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Nature Conservation During the Crisis

In September 1996, war broke out between the ADFL and the FAZ in the southern region of eastern Zaire. In the second half of October, North Kivu was attacked from the Mikeno sector of the Virunga National Park and Goma was captured on 1 November 1996.

The political and military crisis swept over the whole eastern part of the country, an area particularly important for nature conservation. Six national parks (Garamba, Kahuzi-Biega, Kundelungu, Maiko, Upemba and Virunga) as well as the Itombwe and Ituri Forests are situated in this area. They are especially rich in animal and plant species and scientifically very interesting, especially concerning biogeography and evolution. All these areas, which have been the pride and joy of the country and the IZCN (now ICCN) for a long time, were abandoned by their administrators to their sad fate during the war. The war had the following effects:

- Thousands of refugees returned spontaneously to their home country Rwanda.
- The activities of various organizations and the support for nature conservation were completely halted.
- The national parks were isolated from the headquarters in Kinshasa.
- Massive streams of refugees from the conflict areas spread over the region.

A few days after the capture of Goma, the staff of the regional ICCN office returned. In spite of the difficult and insecure time, a confusing socio-economic crisis and blocked local communication, project staff expressed their readiness to resume conservation activities.

A small core of conservationists gathered around the regional director of the ICCN. Regular contact between the park, the IGCP and the DFGF was established. We conducted a survey of the damage in the Virunga Park caused by the war. These investigations helped to inform the new political rulers of the dangers threatening the park. The international community was also alerted.

Several indisciplined armed groups had formed before war broke out in North Kivu, the notorious Mai-Mai among them. They seized control in several sectors of the Virunga National Park, which they terrorized and where they were heavily engaged in poaching activities. The park's animals (hippos, buffaloes and antelopes) were shot in large numbers and their meat was sold in all the markets between Goma and Beni. These people made our work considerably more difficult; often we could not even negotiate with them on a passage for the car.

Only a few days after the alliance had taken Goma, the new political and military authorities expressed their willingness to save the Virunga National Park. Our survey showed the responsible persons of the ADFL the critical situation of the park. We were able to extend this awareness to the local population through radio programmes (Goma, Butembo and Beni) and in public places. In this context, some measures were initiated and decisions taken, among others the permission to resume the operation of the park and initiate its rehabilitation, as well as the disarmament of armed groups. In the beginning of January 1997, a preliminary park administration was reinstated according to the capabilities of the available people.

The camps were cleaned up after the refugees had left them. Rubbish (plastic, paper packaging material, metal) was burned or buried so that plants could start to grow over those areas.

The new authorities consider conservation to be especially important and suggested a reformation of the structure and activities of the IZCN which they renamed ICCN. The retraining of the rangers has already started in the Rumangabo education center and includes ethical, moral, professional and military aspects according to the guidelines for national parks. Hope and life in the region have been aroused again, traffic is getting back to normal and the insecurity has decreased in many areas. Most gorillas are still alive and soon tourism will be resumed with the habituated groups in Jomba.

Among the most painful losses of this war, aside from the depletion of the park's infrastructure, are the disappearance and death of several park rangers. 21 families are affected in the central sector of the Virunga National Park (Rwindi-Rutshuru), 16 in Rumangabo, one in Tshiaberimu and two in Lulimbi. In memory of these brave men and to encourage those who want to continue nature conservation work in the 'liberated Congo', we intend to give special support to their families during the park's rehabilitation.

Vital Katembo Mushengezi and Claude Sikubwabo Kiyengo

News from the Southern Sector of the Virunga National Park

Claude Sikubwabo Kiyengo has been informing us about the situation in this area which includes the Congolese/Zairean part of the Virunga Volcanoes. On 23 December 1996, he wrote that during a survey in late November, they had found that the situation was very critical. The infrastructure had been destroyed, vehicles stolen and several park rangers killed while others had fled. All the rangers had to hand over their guns and could therefore no longer prevent poaching in the park, except with the assistance of ADFL soldiers. The facilities in Jomba and Bukima were also demolished and the rangers' huts were looted. Effective protection of the park could no longer be sustained.

In a letter dated 22 February 1997, Claude Sikubwabo told us that in January 1997 he had been promoted to chief of the southern sector of the park. At some time, he had to flee to Masisi where he hid for 3 weeks. During this time, all his belongings were stolen and part of his house ransacked.

