51
Footprints	21
Encounters	21
Gunshots	19
Hunting camps	14
Vocalisations	3
Abandoned logging roads	2
Other signs	6
<b>Total</b>	<b>711</b>





# GORILLAS



**Gorilla distribution in the Ebo forest**

Map: Daniel Mfossa

(37.9%). Very few signs were recorded in swampy areas (5.6%) and secondary forest (2.8%).

These results suggest that gorillas used grassland more than expected (53.6% of signs yet only 2.63% coverage) and mature forest less than expected (37.9% of signs yet 87.04% coverage). Gorillas tended to use the swampy areas more often during the dry season (57.14%), while they visited the secondary forest most during the rainy season. Other studies have revealed that gorillas show a preference for light gaps in the forest which provide them with a variety of herbaceous and fruiting plants as food sources and preferred nest-building materials.

The Ebo gorillas ranged over around 22 km<sup>2</sup> and were restricted to the central band of the study area. This result concurs with an earlier study which suggested that the gorillas may have a very limited distribution within the Ebo forest.

Although the indirect human impact on the Ebo gorilla population still needs

to be investigated systematically, the situation here could be less catastrophic than elsewhere, since gorillas are not currently targeted by hunters, at least partly due to sensitisation campaigns carried out by the community conservation association 'Clubs des Amis des Gorilles' (Gorilla Guardian Clubs) since 2012. This concurs with previous studies that have demonstrated that consistent conservation activities in local communities positively influence the preservation of wildlife species.

Further studies using alternative survey methods are essential to determine accurately the population size and dynamics, to shed light on the status of this population, and to clarify its taxonomic status through genetic studies. We recommend promoting and supporting sustainable alternative livelihood projects for the benefit of the local population that should, if implemented appropriately, reduce pressure on the gorilla habitat.

Daniel Mbouombouo Mfossa, Ekwoge Enang Abwe and Bethan J. Morgan

## Original publication

Mfossa D. M., Abwe, E. E., Whytock, R. C., Morgan, B. J., Huynen, M.-C., Beudels-Jamar, R. C., Brotcorne, F. & Tchouamo, R. I. (2022): Distribution, habitat use and human disturbance of gorillas (*Gorilla gorilla*) in the Ebo forest, Littoral Region, Cameroon. *African Journal of Ecology* 00, 1–13

## Understanding Visitors at Tourist Sites to Protect Great Apes from Disease

Nonhuman great apes (bonobos, chimpanzees, eastern gorillas, western gorillas and orangutans) are particularly vulnerable to infectious diseases from humans because of our close genetic relatedness. This vulnerability is highest in close-contact activities such as tourism and research. While these activities can assist conservation efforts, there are also well-documented health risks. With the COVID-19 pandemic reviving concerns for disease transmission, the "Protect Great Apes from Disease" initiative was born (see [www.protectgreatapesfromdisease.com](http://www.protectgreatapesfromdisease.com)).

At an early stage of the pandemic (pandemic announced 11 March 2020 and data collected from 19 January to 27 February 2021), our team aimed to develop visitor education and guide training materials for use in African sites with great ape tourism (where you can find all great apes except orang-





# GORILLAS

utans). To do so, we first conducted research focused on these sites and explored what factors seem important to explain visitors' compliance with disease mitigation measures. For example, we wanted to characterise practices during past visits (e.g. if people think visitors are generally compliant with recommendations), assess visitors' willingness to comply with disease mitigation measures (e.g. would they wear a facemask during trekking to protect great apes?) and explore what factors should be promoted to increase their willingness to follow recommendations (e.g. were those more compliant more likely to be aware about potential impacts?).

To answer these questions, 989 past and potential future visitors from 58 countries took our online questionnaire adapting the Health Belief Model, one of the most commonly used public health frameworks for understanding why individuals may or may not act in the face of a threat to health.

Among the 989 survey participants, tourism was generally perceived to pose health risks to the great apes, but also contribute to their conservation. When considering visitor expectations at great ape tourism sites (i.e. duration, distance, photographs and use of personal protective equipment – PPE), 32–41% of survey participants valued being close to great apes, as well as spending a long time with them.

Survey participants reported a high degree of willingness to undertake multiple protective measures before, or when, visiting great apes. At this early stage of the pandemic when vaccinations were not yet widely available, respondents expressed less willingness to comply with getting vaccinated against COVID-19 before visiting great apes. They also expressed less willingness to wear a facemask during trekking (but were willing to wear a facemask when viewing the apes) and quarantine after international

travel before visiting great apes, with 5–15% of them reporting no/low willingness to comply (and 5–9% being neutral). Self-reported barriers to complying with mitigation measures related mainly to: difficulties in implementing quarantine (e.g. excessive costs and delays); difficulties in wearing a mask

during trekking (e.g. heat and humidity); poor compliance and enforcement (e.g. lack of standardisation across areas); uncertainty in planning and diagnostic (e.g. disappointment due to missing out and difficulties in distinguishing symptoms); limited access to resources (e.g. COVID-19 tests, vac-

**Protect Great Apes from Disease**

GREAT APES ARE OUR CLOSEST LIVING RELATIVES AND SHARE MANY SIMILARITIES WITH US. THEY ARE ALREADY THREATENED WITH EXTINCTION AND ARE AT SERIOUS RISK FROM INFECTIOUS DISEASES.

