The "Taiping Four" (T4) gorillas have come back home. Better late than never! The journey from South Africa to Cameroon was incredibly long and tiring for the gorillas and all involved in their care, but when the four gorillas walked confidently out of their travel crates into their new quarantine enclosure, we all knew that it was worth it. The journey had begun 29 hours earlier in the late afternoon of the 29th November 2007, when the lightly anaesthetized gorillas were placed in their travel crates at Pretoria Zoo (South Africa) to begin the long trip home. The journey was to be broken into several legs, the last of which, from Douala to Limbe, I was dreading, as the traffic (and temperature) can be awful and any delay would have added more stress to the already exhausted gorillas.

However, the final leg of our journey turned out to be one of the most memorable moments of my professional life: With Mount Cameroon back-lit by the red sun setting over the sea we drove towards Limbe. A single police motorcyclist with siren blaring cleared the typically grid-locked traffic and led a forty-strong convoy of 4-wheel drive vehicles containing the senior officials of the Ministry of Forests and Wildlife from the Government of Cameroon, all with hazard lights flashing. The people of Douala all turned to look, expecting to see the Prime Minister’s vehicle, but instead found an old truck leading the way, carrying four infamous gorillas. News all over the radio proclaimed the return of Cameroon’s gorillas and people nodded in appreciation at the sight. For a moment it seemed that times had changed in Cameroon, with gorillas being afforded the respect that they deserved in the national psyche. At the Limbe Wildlife Centre hundreds of people had gathered in the darkness to welcome their gorillas home. The truck pulled into the quarantine area and in a much practiced process the 4 crates were unloaded and, with the crowds cheering, the four gorillas trotted into their new enclosure that had been draped in browse and cut branches. Their long journey had come to an end.

The following day the official celebration for the return of the gorillas was held in the neighboring Limbe Botanical Gardens. A speech proclaiming the importance of Cameroon’s wildlife was made by the Minister of Forests and Fauna, and five African grey parrots, recently seized from an illegal shipment at Douala Airport, were released as a symbolic gesture.
The event, watched by hundreds of people and recorded by several news crews, was the answer to those who, quite rightly, have questioned the reasoning behind the decision to return the gorillas to Cameroon. Through this event, the gorillas' sorry saga, that started with the shooting of their mothers in the rainforests of Cameroon and their illegal shipment across the globe on an international airline, was brought to the attention of the Cameroonian people. Through their return, the minds of Cameroonian politicians and public alike were, for the time being at least, focused on the plight of Cameroonian wildlife. This was not a simple story of four gorillas, rather it was a story that echoed the plight of all Cameroonian wildlife that finds itself being taken from its forest homes to satisfy a human demand. Wildlife was, for this moment, top of the agenda. How long the story, and the conservation issues that it represents, remain in people's minds and whether any change is realized as a result we shall only be able to guess in the future; but for one moment, at least, there seemed to be hope. Long may that hope last.

Since those heady days in late 2007 the four gorillas have had a chance to settle into their new surroundings and the keeping staff have been able to develop their new routine. So far there is very little to report, for which I am thankful. The gorillas have, since their first day back in Cameroon, been eating gorilla browse, such as the Aframomum melegueta plant (a member of the ginger family) and papaya stems and leaves, which they seem to enjoy and they have adapted well to their temporary quarantine cage. In early March we will begin the process of transferring the four to join the LWC's resident gorilla group (4 males and 7 females), a process fraught with possible pitfalls and personality clashes. The success or failure of this introduction will determine the future management of the LWC's gorilla group. It will be a very interesting few months.

The return of the Taiping Four gorillas was facilitated by the Government of Cameroon, the Pan African Sanctuary Alliance, the Pandrillus Foundation, the International Fund for Animal Welfare, the International Primate Protection League and the Last Great Ape Organization.

The "T4" gorillas were a lot bigger than the "babies" abducted 6 years early, seen in the photo below right.

Above, L to R: Tinu, Oyin, Abbey and Izan (the lone male).

