



# ***Gorilla Journal***

*Journal of Berggorilla & Regenwald Direkthilfe*

*No. 67, December 2023*

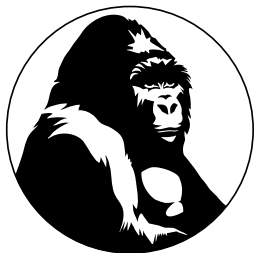


**SOS – Gorillas  
of the Itombwe  
Nature Reserve in  
Danger**

**The Kansere-  
Masakaru-Iyuma  
Forests in Utunda-  
Nord**

**The Imperative  
of Social and  
Ecological Justice  
in Kahuzi-Biega**

**The impact of  
Tourist Visits on  
Mountain Gorillas**



# BERGGORILLA & REGENWALD DIREKTHILFE

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### Gorilla Journal 67, December 2023

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Cover: A ship at the informal Ibanda Port on the edge of Lake Kivu being loaded with charcoal and timber from Kahuzi-Biega National Park's highland sector. The ship will travel to Goma over night where the goods will be sold at urban markets. Photo: Fergus O'Leary Simpson

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In 2023 he was appointed General Director of the Institut Supérieur de Conservation de la Nature, Environnement et Tourisme de Rumangabo, ISCNET-Rumangabo.

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### SOS – Gorillas of the Itombwe Nature Reserve in Danger

An SOS is a 'red alert' signal triggered by a dangerous or life-threatening situation, such as a natural disaster. Here it is suggested that an ecological distress signal is launched at the Itombwe Nature Reserve (RNI), to call for urgent rescue of gorilla and chimpanzee populations in danger of decimation. Currently, managers and eco-guards as well as trackers are 'losing control' of these great apes, following the misunderstandings and tense situations that exist between the RNI and the local population due to interpretation of the law on nature conservation in the Democratic Republic of the Congo (DRC), which is based on the Convention on Biological Diversity (CBD).

This law should have included benefit-sharing mechanisms for local and indigenous forest communities in terms of Access and Benefit Sharing (ABS; access and fair and equitable sharing of benefits arising from the exploitation of genetic resources).



*A patrol ready to leave for the Itombwe Reserve*

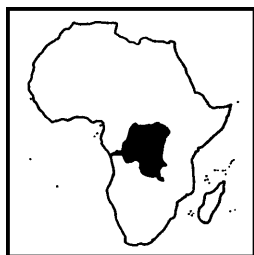
*Photo: ICCN*

The local population blames the managers of the RNI as well as the Congolese government because since the creation of the Itombwe Nature Reserve in 2006 and the promulgation of the law on nature conservation in 2014, nothing has been granted to the local communities. Yet these communities ceded their forest with the hope of receiving benefits according to article 60 of the law. The lack of Access and Benefit Sharing with the local population leads to distrust and withdrawal from the process of joint conservation of the RNI. This in turn threatens achievement of the conservation targets of the RNI which include gorillas and chimpanzees. We deplore the current deterioration of the goodwill which prevailed between the RNI and the population during the land transfer (2006 and a few years later) given that their cooperation protected gorillas in a reserve with an area of 5,732 km<sup>2</sup> and a staff of about 42 agents.

The words often used in matters of the environment and natural resource management, such as conservation, protection, preservation, safeguarding, and management have a 'legal' connotation, because 'regulation or prohibition' allow people to intervene in natural processes without deviation from the law or respect for standards in this area. If not, doing so consti-

### **We Need Translators!**

**Would you like to translate texts from French to English for the Gorilla Journal? We need people who know French well and are speaking English fluently. If you are interested in becoming part of our volunteer translator team, please contact Angela Meder at [meder@berggorilla.org](mailto:meder@berggorilla.org)**



## D. R. CONGO

tutes a “violation of legal principles/provisions”. However, if the law is not well explained and well applied, it may be misunderstood and applied in a way that causes conflicts between those who respect it and those subject to it. This is the case of the difficulty of applying Law No. 14/003 of February 11, 2014 relating to nature conservation, mainly Article 60 in the RNI at present.

### Towards the loss of traces of the Itombwe gorilla

After several years of persistence and effort, eco-guards and trackers discovered, and in 2021 photographed, a silverback gorilla in the reserve. However, he is no longer followed. The objective was to find proof for scientists and the conservation world that gorillas of the subspecies *Gorilla beringei graueri* do indeed exist in the RNI. This silverback gorilla was followed for two reasons:

1. for his protection and for data collection (Biomonitoring);
2. for his habituation to human presence with a view to promoting eco-

tourism at the RNI, which is a real source of financial income for the self-financing of the site and also for remuneration to the local population and indigenous forest peoples of the Itombwe Massif in terms of ABS as provided for by the CBD in its objective 3 and the new law of 2014 relating to nature conservation in the DRC, in its article 60.

### Like gold plated

In reality, no one can say that the DRC does not have fine legal instruments. These exist and are better and adapted to international principles. Unfortunately, it is difficult to implement the law due to a lack of support resources. The new Law (2014) relating to nature conservation in the DRC is a legal instrument which dates back almost 10 years. But to date it has not allowed the implementation of some of its mechanisms, and without these mechanisms, the new Law of 2014 will ‘contradict’ itself (see next paragraph).

From the outset it is appropriate to first make “an analytical retrospective of the explanatory memorandum of

the 2014 law relating to the conservation of the nature of the DRC, and also to highlight certain articles of this law, in particular the articles (52, 57, 59 and 60) which provide for the need to sign decrees which define not only the mode of management and application but also sources of financing for the sharing of benefits in favour of the population living in and around IUCN category VI areas”, of which the RNI is a part.

The article which causes dissension between the managers of the Itombwe Nature Reserve and the local population and which favours the loss of traces of the silverback gorilla in the RNI is the difficulty for the RNI to carry out the requirements of the article 60 of the 2014 law. This article should provide local communities and indigenous forest peoples with financial (monetary) and non-financial benefits. The non-financial benefits do not interest the population, because they find such benefits in the forests of the RNI hinterland which are community forests. Only the financial (monetary) benefits are of interest to the local communities and in-

### Support for Itombwe

Some patrols are carried out in the Itombwe Reserve with support from B&RD. However, their numbers are far from sufficient and they are very poorly equipped. Only a part of the reserve is patrolled regularly, although patrols are also necessary in the remainder of the reserve to ensure protection of the forest and the animals that live there. The men lack equipment and food. They have to carry heavy packs, which makes collecting data very difficult while travelling.

Many things are needed to facilitate existing patrols and to make additional patrols possible:

- rations (400–500 USD/month)
- medical care (100 USD/month)
- equipment (GPSs, rubber boots, uniforms, raingear, sleeping bags, medicines, tents and cooking utensils ...)
- wages for porters to carry the camping equipment
- bonuses to increase motivation

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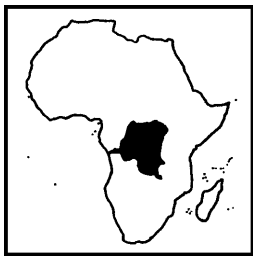
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**If these funds were available on a sustained basis, one or two additional patrols per month could be organised. Help us to make this possible!**

You are also welcome to donate via PayPal if you prefer this:  
<http://www.berggorilla.org/en/help/donate>

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indigenous peoples of the Itombwe forest massif.

The gorillas of the RNI are threatened with extinction because of delays in the implementation of the provisions of article 60, which provide for the payment to the population of monetary and non-monetary benefits by the national government through the signing of a decree, even though provided for by the CBD.

However, at the RNI, the monetary redistribution preferred by the population of the Itombwe forest massif has not occurred. As a result, local communities and indigenous peoples have disassociated themselves from conservation efforts. There is a distrust and lack of confidence in managers, and hunting of the wild fauna of the RNI occurs, without protection of flagship species such as gorillas and chimpanzees.

The dissension between the population and RNI agents has resulted in an angry population who prevent eco-guards from carrying out surveillance activities in one of three gorilla sectors, which is closest to the RNI headquarters and easy for tourists to visit

the gorillas without traveling a long distance.

This is the reason that eco-guards are not monitoring gorillas, including the silverback gorilla photographed in 2021, meaning his location is unknown and he is not protected. The eco-guards have reduced the frequency of their monitoring, as they are afraid of the risk of violating traditional 'prohibitions' decreed by traditional leaders who have not received the promised financial benefits. The local population expect these financial benefits be shared with them as soon as possible if gorillas are to be saved from extinction.

Local communities and indigenous peoples, especially from the Itombwe forest massif, benefit from non-monetary benefits in the RNI. However, these benefits are not fundamental for their survival. For them, their vital needs can only be met through financial benefit (money). But how can the managers of the RNI respond to this demand or satisfy it to some extent, when they do not have access to funding for the reserve? At the RNI we are in the final stages of planning the work

while awaiting possible financial revenues which to satisfy the financial request made by local communities and indigenous peoples of the Itombwe forest massif. These planned activities include:

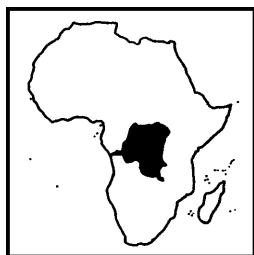
- Demarcation of the external limits of the reserve, outside natural limits such as watercourses. We forecast the need for 59 signs to be installed over a distance of 59 km. At present, 51 signs are distributed over 51 km as follows: (1) 10 signs in Ulindi Sector; (2) 12 signs in Mulombozi Sector; and (3) 29 signs in Elila Sector. Two sectors need signage: Kiboyoka and Mwana.
- Location of gorillas and habituation of gorillas for tourism, to bring in tourist revenue.
- Approach institutional partners who can support the efforts of our traditional partners (Berggorilla & Regenwald Direkthilfe), because more funding is needed to support: the local population, anti-poaching patrols, patrol equipment, construction of infrastructure, management of agent performance bonuses, strengthening of professional capacity of agents, financing of socio-economic support for the population.
- RNI funds can be supplemented through fines, but managers of this reserve prefer to initiate anti-poaching actions by raising awareness among poachers arrested in the reserve, instead of imposing fines on them.

