



Gorilla Protection Project (PPG)

Lésio-Louna Natural Gorilla Reserve/south-west Lefini

Tourist Guide

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Table of Contents

<i>I. Presentation of the PPG's objectives</i>	3
<i>II. Lesio-Louna and Lefini Reserves</i>	4
❖ Date created	4
❖ Léfini Fauna Reserve	4
❖ Access to the Reserve	5
❖ Reserve Ecology	6
❖ Tourist Sites	10
« Iboubikro » site and surroundings	10
Abio: An ideal location for observing gorillas in their natural habitat	11
The Confluent site	11
<i>III History of the Project</i>	12
❖ Origins and beginnings of the PPG	12
1989 to 1997: Rehabilitation at the Brazzaville orphanage	12
❖ From rehabilitation to reintroduction:	12
1993: Creating the sanctuary	12
1994: Transferring the Gorillas to Lésio -Louna	13
1997: War and Evacuation	13
Post-war developments: The return of gorillas to the sanctuary and the closure	14
The Lésio -Louna males return to their cages	15
❖ Reintroduction in South-West Léfini	15
Reintroduction to the Lésio-Louna reserve; a project failure	15
Strengths of the new South-West Léfini Reserve as a new reintroduction site.	15
Transfers carried out in Southwest Léfini	16
❖ The reintroduction project: In summary	17
❖ John Aspinall and his fight for animal welfare:	18
<i>IV. The stages of reintroduction</i>	19
❖ Precautionary Principle	19
❖ Rehabilitation	20
Taking in orphan gorillas	20
Quarantine	20
Pre-release	20
Supplemental feeding of gorillas	21
❖ Release	21
❖ Post-release surveillance	21
<i>V. The gorilla</i>	22
❖ Classification	22
❖ Height and Weight	24
❖ Longevity	24
❖ Ecology	24
❖ Gorilla diet	24
❖ Social interactions	25
❖ Gorilla reproduction	25

I. Presentation of the PPG's objectives

Objectives

The John Aspinall Foundation (JAF) and the Congolese Government are working together to develop several measures through the PPG:

1. Promotion and application of national and international laws for the protection of gorillas and other endangered species in order to reduce the traffic of orphan gorillas and bushmeat trafficking in general;
2. Awareness and education campaigns for the local and international public about the threats to the Congolese fauna;
3. Taking in and rehabilitating orphaned gorillas.

As stipulated in article 2 of decree n° 99-309 dated 31 December 1999 with regards to the creation and organisation of the Lésio-Louna Gorilla Natural Reserve, the aforementioned reserve is specifically in charge of:

1. Ensuring orphaned gorilla reintroductions into their natural environments;
2. Protecting gorillas and the reserve ecosystems;
3. Organising and promoting education, training, awareness and research on the reserve's biodiversity;
4. Promoting and developing sightseeing tourism together with the relevant services;
5. Organising, in conjunction with the local population, an integrated system of natural resource conservation in the reserve.

