



# ***Gorilla Journal***

*Journal of Berggorilla & Regenwald Direkthilfe*

*No. 49, December 2014*

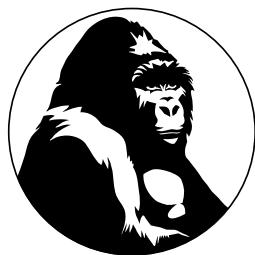


**Trees around Mt.  
Tshiaberimu**

**Equitable  
Conservation:  
a Necessity for  
Bwindi's Gorillas**

**Ebola in Nigeria  
Reduces the  
Consumption of  
Bushmeat**

**Group Formation  
and Dynamics in  
Gorillas**



# BERGGORILLA & REGENWALD DIREKTHILFE

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### Gorilla Journal 49, December 2014

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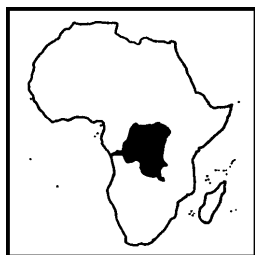
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## D. R. CONGO

### Maiko National Park Progress Report – December 2014

Maiko National Park, Democratic Republic of the Congo (DRC), lies in one of the most remote forest areas in the world. It is an incredible wilderness area, protecting biodiversity of national and international significance, including the Grauer's gorilla and the okapi. But at the same time it has been home to the Simba Mai Mai Rebels for almost 50 years, serving as an instrumental location in DRC's political conflicts. This area of tremendous natural value is therefore volatile, difficult to access, and has received few visitors and very little research.

By working with both the Congolese conservation authorities (ICCN – Institut Congolais pour la Conservation de la Nature) and local stakeholders, including the Simba Mai Mai, FZS (Frankfurt Zoological Society) endeavours to support the management, monitoring and protection of the park; the sustainable development of communities living around the park; and the reintegration of the Simba Mai Mai rebels living within the park back into civil society. FZS recognizes the importance of a holistic support strategy in an area as challenging as Maiko, and with financial support from the German Federal Ministry for Economic Cooperation and Development (BMZ) through the advice centre for non-governmental organisations working in the field of development cooperation (Bengo) and Berggorilla & Regenwald Direkthilfe, we provide a combination of scientific, management and socio-economic support to our partners.

#### Achievements

The project faces major challenges due to corruption, on-going instability, and conflicts between Simba rebels, ICCN rangers and the DRC military

(FARDC). This is further exacerbated by inaccessibility and unreliable telecommunications in the area. Nonetheless, in the face of on-going adversity, we have made a number of major achievements:

- FZS distributed a total of 900 fuel-efficient stoves to communities living around the park, and conducted awareness meetings regarding their use. The stoves have been eagerly adopted by the communities, and will reduce local peoples' dependence on and use of Maiko's natural resources for charcoal. 343 questionnaires about charcoal consumption were filled and 196 people re-interviewed 3 to 4 months later. It appeared from a paired t-test that charcoal consumption decreased by 46%.

100 additional stoves are being kept aside for 100 Simba rebels, and their families, who will be voluntarily resettling in villages outside of the park in the coming months.

- FZS also supported the construction of a primary school in Bitule village, adjacent to the park. This school replaces one that was destroyed in previous conflicts, and it is now complete and in full use. The official ribbon-cutting ceremony took place on the 9<sup>th</sup> October 2014, in the presence of the highest local authorities, political and educational. The initiative has been warmly received by the people of Bitule and surrounding villages, and serves to provide educational opportunities for local communities, and the children of the voluntarily re-settled Simba rebels.
- To support the pacification of the region, FZS is cooperating with the Congolese Commission Nationale de Désarmement, Démobilisation, Réinsertion (CNDDR) to facilitate the resettlement of Simba rebels, who are living within the park boundaries, to villages outside of the park. In May and June 2014 a census was

conducted by the CNDDR to ascertain the needs of Simba for their successful resettlement. In August, the CNDDR organized a meeting in Kinsangani to define the next steps. In November, a FARDC general of Kinshasa met the rebel chief in Oso and discussed about the demilitarization process. Once the resettlement begins, FZS will support with housing, fuel-efficient stoves, and access to the primary school constructed in Bitule.

- FZS also provides top-up salaries to 132 ICCN rangers patrolling in Maiko, in order to improve their economic situation and serve as a source of motivation for protecting this difficult area, and in partnership with Flora and Fauna International (FFI), we have successfully conducted a training session for a small number of ICCN guards in gorilla census and small mammal survey techniques.

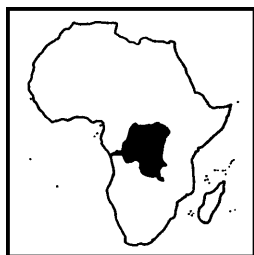
#### Challenges

One of FZS's major objectives for 2014 was to conduct a Rapid Biodiversity Assessment (RBA) of Maiko National Park, in order to gain a better understanding of the park's conservation value, as a means for leveraging further support for conservation action. This would be the first ecological survey conducted in Maiko since 2005, and the first one



*Taking notes at a gorilla nest in the Kahuzi-Biega National Park*

*Photo: FZS*



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of this scale since 1990. Plans were well underway for the RBA, and a team of Congolese and international researchers were brought together and in mid-June, the team gathered in Lubutu, ready to start the assessment in the the park. However, just at that time, FZS received news of Simba Mai Mai splinter groups objecting the presence of western researchers in the park, thus compromising the team's safety. Following this, contradictory reports were received on a daily basis regarding the security situation, with conflicts between FARDC and Simbas, inaccessibility of two RBA sub-sectors due to the presence of splinter groups, and reported activity of an armed bandit group. In an attempt to clarify the security situation, FZS planned a meeting with the Simba leader, General Mando, at his stronghold within the park. At this point, however, cooperation with ICCN began to deteriorate – it became clear that they were not willing to take responsibility in ensuring the team's security during the meeting, or subsequent RBA activities. As a result, we made the difficult decision to cancel the RBA in order to ensure the safety of our team, which was absolutely paramount.

Following this decision, a contingency plan was made to carry out a training session in census techniques at the more secure Kahuzi-Biega National Park. The course took place over 8 days and trained 9 selected ICCN guards from Maiko and 4 community trackers from Kahuzi-Biega in carrying out gorilla censuses, and in surveying and collecting samples of small mammals. This included an introduction to methodologies and techniques; how to identify traces; collecting data at nests, and taking genetic samples; completing data sheets; and the use of technology, including GPS and tablets, in data collection. The team was warmly welcomed by Kahuzi-Biega's Chef de Site, and the training was a huge success.

Since early August, Osamu Terao, the FZS project manager has been carrying out on-going training at the Maiko office, to deepen the knowledge acquired during the Kahuzi-Biega training course, with the intention to organize a precise counting of the gorillas and a census of the small mammals with these trained ICCN guards. One ICCN guard was particularly assiduous, and was assisting with teaching other ICCN guards who did not participate in the Kahuzi-Biega training.

However, in August the security situation in Maiko National Park has worsened. There are on-going clashes between FARDC and the Simba rebels, which severely hamper progress in pacifying the region, and our relationship with Maiko's Chef de Site remains challenging. As such, FZS' ability to effectively operate in the park has become increasingly uncertain.

It is only in November that the situation calmed down, enough to send a team for a gorilla and small mammal census. Despite last minute difficulties (the liaison person with the Simbas blackmailed us to sabotage, Simba

trackers arriving with 3 days delay at the meeting point), the team of ICCN and FFI agents succeeded in their mission and came back with unprecedented data on gorillas' presence/absence and small mammals samples. These samples were sent to the Research Centre in Natural Sciences of Lwiro (near Bukavu) for further identification and analysis. These samples, the first ever collected in the Maiko National Park, are of crucial scientific importance to understand the population genetics and geographical distribution of these mammals.

### The Future

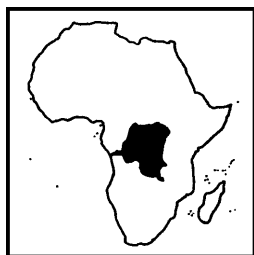
At present, the situation in Maiko is still insecure and volatile and the collaboration with the ICCN very strained. However, a small group of ICCN agents have the required competences to do a biodiversity assessment. They are capable to train other agents and teach census techniques. They can continue the census work of gorillas and small mammals, with an appropriate budget, acceptable security conditions and enhanced motivation of the hierarchy.

The previous data showed that a census done on a regular, monthly basis is the best method to detect and count the gorillas with accurate precision. The absence of external researchers, especially western people, allows to reduce the risks of blackmail or extortion. For these reasons in the Maiko National Park and from our point of view, a census realized by ICCN guards with the support of Simba trackers is the best methodological approach. However, the guards need to be permanently motivated, encouraged and to receive training/rehearsal in the census techniques. Only a foreign NGO and an expatriate can provide the required know-how, funding and a daily physical presence next to the ICCN guards and motivate them.

We hope that a reconciliation process between the Simbas and FARDC,



**During the training in Kahuzi-Biega: use of a tablet computer to collect data in the forest** Photo: FZS



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the reinsertion of Simba rebels into the civil life and a change in the local ICCN hierarchy will contribute to build a peaceful and constructive context in which we can continue our work. Once security and good working relationship will be fully restored, we will send the trained ICCN guards in to areas where gorillas have been previously recorded, to carry out regular censuses of gorillas and mammals. Previous data also show that areas with gorillas tend to be the richest sites in terms of other biodiversity, so we hope to document the presence of other taxa as well, in order to gain a better idea of the park's species richness. We will also continue to collaborate with CNDDR to support the reintegration of the Simba and their families into civil society, in the hope that peace and security can be restored to Maiko National Park, and this rich wilderness area, and its bio-

diversity, can be protected and conserved for the benefit of present and future generations.