In reality, it is up to the ICCN to push for the signing of the decree referred to in article 60 of the new law in order to allow the RNI to work well, to mobilize partners of the RNI for financial support which would allow the financial needs of the population to be met and support the relaunch of gorilla monitoring activities and the motivation of the RNI eco-guards and trackers, otherwise



*A patrol in the Itombwe Reserve*

*Photo: ICCN*



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the gorillas and chimpanzees of the RNI will remain exposed to the risk of extermination through poaching.

*John Baliwa Ngoy*

## The Kansere-Masakaru-Iyuma Forests in Utunda-Nord

The Kansere-Masakaru-Iyuma forests are located between the Usala Gorilla Reserve (RGU) and the Kisimba-Ikobo Primate Reserve (RPKI), in the vicinity of Nyamemba village, groupement Utunda-Nord, Walikale territory, North Kivu province in the east of the Democratic Republic of the Congo. These forests are traditionally managed by local Nyanga leaders. These indigenous communities cut a few tree branches, but never entire trees. They consider the forest and the creatures that inhabit it as members of their families which, according to their ancestral customs, were left to them by their ancestor KIMINA.

For around five years, we have been carrying out reconnaissance and biodiversity assessment patrols in these forests from time to time, which has enabled us to report on the status of these forests.

The forests are bounded to the east by the Bilate River, to the west by the Watu River, to the north by the Kororo River and to the south by the Okowa and Chase Rivers. Several watercourses flow into these rivers, including the Manga, Mariba, Mbombo, Afari, Mpene, Kikoshu, Busonja and Akindabine, as well as several swamps, all of which are rich in fish and other aquatic species.

Biodiversity is essential to human well-being, the health of the planet and the economic prosperity of all people. We depend on it for food, medicine, energy, clean air and water, protection against natural disasters, recreation and cultural inspiration, and it sustains

all life systems on earth. Our ancestors understood this even before colonisation, which is why our forests remain intact.

The vision of the Kunming-Montreal Global Biodiversity Framework is of a society living in harmony with nature, where “by 2050, biodiversity is valued, conserved, restored and wisely used, so as to safeguard ecosystem services, the health of the planet and the essential benefits that all people enjoy”.

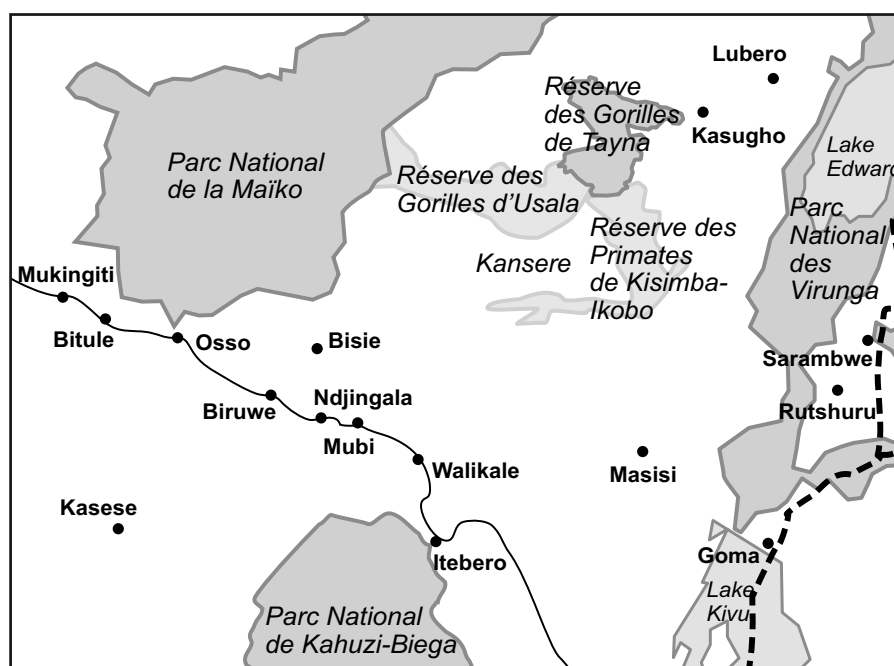
These forests have never been part of any plan to create community reserves, nor have they been part of any conservation organisation – only the local population defines the land use patterns in the area. The local people depend on the forest for their livelihoods: they practise subsistence farming, hunting, gathering and artisanal mining. Thanks to the conservationist spirit of the area’s local leaders, and despite their not belonging to any conservation organisation or association,

the area remains rich in biodiversity, with emblematic species such as gorillas, okapis, chimpanzees, forest elephants and forest buffalos, and other protected species such as red colobus, armadillos, Congolese peacocks and pangolins. Hunting is regulated, respecting the species protected by Congolese law.

As it contains many protected species, this is an area of high conservation value.

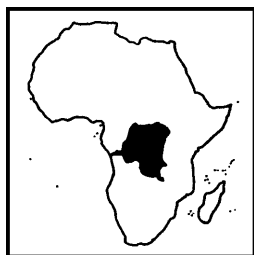
The flora is characteristic of the vegetation of lowland mountain forests and tropical rainforests. The climate is equatorial. The area contains a large swampy area resembling a peat bog and mangrove. The forests deserve special attention. Due to the lack of intervention, numerous cases of poaching of chimpanzees, gorillas, okapis and pangolins have been reported in the area, according to the testimony of local chiefs.

Large trees are found in areas that



*A few of the many areas where forest is protected by local communities in the Grauer's gorilla distribution area.*

*Map: Angela Meder*



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are not swampy. The swamps contain trees of medium size (up to 15 m).

In view of the threats to these forests, there is an urgent need to launch conservation activities in the area. The new conservation system setting out the terms and conditions for allocating forest concessions to local communities (CFLC) is an important solution for the effective protection of threatened species in these forests (Decree No. 014/018 of 02 August 2014, especially Articles 19 and 20 paragraph 4). Community conservation activities should be included to facilitate proper management and monitoring of biodiversity.

### Challenges:

- illegal activities in the forest, particularly poaching, gold mining and the search for minerals
- the lack of financial resources to carry out research

### Needs and priority actions:

- maintain the ecological corridor linking the two nature reserves (RGU and RPKI)
- where possible, monitor large mammals and gorillas
- support the community reserve ini-



**Large swampy valley area (here during the dry season, there are small dry places)**

Photo: Papy Kabaya Mahamudi Eustache

- initiative and community forestry
- strengthen protection laws for gorillas and chimpanzees, including forest protection laws, and enforce them

- raise awareness of nature conservation laws
- support and equip trackers and guides
- support surveillance and anti-poaching activities
- build local capacity through training

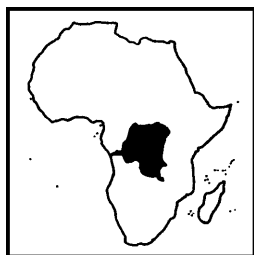
### Results of a biodiversity assessment in the Kansere Forest

Number	Species	Species encounter rate/km
11	Eastern gorilla ( <i>Gorilla beringei graueri</i> )	0.55
14	Eastern chimpanzees ( <i>Pan troglodytes schweinfurthii</i> )	0.70
7	Okapi ( <i>Okapia johnstoni</i> )	0.35
18	Forest buffalo ( <i>Syncerus caffer</i> )	0.90
9	Giant pangolin ( <i>Manis gigantea</i> )	0.45
2	Leopard ( <i>Panthera pardus</i> )	0.10
4	Aardvark ( <i>Orycteropus afer</i> )	0.20
7	Water chevrotain ( <i>Hyemoschus aquaticus</i> )	0.35
3 groups	Red colobus ( <i>Piliocolobus badius</i> )	0.15
5	L'Hoest's monkey ( <i>Cercopithecus l'hoesti</i> )	0.25
4	Hamlyn's monkey ( <i>Cercopithecus hamlyni</i> )	0.20
13	Red river hog ( <i>Potamochoerus porcus</i> )	0.65
+	Bay duiker ( <i>Cephalophus dorsalis</i> )	+++
9	Yellow-backed duiker ( <i>Cephalophus silvicultor</i> )	0.45
6	Black duiker ( <i>Cephalophus niger</i> )	0.30

### Awareness raising and education:

Encourage new awareness raising initiatives for the preservation of forest biodiversity and gorillas in particular.

**Community development:** Everything needs to be done or redone. Armed conflict in the region has devastated local communities, threatening their livelihoods. The human residents of the area are now living in miserable conditions. If the gorillas are to survive in this terrible social context, it is imperative to develop long-term programmes to combat poverty, identify long-term support solutions for the human population and set up environmental education programmes.



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### Conclusion and thanks

We cannot end this short report without thanking all those who have contributed to the realisation of this work. Our sincere thanks go to the Gorilla Organization (GO) for supporting this work in Kansere. Community conservation by local people is a very good initiative. It helps to protect natural resources and local ecosystems. These initiatives should be supported, because without the appropriate resources, especially in remote areas, it is difficult to guarantee the long-term health of ecosystems and biodiversity.

