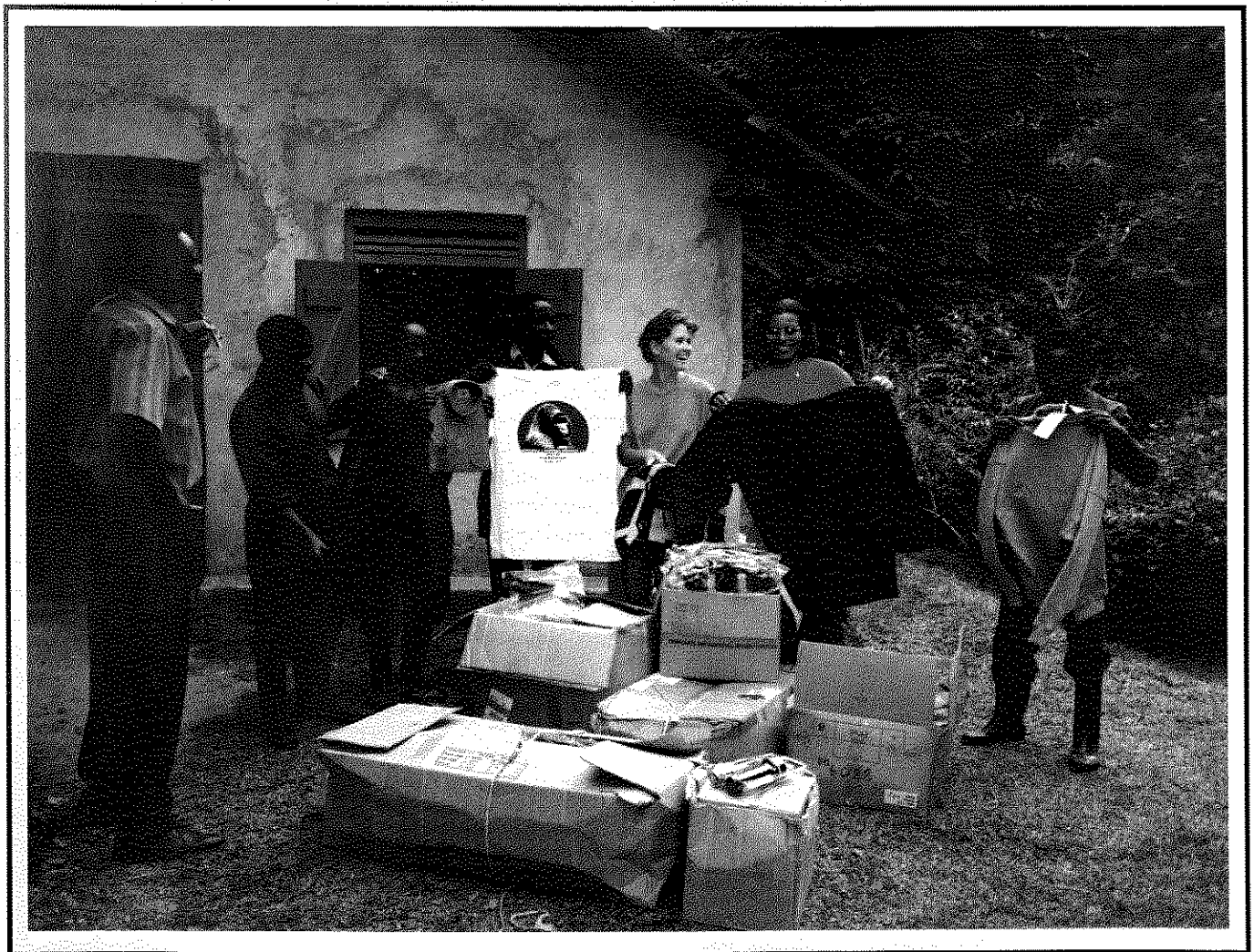




Gorilla Journal

Journal of Berggorilla & Regenwald Direkthilfe

No. 18, June 1999

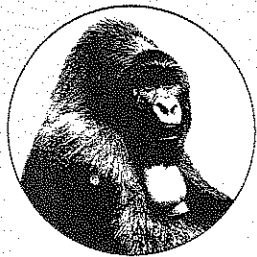


**Tourist Killings in
Bwindi Impenetrable
National Park**

**News from
Kahuzi-Biega**

**Gorillas in African
Culture and
Medicine**

**Lowland Gorilla
Tourism in
Central Africa**



BERGGORILLA & REGENWALD DIREKTHILFE

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Authors of this Issue

3	Dr. Conrad Aveling worked on con-
3	servation in Sumatra (orang utans),
4	Rwanda and Zaire (mountain gorillas)
4	and Sudan before moving to central
5	Africa in 1992 to coordinate ECOFAC,
5	a program centred on protected areas
6	in Congo, Gabon, Cameroon, Equato-
6	rial Guinea, Central African Republic
6	and São Tomé e Príncipe.
7	Don Cousins has had a lifetime in-
8	terest in the great apes. He worked in
8	Twycross and Chessington zoos, and
8	in 1957 visited Gabon to look for goril-
9	las. He has researched and published
9	widely on the subject and was a friend
9	and colleague of Dian Fossey.
9	Dr. Michele L. Goldsmith studied
10	the behavioural ecology of gorillas in
10	the Central African Republic. Since
10	1996 she has been studying the be-
11	havioural ecology of gorillas in Bwindi.
11	Due to recent rebel activity in the area,
15	her new project examining the effects
15	of ecotourism has been put on hold.
16	Jacqui Groves began working with
17	primates in 1991 with <i>Pandrillus</i> in Ni-
17	geria. In 1995 she returned to co-ordi-
18	nate the <i>Pandrillus</i> Cameroon project,
21	the Limbe Wildlife Centre focusing on
21	the rehabilitation of orphaned apes.
21	From 1997 she has worked with WWF
21	Cameroon completing a gorilla survey
21	in the Takamanda Forest Reserve.
22	Dr. Ursula Karlowski is engaged in
22	rain forest conservation in eastern and
22	central Africa since 1988. At the mo-

Gorilla Journal 18, June 1999

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 Cover: Martha Robbins hands over
 equipment to the rangers at Buhoma.
 Photo: Martha Robbins

ment, she is working as a consultant for environmental impact assessment studies. She is an active member of *Berggorilla & Regenwald Direkthilfe*.

Dr. Angela Meder observed the behaviour and development of captive lowland gorillas for 10 years. Today she edits books about animals and nature. Since 1992 she has been part of the board of directors of *Berggorilla & Regenwald Direkthilfe*.

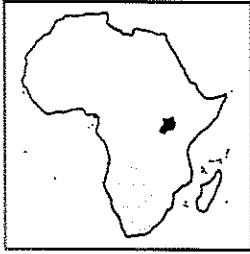
Claude Sikubwabo Kiyengo conducted a gorilla survey in the Maiko National Park from 1989 to 1992, and in 1994 he took part in the gorilla census in Kahuzi-Biega National Park. Since 1995, he has been working for the ICCN (*Institut Congolais pour la Conservation de la Nature*) in Goma.

Dr. Andrea B. Taylor is a Research Associate at the Department of Anthropology, California Academy of Sciences. She has a particular interest in the anatomy and evolution of the African apes. She has worked on the postcranial anatomy of gorillas and is currently studying the masticatory apparatus in the African apes.

Iris Weiche has worked with primates in the wild and in zoos since 1990. At the moment she is finishing her doctoral dissertation on female gorillas in zoos. Since 1994 she has been active for the *Berggorilla & Regenwald Direkthilfe*, and in May 1997 she joined the board of directors.

Dr. Juichi Yamagiwa has studied eastern gorillas since 1978, mainly at Kahuzi-Biega. He worked on gorillas at Karisoke from 1981 to 1982 and conducted extensive surveys at Masisi and Itebero from 1987 to 1991. He promoted a cooperative research project on gorillas and chimpanzees at the Tshibati area.

Dr. Liz Williamson began a study of gorillas in Gabon in 1984. She was involved in gorilla surveys in Congo/Zaire and Cameroon in 1994 and 1995. Currently she is Director of the Karisoke Research Centre, Rwanda.



UGANDA

Tourist Killings in Bwindi

About 100 armed men entered Uganda from the Democratic Republic of Congo on March 1st to raid 3 tourist camps in Buhoma, Bwindi Impenetrable National Park. Buildings were looted and set on fire, vehicles were burnt, and 17 people were kidnapped and taken into the forest. It seems likely that the attackers had been told about the exact whereabouts of the tourists by Ugandans. After freeing some hostages, the kidnappers hacked 8 tourists to death with machetes (4 Britons, 2 Americans and 2 New Zealanders). One Ugandan, the Community Conservation Officer John Ross Wagaba, was shot and his body set on fire.

It is not clear to which group the murderers belong. They spoke Kiswahili, French and Kinyarwanda. Some people described them as Interahamwe, others as Hutu militia. They themselves said that they belonged to the ALIR (*Rwandan Liberation Army*) which has become notorious for their numerous raids in northwestern Rwanda. Since the war in Rwanda, some ten thousand Rwandan rebels, militia and bandits are said to roam the for-

ests of eastern Congo and the Virunga National Park. Afterwards, a group calling itself NALU (*National Army for the Liberation of Uganda*) claimed responsibility for the murders. This could not be confirmed.

After the massacre, the rebels forced a Ugandan to show them the way back to the Congo. Ugandan and Rwandan troops immediately took up the chase. By the end of March, they had killed 35 Rwandan rebels and captured 4. One of them confessed to have participated in the Bwindi killings. It is not certain that the rebels killed were actually involved in the massacre. Troops were posted in Buhoma to ensure security in the future. One source reported that another 15 Rwandan militia were killed 30 miles inside Congo, at Kihito, in May.

Uganda declared a month of mourning for the victims of the massacre. Gorilla tourism was suspended during that month. The tour companies using the raided camps withdrew from southwestern Uganda and removed their equipment from Buhoma.

Before the attack, tourism was Uganda's second largest source of foreign currency after coffee export.

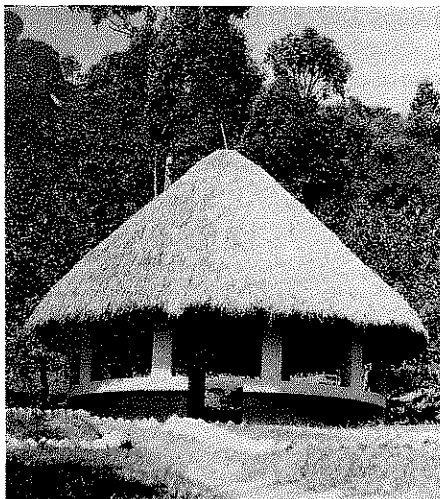
The Nyakagezi Group

Tourists can visit one habituated gorilla group in Mgahinga National Park: the Nyakagezi group. In 1998 a baby was born, and there was another baby in January 1999.

At the moment this group consists of Bigino (silverback), Mariko (silverback), Kaboko (adult female with only one hand), Nyiramwiza (adult female), Munezero (adult female), Magambere (juvenile), Maffia (juvenile), Asndungutse (born August 2nd, 1998), and the baby born in January.

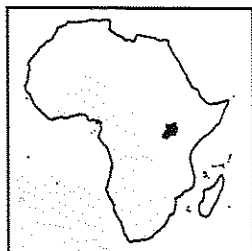
About 75% of the tourist money was derived from gorilla tourism.

After the mourning, the parks were re-opened on April 1st. During April 82 tourists visited Bwindi and 47 visited Mgahinga. Some 60 soldiers were constantly present and worked together with the park staff. One gorilla group (Nyakagezi) can be visited in Mgahinga and 2 (Mubare and Habi-nyanja) can be visited in Bwindi. The Nkuringo group in Bwindi Impenetrable



The community campground picnic bandia shortly before (left) and after the rebel attack

Photos: Sylvia Wladarz (left), Martha Robbins (right)



UGANDA

National Park continues to be habituated. Apparently, there have been no gorilla casualties from the attack.

