



Gorilla Journal

Journal of Berggorilla & Regenwald Direkthilfe

No. 46, June 2013



**Blood Samples
from Mt. Tshia-
berimu Gorillas**

**Cameroon Loses
a Cross River
Gorilla**

**The Status of Go-
rillas in the Di-
monika Biosphere
Reserve**

**Congo's Newest
National Park
Protects Swamp
Dwelling Gorillas**



BERGGORILLA & REGENWALD DIREKTHILFE

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Cover: 10-year-old Mukokya, 1 of 4 individuals in his group on Mt. Tshiaberimu. Photo: MGVP/ICCN

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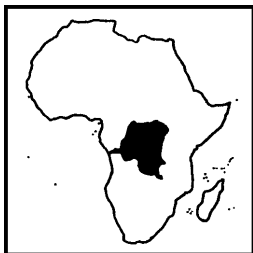
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Blood Samples from Mt. Tshiaberimu Gorillas

On a small forested island in the western region of the Democratic Republic of the Congo's Virunga National Park, a tiny population of Grauer's gorillas has reduced to one third of its original size within the last decade. Now down to just six individuals in two separate groups, this small population living on Mt. Tshiaberimu has only two females left – and their situation is dire.

At the present time, the Mt. Tshiaberimu gorillas have been classified as Grauer's gorillas. But while these gorillas are morphologically and genetically Grauer's, their afro-montane forested habitat is more similar to that of the mountain gorilla. Considering that this population has been cut off from the remainder of Congo's Grauer's population for an indeterminate amount of time, ape conservationists are eager to conduct a more in-depth genetic analysis on these individuals.

"ICCN [the Congolese Wildlife Authority] recently conducted a study on

the long-term survivability of this population using computer modeling. The results indicate that, if the population is left alone, the outcomes are grim" says Eddy Kambale, Gorilla Doctors Head Field Veterinarian in the Democratic Republic of the Congo. "ICCN requested that [Gorilla Doctors] evaluate the health parameters of this population and its habitat in order to determine a future strategy for survival." And so, Gorilla Doctors was tasked with collecting samples from an individual in order to do a complete genome analysis of this group.

On March 13, 2013, Gorilla Doctors traveled to Mt. Tshiaberimu to conduct an intervention and collect blood, hair, buccal swabs, fecal and skin samples from an individual for health and genetic studies. In doing this intervention, Gorilla Doctors, along with its partners at the ICCN, want to evaluate the overall health of the population and successfully map the whole genome of the species, to determine how closely related they may be to either or both eastern lowland and mountain gorillas.

During the intervention, Gorilla Doctors Co-Director Mike Cranfield, along with DRC veterinarians Eddy Kambale and Martin Kabuyaya, anesthetized 10-year-old blackback Mukokya in order to take the samples. Within this small group, there is one silverback, one female and two blackbacks. Gorilla Doctors felt that performing the intervention on one of the blackbacks would be the least disruptive for the group. After a short time under anesthesia for sample collection, Mukokya woke up and joined the rest of his group without incident. The intervention was a success.

Additionally, a clinical workup will also be completed to try and gain some insight into the hepatic and cardiac lesions seen on previous postmortem examinations by Gorilla Doctors Veterinary Pathologist Linda Lowenstine.

Having examined tissues from four Mt. Tshiaberimu gorillas (two silverbacks, one adult female and a juvenile male), Linda Lowenstine reported that "two of the adults had changes in the liver suggestive of exposure to a toxin; changes were severe and may have contributed to death in the female and a silverback." She added "I have occasionally seen similar changes in the mountain gorillas, but always as a minor incidental finding. My main concern is for ingestion of poisonous plants, such as *Senecio*, that contain pyrrolizidine alkaloids, and I wondered if the Mt. Tshiaberimu gorillas were eating something they might not usually eat because of human encroachment. But, of course, this is just speculation at this point."

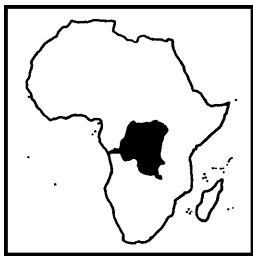
Interestingly, the Mt. Tshiaberimu gorillas have also exhibited heart changes suggesting hypertension, something typically seen in the hearts of captive western lowland gorillas. Similar lesions have been seen in mountain gorillas, but were much more mild.

As a background health check, a serological survey will be done on the



Mike Cranfield and Eddy Kambale collect samples and conduct an exam during the intervention on Mt. Tshiaberimu.

Photo: MGVP/ICCN



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blood collected, to determine the illnesses that this group has been exposed to. Moreover, two skin biopsies were taken. Data from the samples will be coming in over the next six months.

“We went in to solve a puzzle” said Mike Cranfield. “We want to find out why there was a sudden decline in the population, the cause of the liver troubles and where, taxonomically, these animals fit so that a comprehensive plan for the population can be undertaken.” This is just the start of many

issues that have to be examined by ICCN and their partners before the plan can be completed.

Could this population be a novel subspecies different from the mountain gorillas and Grauer’s gorillas? And what will it take to save this isolated group of gorillas? The conservation partners involved are working hard to determine the answers to these critical questions, and hopefully, save this vulnerable and unique group of Congolese gorillas.

Jessica Burbridge

Original text at www.gorilladoctorsblog.org

You can follow the Gorilla Doctors’ health monitoring efforts on their Facebook page, where they post photos and notes from their monthly visits.

Comment by Colin Groves: It seems likely to be the last surviving population of the subspecies described as *Gorilla gorilla rex-pygmaeorum* by Schwarz in 1927 from the Highlands west of Lake Edward.

The Gorilla Monitoring Team on Mt. Tshiaberimu Needs Support

At the end of May, Claude Sikubwabo Kiyengo informed us that the Chief Warden of the Virunga National Park had contacted him and asked for material and equipment to continue the monitoring of the Mt. Tshiaberimu gorillas:

“Our budget for the monitoring of the gorillas was reduced and this means that we cannot provide the necessary equipment for the gorilla monitoring fieldwork. Moreover, the gorillas move to areas where no ranger posts exist and this makes it more difficult to follow them over long distances. The sup-

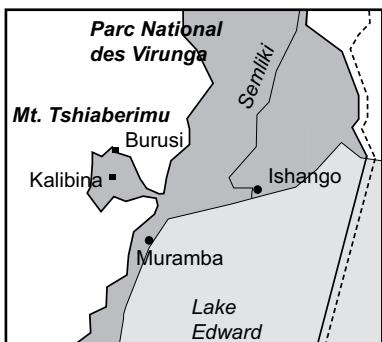
port with equipment would allow us to improve our work considerably.”

The monitoring team consists of 9 persons: 8 pisteurs and the leader of monitoring. They urgently need GPS devices (new type), digital cameras, tents, backpacks, boots, raincoats, water bottles, torches. Everything will be bought locally and cost less than US\$ 2,000. We immediately agreed to support this important activity.

We want the gorillas on Mt. Tshiaberimu to survive! Please help us to support the Congolese national park authority ICCN.

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Our reforestation project at Mt. Tshiaberimu is now in its third year. Below: Claude Sikubwabo (right) in a tree nursery





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Group of the stakeholders during a workshop

Photo: ICCN

Newly Decentralised Entities Get Involved in Gorilla Protection

The conservation of our gorillas can only be safeguarded through good governance, involving all stakeholders among the local communities resident in the Kahuzi-Biega National Park. In order to ensure the involvement of the stakeholders in governance, the park has just completed the establishment of a Community Conservation Management Council (CGCC) at the chiefdom level. This is a key milestone, arguably even more important than the establishment of the Community Conservation Committees (CCCs) at groupement level in 2000.

The CGCC forms the technical group that embodies the chiefdom's (chefferie) support for the development

and sustainable management of the ecosystems of the park and its surrounding areas. The chiefdom may be regarded as the epicentre for the coordination of support to the park, which gives the CGCC an important role in deciding how inhabitants from the different localities could benefit: either through support for social infrastructure (schools, health centres, water distribution systems, agricultural access roads, reforestation, etc.), or through support for income-generating activities. Appropriate interventions will be proposed by the CGCC in its local development plan.