The park, especially the southern part, has suffered immensely. The gorillas could not be visited regularly. Claude Sikubwabo Kiyengo and his colleagues have tried to develop strategies to convince the local population to support the ICCN in their efforts to protect the park. On 15 May, he told us that he had been staying in Rumangabo since March in order to more efficiently supervise the work in the park – gorilla monitoring and patrols.

New Projects

Claude Sikubwabo Kiyengo asked the *Berggorilla & Regenwald Direkthilfe* to provide financial support for the restoration of the Mikeno sector. Several vehicles were stolen, and out of these, only a small Suzuki has been returned, but in very poor condition. It would cost about US\$ 1000 to replace the missing parts. In addition, Claude Sikubwabo Kiyengo would like to initiate a long-term study of the gorillas, much like the monitoring project in Rwanda. He would also like to monitor the activities of other large mammals, such as elephants and chimpanzees. This project would require the following equipment: a computer, two tents, two sleeping bags, two raincoats, two pairs of rubber boots and a camera.

However, the most important issue now is to sensitize the local people who live near the park about the necessity to protect the gorillas. This can not be done at the moment because resources are lacking. The local people must be involved in any measures to protect the gorillas. Claude Sikubwabo Kiyengo has therefore developed a concept for informing and involving the local population of Goma in these efforts. Up to now, there has been no system to let the local population participate from the proceeds from tourism. This creates tension when the gorillas raid their fields or attack them. Claude Sikubwabo Kiyengo is currently investigating the possibility of establishing eco-tourism with the participation of the local population. Another very urgent project he suggested is a trip by a small group of two scientists, two rangers and two pathfinders to the hills of Sarambwe. These hills border the Ugandan Bwindi Impenetrable National Park. It is important to determine whether gorillas are still living in this area.

Angela Meder

Reports from Mt. Tshiaberimu

This special mountain is situated in the northern sector of the Virunga National Park, at the southwestern edge of Lake Edward (see map on page 3). It is nearly 3100 m high and has an especially rich biodiversity. One of the most endangered species which live there is the gorilla.

Since 1995, several trips have been undertaken to Mt. Tshiaberimu to determine whether the gorillas and the biodiversity of this area can be protected from the negative impact of human encroachment. The *Berggorilla & Regenwald Direkthilfe* and the DFGF have decided to support the IZCN/ICCN in their conservation efforts. The equipment which *Berggorilla & Regenwald Direkthilfe* delivered to the park rangers has made their patrols much easier. In September 1996, I received two radios and uniforms for my co-workers from the DFGF-Europe. This equipment will support our efforts to maintain the tracks, to support the patrols and help locate the gorillas.

We are collecting data which will help us to understand the ecology of the gorillas and plan necessary measures to protect their habitat; at the same time, we want to take the development of the local communities around Mt. Tshiaberimu into consideration. According to the first estimate, there are three gorilla groups: one lone silverback, one group comprising four and another group comprising twelve individuals.

The Situation at Mt. Tshiaberimu in December 1996

In November 1996, the North Kivu region was shaken heavily by the war. This crisis has affected the entire Virunga National Park. The senior park officials left for Kinshasa; after their departure, the situation became much more difficult.

The activities in Tshiaberimu were also disturbed. We tried to save as much as we could of the material (equipment for communication, cameras ...). In December, we visited Tshiaberimu to assess how serious the damage was and whether the situation would permit us to resume our work. In December and January we temporarily halted all field work and focused our attention on the park rangers who had stayed in the area. The regional director of IZCN Goma, Norbert Mushenzi Lusenge, tried to convince the new political and military authorities to resume all conservation activities in the Virunga National Park.

Some rangers were still posted in Burusi and Kasimbi, and a new camp was built in the center of Tshiaberimu at Kalibina as a refuge for the rangers during insecurity. The rangers were disarmed by the ADFL. If they are not able to continue their work soon, human encroachment will probably do further serious damage to the area. To prevent this, the rangers need support. They are loyal and motivated. We need their support to ensure the survival of the gorillas in Tshiaberimu during this critical time. We must act as quickly as possible to restore the conservation measures. By collaborating with other organizations, we can save what remains and ensure the survival of this World Heritage Site.

Report from March 1997

In March, I visited the Mt. Tshiaberimu conservation area to get a general impression of the situation after the wartime in the region. I planned to spend about 2 weeks from March 12 so that I could have enough time to discuss with the park guards the possibilities to resume our activities. The trip was easy because the security was restored in different places.

