

Gorilla Journal

Helping People. Saving Gorillas.

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Gorillas are helping us make a difference: For the planet and the next generation

By Tara Stoinski, Ph.D.
*President and CEO/
Chief Scientific Officer*

problems are not only far away but beyond what we ourselves can do to help.

However, as I watch the impact of our holistic gorilla conservation efforts continue to grow and spread, I am more and more convinced that each of us – all of us – can make a positive difference, not only for the environment but for people as well.

Here at the Fossey Fund, saving gorillas was our original mission and our over-arching passion, but during our more than five decades it has developed into something much more. It's become a way – our way – of trying to help address some of the planet's biggest challenges: biodiversity loss and climate change, as well as addressing inequities in education and science and assisting communities to meet their basic needs.

It starts with inspiration

We draw inspiration every day from the gorillas themselves. For example, the success of the many descendants of matriarch Effie, who was first studied

At first glance, it may seem like climate change, loss of species, declining forests and other big environmental



Saving gorillas enables us to address some of the planet's biggest challenges.

by Dian Fossey, is a direct example of how we have made a difference, as they have been protected by our trackers for six generations and contributed significantly to reversing earlier declines of the mountain gorilla population (*See story on page 2.*) We know they will continue to play an important role in saving their species from extinction for years to come.

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Effie's impact: One female's remarkable contributions to the mountain gorillas

By Veronica Vecellio

Gorilla Program Senior Advisor

Due to decades of direct protection, mountain gorillas stand out as the only great ape experiencing an increase in numbers, although this happens slowly given that gorillas take a long time to reach sexual maturity and only reproduce roughly every four years.

In a population of only about 1,000 individuals, every birth is vital, but some gorillas, like female Effie, stand out for their exceptional success not only in adding to the population but also in offering us the opportunity to learn more about gorilla social behavior across generations and to understand how important females are in shaping group dynamics.

Effie, a legendary matriarch, is the pioneer of the largest mountain gorilla dynasty known. She was first seen by Dian Fossey in 1967 at about age 16, in the second gorilla group that Fossey identified for study, which she called Group 5.

Effie's early years are documented in Dian Fossey's 1983 book *Gorillas in the Mist*, starting with her first glimpse of a protective mother holding a 2-year-old infant. Fossey gave this mother the name "Effie" and also noticed a strong facial resemblance to an energetic juvenile male carousing nearby, whom she named Icarus, and decided he was also an Effie offspring.

While most of the gorillas in this group fled and hid upon first seeing Fossey, young Icarus could not contain his curiosity and his antics actually helped Fossey figure out the composition and relationships among the members of the group. Effie showed herself to be the highest-ranking female in the group and became comfortable having Fossey observing nearby within that



Matriarch Effie started an impressive dynasty!

first year. This became one of Fossey's most-important study groups.

Effie lived a long life, passing away in 1994, but her story continues today through her unique descendants and the groups they have helped to prosper. The Fossey Fund has been protecting and studying the remarkable members of her family for more than five decades and has observed many distinctive outcomes. As Dian Fossey wrote, "Effie endowed her infants with love and security during their formative years and a keen self confidence that carried over into their adulthood."

Many dominant daughters

Effie eventually had eight surviving offspring, much more than the average mountain gorilla mother. Seven of them were females and inherited her large body size, longevity and strong personality, leading them to become the dominant females in their groups. Notably, most of these females migrated to other groups, spreading Effie's lineage widely.



Puck was the only Effie daughter who stayed in the natal group. She was born in 1968 and grew up to continue her mother's history by producing five successful offspring, three of whom became dominant silverbacks. However, for her first 10 years, Fossey thought that Puck was a male, which of course changed when "he" gave birth in 1978.

That firstborn was Cantsbee, whose name derives from Fossey's surprise upon learning of the birth. "It can't be," she exclaimed, which turned into the name "Cantsbee."

Cantsbee became a legend among silverbacks. He held the record for the longest dominance reign – 23 years – as the leader of a group and that group became the largest ever recorded when it reached a high of 65 members.

True to his lineage, Cantsbee was not only dominant but prolific, siring at least 28 offspring, as verified by our genetic analyses. Cantsbee's descendants now span multiple gorilla families, marking the sixth generation descended from Effie.



Poppy, Effie’s fifth offspring, born in 1976, was described by Dian Fossey as the “little darling,” of Group 5, with a “winsome and appealing personality.” As a youngster she had a fascination with objects around her, especially for discarded bird nests as well as her human observers. She lived a long and interesting life and became the oldest mountain gorilla to give birth, at age 41, following her transfer to a new group with a young silverback when she was 39 years old.

Many of the Fossey Fund’s current researchers and trackers knew Poppy, who passed away in 2018 at the elderly age of 43. She was monitored throughout her life, helping to connect our current staff directly with the earliest work of Dian Fossey.