Angela Meder

Help for Buhoma

After the terrible attack on the tourists, conservation and developmental aid organisations working in the region

joined together to repair the damage in Buhoma as quickly as possible and to replace the lost material. The *Berggorilla & Regenwald Direkthilfe* immediately mailed a call for donations to members and friends of our organisation. From this fund-raising appeal we were able to transfer US\$ 1,500 for the re-building of the burnt huts of the community campground. In addition, we

offered the rangers of the Bwindi Impenetrable National Park clothes and equipment from our storage, worth several thousand US\$.

The campground at Buhoma is operating again and Mitchell Keiver, the Field Officer for IGCP (*International Gorilla Conservation Programme*) in Kabale, told us on June 9th that the repair of the picnic banda has started.

Equipment for Rangers

For many years, the *Berggorilla & Regenwald Direkthilfe* has provided the rangers of the national parks protecting mountain gorillas with clothes and equipment which they require to go on patrols. Without this equipment, they cannot protect the gorillas and their unique habitats. In order to distribute the urgently required materials as quickly and directly as possible, we decided to set up a storage in Uganda. By arrangement, the rangers can receive what they need from there.

In September 1998, the first material, largely donated, went to Uganda. At the same time the first request arrived. Even before the equipment was transported to its destination in Kisoro, part of it was already on its way into the Virunga National Park in Congo. Soon, other parks asked for equipment as well. By now, the rangers of the following areas have received material from our storage: Mt. Tshiaberimu (Virunga National Park, Congo), Kahuzi-Biega National Park (Congo), Sarambwe (Congo), Mgahinga Gorilla National Park (Uganda) and Bwindi Impenetrable National Park (Uganda). The equipment mainly consists of clothes, rain gear, backpacks, sleeping-bags and tents. We are very happy about the positive response because it proves that we offer exactly what is urgently needed. Therefore we want to continue to supply the storage and employ a Ugandan to administer it.

Now Our Storage Has to Be Replenished

Clothes wear out quickly when rangers frequently go on patrols, and new clothes are constantly needed. At the moment, our supplies are almost depleted. Donations of money and materials are needed to replenish our supplies with good-quality equipment appropriate for the difficult field conditions – particularly gumboots (to be bought in Uganda), warm and durable clothes, rain gear, backpacks, sleeping-bags and tents. In the future, to save money on transportation, we intend to buy as much as possible locally. Small donations of material are welcome (by arrangement), but we usually need large quantities of identical pieces of equipment to strengthen the team spirit of the rangers. We therefore are particularly interested in contacts with manufacturers or dealers.

Please help us to replenish our ranger supplies!

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D. R. CONGO

Acute Danger for the Virunga Park

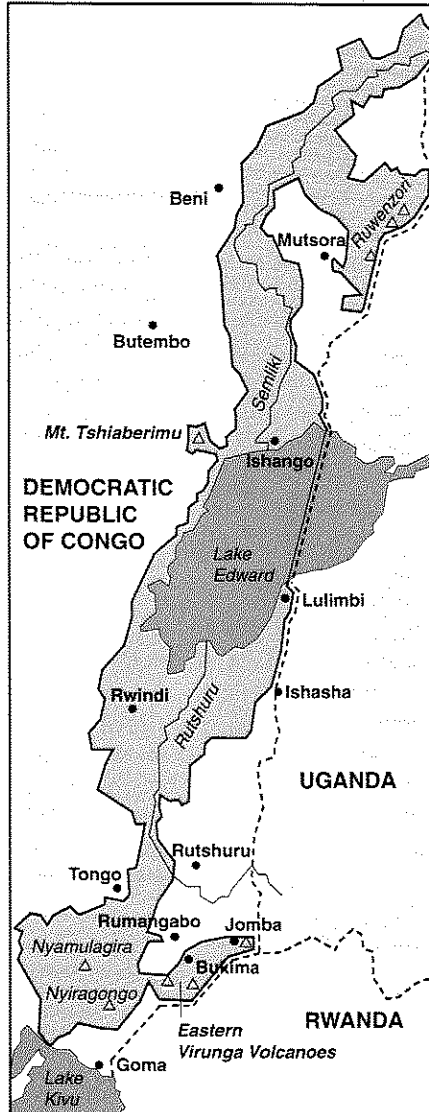
The rangers and the administration of the Virunga National Park as a whole need our support now.

The situation is serious. As it is easier for Claude Sikubwabo to travel to Uganda than for us to enter the Congo, we met him in Kisoro. During a long conversation, he described the current situation of nature conservation in his country.

The Virunga National Park can no longer be protected effectively and is therefore severely threatened. The park urgently needs support, especially for the gorillas whose number has already been reduced. The rangers and their superiors don't receive any salary or any other form of support. There are several military posts in the park. As the soldiers don't always receive their salaries either, they take to poaching. They also cut trees to make charcoal which is sold in the villages. The rangers are helpless as their weapons were confiscated when Kabila came to power. All we can do at the moment is to try to inform the military and the political decision-makers about the problems of the national park and increase their awareness.

If nothing is done, the gorillas will certainly vanish. However, it is not only this sensitive species which needs protection: the park's whole ecosystem is under threat. Having declared the Virunga National Park a UNESCO World Heritage Site in 1979, the international community has recognized its outstanding value. Now, at a time of severe threat, the involvement of the international community is required to save the park.

Recently, a poacher was caught with 1,050 kg of hippopotamus meat. This illustrates the fact that



Parc National des Virunga

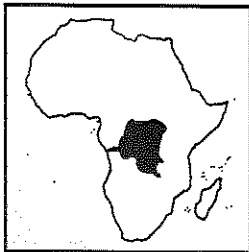
the threat extends to all the animals in the park. Without salary and other forms of support, some rangers leave their posts; those who stay cannot go on patrols. Therefore we are very grateful for the support of the Berggorilla & Regenwald Direkthilfe for the Sarambe and Mt. Tshiaberimu rangers. The DFGF (Dian Fossey Gorilla Fund) has also helped with US\$ 25,000 for the whole park. However, this is still not

sufficient for a park with an area of 800,000 ha, administered by approximately 750 people, 700 of whom are rangers.

Currently, the government cannot do anything for the park. However, financial support from the international community might encourage the government to contribute something as well. For example, if the rangers had their weapons returned and received their salaries, they could be sufficiently motivated to resume patrols in the park.

I do want to emphasize that many rangers have stayed on duty even though they have no longer received a salary or rations. As soon as they are paid a salary, they can further protect the park by going on patrols. If every European could give just US\$ 2, we could perhaps save the park the unique ecosystems in the Virunga National Park, to save its biodiversity and the mountain gorillas. In this situation, we need a lot of support from all sides: the Congolese government, foreign governments, NGOs and individuals. We want everybody to be involved in the protection of our national park.

In December 1998, all parties responsible for the southern sector of the Virunga National Park met to develop an overview of the situation in view of the crisis. In the Mikeno area, 4 out of 5 posts are still guarded. In the Nyamulagira area, 8 posts out of 13 are still guarded. In both areas, the park boundary is not respected. "Uniformed" persons are involved in poaching; trees are cut, especially in the Nyamulagira sector, to make charcoal and for other purposes. There are 104 rangers responsible for the two areas, but at the moment they are essentially powerless. Financial and material support for the rangers and their superiors in the ICCN (Institut Congolais pour la Conservation de la Nature) would help to protect the biodiversity of the park. It



D. R. CONGO

could also demonstrate the park's significance to the current political decisions makers in the region.

In January, I was able to hand over equipment for the rangers of Sarambwe donated by the *Berggorilla & Regenwald Direkthilfe* to Claude Sikubwabo. This equipment included sleeping bags, backpacks, tents and other items. He also received a computer for his scientific work (on Mt. Tshiaberimu among other areas) and US\$ 400 advance funding for a study on Mt. Tshiaberimu which he will start in August. This is a start, but in view of the crisis which Claude Sikubwabo Kiyengo has described so clearly, our involvement continues to be required.

Ursula Karlowski

Mt. Tshiaberimu: News from Vital Katembo

At the moment the Mt. Tshiaberimu region is protected by 22 rangers. Since April 1998 the area is under permanent control. However, this does not ensure conservation; the farmers have to be integrated and they must have a benefit from the park, otherwise the encroachment will continue.

The largest gorilla group (8 animals) is visited almost daily. There is also a group with 3 members which is often ranging near the large group, a group with 6 individuals, and 4 solitary males.

Vital Katembo delivered the equipment provided by the *Berggorilla & Regenwald Direkthilfe* to the rangers; he told us that it was not easy to get it there. The Mt. Tshiaberimu project funded by DFGF UK has a pick-up now which makes the work easier.

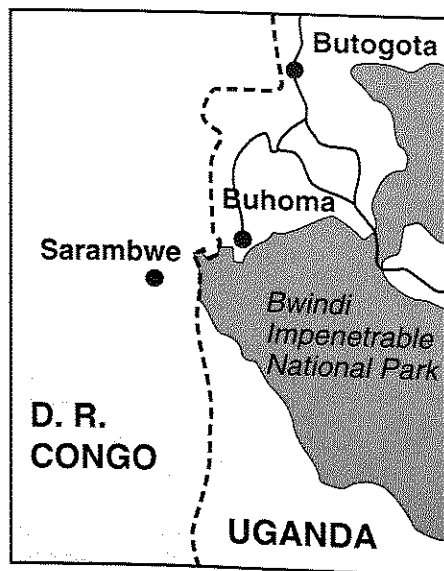
Current Situation in the Sarambwe Forest

From January until mid-March this year, Sarambwe was very unsafe due

to Interahamwe raiding villages in the Democratic Republic of Congo on the Congolese/Ugandan border. In the beginning of March, they killed 9 people in Buhoma. Following this incident, the Ugandan army searched the Impenetrable Forest and Mt. Sarambwe for the rebels. With the help of park rangers, the rebels were followed into the eastern sector of the Virunga National Park up to the Nyarufunzo Forest and to the right shore of the Rutshuru river. At the moment, the situation in Sarambwe is reasonably quiet.

Since April 8th, 1999, the equipment donated by the *Berggorilla & Regenwald Direkthilfe* has been transferred to Sarambwe in cooperation with Conservateur Shabantu Kambale who manages the Domaine de Chasse de Rutshuru and Sarambwe. All the equipment that has been taken from the storage at Kisoro arrived in Sarambwe. The IGCP will take care of the remaining material in Kisoro and transport it to Buhoma, only two hours' walk from Sarambwe, where the Sarambwe rangers will collect it.

Claude Sikubwabo Kiyengo



The location of Sarambwe

News from Kahuzi-Biega

I visited Bukavu on April 5-8th. The GTZ (German aid organization) project is suspended at present, except for supporting the Kahuzi-Biega National Park staff by a small-scale fund.

All the people of Kahuzi-Biega National Park are well (nobody was injured or killed). They have not received their salaries from Kinshasa since last August when the rebels occupied this region. Until the end of March 1999 the park staff could not enter the park. The border at Tshivanga has been closed until now, so no people and no goods were transported from Bunyakiri or Walikale. Local people have suffered very much from the shortage of goods for daily use and the lack of communication. Although the front line has moved to the far west, some Interahamwe and Mai-Mai are still ranging in the forest. Heavily armed soldiers are protecting Tshivanga.

However, people say that the poaching activity is not high, because poachers are afraid to use guns. Unlike during the previous war when poachers killed hundreds of elephants, they now are only targeting small mammals using snares.

At the end of March the Kahuzi-Biega National Park resumed monitoring the 4 habituated gorilla groups. Teams consisting of a guide and several trackers visit each gorilla group every day. However, since they had never contacted the gorillas for 8 months, it was very difficult for them to find the groups.