II. Lésio-Louna and Lefini Reserves

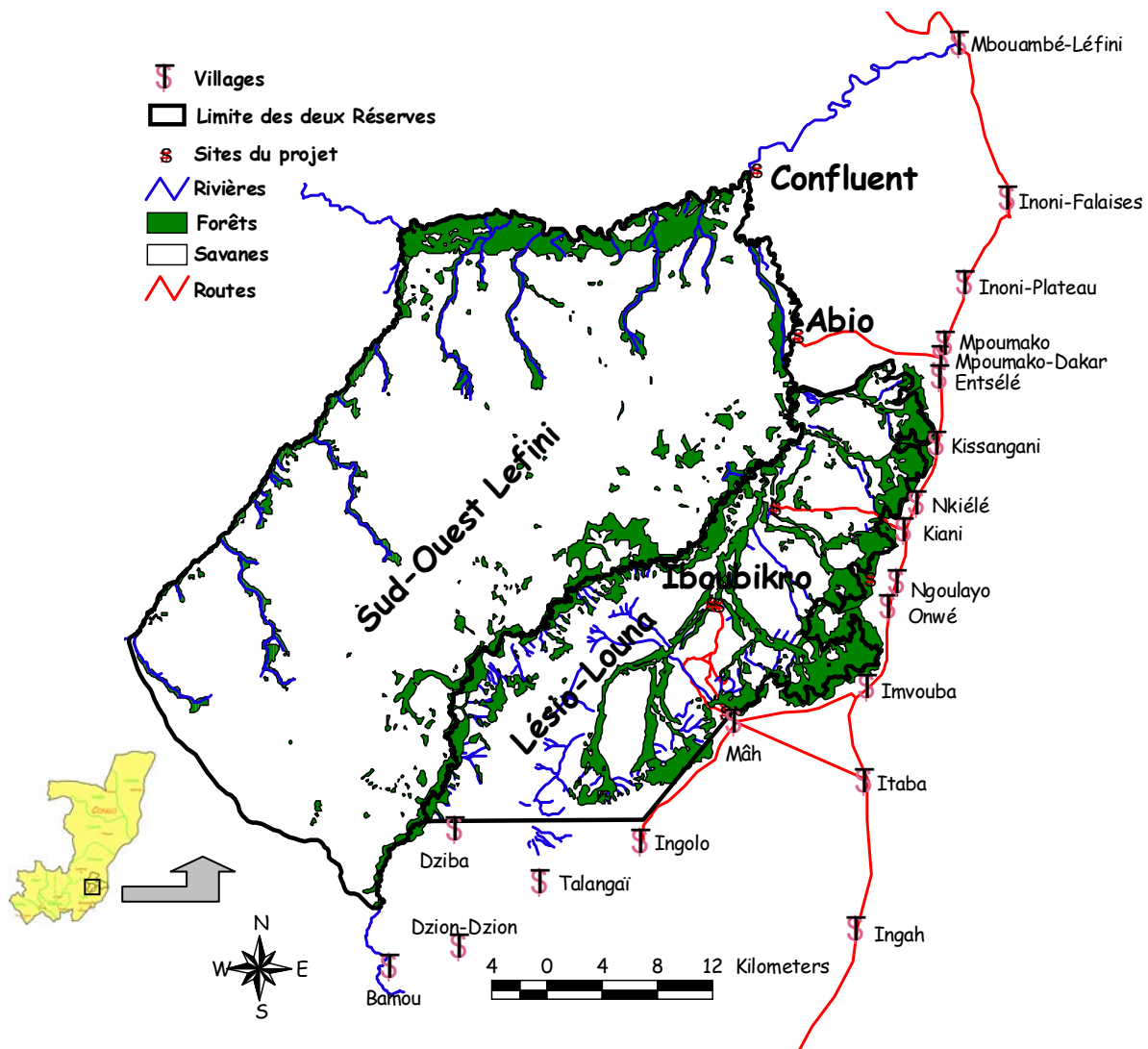
❖ Date created

Léfini Fauna Reserve: 1951

Lésio-Louna Reserve: Created by Decree N° 99- 309 on the 31 December 1999

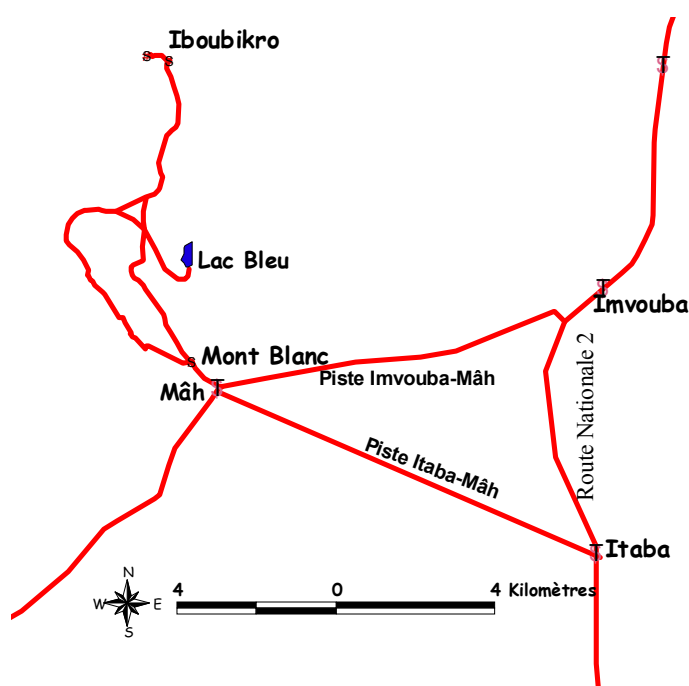
❖ Léfini Fauna Reserve

The Léfini Fauna Reserve is located on the south east of Congo, 140km north of Brazzaville (**figure 1**) and covers an area of 630 000 ha. The reserve constitutes a rich ecosystem, but is a victim of its own proximity to a populated area. Unfortunately, the protection measures established in the 1960s have been discontinued due to lack of financial, logistic and human resources. Since then the development of the Lésio-Louna Project in the Reserve's south west currently constitutes one of the only specific actions able to preserve and restore a part of the typical Batéké Plateau ecosystem.



❖ Access to the Reserve

In order to allow people to share the project's experience, three tourist sites are accessible:



-The base camp **Iboubikro** is accessible from the National 2, which links Brazzaville to the north of the country. From the Odziba toll road situated approximately 100 km from Brazzaville, the villages of Itaba and Imvouba are a further 22 km and 30 km drive, respectively (**figure 2**). From these villages, follow the road signs to Mâh village and then to the Mont Blanc check post that is situated at about 10 km from the asphalt road. From this post, two roads are accessible to get to the Iboubikro site. The shorter one is the prolongation of the road from Mâh, which overhangs the blue lake. After 4 km, there is an intersection with a road sign indicating the route for the blue lake on the right. Continuing on straight ahead, it is another 5 km to the Iboubikro camp.

When the road is wet, it is strongly advised to choose the second road near the Mont Blanc check post.

While this route is 20.5km longer, and a little rougher, it does avoid a very steep section of road that the other path does not. To take this alternative route, turn left at the Mont Blanc post.

- **The Abio site** is accessible by a road that connects the National 2 (N2) to the Mpoumakoto Tabet village. From the Odziba toll booth – situated approximately 100km from Brazzaville, follow the N2 for a further 56km. A sign on the left hand side of the road indicates the beginning of the road leading to Abio – 12km further along. Once on this section of the roadway, you will notice old trucks on the side of the road, which were formerly used for the road's construction. 100m further along there is a smaller track leading off to the left, do not take this path but rather stick to the main track on your right.

- **The Confluent Site** is accessible by pirogue from the village at Abio or Mbouambe-Léfini village. The latter is located on the N2 at the Léfini River Bridge, approximately 80km from the Odziba tollbooth, and about 100km out of Brazzaville.

❖ Reserve Ecology

Fauna

The Léfini Reserve incorporates an abundant and diverse fauna. Unfortunately local hunting pressure, demographic growth, war episodes and the demand from Brazzaville has greatly endangered the reserve's wildlife potential, and some populations/species are threatened by extinction or are already extinct.

Elephants, panthers, aquatic deer, pangolins, aardvarks, most carnivores and small to medium duikers have been particularly subject to decreases in population. Despite the multiple threats, the animal populations of many species such as buffalo and hippopotamus appear to have increased thanks to the protection efforts undertaken on the south west of the Léfini Fauna Reserve and the Lésio-Louna Natural Gorilla Reserve.

Of the most common mammals found on the reserve, certain are most frequently found in the savannah region - such as the side-striped jackal (*Canis adustus*), the common duiker (*Sylvicapra grimmia*), vervet monkeys (*Cercopithecus aethiops pygerythrus*) and aardvarks (*Orycteropus afer*). Other species associated with savannah ecosystems such as the Southern reedbuck (*Redunca arundinum*) and the lion (*Panthera leo*) have since disappeared, while the serval (*Felis serval*) hasn't been seen in the area for a long time. Other mammals that prefer forest or mixed habitats are more commonly found throughout the country. Elephants inhabit the reserve's outskirts, but are not overly present within the reserve itself. Amongst those species that prefer aquatic environments, it is easy to spot both sitatunga antelopes and hippopotamus at dusk and dawn. In forest environments, it is possible to observe groups of small arboreal primates such as guenon or Debrazza monkeys. **Table 1** lists the mammalian fauna present in the Lésio-Louna Gorilla Reserve.