Tuck, born to Effie in 1972, was also a distinctive, high-ranking daughter of Effie, and bore a clear resemblance to both Puck and Poppy. Tuck became the favorite partner of another legendary silverback – Titus. She lived a long life, passing away in 2010. Upon her death, our field staff witnessed her juvenile son and other group members staying near her body for quite some time, seemingly unwilling to relinquish their strong bond.

Maggie was another important daughter of Effie, who helped a young silverback lead a group and later led a group of gorillas on her own for some months after their only silverback died.

Effie’s influence continues



Mother Akariza, shown here with her infant, was Effie’s last offspring.

With more than 90 of the roughly 600 remaining Virunga mountain gorillas carrying Effie’s genes today, her contribution is truly impressive. Just last year, seven infants genetically linked to Effie were born, with the youngest being a female in Mutobo’s group, carrying on the legacy of her great-great-grandmother.

Effie’s story is not only a continuation of Dian Fossey’s pioneering work, but also embodies the power of an individual – whether human or gorilla – to drive significant change and make a difference to an entire species.

“Being able to observe the Effie family over the years and in all stages of life has given us insight into the social and reproductive lives of female gorillas, their hierarchical structure and their personalities,” says Dr. Tara Stoinski, Fossey Fund President and CEO/Chief Scientific Officer.

“Our knowledge of the mountain gorillas – and their growing population – would not be the same without incredible individuals like Effie and her unique offspring. And every time we see an Effie family member today, we are reminded of both this amazing matriarch and of Dian Fossey.”



Fossey Fund Rwanda Programs Director Felix Ndagijimana (front left) and other Fossey staff including Nadia Niyonizeye, (front, far right), and Hilary Hilsabeck (back, second from right) are helping secondary school female students pursue education, careers and more.

Girls in Conservation: New education program helps community and conservation

The Dian Fossey Gorilla Fund believes that conservation works best when it is a community effort. Yet many people who live near the forests face critical needs and poverty. Our many community programs help address these issues and also bring educational opportunities to thousands of children and adults.

One area where we know we can make an especially effective difference is in bringing more educational and training opportunities to women and girls, who are critical to effective conservation and environmental protection in so many ways, yet drastically under-resourced and under-represented. Studies increasingly show that empowering women leads to better results, both for their families and for conservation.

Toward this goal, we recently added a new initiative to our educational efforts in Rwanda, where we already reach more than 7,000 elementary and 3,000 secondary students each year. The new program, called “Girls in Conservation,” focuses on tackling educational inequalities and promoting careers in conservation for female students in secondary schools, through workshops, mentoring and scholarships.

This program is important because financial constraints often mean that girls are not able to continue their educations, as they are needed to assist with household activities and because of school fees and other expenses. In the communities adjacent to Volcanoes National Park, only 9% of girls complete their secondary education.

“You can’t become what you can’t see”

— Nadia Niyonizeye

Girls in Conservation was started by a group of women from our staff, many of whom were themselves the beneficiaries of Fossey Fund mentorship and support. They initiated this project to help mentor and provide financial support to promising young female students from nearby communities, ensuring that they would have the resources to complete their studies, pursue growth opportunities, and be able to consider various professional options, including careers in conservation.

“You can’t become what you can’t see,” says Nadia Niyonizeye, who helped start the program. Niyonizeye became a researcher with the Fossey Fund five years ago, after first working with us in our university-student program and then as a professional intern. “Our goal is to instill confidence in these girls, helping them to realize their potential,” she says.

The inaugural Girls in Conservation workshop was conducted at our Ellen DeGeneres Campus last summer and included 37 girls. They were paired with mentors from our staff and others working in conservation in the region who are actively involved in conservation careers, and participated in a variety of interactive learning sessions. Teacher training is also an important part of the program.

Continuing support for schooling

In addition to the programs provided for these young students at our campus, we also provided scholarships for 16 of them to attend public boarding schools in Rwanda, where they can obtain the best educations.

One parent, Eliada Twasabyimana, who never had such educational opportunities herself, reflected on this opportunity: "I am very happy that you gave my child a chance... I hope this program continues because it will inspire and empower girls."

Felix Ndagijimana, who oversees all of the Fossey Fund's programs in Rwanda, says: "Our aim is to ensure that these girls have what they need to do well in school. But more than that, we want them to be leaders, to teach about conservation, maybe even start environmental clubs. They are our future, and we believe they'll make a difference."

Everyone hopes that this program will be an important new pathway in our community engagement efforts, changing not just the lives of these girls but the



Girls in Conservation receiving their certificates of achievement.

fabric of the communities around Volcanoes National Park. Through addressing the inequalities women face, we hope to provide more income opportunities, lessen the reliance on gorilla habitat for resources and help support conservation and the environment in both direct and indirect ways. Conservation thrives best when communities are thriving too.



