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GRZIMEK

CONSERVATION OF GORILLAS IN EASTERN ZAIRE

Progress Report - January - August, 1985

Frankfurt Zoological Society Project : 966/83
World Wildlife Fund/IUCN Project: 1941

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(A separate report in French submitted to the
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C. Aveling returned from leave in early January and R. Aveling returned with family in February. While on leave or passing through Nairobi the project was discussed with both funding organisations. It has been decided, in consultation with IZCN, to concentrate activities initially on conservation of mountain gorillas in the Virunga volcanoes. This necessitates postponing more general surveys until improvements in protection of Gorilla gorilla beringei, the rarest of the three races, are established (see section 3iii). The approximately 140 mountain gorillas in the PNV-Sud (Parc National des Virunga - southern sector) of Zaire are more than a third of the total world population (approximately 110 in the adjacent Parc National des Volcans of Rwanda and 100 in the Bwindi Forest of Uganda).

1. PROJECT PROGRESS - Virunga National Park, southern sector.

1.1 Tourism Development

(a) Gorilla habituation/surveillance.

The improvement in protection of gorillas that results from carefully controlled tourism has been previously described (Progress report Aug-Dec '84 and funding proposals), and is a major aim of this project. The first step in this direction is habituation of gorilla families to accept visits from small groups of tourists, and this requires both expertise in gorilla behaviour and full-time presence with the gorillas over several months. C. Aveling identified suitable families of gorillas ranging near the edge of the park and started the habituation work, but was unable to devote his time exclusively to this. Authorisation from IZCN and funding from the Messerli Foundation of Switzerland were therefore sought for a field assistant to concentrate on gorilla habituation. Both were obtained and M.C. Catsis was appointed to this post, starting work in Kivu in May. The Messerli Foundation agreed to provide a 2-year grant to Frankfurt Zoological Society totalling 45,000 Swiss Francs, to cover the major costs of the field assistant from May 1985 to April 1987.

The movements (ranging) of three families of gorillas have now been monitored for several months and these groups will form the basis of the tourism programme:

Bukima. The three trackers employed by the project, and the guards from Bukima guard post, have continued to keep track of the family of gorillas in the Bukima/Bikenge sector. After a year of monitoring, the home range has been found to extend from Nyabisunzu to Karuganda, a distance of about 13 Km along the boundary of the park (see Map - Annexe 1). Most of the time the gorillas are within $\frac{1}{2}$ Km of the boundary and are rarely more than $1\frac{1}{2}$ Km from the boundary. In April there was an interaction between the silverback and an unknown silverback near Bikenge. After that the nest count increased from 7 to 10, indicating that new individuals joined the family. In August there was an interaction at Nyabisunzu with an unknown family from Mikeno.

Djomba. In December 1984 a family of gorillas was found ranging near Djomba guard post. Three trackers were engaged to monitor their movements and since February the family has been followed intensively by C. Aveling and M. Catsis. The habituation of this family has progressed very rapidly and it is now possible to take small groups of visitors. The family ranges between the craters Rulinzargwe and Karuganda (see map) and once again spends much of the time within $\frac{1}{2}$ Km of the park boundary, although they also range up to $2\frac{1}{2}$ Km from the boundary. Unlike the Bukima sector, the terrain at Djomba is relatively flat (2100m asl), making it more suitable for tourism. As the vegetation in this sector is very dense, a grid-work of trails is currently being cut throughout the home range of this family. These trails have greatly speeded up access to and from the gorillas; 14 Km are planned initially of

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which 9 Km have already been completed. In July another family of gorillas moved into the area. An interaction between the two silverbacks resulted in the transfer of at least two adult females into the habituated group, and the latter now comprises the following individuals: 1 silverback, 6 adult females, 2 juveniles and 3 infants. If the unhabituated family (nest count varying between 8 and 10) continues to range in the Djomba area it would be ideally situated as a second group for the tourism programme.

Kabara/Kibati. A family with a nest count of 11 has been observed near Kabara gite in the saddle between Mikeno and Karisimbi, at an altitude of 3300 m asl. This family ranges too far from the park boundary to be accessible to most visitors, but remains a possibility for tourists if they were able to stay the night at Kabara. A smaller family of gorillas has been reported below Kabara near the Kibati guard post, but further details are not yet available.

A report by M. Catsis detailing the process and progress of habituation is appended - Annexe 2.

(b) Park access and visitor facilities.

