



Gorilla Journal

Journal of Berggorilla & Regenwald Direkthilfe

No. 21, December 2000



**Attack on a
Kahuzi-Biega
National Park
Meeting**

**The Situation in
Maiko National
Park**

**A Visit to the
Mountain Gorillas
in Rwanda**

**What, if Anything,
is Taxonomy?**



BERGGORILLA & REGENWALD DIREKTHILFE

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Vital Katembo Mushengezi at first worked in the Ituri Forest for WCS (*Wildlife Conservation Society*) and has been active in the Virunga National Park since 1994. Now he is project leader for Mt. Tshiaberimu and field assistant for DFGF (*Dian Fossey Gorilla Fund*) Europe in North Kivu.

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

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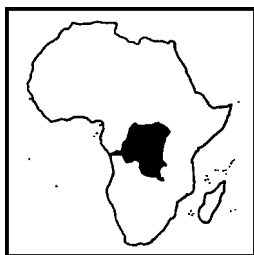
Iris Weiche started her work with primates, in the wild and in zoos, in 1990. At the moment she is finishing her doctoral dissertation on female gorillas in zoos. Since 1994 she has been active for the *Berggorilla & Regenwald Direkthilfe*, and in May 1997 she joined the Board of Directors.

Dr. Liz Williamson began to study gorillas in Gabon from 1984 to 1990. She was involved in gorilla surveys in Congo/Zaire and Cameroon in 1994 and 1995. Currently she is the Director of the Karisoke Research Centre.

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Photo: Klaus Griegel



D. R. CONGO

News from Kahuzi-Biega

On 19 May 2000, the Kahuzi-Biega rangers were returned their arms and resumed patrolling. The ranger posts Mugaba and Tshibati were re-manned after this. Unfortunately, the Tshivanga post was attacked by armed rebels on the night of 17 June. One ranger was injured. In spite of this, park staff continued to control this part of the park. However, they have stopped spending the night at the post.

Thanks to the work of the rangers, no more gorillas were killed by poachers in June. The team working on the illegal live animal trade succeeded in confiscating one gorilla baby, one baboon and one red-tailed monkey in Bukavu. Unfortunately, the gorilla

Attack on a Kahuzi-Biega Meeting

During an Interahamwe attack on a meeting on 5 September 2000, 10 people died and many people were injured, some of them seriously. Contrary to first media reports, no members of the park staff were among the dead. The rebels took five hostages whom they set free near Kalonge. The hostages reported that the attackers belonged to the "Army for the Liberation of Rwanda".

The attack took place on the last day of a meeting between park staff, government representatives, traditional chiefs and representatives of the local population. The aim of the negotiations was to develop solutions for the conservation of the severely threatened corridor between the mountain and the lowland sector of the Kahuzi-Biega National Park.

baby Bitorwa has since died, probably due to an infection.

In June, a survey was begun of gorillas and elephants in the mountain part of the park, as it was not clear how many animals had survived the wars. The survey team was headed by the Congolese biologist Omari llambu and accompanied by more than 50 soldiers. They found 130 gorillas (a few months ago, only 70 surviving gorillas had been estimated), but not one elephant was left.

Park staff started to act against illegal land utilisation in the corridor connecting the two parts of the Kahuzi-Biega National Park after the Governor had annulled the 11 certificates of occupation in May. They expelled all illegal occupants, burned charcoal ovens and confiscated cattle grazing in the park. Unfortunately, certain criminal government employees tried to intimidate and menace the park staff.

Meanwhile, approximately 10% of the park's area is under the control of the guards again.

Attempt to Re-introduce a Young Gorilla to the Kahuzi-Biega Forest

Since 1996, the Kahuzi-Biega National Park has been under severe human pressure because of the troubles that shook the region. Networks of poachers developed; they support the trade in gorilla babies and other primates as well as various trophies of large mammals. Elephants and gorillas are the targets most sought after.

In May 2000, a team of the Kahuzi-Biega Park that was in charge of destroying poachers' networks in the area confiscated a young gorilla from poachers. According to the poachers, an expatriate, an agent of an international organisation in Bukavu, had given the order to capture the gorilla. However, the people who were in-



The orphan Bitorwa

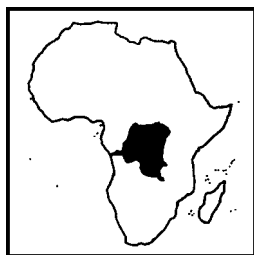
Photo: Carlos Schuler

involved in the Bitorwa case never betrayed their sources, not even to the national police. This shows that they had some sort of safeguard.

The gorilla, a male, was captured in the montane forest after his family had been killed. He was about 2 years old and had been fed fruit (mainly bananas) during his captivity.

About 10 days after his capture, the infant still knew the taste of leaves and fruit that he had eaten in the forest (*Myrianthus*, *Ureia*, *Pennisetum* ...) and the park decided to try and re-introduce him to the forest to give him a chance to survive in his natural environment. It was attempted to introduce him to the group led by the silverback Mugaruka that consists of 6 individuals. However, the re-introduction was difficult because of the silverback's behaviour; he reacted aggressively to the young gorilla three times. The infant panicked and rushed back to the team that had taken him to the group. A few days later, the solitary youngster died in the forest.

It seems that the confiscation and re-introduction of wild animals to their natural habitat does not solve the problem that threatens the large animals of the Kahuzi-Biega National Park. The ICCN (*Institut Congolais pour la Conservation de la Nature*) and the park management are fighting against the transport of animals from the park into town (gorilla babies,



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guenons, leopard cubs, ...) and trophies (ivory, gorilla skulls, ...) in order to destroy the poachers' networks that are systematically looting animal and plant products. Fortunately there are – besides the faithful partner, GTZ (*Gesellschaft für technische Zusammenarbeit*: German governmental development organisation) – UNESCO, *Berggorilla & Regenwald Direkthilfe*, *Born Free Foundation*, WCS, *Nouvelles Approches* and other organisations that support local efforts to save the gorillas in their natural habitat.

The support of the conservationists' world is extremely necessary as it can condemn the acts of destruction and support the respect for nature. This is especially important because official and international organisations are funding the ecocide. For example, zoos, animal centers, rich people who decorate their property with wild animals, and others could help to slow down these activities that are disturbing the balance of the forest ecosystems which include man too.

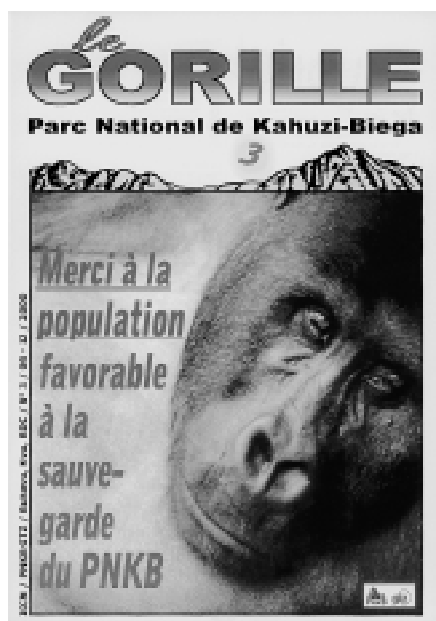
Chantal Shalukoma

Visit to Kahuzi-Biega

During my last visit to the Kahuzi-Biega National Park in October, I saw Mugaruka and his family again. The rainy season has just started in Kivu and the gorillas were feeding mainly on young bamboo shoots.

After I had the pleasure of being close to a family of gorillas, I always take away a feeling of humility and respect for the quiet strength and the harmonic relationship with nature that these primates have been able to preserve. Close to them, one can almost forget that peace is far from being re-installed in the country and that insecurity reigns the region.

After a period of reorganisation, the park guards, partly armed at the moment, have re-started patrols in the smaller part of the park and in the



corridor. One cannot but pay tribute to their ardent wish to preserve what is left of the park's biodiversity, and to their enormous courage. We also recognise the tremendous support they receive from the GTZ against all odds.

At the moment, the authorities' support seems to be much more determined. It is because of this that poachers who are arrested by the guards are actually kept in prison for several months, instead of being freed immediately as it has happened before. The farmers who had illegally cultivated fields in the corridor have been forced to leave.

A new census has determined that the park's gorilla population is in better shape than previously thought. No new cases of gorilla poaching have been reported. On the other hand, the poaching of small animals is worrying. This seems to be partly due to the impoverishment of the human population and the resulting shortage of meat.

The situation of the lowland part of the park is even much more worrying. There are indications that currently thousands of miners are mining there

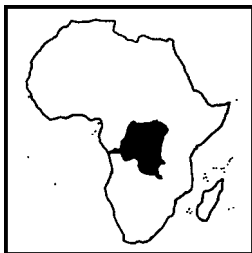
for columbite (niobite – $(\text{Fe, Mn})\text{Nb}_2\text{O}_6$ – and tantalite – $(\text{Fe, Mn})\text{Ta}_2\text{O}_6$), an ore that represents an important resource of the region. Most of the collected mineral is taken out by aeroplanes. Naturally, this illegal exploitation means that every animal species that moves in the lowland part of the park is killed in order to feed the miners. Another factor is the ivory trade. To date, there is no material proof of this illegal activity, but, according to information from the ICCN, there is no doubt that it takes place. Currently, the ICCN has no means to put a stop to the ongoing slaughter. The support of the authorities is needed to determine the source of the collected mineral in numerous airports and localities surrounding the park, such as Punia, Walikale, Nzovu, Isangi and Lulingu. To put an end to this trade is an important financial sacrifice, but without it the lowland part of the park cannot survive.

Jean-Francois Segers

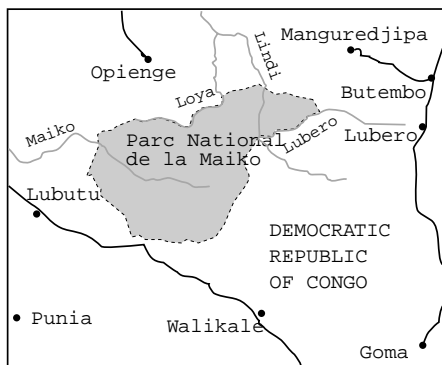
The Situation in Maiko National Park

Maiko National Park was created November 1970 to protect the critical populations of Grauer's gorilla, chimpanzee, okapi, bongo, forest elephant and Congo peacock sheltered within its boundaries. Unlike Kahuzi-Biega and Virunga, Maiko is not a World Heritage listed site and, therefore, does not benefit from similar international attention and support.