*Hollie Booth and Osamu Terao*

### Trees around Tshiaberimu: Development and Reforestation

In 2008, a cry for help came from the Mount Tshiaberimu area due to a rush of people cutting wood and producing charcoal. The profitability of this activity attracts the involvement of the majority of the local communities. Subsistence farming, which is practised on very small parcels of family land (usually less than half a hectare), no longer meets the households' basic needs. Several hectares of forest are cut each month for charcoal making. The charcoal is sold in large urban centres

such as Kyondo, Butembo, Masereka and Luotu. This activity is flourishing and the landscape has started to be transformed: some hills are losing their forest cover and are becoming bare. If nothing is done, the forest of the park, which forms the habitat of the gorillas, will soon be invaded for the same purpose. It is better to prevent than to cure; a direct, mitigating solution needs to be found before a sustainable strategy can be implemented.

### Reforestation Projects

Profiting from a relatively solid local infrastructure, a community reforestation project was initiated in Vuswagha Village in 2008. It was called SAGOT, which stands for "Solidarity of the Friends of the Mount Tshiaberimu Gorillas". The success of this project, which produced 35,000 plants in one season, was very visible and its

### On the Internet

Since 2011 the *Berggorilla & Regenwald Direkthilfe* has had a completely new internet presentation, designed for free by Ravid Aloni. It is based on the widely used software Typo3. As anybody who knows how many pages our website contains can imagine, this relaunch took an incredible amount of time. The new website is more attractive, more informative, more intuitive, and is visited much more often than the old one – we have received numerous positive reactions.

Recently we were informed that soon no more security updates will be distributed for the Typo3 version of our website. We have to use the latest technical standard, however, to be able to fight hacker attacks. So we will have to transfer

the whole website to the new version. Moreover, the design has to be adapted for smartphones and tablets.

Ravid Aloni is not able to redesign the website again, and we did not find another Typo3 expert who wants to do this for free; so a professional web designing company has to work on the relaunch. Even if we try to keep the costs

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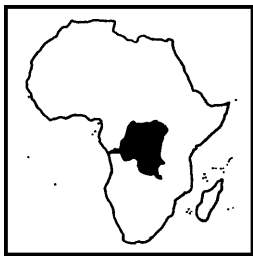
**You are also very welcome to donate via PayPal if you prefer this:**  
<http://www.berggorilla.org/index.php?id=66&L=1>

as low as possible, the complexity of our website and the number of pages will make this relaunch expensive.

**To inform the public on gorillas and gorilla conservation is an important task of our organisation – especially via the internet. Therefore, our website has to stay up-to-date for the future. Please contribute to this with your donation!**

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# D. R. CONGO



**Start of reforestation in 2011 (left) and trees planted in 2011 as they looked in July 2013 (above)**

*Photos: André Katembo*

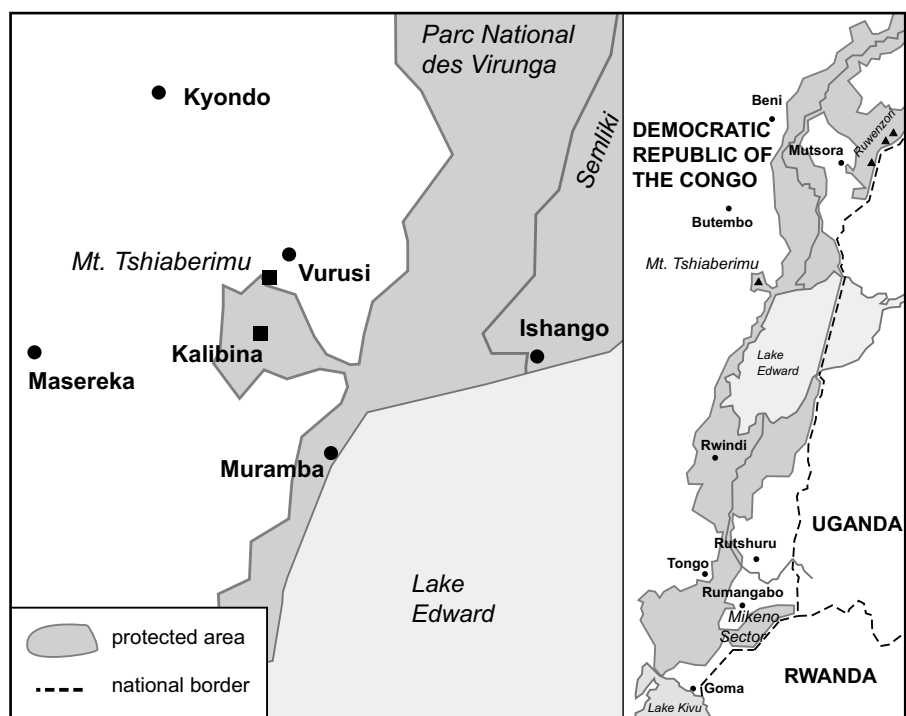
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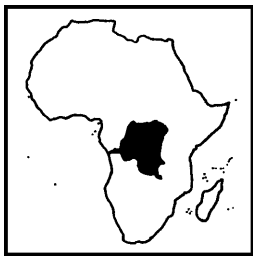
The success achieved by the participating schools in the Mount Tshiaberimu area (Vurusi Institute and the primary schools of Kisanga, Tuvuke, Ighomya, Kitolu and El Shadai) and the presence of a project focal point have prompted requests from other stakeholders, especially influential ones such as the Catholic parish of Kyondo and the Vurusi Health Centre, who

impact could be detected among the community students. Two years later, a new reforestation strategy was initiated, mobilising schools for the production of seedlings: the profitability of this activity is three to four times greater in schools than if undertaken by other reforestation partners. School nurseries help to sensitize school children and their parents to reforestation, train children in the management of nurseries, and raise young people's awareness of the benefits of the forest from a very early age. They encourage disadvantaged children to continue their education, help to restore the environment, maintain good climate conditions and, finally, support the local economy.

In 2010, Berggorilla & Regenwald Direkthilfe funded a pilot reforestation project in 3 schools in the Mount Tshiaberimu area and 3 close to the Sarambwe Reserve – two places where gorillas occur. The same activity was funded in 3 more schools in 2011, giving a total of 9 schools, 6 of which were in the Mount Tshiaberimu area. Seedling production was expected to reach 8,000 plants per school per year, providing for an estimated reforestation area of between 20 and 24 hec-

tares each year in the area of Mount Tshiaberimu and between 10 and 12 hectares in Sarambwe. Unfortunately for Sarambwe, the project could not be continued there for a third year due to the insecurity caused by armed rebel bands such as the M23, the Mai Mai





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### **Distribution of passion fruit plants**

*Photo: Jean Claude Kyungu*

would like to be added to the list of plant producers.

The result of the project was an unexpected, exponentially increased level of seedling production. During the first year, the 3 primary schools produced 44,000 plants, 183% of what was expected. During the second year, 229,135 plants were produced, of which 51,135 were produced by the Sarambwe schools. During the third year, production in the Mount Tshiberimu area increased to 541,510 plants for the 6 schools and the two new partners (Kyondo Parish and the Vurusi Health Centre). As the project had a duration of 3 years, the 3 primary schools were not included during the fourth year, leaving the last three schools and the two new partners mentioned above. During the first season of the fourth year, 127,000 plants were produced and currently, 300,000 are in the nurseries waiting for distribution. We hope to distribute at least 80% of these plants, i.e. 240,000 seedlings, between October and the beginning of December 2014. The total production of the project will have been 1,130,510 plants over the 4 years.

Of course the seedlings are distributed over several fields, but one can see plantations in certain locations which are intended to form copses or small-scale reforestation. Planting activities in villagers' fields are not monitored, but it is estimated that a mini-

mum area of between 500 and 600 hectares will be planted.

### **Reforestation for Profit and to Mitigate Climate Change**

Inspired by the initiatives of the Gorilla Organization (GO) at the end of 2010, in 2011 and at the start of 2012, and as a response to the request of the target group of the school nurseries project and owners of private or community plantations, a project to plant passion fruit plants will be initiated. The fruit plants will be introduced within the plantations set up by the project. The objective of this project is the

production of passion fruit with a view to generating a tangible income for the community.

The passion fruit planting project was initiated from 2010–2012 by the Gorilla Organization in two villages, Vuswagha and Kyondo-mowa, villages that had already benefited from the B&RD reforestation project in 2008. The trees planted during the earlier project served as support for the passion fruit, which is a climbing vine. In Vuswagha, 10 people profited from the project. In Kyondo-mowa, 7 families were beneficiaries. In 2013, 10 sacks of fruit were produced every week in

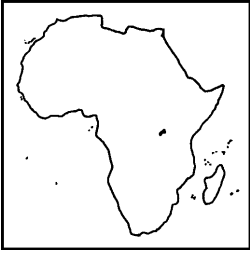
### **Oil Exploration in Virunga National Park**

In 2013, WWF started the campaign "Draw the Line" to stop the British oil company SOCO's explorations for oil in the Virunga National Park, Democratic Republic of the Congo. Hundreds of thousands of supporters signed up for this campaign. In June 2014, the news was spread in the media that SOCO International had signed a declaration with WWF that said they would not drill for oil in the national park. Unfortunately, this does not mean that the park will be safe from their activities; in the meantime SOCO stated that they will not abandon the exploitation of these resources. Experts are concerned that the Congolese government may redraw the park's boundaries to allow SOCO oil exploration outside of the World Heritage Site. But the World Heritage commission may not accept this.

Soldiers take money from SOCO, as is shown in the new documentary *Virunga* ([www.virungamovie.com](http://www.virungamovie.com)) that is available on Netflix, and the company even tried to bribe and intimidate park rangers. Villagers who opposed the project were beaten by soldiers. A warden who tried to prevent SOCO employees from erecting a mobile phone antenna in the park was kidnapped and tortured. And Emmanuel de Merode, the park's Director, was shot.

The organisation Global Witness published a report, *Drillers in the Mist*, in September 2014, that reveals SOCO's methods. It shows that SOCO and its contractors have made illicit payments to authorities and politicians, appear to have paid off armed rebels and benefited from fear and violence fostered by government security forces. These findings are mainly based on undercover recordings gathered as part of an investigation for the *Virunga* documentary.