Due to problems of access (see report Aug-Dec '84) and with gorilla habituation (extent of range, vegetation etc.) at Bukima, we are concentrating initially on the Djomba gorillas.

A small cabin to lodge six visitors is being built at Djomba guard post, together with a second cabin for the guards (replacing the temporary structures currently being used). FZS is providing the tin rooves at a cost of 450 dollars (U.S.) per roof. The planks and posts have now been sawn and construction started, after several delays.

All access roads to the park (see map Annexe 1) are in a very poor state of repair, and upgrading of certain key roads is necessary if tourism to gorillas is to reach its full potential. The road most urgently in need of upgrading is the route Rutshuru - Djomba - Rulinzargwe. This road has not been maintained properly for 15 years but is still passable because it has a rocky base. Minister for the Environment, Conservation and Tourism, Citoyen Njoli Balanga, has requested that the Office des Routes make an estimate and has promised funds from the "Fund for the Promotion of Tourism" (derived from a tax levied on hotels) to upgrade the road. Meanwhile the project and park authorities have sought assistance via the local administrative authorities from community labour (public service work is undertaken once a week by the whole community) to repair certain sections.

In the long term it would be advantageous to upgrade the scenic road which roughly follows the edge of the park from Rumangabo to Rulinzargwe, thus completing the circuit Rumangabo, Rutshuru, Djomba, Rumangabo. Funds for this will probably not be immediately forthcoming. Upgrading of the track A - B (see map) providing access to Bukima will also be necessary eventually.

1.ii Park management including anti-poaching

(a) Park vehicle - Rumangabo, PNV-Sud.

Despite an FZS investment of approximately 1,400 U.S.Dollars for the repair of the Rumangabo H.Q.'s Toyota Pick-up, this vehicle has continued to give many problems. Since repairs were started in October 1984 the vehicle has been on the road for a total of less than a month. In June C. Aveling requested the Parks Director (President Delegeue General, Mankoto ma Mbaelele) to transfer a one-year-old ISUZU pick-up from H.Q. in Kinshasa to Rumangabo and this was agreed on condition that this project could fund its transport by air to Goma. WWF contingency/counterpart

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funds totalling approximately 1,400 U.S.Dollars (unused due to delayed arrival of counterpart Suzuki) were used for the transport and minor repairs, and the vehicle has been in constant use by the parks service of PNV-Sud since its arrival in August. Citoyen Mankoto has also agreed that the Toyota be sold and the funds used in its repair recovered for use in other aspects of the project.

(b) Communications equipment.

An efficient communications network between guard posts and headquarters is essential for both coordination of gorilla monitoring/tourism and anti-poaching activities. The two project radios have now been installed at Rumangabo H.Q. and Djomba guard post, and both are powered by solar panels & sealed battery units. This was made possible by additional FZS equipment brought to Kivu in May by Dr. M. Borner of FZS Tanzania, namely a second solar panel, 2 batteries, regulator and antennae. Three Yaesu FT-180 H.F. radios and 2 solar panel/battery units, for use at the project leader's base and Bukima/Kabara, have been ordered by FZS. An extension of this core network is proposed for 1986 (see section 3.i).

(c) Ranger equipment.

In May Dr. Borner also brought a number of jackets and sleeping bags from FZS stock in Tanzania, for donation to the park. These were distributed to trackers and guards stationed at the Djomba and Bukima guard posts and working in the gorilla monitoring/habituation programme. FZS and WWF agreed to fund the re-equipment of the whole guard force of PNV-Sud and the following items of second-hand ex-army equipment have been ordered from suppliers in the U.K.:

Funded by FZS (total cost approx 8,700 U.S.D.)	- 300 trousers;
	150 shirts;
	150 pairs of boots;
	150 waterproof capes;
	150 jerseys;
Funded by WWF-US (total cost app. 4,500 U.S.D.)	- 100 rucksacks;
	120 jackets;
	110 sleeping bags.

The purchase and shipping of this equipment (through LIFELINE) has been affected by delays in acquisition of equipment for Garamba National Park, as the two orders are being combined for shipping purposes. The container should arrive in Zaire by December and hopefully the above equipment will be at the PNV before the end of the year.

(d) Rations for ranger patrols

Rations have been provided for regular 10-day patrols from Kabara gite and, with the incentive of a 2-Zaire bonus for every trap collected, many traps have been removed from the park. On several occasions gun fire from elephant poachers has been heard deep in the park near the border with Rwanda, and rations have been provided for emergency patrols when necessary.