Until April 7th when I visited Tshivanga, they had only found 2 groups (Nindja and Maheshe). The Mushamuka and Mubalala groups were not located where they had been before. Since Mushamuka died in April 1997, all the females and their dependent infants had moved together until last summer. However, it is possible that they have dispersed to transfer to other



D. R. CONGO



The conservator (right), guides and trackers of Kahuzi-Biega National Park when they were visiting the Nindja group with Juichi Yamagiwa

Photo: Juichi Yamagiwa

groups. This may result in a collapse of the Mushamuka group.

I visited the Nindja group. When I had seen the group for the last time in February 1998, it had consisted of 11 females, 5 juveniles and 5 infants. According to John Kahekwa (a guide), the number of females had decreased to 9 at the end of July 1998. Robert Mulinbi (another guide) told me that he had counted 13 nests when he had found the Nindja group at the end of March 1999. It is the reasonable figure of nest builders including large juveniles. However, he counted 19 nests on April 6th. He also found a long white hair in a big nest on the ground. It means that several adults including at least one silverback had joined the group.

During my visit on April 7th, I counted again 19 nests and observed a young silverback (his estimated age: 12-14 years) charging us. We also

observed several unhabituated females. Females of the Nindja group looked shy probably because they have lacked contacts with us, but did not attack us as the untamed females. It seems likely that the Nindja group moved together with another group led by a young silverback. This is delightful news!

According to John Kahekwa, all the members of the Maheshe group have been found well as before.

My study groups of both gorillas and chimpanzees have been monitored periodically at Tshibati. The gorilla group has lost its leader male and has split into 2 groups recently. Since Mai-Mai people still appear within the study site, my research team could not resume field works in the forest. Only the monitoring and the phenological survey (botany and climatology) are going on at present.

Juichi Yamagiwa

Activities of the GTZ/ICCN Project

The GTZ's involvement in Kahuzi-Biega will be continued, but the budget has been reduced drastically. In 1999, the rangers will be paid by the project, but many other things are lacking, for example equipment. We therefore offered material from our storage to the Kahuzi-Biega rangers.

The park station was looted completely during the war. However, it was possible to save most of the project's remaining equipment, including the vehicles, when the war started in August 1998. This helps the rangers now to continue their work.

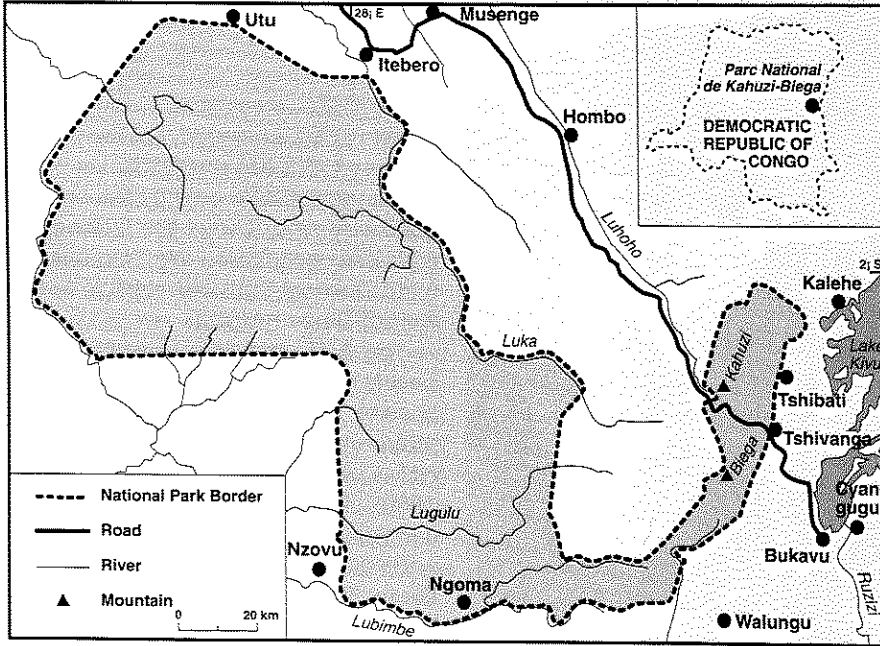
Since March the situation in Kahuzi-Biega National Park has improved a little. The Mai-Mai left the old park sector and therefore the rangers were able to resume their patrols. During these recent patrols they found the mandible of a silverback male gorilla near Kasirusiru. It is possible that it belongs to a former member of the Mubalala group because this group lived in the area. There are also positive news: The local administration supports the park and wants to stop cattle ranching in the narrow corridor.

During a meeting in April, the organizations involved discussed the conservation of the 4 World Heritage Sites in eastern Congo – the National Parks Kahuzi-Biega, Virunga and Garamba as well as the Okapi Faunal Reserve in the Ituri Forest. All those sites are critically endangered, especially because poaching has increased and the surveillance has collapsed. The UNESCO promised US\$ 250,000 to cover the most urgent costs. It is planned to secure the funding in the future by a trust fund. Important activities would include the support and training of the rangers, improved monitoring etc.

*Summary of information provided by
Guy Debonnet*



D. R. CONGO



Kahuzi-Biega National Park. At the moment only the old (eastern) part is accessible.

Map: Angela Meder

Another Study for Kahuzi-Biega

Mbake Sivha, who has been carrying out research on gorillas and chimpanzees with our support, is now carrying out another study to improve the conservation of the Kahuzi-Biega National Park. She uses funds from the *Berggorilla & Regenwald Direkthilfe* for this research.

The aim of this new study is to reduce the human pressure on the park's resources and to determine whether these resources can be supplied otherwise. It is planned to

- identify animal and plant species used by the human population,
- determine how each species is used, both in terms of quality and quantity,
- identify other areas outside the park where these forest products also occur,
- arrive at a strategy for the protection and sustainable use of these re-

sources in order to make them available to the population living close to the park. It is especially planned to use the knowledge of indigenous peoples such as the Twa.

The study is conducted in the area along the road between Kajeje and Tshibati (at the eastern part of the park), as this is the only accessible region at the moment. Five villages are included, two of which are pygmy villages. Most pygmies depend on the resources of the park. They exert a pressure which should not be underestimated. In general, they don't own land and only a small number of them earn a salary as guides in the park.

The study puts special emphasis on women because in traditional African culture they play an important role in the utilization and protection of natural resources. Unfortunately, this has changed with the switch from subsistence to market economy. Consequently, the women are now forced to destroy the local resources to obtain

cash, which in many cases is still not sufficient.

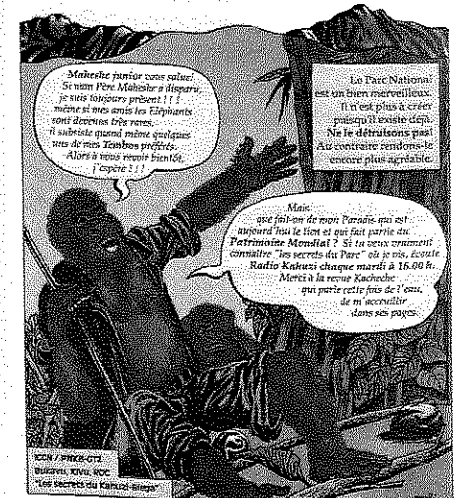
A New Publication: *Le Gorille*

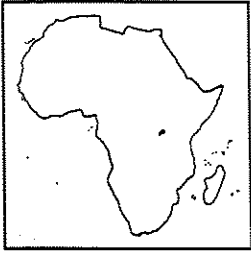
For several years the GTZ/ICCN project has produced *Kacheche*, a newspaper for children about nature conservation and the national parks in eastern Congo. Now the Kahuzi-Biega National Park is starting a new publication, *le Gorille*. It is targeted at populations living close to the Kahuzi-Biega National Park and will be distributed twice per year. It will, for example, provide information about the activities in the park, discuss the cooperation of the park administration and the population and feature an animal.

Each issue of *Le Gorille* will be printed in 20,000 copies that can reach about 200,000 people who live close to the eastern part of the park. The population will also be involved in its production and distribution. It is not yet certain how this project will be funded. In any case, the *Berggorilla & Regenwald Direkthilfe* will support it.

le GORILLE

PARC NATIONAL DU KAHUZI-BIEGA





RWANDA

News from Karisoke

There have been enormous improvements in security in the northwest of Rwanda since last year, and the Karisoke Director is now back in Ruhengeri 5-6 days each week. With peace comes poaching, and trackers are encountering large numbers of antelope and buffalo snares in the park. As yet, we are unable to operate anti-poaching patrols, however, these should be operational within a few weeks.

The gorillas are visited, on average, once a week. The research groups are thriving and there have been 4 more births since January. We hope that we will soon be monitoring all 3 groups 7 days each week, as the trackers completed 45 days of intensive training in June. Karisoke staff were trained together with ORTPN (the National Park Authority) guides and rangers in preparation for the reopening of the Parc National des Volcans in July.

With help from the IGCP, the Mountain Gorilla Veterinary Centre and the Nyungwe Forest Conservation

Project, Pascale Sicotte and Liz Williamson of the DFGF International organised a two-day meeting on "Research As a Tool in the Management and Conservation of Protected Areas in Rwanda" in Kigali in January. The invited speakers included Amy Vedder and David Watts.

Liz Williamson

A Karisoke Reunion

After the meeting in Kigali, researchers who had worked in Karisoke had another appointment - they met in Leipzig, Germany, in the Max Planck Institute for Evolutionary Anthropology. Martha Robbins and Pascale Sicotte had organized this reunion, and although I had never worked in Karisoke, I was invited as a guest too (thanks again to Pascale and Martha, to the MPI and to DFGF).

Christophe Boesch, who hosted the meeting, presented very interesting results on the reproductive strategies of chimpanzees, but after that, Karisoke was the absolute focus. All the

participants who talked about new research results had worked there or analyzed material from there. The themes ranged from conservation (Liz Williamson and Andrew Plumptre), health (Antoine Mudakikwa), ecology (Alistair McNeillage), genetics (Oliver Ryder, Linda Vigilant), social relationships (Alison Fletcher, Kelly Stewart, Martha Robbins, Pascale Sicotte), reproduction (Nancy Czekala, Netzin Gerald-Steklis) and food processing skills (Richard Byrne) to communication (Dieter Steklis). As an exception, Diane Doran compared the socioecology of Karisoke gorillas with that of lowland gorillas, and Juichi Yamagiwa referred about the demography of the habituated gorillas in Kahuzi-Biega which seems to be very different from that of their Virunga conspecifics.

The meeting was very familiar, relaxed and inspiring. It is planned to publish a book with the contributions.

Angela Meder

Tourists Can Visit the Gorillas Again

During May, the rangers and guides of the Parc National des Volcans were trained to prepare them for the reopening of the park for tourism after 2 years of closure caused by the war(s). On June 15th, gorilla tourism will be started again according to a Reuters press release. Each tourist group will be accompanied by armed rangers and guides.

Two gorilla groups can be visited - Suza and Sabinyo - and another one, Amahoro, is still being habituated. According to a BBC article, one gorilla visit will cost US\$ 250 per person; 8 tourists will be allowed to visit each gorilla group for 1 hour per day.



Rwandan gorilla

Drawing: Chisato Abe



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Exploitation of Great Ape Body Parts in Africa

Ethnic medicine in Africa can be divided into two broad categories: herbal medicine and medico-magico practices where plant and animal parts (including sometimes human remains) are used for or against black magic, juju, etc., and also in religious cults and festivals. Success for the first depends on choosing the plant with the right chemistry to inhibit pathogens that cause illness, while success for the second depends on traditional superstitions and deep beliefs.

Both the gorilla and the chimpanzee pervade the superstitious beliefs, legends and folklore of indigenous ethnic groups throughout equatorial Africa. Often the relationship between man and pongids appears paradoxical and complex. For example, natives of the Lac Télé region of northern Congo-Brazzaville deliberately hunt gorillas and chimpanzees for food, but when not hunting the animals they regard them as guardians of the jungle lair of the gods, leaving them offerings of food whenever they meet them in the forest (Nugent, 1993).