*Papy Kabaya Mahamudi Eustache*

### Basket-weaving Training Project for Adolescent Mothers in Mt. Tshiaberimu

Mt. Tshiaberimu, a mountain range on which Grauer's gorillas are protected in the Virunga National Park, is surrounded by several villages. The main activity of the villagers is agriculture. Apart from a few fish ponds, there are no local businesses or other means of generating income. Without any means of subsistence, the population of these villages lives in precarious conditions.

The consequences of these living conditions are manifold. To provide an illustration, the doctor at the Vurusi health centre warned of an increase in the number of adolescent mothers around Mount Tshiaberimu. These adolescent mothers live in difficult conditions and are unable to pay for the health care for their children, or even to send them to school.

This prompted us to try and understand how they live. After a number of consultation sessions with the local population of Mount Tshiaberimu, we found that most of them live off the park's resources. In fact, to be able to provide for these young girls, the perpetrators of their pregnancies try to

use the park's resources as financial means to look after them.

All agricultural goods are transported in traditional baskets from the fields to the villages and from the villages to the markets. Several thousand people use these baskets for transport. The baskets are all made from bamboo. Although some local bamboo plantations help to provide materials for these baskets, it turns out that a large proportion of these baskets are made from bamboo that grows in the park. This contributes to the destruction of gorilla habitat.

We initiated a project to promote weaving baskets using synthetic strings instead of bamboo fibre. These ropes are sold in Butembo, about 37 km from Vurusi. The advantage of these ropes is that they can be woven quickly, and the baskets are very light, strong, resistant and easy to mend.

The direct beneficiaries of the project are 30 women, including 24 adolescent-mothers, 4 widows and 2 track-

ers' wives. These women were identified by the managers of three health facilities around Mount Tshiaberimu, namely the Vurusi, Kyondo-Mowa and Kisanga health centres. After identifying the beneficiaries, their training lasted 4 days, from 29 March to 1 April 2023, during which they learned all the steps involved in weaving: how to hold the strings to cut them, weaving the bottom of the basket, weaving the corners, the body, the end and the handle of the basket. Each woman signed a deed of commitment pledging to continue the activities after the project's support and guidance ended.

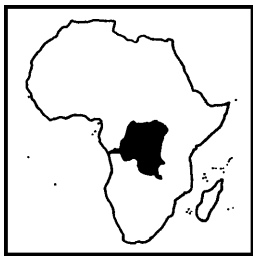
During the training, the women wove 60 baskets. One month after the training, they had woven 476 baskets. By the end of September 2023, 792 baskets had been woven, making a total of 1,328 baskets. The remaining rolls will allow the weaving of 900 baskets. This will make a total of 2,228 baskets. As each basket is sold at an aver-



*During the training for basket-weaving*

*Photo: Kasereka Gervais*





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age of 2 US dollars, this could provide them with a significant profit. Indeed, after deducting the costs of the training and the transportation of the equipment, the project showed a profit of 2,770 US dollars.

Assuming that one stem of mature bamboo can be used to weave one basket, this project made it possible to protect 2,228 bamboo stems. Other activities associated with bamboo cutting, such as trapping and collecting other unlined forest products, would also no longer be carried out.

*Claude Sikubwabo Kiyengo*

## Balancing Act: The Imperative of Social and Ecological Justice in Kahuzi-Biega

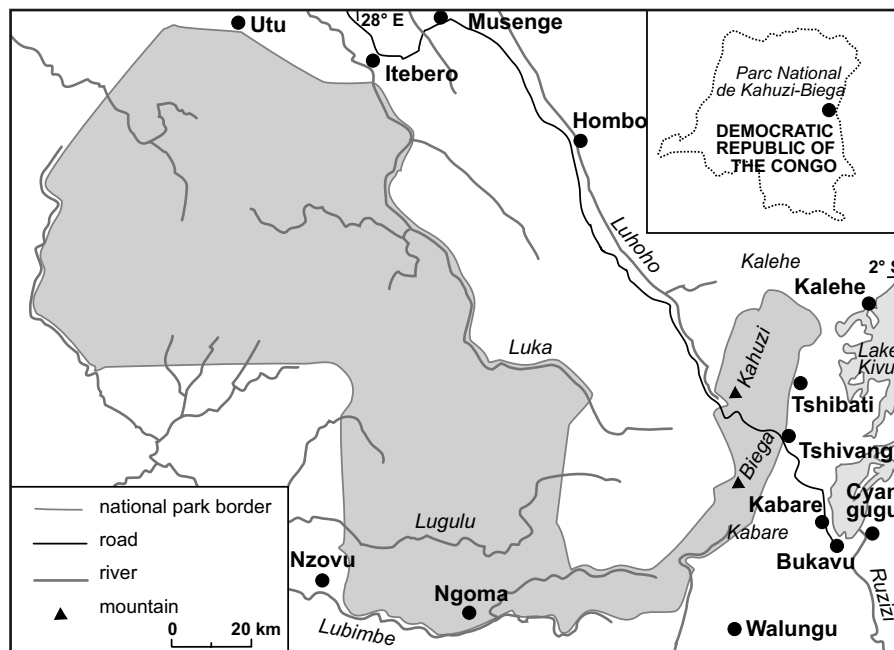
Kahuzi-Biega National Park, a UNESCO World Heritage Site located in the conflict-afflicted eastern Democratic Republic of the Congo (DRC), has recently been thrust into the global spotlight. Widely renowned as a sanctuary for critically endangered eastern lowland gorillas, it has become emblematic of the ethical challenges that surround conservation efforts.

The park has been embroiled in controversy since 1970 when an indigenous group, known as the Batwa, was forcibly displaced from their ancestral lands and forests, which were transformed into a national park in the name of conservation. This displacement left the Batwa impoverished and marginalized, forcing them to reside among other communities at the forest's edge for more than half a century. The controversy reached a boiling point in 2022 when Minority Rights Group (MRG) triggered international outrage with its report titled *To Purge the Forest by Force* (Flummerfelt 2022). The report presented evidence of severe human rights violations committed against Batwa people living inside the park.

This recent episode of violence began in October 2018 when groups of Batwa forcefully returned to the park. Following what they perceived as a string of broken promises by park authorities and the government to secure them lands and alternative livelihoods outside the park, members of the Batwa community were determined to reclaim their ancestral forests. In response, armed park guards, in collaboration with the Congolese military, launched brutal campaigns to expel them from the park. MRG's report documents three military operations that occurred between 2019 and 2021, targeting at least seven Batwa villages within the park. According to the report, these operations resulted in the deaths of a minimum of 20 Batwa individuals, with over 30 reported cases of sexual violence, and the displacement of hundreds of Batwa from makeshift settlements within the park.

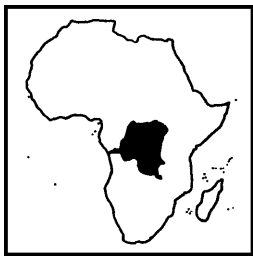
In response to these revelations, MRG and other indigenous rights

NGOs have called for the discontinuation of international financial support for the park, with a specific focus on ending what have been described as its 'militarized' conservation practices. This appeal gained traction when, on July 5, 2023, influenced by the advocacy efforts of MRG and other organizations, the French Development Agency (AFD) terminated its 12 million euro funding initiative for the park (Africa Intelligence 2023). AFD's decision garnered praise from Survival International (2023), an NGO dedicated to advocating for the rights of indigenous peoples, which celebrated it as a significant triumph for Batwa resistance. Survival International is now urging the German government, another major sponsor of the park, to withdraw its support. Fiore Longo, leader of Survival International's Decolonize Conservation campaign, asserts, "Now the German government must follow suit, otherwise it will stand on the wrong side of history. Its silence in the face of



**Kahuzi-Biega National Park**

*Map: Angela Meder*



## D. R. CONGO

these atrocities is shameful” (Survival International 2023). MRG also demands the removal of “all restrictions on Batwa’s usage rights with respect to their territories and resources” (Luoma 2022: 49). This is rooted not only in social justice considerations but also in the belief that the Batwa are the best custodians of their ancestral lands. Based on this logic, the most effective way to achieve positive conservation results is, therefore, to return the park to the Batwa again.

Before I get into my argument, let me be unequivocally clear: all acts of violence against civilians must be condemned and run counter to the principles of ecological and social justice. Nonetheless, broad calls to withdraw funding and return the park to the Batwa overlook the intricate realities of conservation within the Kahuzi-Biega landscape. While these demands are an understandable response to the injustices inflicted upon numerous Batwa people over the preceding decades, they are unlikely to lead to less violent outcomes or the protection of the park; in fact, they could even exacerbate the situation.

Drawing from extensive ethnographic field research in villages surrounding Kahuzi-Biega National Park since 2019, including my PhD and postdoctoral research, I am going to make two key points. First, the intricacies involved in ethically managing a protected area in a conflict zone necessitate an increase, rather than a decrease, in financial support for the park. Second, the Batwa do not consistently fit the idealized stereotype of forest guardians, suggesting a simple restoration of land rights may not align with conservation goals.

### **The dilemma of conservation in a conflict zone**

Since the 1990s, Kahuzi-Biega National Park has found itself at the centre of a web of multiple armed conflicts.

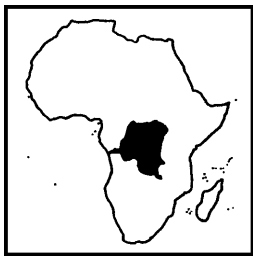
These peaked in the aftermath of the Rwandan genocide in 1994, resulting in a proliferation of armed groups within the park’s borders. Among them were ex-Rwandan government members and the Interahamwe youth militia, who sought refuge in the park and eventually formed the FDLR rebel movement. Subsequently, local defence forces, known as the Mai Mai and Raia Mutomboki, emerged, further worsening the security situation. Recent reports indicate that a minimum of 15 armed groups are active in the park’s vicinity (Kivu Security Tracker 2019). Over time, some of these groups have shifted their focus to exploit the park’s mineral resources, including gold, coltan, and cassiterite.