Common duiker
Silvicapra grimmia



Hippopotamus
Hippopotamus amphibius



Side Striped Jackal
Canis adustus gratus



Male

Sitatunga
Tragelaphus speckeii



Female



Vervet monkey
Chlorocebus aethiops



Moustached monkey
Cercopithecus cephus



De Brazza's monkey
Cercopithecus neglectus

Tableau 1 : Main mammals of the Lesio-Louna Reserve

Order	Family	Common Name	Taxonomic Name
Carnivores	Mustelidae	Congo Clawless Otter	<i>Aonyx congica</i>
		Spotted-Necked Otter	<i>Lutra maculicollis</i>
	Nandiniidae	African Palm Civet	<i>Nandinia binotata</i>
	Viverridae	African Civet	<i>Civetticus civetta</i>
		Large Spotted Genet	<i>Genetta tigrina</i>
		Servaline Genet	<i>Genetta servalina</i>
	Canidae	Side Striped Jackal	<i>Canis adustus</i>
	Herpestidae	Long-nosed Mongoose	<i>Herpestes naso</i>
		Marsh Mongoose	<i>Atilax padulinus</i>
		Bloody Mongoose	<i>Herpestes sanguinea</i>
	Felidae	Panther	<i>Panthera pardus</i>
		Lion	<i>Panthera leo</i> (?)
		Serval	<i>Felis serval</i>
		African Golden Cat	<i>Felis aurata</i> (?)
Afrotherian mammals	Tenrecidae	Giant Otter Shrew	<i>Potamogale velox</i>
	Orycteropodidae	Aardvark	<i>Orycteropus afer</i>
	Elephantidae	Forest elephant	<i>Loxodonta africana cyclotis</i>
Artiodactyla (even-toed ungulates)	Hippopotamidae	Hippopotamus	<i>Hippopotamus amphibius</i>
	Suidae	Bush pig	<i>Potamochoerus porcus</i>
	Bovidae	Forest Buffalo	<i>Syncerus caffer nanus</i>
		Sitatunga	<i>Tragelaphus spekei</i>
		Bushbuck	<i>Tragelaphus scriptus</i>
		Southern Reedbuck	<i>Redunca arundinum</i> (?)
		Black-fronted Duiker	<i>Cephalophus nigrifrons</i>
		Black-Backed Duiker	<i>Cephalophus dorsalis</i>
		Blue Duiker	<i>Cephalophus monticola</i>
		Yellow-backed Duiker	<i>Cephalophus sylvicultor</i>
		Common Duiker	<i>Sylvicapra grimmia</i>
Pangolins	Manidae	Tree Pangolin	<i>Phataginus tricuspis</i>
		Giant Pangolin	<i>Manis gigantea</i>
Rodents	Sciuridae	Gambian Pouch Rat	<i>Cricetomys gambianus</i>
		Cane Rat	<i>Thryonomys swinderianus</i>
		Brush-Tailed Porcupine	<i>Atherurus africanus</i>
Primates	Hominidae	Western Lowland Gorilla	<i>Gorilla gorilla gorilla</i>
		Chimpanzee	<i>Pan troglodytes</i>
	Lorisidae	Potto	<i>Perodicticus potto</i>
	Galagonidae	Demidoff's dwarf galago/ bushbaby	<i>Galagoides demidovii</i>
		Thomas' bushbaby	<i>Galagoides thomasi</i>
	Cercopithecidae	Vervet Monkey	<i>Chlorocebus aethiops</i>
		Moustached Guenon	<i>Cercopithecus cephus</i>
		Debrazzas Monkey	<i>Cercopithecus neglectus</i>

Species noted in Blue: have already disappeared from the region or are most likely no longer present.

Chimpanzees can be found in South-west Léfini and may one day reappear within the reserve. With regards to gorillas, the last known sighting dates back to more than 25 years ago according to village locals.

Habitat diversity, open landscapes and an abundance of bird life make the reserve a favourable location for ornithologists. The number of bird species confirmed to have been seen within the reserve is around 300 at present, but continues to increase.

Amongst the savannah avifauna present within the reserve, 3 species are endemic to the Congo Basin savannah: Finsch's Francolin (*Francolinus finschi*), and the Congo Moorchat (*Myrmecocichla tholloni*) occupy the *Loudetia* prairies, an area with little to no tree cover. The black-chinned weaver (*Ploceus nigrimentum*) is present in the *Hymenocardia* dominated tree savannah. Another notable occupant is the Brazza swallow that can be seen around the lakes and rivers of the region.



Finsch's Francolin
Francolinus finschi

Flora

Due to the sandy soil and excessive burning practices undertaken by the local inhabitants, the most common vegetation is a more or less forested savannah characteristic of the Plateau region, despite the area having climatic conditions favourable to the development of a more luxuriant vegetation. Depending on the soil type, the altitude and the slope, the arboreal strata of the savannah is dominated by *Hymenocardia acida*, *Annona arenaria*, *Ochna gillettii*, *Syzygium guineense*, *Bridelia ferruginea*, and *Vitex spp.* and the grass strata by *Loudetia spp.*, *Panicum spp.*, *Landolphia spp.*, *Trachypogon thollonii*, *Ctenium newtonii* and *Hypparrhenia spp.*

The *Parinari excelsa* forest constitutes the most common type of climax forest on the Batéké Plateau. Ecosystem degradation leads to changes in forest composition, with *Dialium polyanthum* dominating initially, followed by *Milletia laurentii* and *Piptademiastrum africana*, and finally replaced by a *Pentaclethra eetveldeana* dominated forest. The degradation of this climax forest is accompanied by a reduction in the quantity of organic matter on the soil surface, which is the basis for the fragility of the ecosystems of the Téké plateaux. We can also observe colonizing riparian forests with *Alchornea cordifolia*, *Ancistrophyllum secundiflorum*, *Uapaca heudelotii* and *Irvingia smithii*, marsh forests dominated by *Myrtagyna stipulosa*, palm forests and flooded forests of *Eristomadelphus exsul*.

❖ Tourist Sites

The reserve guarantees tourist accommodation at three distinct sites with varied and complementary opportunities to discover the landscape.

« Iboubikro » site and surroundings

The Iboubikro site (« gorilla village ») is located on the banks of the Lésio River, less than 2 hours from Brazzaville by road. It is here that the gorilla reintroduction project has been implemented. The released gorillas around Lésio-Louna have shown a long-standing preference for returning to the base camp; hence the electrical wire fence surrounding the camp, which prevents gorillas from stealing the food and scaring the workers in the middle of the night!!!