During the report period 12 elephant are known to have been killed in the southern sector of PNV, of which 3 were in the gorilla sector. Elephant poaching generally in the PNV continues to be very serious and there is as yet little sign that the park authorities are making headway in the fight to combat it, despite occasional successes in arresting poachers and/or capturing their weapons and trophies. A close collaboration is maintained with the park authorities in Rwanda's adjoining Parc National des Volcans; there are regular exchanges of information regarding movement of poachers and incidents of poaching.

In August the Conservateur of PNV-Sud confiscated 2½ tons of ivory, originating in northern Zaire, when the trader transporting it to Bujumbura overturned his lorry in a ravine near Sake.

2. PROJECT MANAGEMENT - General

2.1 Vehicles

(a) Landrover 110.

The FZS Landrover 110 used by C. Aveling has required considerable maintenance during the report period, largely due to problems with the suspension. Since the start of the project it has accumulated over 50,000 Km, mostly over roads in a very poor state of repair.

(b) Suzuki jeeps.

The two Suzuki jeeps (one funded by WWF for counterpart use and the other by the Avelings for use by R. Aveling) arrived in Goma in April. They remained in customs in Goma until duty-free importation could be arranged in July. Local tax and insurance were obtained and the vehicles have been in service since then.

(c) Motorbike.

In May a one-year-old KTM 500cc motorbike for use by M. Catsis was purchased in Goma with funds from the Messerli Foundation.

2.ii Personnel

(a) Field Assistant.

M. Catsis joined the project in May as field assistant to work on gorilla habituation and tourism development in PNV-Sud (see section 1.i & Annexe 2).

(b) Counterpart.

Pending appointment of a counterpart the project has employed a young Zairois, Gapira wa Mutazimiza, university-educated and ex-IZCN, to work in tandem with C. Aveling. He has proved hard-working and honest and the Parks Director is currently considering his re-employment by IZCN and candidature for the counterpart post.

The Conservateur of PNV-Sud works closely with the project team and is in effect also a "counterpart". Dimoloyele ku Ngilima, Conservateur en Chef, returned from leave at the beginning of the report period.

2.iii Accommodation

(a) Field Assistant.

Since May M. Catsis has spent 2/3 of his time camping at the edge of the park (Djomba guard post) and the remainder with the Avelings. In July Conservateur Dimoloyele ku Ngilima made available a small house at Rumangabo for use as a base for the field assistant. Some minor repairs were necessary, and purchase of paint, cleaning materials and basic furniture/equipment, which are being provided with funds from both Messerli Foundation and FZS.

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(b) Project base.

The possibility of moving the project base from near Goma to near Rumangabo is being investigated. The Avelings have been offered use of a house on the Katala coffee plantations which has been uninhabited for 15 years, but which is ideally situated for the PNV, being 15 Km from Rumangabo and 35 Km from Djomba. An estimate of the cost of installing a water supply and making the house habitable is being arranged.

2.iv Meetings/Visitors.

(a) Kinshasa.

C. Aveling has been twice to Kinshasa during the report period, to discuss project developments with officials of the Ministry of the Environment, Conservation and Tourism and IZCN. During these visits he was able to obtain visas and visa renewals for project personnel and the necessary documents for duty-free importation of the vehicles. In May he took part in a meeting in Kinshasa arranged by the Ministry to discuss a plan for tourism development in Kivu/northern Zaire; the tourism aspects of the gorilla project attracted considerable interest.

(b) Rwanda.

Contact and collaboration with the "Mountain Gorilla Project" and park authorities in Rwanda have been maintained, as well as with other relevant projects (e.g. Belgian Cooperation Parks Project, USAID Regional Environmental Monitoring Project, NYZS forest survey/conservation project). In June C. Aveling attended a meeting in Kigali to discuss the draft management plan for the Parc National des Volcans.

(c) Kivu.

In March C. Aveling took part in a meeting arranged by the Minister of State for the Environment, Conservation and Tourism (Citoyen Njoli Balanga) at Rwindi. The problems and progress of the gorilla project were among the subjects reviewed and the Minister took several positive decisions relating to the project, such as authorisation for M. Catsis and upgrading of access roads to PNV-Sud.