The consequences on people and nature have been devastating. During Congo’s wars, when park guards were disarmed, and their patrols were suspended, poachers decimated the population of eastern lowland gorillas in the park’s highland sector, which dropped from 258 in 1990 to just 130 in 2000 (Spira et al. 2016: 6). Furthermore, forest elephants were eradicated from the same region of the park. Up until today, villages surrounding the park are hotspots for looting, kidnappings, banditry, and sexual violence carried out by armed groups. A noteworthy incident involved an armed group led by a former army captain named Chance Mihonya. In 2019, Chance falsely claimed to be a Mutwa (the singular of Batwa in Swahili) in an attempt to justify his mining activities inside the park. The presence of this armed group forced the local population to abandon their homes and farms, particularly in the vicinity of Kabushwa locality, which is situated near the park in Kabare territory. Chance was eventually captured by park guards working in collaboration with the military and subsequently sentenced to life imprisonment for a wide array of crimes, which encompassed murder, rape, the recruitment of child

soldiers, and the destruction of a protected area.

It is in this context of wider insecurity and violent resource extraction that conservation has become militarized in Kahuzi-Biega. Park guards are armed with AK-47s and conduct regular patrols to enforce conservation regulations. They occasionally carry out joint-operations alongside the Congolese military. This being a national park, it is reserved entirely for tourism and scientific research; local resource uses such as hunting are in theory forbidden, but in reality take place extensively. When park guards encounter individuals illegally entering the park, their job is to apprehend these intruders and transport them to the park headquarters in Tshivanga, where fines or sentences can be imposed. While the park guards are themselves armed, their line of duty is also perilous. On 8 May 2023, just prior to my last research trip, a park guard lost his life while conducting an operation against an armed group mining inside the park. Since 2018, at least five park guards have been killed, and many others have suffered injuries. In nearby Virunga National Park, the situation is even more dire, with over 200 park guards having tragically lost their lives.

Over recent years, armed park guards and government soldiers have undoubtedly committed abuses, particularly against the Batwa, as documented in MRG’s reports. However, the impact of these guards on local livelihoods and the broader dynamics of violence is far from straightforward. In a recent article (Simpson & Pellegrini 2023), I delved into the perspectives of the people living around the park in relation to these armed guards. Some view them as a source of instability and injustice, while others consider them as potential providers of security and a deterrent against non-state armed groups. Notably, one farmer residing on the park’s periphery in Kabare ter-



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territory explicitly called for an increased presence of park guards and government soldiers to ensure the security of the population. There have indeed been instances where park guards have intervened to protect local residents from looting by armed groups, underscoring their potential role in law and order.

This difficult situation defies simple solutions. While removing funding for park guards may appear a logical step to curb human rights abuses, it fails to consider the structural forces driving violent resource extraction and insecurity. Unarmed park guards, as well as unarmed Batwa, are unlikely to effectively counter these influences. Reducing funding for the guards could also undermine their capacity to address security issues, thereby heightening threats to biodiversity and the safety of nearby communities. I believe a more realistic approach would involve allocating additional resources to both train and monitor the conduct of park guards, while facilitating the prompt reporting of violations when they occur.

### **Challenging stereotypes: Indigenous Peoples and conservation**

Indigenous rights activists often demand that the Batwa should be allowed to return to their ancestral lands inside the park to reassume their role as customary forest guardians. An illustrative statement can be found in a press release on the website of the Forest Peoples Programme (FPP; 2021): “The Batwa continue to choose to return to their ancestral lands, despite the threats to their lives, because they know that the land is theirs to *care for*” (italics added). According to FPP, any suggestion that the Batwa are responsible for damaging the park’s biodiversity and ecosystems is based on “unfounded accusations from some conservation actors.” My research shows this does not capture the present reality.



***Deforestation in the Kalehe region of Kahuzi-Biega National Park’s highland sector where several Batwa communities have been living since October 2018.***

*Photo: Fergus O’Leary Simpson*

When evaluating the assertions made by FPP and other parties, it is crucial to acknowledge that the Batwa of Kahuzi-Biega have been separated from their ancestral forests for five decades. A substantial portion of the current population, residing outside the park boundary until 2018, never lived in the forest before this date. While the Batwa may have historically practiced environmentally sustainable traditions and lived with minimal ecological impact, the current circumstances tell a different story. Since October 2018, a number of Batwa leaders have played a central role in facilitating the extraction of timber and charcoal from the park. In interviews, some of them openly admitted to selling access to the park to timber cutters and charcoal producers from neighbouring Bantu communities. One prominent Batwa chief in Kalehe territory told me, “It is true that we no longer care for the forest, but it is our only means of earning money.” As he spoke, a continuous stream of

Bantu laborers could be observed leaving the park, carrying timber planks and sacks of charcoal, subsequently transported to larger towns via trucks and motorbikes. In July 2023, I interviewed the manager of a charcoal market at the edge of the forest. He described how charcoal producers and traders had to pay Batwa chiefs 45,000 Congolese francs (almost 20 USD) to enter the park. Ishumbisho et al. (2023) have produced similar findings.

These dynamics have resulted in the destruction of several hundred hectares of the forest in the highland sector of the park, which is populated by around 250 eastern lowland gorillas. The most extensive deforestation occurred in the highland sector of the park which coincides with Kalehe territory, where several Batwa villages are still located. Significant deforestation also occurred in the region that overlaps with Kabare territory, but this trend ceased following the signing of the Bukavu Declaration in September



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**A truck transporting charcoal from Kabamba town, at the edge of Kahuzi-Biega National Park's highland sector, to Bukavu city.**

*Photo: Fergus O'Leary Simpson*

2019. In accordance with this agreement, several Batwa chiefs agreed to leave the park in return for land in a different location, financial compensation, and employment opportunities. While the Batwa in this region have remained outside the park, most of them remain landless and jobless.

It is important to note that the exploitation is also linked to a broader political economy of extraction. Demand for the park's resources, particularly charcoal and timber, is primarily driven by urban markets in Bukavu and Goma. This demand serves as the driving force behind the deforestation. Various state agencies also play a significant role by levying fees on the park's resources. For instance, the national military deploys soldiers to safeguard villages located on the periphery of the park's highland sector, a measure generally welcomed by the villagers seeking protection from armed groups with-

in the park. However, these soldiers have begun imposing informal taxes at roadblocks on the main transportation routes for goods exiting the park. Additionally, armed groups have contributed to deforestation through activities such as mining, farming, and charcoal production, underscoring that the Batwa are far from the sole actors involved. However, there are also instances in which Batwa chiefs have resorted to arming themselves or collaborating with armed groups to attack park authorities or facilitate the extraction of timber and charcoal from the park.

Given the complexity of this situation, simply lifting all restrictions on the Batwa's usage rights to the park is unlikely to be a viable approach to achieve conservation goals, even if it offers a superficial solution to social justice concerns. A more pragmatic strategy would involve allocating land

to the Batwa outside the park while allowing them access to specific areas within the park for their traditional rituals and cultural practices. Concurrently, it is essential to provide the Batwa with alternative livelihood projects and compensation for the historical injustices they endured during their forced eviction from the park. As I argued above, this will require more, not less, funding to achieve. Ultimately, the park and its international backers must strive to strike a balance between meeting the needs of the Batwa and other communities, while also preserving the park's unique biodiversity and ecosystems. In other words, the imperatives of social and ecological justice must go hand-in-hand.

*Fergus O'Leary Simpson*

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# GORILLAS

## Life History Patterns of Female Gorillas

The concept of net energy balance is familiar to all of us: we eat too many calories and we gain weight; we exercise a lot without changing caloric intake and we lose weight. Additionally, young people having a healthy and/or better diet will go through puberty and reach maturity at an earlier age than people whose lives require more energy expenditure and/or have lower caloric intake. Similarly, in wild animals, there is variation in what are referred to as 'life history variables', with this variation being driven by energetic trade-offs among growth, maintenance, and reproduction in differing ecological conditions. Namely, the more calories ingested and the fewer calories expended, the greater the net energy gain that an animal can devote to getting larger (or fatter) and to reproduction. When energy balance is positive, individuals can have faster growth, earlier reproduction, faster reproductive outputs, and larger adult body size.

Gorillas live in a wide variety of habitats and have large variation in their diets and distance moved per day (see table). For example, the well-studied mountain gorillas of the Virunga Volcanos live in a habitat with extremely high densities of herbaceous vegeta-

tion and almost no fruit. As a result, they can easily meet their nutritional needs and they do not move very much per day (low calorie expenditure). Their nearby neighbours in Bwindi Impenetrable National Park have slightly lower availability of herbaceous vegetation, their diet is about 15% fruit, and they travel further per day than the Virunga mountain gorillas. There are even larger differences in food availability, diet, and movement patterns between western gorillas and mountain gorillas. Herbaceous vegetation occurs at much lower densities, the gorillas' diet is about 30% fruit, resulting in longer travel distances per day.

Therefore, gorillas are interesting species to examine if differences in habitat, diet, and daily movement patterns lead to variation in reproductive parameters. In particular, we can predict that the Virunga mountain gorillas may have the greatest energy balance (net energy gain per calories expended), followed by Bwindi mountain gorillas, and then western gorillas having the least. However, this does not account for certain aspects of energy expenditure, namely the cost of climbing trees and thermoregulation (it is much colder in the Virunga Volcanoes than where western gorillas live).