In Cameroon some Africans believe that wicked people turn into gorillas

during the night to destroy their neighbours' crops out of spite, while others consider old solitary male gorillas as a reincarnation of a particular village headman transformed to protect the village fields against real gorillas. It is relevant that in other societies (including industrialized ones) that do not have the benefit of apes as neighbours, supernatural beings are created that display either good or evil intent.

Many Africans who kill and eat gorillas and chimpanzees respect them for the qualities they themselves endow the apes with, be it strength, courage or intelligence. It is the transference of physical or mental abilities that is desirable.

Anatomical parts of gorillas and chimpanzees are utilized in three principal areas of medico-magico practices: transmission of power, protection from evil influences, and healing and sexual potency. Throughout the whole distribution area gorilla fingers represent strength (it is the powerful hands of gorillas that are used in attacks), and they are highly coveted. Sometimes they are mixed with plants and other animal parts such as snake head and chameleon (Bouquet, 1969), but more often they are simply dried and powdered and boiled in water for bathing a

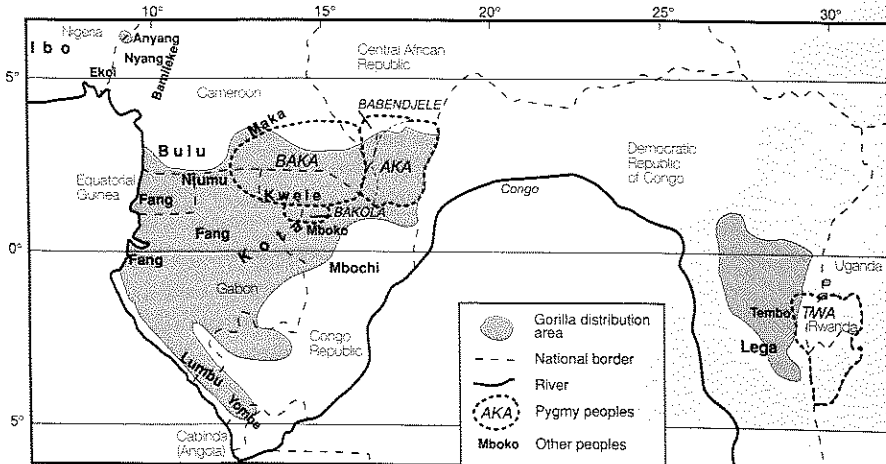
new-born human infant, thus conferring the gorilla's strength (Linden & Nichols, 1992). Villagers living in the vicinity of the Dja Reserve in south-eastern Cameroon believe that a vigorous child will be conceived if the mother attaches a gorilla digit to her hips, while a similar effect is thought to result if the bone of a gorilla is put on a plate, or if a gorilla digit is attached around the child's hips (Prescott et al., 1993/94). So deeply entrenched are these beliefs that even if the child is sickly it is not the fetish that is at fault, but rather the ambivalent spirit of the particular gorilla because it refused to surrender its strength.

The use of ape parts as protective influences is also important. Gorilla skulls are hung over the doors of village headmen, or in nearby trees to protect them from malevolent spirits, particularly when they are asleep and most vulnerable. In parts of Cameroon gorilla hair is employed to protect landowners from the spells of sorcerers, or to protect their fields from sorcerers who may try to steal the fertility of a plantation to the benefit of their own fields (Prescott et al., 1993/94).

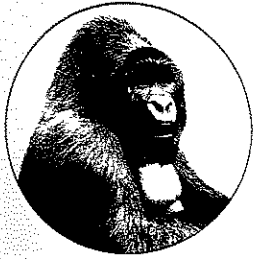
Sometimes the organs of animals are exploited for more sinister purposes. Throughout the Virunga Volcanoes Twa pygmy hunters have killed gorillas, particularly silverback males, in order to remove their testicles, ear lobes, tongues and toes for "sumu" (poison or black magic). Apparently the potions are believed to either kill or induce virility depending on the amount used (Fossey, pers. comm.).

Nigerian subsistence farmers use gorilla penis as a drug for prevention against poison, while the left arm of a chimpanzee is employed to invoke witches. These farmers also exploit gorilla bone and chimpanzee penis as aphrodisiacs and for male potency (Adeola, 1992).

In some regions skeletal parts of apes are much sought after, particu-



African peoples mentioned in the articles about the use of gorillas



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larly in healing practices. The Yombe of Cabinda, northern Angola, attribute supernatural powers to the gorilla, which they frequently hunted for skeletal parts to prepare their "malingoes" or healing remedies (Liz Ferreira et al., 1945). Likewise, the Ntombe of the Lac Tumba region of D. R. Congo prize highly the limb bones of pygmy chimpanzees as medicine which is considered effective in promoting physical strength. Curiously, this belief extends only to the bones of the right arm (Nishida, 1972). Local inhabitants of the Korup district, West Cameroon, utilize chimpanzee bones for therapeutic purposes. The bones corresponding to the injured part of the patient are boiled in water and the liquid applied to the skin (Prescott et al., 1993-1994). When Sanderson (1937) skinned an adult male gorilla killed by local hunters in the Assumbo area of Cameroon, the people ate the flesh of the animal but used some of the internal organs for juju. Part of the intestine was used as a medicine for stomach pains.

The idea that diseased parts of the human body can be cured through the use of corresponding parts of the ape body is interesting. In the past, herbal medicine in some countries was based on the principle that plants exhibiting a roughly similar shape to human organs were curative agents for those organs when they became diseased. Of course, such fetichism is not the sole domain of the African, but is found in many parts of the world, particularly in the Far East. Nugent (1993) relates that in the market in Kinshasa, gorilla fingers, hands and internal organs, which are coveted by the Chinese and Koreans for their supposed curative powers, are sold; gorilla fingers fetch US\$ 50 apiece.

While fetish hunting does not in itself pose a serious threat to the survival of the African apes, it is clear that the exploitation of the body parts of apes for medico-magico practices is

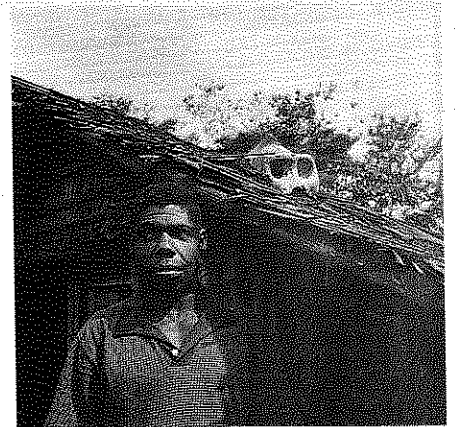
widespread and is embraced by many ethnic groups. Humans have been hunting apes for one reason or another for a very long time. Excavations in the Shum Laka rock shelters near Bamenda, Cameroon, revealed skeletal fragments of chimpanzees, monkeys, and the premolar of a gorilla. These remains were carbon dated 5000 BP (Maret et al., 1987).

Don Cousins

Gorillas in African Culture and Medicine

Paul Du Chaillu (1861) already wrote about gorilla stories he had heard from the Fang people. For example, the Fang were convinced that if a pregnant woman or her husband were to see a gorilla, even a dead one, she would give birth to a gorilla, rather than to a human child.

It is very difficult to find published information on this subject, as little has been written since about the importance of gorillas for African peoples. One exception is Günter Tessmann's study of the Pangwe (Cameroon and Gabon) published in 1913. It contains a detailed description of a secret society whose cult centers around the gorilla. It was widely spread and called Ngi or Ngui among the Fang and Nji among the Bulu. Ngi means gorilla and is the symbol of fire and positive power (the chimpanzee represents evil). During the Ngi celebration, a large sculpture was made after the vigorous dance of a healer. Certain objects were placed in and around that sculpture, for example, parts of dead people (but not gorillas), and rituals were performed. For the members of the Ngi secret society, Ngi was watching their manners. He punished them with illness, for example with leprosy, if they broke the rules. Ngi also protected the society members as he rose at night to fight sorcerers who had left



Gorilla skull on a convention house for men (members of the Ngi society) in northern Gabon (Fang, 1964)

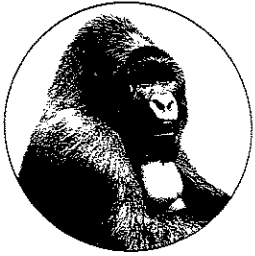
Photo: Klaus Paysan

their bodies to kill people. According to Jordi Sabater Pí, the Ngi cult has disappeared completely. However, Klaus Paysan heard from a chief's son in Cameroon, far away from the present gorilla distribution area, that the Ngi society was still active, but all information was kept absolutely secret.

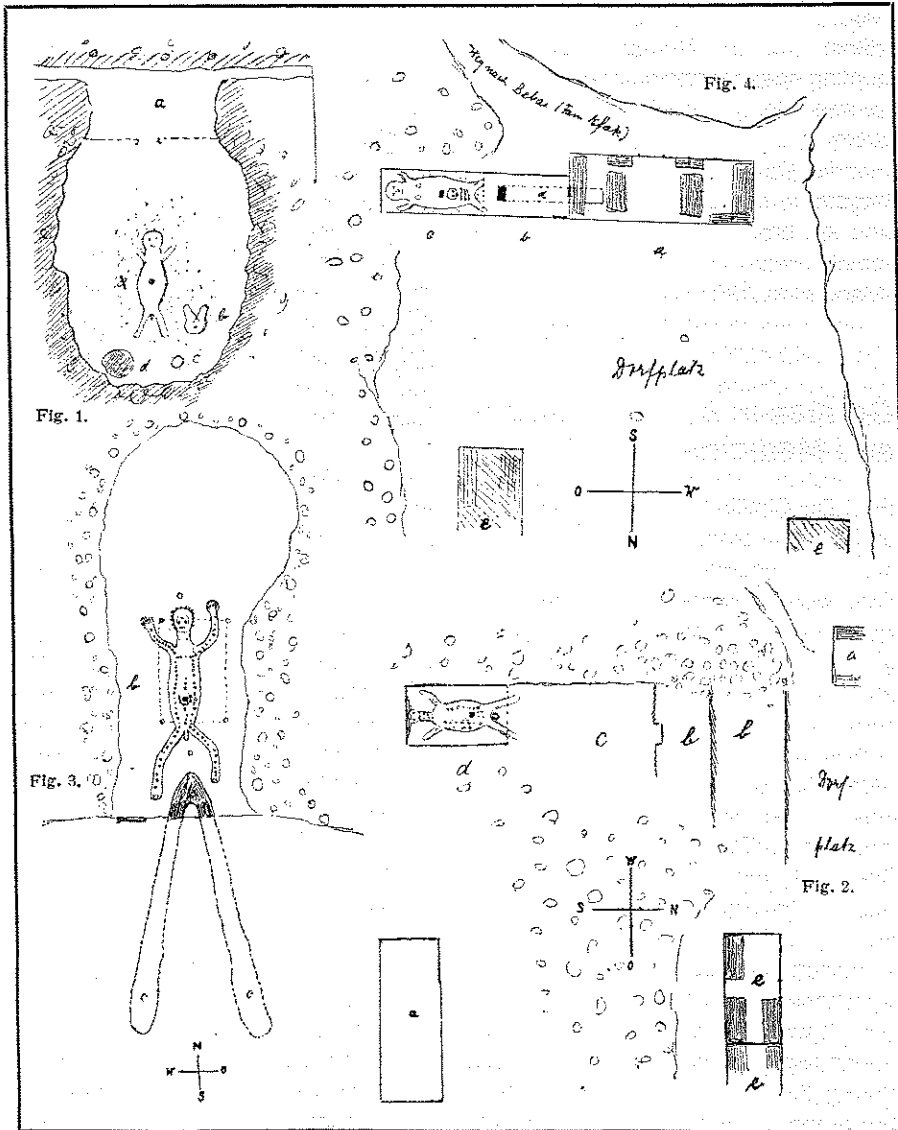
Vanishing Traditions

In the meantime, much has changed. Since Du Chaillu's and Tessmann's days, new religions and medicine as well as new political, economic and social structures have spread across Africa. They changed the traditional societies and the old rituals considerably or even eradicated them in many regions. However, in many places the gorilla is still respected. For example it is the totem of some Fang clans like the Essangui. (essa=father, ngui=gorilla), the clan to which the President of Equatorial Guinea, Teodoro Obiang, and former high-ranking politicians belong.

