

# The Mountain Gorilla Project:

## Progress Report No. 6

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Photograph by C. and R. Aveling.

The Mountain Gorilla Project (MGP) has now been running in the field for over five years. This report covers its activities between November 1982 and February 1984 and also considers what has been achieved so far and what has still to be done. A review is timely for we are approaching a critical point in the evolution of the project. The author has been employed by ffPS as the MGP Field Officer in Rwanda for the past two-and-a-half years.

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Regular readers of *Oryx* will know that the MGP is devoted to the conservation of the mountain gorilla *Gorilla gorilla beringei* in the Parc National des Volcans, Rwanda. This park contains about half of the 250 gorillas in the Virungas, the chain of inactive volcanoes on the Rwanda-Zaire-Uganda border that is the stronghold of the subspecies. Another 115 are found in the Bwindi (Impenetrable) Forest in Uganda, which is now cut off from the Virunga population by a barrier of cultivated land, and these two groups, totalling 360–370 animals, constitute the world mountain gorilla population. The project was initiated when it became obvious that the gorillas

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were in danger of becoming extinct if no concerted action was taken to protect them. The African Wildlife Foundation, People's Trust for Endangered Species and World Wildlife Fund soon joined ffPS to form a consortium to assist L'Office Rwandais du Tourisme et Parcs Nationaux (ORTPN) in its efforts to ensure the survival of these remarkable animals. Apart from working in close collaboration with ORTPN under a formal agreement with the Rwandan Government, the project also has close ties with the Cooperation Belgo-Rwandais and Karisoke Research Station, particularly under the recent directorships of Dr A.H. Harcourt and Dr Richard Barnes.

The MGP consists of three integrated lines of work; park protection, tourism development and conservation education. Before describing them, separately for convenience, it is important to look at the background to the particularly acute problems of conserving the park and its gorillas.

Rwanda is one of the poorest countries in Africa and possesses few natural resources. It is a small country and, at 258 people per sq km, has one of the highest population densities in the continent, while the region around the park supports the highest population density in the country. At 356 people per sq km it is almost equivalent to that found on the outskirts of a European town and is increasing by almost 4 per cent per year. Land is needed to produce cash crops for export to bolster the economy and to support the small-holding farmers who constitute 95 per cent of Rwanda's people. Each year more and more marginal land goes under the hoe, even at the expense of pasturage for the highly-esteemed cattle, and people tend to look at the park as a potential area for new agricultural expansion. Intensive cultivation means less room for trees and bamboo, so people tend to forage for their fuel and construction materials in the protected forest. Poverty means that people cannot purchase meat from domesticated stock so there is a ready market for poached animals and a reservoir of people prepared to take risks to gain an income by this means. Furthermore, traditional views are those of the cultivator; if no one has planted the trees, reared the animals or tilled the land, then these resources belong to no one and can be exploited by anyone. The idea that the forest and its wild-

life, including the gorilla, is of much importance does not come easily. Instead the park appears to be kept as some sort of strange amusement area for white foreigners rather than for any 'good' use. This view in combination with the demographic problems puts a heavy pressure on the park and sets the context within which the MGP must work. Gorilla conservation is no simple affair and there is no simple formula for success. Instead, one has to work on several fronts at once, each with its own ramifications, and take full account of the harsh realities of the region if the effort is to be both appropriate and successful.

### Park protection

The gorillas must be protected from attack by poachers, and their habitat from degradation by woodcutters and encroaching cultivators. This is fundamental, but the PNV does pose special problems: it is on the international border so poachers can come from Rwanda, Zaïre or Uganda and can also, if necessary, take refuge over the border if pursued. Furthermore, the park has a boundary over 60 km long, but it is less than 2 km deep in some places, and there are some 42,000 people living within 2000 m of its periphery. This means that the small proportion among these people who are poachers still adds up to a respectable figure. They can easily reach and penetrate deep into the park, while the dense vegetation and broken terrain makes the job of catching them difficult.