To test these hypotheses, a study was conducted that compared life history traits for female gorillas from

three populations: mountain gorillas in the Virunga Volcanoes (study groups monitored by the Dian Fossey Gorilla Fund), mountain gorillas in Bwindi Impenetrable National Park, and western gorillas observed at Mbeli Bai in the Republic of the Congo. Data from each study site was based on observations of over 300 gorillas spanning more than 25 years. Specifically, we compared age of dispersal from natal group, age of first reproduction, and interbirth interval.

The results generally showed the earliest maturation and fastest reproductive rates for the Virunga mountain gorillas, followed by Bwindi mountain gorillas, and then the western gorillas at Mbeli Bai (see table). However, not all traits consistently varied along a fast-slow continuum. Bwindi mountain gorillas have interbirth intervals that are one year longer than Virunga mountain gorillas, which is consistent with a later age of weaning in Bwindi. However, the two populations shared a similar age at natal transfer, age at first birth and surviving birth rate. The Mbeli western gorillas had a later age at first birth than both mountain gorilla populations, but the interbirth interval for Mbeli was not different from Bwindi and it was longer than for the Virunga mountain gorillas. The age of natal transfers is the only trait that did not vary significantly among all three sites.

Those results suggest that there is more variation in traits that require meeting a threshold of energetic, physiological, or physical condition such as the age at first birth, interbirth intervals, and surviving birth rates. The results would suggest that the variance in energy supply has been highest for western gorillas at Mbeli, followed by mountain gorillas in Bwindi and then those in the Virungas. Those expectations are consistent with the differences in frugivory among the three populations, which has been used as a proxy for the variance in energy supply for gorillas.

### **Ecological, dietary, and life history variables for three populations of gorillas. From Robbins et al (2023) and references therein.**

	Virunga Mountain Gorilla	Bwindi Mountain Gorilla	Mbeli Western Gorilla
Terrestrial Herbaceous Vegetation Density (stems/m <sup>2</sup> )	8.8	4.4–10.6	0.2–2.3
% Frugivory in Diet	< 1%	15%	30–35%
Day Journey Length	0.8 km	1.0 km	1.5–2.6 km
Age at Weaning (years)	3.3	4.5	4.6
Age of Natal Transfer (years)	8.3	7.9	8.6
Age at First Birth (years)	10.1	10.5	12.2
Interbirth Interval (years)	4.2	5.1	5.4



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**Mother and infant in the Mishaya group, Bwindi**

Photo: Wolfram Rietschel

This study is useful both for understanding how animals adapt to their environmental conditions as well as interspecific variation in these life history traits. Furthermore, these results indicate that a slower population growth rate would be expected for western gorillas compared to mountain gorillas and Bwindi gorillas would have a slower growth rate than Virunga gorillas. This can be estimated from the age of first reproduction, the rate of birth (interbirth intervals) combined with the last age of reproduction and infant mortality (which is roughly 30% for both mountain gorilla populations and 50% for Mbeli western gorillas). This has implications for conservation, in that populations with slower life history traits and growth rates would take longer to recover from a decline in population size. Lastly, this study emphasizes the value of long-term study sites for long-lived animals as well as the value of collaborations among different organizations.

Martha M. Robbins

## Original article

Robbins, M. M., Akantorana, M., Arinaitwe, J., Breuer, T., Manguette, M., McFarlin, S., Meder, A., Parnell, R., Richardson, J. L., Stephan, C., Stokes, E. J., Stoinski, T. S., Vecellio, V. & Robbins, A. M. (2023): *Comparative Life History Patterns of Female Gorillas. American Journal of Biological Anthropology* 181, 564–674

## The impact of Tourist Visits on Mountain Gorilla Behaviour and Social Cohesion

Gorilla tourism has played a pivotal role in not only fostering the recovery of the endangered mountain gorillas (*Gorilla beringei beringei*) but also in benefiting coexisting species and local communities. The remarkable success of mountain gorilla tourism has significantly contributed to the conservation efforts within the Greater Virunga Landscape. This is achieved partly by offering economic and social

incentives to local populations, thereby reducing their reliance on more invasive and destructive resource extraction practices that could otherwise degrade the habitat and jeopardize the survival of wildlife.

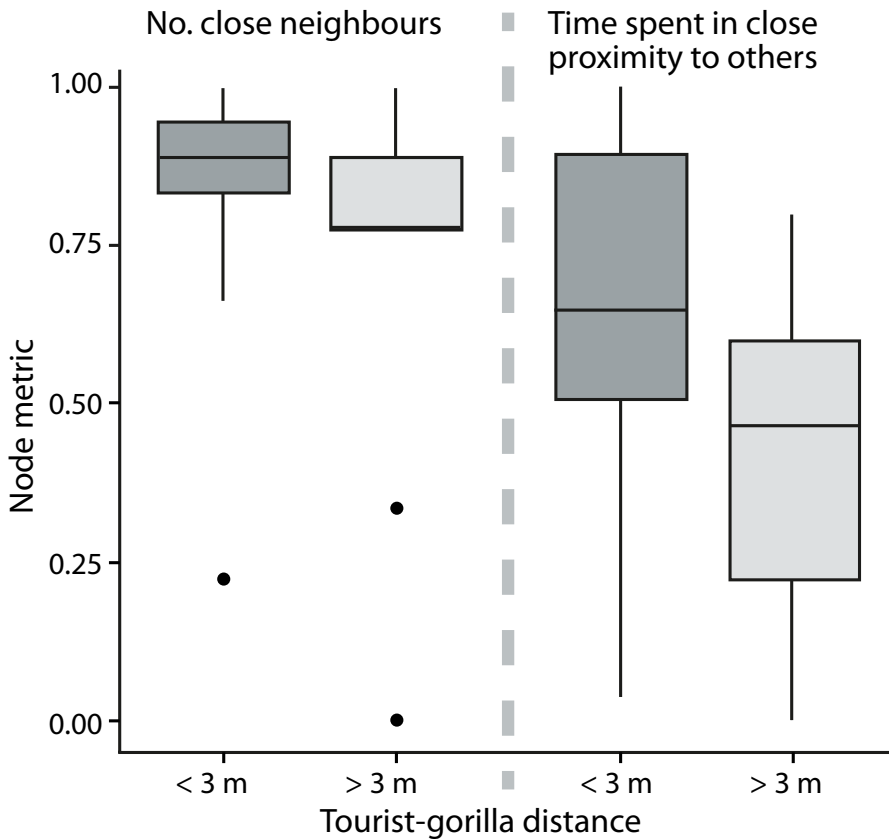
However, gorilla tourism may also pose potential threats to these apes due to the risk of Anthroozoonoses, increased stress levels, and negative impacts on their behaviour. In response to these concerns, the International Union for Conservation of Nature (IUCN) has formulated comprehensive guidelines for great ape tourism aimed at mitigating these risks. These guidelines include prohibiting the participation of individuals exhibiting signs of illness, limiting the number of daily visitors to one group of 8 people (6 tourists and 2 guides) per gorilla group, maintaining a minimum distance of 7 m from the gorillas, and restricting the duration of viewing to one hour.

However, by the end of their gorilla visit, 11% of tourists remain unaware of the 7-meter guidelines (Weber et al. 2020). Moreover, there is growing evidence to suggest that tourists often spend significantly more time in closer proximity to gorillas than recommended. Additionally, Hanes et al. (2018) reported that out of 136 tourists surveyed, 8 openly admitted to tracking gorillas while feeling ill. Even more concerning, despite being aware of the regulations, 25% of the respondents indicated that they would still embark on gorilla treks when feeling unwell.

At such close proximity to tourists, it is reasonable to anticipate changes in the behaviour of gorillas. However, the absence of systematic research complicates our ability to ascertain the specific strategies employed by gorillas to cope with (a) the presence of tourists, (b) the distances between tourists and gorilla groups, and (c) the sizes of tourist groups. In particular, it has been observed that short distances to tourists can trigger stress responses and cop-



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**Group's average number of close neighbours (node degree) and time spent in close proximity to others (node strength) in the function of visitors' proximity (less than 3 m or more than 3 m).**

ing mechanisms in macaques, especially when they are in close proximity to large tourist crowds (Maréchal et al. 2016; Marty et al. 2019). Hence, it is plausible to consider that mountain gorillas may employ similar strategies to cope with the pressures of tourist presence.

The primary objective of this study was to explore the behavioural changes in gorillas concerning tourist presence and proximity to tourists. Simultaneously, we aimed to assess the extent to which tourists adhere to the 7-meter rule during gorilla tourism activities. Our specific focus was on understanding how tourists' compliance or non-compliance with this rule might influence gorilla behaviour. Our study

focused on identifying behavioural stress indicators and social behaviours among gorillas, with a particular interest in uncovering potential coping mechanisms, such as social buffering. To conduct our research, we embarked on a year-long journey to Bwindi Impenetrable National Park in Uganda, spanning from September 2017 to February 2019. During this time, we closely observed one of the oldest gorilla families that had been habituated to tourist presence. It is worth noting that the majority of this family's members were born after the initiation of the habituation process. Throughout this year-long study, we followed the Rushegura gorilla family, totalling 577 hours' worth of data.

Originally, our study aimed to compare behavioural changes during tourist visits as they related to tourist group size. However, only 4% of the visits had fewer than 8 people per group, rendering this comparison impractical, and thus, we discarded this approach. The average tourist group size, excluding guides, was 7.7 ( $\pm 1.5$ ;  $N = 297$ ; range: 2–11), while including guides, the mean group size was 13 ( $\pm 2.4$ ;  $N = 297$ ; range: 6–25). The monitoring group size (comprising park staff and researchers exclusively) averaged 5.8 ( $\pm 1.8$ ;  $N = 443$ ; range: 3–11).