Some traditions have changed during the last few decades. The Anyang in Cameroon near the border to Nigeria were formerly only allowed to hunt gorillas for the initiation of a new chief,



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Günter Tessmann's sketches of Ngi cult sites in today's Cameroon (Figs. 1 and 4), and Equatorial Guinea (Figs. 2 and 3)

when a gorilla had to be killed (Paysan, pers. comm. – information by a chief's son). The chief had to eat the brain and another high-ranking person ate the heart. Anyone who hunted gorillas on other occasions was sentenced to death. In the 1960s, the chiefs and the traditional structure were still strong, and this taboo was observed. At that time, the chief was the highest ranking

and respected person. Now, rich businessmen are held in more esteem than the traditional chiefs, and the taboo is no longer observed. With money, they can obtain whatever they want.

In many forest areas where traditions are still important, medico-magical products made from gorillas are regarded as more powerful and are therefore more popular than those

made from chimpanzees. In modern societies with socio-economic competition between individuals, e. g. in Cameroon, products from chimpanzees are more sought after. The gorilla is a symbol for quiet power that prolongs the lifespan of people, whereas the chimpanzee is essentially bad; it increases luck and fortune (Hecketsweiler, pers. comm.).

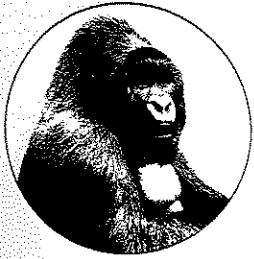
Not to Be Told to Strangers

Although the Ngi secret society has been described in detail by several researchers, there may be other cults that have never been revealed to researchers or to members of other peoples. In Cameroon, for example, in the 1960s it was forbidden to talk about the ritual use of gorillas and leopards because in that case the fetishes would lose their power. It is also still strictly forbidden to talk about initiation rituals to strangers (Paysan, pers. comm.).

Nowadays, Africans influenced by western thoughts sometimes no longer observe this restriction. However, they often do not talk to foreigners about traditional medicine, especially medicinal plants, because they are suspicious that foreigners, e. g. pharmaceutical companies, will exploit this knowledge.

Myths and Legends

All over their distribution area, gorillas play special, but very different roles in the thoughts of the peoples living there. The apes are feared, hated, avoided or admired. In some regions of the Congo Republic, they are a symbol for inexhaustible strength. Pregnant Bantu and pygmy women who work in plantations close to the forest go there only if accompanied by an armed man, and the other women avoid them, because silverbacks are said to attack pregnant women to kill their baby. Kota hunters from north-eastern Gabon talk about mystic transformations between humans and gorilla-



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las or chimpanzees: A hunter may swear that he has shot a gorilla, but afterwards it is discovered that a person from the village had died from this shot (Hecketsweiler, pers. comm.).

Near the Virunga National Park, the gorilla is considered as a bad spirit. Everyone who pronounces its name (Ngagi) in the morning before eating or drinking something is supposed to lose all luck that day and to be exposed to bad things (Sikubwabo, pers. comm.).

Merfield and Miller reported in 1956 that the Maka in Cameroon, who lived in the area of the Dja Reserve, believed certain persons were able to transform themselves into animals. They are convinced that a single male elephant, gorilla or another large animal can have a human soul, often that of their own father or grandfather.

Permission only to Certain Persons

Merfield and Miller noted in 1956 that 60 km south of Yaounde, women were not allowed to eat gorilla meat. Only a few years ago, Bowen-Jones (1998) reported that in the Odzala region (Congo Republic) women do not eat gorilla meat because they are afraid that if they did so, their husbands would become as brutal as gorillas.

The traditional importance of gorillas for Bantu women is often different from that for men, and the medicine made from gorillas is therefore very different too. Women's medicine has psychosomatic effects; proven healing methods are used always. The knowledge is passed from the mother to the daughter. This does not seem to be the case in the traditional medicine of male Bantu.

In the pygmy peoples (Baka in northeastern Gabon, Bakola in northwestern Congo, Babendjele in northern Congo) traditional medicine is apparently known and used by men and women alike – except for medicine used for children's and women's ill-

nesses. However, the kinds and the number of medicines forbidden for women is different from that for men (Hecketsweiler pers. comm.).

Klaus Paysan noticed in 1964 that gorillas which were transported on trucks as bushmeat in southern Cameroon did not have heads. The head and the heart had to be given to the chief. The Fang in Gabon occasionally carve figures with the sagittal crest of a silverback gorilla. In some regions, masks with the sagittal crest can be found or masks with gorilla teeth to give them the power of the apes. Among the Bamileke, only the chief is allowed to wear the mask with the sagittal crest. In the region of the Anyang and Nyang sometimes fetish shields are decorated with gorilla skulls to transfer the animals' power to the shields. Only chiefs may use these shields. This habit was after 1980 even spread to northwestern Cameroon. The Fon of Babungo had two of these shields with baby gorilla and chimpanzee skulls in the palace. The

Ekoï or Nyang had ancestor masks with gorilla skin and hairs (Paysan, pers. comm.).

The Kwele (northern Congo) have a circumcision ceremony called Beka. The initiates as well as some of the guests are obliged to eat gorilla or chimpanzee meat. This is a symbol of power and virility (Gami, pers. comm.).

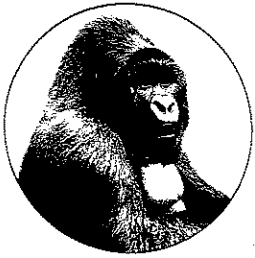
Different Peoples in Different Habitats

Two peoples living in the same region do not always have the same medical/magical relationship towards the two types of ape. There are differences between pygmy and Bantu, but also between forest and savanna Bantu.

Adolf Friedrich Graf von Mecklenburg reported from his trip to the Virunga Volcanoes in 1909 that for the Twa he met the gorilla was umuzimu (totem) and they were not allowed to kill it. In the distribution area of the western lowland gorillas, the pygmies generally have more respect for gorillas than for chimpanzees. They are



Gorilla skull used by the Bamileke, Cameroon, for giving a son strength by making him drink from the skull
Photo: Klaus Paysan



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not afraid of gorillas but are suspicious of chimpanzees. However, recently pygmies have also killed gorillas because they get money for selling the most highly esteemed body parts to the Bantu. Bantu are more afraid of gorillas than of chimpanzees (Hecketsweiler, pers. comm.).

The Bulu in southern Cameroon, the Fang of Woleu, the Ntumu in northern Gabon and the Kwele in Congo/Cameroon are more interested in the chimpanzee for medical/magical purposes. On the contrary, Bantu peoples living in the forest (Kota in Gabon/Congo, Lumbu and Yombe in southern Congo) and pygmies in general prefer the gorilla. They do not kill and eat chimpanzees because they look similar to humans and because they do not taste as delicious as gorillas. A favourite dish in the villages is soup from gorilla intestines (Hecketsweiler, pers. comm.).

Even some savanna peoples who are not living within the gorilla distribution area use gorillas. The Bamileke let their male children drink from bowls made from gorilla skulls to give them strength. The Ibo in Nigeria hire hunters to bring them gorillas for certain magic offerings that are believed to bring good luck. These rituals are no longer performed by the chiefs today but by businessmen who can afford it (Paysan, pers. comm.).

The Chamba in northwestern Cameroon live in the savanna but use some powerful rain forest animals – elephants, buffaloes and gorillas – for certain purposes. For example, during his initiation a new chief has to eat gorilla brain as it is also usual among some forest peoples. This ritual is still performed today.

Medicine, Magic and Fetishes

In some regions, for example in the D. R. Congo, most traditional healers have been replaced, and much of the knowledge about traditional medicine has vanished because the people are



Gorilla sculpture in a net (Cameroon, south of Kribi), probably a fetish for hunting success

Photo: Klaus Paysan

treated with western medicine. However, in many regions the traditional use of gorillas is still common.

Eating gorilla meat often is a ritual act to incorporate the gorilla's power. Chimpanzees are not eaten for this purpose (Hecketsweiler, pers. comm.). The Fang in Rio Muni often eat gorillas as simple bushmeat, but a few parts of these apes are kept as fetishes, for example the canines for good luck during the hunts and the fingernails and dried hands for good luck and female fertility (Sabater Pi, pers. comm.).

Paul Du Chailu noted in 1861 that the Fang

very carefully saved the brain ... charms were made of this – charms of two kinds. Prepared in one way, the charm gave the wearer a strong hand for the hunt, and another it gave him success with women. ... Nothing makes a man so brave as to have a fetish of gorilla's brain. This gives a man a strong heart.

Merfield and Miller reported in 1956 that 60 km south of Yaounde a witch doctor filled his magic horn with gorilla blood and performed rituals to ensure the success of future gorilla hunts.

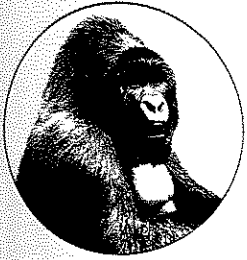
Some parts, especially the head and genitals, are still widely used in southwestern Cameroon and notably neighbouring regions in Nigeria for medical purposes. The hairs are

sometimes used to manufacture local charm (Usongo, pers. comm.). Nigerian farmers use belts, necklaces and bangles made of wild animal by-products (for example gorilla skin) embedded with herbs for protection against witches and for immunity from all diseases and enemies (Adeola, 1992). In Cameroon, some gorilla parts are also used to transfer power, for example by rubbing the back of a person with gorilla hands (Paysan, pers. comm.).

A silverback's canines are a fetish for strength and are sometimes worn in a necklace together with leopard, crocodile and forest hog teeth. A concoction of ground canines and herbs is used to heal caries and to strengthen the jaws (Hecketsweiler, pers. comm.).

Certain groups of the Mbochi in the Congo Republic place a gorilla femur into the bath of babies to give them strength (Gami, pers. comm.). In other areas, a piece of bone of the lower arm is used like this to give power, strength, good bone structure, good constitution and more hair. If a pregnant woman wants her baby to become strong and powerful, she drinks water only from a hollow bone that has to be immersed in water all the time. If ground, dried bone is brought into the nose, it is believed to give power; moreover, if the respective person meets a gorilla in the forest, it will be calm. A concoction of ground, dried bone with herbs gives strength or accelerates the healing of a bone fracture. It may be possible that the intake of ground bone or the immersion of bone in water helps against calcium deficiency (Hecketsweiler, pers. comm.).

A similar practice is found in the eastern distribution area. The Tembo from Bunyakiri believe that dust from burnt gorilla bones can make one stronger when applied to incisions in the skin. Some regions of the skin are preferred: forehead (to make the head stronger); wrist (to make the punch more violent); knee or ankle (to make



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the kick violent). In any case, bones from silverbacks (skull and hand) are considered more useful than those of younger or female gorillas. This belief is also accepted by other forest peoples like the Lega from Mwenga (Basabose, pers. comm.).

Burnt and ground bones of the lower arm and ribs, together with powder of burnt plant products are used for cupping. Cupping at wrist, elbow and shoulder strengthens the arm, cupping at foot and knee strengthens the leg, cupping in the face, at the temple and forehead strengthens the head and improves the reaction during quarrels, cupping in the back of the neck and at the loin strengthens the back – especially in pygmies who sometimes have to carry heavy loads. Ground burnt lower rib is used for cupping on the breast, which gives strength and resistance in breast and belly during quarrels. It is used on the trunk during cupping or massage (with palm oil and plant powder) to heal the illness called "maladie de côte" (Hecketsweiler, pers. comm.).