In April Citoyen Mankoto ma Mbaelele (previously Scientific and Technical Director of IZCN and Advisor to the Minister) was appointed Director of IZCN - Président Délégué Général or PDG - by the President. In late August he made a 2-week tour of inspection of the PNV together with C. Aveling in the project Landrover. This included visits to the major stations of Rumangabo, Rwindi, Mutsora, Ishango and Lulimbi, and finally to the gorillas at Djomba. The visit of the Parks Director to a small outpost like Djomba has not occurred for many years and was an important boost for the guards stationed there.

(d) Visitors.

Project visitors during the report period included:

- Dr. M. & Mrs. M. Borner, Frankfurt Zoological Society, Tanzania;
- Dr. R. Malpas, WWF/IUCN Representative for Eastern Africa, Nairobi;
- Mr. S. Perkin, WWF/IUCN Projects Officer for Eastern Africa, Nairobi;
- Mr. P. Hetz, African Wildlife Foundation Project Development/Education Officer, Nairobi;
- Mr. J. Sayer, Senior Programme Advisor for Tropical Forests, IUCN Gland;
- Mr. P. Wachtel, Information/Public Relations Officer, WWF International, Gland;
- Dr. W. von Richter, Project Leader, GTZ/IUCN conservation project, Bukavu, Kivu, Zaire.../

3. PROJECT DEVELOPMENT

3.i Parc National des Virunga.

An expanded programme of assistance is proposed for PNW-Sud, and funding to support this is being sought from both FZS and WWF. (Such needs were anticipated when the project was set up and planned for as "Phase II" in the Project Document - proposals for additional technical assistance after study of the conservation problems).

A major problem of the whole park (including central and northern sectors) is communication. A once efficient infrastructure has been eroded by years of financial stringencies, but is vital if both anti-poaching and park development activities are to have any chance of success. To this end proposals include:

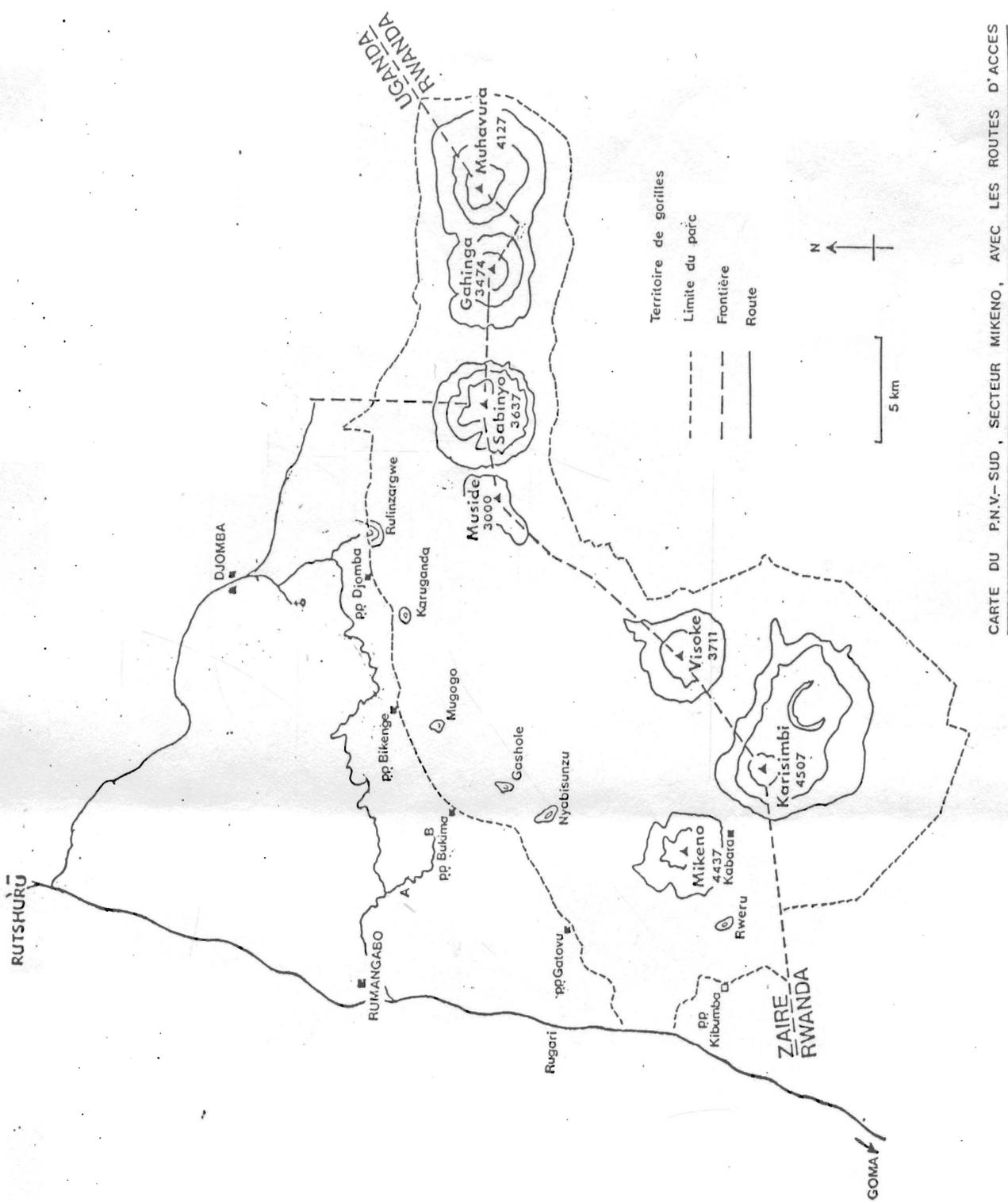
- expansion of the core network of self-contained radio systems (radios and sealed solar panel/battery units, a system developed with considerable success by FZS in Tanzania) for rapid communication between the parks regional H.Q. and outlying guard posts;
- construction of permanent guard posts to replace temporary structures at key areas of PNW-Sud;
- direct assistance for one or two years to the anti-poaching forces and park managers (provision of rations and fuel). Simultaneous development of controlled tourism with gorillas should generate enough park receipts to obviate the need for such direct assistance after this time.