The CGCC seeks to involve and to represent all levels of provincial authorities, traditional authorities, NGOs and civil society. In brief, it seeks to represent social and professional interests and the park authorities in the development and implementation of an inte-

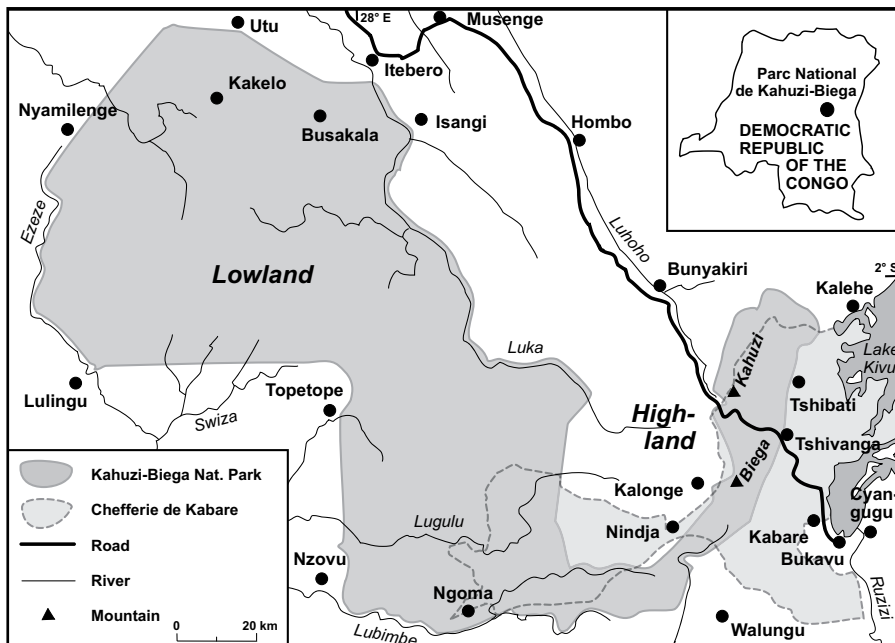
grated local development plan, as requested by the community through the chiefdom.

On 15 March 2013, a Deed of Commitment was signed by the following stakeholders:

- the traditional chief of the Kabare chiefdom
- the Administrator of Kabare territory
- 14 representatives of the groupements of Kabare chiefdom
- 6 representatives of Community Conservation Committees
- 1 representative of the religious confessions
- 1 representative of the health institutions
- 1 representative of Kabare chiefdom civil society
- 1 media representative
- 1 *Institut Congolais pour la Conservation de la Nature* representative



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- 1 representative of the development partners
- 1 representative of the education institutions

The meeting to sign the commitment was held just before the Democratic Republic of the Congo initiated its decentralisation policy. The meeting had two important outputs: the Deed of Commitment itself and an associated byelaw.

In his speech, the Mwami Kabare Rugemaninzi II N'abushi confirmed that:

The Kahuzi-Biega National Park is one of the treasures of the Province of South Kivu. We are proud of the park, which attracts many tourists, thanks to its biodiversity, and particularly the population of eastern lowland gorillas. We also recognise the important contribution of the park in the battle against global warming, which places humanity at risk from greenhouse gases.

The park is therefore a heritage that every single one of us needs to pro-

tect, for the sake of our own survival and that of future generations. The process that we are setting in motion today aims to transform our population into experienced defenders of the park.

The park's partners (GFA, PACEBCO, WCS and WWF) also took part in these meetings. The exchanges that follow on from the meeting will result in proposals from the community for the conservation of the Kahuzi-Biega National Park. The people need to understand the individual and community interests they need to reconcile to support the conservation of the park.

The Community Conservation Management Council of Kabare chiefdom will comprise a total of 23 elected members from different social and professional groups plus 7 co-opted members, totalling 30 members in all. The next stage is to commence support for the park within the framework of the local development plan established by this decentralised entity. A socio-economic study has been conducted in

the 14 groupements of the chiefdom to facilitate the operationalization of the plan.

Radar Nishuli

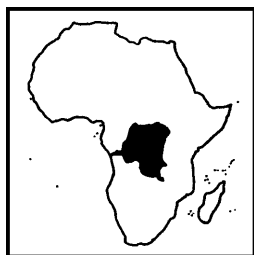
A Visit to Kahuzi-Biega

The Kahuzi-Biega National Park is located in the east of the Democratic Republic of the Congo near the big city of Bukavu on the southern shore of Lake Kivu. It covers a total area of approximately 6,000 km², with about 10% covered by montane rain forest in the high-altitude part of the park. The low-altitude part of the park is far larger and consists of lowland tropical rain forest. It is connected to the high-altitude part only by a narrow corridor. The gorillas living in this national park are Grauer's gorillas (*Gorilla beringei graueri*), formerly known as eastern lowland gorillas.

The gorilla population in the high-altitude part of the park appears to be quite well protected at this time due to gorilla tourism, which takes place only here. However, the situation in the low-altitude part of the park is completely different. There are no recent data on the status of the gorilla population in this area, but numerous reports concerning illegal activities within the national park boundaries – gold and coltan mining and the spread of agriculture – do not promote optimism.

Even the gorillas habituated for the purpose of tourism in the high-altitude part of the park have been a favourite target for poachers in the past. In 1999, over two-thirds of all habituated gorillas in this area were shot, among them such well-known animals as the old silverback Mushamuka. Maheshe, a silverback whose picture was on one of the country's former bank notes, had fallen victim to poachers as early as 1994.

More than 18 years had passed since my last visit to Kahuzi-Biega, so



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I was anxious to see what was awaiting me. In November 2012, I had the opportunity to join a small private tour group led by Andreas Klotz from the Mondberge Project. We planned to visit three eastern gorilla populations: first in Kahuzi-Biega, then in the Volcanoes National Park in Rwanda and finally in the Bwindi Impenetrable Forest in Uganda. As the security situation in eastern Congo continues to be very unstable, the German Foreign Ministry has issued a travel warning, which is still in place. A trip there is not without risk. But we had confidence in our German tour leader, who lives in Africa, and the local agent's up-to-date knowledge of the security situation.

Departing from Bukavu, we arrived at the Tshivanga headquarters at the edge of the national park in the early morning. I was delighted to find that the same guide who accompanied me on my first visit in 1994 would be taking us to the gorillas. In recognition of his loyalty to Kahuzi-Biega during all the intervening years, Lambert had now been promoted to head guide, for which he

deserves the highest praise considering that this sort of work undoubtedly involved him risking his life during times of war. While the formalities were being seen to, we studied the exhibited skulls of numerous gorillas, forest elephants and other animal species that had fallen victim to poachers.

The permit for visiting the gorillas cost 400 US\$. After Lambert had delivered an introductory talk to our group, we were taken to the starting point of the hike on the public road that goes right through the centre of the national park. We had been told that the gorillas stay mostly in the easily accessible bamboo zone of the park during the rainy season in order to feed on their favourite food, the juicy pith of bamboo stems. Nonetheless, we had not expected a walk of only 10 minutes (!) on level ground through dense vegetation, before we ran into the Chimanku group, named after their leader. With utter calm, the silverback enjoyed one bamboo stem after another, while completely ignoring the photographers standing only a few metres from him.

Shortly before we arrived at the gorillas, we were provided with protective masks, covering nose and mouth, in order to prevent disease transmission to the animals. The very dense vegetation of the bamboo forest made it impossible to maintain the minimum distance of 7 m. It would even have been difficult to get out of the way if the gorillas had come any closer.

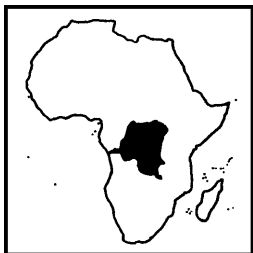
The oldest female of this group, 38 years of age, is well known to the guides as rather intolerant towards visitors she does not know. This time she limited herself to uttering some disapproving sounds aimed in our direction. We noticed that the eyes of this animal, which had an infant of about two years, oozed a whitish liquid.

When the few gorillas which we had been observing moved on, the guides cut a path through the incredibly dense vegetation with their machetes, and very suddenly, we were back on the road from which we had started. Standing on the road, which is used by humans, animals, overloaded lorries and motorcycles, we witnessed how alarmingly close gorillas are to people. Several gorilla females and their infants appeared at the edge of the forest, one after the other. They watched what was happening on the road for a while and then settled down for a sleep in a tiny clearing right at the forest edge. Without a care in the world, the young gorillas played with each other while the adults rested. Repeatedly, our guides had problems convincing lorry drivers stopping to look at the gorillas to move on – even for the locals, seeing gorillas in the wild like this is a very rare event.