Based on forest reconnaissance, John Hart and Claude Sikubwabo (1994) consider Maiko may be the richest forest park in the Democratic Republic of Congo in terms of biodiversity. As a result of their 1989 to 1992 survey, they identified two distinct populations of Grauer's gorilla in Maiko National Park. In 1996 John Hart and Jefferson Hall estimated



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those populations to be 826 (range 444–1090) and 33 (range 18–45) in the north and south respectively, with the northern population remaining relatively stable and offering the best hope for conservation. However, before the war there was already some human occupation in Maïko and elephant poachers worked from temporary camps inside the park. Small scale commercial ivory and live animal (including infant gorillas) trade had already established routes through Butembo, Kisangani, Lubutu, Bafwasende and Walikale. The vast surface area of the park and inadequate infrastructure made surveillance, control and protection very difficult.

The current conflict erupted in June 1998. Two years later, with war still ravaging the terrain, Conservateur Masasu (Maïko north) described the situation (June 2000) from safe haven at Epulu. He reported that the Maïko staff salaries have not been paid for the past three years. The staff feel seriously ignored and unappreciated in comparison to the World Heritage Site parks. He is forced to reside in the village of Butembo (nearly 100 km from the park) because he is no longer able to pay rent for his house in Manguredjïpa. This indicates that there is no "protective" presence within the park territory, the only effective deterrent against illegal activity.

He further reported that the critical wildlife of Maïko National Park are

facing complete disaster as a result of the current crisis. For example he cited events in February 1999 when an adult male gorilla was killed and relates that soldiers based in Manguredjïpa kill at least 2 elephants per week to sell the meat.

The primary factors influencing the poaching and exploitation of minerals are the rebellion and the presence of humans who suffer the resulting miseries of war and economic deprivation. Mineral prospectors and the process of digging for gold (a lucrative clandestine career) impact the water courses and shorelines of the rivers and scarring the landscape. Rudimentary mechanical traps, nets, snares, capture devices, etc. are employed to hunt bushmeat and threaten the lives and the well-being of gorillas. A single trapper may maintain as many as 500 traps.

Due to the armed conflict and inability of park personnel to staff their posts, there is little direct news from Maïko. However, the Okapi Faunal

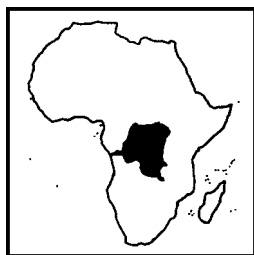
Reserve (OFR) lies just to the north of Maïko and the Epulu station (OFR) offers a relative perspective. John and Terese Hart generously provide information from Epulu. They write that the northeastern Democratic Republic of Congo remains completely unstable, and in August 2000 two new "rebel" movements emerged, including an offshoot group based in Bafwasende. The Bafwasende group include in their territorial claim the occupation of half of northern Maïko.

We can reasonably assume that the situation at OFR is representative of northern Maïko. In personal communications, the Harts relate that they are having to fight a continuous battle against incursion, illicit mining, elephant poaching, military deserters turned bandits/poachers, etc. Most of these "elements" have some complicity with local people, local authorities and the occupying governments. All are involved in chaotic extractive activities, including bushmeat, but mainly driven by the search



Patch of land within the Maïko National Park after digging for gold

Photo: Claude Sikubwabo Kiyengo



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for minerals (gold, colombo-tantalite, diamonds). The Harts do not yet see an end to instability in the region. Meeting with Terese Hart, Conservateur Masasu reported similar incursions into Maiko north, but with the presence of more dangerous armed rebel and military deserters as well.

A *Médecins sans Frontières* volunteer from Kisangani who had been in the Lubutu and Oso region (Maiko south) in the recent past did not even know of the existence of the park, but his description to John Hart of the meat trade in the region was very worrying.

The Harts maintain that despite these depredations, much of the value remains in the region (including Ituri and Maiko) and the capacity for renewal is still there – as there is no serious loss of forest cover or incursion by logging from timber companies, though these remain ultimate risks. The Harts insist that there is still much worth saving – and fighting for. They identify success in OFR as continuous vigilance on the ground and support for whatever interventions can be achieved. Sadly, Maiko lacks such a constituency.

However, Conservateur Masasu asks us to pursue peace, sensitization and education of the human population living close to the park, formation of personnel to control and organize ecological activities at the local level, material (equipment) and financial support for the staff and project assistance for the park.

The organisation of international support is absolutely necessary and indispensable to save the treasures of the Maiko National Park. It is my hope that this article will introduce Maiko to the broader public, encourage support and potentially peak the interest of an NGO to adopt Maiko.

Jo Thompson

Reference

Hart, J.A. and Sikubwabo, C. 1994. *Exploration of the Maiko National Park of Zaire 1989-1992: History, environment and the distribution and status of large mammals*. *Wildlife Conservation Society*, New York.

In August, Jo Thompson and Michel Hasson visited the national parks Upemba and Kundelungu in southern Congo. The situation there was desperate, especially for elephants. However, the rangers are doing their best to protect the parks.

Mt. Tshiaberimu News

In February 2000, with funds from the *Berggorilla & Regenwald Direkthilfe* and the DFGF (*Dian Fossey Gorill Fund*), Claude Sikubwabo and Vital Katembo conducted a training course for 21 rangers and other employees in the Mt. Tshiaberimu area. The training consisted of these courses: introduction to monitoring, importance of the park's conservation, conflicts between conservation and communities, orientation with maps and GPS, habitats and animals of Mt. Tshiaberimu, ecology, biology and behaviour of gorillas, conservation problems on Mt. Tshiaberimu and gorilla census techniques including transects. After the 3-day training, activities in the field started. The participants conducted a survey on the gorillas and other mammals of Mt. Tshiaberimu, registered the cultivated area on Mt. Tshiaberimu, practised orientation in the forest and analyzed human activities.

From 7 to 11 February, the gorillas were surveyed by the employees and from 12 to 22 February by the rangers. Their nests were registered and sometimes a few individuals were seen. When the survey team approached the gorillas, the silverback charged every time. The survey revealed that there is only one gorilla family left in the area. It was named Lusenge. As the group is only partly habituated, it

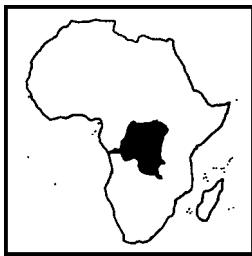
was not possible to determine the gender of all group members. There are definitely 9 gorillas; among them are one silverback male and two adult females with babies. Another silverback lives in the vicinity of the family; his relationship with the Lusenge family is not clear. Three more males, two silverbacks and one blackback, range in the Kivya area. Recently, the gorillas have started to occasionally visit the fields.

The team also collected samples of the gorillas' feeding plants, listing a total of 37 species. Compared to the results from Kahuzi-Biega (about 140 plant species) and Virunga (about 75), this might indicate that gorilla food on Mt. Tshiaberimu is not sufficiently varied. Therefore further research on the nutrition of the Mt. Tshiaberimu gorillas is urgently required.

In addition to the gorillas, the following mammals were also observed on Mt. Tshiaberimu: blue monkey, black-fronted duiker as well as unidentified species of genet, mongoose, galago, squirrels and bats. Baboons were noticed near Kasimbi. The occurrence of the jackal, the owl-faced monkey and the potto could not be confirmed.

Part of the training course was also to survey the area of the park utilized by the local population since 1990. In that year, people started cultivating fields, collecting firewood and plants and setting traps for rodents. The rangers and the responsible persons in Kiavinyonge did not try to stop these illegal activities. Currently, 6.4 km² are affected. Park staff are trying to prevent the allocation of land for new fields. The situation in the part of the park which is actually protected has improved considerably over the last few years. Only a few, usually old, signs of human activity could be found here.

It is essential for the future of the Mt. Tshiaberimu area and its gorillas to sensitize the local population; to



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conduct development projects around the park and to involve the people living close to the park in conservation measures.

To improve the conservation of Mt. Tshiaberimu, we recommend the following:

- Continue the support of the project for the park.
- Conduct a survey (at least for 3 months) on the mammals.
- Examine the health of the gorillas in cooperation with the MGVC (Mountain Gorilla Veterinary Center).
- Study the food plants of the gorillas in detail.
- Develop a community action plan that coordinated the action of the population concerned with the conservation of the site.
- Establish development projects for the surrounding population.
- Keep the pistes for patrols. This is necessary since the elephants have been exterminated.
- Carry out large public awareness campaigns.

*Claude Sikubwabo Kiyengo
and Vital Katembo Mushengezi*

Attack on Vital Katembo

Working for gorilla conservation in the eastern part of the Democratic Republic of Congo is a dangerous task. In 1999 Mbake Sivha was attacked and robbed in her house in Bukavu, and now Vital Katembo became a victim of such an aggression. On 23 October 2000 he was attacked by 4 armed military persons on the way to his house in Goma. They threatened him and stole his computer, video camera, mobile telephone, radio, some money and his identity papers. He feared for his life. When the police arrived, the bandits fled. One of them was caught but set free very soon and the stolen belongings of Vital Katembo were not found. He suffered a great shock from this experience.

Sarambwe Protection

With funding from the *Berggorilla & Regenwald Direkthilfe*, a meeting on the conservation of the Sarambwe Forest was held in June between all organisations working in the area, government representatives, representatives of the local population and the traditional chiefs. The meeting was organized by the local NGO VONA (*La voix de la nature*) and the ICCN. Its goal was to identify the conservation problems in the Sarambwe area and to develop joint solutions.