This site has 2 double rooms and 1 room with 3 single beds and all are equipped with mosquito nets. The site is open every day and it is possible to set up a tent within the site. Shared shower and toilet facilities are also available.

For meals, it is necessary to bring your own food, which can be stored in a fridge. A thatched hut with kitchen facilities, a barbecue, dining room and hall will make your evenings enjoyable. Cold drinks can be bought on site.

Gorilla sightings: there is the possibility of seeing caged male gorillas and observing orphaned baby gorillas.

Warning: for health reasons, visitors should remain at least 7.5 m from the orphaned gorillas.

Botanical path: an hour long marked walking trail around the site introduces visitors to the reserve's forest environment and provides information on the local flora, especially those plants favoured by gorillas. A written guide for the botanical path is available.

The Blue Lake: An exceptional site for a picnic in the shade of a straw hut, or for a swim in the lake. Walking time one-way: 1h30. Also accessible by 4 wheel drive.



Sampion Lake: A trip to the magnificent Sampion Lake makes for a beautiful excursion, and once there, you can bathe in its shallow waters.

Excursion to Ngaka: Discover the superb landscape of the Louna valley from the top of the Ngaka mountain. It is possible to take a 2-hour return trip to a beautiful viewpoint over the valley. For those with a good level of fitness, another 2h climb up to the top of the mountain gives stunning valley views. For the most adventurous, spending one night under the stars on the mountaintop is an unforgettable experience. Before undertaking this, it is necessary to give several days' notice to PPG several days in order to allow time to contact the guides.



Animal sightings: In the early hours of the morning you may be able to see a sitatunga or a hippopotamus around the pools surrounding the camp. By following the botanical path at sunrise or sunset you will be able to watch troops of arboreal monkeys.

Abio: An ideal location for observing gorillas in their natural habitat

Gorilla sightings: Departure by pirogue in the early hours of the morning to visit the bachelor male island group where individuals live in semi-liberty. With a little luck it may also be possible to spot some of the group of 9 reintroduced gorillas who now live freely in their natural habitat, along with the 3 babies born since the reintroduction.

Animal sightings: Don't hesitate to ask the ecoguards to show you Abio the hippopotamus who lives behind the camping grounds. You may also be fortunate enough to spot gorillas along the Louna River.

Trek to Mount Abio: In the area surrounding the gorilla island, there is a walking trail leading to the Mount Abio summit which offers spectacular views of the area (1h30 – 2h one way).



The Confluent site

Excursions: Journey along the Léfini River on board a genuine pirogue from which you can better appreciate the savannah, gallery forests and cliffs which make up the spectacular landscapes of the reserve.

For the more courageous, there are walking paths along the ridges that overhang the Léfini which afford magnificent views of the landscape.



Gorilla sightings:

There is the possibility of sighting a group of 4 reintroduced gorillas, as well as the first baby ever born in liberty to orphaned parents. Unfortunately, this possibility depends on the gorillas' position.

The Abio and Confluent sites are more basic and will please those who love nature. The Louna and Léfini rivers can be navigated by pirogue where the exceptional landscapes of the Léfini reserve can be observed. Encountering the two gorilla groups in their natural habitat completes this unforgettable experience. The only gorilla ever born in the wild to orphan parents confirms the success of this reintroduction project.

Accommodation at the Abio and Confluent sites

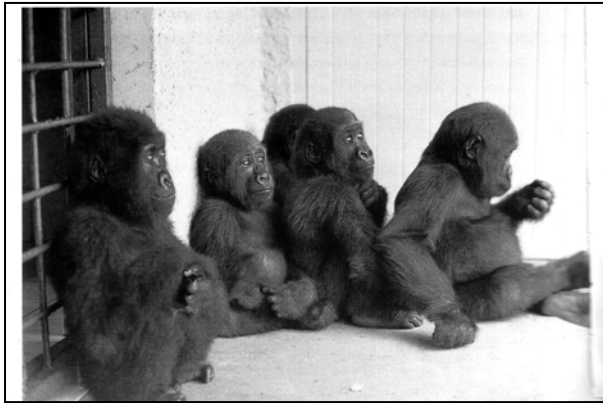
There are no rooms available for tourists in Confluent site, but it is possible to either bring your own tent or to make use of one supplied by the PPG. In Abio, there is a traditional house that can welcome four people. The two sites have electricity, toilets and basic showers.

Note: There are a lot of insects!!



III History of the Project

❖ Origins and beginnings of the PPG



It was during the 1980's that Madame Leroy, a French expatriate, began taking in and caring for gorillas being illegally sold in Brazzaville. However, as her garden wasn't sufficiently large to keep these animals, she asked the famous English millionaire John Aspinall – well known for his dedication to conservation of wild species – in a bid to secure the future of these orphaned gorillas. It was through this that the John Aspinall Foundation (at the time called the Howletts and Port Lympne Foundation after the two zoos created by Mr. Aspinall in the UK)

became the financial support for the construction and management of a centre for young orphaned gorillas in Brazzaville from 1987

1989 to 1997: Rehabilitation at the Brazzaville orphanage

- 71 orphan gorillas were housed between 1989 – 1997
- 12 orphan bonobos were also taken into care by the orphanage (the first one taken in was called Max, who now lives in a sanctuary near Kinchasa managed by Claudine Andre: the Lola ya Bonobo Sanctuary)
- The young gorillas were released every morning into the small open forest surrounding the zoological park and put back into their cages at night.