The fetish Nzobi, one of the most powerful and highly esteemed fetishes in eastern Congo, contains several dozen components, including gorilla finger (Bouquet 1969). Ian Redmond found gorilla hands being sold at all fetish market stalls in Brazzaville that he visited in 1989. Usually the fingers were removed because a potion is made from them which gives the strength of gorillas. The finger bone is burnt until it is black and ground to powder; then an incision is made in the arm and the powder is rubbed into the incision to mix it with the blood.

The dried skin of the supraorbital ridges is carried close to the body for protection by the Mboko in northern Congo; if the person who carries it meets a gorilla, it is submissive and disappears without causing any problems. From the naked skin of silverbacks' breast a fetish against punches

is produced by the Kwele in Gabon. A few long hairs that have been collected in a fresh gorilla nest are carried in a bag or between ear and head; this is said to protect against attacks because the one who carries them is invisible for gorillas (Baka in northeastern Gabon). A dried gorilla hand is a fetish which improves the punch during fights and the resistance against punches (Hecketsweiler, pers. comm.).

Sometimes, the object for magic does not have to be a gorilla body part. Peoples in North Kivu believe that if a branch from a gorilla nest is put on or under the bed of a man, this man will beat his wife and drive her away. If a branch or other material from a gorilla nest is dropped in an office, the head of the office will have many problems with his superior and staff and can lose his job (Sikubwabo, pers. comm.).

Although many old traditions are lost, gorillas still play an important role in the life of many Africans. For many medico-magical purposes the apes have to be killed. However, so far it has not been reported from anywhere that this poses a real danger for the gorilla populations.

Angela Meder

Thanks to Augu Kanyunyi Basabose, François Feer, Norbert Gami, Philippe Hecketsweiler, Klaus Paysan, Ian Redmond, Jordi Sabater Pi, Claude Sikubwabo Kiyengo, Léonard Usongo and Juichi Yamagiwa for essential information.

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Revision of the Genus *Gorilla*: 70 Years after Coolidge

This is a summary of a symposium presented at the 1999 Annual Meeting of the *American Association of Physical Anthropology*.

The year 1999 marks the 70th anniversary of Harold Coolidge's publication *A Revision of the Genus Gorilla*. Recent studies on western lowland, eastern lowland, and mountain gorillas suggest they differ more than has been previously accepted. Thus the past decade has witnessed a shift away from the studies of a single taxon towards more comprehensive comparisons among various subspecies.

To synthesize the recent and extensive knowledge of these apes, we organized a symposium for the 1999 meeting of the *American Association of Physical Anthropology* in Columbus, Ohio. The main goal was to provide the scientific community with a contemporary and coherent picture of the state of our knowledge of the genus



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Gorilla as evidenced by the most recent data on morphology, behavioural ecology, and genetics. In addition to ourselves, we invited 8 primatologists and their colleagues to present timely, original data papers.

With regard to morphology we heard from 4 speakers, some of whom touched on the possibility that subspecific differences may warrant species level distinction. Andrea Taylor demonstrated how structural adaptations of the jaw and dentition differ among the 3 subspecies of *Gorilla* as a function of their degree of folivory. Sandra Inuoye, studying hand morphology, showed that metacarpal and phalangeal differences between western lowland and mountain gorillas were almost as great as those between *Pan* and *Gorilla*.

Paul Park and his colleagues, taking a slightly different morphological approach, used discrete traits to demonstrate both within and between subspecies differences in cranial characters and suggested a possible species distinction between eastern and western populations. Finally, John Oates and his colleagues, combining morphological and genetic data, demonstrated that the dwindling gorilla groups along the Nigerian and Cameroonian border appear to represent a separate subspecies from that of western lowland gorillas.

What we discovered behaviourally from Michele Goldsmith and her colleagues and Diane Doran is that differences in diet, ranging and grouping patterns are related to immediate features of the environment, specifically the degree of frugivory. Michele Goldsmith and her colleagues stressed that differences between subspecies are related to altitude and can be considered part of a continuum. More importantly, differences in behavioural ecology have been demonstrated or suggested to occur between groups within a single population. Melissa Remis

suggested further that differences in the nutritional quality are also evident between populations.

MtDNA results presented by Oliver Ryder and his colleagues reveal a level of genetic differentiation between western and eastern gorilla populations as great as that found to exist among species of *Pan*, leading the authors to suggest that perhaps more than one species exists. By contrast, using nuclear DNA, Michael Seaman and his colleagues demonstrated that differences between eastern and western gorillas are not as great as those found in *Pan*. They conclude that if genetic data are to be used for determining taxonomic levels, a better understanding of the complex nature of genetic variation in the relevant taxa is required.

Questions raised by these presentations include:

- How great do the differences in form and function need to be for purposes of distinguishing taxa at the level of species?
- How rigid do differences in behavioural ecology need to be?
- What distances need to be reached at the level of the gene?

Can we just use other genera, such as *Pan*, as a model? Probably not. Rather, some sort of standard needs to be set and related to all primate species. But, where do we draw the morphological, behavioural and genetic lines? When we figure this out, perhaps then, we can begin to define what distinguishes species from subspecies.

The last presentation by Andrew Plumptre and his colleagues demonstrates nicely, although sadly, the reality of the status of this amazing genus in the wild. Threats of deforestation and hunting are not subsiding and each population is ultimately at great risk of extinction. Most timely are issues of warfare and the bushmeat crisis, and how they continue to threaten existing populations. Unfortu-

nately, our symposium highlights how many important questions remain unanswered and that more data are needed. There is no time to waste.

While we were unable to come to any concrete conclusions regarding the taxonomic status of gorillas, we did

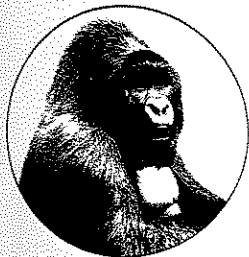
Aid to Cameroon?

In our last issue we included an article by the *Rainforest Foundation* about the EU aid program. The *European Commission* was planning to decide about the approval of developmental aid of ECU 52 million to the Cameroonian government on July 7th in Brussels. A representative of the German Ministry of Development had stated that no new roads would be funded, but rehabilitation projects were planned. No details on the kind of projects were given. Reportedly an EIA (Environmental Impact Assessment) was carried out and presented to the EC.

Conservation organizations including the *Berggorilla & Regenwald Direkthilfe* expressed their concern and strongly supported the participation of NGO conservation experts in the EC's planning processes and decisions to avoid disastrous effects of economic management in this sensitive region.

On July 6th, the *Rainforest Foundation*, *Pro Regenwald* and *Rettet den Regenwald* presented 30,000 signatures against the project to the German Development Minister Heidemarie Wiczorek-Zeul. On the following day, the Commission postponed the decision. They will consider the project again in September.

Iris Weiche



GORILLAS

make great strides in understanding what needs to be done. We hope to publish the proceedings of the symposium in an edited volume, along with contributions from other prominent researchers. All symposium abstracts can be found in the 1999 issue of the *American Journal of Physical Anthropology*, Supplement 28 and on the web at <http://www.samuelmerritt.edu/aapa.html>.

Michele Goldsmith and Andrea Taylor

Gorillas in the Takamanda Forest Reserve

An isolated population of gorillas has been known to occur in the Takaman-

da Forest Reserve and the adjacent Okwangwo forests of eastern Nigeria since the early 1900s. In 1904, Paul Matschie described the gorillas from this area as a distinct species, *Gorilla diehli*. Later taxonomic work reduced this species rank to that of a sub-species and eventually amalgamated it with other lowland gorillas, *Gorilla gorilla gorilla*. However, more recent research, including DNA analysis of hair and the re-measurement of Nigerian gorilla skull records, has provided new information that suggests that these gorillas are indeed more taxonomically distinct than previously thought.

Until recently, little attention had been paid to the population of gorillas on the Cameroon side of the border



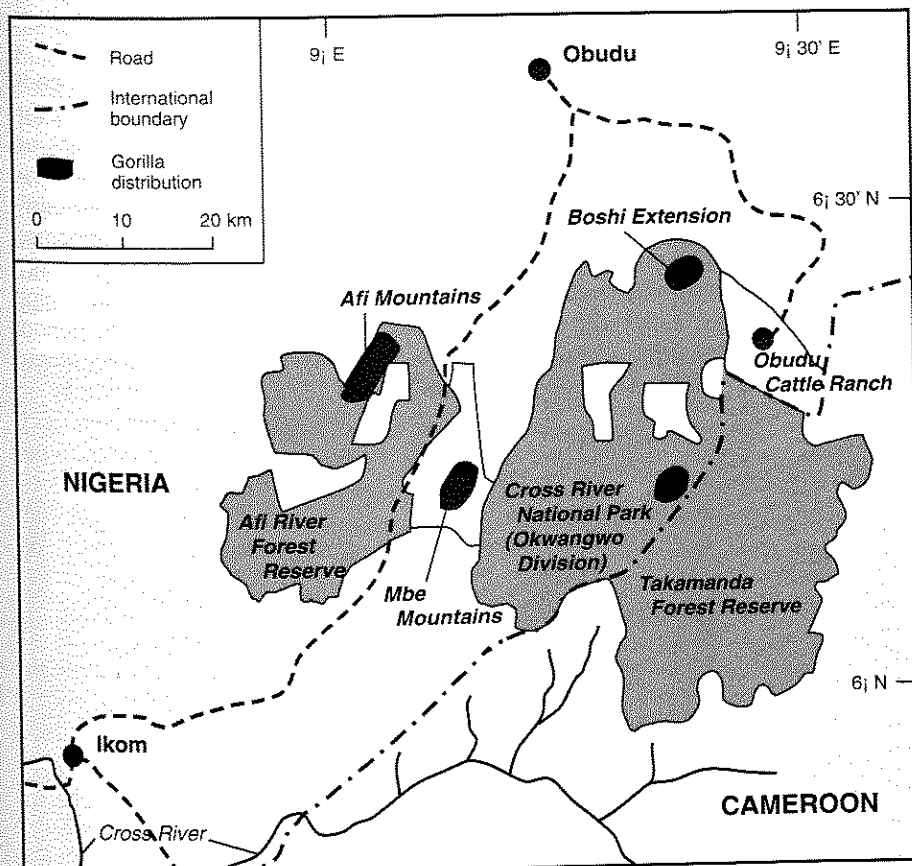
Local field assistant searching a fresh gorilla nest for hair samples

Photo: Jacqui Groves

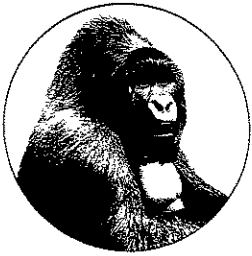
and it was unclear whether gorillas still existed in the area until a WWF expedition in 1987 confirmed their presence. Furthermore in 1996 Jacqui Groves visited the Takamanda Forest Reserve and collected information from the local people indicating the continued presence of gorillas. In 1997 a large mammal census focusing on the gorilla population was undertaken, for which the field work, funded by WWF Cameroon, lasted for 14 months.

The Takamanda Reserve covers approximately 700 km² of which only about 20% is classified as "highland" (for the purposes of this study, areas were categorised as highlands when higher than 700 m) which predominate in the north and east of the reserve. The results of the recent survey show that hunting is clearly higher in the lowlands than in the highlands and that, as a result, gorillas are virtually absent from the lowland areas. Although gorillas are still present in the Takamanda Reserve, they are now almost entirely confined to the highland areas, which are subject to lower hunting pressures, by the local communities. A very rough estimate of gorilla density in the highlands is in the order of 1 gorilla/km². In the lowland forest, the estimate was approximately 0.06 gorillas/km², one of the lowest recorded in Africa.

If gorillas are found in roughly the same density in all of the highland ar-



Gorilla distribution and conservation areas at the Cross River close to the Nigeria/Cameroon border
Original map: John Oates



GORILLAS

areas as in two highland areas surveyed, it would provide an estimated population of 140 weaned gorillas. However, a further highland area surveyed in Takamanda provided no evidence of gorillas at all; this was near to a large village and almost no indication of any large mammal species was found in the area. Therefore population estimates must be heavily weighted, and adjusted, by the proximity of highland patches to village areas, where hunting is the main economic activity.