*Global Witness (2014): Drillers in the Mist. How Secret Payments and a Climate of Violence Helped SOCO International Open Africa's Oldest National Park to Oil. Download: [http://www.globalwitness.org/sites/default/files/library/drillers\\_in\\_the\\_mist.pdf](http://www.globalwitness.org/sites/default/files/library/drillers_in_the_mist.pdf)*



# RWANDA



**Planting of passion fruit seeds in sacks at the Vurusi nursery**

*Photo: Claude Kyungu*

Vuswagha. Each sack can produce up to 100 litres of passion fruit juice and sells for 60 USD. In this way, the household income of the passion fruit producers increased to 240 USD per month, a credible amount for the villagers of these regions, an amount that will help reduce activities leading to destroying of the trees and poaching.

There is a large market for passion fruit in the region. Local restaurants offering passion fruit juice are widespread and all need fruit. The demand of these restaurants is large and production is still small. The locally visible benefits attract more people to the passion fruit project and requests are made frequently to the B&RD focal point who does not hesitate to make suggestions to the B&RD representative. The initiative is financed quickly, not only because it gives the local communities an income, but especially for beneficial effects the project has for the environment: plantation maintenance, the conservation of the forests where gorillas occur and the sensitization of people to gorilla conservation.

Charcoal making, poaching and timber cutting occur mainly because people are trying to earn money or finding ways to support themselves. Passion fruit has given people an alternative solution to this problem. For passion

fruit to do well, the trees that support the passion fruit plants need to be protected, which prevents the trees from being cut down. Maintaining the afforested areas helps to maintain good climatic conditions which helps the fight against local climate change and supports carbon sequestration. This project, initiated by the partners of ICCN, has become a foundation for the sensitization of people to the protection of gorillas as without them the project would not exist.

### **Current Status of the Passion Fruit Project**

Four nurseries have been established close to important afforestation areas

that have resulted from the school nursery project at Vurusi, Ngitse, Kitolu and Katsimbi. Currently, 10,000 passion fruit seedlings are being distributed. A strong sensitization campaign has been initiated by GO staff and the team in charge of the nurseries, and has been implemented by the B&RD focal point in collaboration with GO, Kyondo Parish, a local member of the NGO VONA, local schools and the Vurusi Health Centre. This campaign aims to inform as many people as possible about the project in order to attract more beneficiaries.

*Claude Sikubwabo Kiyengo*

## **Two Leading Silverbacks Die in Rwanda**

The 21-year-old silverback male Umushikirano (Rano), leader of Titus group in Volcanoes National Park, was found dead on July 28, 2014 by trackers. There were no visible signs of injury or illness and his body was carried down the mountain and transported to the Gorilla Doctors headquarters in Musanze, where a necropsy was conducted. Rano suffered a perforation of the small intestine and acute peritonitis.

On October 1, 2014, the 24-year-old dominant silverback Bwenge was found dead by trackers. On September 20 and 24, Bwenge had interactions with a lone silverback and was wounded – these wounds may have caused his death. Bwenge was a son of Titus and Ginseng. He grew up in Beetsme's group and split from this group to form his own in 2007. The group grew in size rapidly, and after just 3 weeks females from Pablo group joined him. Among those was the elder Maggie. She led the group for some time after Bwenge's death. About a month later, the rest of the Bwenge group merged with the Uganda group.

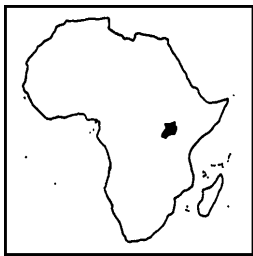
*Summaries of blog entries by Gorilla Doctors and DFGFI*



**The silverback Umushikirano (Rano), the leader of the Titus group in Volcano National Park**

*Photo: Jean Bosco Noheri*





## UGANDA

### Why Equitable Conservation Is a Necessity for Bwindi's Gorillas

Mountain gorillas of Bwindi Impenetrable National Park, Uganda, live in one of the poorest regions of Africa. This creates a major challenge for Uganda to conserve Bwindi's gorillas in a way that improves the livelihoods of local people. The Integrated Conservation and Development (ICD) approach for national park management was adopted to overcome this challenge. ICD initiatives are based on the premise that conservation is achieved by addressing local development priorities. At Bwindi they included the funding of 'common good' projects such as schools and roads from a portion of tourism revenue, and supporting agriculture and health improvements. These initiatives have been key for park authorities to improve relations with

local communities. But more than 20 years later, they have had little impact on bushmeat poaching, encroachment of communities on park land and other illegal activities that threaten Bwindi's gorillas.

#### A Collaborative Research

In 2012, the International Institute for Environment and Development (IIED) partnered with leading research, conservation, and advocacy organizations in Uganda for a combined research and advocacy project at Bwindi. IIED's partners were the Institute of Tropical Forest Conservation, the Jane Goodall Institute-Uganda, and Advocates Coalition for Development and Environment. Additional support was provided by Imperial College London and Parsons Brinckerhoff, and the project was funded by the Darwin Initiative and UKaid.

The team developed a research framework to understand who continues to use Bwindi's resources illegally

despite ICD, and why. They designed household surveys with indirect questioning to allow citizens to discuss illegal activities without incriminating themselves, and focus group discussions to explore the opinions of community leaders and specialist community groups. The research was completed in 2013 and generated the following findings:

#### *Who are the poorest of the poor?*

The poorest people live in the 'frontline zone', extending about 0.5 km from Bwindi's boundary where crops and livestock are frequently raided by wild animals. They are at greater risk of disease because they have fewer sanitation facilities. They have less education, making it harder to find work, and they live far from the trading centres and transport which others within their community benefit from. All this perpetuates a continuing poverty trap.

#### *Do they benefit from ICD projects?*

Some ICD benefits are reaching people in the frontline zone. But few or no ICD benefits are reaching the poorest people living there. The poorest people also feel less involved with decision-making and less ownership of ICD projects. From investigating why this was so, it appeared that most ICD projects occur near trading centres and roads, but not in remote areas where the negative social impacts of conservation are often greater, and people are poorer.

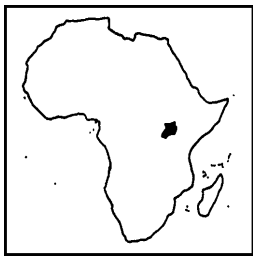
#### *Who uses Bwindi's resources illegally, and why?*

People who have been arrested for illegal resource use were generally poorer than other local residents and lived close to the national park and far from trading centres – suggesting poverty is the major issue. But not everyone undertaking illegal activities is arrested, so the team explored further.



**A family guarding their crops near to the boundary of Bwindi Impenetrable National Park**

*Photo: Mariel Harrison*



## UGANDA

### Bushmeat Hunting

Bushmeat is the forest resource that local people of Bwindi want and consume the most. Bushmeat hunters often live in remote areas and the frontline zone. Many hunt because they cannot afford meat or livestock, or seek bushmeat for medicinal needs. So again, the evidence points to poverty. But then there are hunters who are not the poorest in their community. These included traditional hunters who sold bushmeat locally for a small, modest income. But also others who hunted not from necessity or income, but because they feel the national park's conservation has treated them unjustly. These individuals hunted to compensate themselves for the crops and livestock taken by wild animals. As one of our focus groups explained,

**“the present management is not controlling the problem of crop raiding animals, which makes people angry so they go into the forest.”**

They also hunted because they feel that jobs with the national park and related tourism operations go to outsiders, and that ICD projects fail to benefit people suffering because of the national park. Another focus group told us,

**“people are angered by the giving of goats; those receiving goats are not living near the park, so we are angry and go to the park and poach.”**

These feelings of inequity over national park conservation were as important a driver of hunting (and other illegal activities) as rural poverty.

### Equity Is a Necessity

The team's report, *Linking Conservation, Equity and Poverty Alleviation*, was published in August 2014. When presenting the research findings at workshops to Ugandan policy makers and conservation practitioners, the team focussed on the critical need for equitable management of protected areas. But what does equitable protected area management look like?



**A member of the Rushegura family feeding outside of the park**

*Photo: Uwe Kribus*

The Uganda Conservation and Poverty Learning Group members (U-PCLG) took on this challenge and, for the second stage of the project, are advocating for key outcomes from ICD – greater equity in tourism revenue sharing, more national park-related jobs filled by local people, reduced human–wildlife conflict and better access to sustainable resource use – all with a strong emphasis on delivering benefits to people in front-line communities who are experiencing more of the burden (i.e. costs) of conservation.

Around Bwindi, this research and U-PCLG's advocacy activities are helping ICD interventions – through a specific focus on equity – become more effective in both conservation and poverty alleviation. At the international level they support wider developments for equity

within conservation by illustrating that equity is not only a moral obligation, but a necessity for gorilla and indeed other conservation programmes to be effective and sustainable.

*Julia Baker*

*Twinamatsiko, M. et al. (2014): Linking conservation, equity and poverty alleviation: understanding profiles and motivations of resource users and local perceptions of governance at Bwindi Impenetrable National Park, Uganda. IIED Research Report, London. Download at <http://pubs.iied.org/14630IIED.html>*

### IIED

IIED is an international organization that conducts action-oriented research and forms local partnerships to advocate for fair and sustainable use of natural resources.  
[www.iied.org](http://www.iied.org)



## CROSS RIVER

### **Ebola Virus Disease in Nigeria Reduces the Consumption of Bushmeat**

Bushmeat traders in Watt Market in Calabar, Cross River State, South Eastern Nigeria, are lamenting the poor sales of bushmeat since the outbreak of Ebola virus disease in Nigeria in July 2014. During a recent visit to the market, only 9 bushmeat carcasses were observed for sale by three resident traders (2 brush-tailed porcupines, 2 red duikers, 2 blue duikers and one piece of red river hog). In 2009 a visitor to the same market would have been able to find at least 20 carcasses belonging to 7 species on sale (Bassey et al. 2010).

The traders berated the current media campaign in Nigeria which has warned people against the consumption of wild animals (bushmeat) as a

possible source of the dreaded Ebola virus disease. Many people have since heeded this advice and are avoiding bushmeat altogether. Demand for this once highly esteemed delicacy had been high prior to the Ebola outbreak in Nigeria and threatened the very existence of certain rare and endangered species. One of the traders interviewed complained that business has been very bad since the Ebola outbreak in July, and lamented that it can now take up to one week for her to sell a piece of bushmeat. Prior to the Ebola outbreak she was routinely selling 10 to 20 pieces in a single day!

