

# Gorilla Re-Introduction in Gabon

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The western gorilla (*gorilla gorilla gorilla*) continues to decline in the wild, and has recently been moved to the 'Critically Endangered' class of the IUCN 'red list' of species threatened with extinction. To date, the only programme concerning the reintroduction of gorillas is that of the UK-based charity, The Aspinall Foundation, which runs two western gorilla reintroduction projects in the neighbouring Republics of Congo and Gabon in collaboration with the respective national governments. Both projects are part of the Projet Protection des Gorilles (PPG), and are founder members of the Pan-African Sanctuary Alliance (PASA). The principal aim of the reintroduction programme is to re-establish viable, self-sustaining populations of western gorillas in the wild, within the former range of the species. We have recently compiled a comprehensive and fully-referenced report presenting the most complete analysis to-date of the preparations, release and initial results of the western gorilla reintroduction programme to the Batéké Plateau National Park in Gabon (Pearson et al. 2007). The report was structured based on the recently published IUCN best-practice guidelines for the reintroduction of great apes. The full report is available on request from The Aspinall Foundation; here we try to summarise some of the major points arising from that report.

Release site: the Batéké Plateau National Park. Eight conditions were considered during the process of site selection in Gabon: a) habitat; b) surface area; c) legal status and management potential; d) isolation from human populations; e) isolation from wild gorillas; f) access; g) presence of an indigenous fauna; and h) the possibility of the project to survive national unrest. The Mpassa region, located in the unique Batéké Plateau region of southeast Gabon, was found to be the most appropriate for the proposed reintroduction project, fulfilling all the identified criteria. The site has subsequently been incorporated into the Batéké Plateau National Park (PNPB), created in 2002, which is now managed in partnership with the Gabonese government and the Wildlife

Conservation Society (WCS). The specific release site, along the Mpassa River, was chosen as no signs of wild gorillas were found during ground surveys, with the nearest wild gorillas separated from the reintroduced population by over 20 km, and by several ecological barriers. Indigenous mammals include elephant, buffalo, water chevrotain, sitatunga, various forest duikers, the savanna-dwelling Grimm's duiker, side-striped jackal, leopard, moustached monkeys, and some chimpanzees. The area also supports a unique diversity of savanna and forest birds found nowhere else in Gabon.

The socio-economic situation of the surrounding area is highly complicated, and requires constant attention. The majority of the hunters who previously utilised the PNPB originate from Congo, rather than Gabon. Hunting intensity throughout the park (especially by Congolese arriving from the east) decreased dramatically between 2000 and 2004, and has since been maintained at a fairly stable level, estimated at 20% to 40% of levels pre-2000. This decrease has been due to three major factors: a) the presence of the PPG camp and activities in the heart of the PNPB; b) the monitoring and anti-poaching programme initiated by PPG which has developed into a joint programme between PPG, the Gabonese Government, and WCS; and c) repeated awareness missions within Congolese



Elephants are just one of the novel experiences the gorillas have to learn to live with.

Photo courtesy of Paul Aczel.

villages to the east of the PNPB. The development of an integrated and participatory approach to sustainable development and natural resource management across the whole region remains a major challenge, but this is widely understood by all stakeholders, including the local populations, and progress is being made on both sides of the Gabon-Congo border.

Release stock: The release stock is made up principally of wild-born orphans of the illegal bush-meat trade, mostly from eastern Gabon but also from elsewhere in Gabon. Some orphans arrive in a terrible physical and/or mental condition, and require an intensive stabilisation phase, with the primary aim simply to ensure their survival through medical and psychological treatment. Data

from PPG Congo show that this critical initial period of stabilisation generally lasts up to two months following arrival, after which probability of survival is greatly increased and rehabilitation to independence can become the priority (King et al. 2005). Only those individuals that survive the initial two-month stabilisation phase are then considered for inclusion in the long rehabilitation and reintroduction process, which follows methods developed by PPG through years of experience in both Gabon and Congo. The wild-born release stock is completed by a small number of hand-reared ex-situ captive-borns

transferred from the highly successful captive-breeding colony at Howletts and Port Lympne in the UK. Health risk assessments within the PPG projects have historically been qualitative, although the relative importance of different diseases identified through such assessments has naturally impacted the evolution of the related health management plans. In addition to standard diseases, a major risk to the health of the gorillas has been identified as psychological stress or depression, and in combination with other health issues has often led to mortality. Having recognised stress as one of the major health risks to the species, the management of stress has since become an integral part of PPG health management planning.

**Soft release process:** Gorillas that survive the initial period of quarantine and stabilisation following arrival at PPG (therefore entering the reintroduction programme), then undertake a lengthy period of preparation prior to final release. At PPG-Gabon, the longest pre-release phase is the soft release process. Lasting an average of 15 months, this process begins following transfer to the final release site, when all or some group members sleep in night enclosures, and are accompanied daily in the forest. The primary aim of the soft release process is a gradual adjustment to the release site while ensuring group cohesion and safety from accidents and predators. It is a complex process that includes aspects such as psychological support, social integration, forest adaptation, behavioural and health assessments, and occasional medical interventions. The soft release process ends at full release, which we define as the last date that one or more of the group spends the night in a cage. It is after this date that group



Lekedi with Okeli - the first baby born within the reintroduced population, in October 2007. Photos courtesy of Vially Ognele.

ranging can become independent of cage location, although supplementary feeding and post-release monitoring may continue to impact group behaviour.