Many organisations are concerned with the protection of the Sarambwe Forest, for example: The ICCN sent rangers to the protection of Sarambwe in 1998. ICCN and IGCP (*International Gorilla Conservation Programme*) work together as partners to fund the conservation activities in Sarambwe: The costs of the office of the Domaine de chasse de Rutshuru and the food supplies of the ranger patrols. This permits the rangers of Sarambwe to conduct patrols and meet with the rangers of the Bwindi Impenetrable National Park across the border to Uganda. The organisation AJAKAR works for the reforestation of the disturbed parts of the Sarambwe area. The governmental authority EPF has given permits for wood exploitation to the population but stopped this in 1996. Meanwhile, the Mwami (king) of Bwisha found an area where the people who had cultivated fields in the Sarambwe area could settle.

In 1998, a Sarambwe working committee was founded by those authorities and organisations. However, this committee has not functioned correctly so far as it did not have a program and support.

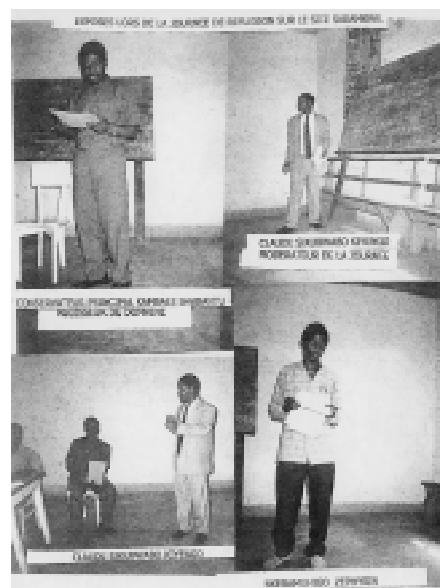
The local population considers the following problems as the most important ones in Sarambwe:

- The ICCN has no control of what is happening in the forest.

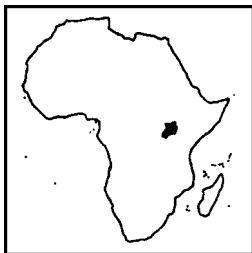
- Deforestation.
- The borders of the protected area are not sufficiently known.
- The local population is not involved in the administration of the Sarambwe Forest area.
- The legislation concerning protected zones is not written in a comprehensible way.
- Local groups do not receive any support for their conservation activities.
- General insecurity.

Severe deforestation poses the greatest threat to the Sarambwe Forest. In order to improve the conservation of the Sarambwe Forest it was decided to increase public awareness activities, to involve the local population in decision-making and to support developmental aid projects around the forest. The forest boundaries are to be demarcated as soon as possible and the resettlement of families still living inside the forest is to be supported. Moreover, adjacent villages will start reforestation measures shortly.

Claude Sikubwabo Kiyengo



Pictures from the meeting on Sarambwe conservation



UGANDA

Our Assistant

William Mugisha, our assistant in Kisoro, is now able to communicate with us regularly by e-mail and mobile phone. He even can send pictures



S. Wladarz and W. Mugisha send a digital picture to Germany.

Photo: Klaus Griegel

that he takes with his digital camera, and he has already done this successfully. It is extremely useful for us that he can now keep us informed on his activities and provide news from the gorilla conservation areas.

He has already taken part in several international meetings. For example, he represented us in the latest IGCP meeting at the end of September. There he reported on our past and future gorilla conservation activities.

Scabies again

At the end of July, the Ugandan park authorities asked the Mountain Gorilla Veterinary Center (MGVC) to examine the gorillas in the Nkuringo group that is currently being habituated. The animals had lost hair and scratched

themselves more than usual. Three young animals had an abnormal skin condition. One gorilla was anaesthetized, as it had lost about 60% of its hair and its skin was coming off in flakes. The MGVC took samples of the diseased skin and took biopsies. A microscopic examination indicated skin mites. The animal was drip-fed, as it showed signs of being dehydrated. Two other young animals were treated with an ectoparasitic ointment without being anaesthetized.

A week later, one of them was treated again. After another week, all three animals' condition had markedly improved. However, at the end of August, in one case another follow-up treatment with the ectoparasitic medicine was necessary. In addition, a newly infected young gorilla had lost a

Sewing and Knitting for Conservation

It has always been our goal that the people living in the vicinity of protected areas for gorillas should be involved in our work and profit from it. Therefore we want to involve Ugandans in the manufacture of clothes for rangers. Waltraud Ndagijimana, who has lived in Kisoro for many years, wants to support us in this project. She has good contacts with local women's groups who will sew clothes and knit sweaters for us.

The first requests for clothes are already coming in. It can get very cold on the Virunga Volcanoes; the rangers of the Mgahinga National Park need warm sweaters. At first we gave them clothes from the store, but now we have run out. Therefore we are planning to have a large number of sweaters knitted and put into the store, to be distributed when the rangers need them.

In addition to sweaters, the national parks' staff regularly need clothes that have to be produced according to their special requirements. We also want to employ Ugandans for this. The first order has already been placed, but to have more clothes made we need more funds. We have to buy wool and cloth (expensive, robust quality) in Uganda or Germany.

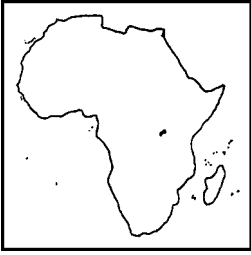
Not only the rangers will profit from this project but also Ugandans living in the parks' vicinity.

We are grateful for any donation that will help us to supply our storage. Please send checks to:

*Berggorilla & Regenwald Direkthilfe, c/o Rolf Brunner
Lerchenstr. 5, 45473 Muelheim, Germany*



Women in Kisoro who will knit ranger clothes for our storage



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lot of hair on the chest and also had to be treated. One young animal received its follow-up treatment from an Australian colleague from Uganda, as the silverback shielded it from the rest of the group while the MGVC veterinarians were there.

At the moment, all animals are in good condition. No additional individuals fell ill. The samples were sent to parasitologists in the USA in order to determine whether the mites were a species that normally infects humans or other mammals. To date, there is no final result. Scabies mites are considered very host specific. However, the mite in question does not seem to be an autochthonous gorilla parasite, as the young animals showed a strong reaction.

In early August, the IGCP called a meeting with the Ugandan park authorities, the ITFC (*Institute of Tropical Forest Conservation*) and the

MGVC. The local park authorities expressed their concern about the disease. Preventative measures are to be taken. The MGVC was asked to develop a questionnaire and give training that would enable rangers and possibly other people living close to the park to recognize early signs of gorilla diseases. This has since been done. Park authorities, IGCP and ITFC are planning additional measures.

The Nkuringo group was habituated for tourists but the start of gorilla tourism was postponed. According to IGCP Uganda, there is no infrastructure in the area, the gorillas are spending too much time outside the park and a clear tourism development plan has not yet been finished. There is no date for opening of tourism to the group but IGCP and UWA (Uganda Wildlife Authority) are working on this issue as a matter of priority.



Amahoro sits close to his mother after having received his medication

Photo: Liz Williamson

Conservation NGOs unite for "Peace"

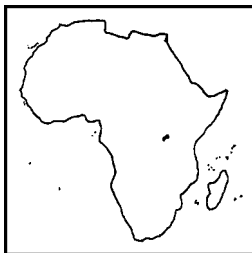
A 14-year-old young silverback in a Karisoke research gorilla group was recently very sick following a prolonged respiratory infection. Amahoro, a name meaning "peace" in Kinyarwanda, became lethargic, did not eat and was having difficulty keeping up with his group. The group, however, adjusted their travel speed to avoid leaving him behind. There are five young silverbacks in this group, and one in particular, Gwiza, was an almost constant companion of the invalid.

When it was clear that Amahoro's condition was deteriorating, we contacted the *International Gorilla Conservation Programme* (IGCP) in Uganda in the absence of the Mountain Gorilla Veterinary Center vets from Rwanda. IGCP contacted Wayne Boardman, working at the Uganda Wildlife Education Centre. We had lengthy discussions of whether or not to intervene and if so how. Vince Smith of *Dian Fossey Gorilla Fund* (DFGF) Europe also participated in the debate. After an evaluation visit, Wayne Boardman discussed Amahoro's condition by telephone with Antoine Mudakikwa and Mike Cranfield of MGVP and Liz Macfie, Veterinary Advisor to IGCP.

The following day we successfully darted Amahoro with two antibiotics. His weak state contributed to the ease of the intervention – a vocalisation would have drawn the attention of the dominant silverback – but Amahoro hardly reacted to the dart, he simply went to his mother, Pandora, for comfort. He has now fully recovered and was an enthusiastic participant during a recent inter-group interaction. Thanks to everyone involved.

Liz Williamson

Each Karisoke gorilla group is visited daily. Karisoke researchers are allo-



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ated military escorts 4 days per week since September 2000. Gorilla tourism is operational 7-days per week on demand. (From Primate Eye 72)

Mountain Gorilla Veterinarians

Recently, the MGVC conducted an autopsy on a young gorilla from a research group. The animal had an affected gastrointestinal tract. The results of the microscopic sections have not yet arrived. It is planned to start research into the microbiology and virology of gorillas through dung sampling this year.

The MGVC vets participated in a conference on zoo animals in the USA to give a talk on the necessity of a multidisciplinary approach in veterinary medicine for nature conservation and to participate in a training course on the assessment of disease risk. They received training in modern techniques in the microbiological and virological part of the Simian Laboratory in San Antonio.

The *Morris Animal Foundation* (which funds the Mountain Gorilla Veterinary Project) invited 18 participants to meet in Florida for the strategic planning of the project's future.

Journey to Uganda and Rwanda

After having seen the mountain gorillas in the Bwindi Impenetrable Forest National Park in February 1999, our interest in the gorillas of the Mgahinga Gorilla National Park had been awakened. So we set out to see them in September 2000.

We were not able to obtain permits for the Mgahinga Park from the *Uganda Wildlife Authority* in Kampala. As the only habituated group (Nyakagezi) sometimes moves into the Vi-



Young gorilla in Rwanda
Photo: Sylvia Wladarz

runga National Park in the D.R. Congo, visits can only be booked locally in the Kisoro office of the park. There we learnt that the Nyakagezi group had recently stayed in Congo because of more abundant food on that side of the border.