Both our guides and Carlos Schuler, who worked on gorilla conservation in Kahuzi-Biega for many years and now operates a large restaurant in Bukavu, confirmed that the road that cuts through their habitat has never been a problem for the gorillas. It has always been there, and even when the road surface improved and permitted cars



The tourist group observes several female gorillas with their offspring next to the road that leads through the park. Photo: Thomas Weinhold.



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to go much faster than before, no traffic accidents with gorillas have ever been reported.

The conclusions from our visit to the Kahuzi-Biega National Park is that the population of Grauer's gorilla in the high-altitude part of the park is stable or slightly on the increase, while the population of forest elephants has been almost extinguished due to poaching for their ivory.

Peter Zwanzger

Impressions from the road that leads through the Kahuzi-Biega National Park (another photo on page 15).

Photos: Thomas Weinhold.



Rescue of an Infant Gorilla Suspected to Have Escaped Poachers

An infant male gorilla, found alone in a cornfield in the eastern Democratic Republic of the Congo was rescued by the ICCN with assistance from Gorilla Doctors. The young gorilla is estimated to be 3 years old and weighs 11.5 kg. He was ranging alone for days, approximately 1 km outside of Virunga National Park, before a local individual alerted the wildlife authorities. Although generally in good health, he has a large wound on his back, possibly due to a rope restraint. The laceration and scarring suggest he may have been a victim of gorilla trafficking and has been held captive by poachers for several weeks. ICCN rangers slept in the cornfield to protect the young gorilla until the rescue, which took place on June 23.

Gorilla Doctors' Head Field Veterinarian in Congo, Eddy Kambale approached the gorilla, who was named Matabishi, in the field and took him on a 27 km bumpy ride to Rumangabo. Although it is likely that the infant was poached from a wild gorilla group, he "is definitely overhabituated to humans" said Eddy Kambale. "He is most comfortable resting next to people or sitting in someones lap."

Once at the Senkwekwe Center, Gorilla Doctors conducted a complete quarantine check-in protocol. Five gorilla orphans for which Gorilla Doctors provide all the veterinary care currently live at Senkwekwe: three mountain gorillas, Maisha, Ndeze and Ndakasi, and two Grauer's gorillas, Baraka and Isangi.

It can be difficult to distinguish between a mountain and a Grauer's gorilla based on appearance alone, especially at this young age. It will take several months to conduct a complete genetic analysis, but samples have been taken and arrangements are being made to ship them out for testing as soon as possible.

Summary of a Gorilla Doctors press release



CROSS RIVER

Cameroon Loses a Cross River Gorilla

On March 1, 2013, the Cameroon conservation community was taken aback when news reached them about the brutal killing of a silverback male of the critically endangered Cross River gorilla in Cameroon. This human cousin, which had probably strayed from the proposed Tofala Hill Wildlife Sanctuary in the Lebialem Highlands (see map on page 11), was killed by the people of Pinyin, a village in the Santa Sub-division, Northwest Cameroon. Gorillas were first reported here some 60 years ago, making it likely that the current young generation has not seen gorillas or chimpanzees during all that time.

Judith Benue, a local teacher from the village school, spotted a male gorilla approaching her in the farm on March 1, 2013. She screamed at the top of her voice and rushed back to the village to raise an alarm. A small popu-



The killed gorilla

Photo: Louis Nkembi

lation from the village armed with guns, clubs and stones, under the command of a Gendarmerie officer and the village chief, searched for the gorilla and killed it 3–4 km away from where it was initially spotted, in the name of “self-defense”. Frightened by the noise, the silverback had taken to its heels and

was probably heading back towards its habitat. Unfortunately for the gorilla, the crowd caught up with him and fired about 47 cartridges, together with stones, and beat it with clubs, leaving the poor animal in a pool of its own blood.

Speaking on March 21 at a press conference in Buea, the President/CEO of ERuDeF, Louis Nkembi, said the killing of the gorilla was a bad omen for the conservation world, given that it indicated that the fight against poaching, ignorance and people who do not yet understand the value of wildlife is still very far from being achieved. The proposed Tofala Hill Wildlife Sanctuary, from which the slain Cross River gorilla had probably come, hosts about 40 of these gorillas (ERuDeF estimate). The death of this gorilla therefore means the sub-population has decreased by one; the loss of just one gorilla means a lot to the Cross River gorilla population that numbers just about 300 in the wild. The Lebialem Highlands lodges over 60 of these 300 gorillas within the Cross River gorilla landscape (ERuDeF estimate).

On March 28 Louis Nkembi, in collaboration with Mbah Grace, the Northwest Regional Delegate of Forestry and Wildlife, jointly launched an education and sensitization campaign in the community where the gorilla was killed, aimed at the local, traditional and administrative authorities. Mbah Grace explained to the Fon and his people the legal implications of the killing of the silverback gorilla as it falls within category A of protected animal species alongside chimpanzees and others. Thus, anybody who kills them is liable to a jail term of 1–3 years or a fine of 3 million francs CFA and above, according to the laws of the nation. The importance of wildlife and biodiversity conservation was also explained.

From all the investigation conducted, it was evident that the gorilla was killed out of excitement on the part of



Judith Benue, the lady who saw the gorilla approach her

Photo: Louis Nkembi



CROSS RIVER



The area where the male gorilla was noticed for the first time (above) and the riparian forest where he was killed (right)

Photos: Louis Nkembu

the Pinyin people and not self-defense as it was reported earlier. The death of this Cross River gorilla further underpins the need for more concerted efforts to protect these great apes in all the locations where they are still found. There is equally a need for more sensitization campaigns, especially in forest adjacent communities, on the need to conserve these animals. The time for the government of Cameroon, supporters, conservationists and NGOs to act is NOW! If not, we might as well say good bye to the remaining precious apes.

Louis Nkembu and Regina Leke

Tree Nesting in Mawambi Hills Gorillas

Mawambi is a 43 km² lowland forest site, also known as Takpe/Awuri, located to the southeast of the Takamanda National Park in Cameroon. The Mawambi gorilla research project was launched in November 2009 with the aim of obtaining baseline information on the population size, feeding and ranging ecology, and anthropogenic disturbance of a Cross River gorilla subpopulation inhabiting this unclassified forest. During a total of 297 field



days, spanning 23 months, we have documented the diet and ranging behaviour of these gorillas, investigated the intensity and spatial distribution of human activities within the forest, and evaluated the vulnerability of gorillas to human disturbance.

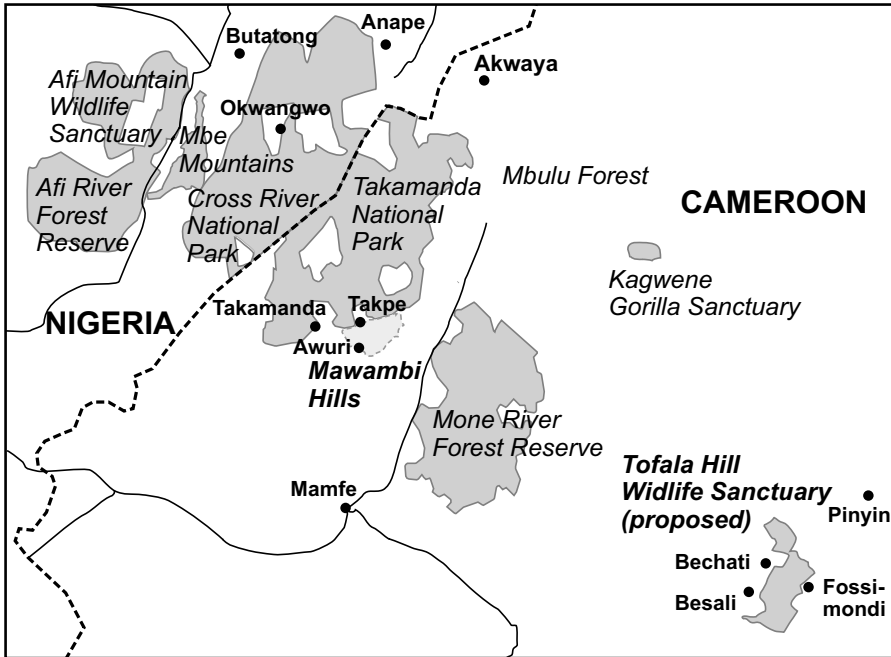
Based on nest counts; we estimate that 20–30 weaned gorillas occupy this forest. For the Cross River gorilla, Mawambi is therefore a significant site harbouring one of the largest known groups of gorillas. In addition to gorillas, non-human primates recorded at Mawambi include the angwantibo (*Arctocebus calabarensis*), Demidoff's galago and Talbot's needle-clawed galago (*Galagoides demidovii*, *Euoticus pallidus talboti*), mona monkey, red-rumped putty-nosed monkey, Cameroon red-eared monkey and Preuss's monkey (*Cercopithecus mona*, *C. nictitans ludio*, *C. erythrotis camerunensis*, *Allochocebus preussi preussi*), and Elliot's chimpanzee (*Pan troglodytes ellioti*).