Two groups have undergone the rehabilitation and soft release process at PPG-Gabon, consisting of a total of 29 gorillas, comprising 20 wild-born and 9 captive-born individuals. To date, rehabilitation for future release has only been attempted with wild-born orphans arriving aged no more than 4.5 years, and usually less than 2 years. Only three mortalities have been recorded during this phase at PPG-Gabon. The remaining gorillas have all progressed to develop the survival-critical behaviours required for release.

**Post-release monitoring** of the released groups has been facilitated by the development of an extensive trail system within the release site, with each trail named and features marked at regular intervals to allow precise description of locations. Monitoring post-release has been initially intensive, and gradually reduced over many months. Daily supplementary feeding with reconstituted milk continued for 23 and 16 months for the two groups respectively, with the concentration and quantity given depending on the age of each group member, and the frequency being reduced gradually over time. Monitoring teams, usually of two to four staff members, would initially spend much of each day with the group, in a similar manner to during the soft-release phase. With time, the amount of time spent with the gorillas each day was reduced until the post-release monitoring consisted of locating each group (directly or indirectly) on a daily or even weekly basis, and of noting group composition and

general health when possible. Staff observations were noted on record sheets at the camp, and daily locations were plotted in a geo-referenced database. Post-release veterinary intervention continued when possible and if deemed necessary.

Following the long soft-release process described earlier, a total of 26 (12.14) gorillas have been released within the PNPB, in two groups consisting of 17 (in Jan. 2001) and 9 (in Aug. 2004) individuals. Two of these have died post-release (both males), and two others have disappeared, presumed dead (both females). Overall confirmed survival is therefore 85% after three years post-release, and is almost identical for wild-born (84%) and captive-born (86%) individuals. After the first year or so post-release, annual and cumulative forest area within the home ranges of both groups has increased slowly but gradually, to a cumulative total of 5.6 and 1.4 km<sup>2</sup> for each group as at April 2007. Although the home-ranges for the two released groups were initially separated by a small river, both groups have now crossed the river on numerous occasions to spend brief periods of time within the core home-range of the other group. This has resulted in the two groups being located in the same zone of the reintroduction site on a number of occasions since September 2004. It is unclear how often this proximity has led to intergroup encounters. Minor injuries have been observed following probable encounters, but it is unknown whether these were caused by intra- or inter-group relations. The reintroduced groups have been observed to utilise over 50 species of plants as food items.

As has been observed in wild western gorilla populations, the reintroduced groups feed greatly on fruit when it is available, while in periods of low fruit availability they eat higher quantities of non-fruit items, particularly low terrestrial vegetation of the Marantaceae, Zingiberaceae and Commelinaceae families, but also flowers, bark and even sap. This is also reflected by preliminary analysis of activity budgets of the first released group, which show that during the dry season (when fruit availability is low), the released gorillas were found to spend more time feed-

ing, and more feeding-time on the ground, than during the wet season (when fruit availability is higher).

With most of the release stock only recently reaching adulthood or still immature, there has been one baby born to-date within the released groups, with most of the release stock only recently reaching adulthood or still immature. The baby was observed for the first time on October 5, 2007, during regular post-release monitoring. The mother is the second-eldest female in the population (Lekedi), aged 10.2 years at the time of the birth. The identity of the father will only be established through future genetic paternity testing. The baby has been named 'Okeli', meaning 'stream that leads to bigger things.'

**Conclusions:** Ten years since the conception of PPG-Gabon, and seven since the first release, the ambitious programme to reintroduce the critically endangered western gorilla to the Batéké Plateau National Park (PNPB) of Gabon is still young when considering the long and slow life-history of the species. The post-release survival of both wild-born and captive-born gorillas in the PNPB (84 and 86% respectively) are higher than any of the confirmed survival rates of other primate species in a number of release projects around the world for which published data was found, which vary from <10% in the least successful to around 62 to 82% in the more successful. Captive-born primates have generally had lower post-release survival than wild-borns, a striking example being demonstrated by the well-known golden lion tamarin reintroduction project, with reintroduced captive-borns exhibiting a 30% survival rate in the first year post-release, while translocated wild groups showed an 82% survival rate per year (Kierulff *et al.* 2002). The high survival rate of the second group of ex-situ captive-born gorillas transferred from the UK to Gabon, at 86% during the soft-release phase and 100% during the first three years post-release, has undoubtedly been due to changes in release preparation and implementation based on the experience gained with the first group. The most significant of these changes were the longer duration of psychological and veterinary



Lekedi, a wild-born female of the first group reintroduced to the PNPB, feeding on Marantaceae pith. Photo courtesy of Liz Pearson.

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support from well-known humans, the higher proportion of captive-borns to wild-borns within the group, and possibly the timing of transfer and the administration of a 7-month anti-malarial treatment.

At an international level, the reintroduction programme has proved to be attractive to the popular media, generating global publicity for the plight of the gorilla. The transfer of captive-born gorillas from the UK has been particularly well-covered by interna-

tional media, with two television series and numerous newspapers and magazines following the transfer and progress of the gorillas 'sent home.' The combination of the initial success of the reintroduction programme itself and the associated benefits from wide-ranging popular media coverage has demonstrated the high conservation value of what remains a growing and pioneering project in natural resource management in Central Africa.



**Gorilla reintroduction to the Batéké Plateau National Park, Gabon:**



**An analysis of the preparations and initial results with reference to the IUCN guidelines for the re-introduction of Great Apes**

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Members of the second reintroduced group in 2007: Kiba, Djalta, Souba, Ima (behind), and Kwibi, all except Souba hand-reared captive-borns from Howletts & Port Lympne Wild Animal Parks in UK. Photo courtesy of Tony King.

For a copy of the full 73 page report (above), please contact the authors or [click here](#), on the Electronic version in the E-Gorilla Gazette!

#### References:

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