Teacher training for the Girls in Conservation program included tree planting as well as curriculum planning.

The animals we're seeing in Congo forests: All biodiversity benefits from gorilla protection

The primary forests of the Democratic Republic of the Congo, where we work with local communities to protect critically endangered Grauer's gorillas, are also home to more of the world's most diverse animals and plants, many of which are severely threatened. But until recently, there has been little formal ecological research in these remote areas, where our Nkuba Conservation Area is based – though there is extensive ecological knowledge among the local people who have long been stewards of these forests.

While our teams – who are all from nearby communities – camp in the forest for weeks at a time to monitor and protect the Grauer's gorillas, they have also been able to observe other species and take advantage of tools such as motion-activated cameras and acoustic monitoring to record the presence of additional animals.

These efforts are now paying off. A recent multi-year analysis by our staff showed 33 large mammal species in the area, including nine that are globally threatened with extinction. Fortunately, our efforts to protect gorillas also help these other species, while further ensuring the maintenance of healthy forest ecosystems and related

services – providing clean air, stabilizing global climates, and mitigating climate change through carbon storage.

“The rainforests of the Congo Basin are vital to life at all levels: the biodiversity it harbors, the human communities that are intricately linked to the services and products these forests provide, and the larger climatic processes that facilitate life on every continent,” says Yntze van der Hoek, Ph.D., the Fossey Fund's senior biodiversity researcher, who has led important studies analyzing the animals and plants in these forests.

It is important to learn as much as we can about all this biodiversity, because everything is interconnected, adds Dr. van der Hoek. “Nothing in nature is singular – human activities that threaten one species can affect others as well. And conservation that targets one species, like the gorillas, can have benefits to others. These are all important connections to consider.”

Here is a look at some of the interesting animals we have seen recently in these forests of the Congo Basin, as we continue to increase our understanding of the biodiversity in this critical area.



Grauer's gorilla (*Gorilla beringei graueri*)

The Grauer's gorilla groups we monitor here are not habituated to the presence of humans, so we follow them at a day's distance. We record where they have traveled by focusing on signs of their nests, dung, vegetation and other clues. Since we don't observe them directly, we rely on our remotely triggered cameras to obtain footage of them and learn details about their lives, such as behaviors and group composition.

Grauer's gorillas are critically endangered due to threats such as hunting and habitat loss, but our community-based protection is now doing an amazing job of ensuring the safety of Grauer's gorillas within the 2,400-square-kilometer Nkuba Conservation Area.

“That the endangered apes – Grauer's gorillas and chimpanzees – in Nkuba are thriving is a cautious but optimistic first sign of the conservation potential of this area and the outcomes of our protection activities, specifically those that rely on community involvement,” says Dr. van der Hoek, who recently led a Fossey Fund study showing this evidence of a stabilizing population, based on a series of surveys conducted over seven years.

Now we assess the Grauer's gorillas' abundance and distribution through surveys every two to three years, says Urbain Ngobobo, the Fossey Fund's director of programs in the DR Congo. This enables us to adapt our protection strategies as needed to ensure that they are working.

“It takes a permanent presence, with long-term investment in and partnership with the communities to be able to gather this kind of important information,” says Ngobobo. “I am proud of our biodiversity and gorilla teams, composed of community members we have trained, who are making an incredible contribution to the understanding and conservation of this special ecosystem.”

Eastern chimpanzee (*Pan troglodytes schweinfurthii*)

Of course, we are delighted to see chimpanzees in the forest, as a close cousin to the gorillas – and to us humans. They are also an endangered species. As with gorillas, there are four subspecies of chimpanzees, facing various levels of threats to their populations, including habitat loss, hunting and disease. Our latest study of their density in the Nkuba forests shows that our protection of the Grauer's gorillas has helped stop the rapid decline of both species.

Owl-faced monkey

(*Cercopithecus hamlyni*)

This is one of several types of monkeys we've observed in the forest. The owl-faced monkey is considered a vulnerable species and is found only in the eastern part of the DR Congo and some small areas of forest in neighboring countries, such as Rwanda. It is often very hard to observe and is therefore understudied, but we often see it in our camera traps, suggesting a thriving population lives within Nkuba.

Leopard (*Panthera pardus*)

Most leopards, like this one, are threatened by loss of habitat and habitat fragmentation, so are listed as a vulnerable species. We have been lucky to get both still photos and video of these lone predators. As the only apex mammalian predators in these forests, leopards play a vital role in the maintenance of a diverse forest ecosystem. Without their presence, the balance among species would be lost, leading to the rapid increase of some and the loss of others.