Due to Mawambi's lower altitude and proximity to village communities, the forest is intensively used by local people for hunting, lumbering, and non-timber forest product collection. According to village reports gorillas and chimpanzees have been hunted heavily at Mawambi in the past. The last gorilla hunting incident was in 1998 when an adult male was reportedly killed by a hunter from Takpe village. Hunting has subsided ever since as a result of increased conservation efforts, mainly by WCS, but rapidly increasing anthropogenic disturbance threatens to undermine these conservation efforts. We have found that Mawambi gorillas mainly occupied the slopes of steep hills and avoided human disturbed areas. A measure of the spatial congruence between human activity and gorilla signs also revealed a high human pressure on the core areas used by gorillas.

Here we report on the use of trees in nest construction by Mawambi goril-



CROSS RIVER



The position of the the area where the gorilla was killed (at the right) and the Mawambi Hills (between the Takamanda National Park and the Mone River Forest Reserve)

las. Knowledge of plant species used for nesting by gorillas is important because it can lead to the designation of suitable habitats. Identifying and protecting trees used for nesting has also been recommended as a practical approach to reduce the negative impacts of logging on great apes (Sanz et al. 2007).

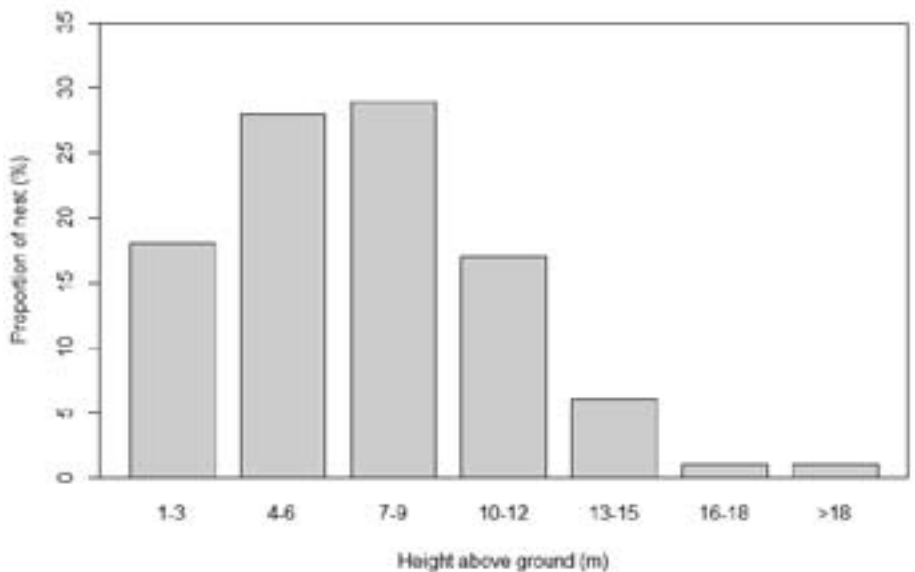
We examined 163 nest sites to determine the rate of tree nest construction and their choice of tree for nesting. Typically, nests are constructed in trees by breaking, bending, and inter-weaving branches from the same or neighbouring trees to form a solid platform and then lining it with smaller branches, twigs and leaves in a circular fashion until it is comfortable to sleep in (Fruth and Hohmann 1996). For each nest built in trees, we recorded 1) species of tree, 2) height and DBH (diameter at breast height) of trees in which they nested, and 3) height of nest from the ground.

To determine whether gorillas were selective in their choice of nesting trees, the density and abundance of gorilla nesting tree species were ob-

tained in a habitat-wide vegetation census.

Nests built in trees accounted for 38.3% (N = 633) of the whole nest sample, while ground nests constituted 61.7% (N = 1019). Nest sites with only tree nests accounted for 14.8% (N = 25) of all nest sites. Nests were built at heights ranging from 0 to 34 m (mean = 7.1, median = 7.0). The mean height of tree species on which nests were built was 9.7 m (median = 10). The mean difference between height of nest and height of nest tree was 1.32 m (range 0–6 m) indicating a general tendency to build nests at the top of the tree.

Gorillas nested in 98 tree species from 19 families, and in 10 identified understory tree species. Seventy-two per cent (72%) of tree nests were built in trees from five families (Euphorbiaceae, Leguminosae, Anacardiaceae, Sapindaceae, and Olacaceae). Density estimates were calculated for 35 (out of 98) nesting tree species recorded in the vegetation survey. For these 35 species, we found no relationship between tree density within the study area and the frequency of nests built in each tree species. Also, the frequency



Frequency distribution of height of individual gorilla nests at Mawambi



CROSS RIVER

of nests built in a tree species was not related to the mean DBH (> 10 cm) of the species. The mean DBH of nesting tree species was 27.5 cm (median = 25.3). Gorillas preferred small to medium sized trees in the understory or middle story of lowland forests such as *Baphia nitida* and *Strombosia grandiflora*, and small trees growing on open rocky areas, e.g. *Mallutos* sp., *Lannea* spp., and *Chytranthus* sp. Because density data were available for only 35 of the 98 (35.7%) nesting tree species, these findings should be considered preliminary.

The 12 tree species that Mawambi Hills gorillas used most frequently for nest construction contained 65% of nests. Only five of them are among the 12 most common tree species in the

study area, again indicating that choice of tree species for nest construction was not related to abundance of each tree species.

At Mawambi Hills, the size and abundance of particular species did not significantly influence their selection for nesting. However, trees ≤ 29 cm DBH and < 13 m above the ground were mostly used for nesting. These two factors are not mutually exclusive as larger trees are also taller. Most nests were located close to the top of nesting trees; possibly to increase exposure to the early morning sun as has been suggested to be the case in chimpanzees (Baldwin et al. 1981). At Mawambi Hills, selective use was attributed to a few species, as the top 12 species were used for 65% of tree nests vs.

10 species for 13% of gorilla nests in Goulougo forest (Sanz et al. 2007).

Although gorillas ate fruits and/or leaves from 74% of nesting trees, it could not be established that availability of edible fruits or leaves was the overriding factor in nesting tree selection given that we did not inspect whether or not nesting trees were used for food at the time that nests were built on them. Instead, the choice of nesting trees seems to be influenced by their presence in the nesting environment rather than the tree species per se (Rothman et al. 2006). When nesting in lowland forest with large trees and closed canopy, Mawambi Hills gorillas preferred small to medium sized trees in the middlestory such as *Baphia nitida*, *Strombosia grandiflora* and *Treculia obovoidea*. While nesting in rocky and hilly places with shorter and smaller trees and more open canopy, strong woody understory trees that grow in rocky areas such as *Chytranthus* spp., *Lannea* spp. and *Mallutos* spp. were preferred. In addition to their presence in the nesting environment, preference of these particular tree species might relate to structural features that make them secure and comfortable such as height, strength, fibrousness, maturity and crown structure (Anderson 2000; Stanford & O'Malley 2008).

This paper reports for the first time on the trees in which Cross River gorillas built their nests. It is however, important to catalogue the structural and architectural characteristics of trees used for nesting, as these have been predicted to be a key factor in determining nest tree choice in great apes.

Denis Ndeloh Etiendem

Preference of 12 tree species that were most commonly used for nesting by gorillas at Mawambi Hills, South-West Cameroon (2009–2011) compared to stem density

Main species for nesting	Observed number of trees used for nesting (1)	Proportion of (1) to all trees used for nesting	Number of trees (> 10 cm DBH) recorded in vegetation plots ^a	Number stems per hectare (stem density)
<i>Mallutos</i> sp.	97	0.153	— ^b	— ^b
<i>Lannea</i> spp. ^{c,d}	65	0.103	12	2.59
<i>Chytranthus</i> sp. ^c	60	0.095	6	1.30
<i>Baphia nitida</i>	49	0.077	49	10.58
<i>Strombosia grandifolia</i> ^c	32	0.051	114	24.62
<i>Treculia obovoidea</i> ^c	29	0.046	131	28.29
<i>Tabernaemontana crassa</i> ^c	18	0.028	38	8.21
<i>Cola lepidota</i> ^{c,d}	16	0.025	42	9.07
<i>Myrianthus arboreus</i> ^c	16	0.025	11	2.38
<i>Santiria tremera</i> ^c	12	0.019	38	8.21
<i>Calpocalyx dinklagei</i>	11	0.017	77	16.63
<i>Strombosia</i> sp.	8	0.013	5	1.08

^a Data from 30 sample plots (4.63 ha) nested in 1 km² grids placed over the study area. ^b Not recorded in vegetation plots. ^c Trees with fruit eaten by gorillas. ^d Trees with leaves eaten by gorillas.