3.ii Collaboration with GTZ/IZCN Project, Bukavu.

Coordination with the GTZ/IZCN project based in Bukavu is maintained through Dr. W. von Richter. Collaboration between the two projects is focusing in particular on improvement of gorilla protection in the 2 parks (guide training, gorilla visit systems etc.) and environmental education/public awareness. A joint environmental education programme is being prepared and funding sought along the lines of the summary paper submitted to WWF and appended as Annexe 3.

3.iii Other areas.

After the first year of operation in Kivu, the project team consider that gorilla conservation in eastern Zaire should concentrate on the two national parks already established for protection of gorillas - the southern sector of the Virunga National Park for G.gorilla beringei and the Kahuzi-Biega National Park for G.gorilla graueri. Given the political and economic realities of Zaire, there are enough problems in trying to maintain the integrity of the existing national parks, without overloading an already stretched system with creation of new protected areas. Both PNW (with the adjacent Rwandan sector) and PNK-B are large enough to support viable populations of the two races if their protection could be assured. However, as soon as other commitments allow, the project leader plans to investigate certain other areas where gorillas occur - starting with Mt. Tsiabieremu in the northern sector of the PNW.



CARTE DU P.N.V.-SUD, SECTEUR MIKENO, AVEC LES ROUTES D'ACCES

ANNEXE 1 - Map of Virunga National Park, southern sector, showing approximate home ranges of gorilla families being habituated for tourism, and access routes to the park.

Progress Report on the Habituation of Mountain Gorillas in the Virunga National Park - Southern Sector

Introduction

A group of Mountain Gorillas ranging in Neoboutonia forest at around 2200 metres a.s.l. has been followed daily since Feb. 1985 by trackers and PNVi guards stationed at the Djomba patrol post at the edge of the park (see map enclosed). The group had been visited intermittently since February by Dr. Conrad Aveling but at the end of May 1985 intensive visits were initiated by M.C. Catsis in order to habituate the group to a human presence leading eventually to daily visits by tourists.

Daily Routine

Each morning between 7:30 - 8:00 am the habituator leaves camp accompanied by a guard and a tracker to locate the gorillas. This is achieved by returning to the spot where the group had been left the previous day and following their tracks through the forest until their night nests are found. Gorillas make nests each night to sleep in and these nests are the source of important demographic data especially when unhabituated gorillas are being followed and not all the animals can be seen. Each nest is examined and the relative distance of each nest to the others is recorded and plotted diagrammatically and according to dung size the occupant of each nest - whether silverback, adult female, juvenile or infant - is also recorded. At this stage also trackers and guards are trained to identify age classes of gorillas according to dung size and the recording of such data. The trail is then followed from the nests to the actual position of the group. A contact is made with the gorillas and the group is then followed in close proximity for up to 2½ hours before returning to camp. The trail home is well marked for easy recognition for the next day's contact.