However, a visit to the mountain gorillas was not our only reason for coming to Kisoro. As members of the *Bergorillas & Regenwald Direkthilfe* we wanted to see the recently established office in Kisoro and meet the organisation's assistant, William Mugisha. He showed us the small office next door to the Mgahinga National Park office. A lap-top computer and a digital camera had just been handed over. With this modern equipment, William Mugisha can now send up-to-date news to Germany, both in text and pictures, via e-mail, and also receive messages. We tested the new equipment the same evening and found it was working well.

On 11 September, we drove with William Mugisha from Kisoro to the Mgahinga National Park post. In the presence of Chief Warden Isaac F. Drani, we handed over 2 tarpaulins, 3 two-men tents, 42 polo shirts and 3 sweatshirts.

We learnt that visits to the mountain gorillas of the Volcano National Park in Rwanda are possible from the Ugandan side. So we decided to attempt this. In the Virunga Hotel we

found a tour operator who took us to the border in Cyanika in his pick-up truck, together with four British students. From there we went to ORTPN (*Office Rwandais du Tourisme et des Parcs Nationaux*) in Ruhengeri to get the permits, before we finally arrived in Kinigi, the post where the gorilla visits start. As in Uganda, the permit costs US\$ 250 for foreigners.

We visited the Sabinyo group which consists of 2 silverbacks, 5 adult females and 4 young gorillas. It took less than an hour to reach the group. For a second time we were able to enjoy the overwhelming experience of seeing the mountain gorillas. When we re-entered Uganda, we had to pay another US\$ 30 for the visa.

Klaus Griegel and Sylvia Wladarz

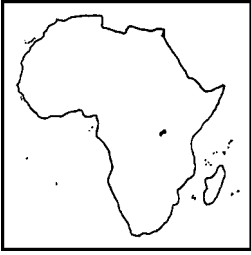
Visit to the Mountain Gorillas in Rwanda

In August 2000, the federal delegate of the Green Party, Hans-Christian Ströbele, and I visited the Volcano National Park in Rwanda and the Mountain Gorilla Veterinary Center in Ruhengeri. Ute Eilenberger also accompanied us on our visits to the gorilla families Sabinyo and Susa.

Rwanda profits from the tourist rush in Uganda. Tourists who did not manage to get into a group in Uganda are taken across the border to the Rwandan park and integrated within



Number of gorilla tourists from August 1999 to August 2000 (ORTPN)



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visitor groups there. During our first visit to the Sabinyo family we learnt that this trans-border shuffling of tourists is conducted in a relatively un-bureaucratic way. The park authority not always keeps the stipulated maximum number of visitors per gorilla family (8). There were 9 of us when we visited Sabyinyo; when we visited the Susa group on the next day, we were 5. Both times we were accompanied by several guides and the inevitable military escort. The visitors are always accompanied by armed troops as a precautionary measure, because the situation at the border area is still unsafe. Time and again, people in refugee camps and in the forest have suffered attacks from the Congolese side of the border.

Although clear instructions to the accompanying soldiers are supposed to prevent the gorillas from feeling alarmed, the soldiers did not follow these instructions during our visit. As consequence, the silverback male especially became irritated. The other 10 group members, all of which seem-

ed healthy, reacted to the visitors according to age: the young gorillas were curious, the older ones were calm and mostly relaxed. However, neither on this occasion nor on the next day when we visited the Susa group, was the minimum distance of 7 m between people and gorillas maintained. This regulation is supposed to prevent the gorillas from catching human diseases. The accompanying vet was not happy.

The gorillas were close to the park border and the walk to the Sabinyo family was only a short amble. In contrast, the visit to the Susa group required a high degree of fitness. We had to hike for several hours up to an altitude of over 3,000 m, first to reach the edge of the forest, and then within the forest. The gorillas moved just ahead of us out of sight. We only reached them after they had settled down in a clearing.

As these gorillas have been used to receiving visits from tourists for a long time, they were not disturbed by our presence. Ute Eilenberger was

pleased to see that a bite wound on a blackback was healing well. However, she was considerably concerned about the attention another blackback paid to the head guide. The gorilla grasped the collar of the man (whom he has known for many years), pulled him towards himself, held his head and turned it so that the man's face was pressed against his own cheek. Thankfully, this was accompanied by a very friendly facial expression. He held his "prisoner" in this way for quite a while: an impressive if very ambivalent experience. It can only be hoped that neither of them suffer any health problems as a result of this encounter.

The rangers and guides impressed us with their involvement, their knowledge and the respect they show for the gorillas, and last but not least with their friendly but professional way of dealing with the tourists. There is no doubt that they need equipment of all sorts, as do their colleagues in Uganda and the Congo. In this terrain, boots and other equipment suffer a lot wear and tear.

The government has the difficult task of resettling returning refugees. Contrary to their cultural tradition and patterns of dispersed residence, the government promotes their new settlement in villages, which facilitates infra-structural support and shall prevent settlement in the forest. However, fields are adjoining the edge of the forest. The establishment of buffer zones with appropriate management is urgently required if the national parks' biodiversity, including the gorillas, is to be conserved. International cooperation is required here. However, since the end of the war, international cooperation is executed with restraint, although the country, after having suffered a terrible war, urgently needs help. Nature conservation and the promotion of development cannot be separated here.

Juliana Ströbele-Gregor



Tourists sometimes can approach the gorillas very closely

Photo: Sylvia Wladarz



GORILLAS

What, if Anything, Is Taxonomy?

Taxonomy and classification, two words that have come to mean much the same thing, are "the ordering of organisms into groups, on the basis of their relationships" (modified after Simpson, 1961).

It is important to realize that taxonomy is a part of biological science, like ecology, behaviour, physiology or evolution. So a classification is a scientific hypothesis, subject to modification if new evidence comes to light, or if new understandings are brought to bear. In this sense, a classification is never finalized, there is no "official taxonomy". There can only be a statement of the present position, as seen by a particular taxonomist, taking (one hopes) all relevant information into account.

Nowadays, nearly all taxonomists agree that common ancestry is the most objective criterion for orders, families and genera (and suborders, subfamilies ... and so on); so, the lemurs, tarsiers, monkeys, apes and humans are classified in the order Primates because they share a common ancestor not shared by other mammals. In older books, humans are usually classified alone in the family Hominidae, whereas orangutans, gorillas and chimpanzees are placed in a

different family, Pongidae; but it is now clear that humans, chimpanzees and gorillas share a common ancestor not shared by the orangutan, so we should classify them together in a group that excludes the orangutan. As all four are rather closely related, it is now almost universal to place them in a single family, for which the correct name is Hominidae, with two subfamilies: Ponginae for *Pongo* (the orangutan) alone, and Homininae combining *Homo* (humans), *Pan* (chimpanzees) and *Gorilla* (gorillas).

A Word about Names

I referred to "the correct name" because, unlike taxonomy, nomenclature is objective. Once one has decided what the most appropriate taxonomy is, the question of what names to call the resulting taxonomic groups is decided by the rules of naming, laid down in the *International Code of Zoological Nomenclature*. In the main, one must use the earliest available name given to a species (or subspecies, or a genus, or a family).

A species name is a binomial. The first word is the generic name, the second is the specific name. So in the genus *Macaca* we have the species *Macaca mulatta*, *Macaca fuscata* and others. In the genus *Pan* we have *Pan troglodytes* (common chimpanzee) and *Pan paniscus* (pygmy chimpanzee or bonobo).

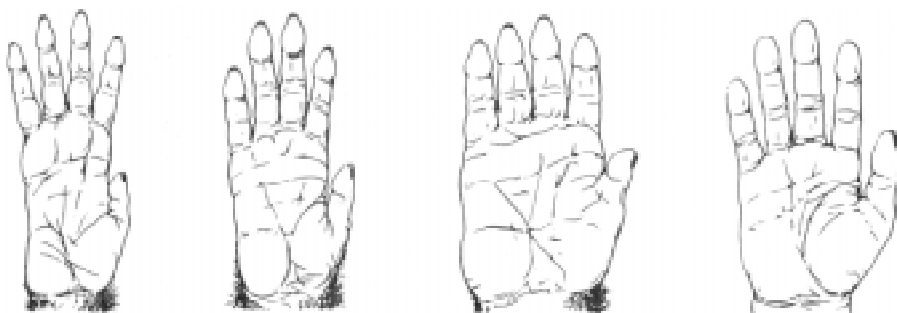
Always begin the generic name with a capital letter; always begin the specific name with a small letter.

What Are Species?

The category "species" needs to be discussed separately, for reasons that will become clear. The great taxonomist Ernst Mayr defined a species as being "reproductively isolated"; his fullest discussion of what this would mean was published nearly 40 years ago (Mayr, 1963), but is still well worth reading. The concept of reproductive isolation has been much misunderstood. It actually means that two species do not, "under natural conditions" (meaning, more or less, in the wild) interbreed with each other. What it does not mean is that they do not interbreed with each under any circumstances. Thus, horses and mules interbreed, though their hybrids (mules and hinnies) are almost invariably sterile; and lions and tigers can be persuaded to interbreed in zoos, and their hybrids are fertile – yet nobody, as far as I know, has ever suggested that they should be included in one species. This is known as the Biological Species Concept (BSC).