References

- Anderson, J. R. (1998) Sleep, sleeping sites, and sleep-related activities: awakening to their significance. *American Journal of Primatology* 46: 63–75
- Baldwin, P. J. et al. (1981) Comparisons of nests made by different populations of chimpanzees (*Pan troglodytes*). *Primates* 22: 474–486



CROSS RIVER



Gorilla nests in the Mawambi Hills

Photos: Denis Ndeloh Etiendem

Fruth, B. & Hohmann, G. (1996) Nest building behavior in the great apes: The great leap forward? Pp. 225–240 in: McGrew, W. et al. (eds.): *Great Ape Societies*. Cambridge (Cambridge University Press)

Oates, J. F. (2011) *Primates of West Africa: A Field Guide and Natural History (Tropical Field Guides)*. Conservation International, Bogota

Rothman, J. M. et al. (2006) Plant choice in

the construction of night nests by gorillas in the Bwindi-Impenetrable National Park, Uganda. *American Journal of Primatology* 68: 361–368

Sanz, C. et al. (2007) Distinguishing between the nests of sympatric chimpanzees and gorillas. *Journal of Applied Ecology* 44: 263–272

Stanford, C. B. & O'Malley, R. C. (2008) Sleeping Tree Choice by Bwindi Chimpanzees. *American Journal of Primatology* 70: 642–649

Modelling the Survival of the Gorillas in the Mawambi Hills

To understand survival prospects of the Cross River gorillas at Mawambi Hills, a distribution model was used to predict the distribution of gorillas. Overall, 24% of the study area was predicted to be suitable for gorillas. The most important predictors of gorilla distribution were elevation, distance to villages and slope steepness. Gorillas mainly occupied altitudes of 150–450 m and slopes of steep hills and avoided areas of human disturbance. Anthropogenic pressures (population growth and lack of alternative livelihood choices) in previously unused forest areas are increasing as a result of resource depletion at lower altitudes; resource users will more frequently access higher-altitude areas, encroaching on gorilla habitats. Conservation management plans that seek to reduce encroachment into habitats preferred by gorillas will probably contribute to gorilla survival.

Recommendations: removal of hunting camps within suitable gorilla habitat, development of alternative livelihood options, enforcement and monitoring of illegal logging, designating core areas where no form of human encroachment will be allowed.

Summary of: Etiendem, D. N., Funwi-Gabga, N., Tagg, N., Hens, L. & Indah, E. K. (2013): The Cross River Gorillas (Gorilla gorilla diehli) at Mawambi Hills, South-West Cameroon: Habitat Suitability and Vulnerability to Anthropogenic Disturbance. Folia Primatologica 84: 18–31



GORILLAS

Second Gorillas Across Africa Workshop

Following a successful first edition of the Gorillas Across Africa Workshop in Uganda in 2011, a second workshop was organized in 2012 by the Max Planck Institute for Evolutionary Biology, North Carolina Zoo, Cleveland Metroparks Zoo/Cleveland Zoological Society, the Columbus Zoo, the *Mountain Gorilla Veterinary Project*, and the *Dian Fossey Gorilla Fund International*. The workshop was hosted at the Dian Fossey Gorilla Fund's Regional Research Center in Musanze, Rwanda from November 7 to 11, 2012.

All 4 subspecies of gorilla are endangered throughout their range due to poaching, habitat loss and fragmentation, and disease. Gorilla conservationists face a variety of challenges, some shared and some regionally specific. However, there are few opportunities for sharing yet unpublished re-

search on gorilla behaviour and ecology as well as regional conservation practices that could inform gorilla conservation strategies across Africa. The Gorillas Across Africa Workshop was conceived as an opportunity for gorilla researchers and conservationists from all gorilla range countries to convene with the goal of exchanging technical information, methods, ideas, and knowledge as well as to develop relationships and professional networks within the gorilla conservation community.

The workshop brought together both established and early career scientists and conservationists, but focused especially on presenting the early career scientists and conservationists with a rare opportunity to network with their colleagues. Representatives from 8 out of the 10 gorilla range countries, including Cameroon, Central African Republic, Democratic Republic of the Congo, Republic of Congo, Gabon, Nige-

ria, Rwanda and Uganda attended the 2012 workshop, and specialists in all 4 subspecies of gorilla were represented. The attendance of a scientist from Central African Republic was particularly exciting, as the country had not been represented at the 2011 workshop. The 4-day workshop was comprised of presentations given by participants on topics ranging from current research to park management, veterinary medicine, community programs, conservation education, and law enforcement and was augmented by group discussions and field visits. Workshop participants were challenged to present both their successes and failures as learning opportunities and to consider how these might inform future conservation strategies.

Following 2 days of presentations, participants remarked on specific topics that surprised them most. Among those mentioned were the undefined taxonomy of Ebo gorillas, gorilla rein-



Photo of workshop participants gathered together

Photo: The Dian Fossey Gorilla Fund International



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roductions in Congo, lack of political support for conservation in some countries, the fact that fewer tourists visit western gorillas than mountain gorillas, the power of an inter-disciplinary approach to wildlife conservation in general and gorilla conservation in particular, the link between effective gorilla conservation and the welfare of communities living around gorilla sites, the benefit of a well-developed tourism industry to gorilla conservation, and local participation in programs designed to minimize human/wildlife conflict. In particular, the difficulties of working in isolated and difficult terrain, barriers to effective monitoring of law-enforcement staff, levels of rural poverty, high demand for bushmeat, trophy hunting and use of animal parts for traditional medicine, the trans-boundary nature of most gorilla sites in Africa, and human conflicts came across as some of the major challenges to law-enforcement aspects of gorilla conservation programs.

Some workshop participants were particularly impressed by the success of conservation education, community programs and community participation in wildlife management, the development of a guns-for-snails program in Nigeria which has successfully reduced poaching, and Rwanda's revenue sharing initiative.

The dire situations of gorilla populations in some countries, like Democratic Republic of the Congo, which was in the midst of rising conflict during the time of the workshop, nevertheless inspired participants with the commitment and tenacity of conservationists working in these regions.

In addition to presentation and discussion groups, participants were invited for several field visits. Among the sites visited were the Mountain Gorilla Skeletal Project, *Art of Conservation*, *Mountain Gorilla Veterinary Project*, an exhibition of the IGCP household rainwater harvesting demo tank, the Bi-



Members in the Chimanku group in the Kahuzi-Biega National Park.

Photos: Thomas Weinhold.

sate Health Clinic and Bisate School supported by the Dian Fossey Gorilla Fund, and several projects implemented by the Rwanda Development Board (in charge of national park management) including an artisan project, a village constructed with revenue from a local tourist lodge, and the Kinigi Cultural Center. These field visits afforded the opportunity for participants to see firsthand the community and education initiatives being implemented in the Volcanoes National Park region of Rwanda as well as to interface with local staff about their methods and facilities and the challenges and successes faced by their programs. Participants were also treated to a visit to habituated mountain gorilla groups in Volcanoes National Park. This was a particularly exciting experience for some of the participants from West Africa, where there are few habituated groups, and many of the researchers

have seen only the briefest glimpses of gorillas in the wild. The goal of the visit was to observe how gorilla tourism benefits conservation efforts and the research advantages afforded by such close, daily observation as well as to understand the risks and challenges introduced by tourism.

Among the recommendations and strategies agreed upon at the workshop as paramount for gorilla conservation efforts across all range countries were:

- Taking into consideration the needs of local people and incorporating them into conservation strategies, including the implementation of poverty reduction and family planning projects around protected areas.
- Effective collaboration and communication between governments, NGOs, and other conservation stakeholders



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- Attitudes towards gorilla conservation and culture vary in locations where gorillas occur and must be considered and addressed as part of conservation strategies.
- Participation of government stakeholders in gorilla conservation at workshops like Gorillas Across Africa improves the overall experience and impact of these events.
- There is a need for conservation education in city schools in addition to local schools to respond to pressures placed by cities on rural communities surrounding conservation sites and to communicate how rural communities often act as liaisons between wildlife and city demands.
- Information and resource sharing among international gorilla conservation programs, particularly with more developed projects helping less developed ones, should be improved.
- The creation of a formalized network of African gorilla conservationists for data and practice sharing, commu-



Approaching the Dimonika Biosphere Reserve

Photo: Fernando Turmo/the Jane Goodall Institute

nication and decision-making would be beneficial.