**Tourism and disease risk**

WE ALL HAVE THE POWER TO PROTECT GREAT APES!

GREAT APE TOURISM CAN SUPPORT LOCAL LIVELIHOODS AND CONSERVATION EFFORTS BUT THERE ARE HEALTH RISKS TO GREAT APES. WITH HUMAN RESPIRATORY VIRUSES A MAIN CAUSE OF DEATH.

**Follow scientific advice to protect great apes**

HEALTH WE ARE ONE HEALTH

TAKE A TEST | WEAR A MASK CORRECTLY | CHECK YOUR TEMPERATURE

LISTEN TO YOUR GUIDE | USE HAND SANITISER | REPORT ANY SYMPTOMS

UNIVERSITY OF EXETER | ZOO SCIENCE | RGS | wild HIGH | HELMHOLTZ Institute for One Health

More information: [www.protectgreatapesfromdisease.com](https://www.protectgreatapesfromdisease.com)

Designed by jenny.colors.com



## READING

cines); and concerns about physiological needs.

By obtaining feedback from the visitors to wild African great ape tourism sites we were able to identify ways of improving measures to reduce disease transmission. This is important not only for COVID-19 but other infectious diseases too, particularly at early stages of future pandemics when information is generally limited but preventive action is required. In the face of growing threats from future pandemics, we must minimise disease transmission while ensuring that tourism and research promote long-term support for conservation of great apes and their habitats as well as maximising benefits for local communities.

Ana Nuno, Chloe Chesney and Kimberley J. Hockings

### Original publication

Nuno, A., Chesney, C., Wellbelove, M., Bersacola, E., Kalema-Zikusoka, G., Leendertz, F., Webber, A. D., Hockings, K. J. (2022): *Protecting great apes from disease: Compliance with measures to reduce anthroponotic disease transmission. People and Nature* 4 (5), 1387–1400

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**“We’ll keep our forests, you keep your dollars!”** Local voices against Congo’s oil auction. September 2022. 20 pages. Download PDF (1.9 MB): <https://www.greenpeace.org/static/planet4-africa-stateless/2022/09/38e752f8-oil-blocks-report-english-v1.2.pdf>

**Boaventura Monjane, Chris Lang, Dercy Teles de Carvalho, Euridse Samuel, Izzuddin Prawiranegara, Joanna Cabello, Jutta Kill, Larry Lohmann, Letícia Yawanawa, Mu-yissi Environnement, Natacha Bruna, Prince Lungungu, Tamra L. Gilbertson, Tom Goldtooth and the WRM Secretariat**

**15 Years of REDD:** A Mechanism Rotten at the Core. 109 pages. Montevideo (World Rainforest Movement) 2022. <https://www.wrm.org.uy/publications/15-years-of-redd-a-mechanism-rotten-at-the-core>

Download PDF English (6.9 MB): [https://www.wrm.org.uy/sites/default/files/2022-05/REDD\\_15\\_%20years\\_ENG.pdf](https://www.wrm.org.uy/sites/default/files/2022-05/REDD_15_%20years_ENG.pdf)

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# BERGGORILLA & REGENWALD DIREKTHILFE

## 2022 Members' Meeting

Finally a reunion with a full program! A total of 51 participants from all over Germany made their way to this year's meeting in Hanover. The meeting began with Angela Meder from the Board of Directors briefly informing the participants about the worrying crisis situation in eastern Congo and the organisation's projects with the eastern and western gorillas. Fellow board member Burkhard Bröcker then made a presentation about how corporate partnerships have become increasingly important for the organisation in recent years. For example, cooperation with the German Postcode Lottery has enabled regional projects in the vicinity of the Maiko National Park to be financed.

Three researchers also presented information about exciting develop-

ments from their areas of expertise. Veronika Städele, now at the German Primate Center in Göttingen and formerly at the Max Planck Institute (MPI) for Evolutionary Anthropology in Leipzig, gave a lecture on the analysis of Y-chromosomal DNA in free-living gorillas. From this, conclusions can be drawn about the migration movements and population sizes of the gorilla subspecies.

Winnie Eckardt, primatologist at the Dian Fossey Gorilla Fund (DFGF) since 2004, joined the meeting via video-link from Rwanda. In her presentation, she discussed the influence of different lengths of care periods on the development of young gorillas. Members also learned that contact between the gorillas and researchers from the DFGF had been reduced during the COVID-19 pandemic.

Anne-Céline Granjon, who previous-

ly also worked at the MPI, reported that during her time there, an increase in the number of mountain gorillas was determined which was very encouraging. She described how in 2015, more than 100 people in international teams took faecal samples from the gorillas' sleeping nests over a period of 3 months, after which the samples were then examined by the researchers. A second survey was carried out in 2016.

At the conclusion of the meeting, the participants met for a group dinner at the Zoo's "Hoflokal" restaurant, with conversations lasting until late into the night. On the same night, the zoo also hosted a festival which included arts and crafts and hip-hop performances. Unusual sounds in the zoo, for both animals and visitors.

On Sunday, the group turned its attention to the zoo's animals: Klaus Meyer, gorilla keeper at Hanover for over 45 years, and curator Fabian Krause discussed their work with the Hanover gorillas and how it has been such a great success for the zoo.

*Marieberthe Hoffmann-Falk*

*Photo: Manfred Hartwig*



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Many thanks to all donors, also to those we could not name here!