Though trading and consumption of bushmeat is not banned in Calabar, not fewer than 4 states in Nigeria have since banned the harvesting and sale of bushmeat in an attempt to prevent the spread of Ebola – Ondo, Kano, Rivers and Kogi States. The federal government of Nigeria in its effort to contain the spread of Ebola has also banned

the importation of bushmeat from other West African countries. At the community level, some communities have equally enacted local bans on the harvesting, trading and consumption of bushmeat amidst the fear surrounding Ebola. For instance, Buanchor and Kakwagom communities surrounding Afi Mountain Wildlife Sanctuary in Nigeria have banned the harvesting and sale of bushmeat with severe punitive measures taken against anyone found violating the community directives. Afi Mountain Wildlife Sanctuary is one of three sites in Nigeria where Cross River gorillas are found, and also contains the Nigeria-Cameroon chimpanzee. Consequently, patronage for bushmeat has drastically dropped, so that some dealers in the commodity have diverted to other forms of business while consumers now instead patronize meat from domestic animals and fish for their protein needs.

Thankfully the Ebola outbreak in Nigeria looks to have been successfully contained. Once the fear surrounding Ebola has abated it may be that the demand for bushmeat will soon return to normal. In the meantime, we hope that a long-lasting reduction in the sale and consumption of bushmeat, especially in communities surrounding protected areas, will help relieve hunting pressure on Nigeria's rare and endangered species. On the other hand, however, this will adversely affect the economy of families that depend on the bushmeat business for survival.

*Emmanuel Bassey*

#### **Reference**

Bassey, E. Nkonyu, L. & Dunn, A. (2010): A Reconnaissance Survey of the Bushmeat Trade in Eight Border Communities in South-East Nigeria. Unpublished report to the Arcus Foundation and the WCS Nigeria Program



***Bushmeat on sale by the roadside in Cross River State***

*Photo: Louis Nkonyu/WCS Nigeria Program*



# GORILLAS

## Group Formation and Dynamics in Eastern and Western Gorillas

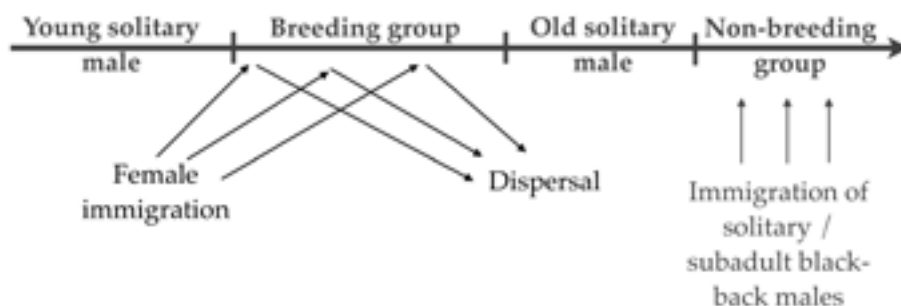
Gorillas spend the major part of their life in small social groups led by a mature silverback male. Only young blackback males and mature silverback males are known to spend extended periods of time ranging solitarily. The composition and stability of gorilla groups varies greatly, both within gorilla populations and among the four gorilla subspecies. For example, mountain gorilla groups studied at the Karisoke Research Center in Rwanda can include as few as two individuals or reach 65 individuals. Western lowland gorillas typically live in breeding groups including several females and their offspring, but also occasionally form groups that do not include any adult female. Understanding the factors responsible for this flexibility has long been a research priority as it relates to the social evolution of our ancestors.

Young gorillas are born and grow up in breeding groups. These groups are typically composed of several, usually unrelated, adult females, their offspring and a single silverback male. Western lowland gorillas, one of the two gorilla subspecies living in western central Africa, form breeding groups rarely exceeding 20 individuals (about 10 adult females). The size of eastern gorilla groups from Rwanda, Democratic Republic of the Congo and Uganda is on average similar to that of western gorillas, but exhibits a larger variability. Mountain and Grauer's gorilla groups exceeding 30 individuals are occasionally observed. At least in the case of mountain gorillas, large groups generally include more than one silverback male. Grauer's gorillas are not as well known as mountain gorillas, but it seems that multi-male groups are less common in this subspecies. Why can eastern gorilla groups reach a larger size than western gorilla groups? The answer is in the difference between their habitats.

Western lowland gorillas inhabit low-altitude forests rich in fruit tree species. Fruit is a high-quality resource, rich in energy. Depending on the season, western lowland gorillas spend up to 70% of their foraging time eating this resource. But fruit trees constitute small, clumped resource patches that cannot provide enough food resources for large groups of gorillas, which may explain the absence of large groups in western lowland gorillas. Mountain gorillas and high altitude populations of Grauer's gorillas live in forests that are rich in terrestrial vegetation – herbs, shrubs, vines – but poor in fruit trees. In some parts of eastern gorillas' range, such as the Virunga Volcanoes, the terrestrial vegetation is abundant and forms very large food patches that provide enough food for large groups of gorillas.

Adult female gorillas give birth to a single infant every 4 to 5 years. Twin births are rare but have been observed in mountain, Grauer's and western lowland gorillas. Females wean their infants around the age of 3. After 3–6 cycles, the female becomes pregnant again and gives birth to a new infant 8.5 months later. Infant mortality is high: only two thirds of mountain gorilla infants, and only half of western gorilla infants, reach the weaning age. After they are weaned, young gorillas stay close to their mothers for a few more years and are often seen playing with their siblings or exchanging grooming with their mothers.

When females become sexually mature around the age of 8, they have an important choice to make: staying in their natal group or leaving. In western gorillas, young females systematically leave the natal group and then join a solitary silverback male or another breeding group. This behaviour limits the risk of inbreeding, as the silverback in the natal group of a young female is almost always her father. In mountain gorillas, natal transfers are



**Typical dynamics of single-male gorilla groups. Young gorilla males systematically leave their natal groups and range solitarily for a few years. When they encounter breeding groups, they challenge the silverback male of the group and try to acquire females. If they are successful, they form a breeding group typically reaching about 10 individuals. The breeding tenure of males can last 10 to 15 years. As breeding males get older, their ability to attract and keep females decreases, and females start leaving them and they become solitary again. Sometimes, old solitary males bond with young blackback or subadult males and form temporary non-breeding groups.**

*Drawing: Damien Caillaud*



# GORILLAS

not systematic. The presence of several silverback males in up to half of the groups limits the risk of inbreeding in this subspecies. Transfers are not limited to young females. Parous females (females who have already had an infant) often transfer too. They generally do so shortly after the most recent infant is weaned or dies.

Transfers occur when a group encounters a solitary male or another group. The home ranges of neighbouring gorilla groups generally overlap a lot, so bumping into another group or meeting a solitary male is common. During encounters, silverback males charge, chest-beat, and sometimes bite each other. These displays serve two functions: impressing the other silverback and “seducing” his females, hoping that one of them will decide to join his group. It is important to note that solitary male gorillas do not “take over” groups as is observed in other primates like baboons. The reason why take-overs are not observed is prob-

ably because female gorillas choose who they want to live with. If a male they did not like took over their group, female gorillas would simply leave and find another male. Baboon females, on the other hand, are philopatric; they never transfer between groups, which makes a take-over a beneficial strategy for solitary male baboons.

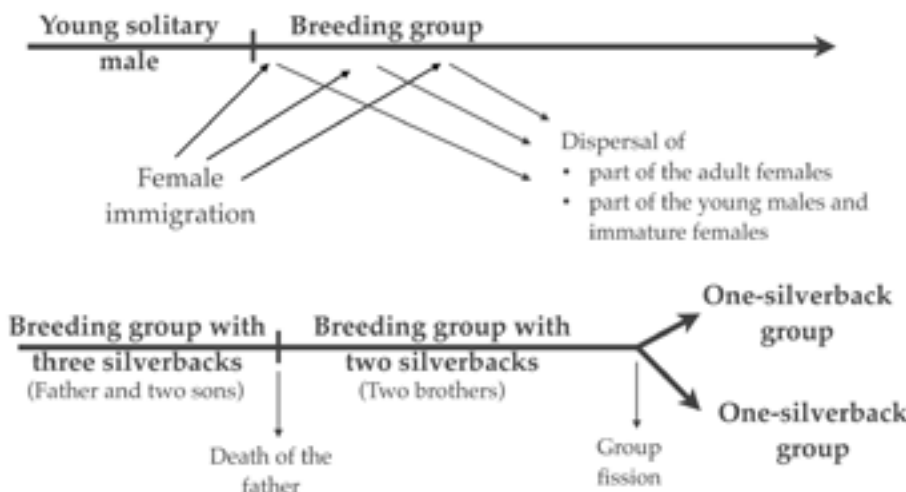
Researchers have found that males with a large body size and a prominent crest on the back of the head have more females than smaller males. It is likely that females who are in a position to transfer compare their current male to other males during encounters, and make a decision by comparing the physical appearance of the males and their ability to “win” encounters. Females may also make transfer decisions based on the size and composition of their current group and possible destination groups.

Male gorillas reaching sexual maturity do not start reproducing immediately. Young males reach the size of an

adult female around the age of 8 to 10 and are then called blackback males. Between the ages of 12 and 15, blackback males start developing a grey coloration of the hair of their back. Their body size and muscle mass keep increasing. Mountain gorilla males reach full maturity around the age of 15 while western lowland gorillas reach their mature silverback morphology around the age of 18. In western lowland gorillas, young males leave their natal groups before they turn silverbacks. They typically live solitary for a few years, until they become able to compete with breeding males and attract their females. Occasionally, young males join an old solitary silverback and form a non-breeding group.

Non-breeding groups usually include 2–8 individuals, but can also exceed 20 individuals, and their composition changes much more often than the composition of breeding groups. In mountain gorillas, young males stay in their natal groups more than half of the time, where they mature and become silverback males. An old silverback male can have in his group several of his sons that have turned silverback; when he dies, the group will remain cohesive, as one of the sons will become the new leader. This is a key difference between mountain gorilla and western lowland gorilla groups: in western lowland gorillas, when the silverback of a group dies, the group disbands and the females join other groups or solitary silverbacks.