In its second year, the Gorillas Across Africa Workshop continued to establish itself as a crucial resource for the gorilla research and conservation community. It improved its reach with the addition of Central African Republic to the list of participants, and has shown its efficacy as a networking opportunity through the continued communication between workshop participants since November 2012.

Felix Ndagijimana, Celestine Mengjo, Eni Kuchambi Indah, Franck Barrel Mavinga, Natacha Nssi Bengone and Terence Fuh Neba

The Status of Gorillas in the Dimonika Biosphere Reserve

Designated in 1988 under the UNESCO Man and the Biosphere Program, Dimonika Biosphere Reserve is located in the central Mayombe Mountain chain in the western part of the Republic of Congo. The reserve



Gold mining in the Dimonika Biosphere Reserve

Photo: Achille Nsafou/the Jane Goodall Institute



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has a spectacular mountainous terrain dominated by beautiful lowland guineo-congolese rainforest and savanna vegetation. Despite its status, very little information is available about the biodiversity and threats in the region. Through the generous support of the U. S. Fish & Wildlife Service's GreatApe Conservation Fund, in 2009 the *Jane Goodall Institute* (JGI), in partnership with the Ministère de l'Economie Forestière et de l'Environnement (MEFE), was able to conduct faunal, floral and socio-economic surveys in the reserve. The surveys were part of the larger effort to establish an institutional framework for the design of a protected area network in the Kouilou Region. The survey results were presented last year at the International Primatological Conference in Cancun (Pintea, Latour, Hanni, Tchindongo, Nsafou, Atencia, Pharoah and Cox 2012).

First a JGI survey team conducted a series of reconnaissance walks (recces) within the reserve. We quickly learned that the effort required to survey Dimonika's rough terrain was going to be much more time consuming and labour intensive than imagined, making the logistics and planning for the survey more complicated given the remote location. A sampling plan was designed using Distance software that identified 57 one-kilometer line transects. The field teams were able to collect data along 50 line transects with a total length of 44,590 km. They found old "secondary forest" habitats that have not been industrially logged since the creation of the Biosphere Reserve. Some inaccessible places on very steep slopes still remain quite intact with mature forest, very large trees and clear undergrowth.

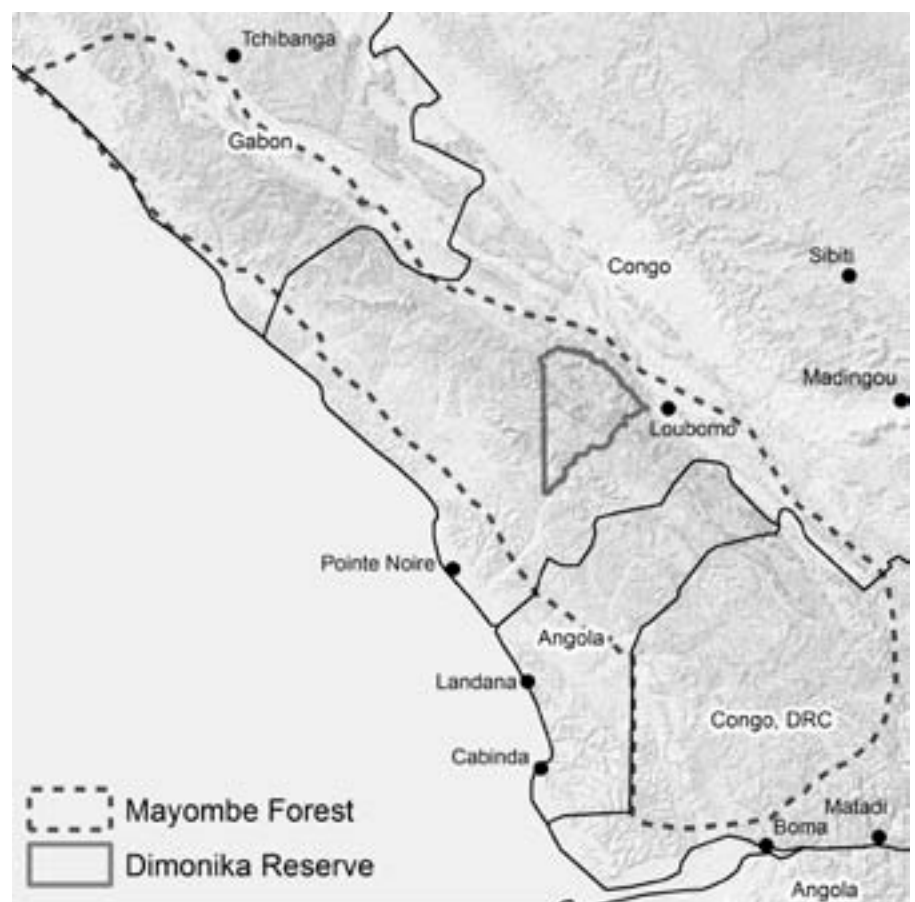
One of the major findings in Dimonika was confirming the presence of a population of western lowland gorilla (*Gorilla gorilla gorilla*) estimated at 113 nest building individuals. Some nests could not be identified to ape species

level and the number of those individuals (chimpanzee or gorillas) were estimated at 163. What was interesting was that gorillas were among large mammal species – including chimpanzees, duikers and bush pigs – whose traces (footprints, droppings, tracks, crossings) were the most frequently encountered. This does not, however, reflect the relative abundance of these species across the entire reserve where hunting pressure is very high and constant.

Apart from commercial and subsistence farming and artisanal wood carving, which are generally practiced near the villages and along the major routes, subsistence hunting and commercial-

ized artisanal gold mining are the two primary activities whose impacts are very visible within the reserve. During the wildlife inventory, the majority of the human traces observed were those relating to hunting (animals slaughtered, cartridge cases, hunting trails, signs of passage), logging (old sites) and mining (research, industrial exploitation and artisanal gold).

The core activity in the villages adjacent to the reserve is hunting. It has become a commercialized trade, especially as the villages are located on major roads and have almost permanent customers (merchants of bushmeat, restaurants in the larger villages, officials, employees of the mining sec-



The Mayombe Forest and the Dimonika Biosphere Reserve

Map: the Jane Goodall Institute



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tor, public works and logging companies), as well as the means of road and rail transport, and all this makes it very easy to get the bushmeat into urban centers like Pointe-Noire and Dolisie. An example is the village of Makaba: bushmeat traders from Pointe-Noire and Dolisie make weekly visits to this village to buy bushmeat.

It should be noted that hunting tracks, starting from the village, follow the network of old, established logging tracks. Gradually they move deeper into the heart of the forest, and they are then divided into smaller tracks serving various "hunting areas". There are very old logging tracks in both primary and secondary forest, whose use dates back to before the creation of the reserve; these have allowed local residents to enter the heart of this mass of forest and have led to an increased hunting pressure on the wildlife. In this way, these old logging roads continue to serve a network of active hunting trails that are connected to other trails hunters use following certain mountains and valleys.



A village in the Dimonika Biosphere Reserve

Photo: Fernando Turmo/the Jane Goodall Institute

Mining is another very high threat in the reserve. The village of Dimonika, which gives the biosphere reserve its name, was created in the 1950s by a

miner named "Vigoureux", and traces of industrial exploitation of gold can be found dating back to this time. Commercial mining halted in the 1960s, and since then it has mostly been local people who are active in artisanal gold mining. This activity is flourishing in the village of Dimonika, the hamlets of Voula and Ndéguélé (former secondary mining areas), Vigoureux, and the village of Poug. Traces of research and exploitation at smaller sites have been noted in other areas of the reserve. The gold miners' most active area is within the valley of the Loukéné River and its tributaries. Currently the company MANAGEM is conducting research with the aim of gold exploitation on an industrial scale.