Problems encountered:

- Overcrowding
- Close contact with local human population
- High incidence of illness and mortality
- Escapees fleeing to the town centre
- Indefinite closure due to civil war conflict in 1997

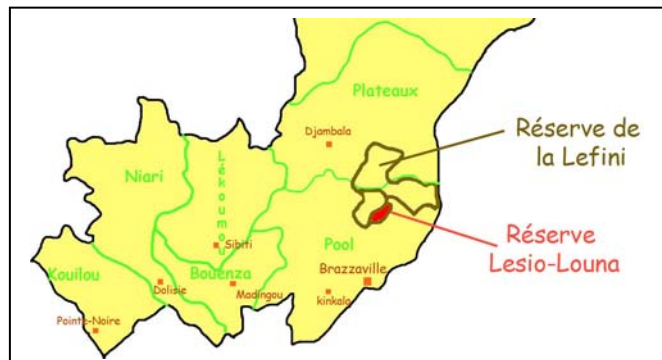


Helen Attwater (wife of the orphanages' first co-ordinator, Mark Attwater) and Albertine Ndokila, first nurse involved with the project, watch over young gorilla orphans in the Brazzaville Zoological Park. Helen has written a book relating her experiences in the orphanage; **Helen R. Attwater. *My Journey Gorilla: Living with the orphans of the rainforest.* 1999. Editions Sidgwick & Jackson, 292 pages**

❖ From rehabilitation to reintroduction:

1993: Creating the sanctuary

The young gorillas were becoming more and more difficult to keep within the confines of the small forest surrounding



the Brazzaville zoological park. The evolution of the project involved developing a forest reintroduction of those first orphaned gorillas to have been taken in.

In the southwest of the Léfini Fauna Reserve, a region covering 440km² along the Lésio and Louna Rivers was thereby chosen as a reintroduction site. In 1993, an agreement was signed between the Congolese government and the JAF to create the Lésio -Louna gorilla sanctuary. It was only on the 31st December 1999 that the Gorilla Reserve was officially authorised (by Decree No. 99-309)

1994: Transferring the Gorillas to Lésio -Louna

In December 1994, the first group of 6 young male gorillas – lead by Kola (7 years old) – was transferred from the orphanage to the Lésio-Louna Reserve. This reintroduction attempt was a first in Africa, with no precedents or prior experiences available to the project team. Despite the premature death of 3 of the gorillas from stress related to a sudden change in their surroundings, overall the gorillas acclimatised well and were to lead the way for further successes.

Kola and Despina Chronopoulos: This young Greek journalist specialising in wild animals was in charge of the Lesio-Louna reintroduction programme from 1995 onwards. She wrote a book on this experience following her time there:

Despina Chronopoulos: Gorilles orphelins. 2000. Editions Robert Laffont



1997: War and Evacuation

Civil war broke out in the Congo in 1997. Members of the project, with the help of the French army, evacuated the young gorillas from the orphanage as their location now put them in the middle of a combat zone. Meanwhile, in the Lésio-Louna Reserve, following an increasingly hostile rebel presence, a helicopter evacuation was being organised. Kola's group, one of the two groups of gorillas within the site, was removed to safety. Thanks to the efforts and bravery of several project members, Kola's group – the first to be successfully released – and Yambo-Sid, the only caged male remaining, stayed safe and well in Lésio-Louna during this period of conflict.

All the evacuated gorillas were sent to the Tchimpounga chimpanzee sanctuary near Pointe-Noire. During this sombre period, the project team looked for a new reintroduction site in Gabon, but Congolese authorities ultimately refused the transfer of gorillas to Gabon. Despite this setback, the JAF decided to go ahead with a reintroduction project in a newly authorised sanctuary with different orphaned gorillas rescued in Gabon.

Post-war developments: The return of gorillas to the sanctuary and the closure of the orphanage

On the 25 November 1998, Kabo's group was returned to the Lésio-Louna Reserve. However, they were more numerous than when they had left, as Mayoko had given birth to Kama during their time at Pointe Noire. Unfortunately, this newly created proximity of Kabo's group to that of Kola's provoked a lot of tension, ultimately leading to the death of Kabo and Mayoko. Another female in Kabo's group, Loubomo, also disappeared but it was not known if Kola's group also attacked her.

Any newly confiscated gorillas from the Brazza area were now being transferred directly to the reserve in order to avoid the high risk of contracting diseases that was present around the zoological gardens. Because of this, the orphanage was to be closed indefinitely.

Those gorillas that arrived between 1996 and 1999 became part of a new group lead by Djeke.



Amos Courage, African Projects Director for the JAF, sitting amongst Djeke's group. During the period 1996 – 2000, he was co-ordinator for the Lésio-Louna project.

The Lésio -Louna males return to their cages



Stable gorilla groups are generally made up of 1 male for every 3 to 4 females. Kola, leader of one of the groups, provoked a great deal of tension with two of the other males; Titi and Masissa. This ultimately led to these latter males becoming solitary individuals in 1998 and 1999 respectively.

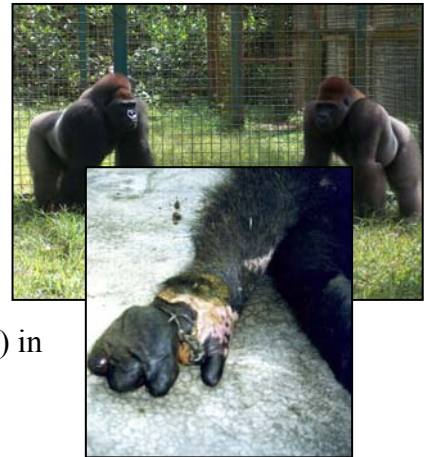
It was necessary to return these males to a cage where they joined Yambo-Sid, as their efforts to find a new group of

females was taking them farther and farther afield - beyond the reserve boundaries. Meanwhile, Kola was also beginning to leave his group to explore his surroundings. His frequent forays into the camping ground and the surrounding villages resulted in him being returned to a cage in December 2001. However, there was still hope of returning these large males back to the forest environment. The subsequent creation of an isolated island reserve on the Louna River later allowed these animals to live in semi-liberty once again since March 2007.

❖ Reintroduction in South-West Léfini

Reintroduction to the Lésio-Louna reserve; a project failure

From 2003, the gorillas initially released in the Lésio-Louna reserve were moved to the southwest of the Léfini reserve due to insufficient ecological barriers present in the former site. This lack of protection was endangering the lives of the gorillas, as the proximity of the animals to populated areas was proving hazardous. One young reintroduced female, Lengui, caught her hand (pictured right) in a trap leading to its amputation.



Strengths of the new South-West Léfini Reserve as a new reintroduction site.

- Area: 1230 km²
- Part of the former natural range of the species
- No permanent human constructions
- No remaining large primates in the area
- Ecological barriers (3 large rivers and a vast expanse of savannah) to control gorilla movement
- 47km² of forest along the Léfini river and 53km² of associated forest
- Large variety of browse.