Pangolins

We've recorded two types of this endangered scaly animal – giant ground pangolins (*Smutsia gigantea*) and white-bellied pangolins (*Pataginus tricuspis*). They may look like armadillos but actually are not related at all. They just happen to have evolved adaptations to the same type of lifestyle and diet. Pangolins are sadly considered the most-trafficked animal in the world and so their protection at Nkuba is critical to their long-term survival. Pangolins are nocturnal and eat mostly ants and termites.

Sitatunga (*Tragelus spekii*)

While this type of large antelope (closely related to the bongo also found here) is not considered a threatened species, it does face habitat loss and degradation in some areas where it occurs. The remote nature of the Nkuba forests suggests the sitatunga still has a significant population here, especially in our protected areas. Interestingly, sitatungas can almost be considered amphibious/semi-aquatic – that's how much time they spend in swampy marshes. They use their unique splayed hooves to dash through wet areas where almost no predator can follow – unless that predator is a crocodile.

Eastern long-tailed hornbill (*Horizocerus cassini*)

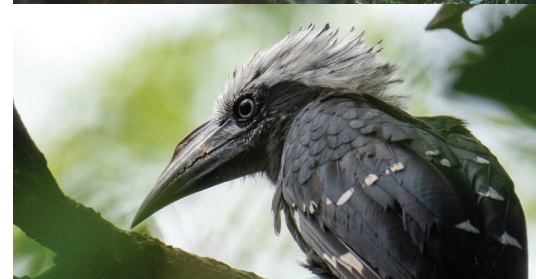
These birds are sometimes found near troops of monkeys, because such associations provide mutual benefits in finding foods and increasing vigilance against predators. Although this bird is not currently considered globally threatened due to its large range across the Congo Basin, its population is declining due to deforestation. This is just one species of hornbill, all important seed dispersers, that we have spotted in Nkuba. Others include the white-thighed hornbill, Congo pied hornbill and red-billed dwarf hornbill.

Grey parrot (*Psittacus erithacus*)

Across their range, these parrots have suffered from losses due to the illegal pet trade and deforestation, rendering them endangered. In Nkuba, they flock to open forest clearings like this salt lick, to obtain much needed nutrients from mineral-rich soils, water, and specific types of vegetation.

Olive baboon (*Papio anubis*)

Our first sighting of this baboon took place recently and is exciting because it shows that the forest of Nkuba still holds secrets, even after we've been monitoring biodiversity for more than a decade. Baboons are typically considered savanna species that prefer open landscapes, but in this part of the DR Congo they can also be found inside dense rainforests, which our latest observation confirms. However, until this sighting, baboons had not been seen here for more than 10 years. We hope their return may signal that they are gradually feeling safe in this area.



Continued from page 1

Increasingly, we are also inspired by the wide variety of the biodiversity in the forests where we work, especially in eastern Congo, where our teams are recording the returning richness of the remote areas now receiving protection. In addition to growing numbers of Grauer's gorillas, we are observing chimpanzees, baboons, large cats and lots of other important species that are starting to thrive again. (See story on page 6.)

If we had not gone to this area to work with the local communities to protect critically endangered Grauer's gorillas, we would never have been able to make this even-greater impact helping to ensure the integrity of the forest's full ecosystem. And the overall health of this ecosystem, which is one of our best natural defenses against climate change, makes a difference not just locally but globally.

Next generation of conservationists

Another way we try to make a difference is to keep our mission going and growing by helping to build the next generation of conservationists, through our education and training programs for students, teachers and community members where we work. We reach some 7,000 elementary school children and 3,000 secondary school children each year, in addition to more than 400 college science students and hundreds of community leaders.

One of our latest efforts is a new program called "Girls in Conservation," which was started by a group of women on our staff to help mentor and support young female students in Rwanda who might otherwise not be able to continue their educations. (See story on page 4.) Many of the women who developed this program were themselves the beneficiaries of mentorship and support, thus paying forward the investment in the next generation. Data shows that women are critical to effective conservation and environmental protection, so helping increase their roles and opportunities is definitely important and we can't wait to see the positive impacts these young women will have!

And finding more opportunities

Scientists predict that we will lose half of the remaining great apes within the next two decades, with Grauer's



Our newest professional interns are among the many young scientists making an impact in conservation.

gorillas facing the largest decline of all. So we know that the Fossey Fund's conservation efforts will truly help save a species.

But the more we do, the more we can see that the opportunities to make a difference are everywhere, from the smallest action to much larger efforts. Effective conservation involves an inter-connected web of strategies and we feel lucky that our passion for saving gorillas has become such a wonderful way to help address some of the world's most-critical issues.

Thank you to our Corporate Sponsors for their extraordinary support in 2024



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