In conclusion, despite its status as a Biosphere Reserve, Dimonika currently has protection only theoretically, on paper, and as such suffers from both an absence of management and high human pressures. This issue is highlighted by the observable signs of hunting which our survey teams found abun-



View of the Dimonika Biosphere Reserve

Photo: Fernando Turmo/the Jane Goodall Institute



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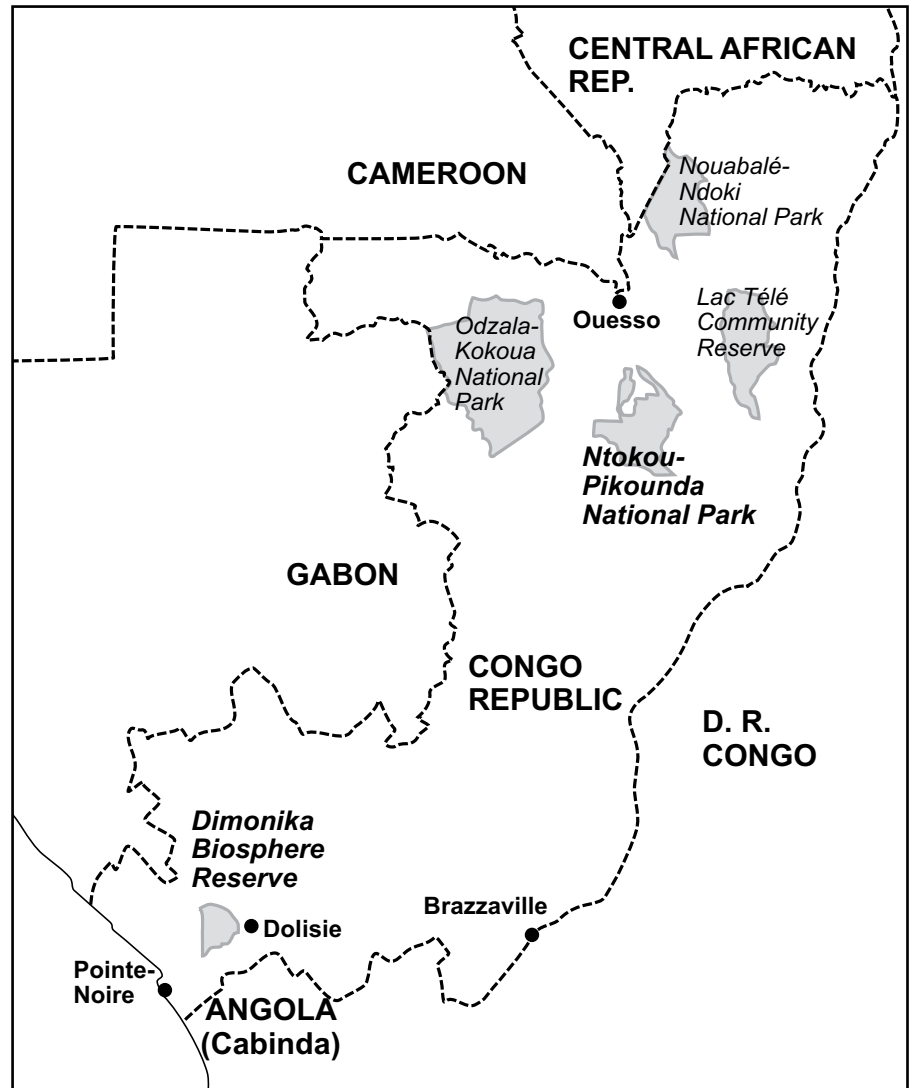
dantly all over in the reserve: shell casings, snares, animal carcasses and so on, as well as the extensive evidence of artisanal gold mining. Nonetheless, the reserve is still home to important populations of gorillas and chimpanzees and there is a need for urgent action and the development of strategies to conserve great apes and other biodiversity within the reserve and to maintain connectivity within the Mayombe ecosystem.

Lilian Pintea, Rebeca Atencia and Debby Cox

Congo's Newest National Park Protects Swamp Dwelling Gorillas

In 2000, WCS Senior Conservationist, and *National Geographic* explorer, Mike Fay set off on his now famous MegaTransect through the forests of Central Africa. During that historic 2,000 km trek from northern Republic of Congo to the Gabonese Atlantic coast, he encountered what he later called the "Green Abyss". The swampy forest was densely carpeted by Marantaceae, a family of herbaceous tropical plants that produce impenetrable tangles of leafy underbrush. During the 10 weeks it took Mike Fay and his team to cross the Green Abyss, he realized that while it is a terrible place for humans, it was a major stronghold for large mammals, including extremely high densities of great apes.

The international publicity generated by the MegaTransect also drew the attention of the Congolese government who in 2004 asked the *Wildlife Conservation Society* (WCS) to assist them in evaluating the potential to create a new protected area to preserve this unique habitat and its wildlife. While WCS and the government were performing biological inventories, the IFO-Danzer logging company, whose concession overlapped



the Green Abyss, requested the government to remove 150,000 ha from the southern part of their concession, freeing up this swampy land for protection. By July of 2006, preliminary surveys in the area showed higher than expected densities of gorillas in an area where local communities expressed a strong interest in protecting these inaccessible habitats. Thus in September of 2006, at the United Nations General Assembly in New York, the government of the Republic of Congo announced its intention to

create the Ntokou-Pikounda National Park, named after the two largest villages along its border.

The Congolese National Center for Wildlife and Forest Inventories and Management (CNIAF) and WCS then initiated the first-ever comprehensive census of elephants and great apes across northern Congo, including a return to the Green Abyss, with a team of 40 staff to perform transect counts, fighting their way through the underbrush and sleeping in hammocks slung from trees over the swampy



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Swampy forest with *Marantaceae*

Photo: Richard Malonga/WCS

ground. For the first time, thorough and meticulous counts of gorilla signs were made using Distance sampling techniques to estimate great ape density from nest counts. The surveys were unprecedented in their scale – covering a total 47,444 km² of contiguous lowland and swamp forest – and, for some parts of the survey zone, these represented the first systematic surveys of the area.

Upon completion of the wildlife inventories in northern Congo in 2008, WCS announced the discovery of 125,000 western lowland gorillas, *Gorilla gorilla gorilla*, living in northern Congo – more than half of these individuals living in a population previously unknown to science. This discovery was extraordinary because, prior to the announcement, the most optimistic population estimate for this sub-species put their total numbers at approximately 50,000 to 100,000.

About 30,000 of northern Congo's 125,000 gorillas live in the Green Abyss, a place more properly known as "Ntokou-Pikounda". The density

of gorillas throughout this whole area was estimated to be 4.1 weaned gorillas/km². No unprotected site in Central Africa had a higher priority for park creation, ape protection, and long-term conservation.

With this information in hand, and the government's stated desire, the process of creating the Ntokou-Pikounda National Park began in earnest. The CNIAF and WCS worked together through the multi-step process culminating in a Presidential Decree that would protect these gorillas and their habitat in perpetuity.

Armed with the results of biological and socio-economic surveys, the government and WCS convened community meetings around the entire periphery of the proposed park to discuss the placement of park boundaries with all stakeholders. For a protected area to succeed in safeguarding gorillas and other wildlife, local people must be supportive. In the creation of a protected area people must not be physically displaced from their homes, and long-established usage rights must be re-

spected and safeguarded. In Ntokou-Pikounda there were few people living in the area and none inside the proposed park boundaries. Approximately 7,000–8,000 people live around the park. Once the communities agreed to the boundaries, all of the stakeholders were convened in a workshop to discuss and validate the presidential decree that was signed March 4, 2013.

In addition to gorillas, this newly established national park is home to more than 900 chimpanzees and 800 forest elephants. Additionally, because of its unique wetland habitat, this park hosts a wide variety fish, crocodiles, birds and Congo's largest and most secure hippo population.

The creation of this new protected area comes just in time as the threats to gorillas in this region are increasing at an alarming rate. Hunting of gorillas for bushmeat is increasing as the opening of new roads and bridges near the park has facilitated the entry of hunters and the transport of bushmeat. Additionally, prior to the creation of the park, and without consultation with the Forestry Ministry, the Minister of Agriculture issued a 4,700 km² palm oil plantation permit that overlapped a significant portion of the proposed park. However, with the official presidential decree that created the new park the forests within its boundaries are now fully protected.

This new park is a significant move toward the successful long-term conservation of western lowland gorillas and secures a future for this remote population in the food-rich swamp forests of the Republic of Congo. WCS will continue to support the Congolese government with technical assistance to the management of this park. With this opportunity there will also be the possibility to initiate behavioral and ecological studies of these swamp-living apes.

Paul T. Telfer



READING

Jonathan Kingdon, David Happold, Thomas M. Butynski, Michael Hoffmann, Meredith Happold and Jan Kalina

Mammals of Africa, Volumes I–VI. London (Bloomsbury Publishing) 2013. 3755 pages, 660 colour illustrations, more than 2000 b/w illustrations, 1,100 colour distribution maps. Hardcover, £ 600.00, US\$ 900.00. ISBN 978-1-40812257-0. Vol. II: Thomas M. Butynski, Jonathan Kingdon and Jan Kalina (eds.): Primates. 560 pages.