Although the MGP project staff involve themselves directly by leading special patrols to cover areas suffering from especially severe problems, their main task is to help ORTPN itself to do the work. The MGP continually suggests improvements to the patrolling system to make the best use of the available men and their time. There are now five patrols in the field on any given day, covering the whole of the park, but concentrating on those areas with the greatest numbers of gorillas. The project encourages good work by paying rewards for every poacher and woodcutter caught, and every item of poacher's equipment confiscated, while also playing an important part in overseeing the guards to make sure the patrols are in the right place at the right time with the right complement of men. So the

guards can operate effectively the project has also provided uniforms, replacing them twice as the old stock wore out, tents, sleeping bags, rucksacks, waterproof clothing and other gear. In 1983 it gave boots to every man, binoculars to the guides, and yet more tents and sleeping bags.

Many thousands of traps, each one a potential gorilla killer, have been taken from the home-ranges of the gorilla groups and numerous poachers and woodcutters have been caught and had their equipment confiscated. Several thousand snares were again taken in 1983 and, with constant effort, the level of trapping in the central area of the park has been reduced over the years. In one patrolling area, for example, the average trap-take fell from 22 per patrolling day in January to only one in November. This is encouraging but there is no room for complacency as any relaxation in effort results in an immediate resurgence of poaching activity. Two infant gorillas in one tourist gorilla group, one in a research group and a sub-adult in another tourist group have been caught in traps since November 1982, whilst yet another infant had to be anaesthetised to remove a trap. Removing these traps is a delicate job and highly disturbing for the gorilla group, but is absolutely necessary for the wire snares cut deeply into the flesh and if they are not taken off the wound becomes gangrenous. If the animal is fortunate it will only suffer mutilation (two gorillas in one tourist group lack hands) but the usual result is blood-poisoning and death.

These traps, although lethal for gorillas, are set to catch antelope but we also have the problem of deliberate poaching of the gorillas themselves. There was an outbreak of attacks in late 1982 and early 1983 during which we estimate that at least 12 gorillas were lost to the wild population in Zaïre and Rwanda. The first incident took place in November 1982 on the Mudakama group, at that time under the surveillance of the Karisoke Research Centre, in which the dominant male was killed and a two-week-old infant was captured. An ORTPN patrol intercepted the poachers before they could leave the park and recovered the infant, which was hand-reared by the MGP until its sudden death from dysentery in March 1983. In January 1984 ORTPN raided a house and recaptured another infant gorilla, which had probably been caught in Zaïre. MGP

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staff member Mark Condiotti nursed it back to health and had almost succeeded in reintroducing it into a free-living gorilla family when the infant, which had become accustomed to eating virtually anything while in the hands of the poachers, apparently poisoned itself with a fungus. We also heard of another infant which had died while being held by poachers in Zaïre and then a fourth one surfaced in Burundi, which has no gorillas of its own, and was bought by Antwerp Zoo. One dominant male gorilla must have been killed for each infant caught, and in most cases the mother too. The infants themselves were lost to the wild and more infants must have died in the social readjustments following the deaths of the group leaders. One definitely died when the Mudakama group amalgamated with the neighbouring Susa group. Twelve lost gorillas is a minimal estimate.

More recently there was another attack on an irregularly monitored group in the PNV on Sabyinyo and even now there are rumours of a gorilla being held in captivity somewhere in the region. A man was denounced by his wife, and a box, which was almost certainly to house the animal, was found buried on his property. Judging by the state of the infants when they are recovered, such treatment is commonplace but in this instance the wife retracted her statement and, with no gorilla as proof, the case had to be dropped.

It is impossible to say if the attacks on gorilla groups are increasing or if they were always occurring at the present level of intensity and that we are now simply exposing the true scale of the problem. The MGP is certainly now monitoring more gorilla groups and can thus swiftly detect when attacks take place and ORTPN is becoming really effective in identifying and taking action against the perpetrators. What is certain, though, is that at least a proportion of the captured infants is destined for zoos and that while there is a demand there will be no shortage of people willing to poach them. This problem is going to remain with us until there is stricter control in the international trade in wild animals.