When I arrived at Tshiaberimu, I received a warm welcome by a lone park ranger who was wandering around in the village of Burusi. He explained to me that the others were at the fishing village of Kiavinyonge because of the difficult living conditions in Burusi after the war. He also talked about the experience they endured during the Mai-Mai rebels attacks in January 1997. They were forced to leave the park patrol posts on 15 January and managed to survive in the neighbouring villages; some went to their native villages near Beni and Mutsora. One ranger died during the war.

While in Burusi, I sent a message to the rangers urging them to come back. They arrived together with other workers and we held a meeting to discuss what could be done after the crisis. The elder worker Kihulane speaking on behalf of the team said that they were all happy to see me back in Tshiaberimu and they were ready to start with the activities provided I could help them. He explained that out of what was stolen by the looters, they saved very little equipment. Much of the equipment that the *Berggorilla & Regenwald Direkthilfe* had provided was lost, too.

I told the rangers that the aim of my visit was to get a general view of the situation and determine what possibilities there were to resume the activities that we had started before the war. We had a wonderful celebration at the Burusi patrol post and I invited some locals to join in. I used this opportunity to explain that the park was not dissolved and those who were clearing the forest had to stop their activities. I visited some plots with the peasants and informed them that they were cutting the forest within the park boundaries. I told the local leaders that this anarchy must stop. It was obvious that the war has had a negative impact on the conservation efforts.

Human encroachment on the park resources has greatly increased. New forest clearings had been made in the unique montane and bamboo forests; the most damaging activities included gold mining, pitsawing and making charcoal out of felled trees. In addition, traps had been set to catch mainly rodents. On our way to the Kalibina camp site, we removed 26 rodent traps. As a result of the intense activities of villagers, many new trails had been made in the forest.

Nine gold miners had settled near the camp site and built two huts in the forest. When we arrived, they were in the river 'washing sands'. They ran away leaving all their equipment and tools behind. We caught an old man who could not escape because he was really old. He told us that they had been in the forest since the rangers had stopped working. We took the machetes, pels, hoes and basins that they were working with.

The situation of Tshiaberimu is similar to what is happening in different places around Virunga National Park. Serious conflicts are arising in the relations between the peripheral rural area and the park. This is a crucial issue for the future management of the park; a conservation approach involving the communities surrounding the park could be recommended. Success is only possible if the government formulate a viable policy of integrated rural development and puts an end to the various forms of land exploitation damaging the park integrity.

Vital Katembo

Nobody knows how the human encroachment has affected the gorillas. Two rangers observed a group with four members; it was not possible to find other gorillas.

In mid-January, new conservators were appointed for the northern sector of the Virunga National Park, but none of them has been on Mt. Tshiaberimu so far. The rangers are still waiting for instructions as to how they should continue their work. As soon as their ethical-moral retraining is completed, 20 rangers will be installed in the posts at Mt. Tshiaberimu.

Death of a Patriarch

The famous silverback Mushamuka disappeared on 18 April 1997. He was the leader of one of the first two Grauer's gorilla groups in Kahuzi-Biega National Park who were habituated to humans. The habituation was done by the late Adrien Deschrijver between 1965 and 1971. Mushamuka has been known since 1971. Deschrijver estimated him to be 20 years old at that time. When Kelly Stewart met the silverback in 1972, she decided to become a gorilla researcher and later worked at Karisoke in Rwanda. Tourists also remembered him because he used to bluff charge during the visits. He also was shown in the movie *Gorillas in the Mist*.

The first zoologist to study Mushamuka's group was Alan Goodall in 1972. The group had 20 members at that time. It continued to grow during the following years; when Juichi Yamagiwa observed it in 1978; at that time, Mushamuka was the leader of an extremely large group with 42 individuals. This is the largest gorilla group ever reported. In 1990, the group consisted of 21 members, in 1993 of 19 members.

Mushamuka was an extremely successful silverback. Many of his sons left his group and established their own – recently, Bwana in 1992 and Lambchop and Mintsauce in 1995. Nindja, an older son, can also be visited by tourists. The last offspring Mushamuka sired was born in 1994 but it died when it was only 1.5 months old. The group is now led by a young male, probably a son too, and seems o.k. It can be visited by the rangers.

Mushamuka was the second famous Kahuzi-Biega silverback to die within only a few years (in 1993, Maheshe had been killed by poachers; he was possibly also a son of Mushamuka). However, unlike Maheshe, Mushamuka was not killed by poachers. He was estimated to be 43 to 46 years old and had lost many teeth. His remains have not yet been found.

Angela Meder

Research on Gorillas and Chimpanzees in the Kahuzi-Biega Park

Our research in the park concentrates on primates and especially on the ecology of chimpanzees and gorillas. In this, we cooperate with the CRSN in Lwiro, the IZCN/ICCN and the Kyoto University. *Berggorilla & Regenwald Direkthilfe* has been supporting this research since July 1995.