Habituation

The goal of gorilla habituation rests in gaining the confidence and trust of the group and, in the beginning particularly the silverback male leading the group, so that they will tolerate a close human presence without fear, behaving normally. This process is achieved on 2 levels;

1) The mere following of the group as closely as possible and as consistently as possible over as long as it takes for the goal to be achieved.

2) The process must be carried out with careful judgement based on a thorough knowledge of Mountain Gorilla social behaviour. Judgement is necessary to evaluate how best to cause least stress to the animals during the critical period of habituation through decisions concerning;

- how close to approach
- when to terminate a contact
- how to behave near the gorillas

All aspects of gorilla habituation are thoroughly explained and demonstrated to accompanying PNVi guards. Since the end of August the habituator has been accompanied during gorilla contacts by PNVi guards.

Group Composition

The composition of the group has changed since observations began in May. Up until the middle of July the group, according to nest counts, consisted of 1 silverback 4 adults - probably all females - and 2 infants. During July the group encountered another, previously unknown, group ranging in the same area and a series of interactions ensued; one observed on July 12 another on July 19.

These interactions caused considerable confusion while following trails and the Djomba group was lost for a period of 8 days putting work considerably behind schedule together with the resultant stress afterwards which resulted in the silverback being less approachable and more nervous than usual.

During gorilla interactions it is common for adult females, and sometimes accompanying juveniles, to transfer from one group to another. This occurred during the series of interactions as evidenced by the increased nest counts of our group. Average nest counts now reveal at least 12 animals and so far 12 animals have been positively identified, comprising one silverback, 6 adult females, 2 juveniles and 3 infants.

The New Group

The group which was encountered during the interactions had not previously been reported and was not found during the two recent censuses of the Virunga population (Aveling and Harcourt; 1981, Weber and Vedder; 1983).

After the interactions an attempt was made to follow the new group on a daily basis. This was initiated but the group was soon lost due to inexperience of trackers and guards from the nearby patrol post of Bikenge (see map enclosed). On August 15, however, a fresh trail was discovered on returning from the Djomba group and was followed leading to, what is assumed to be, the new group. The trail was backtracked to the night nests and a count was made revealing the composition to be; one silverback, 7 adults, one juvenile and one infant. Since this time the group has been regularly followed by a team of 3 trackers alternating every 5 days as is the case with the Djomba group. It is hoped eventually to habituate this new group for tourism if they remain within our area.

Home Range and Ecology of the Djomba and New Groups.

The approximate ranges of these two groups broadly overlap each other as indicated on the accompanying map. The Djomba group's range is fairly well delineated by the two volcanic craters, Rulinzargwe and Karuganda lying near the edge of the park (see map). They range within the park to between 1½-2 km staying generally within the thickly understoried and sparsely wooded Neoboutonia forest which forms a plateau before breaking into Arundinaria bamboo forest at higher elevations.

The diet of these gorillas should prove to be of considerable interest as, so far, all studies of Mountain Gorilla ecology have been carried out at the Karisoke Research Centre in Rwanda which is at considerably higher altitude, the study groups ranging between 2700 - 3700 m a.s.l.. Here the main food items are a vine Galium ruwenzoriense the thistle Carduus afromontanus and wild celery, Peucedanum spp along with the pith and stems of various tree species. At a lower altitude of 2200 m the forest is of a very different nature and these species are either not present or in much reduced abundance. The Djomba gorillas feed more on vines and various herbaceous species which have yet to be identified as well as the pith of the tree Vernonia adolfo-frederici. There seems to be a marked seasonal shift in diet coinciding with the fruiting of various tree species, something not shown at higher altitudes where little fruit is available. In June and July the Djomba gorillas made considerable movements in search of fruiting trees especially in the region of Rulinzargwe where a number of tree species occur on the heavily wooded crater slopes not found elsewhere in the forest, among these Myrianthus holstii.

More detailed collections of plant food items will be carried out during the course of the project for identification, a task facilitated by the gradual increase in ease of observation of the gorillas during the habituation process.