Breeding groups have a limited duration of life. In mountain gorillas, a group can include several – generally related – silverback males, and when the dominant silverback dies, another silverback becomes dominant. A few years later, one of his sons may also become the leader of the group and “perpetuate” the dynasty. Groups can thus persist for several silverback tenures. One of the groups currently studied at Karisoke in Rwanda (group Pab-



**Example of dynamics of a multi-male mountain gorilla group. If young males stay in their natal groups, multiple silverback males can coexist in the same group. These males are often, but not always, related. If the dominant silverback dies or emigrates, the group does not disintegrate as another silverback can become dominant. Large multi-male groups occasionally fission, forming smaller one-male or multi-male groups.**

*Drawing: Damien Caillaud*



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**Members of the Umubano group in Rwanda**

*Photo: Wolfram Rietschel*

lo) descends from Group 5, which was habituated by Dian Fossey in the late 1960s.

Sometimes, multi-male mountain gorilla groups split, forming two new groups that are each led by a different silverback. Between 2007 and 2009, a series of group splitting events was observed at Karisoke, and 3 mountain gorilla groups became 8 groups.

One may wonder why some young mountain gorilla males decide to stay in their natal group while others prefer leaving and becoming solitary. It is a current research topic for many gorilla specialists with no final answer yet. Several hypotheses have been formulated. It seems that that staying is overall a better strategy for males, as close to half of the dispersers never manage to reproduce. The advantage, however, depends on the context. Staying in a group with only one old silverback

seems to be a good strategy, as the young silverback can then expect to become dominant within a few years. Staying in a group with already 4 young silverbacks may not be such a good strategy: in multi-male groups, the dominant silverback sires an estimated 85% of the offspring, subordinate silverbacks only 15% of the offspring – being the 5<sup>th</sup>-ranked silverback probably gives no chance to reproduce, and in this context, dispersing may be a better strategy.

From the dominant male's perspective, it may also be beneficial to tolerate subordinate males and let them sire a small proportion of the offspring, because subordinate males can help fight other males and protect the infants during between-group encounters. Thus, because they offer better protection, multi-male groups may be more attractive to females. If tolerating one or two

subordinate males gives the dominant male access to one or two additional females, it may be worth it. Finally, the subordinate males are often related to the dominant male, so when the subordinate males sire offspring, they also pass on some of the genes of the dominant male and indirectly increase his reproductive success.

If staying in his natal group is a good strategy for a large number of young mountain gorilla males, why has this behaviour never been observed in western lowland gorillas? Here again, researchers do not have a final answer. It is possible that the cost of the feeding competition resulting from the presence of additional males would exceed the benefits in terms of support during encounters and protection against predators. Also, as the number of females in western lowland gorilla groups is comparatively low, it may appear difficult for a subordinate male to mate with females behind the dominant silverback's back.

After almost five decades of research on mountain gorillas and two decades of research on western gorilla social dynamics, we have learnt a lot about the rules that govern the formation and evolution of group groups, but there are many questions that remain unanswered, and the group dynamics of Grauer's gorillas and Cross River gorillas are still poorly known. Gorilla population biology is still an active field of research with important applications in conservation. Understanding group dynamics is indeed critical to anticipate the demographic consequences of human illegal activities and the impact of disease outbreaks.

*Damien Caillaud*

*Our current research on mountain and Grauer's gorillas would not be possible without the support of the Fossey Fund's staff from the Karisoke Research Center in Rwanda and from the Biruwe-Nkuba field station, Democratic Republic of the Congo, and the staff from Kahuzi-Biega National Park in Congo. We are*



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also grateful for the help and support provided by the villagers from Biruwe and Nkuba.

## Further readings

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## Update: Conflict in the Central African Republic and its Impact on Dzanga-Sangha

The Dzanga-Sangha Protected Areas (DSPA), located in the southwestern Central African Republic (CAR) and the northern edge of the Congo basin, is managed by the CAR government, with significant financial and technical support from WWF, the global conservation organization. The 4,579 km<sup>2</sup> DSPA is part of the largest intact forest block remaining in CAR. An area of exceptional regional and international significance, it is part of a more than 25,000 km<sup>2</sup> complex of protected areas called the Sangha Tri-National complex (known by its French acronym TNS). In addition to DSPA, the TNS also includes Lobéké National Park in Cameroon and Nouabalé-Ndoki National Park in the Republic of Congo. The Regional Action Plan for the Conservation of Chimpanzees and Gorillas in Western Equatorial Africa (IUCN 2005) selected the TNS as an exceptional priority area for their conservation and will remain a priority area in the revised action plan (IUCN, in prep.). In recognition of its conservation

importance, TNS was designated a trans-boundary World Heritage Site by UNESCO in 2012. Since the early 1990s, DSPA has run an ecotourism programme to promote the value of its exceptional biodiversity and natural resources as well as showcase the traditional cultures and customs of the local people.

As part of the DSPA Ecotourism Programme, a Primate Habituation Programme (PHP) was launched in 1997 with the main aim of habituating western lowland gorillas (*Gorilla gorilla gorilla*) for tourism and research. To date, the PHP has successfully habituated 3 western lowland gorilla groups, while 2 additional groups are presently undergoing habituation. The PHP employs 60 local people as trackers (the Ba'Aka) and guides, and these employees are based in PHP's two forest camps: Bai Hokou and Mongambe. Apart from being a source of employment for the local people the programme plays a vital role in DSPA's management strategy by generating significant revenue and strengthening the vital link with the community, hence acting as an important conservation tool.

Between 2007 and 2011 the PHP received about 550–650 gorilla visiting tourists (i.e., many additional tourists participated in non-PHP related activities during this period) annually, and from 2009 to 2011 alone, 15 film teams visited the gorillas alongside scores of international journalists and researchers. Additionally, extensive research has been carried out from the PHP site, resulting in numerous scientific publications. By 2012, gorilla tracking fees covered about 75% of the direct operational costs of the PHP (i.e., local salaries, subsistence, materials, vehicle maintenance and fuel), and projections showed that the programme could potentially become self-sustaining by 2016. Gorilla tourism at Dzanga-Sangha thus can be considered one

of the most successful western lowland gorilla tourism and research programmes in Central Africa. Unfortunately, despite the seemingly suitable conditions for a perennially flourishing and financially profitable ecotourism programme, instability has overwhelmed the CAR for nearly 2 decades with multiple *coup d'état* attempts and, over the last 2 years, the worst violence ever witnessed by this generation of CAR citizens.

## The March 2013 Coup d'Etat

From December 2012, CAR has been undergoing persistent political crisis which culminated in a violent *coup d'état* in March 2013. The president was ousted by a Muslim rebel coalition force known as "Seleka" who then extended their violent movement to all regions of the country including DSPA. At least three different splinter Seleka groups, all reporting to different leaders, visited DSPA over a period of 11 months during which time the DSPA headquarters were looted twice, and Seleka troops caused total panic in the nearby villages in their aggressive efforts to locate



**A silverback in a bai of the Mongambe area (1998/99)**

*Photo: Angélique Todd*



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associates from the previous regime. Among the DSPA material looted was PHP's indispensable pickup truck, used to transport team members from their villages to and from the camps, in addition to providing them with critical subsistence supplies. Moreover, previously operational HF/VHF radios, project computers, cameras and many other important equipment items were taken by the Seleka troops.

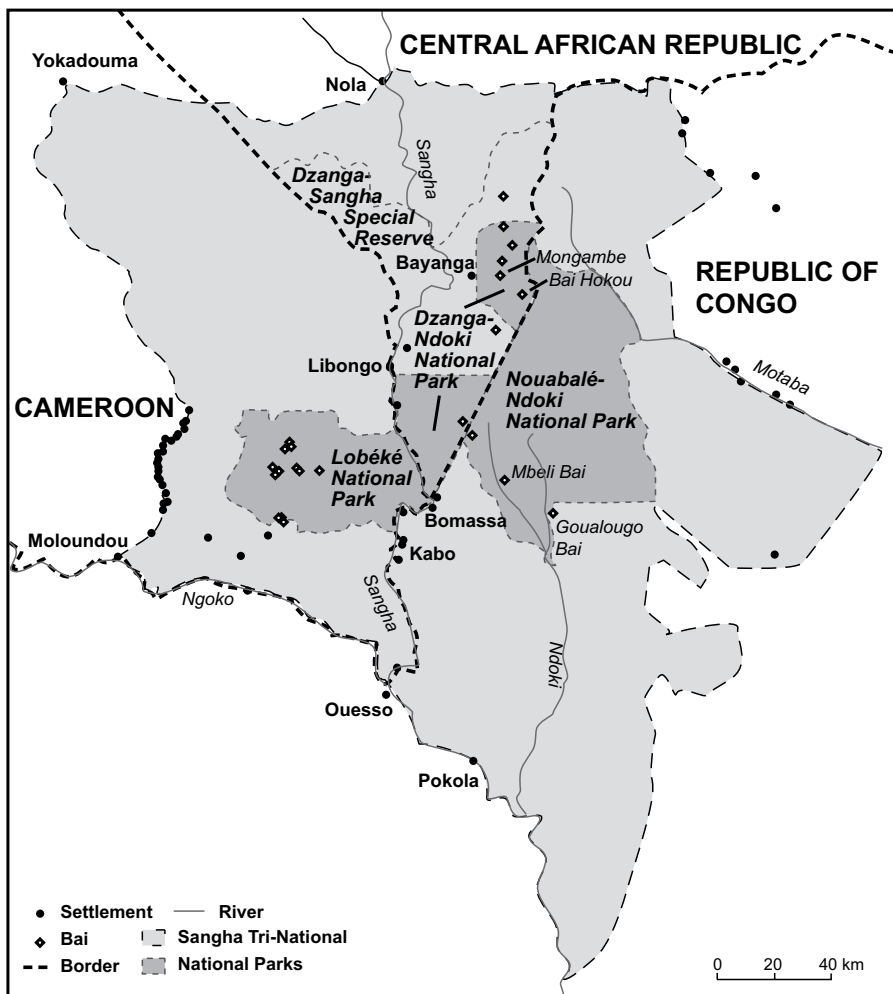
In April 2013, about 40 Seleka elements were stationed in Bayanga vil-

lage, where the DSPA HQ is based, with constant visits by support troops from a larger base in the neighbouring town of Nola, just 120 km north of Bayanga. In early May, a 17-man Sudanese Seleka group, purportedly seeking a missing colleague, then drove into the Dzanga-Ndoki National Park, proceeding to the mineral rich Dzanga Bai where, armed with AK-47s, they killed 26 elephants, including 4 infants. They then hacked off all the dead elephants' tusks, loaded them into their

pick-up, and drove away.