Additionally, we initially intended to examine the influence of distances of less than 3 m, 3–7 m, and greater than 7 m to tourists on gorilla behaviour. However, due to tourists spending nearly 60% of their time within 3 meters of the gorillas, we had to consolidate the categories of 3–7 m and greater than 7 m into a single category (> 3 m) to balance the data between the predictor variables. Specifically, tourist groups spent 59.20% of their time at distances of < 3 m, 25.63% at 3–7 m, and 15.17% at > 7 m away from the focal gorilla, respectively.

Upon analyzing specific behaviours (such as scratching, social interactions, and interactions with tourists), our models have revealed heightened stress indicators during tourist visits and the use of stress alleviation mechanisms.

We found increased self-scratching, particularly among male gorillas who exhibit acute stress when tourists are within a 3-meter proximity. Self-scratching serves as a non-invasive and well-established behavioural proxy for measuring stress. It has been effectively utilized in previous studies involving various wild primate species exposed to tourist crowds and other sources of anthropogenic disturbance. In fact, this method is commonly employed in both captive and wild habitats, including as a dependable meas-



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**Percentage of events of all observed types of Human-directed behaviour (agonism, neutral, and avoidance) at the different levels of tourist-gorilla distance, during the tourist visiting hour. A total of 1,120 sessions were recorded in the presence of tourists (182.6 hours).**

	Agonism	Neutral	Avoidance
< 3 m	94.59 %	91.67 %	80.00 %
3–7 m	5.41 %	6.25 %	15.00 %
> 7 m	0.00 %	2.08 %	5.00 %

ure to evaluate the impact of visitors on anxiety levels in western lowland gorillas (*Gorilla gorilla gorilla*) in zoos.

Furthermore, by employing both General Linear Models to assess the frequency of pro-social behaviours and utilizing social network analysis with selected metrics like node degree, node strength, and node closeness to thoroughly investigate our hypotheses, our research reveals a consistent pattern. It indicates that gorillas are more inclined to engage in social behaviours and increase cohesion when tourists are present and within 3 m. This behaviour is likely a strategy employed by gorillas to alleviate stress through social buffering, which encompasses their proximity to and interactions with conspecifics, including activities such as grooming, affiliative physical contact, and play.

Additionally, our research findings indicate that gorillas typically respond to close tourist proximity by either engaging in aggressive behaviours or avoiding tourists altogether. Given that tourists often spend the majority of their time in close proximity to gorillas, this presents an imminent risk of potential pathogenic transmission through close physical contact. It is worth noting that animals under stress may have compromised immune systems, further exacerbating this risk. Notably, tourists visiting wild mountain gorillas may not always recognize or admit to experiencing symptoms of illness. Additionally, some tourists could be asymptomatic carriers of diseases, remaining un-

ware of the potential threat they pose to the vulnerable wild gorilla population.

Furthermore, in the presence of large groups of tourists, with more than eight people per group, tourists tend to cluster together, often at increasingly shorter distances to gorillas. In response to this, gorillas form more cohesive and tightly connected aggregations. In other contexts, rapid transmission of respiratory infections within gorilla groups has been observed, possibly due to the strong social connections between individuals (Morrison et al. 2021). The cumulative effects of shorter distances between potentially infectious humans and more cohesive gorilla aggregations may significantly heighten the risk of cross-species pathogen transmission.

### Implications for conservation

Gorilla tourism undoubtedly brings significant benefits to parks and communities across the country, especially those with limited resources. To ensure the continued success of gorilla tourism in a sustainable manner, we recommend revisiting the original regulations that allowed for 6 tourists and 2 guiding park staff per group. Our research findings underscore the critical importance of gorillas being influenced by the proximity of tourists, emphasizing the need for stricter enforcement of the 7-meter rule.

The COVID-19 pandemic may have raised awareness about the potential for new zoonotic diseases among tourists. In addition to the immediate threat

to these animals, the potential for repeated infections due to continuous human contact through tourism could lead to the emergence of new virus variants. While recent models suggest that inter-group pathogen transmission is unlikely (Morrison et al. 2021), we propose limiting the number of new habituated gorilla groups or even suspending the habituation of additional groups. This precaution would help ensure that a portion of the wild gorilla population remains free from pathogens and parasites of human origin and preserve their natural social and demographic processes.

With the reopening of the parks and international traveling, wildlife tourism has regained momentum. To ensure a 7-m distance between tourists and gorillas, park staff could enhance their communication efforts by providing more assertive and effective explanations for these regulations. Additionally, ecotourists are inclined to contribute more towards conservation initiatives. Therefore, planning an increase in permit prices could be a viable strategy. This would guarantee (or even increase) enough capital to sustain the activity and benefit the communities while we can work towards ensuring that a portion of the mountain gorilla population remains wild and free.

*Raquel F. P. Costa*



***Innocence amidst the wild – an infant mountain gorilla in the Rushegura group, Bwindi Impenetrable National Park, Uganda (July 2018).***

*Photo: Raquel F. P. Costa*





# GORILLAS

## Adapted from:

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Costa, R. F. P., Romano, V., Pereira, A. S., Hart, J. D. A., MacIntosh, A., & Hayashi, M. (2022): *Mountain gorillas benefit from social distancing too: Close proximity from tourists affects gorillas' sociality*. *Conservation Science and Practice*, e12859. <https://doi.org/10.1111/csp2.12859>

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## Ape Trafficking Escalates as Demand Increases in the Middle East and South Asia

Africa's great ape sanctuaries have become inundated with new arrivals, rescued from the collateral damage of the bushmeat trade and targeted trafficking to supply the exotic pet trade and the growing commercial zoo and safari park industry. Partly as a consequence of the illegal trade, several species of great ape

are in decline, and those involved in managing sanctuaries or in wildlife law enforcement fear the extinction of chimpanzees and gorillas should the UN and big international NGOs not act soon.

Over the past two decades there has been a spike in demand for exotic animals used as pets, linked to the increasing capture of mainly young exotic animals in the wild, putting even more pressure on the survival of endangered species. Great apes, other primates, big cats and a few other exotic animals top the list of creatures to be flaunted on social media by owners seeking to attract attention and status. Concurrently, private commercial zoos posing as 'rescue' or 'conservation' centres have also increased in more countries around the world, driving demand for photogenic, playful, endearing young animals that can draw in paying visitors.

The internet, via e-commerce and social-media marketing, is a favoured method for bringing consumers to suppliers. The major suppliers, who are often also exotic pet owners or zoo owners, are coming together in loose net-

Lwiro Primates @lwiroprimates · Apr 8  
Kailo's rescue  
Confiscated by Congolese wildlife authorities. Saved from the illegal wildlife trade.  
Don't be complicit in cruelty, never buy a wild animal.  
#stopwildlifetrade



**Lwiro sanctuary nears full capacity as chimpanzee rescues surge.**

Photo: X (Twitter)



**This baby chimpanzee arrived dead in Dubai.**

Photo: Confidential source

works to buy and sell exotic animals, including great apes, and to find new customers. Some of these exotic animal social media stars have millions of followers on YouTube, Facebook and Instagram. TikTok and Snapchat are also becoming major marketing and deal-making platforms for exotic pets. A video post of a chimpanzee infant dressed in children's clothing, for example, can quickly reach numerous potential buyers. The trade deals are then negotiated out of public view, in private-messaging apps.

The 'captive breeding facility' has emerged to evade the restrictive trading regulations established by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), as trade can be permitted if certain criteria are met, primarily stating that the animal was not born in the wild. These facilities, effectively commercial zoos, are open to the public, and the owners gain free advertising when paying visitors post their experiences interacting with exotic animals on social media. It is a lucrative



# GORILLAS



**Even though not openly stated, many viewers know that this is a 'for sale' ad.** Photo: Public Facebook post

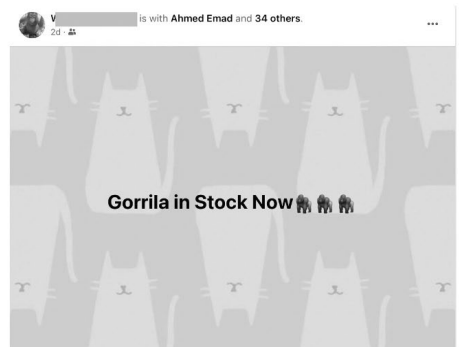
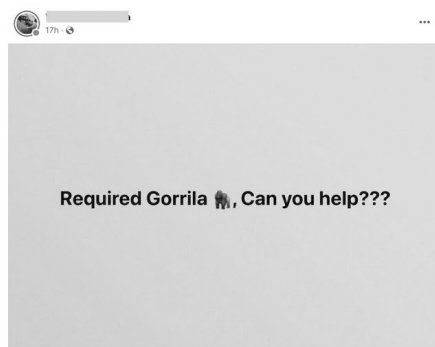
business model: attract animal buyers online from visitor posts made by people who have paid for the experience. The social media companies also gain significant income from the views generated by the posts – the 'click' economy – an incentive to them not to enforce their own rules prohibiting illegal user activity. These private zoos are growing fastest in the Middle East and South Asia.

The under-reporting of great apes seized in illegal trade incidents, both nationally and internationally, is a serious problem in bringing a true appreciation of the great ape trafficking situation to the attention of governments, international organisations and the media. Relevant institutions in the UN system (e.g. GRASP) and the International Union for Conservation of Nature (IUCN) need particular improvement in their approaches concerning the illegal trade in great apes.