But what if two animal populations live in different geographic areas (are allopatric), so do not have the opportunity to interbreed? Consider the following three levels of separation:

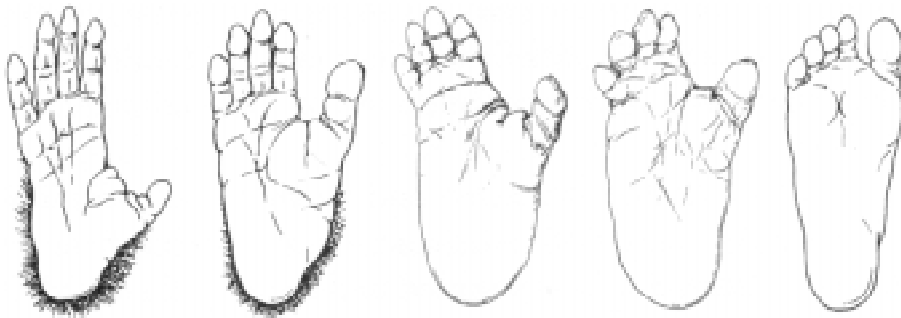
- Japanese macaques (on all the Japanese islands) differ strongly and consistently from rhesus macaques, which live on the Asian mainland. Japanese and rhesus macaques are customarily separated into different species, *Macaca fuscata* and *Macaca mulatta* respectively.
- Within Japan, the macaques of Yakushima (=Yaku island) differ on average from those of the three main islands, but not absolutely. The Japanese macaques are customarily divided into two subspecies, *Macaca*



Hands of (from left to right) orangutan, chimpanzee, gorilla and man
Drawings from Schultz, 1956



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Feet of (from left to right) orangutan, chimpanzee, western gorilla, eastern gorilla and man

Drawings from Schultz, 1933 and 1956

fuscata fuscata (large islands) and *Macaca fuscata yakui* (Yakushima).

– Macaques on the three main Japanese islands of Honshu, Shikoku and Kyushu are indistinguishable morphologically from each other. Macaques of all three islands are regarded as belonging to one and the same subspecies, *Macaca fuscata fuscata*.

Could the essence of species, then, be that they are morphologically distinct, and if so, how much difference is required?

It is today possible to examine DNA sequences directly, and these, like morphological characters, may differ between two populations. Those sequences that have been analysed tend either to code for enzymes (haemoglobin, cytochrome oxidase) or not to code for anything (pseudogenes, introns) and so apparently are "silent". No sequences that code for morphological characters have yet been identified, let alone analysed, though clearly they exist, because such morphological (visible or metrical) differences as occur between individuals, and hence between populations, are, to a greater or lesser degree, heritable. So morphological differences are a special case of genetic differences. Let us then rephrase the question: Could the essence of species be that they are genetically dis-

tinct, and if so, how much difference is required?

The view promoted by the ornithologist Joel Cracraft nearly twenty years ago (Cracraft, 1983), and now widely adopted, is that species should be "diagnosable", or 100% distinct; that is to say, that every member of a species should be distinguishable from every member of all other species. This is known as the Phylogenetic Species Concept (PSC). Some of the DNA sequences of pseudogenes could likewise be identified infallibly though, interestingly, in their mitochondrial DNA some rhesus macaques are much more similar to Japanese macaques than to other Rhesus – so not all genes give the same results.

In the Japanese vs. Rhesus macaque example, there is not the slightest possibility of determining whether they are separate species or not using the BSC. (These drawbacks apply, quite frankly, to most comparisons between pairs of populations.) But the PSC can be applied, and we find that the two are genetically distinct: there are some genes which are universal (fixed) in the one, absent from the other. Each can be *diagnosed*. By contrast, Yakushima and larger-island macaques differ on average only: no gene (including morphological charac-

ter) has been discovered which is universal in the one, absent in the other.

Although species theory is very controversial, there is a growing consensus that the BSC has outlived its usefulness as a criterion. It is still a touchstone, in that it illustrates in some important way what a species is all about, but it is simply inapplicable in most cases. The PSC, however, always offers objective criteria, and it is likely that a majority of taxonomists now adopt some version of it, consciously or subconsciously.

A species, then, is a population (or group of populations) which differs diagnostically (i.e. absolutely) from others. Put another way, it has fixed genetic differences from others. Put another way, there are gaps between different species. Below the species level, relationships between populations are reticulate (shared genes, shared characters). In cladistic jargon, the species is the terminal on the cladogram.

What Are Subspecies?

Subspecies are geographic segments of a species. They are populations which differ from one another as a whole, but not absolutely. In this case it is relevant to ask how much they should differ to merit being called different subspecies – what proportion of individuals should be recognizable? The decision is somewhat arbitrary, but a good rule of thumb is the "seventy-five percent rule" (Mayr, 1963): three-quarters of individuals in a population should differ from all individuals in other populations of the species.

Subspecific names are trinomials. The first two words denote the species; the third denotes the subspecies itself. Note that there is never just one subspecies, there are none or there are two or more: a species is divided into subspecies. As mentioned, *Macaca fuscata* is divided into two subspecies. One, the mainland Japa-



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nese macaque, is called the nomotypical subspecies, and its subspecific name repeats the specific name: *Macaca fuscata fuscata*. It is the one that occurs at the type locality (the locality from which the species was first described). The other has its own subspecific name, peculiar to it: *Macaca fuscata yakui*.

Applying the Criteria to Gorillas

Gorillas are found in two widely separate parts of Africa. Western gorillas live in the West-Central African region: southwestern Central African Republic, Congo, Mayombe, Luanda, Gabon, Río Muni, southern Cameroon, southeastern Nigeria, and the Djabbir region of the Democratic Republic of Congo. Eastern gorillas live in the East-Central African region: eastern D.R. Congo, southwestern Uganda, northern Rwanda. Eastern and Western gorillas are somewhat different. How to classify them?

In my experience, every gorilla is at once distinguishable as an Eastern or a Western gorilla. They are diagnosable. They differ 100% in their external characters, and in the skull and teeth. Their mitochondrial DNA (mtDNA) sequences are absolutely different; note that what is important, in deciding whether they are different species or not, is not the fact that their sequence differences show that they diverged over a million years ago (Garner & Ryder, 1996), but that they have fixed genetic differences between them. Even if we knew nothing of their mtDNA, we would still be justified in concluding that they have fixed genetic differences, because their morphological differences are absolute, and are heritable. So, under the PSC, they rate as distinct species.

Note that, because their distributions are entirely separate, we have not a hope of applying the BSC to them – just as in the rhesus and Japanese macaque example. Unless we

apply the PSC, we will have no objective means of deciding whether to call them different species or not. Some biologists do not accept the PSC; but for myself, I do not see how else we are to arrive at anything like a repeatable, falsifiable hypothesis for their classification.

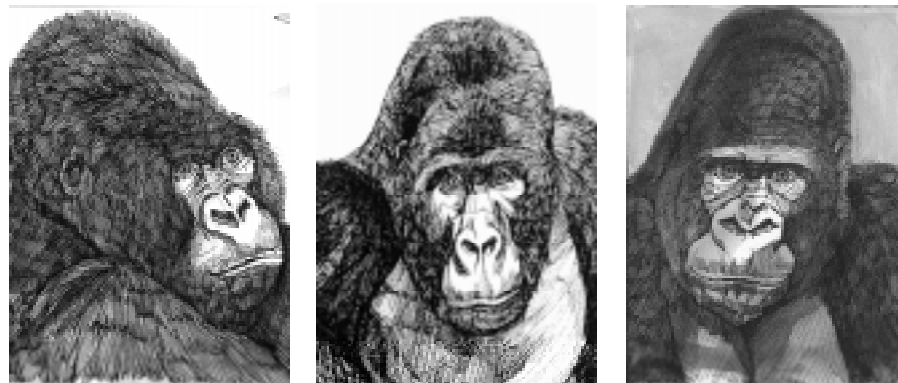
The first gorillas to be described were from the Gabon estuary and were Western gorillas. The Reverend Savage, who first made gorillas known to science (Savage & Wyman, 1847), gave the name *Troglodytes gorilla*.

About the generic name: The name then in common use for the chimpanzee was *Troglodytes niger*, which had been given to it by the great French zoologist, Etienne Geoffroy St. Hilaire, in 1812; Savage thought that the gorilla was a giant species of chimpanzee, which is why he called it *Troglodytes gorilla*. But the chimpanzee's generic name had to be changed, because the same name, *Troglodytes*, had earlier been applied (by Vieillot in 1806) to the wren! So the next available name, *Pan* Oken, 1816, is now used for the chimpanzee. But the gorilla is in any case no longer considered to belong to the same genus as the chimpanzee, and in fact as early as 1852 Isidore Geoffroy St. Hilaire, son of Etienne, gave it its own generic name, *Gorilla*. And that is

why the correct scientific name for the Western gorilla is *Gorilla gorilla*.

In 1902, Captain Oskar von Beringe discovered the Eastern gorilla (he "discovered" it by shooting one), and it was described the following year (Matschie, 1903), and named after him: *Gorilla beringei*. Von Beringe's gorilla was from Mt. Sabinyo in the Virunga Volcanoes, so this is the type locality of *G. beringei*. I have argued, above, that Eastern and Western gorillas are distinct species, so both Savage's and Matschie's names are valid.

Paul Matschie, describer of *Gorilla beringei*, was by modern standards a great "splitter" of species: where we today see a single species, he saw two, three or more. Between 1905 and 1914 he described several more supposed new species of gorilla from different regions of Cameroon: *Gorilla diehli*, *jacobi*, *schwarzi*, *hansmeyerii* and *zenkeri* (and the Hon. Walter Rothschild even named one after him: *Gorilla matschiei!*). In 1914, too, he described a supposed new species, *Gorilla graueri*, from the Itombwe Mountains, in the D.R. Congo west of Lake Tanganyika. Other people described supposedly new subspecies of *Gorilla gorilla*: *G. g. halli* from Río Muni, *G. g. uellensis* from Djabbir, and *G. g. rex-pygmaeorum* from Mt. Tshiberimu.



Gorillas from the Virungas, Kahuzi-Biega and the western lowlands

Artwork: Chisato Abe



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Two of Matschie's "species" do actually denote different subspecies. It does not matter that he described them as species; we can also use the names for the subspecies they really are.