For many years, the CAR has been invaded by marauding, heavily armed bands of poachers mounted on horseback, targeting the country's northern protected areas, where some of the most significant populations of elephants once roamed. Once these populations were virtually depleted, the armed groups then targeted the elephant rich DSPA. With rampant corruption throughout the entire country, even armed groups carrying automatic weapons are able to purchase their way through government controlled areas. Until recently, despite previous attempts to infiltrate DSPA and locate its substantial elephant populations, the DSPA had remained relatively untouched until the current state of political and military chaos provided the armed groups with the opportunity to eventually access this virtually unspoiled location. The crisis was exacerbated by the fact that there were different factions of Seleka forces operating in the region working independently of one another. In times of political instability, both people and wildlife may suffer greatly, as law and order breaks down, violence and corruption prevail, and turmoil reigns. In their targeted search for elephants and their ivory, the rebels also arrived at one of the gorilla camps; but the camps were quickly evacuated and, once the intruders saw that there was nothing of value to seize, they quickly left the camp and never accessed or harmed the nearby gorilla groups.

When the Seleka troops finally departed Bayanga and DSPA in February 2014, a Christian militia group known as the "Anti-Balaka" began to confront the various Seleka factions throughout the country. Having suffered at the hands of the aggressive and brutal Seleka forces, the Anti-Balaka militias then went on a terror mission of their own, targeting not only Seleka troops and supporters, but also innocent Mus-



**The Dzanga-Sangha Protected Areas (Dzanga-Ndoki National Park and Dzanga-Sangha Special Reserve) and the adjacent national parks as well as the Sangha Tri-National complex. The Dzanga-Ndoki National Parks consists of the Dzanga Sector (above) and the Ndoki Sector (below).**





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lim civilians. They eventually arrived at Bayanga where they overcame the local authorities and forcibly disarmed the DSPA government para-military trained rangers.

## Major Challenges of the Coup d'Etat

One major challenge of the *coup d'état* was assuring the security of all DSPA staff members. Local PHP staff courageously continued following the gorillas, only evacuating the PHP camps from April 4<sup>th</sup> to 7<sup>th</sup> and May 6<sup>th</sup> to 13<sup>th</sup> when 2 different factions of Seleka rebels arrived, one of which looted the DSPA HQ, while the other entered the field camps, committing the elephant massacre and looting the PHP-Mongambe camp. Ensuring adequate security for the local staff to continue working was clearly a significant challenge because, even though the team members may have felt safer to remain in the camps and in the process protect their livelihoods, they also had family in Bayanga that needed their protection as well.

During this tumultuous period, and due to urgent security concerns, tourist numbers in DSPA dwindled to zero, and the suspension of tourism activities was inevitable. Consequently, the PHP, which largely depends on gorilla tracking fees, was unable to fully cover its operational costs. It was of course vital that the two gorilla camps maintain at least a minimal level of functioning in order to ensure continuous follows of the gorillas, thereby avoiding an abrupt cessation to critical gorilla surveillance activities. There was therefore the need to seek emergency funding to ensure the continuous running of the program. Unfortunately, with no tourism revenue for over 1.5 years, and due to the travel restrictions throughout the country, projections for programme self-sustainability have required recalibrating, and thus the project will continue to seek external funding support

until political stability in CAR is reached and tourist numbers begin to recover.

Another major challenge during the instability was procuring essential supplies from Bangui, the capital, given that the high rate of insecurity throughout the country made travelling by road a significant risk. Moreover, the Seleka forces had confiscated the PHP vehicle, which greatly hindered the transport of important subsistence and equipment items to the PHP camps located up to 32 km from Bayanga, thus negatively impacting the day-to-day operations of the PHP.

The presence of Seleka in the region also caused many inhabitants of villages surrounding DSPA, especially the Ba'Aka, who are traditionally hunters and gatherers, to relocate to the park and pre-park for their safety. As a result there was an increase in the number of hunting camps, guns and snares throughout the protected areas.

There was thus a compounded need for augmented anti-poaching patrols, leaving the conservation division completely stretched.

## Ways Around the Crisis

Putting in place appropriate security measures was one major way of responding to the crisis. Prior to the arrival of the Seleka troops in Bayanga, all foreign staff were evacuated by pirogue along the Sangha River to the Bomassa headquarters of the Wildlife Conservation Society in neighbouring Nouabalé-Ndoki National Park, Republic of Congo. The local staff that remained thus needed adequate security assurance. With support from the WWF regional office in Yaoundé, the emergency evacuation protocol was strengthened; one full-fuelled car and driver was always available at the park headquarters at all times, a full-fuelled pirogue and driver were



**Seleka leader in Bayanga village addressing the population during a collaboration meeting organized by WWF and APDS**

*Photo: Christian Bassoum*



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ready to disembark at any moment, and an urgent evacuation aircraft could be quickly called-on, runway security permitting.

Security experts were also hired to install surveillance cameras at strategic locations, conduct training courses for the park rangers (navigation, crisis response, first aid etc.), and develop information networks to support an early warning system and subsequent contingency plans in case of approaching rebels. A WWF anti-poaching expert was brought in to work closely with the DSPA staff to boost the effectiveness of the eco-guards and their surveillance strategy. Moreover, in response to an increased need for constant anti-poaching patrols, more park rangers were recruited to reinforce patrol teams

and more informants were carefully engaged and dispersed within nearby villages in order to record and report illegal activities.

In November 2013, with the support of the WWF National Office, an agreement of collaboration was signed between the DSPA administration and the Seleka Military Region of Sangha Mbaere prefecture to reinforce the protection of DSPA and permit commencement of previously planned conservation activities and free circulation of people in the region. The Seleka agreed to transfer its Bayanga stationed troops to the Nola military base, only to return to the area if the DSPA administration solicited their assistance for mixed patrols against incoming armed poachers.

Although the stolen PHP pickup was eventually replaced, as long as Seleka troops were still present in Bayanga, there was a great need to secure the vehicle, which was consequently parked deep in the forest and was limited to traveling a maximum of 4 km outside the village of Bayanga. Subsistence therefore had to be transported manually to a hidden location, 4 km into the park, transferred to the pickup truck and only then transferred to the field camps. Other project cars were hidden 50 km inside the park with only two old cars used for basic operations by anti-poaching units, until the complete departure of Seleka troops. All Seleka troops finally departed the region in February 2014.

During such unstable and unpredictable times, a functioning communication system is imperative. A reliable system of HF radios was thus secured between all gorilla camps and the park headquarters and systematic status updates between them were scheduled. All camps and even some trusted informants were equipped with satellite phones to use in cases where HF radios were unavailable or when communication by radio may have compromised security. Informants were positioned at strategic points to alert the project site whenever there was an incoming group of Seleka and Anti-Balaka rebels, or any other group which might threaten to infiltrate DSPA.

All the above intervention measures could not have been achieved without the necessary emergency funding. These funds were sought through, and provided by, the greater WWF Network, assuring the continuation of critical anti-poaching and PHP activities in DSPA.

## Way Forward

The government of CAR in its effort to lend support to the protection of DSPA has stationed 15 elements of the Central African Army (Force Armée



**Makumba, the dominant male in Bai Hokou**

*Photo: Tianna Peller*



# GORILLAS

Centrafricain, FACA) in Bayanga to strengthen the rule of law in the region. These FACA elements work in shifts and are replaced every month by new troops from the FACA regional base in Nola. The FACA have succeeded in completely dissolving all Anti-Balaka units in the region and have successfully reinstalled law and order.

Tourism activities have been reopened in DSPA but, due to continuing media reports of chaos in other parts of CAR, tourist turnout is still very low. WWF and the Ministry of Tourism are working together to communicate to the international community the most accurate and realistic details of the improving situation on the ground in an effort to revive the tourism programme.

With the above challenges it might be debated as to whether or not it is worth struggling to assure the continuous functioning of the PHP under such difficult circumstances, but there are numerous arguments for supporting the project's continuation. PHP's contribution to increasing the scientific knowledge of western lowland gorillas has been significant (1998–2013: 35 published articles, 8 submitted, 3 PhDs, 4 Masters Theses and one Bachelor's thesis), despite the fact that the programme originated not to support research, but with the primary goal of promoting conscientious ecotourism. The programme has already demonstrated that, with regional stability, it can eventually become self-sustaining, not only supporting the local community through employment, but also through revenue sharing schemes and assistance to the health and education sector. Notably, it also endeavours to help preserve the traditional forest skills of the increasingly urbanized Ba'Aka community and has provided the opportunity for over 3,000 tourists and media representatives to view these amazing gorillas. Most importantly it has increased their overall protection in the area: while poaching

for great apes in the region is common, PHP focal gorilla groups have yet to suffer any casualties at the hands of a poacher. Indeed it can thus also be argued that the PHP is a treasure to be jealously guarded, even through the most difficult periods imaginable.