Another potential deleterious impact of the illegal great ape trade was thrust into the spotlight by the COVID-19 pandemic. The most likely cause of the pandemic is that the virus passed from an infected wild animal to humans in a food market in Wuhan, China. Most illegal great ape imports are done without veterinary health inspections or

certificates, which raises considerably the risk of introducing one or more zoonotic diseases to humans in destination countries. The COVID-19 pandemic has raised government and public awareness about the health risks involved in illegal wildlife trade, which may lead to better legislation aimed at controlling this frequently ignored threat.

Great ape prices at source levels in African rural areas appear to have remained stable over the past decade at approximately US\$ 25–270 per individual, depending on the species, age and location. Chimpanzees are the least expensive, with gorillas costing up to 10 times more. However, the prices at the level of middleman who operate in villages and towns and supply great apes to the export cities have risen in recent years, with the lowest recorded at US\$ 135 for a chimp and the highest (US\$ 10,000) paid by an exporter to a middleman supplier. Infant gorillas from the DRC offered recently by middlemen in Nigeria were asking US\$ 17,000. The prices that exporters are demanding from overseas buyers have spiked considerably in recent years, and today reach US\$ 50,000 for a chimp without CITES papers and up to US\$ 100,000 for a chimp with fraudulent CITES permits, transportation included. The export price for an infant gorilla can reach US\$ 250,000, although



**Earlier this year a trafficker in Pakistan advertised on Facebook a need for a gorilla, a few days later he posted an ad selling them.**



# GORILLAS



**An example of what a dealer sends in response to a potential buyer expressing an interest.**

*Photo: Pakistani trafficker*

a trafficker in Pakistan offered one from the DRC this year for US\$ 70,000, considered cheap. Importer selling prices are correspondingly higher, with costs of US\$ 82,000 for an undocumented chimp and US\$ 548,000 for a gorilla recorded in Dubai in 2022. Chimps sold in the Gulf before 2016 were going for US\$ 20,000 to US\$ 34,000, seen in posts. Dealers no longer post prices in public social media.

Circulated private message ads for gorillas in particular have been surging, coming out of Middle Eastern and Pakistani dealers. In past years it was rare to see gorillas offered for sale, now it is common. Nigeria and Libya have become important transit countries where they are smuggled from Central Africa for marketing. Dealers in the UAE, Jordan and Iraq are also offering gorillas and chimpanzees for sale.

There are three main methods of transporting great apes by air to buyers. The first is to obtain a CITES export or re-export certificate that states

that the source is second generation captive bred (C source code), which requires bribing the national CITES officer. The second is to ship the ape concealed with other species that have CITES export permits, and the third is straight smuggling with no CITES permits. Since so few seizures of apes are reported, most trades seem to succeed, although there are apes that die during transport.

Wildlife dealers mainly in Kinshasa, who also export other primates and birds, have created transnational criminal networks of poachers, middlemen, exporters and foreign dealers to collect, transport and traffic dozens of great apes abroad every year, resulting in hundreds of great ape deaths annually in associated incidents. Suppliers operate throughout Central and West Africa thanks to corrupt facilitators in national CITES offices, the police, customs services and certain airline companies. Concerted action by CITES Parties and international organizations is urgently needed to control this threat to great ape survival. For more information see <https://globalinitiative.net/analysis/great-ape-trafficking/>.

*Daniel Stiles*

### **Original publication:**

*Stiles, D. (2023): Empty Forests. How politics, economics and corruption fuel live great ape trafficking. Black Market Brief Wildlife Trafficking 3. Global Initiative against Transnational Organized Crime. <https://globalinitiative.net/wp-content/uploads/2023/04/Daniel-Styles-Empty-Forests-live-great-ape-trafficking.April2023.pdf>*

## **Gorillas, Chimpanzees and Forest Elephants Thrive in the Rio Campo Nature Reserve**

Protected areas aim to conserve wildlife – particularly large, charismatic species

like gorillas – while benefiting local communities. But in tropical forests, wildlife within protected areas is often threatened by habitat degradation and hunting, despite laws protecting them. Species particularly at risk in these areas are typically those that are large bodied and slow to reproduce, like the western lowland gorilla (*Gorilla gorilla gorilla*). Large mammals like gorillas face compounding threats such as human population growth, ever increasing access to remote forests, and an influx of cheaper hunting technology, such as shotguns.

At the same time, central African protected areas face funding challenges that lead to inadequate protection – both for threatened and more common species. This is the case in Equatorial Guinea (EG) in west central Africa, where despite hunting laws existing on paper, there is essentially no on-the-ground enforcement. There is a glimmer of hope, however: the simple presence of law enforcement or survey crews can positively affect wildlife through “passive” protection.

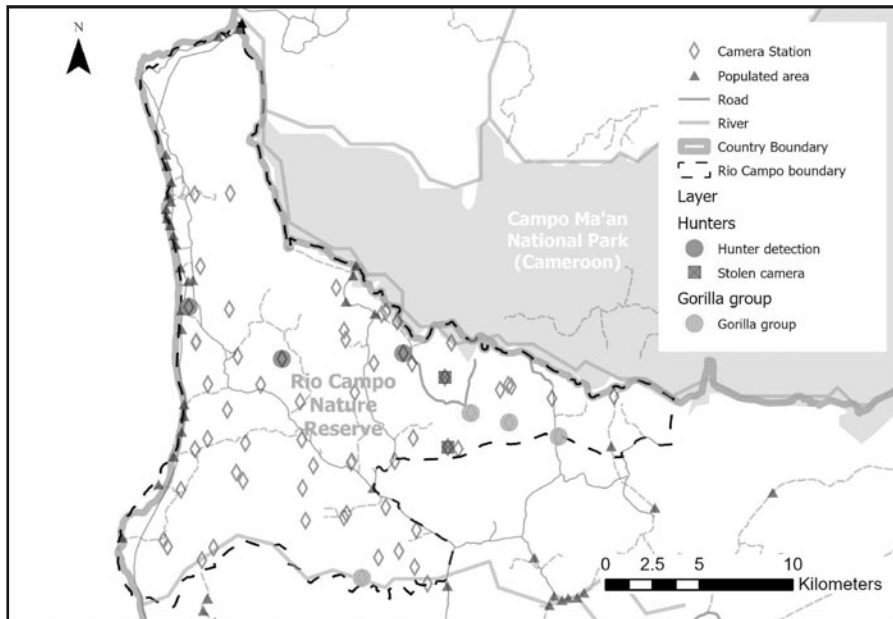
### **Challenges faced by Equatorial Guinea’s protected areas**

The government agency responsible for protected areas management in EG, INDEFOR-AP, is underfunded, but during wildlife surveys they have been able to shut down multiple poaching and illegal logging operations. Despite a lack of capacity for surveys and law enforcement, INDEFOR-AP is committed to protecting natural resources. They have previously designated roughly 20% of the country's upland habitat as protected areas. INDEFOR-AP has also implemented legislation such as bans on hunting in protected areas and a total ban on primate hunting.

The agency is also undertaking wildlife surveys to determine new areas to prioritize for protection. Researchers play a positive role as well, by providing more in-depth survey reports to



# GORILLAS



**Gorilla groups (lighter circles), hunters (darker circles), and stolen camera traps (squares) detected during a camera trap survey of mammals in Rio Campo Nature Reserve, Equatorial Guinea, conducted in 2017 and 2019.**

INDEFOR-AP, who then inform on-the-ground management. For example, research conducted using camera trap surveys of mammals across EG has led to the designation of a new national park, which will connect two previously isolated protected areas.

## **Rio Campo: A vital, but threatened, connection between Equatorial Guinea and Cameroon**

Rio Campo Nature Reserve is a protected area that lies along continental EG's northern coast. It is sliced in half by a road leading from EG's largest city, Bata (also home to EG's largest wild meat market). It is a short 50 km trip by car from Bata to Rio Campo's boundary, on a nicely paved highway. This, and the multiple towns and villages within Rio Campo, make it an area particularly vulnerable to human impacts.

Rio Campo has previously been identified as an important area for endangered species such as African el-

ephants (*Loxodonta cyclotis*), western lowland gorillas, and common chimpanzees (*Pan troglodytes*), in part due to its connectivity with the neighbouring Campo Ma'an National Park in Cameroon (Murai et al. 2013). To assess the diversity and distribution of mammals in Rio Campo, we collected camera trap data at 66 sites across the majority of the reserve (except for the northernmost portion), in 2017 (n=26) and 2019 (n=40). We created a species inventory and determined patterns of distribution for six taxonomic groups of interest, including great apes (gorillas and chimpanzees). With this assessment, we built upon previous mammal survey work by Murai et al. 2013 and Larison et al. 1999 by providing an updated and more comprehensive snapshot of diversity and distribution of both endangered species and common, yet extensively hunted species in Rio Campo. Species distributions were reported to INDEFOR-AP to assist in their management of Rio Campo's mammals.

## **Great ape distributions in Rio Campo**

Our study resulted in nearly 3,000 days of survey effort (number of nights cameras were active). We recovered images from 55 camera traps with an average of 48 days of effort per camera. Throughout the duration of the study, we detected at least 32 mammal species in Rio Campo including threatened species such as African forest elephants, white-bellied and giant pangolins, mandrill (*Mandrillus sphinx*), chimpanzees, and gorillas – as well as common species such as duikers, brush-tailed porcupines (*Atherurus africanus*), and Emin's pouched rat (*Cricetomys emini*).

In addition to generating a mammal species list and distribution maps for groups of interest, we used two-step or 'hurdle' models to assess 1) presence of taxonomic groups and 2) relative abundance of each group. We included several explanatory variables representing human impact (e.g. distance to road) and habitat (e.g. distance to river) factors. Additionally, we calculated detection rates for each species, calculated by dividing the number of independent detections of a species by the number of nights the camera traps were operational.