Transfers carried out in Southwest Léfini

- **John's Group: Close to the river confluence area**

- 18 January 2003
- 5 young adults (2 ♂, 3 ♀)
- In 2004, Djembo gave birth to a wild-born baby

- **Djeke's Group**

- 8 September 2004
- 9 sub-adults and juveniles in liberty (4 ♂, 5 ♀)
- In 2006, four females gave birth to four babies
- After she lost her baby in 2006, one of the females gave birth again in 2008.

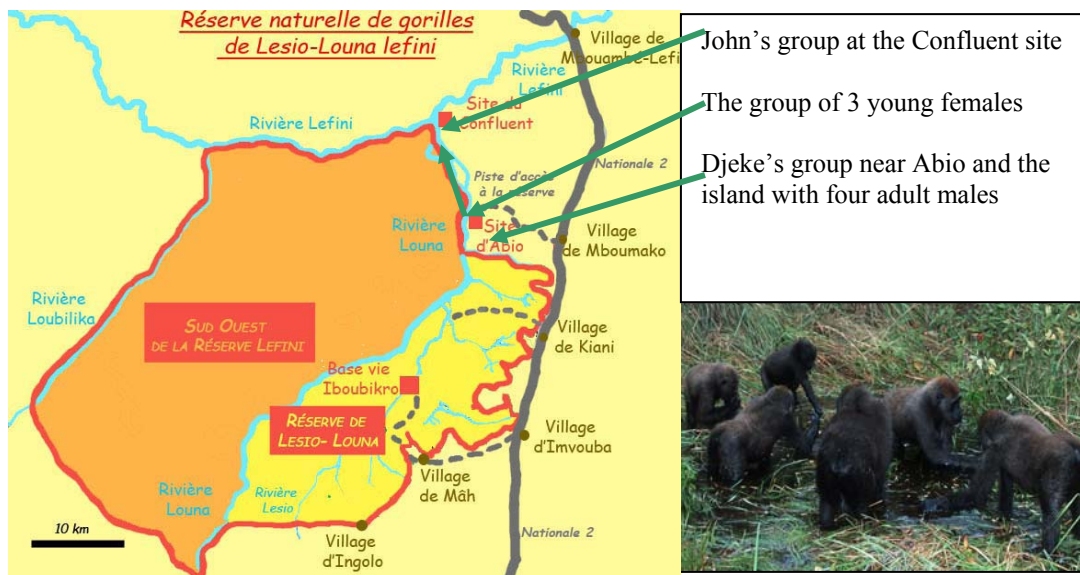
- **Bangha**

- 20 July 2006

Initially introduced with John's group but subsequently transferred to an island near Abio. Bangha had left the group in mid 2004, shortly after the birth of the first infant, and had joined Djeke's group in December 2004. Bangha attempted in vain to take over Djeke's group and become the new leader. Sometimes alone, sometimes with other adult females, but rarely with the group as a whole, Bangha was never able to fully integrate with the others and thereby prove his silverback status. Ongoing observations of the group highlighted that his solitary behaviour was hindering group development, and it was decided to transfer him to an Island. Since March 2007, Bangha had to share the Island with other big males (Kola, Sid, Ruppert and Titi). Finally he also died in November.

- **Helen's group**

- 15 October 2006
- 3 sub-adult females transferred
- Transfer at Abio, then discovery of 3 females by John lead to their migration towards the confluent site.



The 13th of April 2004 marked the first infant born of a reintroduced gorilla - Djembo – born in John's group. This birth confirmed the success of the reintroduction program put in place by the PPG. At the end of 2006, to the surprise of all the project team, 4 consecutive births occurred in Djeke's group between September and November. Unfortunately, one of the infants died shortly after birth, which is a frequent occurrence amongst gorillas giving birth for the first time.

❖ **The reintroduction project: In summary**

- 25 gorillas have been released since the beginning of the reintroduction program in 1994
- 1 female has disappeared
- 3 have died
- 1 male adult died after a stressful episode: Mabinda, a member of Kola's group had a heart attack while members of the project team were bringing her across the savannah back to the reserve boundaries.
- 1 male and 1 female were attacked by older gorillas; Kabo and Mayoko
- 4 male adults have been returned to their cages: Kola, Yambo-Sid, Masissa and Titi but finally moved to an adequate Island.
- 17 gorillas were transferred to Southwest Léfini (6 ♂, 11 ♀)
- 1 of the 6 males in southwest Léfini was transferred to an island
- 5 infants have been born to orphan parents, of which 1 died shortly after its birth

❖ **John Aspinall and his fight for animal welfare:**

John Aspinall (1926 – 2000), famous English businessman who made his wealth in casinos, dedicated his life to the conservation of wild animals. He founded two animal parks in England; Port Lympne and Howletts, renowned for their remarkable animal enclosures and looking after the well being of their animals. Fascinated by gorillas, Mr Aspinall succeeded in raising successful groups of breeding lowland gorillas, which brought about worldwide notoriety for the zoos with regards to captive gorilla management.

John Aspinall strongly believed that the planet's wild spaces were our most valuable resource. He believed in the sanctity of a diverse system of living creatures and not in that of human life alone. He thought that this ingrained philosophy is the root cause of all the problems we suffer today and that changing this idea is a necessity for the survival of humankind.

The two re-introduction projects that he funded in Congo and the Gabon permitted many young orphaned gorillas to return to their natural environment. Thanks to Mr Aspinall, who had complete faith in the success of this venture, more than 50 orphan gorillas are living freely in the Lésio-Louna and Léfini reserves of the Congo as well as in the Bateke Plateau National Park in Gabon.



John Aspinall, pictured right, with his brother James Osborne sitting with a group of orphaned gorillas. James Osborne is presently one of the two Directors of the JAF, along with Damien Aspinall, the son of John Aspinall.

IV. The stages of reintroduction

The main aim of the reintroduction programme is to re-establish a viable and independent group of Western Lowland Gorillas in the wild.

❖ **Precautionary Principle:**

The project team is aware of the risks associated with the reintroduction of orphaned gorillas back into the wild, both for the orphans themselves as well as wild gorilla populations.

The project has a long-term commitment to undertake the reintroduction program in accordance with conservation directives and with due concern for the well being of the released individuals.

The release sites have been chosen in areas with no wild gorillas populations present.