Eugène Rutagarama

Le Regard du Gorille. Paris (Fayard) 2013. 248 pages. Paperback, euro 19.00. ISBN 978-2213656144

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://dev.grida.no/RRApes/RRApes.pdf?utm_source=UN-GRASP+Updates&utm_campaign=b6e491358f-Newsletter&utm_medium=email

Monte Reel

Between Man and Beast: An Unlikely Explorer, the Evolution Debates, and the African Adventure that Took the Victorian World by Storm. New York City (Doubleday) 2013. 352 pages. Hardcover, US\$ 26.95. ISBN 978-0-38553422-2

Michael A. Huffman, Naofumi Nakagawa, Yasuhiro Go, Hiroo Imai and Masaki Tomonaga

Monkeys, Apes, and Humans: Primatology in Japan (SpringerBriefs in Biology). 62 pages. Tokyo (Springer) 2013. Paperback, US\$ 49.95. ISBN 978-4-431-54152-3

Kristin Andrews

Do Apes Read Minds? toward a new folk psychology. Cambridge, Mass. (MIT Press) 2013. 312 pages. Hardcover, US\$ 38.00. ISBN 978-26201755-8

Christophe Boesch

Wild cultures: a comparison between chimpanzee and human cultures. 288 pages. Cambridge (Cambridge University Press) 2012. Hardcover, US\$ 95.00. ISBN 978-1107025370.

New on the Internet

The Enough Project

From Child Miner to Jewelry Store. The Six Steps of Congo's Conflict Gold. October 2012. 20 pages. <http://www.enoughproject.org/files/Conflict-Gold.pdf>

Greenpeace

Palm oil's new frontier. How industrial expansion threatens Africa's rainforests. August 2012. 28 pages. <http://www.greenpeace.org/international/Global/international/publications/forests/2012/Congo/PalmOilsNewFrontier.pdf>

Greenpeace

Cut it Out: Illegal Logging in the Democratic Republic of Congo (DRC). March 2013. 12 pages. http://www.greenpeace.de/fileadmin/gpd/user_upload/themen/waelder/20120504-Report-Cut-It-Out-Abholzung-Kongo.pdf

The Rainforest Foundation UK

Seeds of Destruction. Expansion of industrial oil palm in the Congo Basin: potential impacts on forests and people. February 2013. 38 pages. <http://www.rainforestfoundationuk.org/files/Seeds%20of%20Destruction,%20February%202013.pdf>

Global Witness

Logging in the shadows. How vested interests abuse shadow permits to evade forest sector reforms. April 2013. 35 pages. http://www.globalwitness.org/sites/default/files/library/Shadow%20Permit%20Report%202013%20Final_Web_0.pdf

Global Witness

Putting principles into practice. Risks and opportunities for conflict-free sourcing in eastern Congo. May 2013. 11 pages. <http://www.globalwitness.org/sites/default/files/library/Putting%20principles%20into%20practice.pdf>

UN Security Council

Special Report of the Secretary-General on the Democratic Republic of the Congo and the Great Lakes region. S/2013/119. 27 February 2013. 18 pages. <http://www.un.org/Docs/journal/asp/ws.asp?m=S/2013/119>

Kasper Agger and Jonathan Hutson

Kony's Ivory: How Elephant Poaching in Congo Helps Support the Lord's Resistance Army. Enough Project, The Resolve, Invisible Children, and the Satellite Sentinel Project (with DigitalGlobe) June 2013. 18 pages. <http://www.enoughproject.org/files/KonyIvory.pdf>

The first phase development of the new IUCN Red List sub-site was launched, which runs as part of the current IUCN Red List web site. The sub-site is targeted to the non-technical user, such as the general public, and provides a new view of The IUCN Red List where visitors can browse the site using the new "Discover Species" search tool which allows them to search for species using common group names and filter results by IUCN Red List Category, location, habitat type or threat type. At www.iucnredlist.org you can discover a new way of viewing The IUCN Red List.



BERGGORILLA & REGENWALD DIREKTHILFE

Photos from the Members' Meeting in Apenheul, the Netherlands – May 2013

This year we met with our members at the primate park Apenheul in Apeldoorn. Apart from presentations and films we had opportunities for chats and discussions. We also visited the gorilla island in the primate park while being observed by the gorillas.

Photos: Angela Meder





BERGGORILLA & REGENWALD DIREKTHILFE

Finances

Income in 2012

Subscriptions	20,950.08 euro
Donations	70,610.69 euro
Sales	1,269.50 euro
Refund from meeting	724.00 euro
Total	93,554.27 euro

Expenses in 2012

Administration	1,595.78 euro
<i>Gorilla Journal</i>	3,057.91 euro
Items for sale	550.66 euro
Postage	1,789.15 euro
Fees	125.00 euro
Pay/top-ups	5,200.00 euro
Maiko	
Schools for Simba	15,000.00 euro

Virunga National Park

Ranger evacuation 4,100.00 euro

Sarambwe

Equipment, water 4,098.05 euro

Mt. Tshiaberimu

School tree nurseries 16,041.59 euro

UGADEC

Punia Gorilla Reserve 760.46 euro

Bwindi

Study Nicole Seiler 2,000.00 euro

ITFC employees 8,000.00 euro

Ebo Forest

Amis des gorilles 12,641.93 euro

Cross River area, Cameroon

Gorilla Guardians 12,000.00 euro

Cross River area, Nigeria

Conservat. education 12,662.25 euro

Total 99,622.78 euro

Our Donors

From November 2012 to April 2013 we received major donations by Aurelis SA, Christoph Baumann, Familie Beier, Birgit Bühner, Sabine Bungard, Angelika Dickmann, Emmerich Exklusivbrillen, Elisabeth Engel, Marianne Famula, Peter Florian, Helga Forst, Susan Goetsch, Nadja Gräf, Peter Günther, Heinz and Magdalena Hertle, Marianne Holtkötter, Antje Hoyer, Helga Innerhofer, Götz Kauschka, Hartmann Knorr, Jürgen Kranz, Frank Lehwalder, Lore Marholdt, Heike Meix, Hannelore Merker, Milwaukee County, Manfred Paul, Wilhelm and Gisela Plogmann, U. and K. Rathfelder, Birgit Reime, Dieter Schmitz, Eva Schweikart, Friedrich Spitz, Julia Stoppel, Juliane Ströbele-Gregor, Nina Sundermann, taetta Grafik und Design, TIPP 4 GmbH, Wigwam Naturreisen & Expeditionen, Zoologisch-Botanischer Garten Wilhelma, Elisabeth and Heinz Zaruba.

Wolfram Rietschel collected donations for us again during his presentations about gorillas. He also took the initiative to create the gorilla wine together with the wine growers' cooperative Fellbacher Weingärtner; from the sale of the first vintage we received euro 1,200 (see overleaf). The new vintage is already available.

Many thanks to everybody! We are grateful for your support, and we hope that you will continue to support us.



In May 2013 the new house for gorillas and bonobos was opened in the Stuttgart Zoo Wilhelma. It contains plenty of information on the two great ape species for the visitors, including videos on the threats and examples of conservation efforts. On a touchscreen they also get a brief introduction to the Berggorilla & Regenwald Direkthilfe's work. *Photos: Angela Meder*



Thomas Seibold, Fellbacher Weingärtner (wine-growers of Fellbach) hands over a check to B&RD co-director Angela Meder in the Congolese rainforest of the State Museum of Natural History Stuttgart: 1,200 euros from the sale of gorilla wine.

More information (in German) about the producer:
<http://www.fellbacher-weine.de/>
 and about the new vintage of the gorilla wine:
<http://www.fellbacher-weine.de/Rot/2012-Acolon-%3EC-%3C-trocken-Rettet-die-Berggorillas::318.html>

Subscription to the *Gorilla Journal*

If you become a member, you will receive the journal regularly. If you want to receive the printed journal without becoming a member, we would be grateful if you could make a donation to cover our costs. The costs to send the journal overseas are about US\$ 20 per year.

If you do not need the printed version, we can include your email address in our mailing list and you will be informed as soon as the PDF files are available (contact: meder@berggorilla.org).

You can download this issue at:
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Starting with the following date ____ I declare my membership in *Berggorilla & Regenwald Direkthilfe*

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