Progress and Tourism

After the period of instability following the series of interactions (see above) the gorillas have become noticeably more approachable within the last 3 weeks. The silverback has become much less nervous and is calm now within 5 m of the habituator, feeding normally. The adult females, 3 of whom have young infants - 1-2 year olds) are still wary of humans in close proximity but are, however, very curious; an important step in the habituation process. The young infants and juveniles show a very marked degree of curiosity and an apparent lack of fear of a human presence, readily climbing into trees within 5m to gaze at the habituator.

It is felt that the Djomba group is now ready for controlled visits of two tourists at a time; indeed a necessary part of the process. These visits will build up to a maximum of 6 tourists per visit per day when the gorillas are felt to be ready.

M.C.Catsis 10 sept 1985

Background. Two assistance projects are currently working with IZCN (Zaire Institute for Nature Conservation) in eastern Zaire, to improve prospects for conservation of gorillas and their forest habitat. WWF/IUCN Project 1941 (FZS Project 966/83) is centering activities on the Virunga Volcanoes National Park and its population of mountain gorillas (*Gorilla gorilla beringei*). GTZ Project PN 82.2130.1 is basing development of a regional conservation strategy from Kahuzi-Biega National Park with its population of eastern lowland gorillas (*G. gorilla graueri*). Both projects have provision in their statutes for environmental education work, and project personnel have agreed to combine resources and expertise to develop a cooperative environmental education programme in Kivu region. The programme is viewed as an extension of the existing projects and not as a new project in itself.

Proposed programme (summary).

1. Title. Environmental Education in Eastern Zaire.

2. Originators. Dr. C. & R. Aveling, FZS Project 966/83, WWF/IUCN Project 1941 (B.P. 106, Goma, Kivu, Rep. du Zaire); Dr. W. von Richter, GTZ Project PN 82.2130.1 (B.P. 852, Bukavu, Kivu, Rep. du Zaire).

3. Personnel. - Environmental education expert for 2 year period (to be appointed and funded by the project);
 - 2 Zairois counterparts with experience of practical conservation (to be appointed and funded by IZCN);
 - 2 Zairois counterparts with scientific training/teaching experience (to be appointed and funded by the project).
 - R. Aveling to assist with coordination, liaison and programme development.

4. Timing. Planning and preparation to start immediately. Programme to start operation in mid-1986, with appointment of personnel and arrival of vehicles.

5. Funding. - WWF (requested): Major running costs (vehicle operation, personnel allowances, materials) of the programme are being sought from WWF according to the attached budget estimate. Confirmation of the commitments of GTZ and IZCN will depend on allocation of WWF funding.

- GTZ (agreed, subject to confirmation): Two 4-wheel drive vehicles (Landrovers or Toyotas) fully equipped with audio-visual equipment by the International Centre for Conservation Education (ICCE). Funding (to be agreed) for training of Zairois personnel (study visits to other education projects etc.).

- IZCN (agreed, subject to confirmation): Two counterparts from within IZCN service. Accommodation for project personnel at Rumangabo & Bukavu.

In addition to the above organisations the programme includes a commitment from FZS (involvement of R. Aveling and some logistic support to the programme team). Involvement of AWF would also be sought, particularly the organisation's expertise in materials production and cooperation with AWF's education programme in Rwanda.

Programme implementation.

(a) Target groups. Primary target group to be the populations around the two parks, with particular concentration on the local traditional leaders. Secondary target group to be middle/high schools, with possible development of wildlife clubs. Both initiating projects work closely with government officers of all levels from park and administrative services and related disciplines. This would continue with the education programme team, thus 'decision makers' are not isolated as a specific target group. The team would retain flexibility to reassess and redirect the approach during the course of the programme.

(b) Programme operation. Two counterparts and one vehicle would be based at Rumangabo (Virungas) and the others at Bukavu (Kahuzi-Biega). The environmental education expert would work with both teams, directing the approach in the initial stages, training the counterparts in techniques and developing materials. Throughout, attempts to seek and foster local support will be made with a view to the future of the programme after external support ceases.

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Env. Ed. Eastern Zaire

Budget estimate: funds requested from WWF (U.S. Dollars):

	1986-87	1987-88
Vehicle operation (fuel and maintenance for two vehicles)	14,000	16,000
Education expert salary	12,000	12,000
Materials	4,000	6,000
Counterpart allowances	3,000	4,000
	<hr/>	<hr/>
	33,000	38,000

(Note: funding to commence mid-1986 and be provided through existing channels to project 1941).

R.J. Aveling
Goma 29.8.85