The Mawne (sometimes referred to as Mone) Forest Reserve and the Oko Mountain area to the east of the Takamanda Reserve are also comprised of a mosaic of highland and lowland forest. Recent gorilla skull records collected during this study from the Mawne Reserve indicate their continued presence in this area. Further surveys have been recommended for both reserves, focusing on areas that are the furthestmost from human habitation.

Jacqui L. Groves

Lowland Gorilla Tourism in Central Africa

The EC-funded central African forest conservation program ECOFAC has been running since early 1992. It focuses on protected areas in 6 countries of the sub-region (Cameroon, Congo-Brazzaville, Central African Republic, Gabon, Equatorial Guinea, São Tomé e Príncipe). In the course of the survey work undertaken by the program, certain sites have been shown to harbour unexpectedly high numbers of lowland gorillas (*Gorilla gorilla gorilla*). This is particularly true of the Odzala National Park in northern Congo which has very extensive areas of open canopy Marantaceae forest, a habitat particularly favoured by gorillas. In certain areas the density may be as high as 10 gorillas/km² (Bermejo, 1995).

The surveys in the north of the park also revealed the presence of over 100 forest clearings (called "bais" or salines) some of which attract astonishingly high numbers of large mammals, in particular forest elephants, gorillas, forest buffalo, bongo, sitatunga, giant forest hog and bush-pig. Observations over an 8-month period in one of these salines (called Maya north) showed that it was visited by at least 36 different gorilla families and 18 solitary males, representing some 420 individuals (Magliocca et al., 1999). Furthermore it was shown that gorillas were present on over 80% of the days!

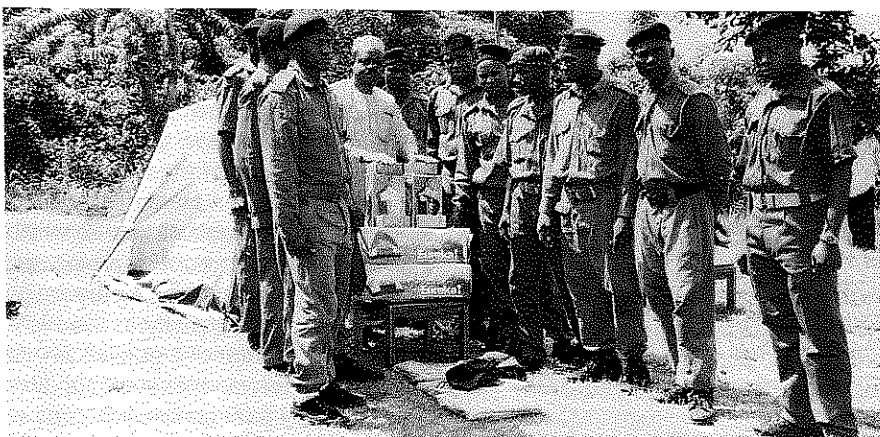
First Steps to Tourism

Simultaneously to the survey work in the park, a Spanish couple of primatologists, Magdalena Bermejo and Germain Ilera had been undertaking a study of gorillas in an area of Marantaceae forest some 30 km to the southwest of the park at a site called Lossi. In the course of their work since 1993 they have succeeded in habituating a couple of gorilla families using the clas-



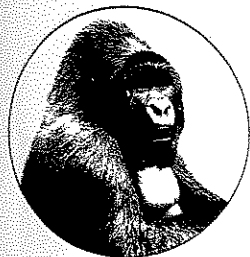
John Oates delivers the equipment donated by us (4 tents, 4 ground-sheets, 4 pairs of binoculars, 4 GPS units, 4 compasses, a camera and film) to Clement Ebin, Cross River National Park. Left to right: Kanu Agabi, Clement Ebin, John Oates, A. A. Nchor.

Photo: Peter Jenkins



Clement Ebin, General Manager, presents the items to the Cross River National Park.

Photo: Clement Ebin



GORILLAS

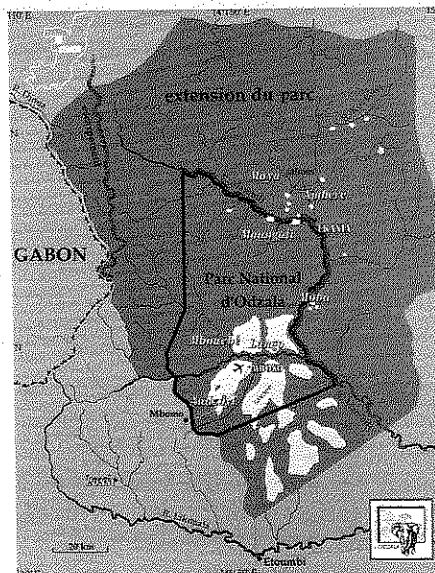
sic method of tracking them day in and day out with the help of skilled Congolese trackers. This has been a major breakthrough as until now nobody had ever succeeded in habituating lowland gorillas, and many people had begun to believe that Virunga-style gorilla tourism would never be possible in the lowland forests of central Africa.

These discoveries mean that Odzala now has genuine tourist potential as it offers on the one hand the rare possibility of good-quality viewing of spectacular rain forest mammal species in the salines, and on the other the classic close-up experience of gorilla tracking in the forest. Over the last 3 years ECOFAC has, therefore, invested a considerable proportion of its energy to developing the tourist potential of Odzala National Park and its buffer zone. The outbreak of the war in Brazzaville in June 1997 could not have come at a worse time as tourism was just beginning to take off in Odzala with visitors coming in on the weekly flight into the park's air strip at Mboko in the savannah/forest mosaic section of the south of the park. Since then the security situation has meant that it has

not been possible to bring in visitors on a regular basis but all park management activities (anti-poaching, monitoring of salines, gorilla tracking etc.) have continued almost without interruption and once the situation normalises tourism activities will be able to resume rapidly. The war has meant that road links between Odzala and Brazzaville (750 km) have deteriorated very considerably and the park is now virtually cut off from the capital. However, Odzala is only 60 km from the Gabonese border, where roads and communications are excellent, so paradoxically this has meant that ECOFAC's logistical problems have been considerably eased as the project has had to develop its links to Gabon (rehabilitation of the old, abandoned border road). Currently all the logistics for the park are now run directly out of Gabon (thanks to the support of the Gabonese authorities).

Tourist Activities in Odzala

The salines. A trip up the Mambili river by motorised dug-out canoe to the area of salines in the north of the park. To get the best out of this trip 6 or 7 days



are required. The trip starts out from the tented camp (east African style) at Mboko in the forest/savannah zone of the south of the park. The trip up the river is a pleasant 6-hour ride (excluding stops) passing through forest all the way and with plenty of opportunities for observing wildlife. From the tented camp at Ekania a large number of salines are within easy reach, all of which are regularly visited by the large mammal fauna including gorillas. At the Maya north saline (1 hour pirogue, followed by a 3-hour walk) there is another, more basic, camp. In the saline a 4 m high observation hide provides excellent viewing.

Gorilla tracking at Lossi. Lossi is just outside the Odzala National Park some 28 km to the south of the village of Lengui-Lengui on the road between Mbomo (park headquarters) and the border with Gabon. The walk to Lossi is currently long (9 hours) but not difficult. A motorable track of 16 km will be reopened once tourism resumes. The accommodation is basic (local style cabins). A team of 5 highly experienced trackers follow the gorillas every day thus ensuring an almost 100% guarantee of seeing them. Two fami-

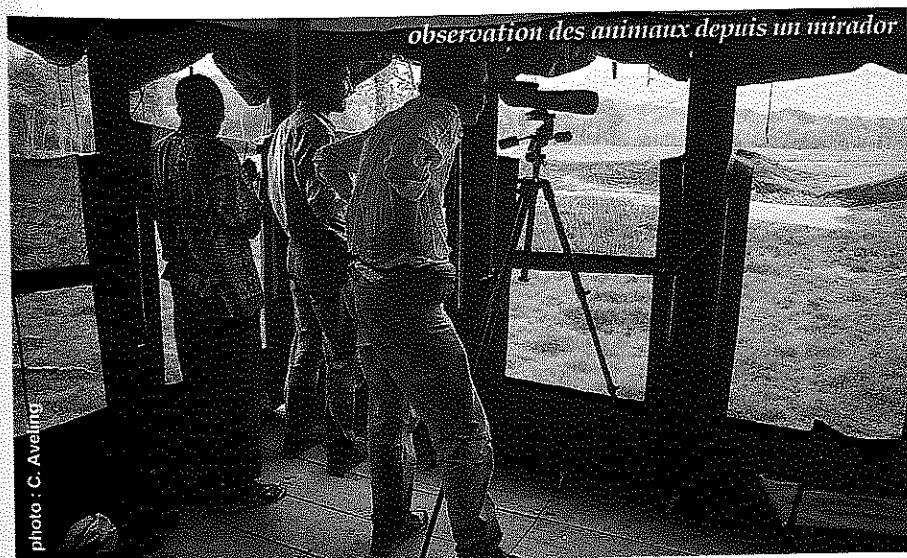


photo : C. Aveling

Another way of observing gorillas

Photo: Conrad Aveling



GORILLAS

Conservation areas supported by ECOFAC

Cameroon	Dja Biosphere Reserve	5,260 km ²
Congo-Brazzaville	Odzala National Park	2,800 km ²
	(currently being extended to 13,000 km ²)	
Gabon	Lopé Wildlife Reserve	5,360 km ²
Equatorial Guinea	Monte Alen National Park	1,600 km ²
Central African Republic	N'gotto Forest	733 km ²
São Tomé e Príncipe	Obo Natural Parks	295 km ²

lies are habituated. The vegetation is extremely thick so viewing conditions are not like those of the Virungas, although these gorillas, being mainly fruit eaters, spend a lot of time in trees where they are easily observed.

The interesting aspect of Lossi is that this area of forest "belongs" to the villagers of Lengui-Lengui who have asked ECOFAC to help them develop tourism in the forest where they and their ancestors have practised their traditional activities. The revenue from tourism will thus go directly to the traditional "owners" of the forest who have understood that conservation of the forest for gorilla tourism may well bring much greater long-term benefits to them than hunting the wildlife – a per-

fect example of community conservation. A visit to Lossi, with 2 gorilla visits, would thus take 4 days allowing for the walk in and out.

Currently, access to Odzala is by road from Gabon, via Makokou and Mekambo. There are regular weekly flights from Libreville to Makokou and three flights a month to Mekambo. The road trip from Makokou to Odzala Park headquarters at Mbomo takes some 6 hours.

More Sites for Visitors

Encouraged by the success in Congo, 2 other components of the ECOFAC program, Gabon (Lopé Reserve) and Equatorial Guinea (Monte Alen National Park) have also decided to develop gorilla tourism programs. These are both protected areas where tourism (on a small scale) already takes place so the addition of gorillas to the attractions proposed will be a considerable asset. Magdalena Bermejo has helped identify suitable areas in both protected areas and work has already progressed well in Monte Alen although the hilly terrain makes the task of keeping track of the gorillas every day somewhat more difficult than in Congo. However, despite the fact that no family has yet been habituated, during the 1998 summer period all those visitors who opted to spend 2 or 3 nights in the park in the gorilla area all managed to see gorillas.

In Lopé work is only just beginning to habituate a family but it is hoped that

by the end of year 2000 it may be possible to propose gorilla tourism here also. Lopé has very good communications (good road from Libreville, as well as train) and an excellent hotel on the shores of the majestic Oogoué river.