*Terence Fuh Neba and David Greer*

*We would like to express our gratitude to our principal donors US Fish and Wildlife Service, the Arcus Foundation, KFW, and the greater WWF network for providing financial support throughout this crisis period and who continue to support the programme. We would also like to give tremendous thanks to the staff of the PHP, DSPA and above all the brave rangers that courageously continued working throughout the crisis.*

## Ape Trade from Guinea

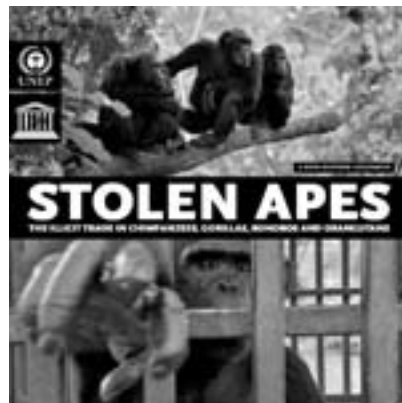
When CITES suspended Guinea from all trade in Appendix I species in 2013, it did more than highlight that country's failure to control illicit traffic in great apes and other wildlife from West Africa to Asia. It shed light on an illegal ape trade that was much more sophisticated, global, and corrupt than ever before.

The sale of infant great apes was originally considered a consequence of the bushmeat trade, an ad-hoc and opportunistic endeavor that rarely extended past country lines. But the export of an alleged 138 chimpanzees and 10

gorillas from Guinea beginning in 2007 through falsified permits that identified the apes as "captive-bred" speaks to the widespread corruption that the desire for apes has fueled, and emphasized the growing black market for great apes. Environmental crime now ranks among the most significant illegal activities in the world, with recent estimates placing its worth in excess of 200 billion USD.

It has historically been easy to categorize ape trade as limited and anecdotal, because reports have come from disparate sources and filter through the news only sporadically. Sparks erupt when celebrities post photos cuddling infant great apes in the Middle East, or when the public sees stories of an orangutan being discovered in a suitcase in the Jakarta airport or chimpanzees smuggled in sacks of marijuana, but the flow and scope of great ape trade is not readily apparent, nor is the provenance of these apes often clear.

But a 2011 CITES mission to investigate claims that a large-scale traffic of great apes was churning out of West Africa quickly uncovered an operation that was as comprehensive as it was corrupt. In 2010 alone, the CITES report found that 69 chimpanzees had been exported under falsified permits, and hinted that the collateral damage was far worse.



**Daniel Stiles, Ian Redmond, Doug Cress, Christian Nellemann and Rannveig Knutsdatter Formo (eds.)**

**Stolen Apes** – The Illicit Trade in Chimpanzees, Gorillas, Bonobos and Orangutans. A Rapid Response Assessment. United Nations Environment Programme, GRID-Arendal 2013. 53 pages. ISBN 978-82-7701-111-0. PDF download at: <http://www.grida.no/publications/rr/apes/>



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“The capture of such large numbers of chimpanzees must have been a considerable undertaking in itself, which past experience indicates would have involved the killing of mothers, and perhaps other family group members, since it is invariably juvenile chimpanzees that are wanted for trade,” the CITES report stated. “Such crime has the potential to have considerable negative impact upon chimpanzee populations.”

The loss of such a huge number of great apes from the forests of West Africa is no longer considered small-scale or anecdotal. Though it was Guinea that was sanctioned by CITES, it is clear that many of the exported apes came from nearby countries – particularly as gorillas do not originate in Guinea – and that the flow of illegally traded apes merely terminated in Guinea. But the pattern was clear: as foreign investment and development continue to expand into pristine forest areas in great ape range states, an increase in wildlife crime and trafficking is sure to follow.

It has become clear that combatting wildlife crime requires a more organized defense. In December 2014, Prince William, Duke of Cambridge, stated that “Cooperation is our greatest weapon and we must be brave and ambitious in taking a truly international approach to get one step ahead of the criminals and hold to account those who look the other way.”

The Great Apes Survival Partnership (GRASP) works to leverage its broad alliance of national governments, conservation organizations, United Nations agencies, research institutions, and private companies on behalf of issues such as illegal trade. In 2013, the GRASP network produced the data that became, *Stolen Apes: The Illicit Trade in Chimpanzees, Gorillas, Bonobos, and Orangutans*, the first publication that assembled all of the “anecdotal” reports to establish baseline information that proved great ape trafficking

was, in fact, happening on a worldwide scale that existing systems were not set up to quantify or track.

*Stolen Apes* revealed that at least 3,000 apes were lost each year from the wild between 2005 and 2011, and recent reports from the partnership indicate that this trade continues to flourish. In 2015, GRASP will launch the Apes Trafficking Database, a comprehensive data bank of orphaned apes being traded that will help bring transparency and coordination to combat this illicit trade that is posing a serious risk to ape survival. The database will also chart whether the laws in place in great ape range states are being upheld and prosecutions issued in trafficking cases. *Stolen Apes* reported only 27 arrests in Africa and Asia from 2005–2011, and a quarter of those arrests were never prosecuted.

Evidence suggests, however, that many of those arrests were merely pawns in the trade: low-level dealers without much influence. Many of the parameters of the Apes Trafficking Database are designed with the goal of being able to identify patterns that lead to the kingpins of wildlife trafficking.

One such kingpin, Ousmane Diallo of Guinea, has already felt the effect of a coordinated effort toward justice. The work of both the WARA Conservation Project and Guinean authorities led to Diallo’s arrest in 2013, after he boasted on hidden cameras that he had personally trafficked more than 500 chimpanzees out of Guinea as far back as 1994. Said Diallo: “*Sometimes, I can sell 10 or 15 chimpanzees. We have clients for this.*”

Yet, without steps towards demand reduction, the prosecution of ape traffickers will not be enough. The illegal wildlife trade in Guinea and neighbouring countries remains viable because a daily wage in many areas is less than 5 USD/day, and the lure of big money through illicit activity is strong. While countries like Rwanda and Uganda

have capitalized on great apes to make eco-tourism a profitable aspect of conservation, Guinea and many other nations have been unable to convert this natural heritage into a sustainable resource.

But if West Africa represents the origin of the illegal trade, what about regions that represent the transit and destination markets? North Africa and the Middle East have long been major players in the ape trade, with Egypt serving as an exit point from Africa and Gulf States such as Qatar, the United Arab Emirates, and Lebanon as the ultimate buyers. But the rapid and massive growth of China’s middle class – which triggered a major expansion of leisure-time sites such as zoos and theme parks – kicked the illegal trade into overdrive.

The ordeals faced by chimpanzees and gorillas brought to China are considerable. The 10 gorillas thought to have been exported to China have never been put on public display nor been registered as having arrived, and there is speculation that they were euthanized as a disease risk. The chimpanzees, meanwhile, are prominent fixtures in at least 20 Chinese zoos and animal parks, even though CITES regulations prohibit the use of illegally sourced wildlife in entertainment. Unfortunately, only a fraction of these zoos fall under the authority of the Chinese Association of Zoological Gardens (CAZG).

Studies show that chimpanzees deprived of the maternal bond, such as orphans like those from Guinea, exhibit abnormal behavior, including severe violence not only towards other chimpanzees but towards humans as well. Abnormal behaviors include repetitive rocking, stereotyped body movements, unusual posturing, self-oral, depilation, regurgitation, coprophagy, urophagy, and others. Additionally, many chimpanzees raised in non-natural environments exhibit a lack of inter-



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est in sex and breeding, or an inability to perform properly. The potential lack of births in many of these zoos and animal parks could inadvertently fuel greater demand for imported apes.

Studies also connect the use of chimpanzees in anthropomorphic settings and wearing clothing with a lack of knowledge about their status as an endangered species. The presence of these chimpanzees in Chinese communities therefore contradicts the global conservation message that this species needs to be protected.

In the current climate where wildlife trafficking is increasingly organized and international, it is important to concentrate energies and efforts in the most productive way. The ability of officials in Guinea to falsify permits, claim captive-born status, and arbitrarily amend existing documentation has highlighted a need for system overhaul. Future options under discussion include an electronic permit system, a captive-breeding database, and collaboration with organizations such as TRAFFIC that would prevent the abuse of CITES permitting.

The best recourse, in addition to committing funds and energy to the improvement of reporting mechanisms, working together on projects like the Apes Trafficking Database, is to raise awareness of the perils facing chimpanzees and other great apes, and create systems that will mandate their protection. Zoo associations in Europe, North America, and China are working to produce a joint statement calling for an end to all public shows that feature great apes. It is the responsibility of the public to inquire as to where the apes on display have come from, and to altogether avoid animal parks where apes are forced to perform.

As Prince William emphasized, "with the illegal wildlife trade on the rise, our response to the problem must evolve, and do so rapidly." Through collaboration and cooperation, not only can we

eliminate the possibility of great apes being illegally traded so abundantly but we can make those driving the trade realize the true impacts of their actions:

compromising the survival of great apes in the wild.

*Laura Darby*

## Gorillas in Illegal Trade

In previous Gorilla Journals, we have presented several articles about the wildlife law enforcement organisation LAGA in Cameroon. In the meantime, sister organisations have been established in many African countries, forming the EAGLE Network, and, in cooperation with the authorities of the respective countries, they arrest wildlife traffickers. Among the items seized during the last months are ivory, pangolin scales, leopard and lion skins, but also ape skulls and body parts. From July to October 2014, 22 ape traffickers were arrested, and a total of over 34 chimp skulls and fresh heads, 34 fresh chimp limbs, 24 gorilla skulls and fresh heads and 16 fresh gorilla limbs have been seized. Regarding arrests of people who tried to sell gorillas or parts of them, Ofir Drori reported the following events on his facebook page:

14 July: In Cameroon 5 traffickers were arrested with a gorilla skull.

16 July: A trafficker tried to sell a gorilla baby who died before the team arrived. He was arrested.

23 August: In Cameroon an ape trafficker was arrested with 2 gorilla skulls.

27 August: In Cameroon 2 dealers were arrested with gorilla bones and skull.

8 September: In Cameroon an ape trafficker was arrested with 4 gorilla heads and 16 hands and legs.

1 October: In Cameroon 2 ape dealers were arrested with a gorilla skull. They are behind bars.

14 October: In Cameroon a trafficker with 5 gorilla skulls was arrested. His bike was seized and he is behind bars.

6 November: In Cameroon a trafficker was arrested with 3 gorilla skulls.

28 November: In Cameroon an ape trafficker was arrested with a gorilla skull.



**Above: dead gorilla baby**  
**Below: a trafficker arrested with several skulls in Cameroon**

*Photos: LAGA*



## READING

### Arcus Foundation

**Extractive industries and ape conservation.** State of the Apes. Cambridge (Cambridge University Press) 2014. 367 pages. Hardcover £ 65.00, US\$ 99.00, ISBN 978-1-107-06749-3. Paperback £ 24.99, US\$ 39.99, ISBN 978-1-107-69621-1

This book provides a very good overview of the impact that extractive industries (logging and mining) in ape distribution areas have on the living conditions of these apes. In section 1, 8 chapters deal with trends, communities, ecological impacts, timber extraction, mining and oil extraction, small-scale mining, indirect impacts and case studies; section 2 explains the status of the apes in the wild and in captivity. The chapters were written by different authors and each one has its own character. Some chapters describe activities of logging and mining companies in detail, and they explain the impacts of each phase on apes. Many examples, some of them in detail, show case studies and problems. The authors are experts and the explanations and examples are up-to-date.