(1) The so-called Eastern Lowland gorilla, from the Itombwe Mountains, Kahuzi-Biega, Mt. Tshiaberimu and the D.R. Congo lowlands east of the Lualaba, is different from the true Mountain gorilla of the Virunga Volcanoes; but the morphological characters overlap slightly, and although there is no difficulty in distinguishing the two as a whole, I do not believe that every single individual could be allocated to one or the other. So I do not think that they are different species; instead, I class them as subspecies of *Gorilla beringei*. Because the Eastern Lowland gorilla occurs in the Itombwe Mountains, type locality of Matschie's *G. graueri*, its correct name is *Gorilla beringei graueri*. (In the days when I assumed that all gorillas belong to one single species, I called it *Gorilla gorilla graueri*; but, as explained above, I now conclude that all Eastern gorillas belong together in a species different from Western). The name *rex-pygmaeorum*, given to Mt. Tshiaberimu gorillas, denotes the same subspecies, so is a synonym of *graueri*; but if, at some future time, someone considers that Mt. Tshiaberimu gorillas are a different subspecies from Itombwe gorillas, the name will have to be resurrected. The true Mountain gorilla is *Gorilla beringei beringei*.

(2) It has recently been argued (Stumpf et al., 1998; Esteban Sarmiento, in preparation) that the gorillas of the Cross River district, on the Nigeria-Cameroon border, are somewhat different from other Western gorillas, and should be regarded as a separate subspecies. Matschie's name *diehli* was given to gorillas from this region. The Cross River gorilla

must therefore be known as *Gorilla gorilla diehli*, and other Western gorillas will be *Gorilla gorilla gorilla*.

I should add that long ago I studied and measured the three skulls on which the name *uellensis* was based and, unexpectedly (because the population is geographically so isolated), I could find no differences at all from any other Western gorillas. So I conclude that they are probably examples of *Gorilla gorilla gorilla*.

Sarmiento et al. (1996) consider that the gorillas of the Bwindi-Impenetrable Forest are different from all other Eastern gorillas, whether Mountain (Virunga) or Eastern Lowland. Should further specimens support this hypothesis, then a new subspecies of *G. beringei* will have to be described and named because curiously, despite the arrant splitting that went on in the early 20th century, no-one ever got around to looking at any Bwindi gorillas!

Colin Groves

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An Overview of Apes in Africa

All the great apes, except the orangutan, live in tropical Africa. They comprise two species of chimpanzee, the robust chimpanzee (also known as the common chimpanzee) and the gracile chimpanzee (also known as the bonobo or pygmy chimpanzee), and two species of gorilla, the western gorilla and the eastern gorilla. All four of Africa's great apes are found near the equator, primarily inhabiting tropical forest where they are essential components of the richest assemblage of species on the continent. Unfortunately, apes are also a source of food and cash for many people in West and Central Africa. Hunting, together with loss of habitat, has greatly reduced both the distribution and the abundance of all four species.

Chimpanzees

The robust chimpanzee lives in savanna woodlands, grassland-forest mosaic and tropical moist forest, and is found from sea level to an elevation of about 3,000 m. This species probably once spanned most of equatorial Africa from southern Senegal to southwestern Tanzania, ranging over all or part of at least 23 countries. Today, the robust chimpanzee is the most widely distributed of Africa's apes, occurring in 21 or 22 countries between 13° N and 7° S.

There are four subspecies of robust chimpanzee. The western chimpanzee once ranged over ten to twelve countries, but now an estimated 40,000 members of this subspecies are patchily distributed in eight or nine countries from southeastern Senegal eastwards, possibly to the Niger River in Nigeria. Recent genetic research supports the recognition of the robust chimpanzee in eastern Nigeria and western Cameroon as a distinct subspecies, the Nigeria chimpanzee. Its



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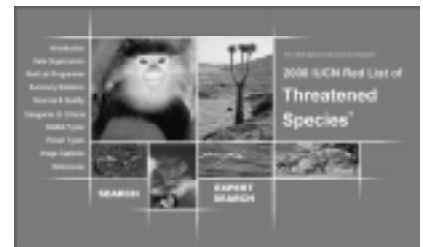
Red List – Gorillas

Listing of the gorillas in the 2000 IUCN Red List

<i>Gorilla beringei</i> (Eastern gorilla)		endangered
<i>G. b. ssp. ?</i> (Bwindi gorilla)	critically	endangered
<i>G. b. ssp. beringei</i> (Virunga gorilla)	critically	endangered
<i>G. b. ssp. graueri</i> (Grauer's gorilla)		endangered
<i>Gorilla gorilla</i> (Western gorilla)		endangered
<i>G. g. ssp. diehli</i> (Cross River gorilla)	critically	endangered
<i>G. g. ssp. gorilla</i> (Western lowland gorilla)		endangered

C. Hilton-Taylor 2000: *2000 IUCN Red List of Threatened Species*.
IUCN, Gland (Switzerland) und Cambridge, UK

In September 2000 the IUCN published the new Red List. It is available in the internet at <http://www.redlist.org> and also includes the definition of the criteria.



range covers what was formerly considered the southern range of the western chimpanzee and the northern range of the central chimpanzee. A reasonable "guess" is that there are today 4,000–6,000 Nigeria chimpanzees and that their geographic range is approximately 20,000 km².

The range of the central chimpanzee is very much larger, covering approximately 270,000 km² across seven countries in the region between the Sanaga, Ubangi and Congo rivers. Probably between 47,000 and 78,000 individuals inhabit this region.

The eastern chimpanzee, with a population estimated at between 75,000 and 118,000, is the most numerous of the chimpanzee subspecies. Its range is also the largest, covering about 500,000 km² and spanning seven countries from the Ubangi River in the central Democratic Republic of Congo, north of the Congo River to southwestern Sudan and south to southwestern Tanzania.

The gracile chimpanzee is endemic to the grassland-forest mosaic, lowland forest and swamp forest of the central Congo Basin south of the Congo River in the Democratic Republic of Congo. It lives within a range of elevation of 300–500 m, and numbers

between about 30,000 and 50,000 individuals.

Gorillas

Gorillas occur in two distinct regions, western Central Africa and eastern Central Africa, which are separated by about 900 km of forest in the Congo Basin. Recent studies show that the genetic differences between the gorillas in the eastern and the western region are slightly greater than those between the robust chimpanzees and the gracile chimpanzee. This genetic distance, together with morphological, ecological and behavioural differences, provide support for recognizing two species, the western gorilla and the eastern gorilla.

The western gorilla inhabits lowland forest, swamp forest and submontane forest from sea level to about 1,600 m. Two subspecies are recognized: the western lowland gorilla and the Cross River gorilla. The former is distributed over six countries from south Cameroon to Angola's Cabinda enclave, covering an area of roughly 445,000 km². As in the cases of the chimpanzees, however, the actual range that gorillas occupy is much less than the geographic range, as there are large areas in which no gorillas are present.

The Cross River gorilla, a recently resurrected subspecies, inhabits lowland and submontane forest in the upper Cross River region on the Nigeria–Cameroon border, about 260 km north of the range of the western lowland gorilla. With only about 200–250 individuals remaining, this is the most threatened of the gorilla subspecies.

The eastern gorilla lives in submontane and montane forest at an altitude of between about 800 and 4,000 m. There are two currently recognized subspecies: the mountain gorilla and Grauer's gorilla. The mountain gorilla is restricted to one population of about 300 individuals. This population lives in a 375 km² area in the Virunga Volcanoes where the borders of Uganda, Rwanda and the Democratic Republic of Congo meet.

The taxonomic status of the 300 or so gorillas that range over an area of about 215 km² in the Bwindi Forest in southwestern Uganda is highly uncertain. Although they have been called "mountain gorillas", differences between them and the gorillas of the Virungas suggest that the "Bwindi gorilla" represents a third subspecies or that they are Grauer's gorillas.

Grauer's gorilla has a discontinuous distribution in eastern Democratic



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Republic of Congo from Lake Edward south to Lake Tanganyika. This subspecies numbers roughly 17,000 animals and has a geographic range of about 15,000 km².

Conservation Status

At an international workshop held in Orlando, Florida, in March 2000, members of the IUCN/SSC Primate Specialist Group and other senior scientists met to reassess the taxonomy and degree of threat status of the world's primates in preparation for the publication of the next *Red Data Book*. The participants concluded that, in the light of the recent and continuing rapid declines in the numbers and distributions of Africa's apes, all four species and six of the eight subspecies are "Endangered". Two subspecies, the mountain gorilla and the Cross River gorilla, are "Critically Endangered", as is the population of gorillas in the Bwindi Impenetrable Forest. Clearly conservation efforts must focus on these taxa.

Threats

What are the current threats to populations of apes in Africa? On a continent where food production per person is on the decline, where one person in three is malnourished, and where the human population is expected to double by the year 2025, the requirements for food, clothing, fuelwood and shelter will continue to grow rapidly. This is coupled with a growing demand for Africa's natural resources by people in Europe, Asia and North America. As a result of this exploitation, the populations of chimpanzees and gorillas are being reduced, fragmented and destroyed, both indirectly through habitat degradation and loss, and directly through unsustainable hunting.

Throughout their ranges, chimpanzees and gorillas are officially protected under both national and inter-

national law. Nonetheless, during the last decade the commercial (i.e., non-traditional, non-subsistence) hunting of apes has increased greatly as logging companies open up large tracts of previously inaccessible forest. Hunters have completely destroyed populations of apes and greatly reduced many others. As a result, today there are large tracts of suitable habitat where chimpanzees and gorillas are either at low densities or no longer present. Hunting, rather than the loss of forest habitat, is now probably the most significant and immediate threat facing all of Africa's apes, as well as many other species of primates and other large mammals.

The increase in hunting not only threatens populations and taxa of apes, but it also brings people and apes into closer and more frequent contact than ever, with the consequence that the rate of disease transmission between humans and apes has increased. Medical researchers now recognize links between the

"opening up" of the tropical forest by logging firms, the increased hunting of great apes and the more frequent transmissions of diseases between apes and humans. For example, the virus that gave rise to HIV-1 in humans may have been transmitted through blood contact during the butchering of robust chimpanzees for food.