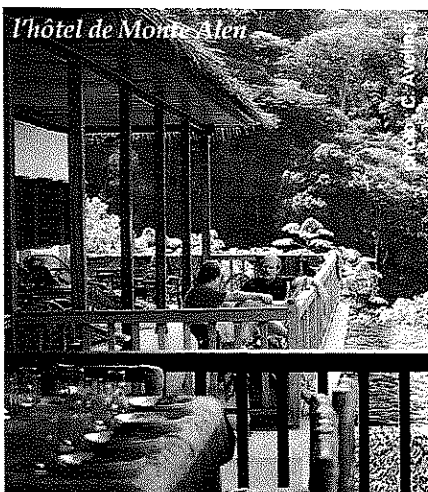
Conservationists' eternal problem is how to make sure that their activities translate into real long-term improvements in protected area management and conservation. Making protected areas pay is certainly one of the ways of demonstrating the value of conservation and thus convincing national decision-makers to take wildlife conservation seriously. Rarely, however, has this been achieved in the rainforest environment and eco-tourism has perhaps too often been held up as the panacea for conservation. However, the special case of gorilla tourism really is different because of its ability to generate very large amounts of revenue as has been repeatedly demonstrated in ex-Zaire, Rwanda and Uganda. ECOFAC also hopes that the development of gorilla tourism in Congo, Gabon and Equatorial Guinea will help focus international attention on the extraordinary riches of the Congo basin forests and the threats that they are facing (logging and bushmeat trade).

Conrad Aveling

For further information contact:

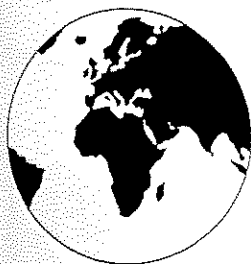
*ECOFAC Coordination
B.P. 15115, Libreville, Gabon
Tel: (241) 732343/4
Fax: (241) 72345
e-mail: coordination@ecofac.org
Web site: <http://www.ecofac.org>*

Bermejo, M. 1995. Recensement des gorilles et chimpanzés du Parc National d'Odzala. Rapport ECOFAC
Magliocca, F., Querouil, S. & Gautier-Hion, A. 1999 (in press). Population structure and group composition of western lowland gorillas in N-W Republic of Congo. *Am. J. Primatol.* 47



The hotel at Monte Alen

Photo: Conrad Aveling



READING

Leave None to Tell the Story. Genocide in Rwanda. *Human Rights Watch* 1999. 807 pages, \$ 35. ISBN 1-56432-171-1. Available also on the internet at: <http://www.hrw.org/reports/1999/rwanda>. Can be ordered online.

State of the World's Forests 1999. Rome (FAO). Ordering information at: <http://www.fao.org/infosylva/VR>

Helen Attwater

My Gorilla Journey. London (Sidgwick & Jackson) 1999.

Clark C. Gibson

Politicians and Poachers: the political economy of wildlife policy in Africa. New York (Cambridge University Press) 1999. Hardcover \$ 59.95, ISBN 0521-62385-5. Paperback \$ 24.95, ISBN 0521-66378-4.

Martha Honey

Ecotourism and Sustainable Development: Who Owns Paradise? Washington D. C. (Island Press) 1999. 350 pages. Hardcover \$ 50, ISBN 1-55963-581-9. Paperback \$ 25, ISBN 1-55963-582-7.

P. C. Lee

Comparative Primate Socioecology. Cambridge (Cambridge University Press) 1999. 424 pages, 46 line diagrams, 52 tables. Hardback, £ 45. ISBN: 0-521-59336-0

News from the Internet

Kelly Stewart finished the new issue of her *Gorilla Conservation News* which is available at <http://www.anthro.ucdavis.edu/gcn>.

A.D.I.E. (*Association for the Development of Information on Environment in the Congo Basin Region*) can be accessed at <http://www.omm.se/adie>, and the *East African Biodiversity Project* at http://www.fao.org/WAICENT/faoinfo/forestry/bio_web.

ARCOS (*Albertine Rift Conservation Society*) can be found at <http://www.wcmc.org.uk/arcos>. From this web site the newsletter *Backbone* (English) or *Le Pilier* (French) can be downloaded. ECOFAC's *Canopée* (in French) is available at http://www.ecofac.org/Canopee/_CanSomNum.htm#13. The *Ape Alliance* review *The bushmeat scandal – a recipe for extinction* can be found at the WSPA's web site at <http://www.wspa.org.uk/escape/ape3-2.html>.

APFT (*Avenir des Peuples des Forêts Tropicales*) is a multi-disciplinary project sponsored by the European Community which aims to investigate and document the future of rainforest peoples. The major input is from anthropologists. Started in 1995, the project runs for 5 years and involves over 30 researchers in three principal areas: the Caribbean, central Africa and the southwestern Pacific (<http://lucy.ukc.ac.uk/Rainforest>).

A resource site for anyone interested in primates is *Primates Online* (<http://www.primates-online.com>). It supports the search for information, links, images, experts and materials specific to primates, news, book reviews, features of organizations, con-

servationists and artists, information about sanctuaries and grants.

The *Berggorilla & Regenwald Direkthilfe* has a new web site – in German (<http://www.berggorilla.com>). There have been considerable problems with our international web site (<http://www.kilimanjaro.com/gorilla/brd>), but Stephanie Hancock, who operates the site, promised that everything will be back to normal and updated soon.

Donations and Fund-raising Activities

The studio *Gorilla Tattoo* in Neuss got its name because the owner takes an interest in gorillas, has a talent for drawing and enjoys designing and improving the appearance of otherwise neutral and drab surfaces and bodies. Apart from tattoos, the studio offers piercing and airbrush.

When Peter, the owner of *Gorilla Tattoo*, learnt about the *Berggorilla & Regenwald Direkthilfe*, he immediately offered to support our work through fund-raising activities. He decorated his shop-window with our poster and displays our leaflets in the shop, next

*Berggorilla & Regenwald
Direkthilfe e. V.*

Wir helfen, die Berggorillas und ihre Wälder zu
schützen



Schauen Sie doch mal rein!



BERGGORILLA & REGENWALD DIREKTHILFE



to a earthenware vase in which donations are collected. Since the beginning of this year, DM 10 have been put into the vase for each new tattoo and DM 5 for each piercing. The contents of the vase will be handed over for the first time in summer. A great idea! Many thanks in advance to Peter, Bettina and Silvia!

In March, the punk-rock musician Lutz Hiller and his group *Die Brut* gave a charity concert for our organisation. DM 600 were generated and will go towards the protection of gorillas.

Our rainforest exhibition, now on display in Saarbrücken Zoo, will move on to Leipzig Zoo in the summer. Other zoos have also indicated their interest. Unfortunately, we have not yet been able to find a good way to digitize and print the tables or improve them in some other way to facilitate transportation.

Some active members will organize information stalls in various zoos in September. Ellen Krebs and Peter Zwanzger continue to supply visitors of Cologne Zoo with information about our organisation. Heinz and Gundi Scharpf distributed the *Gorilla Journal* to interested people in Stuttgart.

Author Paul-Hermann Bürgel has donated the remaining stock of his children's book (in German) to us for sale.

Family Schmitz from Stuttgart sold some of our sale items in their hair-

cutting salon and Stephan Köppchen distributes our information material at his information stall for WWF Aachen.

In reaction to our latest appeal for donations several people offered office equipment such as typewriters and computers. We cannot accept heavy and/or old equipment because of the costs for transport and customs. With old PCs, moreover, there is the year 2000 problem. Nevertheless we check each offer as to whether the material can somehow be used.

We owe our special thanks to Volker Jährling and the companies *Golden Team*, *Hanweg Sportschuhfabrik*, *Berger* and *Fintech Sports* for their generous donations of material which will replenish our storage in Kisoro. Private donations of certain material, such as the one from Ms. Graupner, are also most welcome.

If you want to put a fund-raising idea into practice, get in touch with us at our organization's address.

Our heart-felt thanks to everybody who has been involved!

Iris Weiche

Donations

We thank each person and company that has supported us during the period from November 1st, 1998, to May 31st, 1999. Larger contributions were given by Hayley Adams, Elke Bakels, Jane Dewar (*Dewar Wildlife Trust*), Johannes Dönges, *DUMA-Naturreisen*, Monika Gail-Drouineaud, Karin Gnädinger, Ursula Hänzel, E. Kipka, Hartmann Knorr, Angelika Kraus, Thomas Krupp, Christine Locher-Vich, Margarete Lord, Angela Meder, Susanne Messmer, Dr. Niemeyer, Anneliese Pfaffenhuber, Gerhard Pressel, Michael Reibenspies, Erwin Rosenkranz, Axel Rucker, Paul Ruoff, Werner Schindelin, Sigrid Schubert-Glathe and Heinz Zaruba. Volker Jährling donated equipment and Erwin Fidelis Reisch (*Gentner Verlag Stuttgart*) took charge of the costs of reproduction and composition for the journal. Many thanks to all the above mentioned and all the other donors for their confidence in our work. We hope that you will continue to support us in the future!



A NEW SAFARI ALTERNATIVE

Mgahinga Safari Lodge is a new luxury lodge, perched at the tip of a peninsula jutting into the waters of Lake Mutanda, in southwestern Uganda. The lodge is the ideal setting from which to track the mountain gorilla in nearby Mgahinga Gorilla National Park; venture deep into Bwindi Impenetrable Forest; search for savannah antelope in Lake Mburo National Park; or visit Lake Bunyonyi – renowned as the 'lake of little birds and sweet water fish'.

The lodge complex consists of a main building – which houses the reception, restaurant, lounge and bar – and six spacious, twin-bedded tents. All equipment at the lodge is of the highest European standard. The tents are en suite, with hot showers and flush toilets, and have continental quilts and pillows. Soft drinks and laundry service are provided. The restaurant serves a high standard of continental and traditional cuisine accompanied by a selection of local and international wines and spirits.

For further information contact:

Niedermeier Verwaltungs- und Touristik GmbH

Ammerseestrasse 35 a, D-82396 Paehl/Germany

Tel: 49-8808 91009 Fax: 49-8808-1326

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Order form

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Sizes: M – L. US\$ 25 (see photo)

SOS T-shirts. 100% cotton, gray, print red and black.
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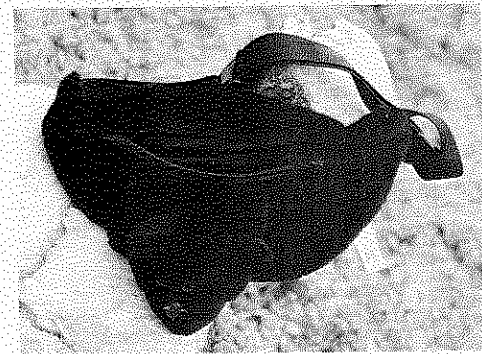
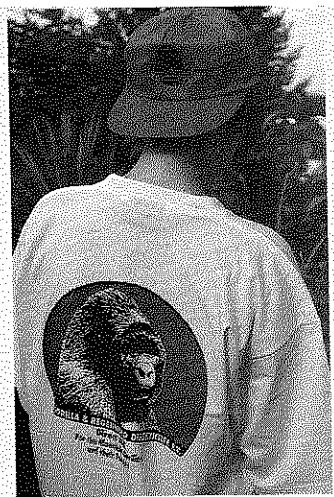
Baseball caps. Green with BRD logo in black (see photo). US\$ 10

- Picture postcards.** US\$ 1 per piece
- Number with feeding Rwandan gorilla by Gabriele Holzinger
 - Number with mountain gorilla by Markus Weiss
 - Number with Mushamuka (Kahuzi-Biega National Park)
 - Number with Bwindi gorilla mother and young
 - Sets with 20 postcards (10 Mushamuka, 10 Bwindi). US\$ 15.

Set of primate stamp postcards (4 picture postcards). US\$ 4. Number

Gorilla hip pocket (see photo). US\$ 15.

Key chain with BRD logo. Covered with silver. US\$ 15.



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Subscription to the Gorilla Journal

If you become a member, you will receive the journal regularly. If you want to subscribe 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. Please send your application with a cheque to Rolf Brunner (address below).

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