The general distribution patterns we observed suggest that threatened species such as gorillas, chimpanzees, giant pangolins, and elephants were mainly detected in the northeast of Rio Campo, while common species were more evenly distributed throughout the reserve. Our models suggest that great apes (gorillas and chimpanzees) were detected closer to the border between Rio Campo and Campo Ma'an in Cameroon, though the effect was marginal. We detected gorillas on five occasions throughout the study period, a rate of one detection per 600 days of survey effort. This rate was similar to that of chimpanzees in Rio Campo. Most gorilla detections consisted of groups, rang-



# GORILLAS



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***A female gorilla with infant detected by a camera trap in Rio Campo during a camera trap survey conducted in 2017 and 2019***

ing from: 1) one adult, 2) two adults (one being a pregnant female), 3) a female and infant, 4) at least two adults (one being an adult silverback) and four juveniles, and 5) six adults and a juvenile. All but one of these groups were detected in the eastern arm of Rio Campo; the lattermost group was detected in the southeast portion of the reserve near River Mbia approximately 5 km from the main highway leading towards Bata.

We detected hunting activity at five stations during the study. All human detections were under 1 km from the

nearest road, and two camera traps that were reportedly stolen were located within 5 km of the nearest populated place. The two missing camera traps were also within 2.5 km of one camera station that detected gorillas. INDEFOR-AP also shut down an illegal wild meat operation in the eastern portion of Rio Campo during the deployment of camera traps.

### **The threat of development: gorillas in Rio Campo and beyond**

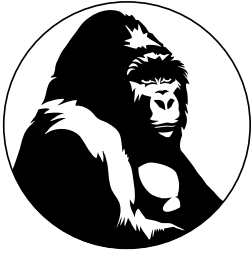
EG is unique in its relatively intact forests and the presence of populations of

threatened mammals, including African forest elephant, western lowland gorilla, common chimpanzee, and three of the four African pangolin species, among many others. Rio Campo is close to EG's largest city, Bata, is intersected by a major road, and contains several populated areas within its boundaries. Thus, it represents an important region to assess the distributions of large-bodied mammals which are under increasing threats from human impact.

This study represents the most comprehensive camera trapping effort in Rio Campo to date. While we did not survey the northernmost tip of the reserve, we expect that wildlife is abundant due to the area's relative inaccessibility. This northern region is under a new threat, with the planned development of a bridge across the Ntem River. Our research suggests that sensitive species like gorillas tend to avoid developed areas, and so it is crucial that the remote parts of Rio Campo remain remote. We recommend additional camera trap surveys to assess diversity and distribution of mammals, and the possibility of great ape presence in this area.

Previous surveys detected gorillas in eastern Rio Campo (Murai et al. 2013). We also detected gorillas in this region, but note one group detected in southern Rio Campo, closer to the main road and potentially more at risk from human impacts. Additionally, our models indicate that the connectivity between Rio Campo and Campo Ma'an may be an important factor – not only for great apes, but other species as well. Concerningly, hunting activity was also detected in this same region of Rio Campo. Since camera traps were reportedly stolen, hunters may be aware of and avoid camera traps and hunting pressure is likely higher than represented by our study.

Development is an ongoing threat to mammals in EG, for example with the proposed Ntem River bridge – and



# GORILLAS



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***Gorillas including a silverback detected by a camera trap in Rio Campo Nature Reserve, Equatorial Guinea, during a camera trap survey of mammals conducted in 2017 and 2019***

further inland, the new capital city, Ciudad de la Paz (previously the village of Oyala), which has been built in a previously remote forest. The models developed in this study are a first step at assessing mammal distributions across mainland Equatorial Guinea and the factors affecting them. The aim of our work is to directly impact management of both threatened species like gorillas, and the common species that are so important to local livelihoods. We are beginning to see the fruits of this labour: work from this and other camera

trapping efforts in continental EG have helped gather wildlife data to guide the creation of a new national park, which will connect two other protected areas, Altos de Nsork and Piedra Nzaz, and be the second largest protected area in the country.

*Tiff L. DeGroot, Luke L. Powell, Jared D. Wolfe, Kristin E. Brzeski*

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# BERGGORILLA & REGENWALD DIREKTHILFE

## Members' Meeting 2023 in Stuttgart

This year, the Stuttgart Museum of Natural History opened its doors for our two-day meeting. As a start, the participants were given either an expert guided tour through the Museum Schloss Rosenstein or alternatively through the Löwentor Museum. On a "trip around the world", one group heard interesting facts about elephant teeth and baleen plates of whales, while the others went on a "journey through time" to learn about fossils.

The informative afternoon started in the conference room of the Museum, with the board welcoming 40 members from all over Germany. First, board member Angela Meder gave an overview of the volatile political and humanitarian situation in the gorilla regions, especially in the Democratic Republic of the Congo. She then provided detailed information on the projects that B&RD supported in 2021 and 2022. Here, she once again praised the on-site support by long-time assistant Claude Sikubwabo. Board member Burkhard Bröcker complemented the report informing about successful fundraising campaigns.

After a short coffee break with stimulating conversations, the long-time cooperation partner and gorilla expert Martha Robbins from the Max Planck Institute for Evolutionary Anthropology in Leipzig reported about her gorilla research and the contribution it makes to the protection of the animals and their habitat.

The former veterinarian of the Zoological-Botanical Garden Stuttgart, Wolfram Rietschel, rounded off the day with lively and entertaining travel insights from the gorilla regions in the DRC, Rwanda and Uganda, thus also highlighting the role of tourism in local species conservation.

The participants enjoyed a successful and pleasant end of the eventful first

day with a joint dinner accompanied by a friendly exchange of ideas in beautiful weather at the Natural History Museum's Café Fossil.

On Sunday the official members' meeting took place. After discharging the treasurer and the management board, the elections were held under the chairmanship of Andreas Klotz. Angela Meder, Burkhard Bröcker and Laura Hagemann were unanimously confirmed in their board positions for the financial years 2023 and 2024 by the attending members. Karl-Heinz Kohnen also stood for re-election as treasurer for this period and was unanimously elected.

## Our Donors

From May to October 2023 we received major donations by: Christian G. Ahrens, Alexandra Altmaier, Gabriele Bast, Axel Bastian and Sonja Guigas, Andreas Becker, Martin Benz, Frank Berger, Michael Beutel, Achim Christen and Rita Christen-Stuttgen, Karlheinz Dilberger, Rouven Doetschmann, Walter Dollenberg Seilermeister e. K., Drahtseil Hartmann GmbH, Drahtseilwerk Hemer GmbH, Ebberg Elektrotechnik GmbH, Sybille Eck, Emders Schiffsausrüstungs AG, Michael Enders, Fachverband Seile und Anschlagmittel e. V., Hermann Ferling, Kurt Ferner Steuerbüro, Pascal Fliegner, Holger and Karina Gies, H. Giese GmbH, Gleistein GmbH, Görlitzer Hanf- und Drahtseilerei GmbH, Gorilla Gym, Susanne Gressler, Holger Grigoleit, GuBo-Trans, Torsten Haase, HEKO Industrieerzeugnisse GmbH, Birgit Höfer, Jürgen Hoffmann, Julia Holzberg, Volker Jährling, Renate Karl, Joka Josef Knappheide GmbH, Dennis König, Carl Kohl GmbH, Angelika Krebber, H. Kunne GmbH & Co. KG Stahldrahtwerk, Daniela Lachmund, Renee Läßig, Randolf Ledeböer, Rolf Lingenberg, Lippmann German Ropes, Isabella Löber, Marianne Lotsch, Fa-

The weekend dedicated to gorilla conservation ended on Sunday with an exciting guided tour through the great ape building at Stuttgart Zoo. In perfect early summer weather, the participants were guided through the apes' section in two groups and could thus gain insights into the keeping of gorillas and bonobos.

As the B&RD's next meeting will take place on its 40<sup>th</sup> anniversary, the board received suggestions from the audience about a suitable venue for this special occasion. We look forward to the next meeting. Further suggestions are welcome at any time.

*Christine Driller and Ulrich Gauf*

milie Dr. Lüthje, Mertens GmbH, Holger Meyer, Miroslaw and Beate Michalski, Tanja Michel, Johann Militzer Drahtseilerei und Hebewerkzeuge e. K., Thi Kim Ly Nguyen, Norddeutsche Draht, Marianne Paul, Pflingsten Feuerverzinkung GmbH, Pickert GmbH, Christian Pritscher, Klaus Radermacher, Rathgeber GmbH, Reichardt Seile- und Hebetchnik GmbH, Birgit Reime, Daniela Rogge, Ruhrberg Dedic GmbH, Sahm Splice GmbH, Schleicher GmbH, Ralph Georg Schottke, INOX Drahtseile, Patricia Schwennsen, Seilerei Berger, Stephanie Skolik, Hartmut Stade, Stadt Hemer, Stadtwerke Hemer, Michaela Steinhäuser, Frauke Strack, Andrea Stütz, Suther & Schon GmbH, Talurit GmbH, Daniel Tridico, Philipp Trottenberg, Ulrike Uhlig, Holger and Simone Voigt, Andreas Wallert, Christof Wiedemair, Frigga Wirths, Klaudia Woede, Ingo Wolfeneck, Brigitte Ellen Wullert, Sabine Wynands, Rebecca Zindler, Zoologischer Garten Saarbrücken and Zoo Rostock.

Several companies developed creative ideas to support us, and several people very successfully collected mobile phones for us that were recycled.

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