One can say that, five years into the project, the fight against poaching is in full swing. The situation has improved and if ORTPN and the MGP

keep up the pressure, the problem can be contained. Mere containment is not adequate though; the anti-poaching effort must be extended to give proper coverage to the extremities of the park and free large areas of under-utilised gorilla habitat from excessive disturbance. Control over the guards in the field must be improved considerably, there is a need for more men and provision has to be made for better training. There is going to have to be a lot of hard grinding work before anyone can say that poaching is not *the* major cause of concern.

## Tourism

Like any poor country, Rwanda must make the best use, in economic terms, of all of its natural resources, including its land. The gorillas and the park must compete with all other possible land uses and, even with the best will in the world, aesthetic arguments for their conservation carry little weight on their own. This is why, between 1968 and 1978 and before the MGP started, over half the park was taken to provide land for an agricultural scheme producing pyrethrum for export. This land was good gorilla habitat and, without intervention, the process would have repeated itself until the park was gone. Tourism was the means by which the project permitted the gorillas to pay for their keep.

Tourism depends upon the visitors being able to see the gorillas. Because of the dense undergrowth the gorillas must be habituated to tolerate people at very close range. The technique was first developed for research, but found a very useful application in tourist development. Gorilla-visiting is, however, a highly specialised affair, which requires firm control if it is to work. The number of visitors is restricted to six, staying with the gorillas for one hour only. The visit is cut short if the visitors do not follow instructions on how to behave or if the gorillas are nervous for any reason. Children are only permitted to visit one particular group. The idea is that the visitors see the gorillas going about their daily lives without interference and experience shows that this aim has been achieved. We can see no differences between the tourist groups and the research or monitored groups, in their composition, ranging behaviour, birth-rate, frequency of interactions

with other groups or frequency of movements of individuals into or out of the families, that could be attributed to the presence of paying visitors.

Between 1978 and 1982 the MGP habituated three gorilla groups for tourism and trained specialist gorilla guides. In 1983 we habituated a fourth, the Susa group, which is the largest under constant surveillance, with 20 members including two silver-back males. Visits to Susa group began in December with a quota of two tourists a day, to be built up gradually to six as time goes by. As Susa group is difficult to reach and the visit takes two days, we have also set up a camp with a permanent hut to accommodate tourists.

Tourists also come to hike in the volcanoes and the project has provided tents for overnight visits, a hut on Karisimbi (the highest volcano in the park) and radios to co-ordinate tourist management, but which also serve for communications in general. In 1983 we provided new, more spacious tents, obtained first-aid equipment and continued to update and improve information material. The MGP collaborates with ORTPN in the general oversight of park visitors, although financial policy, the gorilla-visit reservation system and tourist reception at the park headquarters are the responsibility of ORTPN alone. The project produces a variety of goods such as car stickers, posters and brochures, which are passed on to ORTPN for resale or offered direct to visitors to offset our running costs.

Tourism development has been the project's greatest success so far, with visitor numbers and park income increasing every year. There were 4784 tourists in 1983, 3959 of whom saw the gorillas, which represents an increase of 30 per cent and 16 per cent respectively over 1982. Income stood at F.Rw 11 million (£78,000), an elevenfold increase since the start of the project, which has turned the financial situation around so that the PNV, once a loss-maker, is now paying for itself. From being totally overshadowed by its sister park, the Akagera, the PNV is now the bigger earner and, furthermore, the gorillas have become Rwanda's big tourist attraction. Tourism is one of Rwanda's top three foreign currency earners and the gorillas support the industry on a national scale, so achieving special status as a major prop of the country's economy. Thus MGP

is more than an orthodox wildlife conservation project: it has become an important national economic development programme.

There have been no apparent ill-effects to the gorillas from tourism as it is now practised; indeed, there have been crucial benefits. The tourist groups are checked every day so that any problems, such as an infant picking up a snare, can be dealt with swiftly. The poachers know that these groups are watched closely so there is somewhat less antelope poaching and, to date, no direct attacks in their ranges. Because the gorillas have become a valuable national asset there have been no new land acquisitions at the expense of the park and none, according to visiting experts, would be supported by the major international development agencies. As a result there is a higher survival of young gorillas, giving 17 per cent more infants and juveniles in the tourist and closely monitored research groups as against those groups which are not watched so closely. The savage decline in the Virunga gorilla population has been arrested on the Rwandan side of the border and the habitat is no longer being eroded: the pre-conditions have been met for a population expansion in numbers and into those areas from which the animals have been largely excluded over the past 20 years or so.