Disease can be a major problem in efforts to conserve endangered populations and taxa. Exotic strains of pathogens have the potential to become hyperdiseases by "jumping" to hosts not previously exposed to the strain. Experience tells us that this can result in 80–100% mortality, with even large populations being virtually destroyed by disease. Yet disease as a threat to free-living apes remains a neglected topic. Since chimpanzees and gorillas are phylogenetically close to man, they are highly susceptible to numerous human infectious diseases, especially viruses. The risks and consequences of disease transmission between humans and

Species and subspecies	Approximate number	Approximate range (km ²)
Robust chimpanzee (<i>Pan troglodytes</i>)	200,000	838,000
Western chimpanzee (<i>P. t. verus</i>)	40,000	48,000
Nigeria chimpanzee (<i>P. t. vellerosus</i>)	5,000	20,000
Central chimpanzee (<i>P. t. troglodytes</i>)	62,000	270,000
Eastern chimpanzee (<i>P. t. schweinfurthii</i>)	96,000	500,000
Gracile chimpanzee (<i>Pan paniscus</i>)	40,000	120,000
Western gorilla (<i>Gorilla gorilla</i>)	94,000	445,000
Western lowland gorilla (<i>G. g. gorilla</i>)	94,000	445,000
Cross River gorilla (<i>G. g. diehli</i>)	200	300
Eastern gorilla (<i>Gorilla beringei</i>)	17,000	15,000
Mountain gorilla (<i>G. b. beringei</i>)	300	400
Grauer's gorilla (<i>G. b. graueri</i>)	17,000	15,000
Bwindi gorilla (<i>G. b. subspecies?</i>)	300	200



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apes are predicted to become more serious as once-stable ecosystems and large (genetically diverse) populations of apes are fragmented and reduced.

Several small, critically endangered populations of apes are being exposed to contact that is both frequent and close (i.e., less than 1 m or touching) with large numbers of people. In eastern Central Africa, all five of the gorilla tourism programmes are based on populations of only 240–340 individuals, while all seven of the chimpanzee tourism programmes are based on populations of 20–650 individuals.

The single population of 300 mountain gorillas in the Virunga Volcanoes is particularly badly affected. When the security situation allows, 70% of the gorillas in this population – and therefore of this subspecies – is visited daily by more than 70 tourists and a similar number of guides, porters, rangers and researchers. There have been several outbreaks of disease which can probably be attributed to humans, including an epidemic in 1988 in which six habituated gorillas died of respiratory illness and 27 more became ill and were given injections of penicilline. It appeared that the measles virus or a related morbillivirus was responsible. As a result, 65 gorillas in seven habituated groups were vaccinated against human measles. No further signs of respiratory disease were seen after the initiation of the vaccination campaign. There is no evidence that this disease affected gorillas in the unhabituated groups. In 1990, broncho-pneumonia affected 26 of 35 gorillas in a group visited by tourists and four of the gorillas died.

Similar episodes have occurred among other great ape populations. There were at least six epidemics in the research and tourist community of robust chimpanzees at Gombe National Park, Tanzania, between 1966

and 1997. The diseases involved include poliomyelitis, pneumonia and scabies. In the course of the epidemics at least 42 chimpanzees either were crippled or died. During the 1980s there were about 150 chimpanzees in Gombe National Park. Today there are fewer than 100.

In 1993/1994, at least 11 habituated robust chimpanzees (perhaps as many as 18) died in the Mahale Mountains, Tanzania, from a "flu"-like illness. It is suspected that tourists or other people in contact with these chimpanzees transmitted the virus. In 1992 and 1994, outbreaks of Ebola or a similar disease killed at least 20 of the 40 or so robust chimpanzees in the research community in Tai Forest, Côte d'Ivoire. The number of adult males in this community was reduced from eight to two. One student fell seriously ill (but recovered) from the same virus after participating in an autopsy. It is probable that the disease resulting in at least some, perhaps all, of these epidemics were transmitted to the apes by people.

Conclusions

There is broad consensus among field workers that chimpanzee and gorilla numbers are in sharp decline in the wild, that the rate of decline is rapidly accelerating, and that all four species will become extinct in the wild if the causal factors are not sufficiently addressed. The population estimates for the apes are small in the context of species survival potential, and particularly so in view of the extreme fragmentation of their populations and habitats. It is obvious that further exploitation of these species, and of their habitats, should not be permitted, and that more effective conservation measures need to be implemented.

To date, all that can be claimed is that we have pushed forward somewhat the time when Africa will begin to

lose some of its taxa of great apes. The present decline in numbers will not be reversed without more work, more ideas, more approaches, more money and, above all, more people who are willing to commit to an active role. This problem must be made an issue of global concern if all taxa of African apes are to have a long-term future in the wild. We must all find a way to help make the "African great ape crisis" a global issue and a focus of effective global action.

Tom Butynski

A longer version of this article was originally published in Africa – Environment & Wildlife, Vol. 8, No. 5 (June 2000).

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Conservation of Cross River Gorillas: A Progress Report

There are several pieces of encouraging news to report about the gorillas of the Cameroon–Nigeria border region, the population described in *Gorilla Journal* 20 as belonging to the subspecies *Gorilla gorilla diehli*.

In April 2000, Nigeria's Cross River State Government declared Afi Mountain as a wildlife sanctuary. This welcome news, which brings more formal protection to the Afi Mountain subpopulation of gorillas, was the result of vigorous activity by the reorganized *State Forestry Commission* (formerly the *Department of Forest Development*) and especially by its new Director of Wildlife and Ecotourism, Chris Agbor, and its Permanent Secretary, Etim Amika. Meanwhile, Kelley



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Kelley McFarland looking for gorillas in the Afi Forest

Photo: John Oates

McFarland's team of gorilla trackers on Afi Mountain have continued their patrols, supervised by Liberian volunteer James Coleman, who reports to a conservation consortium that includes the Forestry Commission, the local NGO *Pandillus, Fauna and Flora International*, and myself (representing the *Wildlife Conservation Society* and the City University of New York). Kelley McFarland is presently in the U.S. analyzing her field data for her doctoral dissertation, but plans eventually to return to Afi to continue studying the gorillas. In October 2000, Hazel White arrived in Cross River from the U.K. to take over on an interim basis from James Coleman on Afi Mountain, while we work to develop a sanctuary management plan.

Elsewhere in Nigeria, another Cross River State NGO, *Primates Preservation Group* (PPG), has been monitoring the gorilla subpopulations on the Mbe Mountains and in the Boshi Extension forests of Cross River National Park. During July

through September, Ernest Nwufoh of PPG recorded evidence of two gorilla groups in Boshi Extension, and managed to see two juveniles in one of the groups, showing that they are reproducing successfully.

No recent hunting of any Nigerian gorillas has been detected in the last year and there appears to be growing awareness in Cross River State of the importance of gorilla conservation. One very helpful element contributing to this awareness has been the personal commitment of Onari Duke, the wife of the new State Governor, to gorilla conservation. The state's First Lady has initiated a plan for an education and visitor center to be established on the Obudu Plateau, near the Cattle Ranch Hotel and within sight of the Boshi Extension gorilla habitat.

In Cameroon, meanwhile, September saw the start of renewed field surveys in the Takamanda and Mawne Forest Reserves by Jacqui Groves. These surveys are supported by the *Wildlife Conservation Society*, the

Margot Marsh Biodiversity Foundation and the *Whitley Foundation*.

Finally, plans are being made for a small workshop to be held at Obudu Cattle Ranch in April 2001, a meeting that will bring together conservationists, scientists and government officials from Nigeria and Cameroon to formulate policies for more coordinated and effective conservation of the remaining Cross River gorillas.

John F. Oates

Bushmeat Action

The bushmeat crisis, the commercial, illegal trade in meat from wild animals, which is particularly common in West and Central Africa, has been the theme of various activities this year. The exhibition *Gorillas in the Cooking Pot* in the Stuttgart Zoo from June to September had a great response. In particular, Marianne Holtkötter supported the exhibition in every conceivable way. We also have to thank Professor Jauch, the Director of Stuttgart Zoo, for his courage and trust and for the funding, all of which made the exhibition possible in the first place.

Shortly after the exhibition had been opened, German zoo directors and EEP coordinators had a meeting in Stuttgart and they seized the opportunity to have a look at the 34 posters on the bushmeat problem. There was great interest in taking the exhibition to other zoos. Consequently, it went to Cologne Zoo in October and will stay there until December.

From January to March 2001 it can be seen in Neunkirchen Zoo, from April to May 2001 in Heidelberg Zoo and from June in Karlsruhe. Besides, the zoos of Krefeld, Zürich, Herberstein, Basel and Hamburg will also show the exhibition. In exchange, the zoos will donate a certain amount of money to the *Berggorilla & Regenwald Direkthilfe*. As other organisations (*Rettet den Regenwald, Wild Chim-*



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Iris Weiche and Marianne Holtkötter in the bushmeat exhibition

Photo: Michael Reibenspies

panzee Foundation, Bonobo In Situ Project, Save the Drill, World Society for the Protection of Animals) also contributed material, they will help to determine which projects working against the bushmeat trade will receive the money.

The exhibition formed the basis of a European-wide bushmeat campaign initiated by the *European Association of Zoos and Aquaria* (EAZA). The campaign is to inform the visitors to European zoos about the background of the bushmeat trade and collect donations for organisations working to find a solution to the bushmeat problem. The *Berggorilla & Regenwald Direkthilfe* is one of them.

In addition, signatures are collected for a petition calling upon the political decision-makers in Europe and Africa to initiate effective measures to solve the bushmeat problem. The petition was laid out publicly for the first time during the exhibition in Stuttgart. We collected 20,000 signatures there. The aim is to get at least one million signatures. When this is achieved, the petition will be handed over to the

leaders of African nations by Jane Goodall and others. This campaign will probably run until October 2001 and hopefully receive a lot of attention from the media.

In the USA, local organisations are also very active. Working groups spring up everywhere, because people now recognize the severe threat the bushmeat trade is posing. This happened during the spring 2000 CITES conference, for instance. During the World Conservation Congress in Amman, the IUCN passed a resolution to ban the illegal bushmeat trade. It is encouraging to see that organisations and institutions worldwide seem to cooperate well in this campaign.

Iris Weiche

The Great Ape Event

At the end of September, the *Ape Alliance* launched the Great Ape Event to present the campaign 2001 – *An Ape Odyssey*. In fact, it included three events: a press conference, an online event (hosted by the BBC) and the Great Ape Event.