A. Rehabilitation at Lesio-Louna

- Reception, medical surveillance and quarantine
- Pre-release

B. Release into Southwest Lefini

- Transfer of the group into a secure area of forest
- Post release observation

❖ Rehabilitation

Taking in orphan gorillas



Orphans are confiscated by employees of the Ministry of Forestry and the Environment before being handed over to the PPG.

The orphans, who are generally weakened by stress, dehydration and a range of illnesses, (amoebas, internal parasites, pneumonia) are put into medical care. Tests for Hepatitis B, HIV and tuberculosis are carried out, and the gorillas are vaccinated against polio, tetanus, diphtheria, rubella, mumps and measles.

Quarantine

Upon arrival at the centre, the baby gorillas are put into quarantine. This quarantine period, which lasts at least a month (following IUCN directives regarding reintroduction procedures) avoids any disease transmission from the newly arrived gorillas to the surrounding environment where they will later grow and develop.



Pre-release

Every day, over the course of approximately 5 years, nurses take the juvenile gorillas into the open forest near the Iboubikro base in Lésio - Louna until they are finally ready for release.

Over the course of their rehabilitation period, gorilla groups are formed based on their age and sex in a bid to establish the strong social bonds that will be essential if they are to be successful once they have been released back into the wild.

Ideally, a group of 1 male for every 3 to 4 females needs to be created. In the wild, a dominant male oversees a group of several females and their young. However, as the sex ratio of confiscated gorillas is more or less equal, the project members have had to put in several males per group.



Supplemental feeding of gorillas

During the pre-release period, a diet of fruit and milk is supplied to the young every day. Once they are older, they must search out food for themselves in the forest.



Solitary caged males are supplied daily with milk, fruit, and vegetables (cabbages, eggplant, cucumbers, bananas, banana palm shoots, mangoes, pawpaw and other local fruit)

Most of these fruit and vegetables are purchased at the local villages that border the reserve, which allows local villagers to make a regular income from selling their produce (200 000 Fcfa per week).

❖ Release

Once the social groups have been properly established, they are transported to a selected area of the reserve for permanent release. From this point on they are free to move through the forest, even though ecoguards sometimes need to influence their movement to maintain them within the reserve area. Human contact with the gorillas and supervision of the group is reduced to a minimum.



❖ Post-release surveillance

- Daily observations for direct or indirect signs of gorilla presence (tracks, stools, sounds of chest beating, visual sightings) by ecoguards teams
- Ecoguides move through the reserve either by a network of paths that run through the forest, or by river through the savannah (for safety reasons)
- There is no system of radio-collar tracking that has been adapted to suit gorillas.
- Several key areas for gorillas observation exist within the park
- Maximum security measure are in place thanks to anti-poaching patrols

V. The gorilla

❖ Classification

There are 2 species of gorilla, and each of these species groups is made up of two sub-species:

Western Gorilla
Gorilla gorilla (Savage, 1847)

Divergence 2 million
years ago

Eastern Gorilla
Gorilla berengei
(Matshie 1903)

Sub-species
Cross River Gorilla
Gorilla g. dielhi

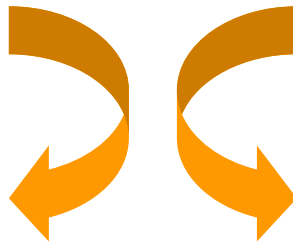
Sub species
Mountain gorilla
Gorilla b. berengei

Western Lowland Gorilla
Gorilla g. gorilla

Eastern Lowland Gorilla
Gorilla berengei graueri

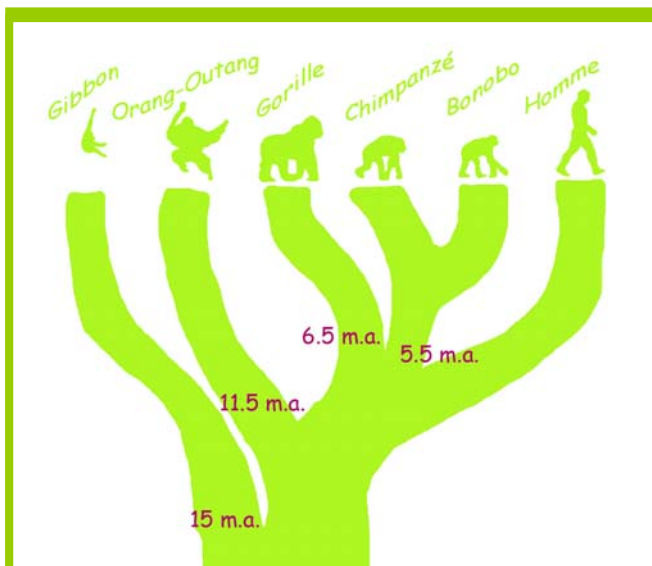


Several
morphological
differences



Smooth greyish or brown
fur
Fur on the head has reddish
highlights while males also
have a red-brown neck and
crown.

Longer, darker fur
More developed sagittal
crest (and more developed
jaw muscles)



Phylogenetic tree

Gibbons were the first group to branch off the phylogenetic tree that would eventually lead to the evolution of large primates. Orang-utans were the next to diverge followed by gorillas. Chimpanzees and bonobos were the last group to separate off from the genetic line that lead to the evolution of human and are therefore our closest relatives.

Cross River Gorilla*Gorilla gorilla diehli*

This gorilla is found in the mountainous areas along the Nigeria-Cameroon border, as well as near the Cross River. The remaining population is estimated to be around 250 – 280 individuals distributed throughout 10 fragmented zones.

Mountain Gorilla*Gorilla berengei berengei*

Two populations can be found in an area covering three different countries; DRC, Rwanda and Uganda. A population of around 380 individuals can be found in the Virunga massif (Virunga National Park, DRC, Rwanda Volcanic National Park, Mgahinga Gorilla National Park). The second population of 320 individuals inhabits the Bwindi National Park on the Uganda-DRC border (320 gorillas in 200km² of forest)

**Western Lowland Gorilla***Gorilla gorilla gorilla*

This species is widespread in Western and Central Africa. The Oubangui River/Congo is the eastern limit of their distribution, and the Sanaga River is the northern limit. This gorilla is present in Gabon, Cabinda, Angola, Western Congo, in the extreme southwest of the Central African Republic, south and central Cameroon and in Equatorial Guinea. This subspecies is the most numerous but it is difficult to accurately estimate numbers particularly following the Ebola epidemic that has seriously affected the population. Before the epidemic, numbers were estimated to be 98500 - 110000

Eastern Lowland Gorilla*Gorilla berengei graueri*

This gorilla species is only found in eastern DRC, between the Lualaba River and the Burundi/ Rwanda/ Uganda border. The population was estimated at 17000 in the mid-nineties, but it is feared that there has been a sharp decrease in numbers following intensive hunting by armed militia, rebels, refugees and miners over the last few years. Other population estimates are fairly pessimistic; putting population numbers at somewhere around 3000 individuals.