Nevertheless, the success of tourist development in the PNV brings new problems in its train. The demand for places on the gorilla visits is now far greater than the supply. By February 1984 all the places for the coming July, August and September have been booked and some companies are reserving one year in advance. Demand is growing despite a fee of over £30 for an hour with the animals and many people coming this year without reservations will have to be turned away disappointed. There are no more gorilla groups suitable for habituation for tourism to relieve the pressure, the visiting system must not be relaxed and the system is showing signs of strain. The new park bureau, built with the assistance of the Co-operation Belgo-Rwandais and nearing completion, should improve visitor reception, but the main problem, from a conservation management point of view, lies in overbookings and illegal visiting of the gorillas. These threaten the well-being of the animals and strike at the economic foundation of the park so the MGP's role is

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Tourists with an habituated gorilla group (*Ian Redmond*).

changing from one of tourist development and promotion to collaboration with ORTPN in day-to-day tourist management. The level of management expertise has to be extraordinarily high to properly handle gorilla visits and even hiking on the delicate alpine vegetation. The new asphalt road now being built between Kigali and Ruhengeri will soon be bringing more weekend visitors than we have at present, further increasing the need for rigorous organisation. There is still much work for the MGP before the park staff are fully capable of handling all the facets of tourist management smoothly and without aid, especially during peak visiting periods.

## Conservation education

Revenue from tourism benefits the Rwandan Government, but, with the exception of the relatively small number of people who find permanent or temporary work in the PNV, does not directly affect the mass of the people living in the region. Yet it is among these people, still holding to largely traditional opinions and way of life, that many of the pressures on the park arise. To protect the park and the gorillas the MGP works to promote sufficient awareness of their value so that the people will respect the park.

This part of the project addresses an immediate need but we must also look to the future, not only

of the gorillas and their fragile montane habitat, but also of the wildlife and wild places of the country in general. This lies in the hands of today's school children, particularly of the secondary school children from amongst whom the next generation of influential members of Rwandan society will be drawn. The second part of the conservation education programme, Nature et Environnement au Rwanda or NATENRWA, works at this level from its base in Kigali.

The conservation education work around the park periphery was the major initiative of 1983. The donation of a new Suzuki jeep by AWF (to join the other seven motorbikes and vehicles given to ORTPN and the MGP field staff by the consortium organisations over the years) was the crucial factor in setting the programme off for it provided the necessary mobility. The aim is to promote general awareness of the natural environment and the value of the park rather than, at this stage at least, to educate in depth. The target groups in the local population are the local administrators, professionals such as forestry, medical and agricultural extension workers and the primary school teachers. The primary school children and the adult population can be reached through these people, although we also work with them directly. We organise visits to the park, create nature clubs in the primary schools and hold open-air film shows. We emphasise the importance of the gorillas to the country through tourist revenues, which eventually benefit the local people through governmental provision of services, and the direct benefit to the people from the value of the park for the conservation of water supplies serving the region.

Encouraging visits to the park by providing transport and assisting with the logistics of the trips have resulted in 400 Rwandans going on guided hikes in 1983, double the number visiting the park in 1982, which was itself an increase over 1981. In the first two months of 1984 there were 200 more Rwandan visitors. Gorilla visits are more difficult to arrange as they must be fitted into the tourist trips and the limits in numbers must be maintained. Nevertheless, we have enabled 65 local children and teachers to see the gorillas for the first time. The park visits provide an opportunity to explain the function of the park but the

clubs allow a more detailed study of the environment. There are four clubs at present, with 100 members, and all have visited the park as well as other areas such as Gishwati, where they can see what happens when a forest is not protected. They have also set up trial potato plots to test different varieties (for if land cannot be taken from the park, that already under cultivation must be used more intensively), looked at different forms of erosion and looked at traditional medicinal uses of plants found in the forest, which has led to discussions on the park as a reservoir of wild genetic resources. So far each club has followed approximately the same sequence of activities, but they are encouraged to suggest new ones that the club members would like to undertake. Our job is to enable them to follow their own interests, so long as they stay within the realm of environmental education and we have the opportunity to stress the value of the gorillas.