The Great Ape Event on 27 September was a sell-out with many more ticket orders than seats available – 2,350 people were there. David Attenborough hosted the evening in the Westminster Central Hall, London. Speakers included Jane Goodall, who talked about her work with chimpanzees, Birute Galdikas on orangutans, Jo Thompson on bonobos, Ian Redmond on gorillas, and special guest Charlotte Uhlenbroek presented extracts from the BBC 1 series *Cousins*. They each gave a short presentation followed by a question and answer session.

All profits will go to four primate projects: Mount Tshiaberimu Gorilla Project (Democratic Republic of Congo), Bonobo Sanctuary (Kinshasa), the Orangutan Foundation Care Centre and Quarantine Facility (Borneo) and Tchimpounga Chimpanzee Orphanage (Pointe-Noire, Congo).

For follow-up publicity, a short article about the bushmeat problem will be published in the BBC Wildlife magazine. Further activities are in preparation, including for example a postcard action.



Iris Weiche explains the exhibition to Amooti Latif, Murchison Falls National Park, Uganda

Photo: Angela Meder



READING

Guy Cowlshaw and Robin Dunbar
Primate Conservation Biology. Chicago (University of Chicago Press) 2000. 512 pages, 89 line drawings, 59 tables. Hardcover US\$ 75, ISBN 0-226-11636-0. Paperback US\$ 27, ISBN 0-226-11637-9.

This book gives a general overview of primate conservation biology. It is an introduction to the subject for students and primatologists starting in the field, and it explains conservation project planning. Some knowledge of statistics is useful to understand the models and calculations presented.

The first sections introduce the reader to primate biology, diversity, life history, ecology, behaviour, group dynamics, distribution of species and population biology. This is necessary for understanding the problems and solutions. Based on these subjects, key issues of primate conservation (mainly theories and models), threats and conservation strategies are described. The authors also discuss the various approaches to conservation and refer to studies that deal with their successes and failures. In the conclusions, they give some advice for solutions and stress that each project has to be planned individually.

As both authors are working in Africa, this continent is the focus of the book – although it covers primate conservation worldwide, including captivity. Apart from the comprehensive text, the references are useful for those who want to read more.

Christophe and Hedwige Boesch
The Chimpanzees of the Tai Forest. Oxford (Oxford University Press) 2000. 316 pages, 22 halftones, 30 line drawings. Hardcover £ 55, ISBN 0-19-850508-6. Paperback £ 19.95, ISBN 0-19-850507-8.

Filippo Aureli, Frans B.M. de Waal
Natural Conflict Resolution. Berkeley (Univ. of California Press) 2000.

422 pages, 38 photos, 31 drawings, 19 tables. Hardcover US\$ 65, £ 40, ISBN 0-520-21671-7. Paperback US\$ 24.95, £ 15.95, ISBN 0-520-22346-2.

Shirley C. Strum and Linda M. Fedigan

Primate Encounters – Models of Science, Gender and Society. Chicago (University of Chicago Press) 2000. 636 pages, 34 drawings. Hardcover, US\$ 35, ISBN 0-226-77754-5.

Which questions are posed in primate research? Why and how are they posed? Ideas about primate societies are shaped by various scientific disciplines and theories as well as cultural factors – this is clearly shown here. This book is a reflection on the history of primatology and science in general. It was written after a symposium and workshop with 23 primatologists and people who study primatologists, initiated by the editors.

Included are: an overview of the history of primate society research, reports of primatology pioneers about their experience, articles on the influence of various cultures, disciplines and approaches, models of science and society. The sections contain introductions with short summaries of the contributions; at the end, e-mail discussions are added. The focus clearly is on North America – 16 of the 23 authors are North Americans –, but it deals also with the influence of different cultures (Japan, Brazil, Netherlands) on primate research. Nevertheless, it is a fascinating book for any primatologist.

Jane Goodall

Africa in my Blood. An Autobiography in Letters. (Houghton Mifflin) 2000. 371 pages, US\$ 28.

Michela Wrong

In the Footsteps of Mr Kurtz. Fourth Estate 2000. £ 13.99. ISBN 1-84115-421-0.

Peter M. Kappeler

Primate Males. Causes and Consequences of Variation in Group Composition. Cambridge (Cambridge University Press) 2000. Hardcover US\$ 85, ISBN 0-521-65119-0. Paperback US\$ 37.95, ISBN 0-521-65846-2.

Hans Dieter Neuwinger

African Traditional Medicine. A Dictionary of Plant Use and Applications. Stuttgart (medpharm Scientific Publishers) 2000. 589 pages + 46 pages (supplement). Hardcover, DM 198. ISBN 3-88763-086-6.

World Commission on Forestry and Sustainable Development

Our Forests, Our Future. Cambridge (Cambridge Univ Press) 1999. 228 pages, 20 halftones, 50 diagrams, 40 tables. Paperback US\$ 34.95, ISBN 0-521-66956-1. Hardcover US\$ 74.95, ISBN 0-521-66021-1.

Rob Glastra (ed.)

Cut and Run: Illegal Logging and Timber Trade in the Tropics. Stylus Pub. 1999. 160 pages. Paperback, US\$ 17.50. ISBN 0889368627

Thandika Mkandawire and Charles C. Soludo

Our Continent, Our Future: African Perspectives on Structural Adjustment. Lawrenceville (Africa World Press) 1999. 176 pages. Paperback, US\$ 21.95. ISBN 086543705X.

Thandika Mkandawire and Charles C. Soludo (eds.)

African Voices on Structural Adjustment. A Companion to Our Continent, Our Future. Lawrenceville (Africa World Press) 2000. 280 pages. Paperback, US\$ 25.00. ISBN 0889368880

World Bank

African Development Indicators – Print Edition. Washington, D.C.



BERGGORILLA & REGENWALD DIREKTHILFE

(World Bank) 2000. 448 pages, US\$ 40. ISBN 0-8213-4386-6.

World Bank Africa Database CD-ROM. Washington, D.C. (World Bank) 2000. Single user: US\$ 95, ISBN 0-8213-4387-4. Network user: US\$ 190, ISBN 0-8213-4388-2.

International Panel of Eminent Personalities

Special Report to Investigate the 1994 Genocide in Rwanda and the Surrounding Events. OAU 2000. Available online in English (<http://www.oau-oau.org/Document/ipep/report/Rwanda-e/EN-III-T.htm>) and French (<http://www.oau-oau.org/Document/ipep/report/Rwanda-f/FN-III-T.htm>).

News from the Internet

Previous issues of the *IUCN Red List of Threatened Species* were published as books, but now it is available for free in the internet at <http://www.redlist.org>. The activities of the *Mountain Gorilla Veterinary Project* are presented on the *Morris Animal Foundation's* website at http://www.MorrisAnimalFoundation.org/Mountain_Gorilla.html.

Information about forestry – especially for the timber industry – can be found on the *ForestWorld* website (<http://www.forestworld.com>).

Some new websites are dealing with the bushmeat crisis. The new site for the *Ape Alliance* is now running at <http://www.4apes.com>. The *European Association of Zoos and Aquaria* (EAZA) has also started a bushmeat campaign (<http://www.EAZA.net>). You can read the news release of the IUCN resolution on bushmeat at http://www.iucn.org/info_and_news/press/bushmeat.html.

For FFI (*Fauna and Flora International*), the new web address is <http://www.fauna-flora.org>. The *Orang-*

utan Network, founded by Carel van Schaik, presents news and information at <http://www.usfstudent.com/orangutannetwork>. African conservation organisation links are collected on *African Websites* <http://www.africanwebsites.net>. The *Pan-African Sanctuary Alliance* (PASA) is specializing on chimpanzees (<http://www.andkeys.com/pasa>).

Jobs and Opportunities for Volunteers

As war continues in the distribution area of the mountain gorillas, there are currently no opportunities for volunteers in mountain gorilla conservation projects. In principle, the *Berggorilla & Regenwald Direkthilfe* attempts to involve local scientists and conservationists, as they can communicate more easily with the local population and cope better with local difficulties.

Vacancies are usually advertised publicly, for example on the *Primate Jobs* webpage (<http://www.primat.wisc.edu/pin/jobs>), the international job market for primatologists on the internet. Generally, a degree is required (mostly in biology or veterinary medicine) and very good command of English, also of French in the case of Rwanda or Congo. Moreover, applicants usually should have field experience in the tropics.

However, sometimes there are also opportunities for people to become involved who do not have a scientific background but possess a strong interest in animals and nature conservation, are able to cope with great physical and psychological stress and are willing to commit themselves. For example, people who want practical experience are always needed at the *Limbe Orphanage* in Cameroon. You can read more about this on their website: http://members.nbc.com/_XMCM/limbe/staff.html. Vacan-

cies for internships and other positions are also advertised by the portal *African Websites* (<http://www.africanwebsites.net>).

Activities

Up to September 2000, a total of £ 2,600 has been raised in the current joint fund-raising drive with *Volcanoes Tours*, DFGF Europe and IBCP. One third of this sum was transferred to us, earmarked for the purchase of ranger equipment. This fund-raising drive will continue: publicity material will be distributed at the *World Travel Market* in London in November 2000 as well as on the *ITB* in Berlin in March 2001.

For the future, we want to become active in schools through giving talks or through fund-raising activities. We are also thinking about arranging partnerships between German and African schools. Our assistant William Mughisha has already made contact with a school in Kisoro. The African schools are to receive support to obtain teaching materials. Both German and African students are to be made more familiar with the concept of nature conservation.

Iris Weiche

We thank each person and company that has supported us during the period from 1. June to 31. October 2000. Larger contributions were given by Jane and Stuart Dewar, Horst Engel, Wolfgang Ettl, Angela Meder, Agathe Paech, Michael Reibenspies, Erwin Rosenkranz, Patricia Schmidt, Juliana Ströbele-Gregor, Karl-Otto Weber, Susanne and Helmut Zeitler. Erwin Fidelis Reisch (*Gentner Verlag Stuttgart*) took charge of the costs of reproduction and composition for the *Gorilla 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 2001!



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:

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