❖ Height and Weight

Gorillas are the heaviest of all the primates. On average, over all species, the adult male weighs 170kg and is 1m70 in height. The female is smaller, weighing on average 90kg with a height of 1m40. The span of their arms is more than 2m. Obviously there are individuals larger and heavier than the average – and males more than 250kg in the wild and 300kg in captivity have been noted. An article dated from 1901 speaks of an individual killed in Northern Congo that weighed 530kg, but this would seem to be more myth than reality.

❖ Longevity

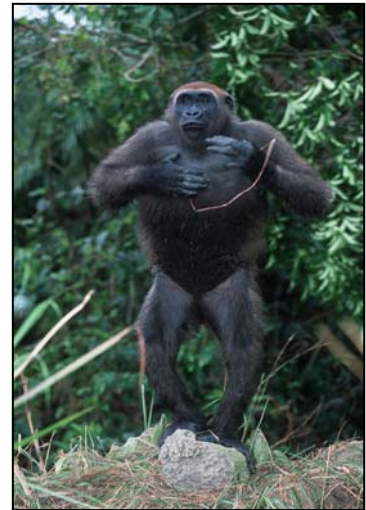
The maximum lifespan of gorillas in the wild isn't known; the oldest mountain gorilla known reached an age of 40 years old, while the oldest captive gorilla lived to 53 years.

❖ Ecology

Gorillas are typically forest-dwelling species, and only rarely venture out into open areas, such as the savannah. Essentially quadrupedal and terrestrial while they are on the move, they will climb trees to obtain food, to keep a look out or to build nest beds. Along short distances, they can move in a bipedal stance, notably during displays of intimidation, which are accompanied by chest beating.

As with the majority of primates, the day is made up of two feeding periods, the first at daybreak, and the second in the late afternoon. Between feeds, animals will rest and some will spend the time constructing their nests. It is an important time for social interaction. While the adults rest and groom each other, the young will take time to play.

Apart from those young that have not yet been weaned, each gorilla constructs a nest-bed every day around 5pm. This rudimentary bed is made up of twigs, grasses or broken branches placed on the ground or in the trees.



❖ Gorilla diet



The diet of a gorilla is mainly made up of plants, of which they consume around a hundred different types. The part of the plant eaten depends on the species; leaves, bark, stems or roots. They are particularly fond of herbaceous plants from the *Marantaceae* (Arrowroot) family as well as *Zingiberaceae* (Ginger). Gorillas also consume fruit, which are more or less important in their diet depending on the habitat. The lower the altitude, the more fruit trees there are in the forest. Mountain gorillas are more herbivorous, and

Lowland gorillas are more frugivorous. Consumption of animal prey is minimal and generally only includes ants and termites.

❖ **Social interactions**

The average size of gorilla groups is between 7 and 16 individuals, with 8-11 being the most common. This group is made up of a silver-backed dominant male, 3 or 4 females and 4 or 5 young. 90% of lowland gorillas and 60% of mountain gorillas are included in this group structure. The remaining percentage is made up of groups of dominant males that share females, or male only (bachelor) groups. Generally, in those groups where several silverback



males share females, the males are younger and have not yet left their family group. Once males reach sexual maturity, they generally leave the family group and may take some females with them, join a bachelor group or remain alone until they have managed to gather together enough females to start their own group. Females may also change groups, and may do so more than once in their lives. If the change occurs while they still have an unweaned infant, it is highly likely that the dominant male will kill the infant so that the female will become sexually receptive.

❖ **Gorilla reproduction**

Males reach sexual maturity after 10 years, and do not become fertile until they are 12 years old. Around 9 years of age the 'black-backed' sub-adult males start to develop adult morphology. Their black fur is progressively replaced by grey fur – especially on their backs, they become bulkier and their sagittal crest develops markedly. Males are fully grown adults by the age of 13, and are called 'silverbacks'.

The females reach sexual maturity at around 7-8 years of age. They come into oestrus every 30 days. The first births occur from around 9-10 years of age, after a gestation period of around 8 and a half months. At birth, the young weigh around 1.5kg. The newborn is completely dependant on its mother, on whose stomach it clings to for several months, before going onto its mothers back. The infant starts to move about on its own and to climb at about the age of 4-5 months, and is weaned at about 2-3 years. It will stay close to its mother until she gives birth again, approximately every 4 years.

The Lesio-Louna-Lefini Gorillas need your help.

Since the beginning of the reintroduction program in 1994, 17 gorillas have been returned to the wild in Congo. The success of this program is such that 5 young have been born to once orphaned gorillas.

Based on the continuing evolution of the project, and the results obtained – it is necessary for the team not only to manage actions relating to the location, care and reintroduction of orphaned gorillas, but also numerous activities related to reserve management. In particular, social development requires significant funds to set up rural community projects for those villages that lie on the outskirts of the reserve (nearly 14000 people), as well as education campaigns and tourism development. As it is only the JAF that finances the project at present, it is imperative to find other financial sources as soon as possible.

It is thanks to the support of locals living in surrounding villages that this reintroduction project **can continue in the long term.**

Support one of the reserve projects...

...such as an education nature club in a local village.

The creation of nature clubs allows children and adults to get together and learn about nature and environmental issues. Thanks to teaching assistants and the use of learning aids that cater specifically to environmental themes (plays, games, excursions, colouring books) these nature clubs are an effective tool for encouraging the involvement of villagers in looking after their local environment.

It is through education that man learns how to think and live in a more sustainable and less harmful manner.

However, this project can only be accomplished through funding from external sources – necessary for supporting the teaching staff and purchasing educational materials.

If you would like to contribute to this project, please do not hesitate to contact the PPG headquarters.

Contact PPG:

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