The evening film shows are open to everyone. We replace the French or English commentaries with one in Kinyarwanda given over a loud-hailer, which permits us to slant the speech towards areas of local interest as well as making the whole thing comprehensible to the audience. So far we have given 14 shows in four of the six communes bordering the park, with a total audience of around 10,000.

It is difficult and too early to judge the effectiveness of the conservation education work, but the signs are encouraging. The people enjoy the shows and the park visits and become more well-disposed towards the conservation effort, which creates a better atmosphere in which to work. The films usually end with public exhortations by the local administrators over the public-address system to support the park and protect the gorillas. Requests for shows, park visits and new clubs are coming in, which is evidence of the interest the work is arousing.

The NATENRWA programme is based in the Ministry of Education and is staffed by a full-time MGP worker and a part-time Rwandan counterpart. This programme uses the same methods as the work on the park periphery, but over the whole country and especially around the Akagera park and Nyungwe forest. It concentrates on the secondary schools where 12 clubs have been

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created, but also organises seminars, produces environmental education materials and a bulletin, and runs competitions on a national scale. Its greatest achievement to date has been to have environmental education included in the school syllabus so that all secondary school pupils have at least a grounding in the subject.

Both aspects of the conservation education programme must be developed further if they are really to make the impact they are capable of achieving. NATENRWA has a staff of two, one rather decrepit vehicle and a single set of audio-visual equipment to cover the entire country. The work on the periphery of the PNV is handled by one MGP staff member who works part-time on that part of the project and a volunteer Rwandan primary school teacher who is vital to the success of the work and devotes his spare time to it. All the equipment, with the exception of a slide projector and accessories recently given by the Elsa Wild Animal Appeal, is borrowed from NATENRWA as and when it is available, while costs, particularly for the hire of vehicles for park visits, are high. We have managed to cover a lot of ground in a short time but have gone as far as present resources permit; there are around 200,000 people living within 15 km of the park edge and we are going to have to expand if we are to make any sort of lasting impression upon them.

## Summing up

The MGP has been a highly successful project that has been instrumental in turning an apparently hopeless situation around to one where the future of the mountain gorilla hangs in the balance. The loss of habitat has been stopped, the decline in the gorilla population in Rwanda has also been checked, the stage is set for a population increase and the park is profitable. At the same time poaching is still at an intolerable level, there are new problems created by over-demand from tourism and the conservation education work is still in its early stages. In the background the basic problems of over-population and a galloping growth rate remain unchanged,

although their consequences for the park are, in my view, no longer inevitable. The park is, after all, reduced to a very small area, which could support, if given over entirely to agriculture, a number of people representing the equivalent of only four-months' worth of population increase over the country as a whole. It is the best land-use, both environmentally and economically, of this steeply sloping high-altitude area and is already an important contributor to the national finances. It could give land to provide a marginal living to some 65,000 people at the very outside, assuming they cultivate to the peak of Karisimbi, which is patently impossible, but if this were to happen it would jeopardise the water supplies serving seven to eight times that many people. All this adds up to a very strong case for conserving the park even if the population pressure on it increases enormously, and the conservation education programme is in place to drive that very point home at every opportunity.

The situation is better than it was but it is still not good, and the object of the project, to ensure the survival of the mountain gorilla, is not yet attained. Five years into the project we are at a critical juncture and the most important thing is to keep the MGP in place in the field. If the MGP stops, the gorillas are still likely to be lost and we will have given them only a temporary reprieve, while if we stay longer they have a chance of survival. But to do our job properly and gain lasting results we have to expand on all three programmes and more attention has to be given to forward planning to get ahead in the race rather than simply react to immediate needs on an *ad hoc* basis. There is also work to be done in Zaïre to cover the other half of the Virunga gorilla population. All this will need continued public support channelled through the MGP parent organisations, for the real work of conserving the mountain gorilla for the pleasure and profit of future generations is only just beginning.

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