As these problems have been known for a long time, many guidelines, policies, instruments and international programs have been developed to reduce the impacts of extractive activities on apes (and other species) and to ensure their sustainability. These instruments and programs are listed and explained, but sometimes it is not clear whether they really are successful.

Angela Meder

### Anne Russon and Janette Wallis (eds.)

**Primate Tourism: A Tool for Conservation?** Cambridge (Cambridge University Press) 2014. 339 pages. Hardcover US\$ 99, £ 65.00, ISBN 978-1-107-01812-9

Gorilla (and other primate) tourism started in the 1950s and has grown for many decades, especially since the

1980s. An increasing number of critical reports regarding the conservation aspect of primate tourism have been published since the 1990s. It has become obvious that many problems are connected with close human–primate encounters. The authors of this book worked at many different sites where primates can be visited; some of the contributions are original studies, some are reviews. The major issues – economics, disease and tourism guidelines – are covered in separate chapters.

It seems to be the rule that primate tourism is bound to have more or less negative effects, even when positive effects are obvious at the same time. Although primate tourism is usually marketed as “ecotourism”, many contributions demonstrate that in most cases this label is not appropriate, especially if the primates are provisioned and close contact to humans is possible. In general, visitors are not aware that this kind of tourism may harm the primates. *Primate Tourism* gives an excellent overview of the experiences with primate tourism, the positive and negative effects, and it provides recommendations for the solution of the problems.

Angela Meder

### Fritz Jantschke and Thomas Marent

**Like Us: Encounters with Primates.** White Star Publishers 2014. 240 pages. Hardcover US\$ 36.69. ISBN 978-8854408906

## New on the Internet

The latest issue of *African Primates* is now available. You can download the individual articles – or the entire issue – at <http://www.primates-sg.org/african-primates-volume-9/>

### Global Witness

**Drillers in the Mist.** How Secret Payments and a Climate of Violence

Helped SOCO International Open Africa’s Oldest National Park to Oil. London 2014. 32 pages. ISBN 978-0-9926910-9-7. Download (4.5 MB): [http://www.globalwitness.org/sites/default/files/library/drillers\\_in\\_the\\_mist.pdf](http://www.globalwitness.org/sites/default/files/library/drillers_in_the_mist.pdf)

### Medard Twinamatsiko, Julia Baker, Mariel Harrison, Mahboobeh Shirkhorshidi, Robert Bitariho, Michelle Wieland, Stephen Asuma, E. J. Milner-Gulland, Phil Franks, Dilys Roe

**Linking Conservation, Equity and Poverty Alleviation:** understanding profiles and motivations of resource users and local perceptions of governance at Bwindi Impenetrable National Park, Uganda. IIED Research Report, London, August 2014. 104 pages. ISBN 978-1-78431-073-8. Download at <http://pubs.iied.org/14630IIED.html>

### Osipova, E., Wilson, L., Blaney, R., Shi, Y., Fancourt, M., Strubel, M., Salvaterra, T., Brown, C., Verschuren, B.

**The Benefits of Natural World Heritage:** identifying and assessing ecosystem services and benefits provided by the world’s most iconic natural places. Gland (IUCN) 2014. VI, 58 pages. ISBN 978-2-8317-1694-7. <https://portals.iucn.org/library/node/44901>

### de Wasseige, C., Flynn, J., Louppe, D., Hiol, F., Mayaux, Ph. (eds.)

**The Forests of the Congo Basin – State of the Forest 2013.** Weyrich, Belgium (OFAC/COMIFAC, CBFP) November 2014. 328 pages. Legal deposit: D/2014/8631/42. ISBN 978-2-87489-299-8. For download (15.3 MB): [http://www.observatoire-comifac.net/docs/edf2013/EN/EDF2013\\_EN.pdf](http://www.observatoire-comifac.net/docs/edf2013/EN/EDF2013_EN.pdf)

### Global Witness

**A Good Deal Better?** Uganda’s secret oil contracts explained. London (Global Witness) September 2014. 78 pages. ISBN 978-0-9926910-8-0. <http://www.globalwitness.org/ugandaoilcontracts/>



## BERGGORILLA & REGENWALD DIREKTHILFE

### The Enough Project

**How to Dismantle a Deadly Militia.** Seven Non-Military Tactics to Help End the FDLR Threat in Congo. November 2014. 22 pages. Download (1.5 MB): <http://www.enoughproject.org/reports/how-dismantle-deadly-militia>

**Joyce Muraya and John Ahere**  
**Perpetuation of instability in the Democratic Republic of the Congo:** When the Kivus sneeze, Kinshasa catches a cold. ACCORD Occasional Paper Series: Issue 1, 2014. 44 pages. Download (1.2 MB): <http://www.accord.org.za/publications/occasional-papers/1268-perpetuation-of-instability-in-the-democratic-republic-of-the-congo>

**Ingunn Bjørkhaug and Morten Bøås**  
**Men, women, and gender-based violence in North Kivu, DRC.** Oslo, Fafo-report 2014:39. 38 pages. ISBN 978-82-324-0143-7 (paper edition), 978-82-324-0144-4 (web edition). Download: <http://www.fafo.no/pub/rapp/20386>

### IFAW

**Wanted – Dead or Alive.** Exposing Online Wildlife Trade. 62 pages. London (IFAW) 2014. Download (4.5 MB): <http://www.ifaw.org/united-states/resource-centre/wanted-dead-or-alive-exposing-online-wildlife-trade>

### MONUSCO

**Report of the United Nations joint Human Rights Office on human rights violations committed by the Mouvement du 23 mars (M23) in North Kivu Province April 2012 – November 2013.** October 2014. 15 pages. [http://www.ohchr.org/Documents/Countries/CD/UNJHROOctober2014\\_en.pdf](http://www.ohchr.org/Documents/Countries/CD/UNJHROOctober2014_en.pdf)

**Ken Matthysen and Andrés Zaragoza Montejano**  
**Conflict Minerals' initiatives in DR Congo:** Perceptions of local mining communities. Antwerp (IPIS) No-

vember 2013. 52 pages. Download (828 kB): [http://www.ipisresearch.be/publications\\_detail.php?id=426](http://www.ipisresearch.be/publications_detail.php?id=426)

**Paolo Omar Cerutti, Guillaume Les-cuyer, Raphael Tsanga, Sam Nziengui Kassa, Prisca Roseline Mapangou, Edouard Essiane Mendoula, Aimé Patrick Missamba-Lola, Robert Nasi, Paule Pamela Tabi Ekebil, Régis Yembe Yembe**  
**Social impacts of the Forest Stewardship Council certification.** An assessment in the Congo basin. CIFOR Occasional Paper 103, 2014. 74 pages. ISBN 978-602-1504-30-7. Download (555 kB): <http://www.cifor.org/library/4487/social-impacts-of-the-forest-stewardship-council-certification-an-assessment-in-the-congo-basin/>

**Sylvia Wicander and Lauren Coad**  
**Learning our Lessons:** A Review of Alternative Livelihood Projects in Central Africa. Environmental Change Institute, April 2014. 99 pages. Download: <http://www.eci.ox.ac.uk/publications/downloads/coad14-workingpaper.pdf>

### CITES

**Elephant Conservation, Illegal Killing and Ivory Trade.** Geneva, July 2014. 38 pages. Available for download (2.1 MB) at <http://www.cites.org/sites/default/files/eng/com/sc/65/E-SC65-42-01.pdf>

### Our Donors

From May to October 2014 we received major donations by Marion Arnoldi, baupartner, Don Cousins, Angelika Dickmann, Marie Engel, Jürgen und Irmgard Friedrich, Peter Gausmann, Marieberthe Hoffmann-Falk, Michael Jähde and Angelika Jähde-Stoeckle, Dorothea Kaiblinger, Rafaela Kopy, Karin Lyer, Hanna Otte, Kurt Rathfelder, Birgit Reime, Wolfram Rietschel, Alfred Roszyk, Josefine Schmölder, S.O.S. Gorilla, Sparkasse Herford, Michaela Steinhäuser, Julia Stoppel, Kristin and Thomas Tiede, Steve Tyler, Margit and Otto Wallner and Christof Wiedemair.

The Stuttgart Zoo donated euro 1000 from the collection of mobile phones for recycling, and the Pieterella Pols Fonds transferred euro 5000 that was used to construct a building for rangers at the Mt. Tshiaberimu. The colleagues of Ravid Aloni at the company 1 & 1 collected donations when she left the company.

Many thanks to everybody, including all the donors that could not be listed by name here. We are grateful for any support, and we hope that you will continue to support our work in the new year. We wish everybody a happy, successful 2015!



**House for rangers at Mt. Tshiaberimu that was constructed with funds donated by the Pieterella Pols Fonds**

*Photo: Claude Sikubwabo Kiyengo*

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<http://www.berggorilla.org/en/extras/art/>

We present artists with a special interest in gorillas; one of them is Chisato Abe.

### Literature

<http://www.berggorilla.org/en/extras/literature/>

Selected references provide the most important articles and books related to gorillas, their conservation and the protected areas where we support gorilla conservation activities.

### Links

<http://www.berggorilla.org/en/extras/links/>

This section provides links to the websites of various organisations, archives, maps and other sources of information.

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