Four trackers and one ranger are working in Kasirusiru, following gorillas and chimpanzees. In Tshivanga, one tracker and one guide monitor six transects along the Bukavu–Kisangani road and one botanical transect in Kasirusiru. In Tshibati (the site established by the CRSN and the Kyoto University), four trackers follow the gorillas and chimpanzees.

In Situ Research

In October 1996, we had to interrupt our work because of the war. By mid-January 1997, we were able to resume our field work intermittently, with the approval of the new authorities, and by mid-February we resumed it on a regular basis. The two gorilla groups are slowly getting habituated to humans – currently, they can be approached within 15 to 20 m. In contrast, the habituation of chimpanzees is more difficult. However, we follow the apes on an almost daily basis and monitor their use of different biotopes. Fresh gorilla and chimpanzee tracks are marked on a map.

Gorillas often stay in clearings created by elephants that are uprooting trees, because there the gorillas' preferred food plants grow. Chimpanzee groups split into small parties while searching for fruiting trees. However, several parties of one community may meet up in some trees, especially in trees with ripe figs. These daily observations are complemented by the analysis of faecal samples in the primatological laboratory of the CRSN. We should soon be able to show some preliminary results.

We cut transects to determine the density of trees with fruits that are eaten by apes. This research has been running since November 1994 and we are currently preparing the data for a publication.

Impact of the Road

This research was conducted to determine the possible impact of the expansion of the road between Bukavu and Kisangani on the national park. The study started in October 1993 and ended in October 1996 when the war broke out. The main targets of the study were gorillas and elephants. According to a survey done by WCS, there was a particularly high elephant density in the old part of the park before the war.

The analysis of the data is almost completed. We found that gorillas and chimpanzees cross the road in both directions in various habitats. We found traces of their activities even right next to the road. This means that the road is no barrier for these two species and does not influence their activities.

However, a great risk to the animals is apparent from these findings. If traffic on the road is not controlled and therefore increases, there might be an increased risk of accidents and the animals' freedom of movement might be restricted. We had intended to complement these results with the census of traffic in Tshivanga; unfortunately, most of the data were destroyed during the war.

Other Research Activities

WCS, IZCN, CRSN and the Kyoto University conducted a joint survey of big mammals in the old part of the park from 18 May to 25 July 1996. Within the comprehensive survey of *Gorilla gorilla graueri*, one goal of this joint survey was to estimate the number of gorillas and to compare it with earlier surveys. Another aim was to determine the extent of utilisation of different habitats. In addition, signs of elephants, chimpanzees, monkeys, duikers, forest hogs and carnivores were noted. Another important subject was the impact of humans on the populations of these animals. The number of gorillas was estimated to be 247, which is approximately what had been found in earlier surveys (1978/1979: 223 to 258; 1990: 258). They were living in 25 groups with 2 to 24 animals per group. In addition, there are two solitary silverback males.

After the destruction of large forest areas in the corridor between the two parts of the park in 1995, the elephants could not leave the old part of the park any more and raided the fields in the border zone of the park more frequently. To find a solution for this problem, the Cameroonian expert Martin Tchamba analyzed the conflict between elephants and humans. He made various suggestions on how to prevent elephants from raiding the fields and on how to support the human population.

Outlook

We suggest that the following studies be conducted in the future:

- Utilization of bamboo and the impact that a disease which kills the bamboo may have on gorillas and the park in general. This research would also be important for chimpanzees and elephants, two species that consume lots of bamboo as well.
- Monitoring (visits at regular intervals) of various key species. This study should run for at least 5 years. The involvement of local employees could decrease the costs considerably and increase the quantity of collected data.

As the national park's fauna and flora have been damaged considerably since last autumn, we need to reconsider our priorities. We are hoping to continue our activities in spite of the difficult situation. The staff are very motivated, especially because they are paid regularly and because they receive the necessary equipment. Of course, the equipment has to be replaced regularly, too, but Mbake Sivha has been able to purchase some high-quality equipment for the team's field work during her stay in Germany.

Mbake Sivha

Mbake Sivha told us on 9 June that her team had no more been able to visit the gorilla group that they used to observe for more than a month. The group has moved to the center of the forest, and the ICCN employees are not allowed to go into the forest because of the militia who are still hiding there. Moreover, the conflict in Nindja, where the local rulers are opposed to the national park authority, has started again.

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