Update: On 21st December 2007, three weeks after receiving the Taiping Four gorillas, the Limbe Wildlife Centre was involved in the rescue of an approximately 7month old female western-lowland gorilla from the east of Cameroon. The infant's mother was killed by a hunter who was apprehended when he tried to sell her to a government civil servant. The female gorilla (photo left), named Adjibolo, or "Bolo" after the civil servant, is now living at the LWC and currently spends 24 hours a day with a human caregiver. In the near future she will be introduced to a surrogate mother who will be selected from the LWC's resident gorilla group. Following this, the surrogate mother and Adjibolo will be introduced to the resident group, an introduction that we hope will lead to Adjibolo becoming the youngest member of the LWC's recently expanded gorilla population of 16 individuals.

Photos are courtesy of the author, except the photo from Taiping (baby in hammock), which is from the internet.

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Gorilla Gazette, May 2008, Page 2
The 2008 Gorilla Workshop, hosted by Brevard Zoo and Disney’s Animal Kingdom, was the sixth such Workshop since 1990. Conferences have been held in the US, Canada and the United Kingdom with the number of delegates in attendance ranging from 95 to 220. Over the years keynote speakers have included Drs. Kelly Stewart and Sandy Harcourt of UC Davis, Dr. Mike Cranfield of the Mountain Gorilla Veterinary Project, Dr. Liz Rogers of Edinburgh University, Dr. Bryan Carroll of Bristol Zoo/CWAF and Ian Redmond. Although there have been some changes since its inception, such as a greater emphasis on in-situ fieldwork and conservation, and discussion of all-male groups, the beauty of the GW is its adaptability and willingness to lead the way in husbandry practices. What has not changed is the sense of camaraderie amongst attendees, their shared passion about improving the lives of captive gorillas and truly wanting to make a difference - those are the aspects that serve to inspire.

The 2008 Gorilla Workshop included 200 delegates representing 17 countries, 73 zoos, 10 universities and 11 non-governmental organizations (NGO’s) and/or field sites. Keynote speakers included Thomas Breuer of the Mbeli Bai Gorilla Study, Doug Cress of the Pan African Sanctuary Alliance (PASA) and Dr. Alecia Lilly of the Dian Fossey Gorilla Fund International (DFGFI). This GW included 3 full days of talks (over 50) with the final day spent at Disney’s Animal Kingdom, and pre/post tours offered to Brevard Zoo and Busch Gardens. Travel grant funds raised by the Paignton Zoo at their 2006 Workshop were awarded to: Luis Soto Rendon of the Guadalajara Zoo, Mexico; Cynthia Fernandes Cipreste of the Belo Horizonte Zoo of Brazil and Fay Clark of the Zoological Society of London. Brevard Zoo sponsored Jeta James Fawah of the Cameroon Wildlife Aid Fund. Columbus Zoo and Brevard Zoo sponsored Simon Childs of the DFGFI/MGVP gorilla orphanage in Rwanda (thanks to Jack Hanna for making that happen).

Products that were given to the 2008 GW delegates benefited projects in Africa or were eco-friendly. The cloth conference bags made by a widows’ co-op and the banana leaf portfolios from the Ubumbwe Community Center, are both projects located in Rwanda. These items were bought through Partners in Conservation (PIC) of the Columbus Zoo. The pens and paper tablets in the portfolios were made from recycled products. Our vendor booths included PIC which raised $4,100 for mountain gorilla conservation and community-based projects in Rwanda; the Eques Inc/Brevard Zoo booth sold $1,200 ($600 to PASA and $600 to Mbeli Bai Study); and Mbeli Bai t-shirts, photos and donations netted $1,800 for Thomas Breuer’s work. The Silent Auction raised $3,600, some of which will be given to the next host zoo’s travel fund; the rest will be combined with $10 from each registration fee and used to benefit gorilla field conservation and research.

Continued ...

The 2008 Gorilla Workshop was fun for all, networking and shopping for good causes. DAK gorillas KJ and Spike put on a fun show for delegates too! Photos courtesy of Beth Armstrong (left and right) and Rick Murphy (center).
I would like to thank all the attendees - it’s because of your experience, commitment and willingness to share your respective knowledge, that captive gorillas’ lives have been made better over the last 18 years. Although many people worked tirelessly on this conference both at Disney (Amy, Barbara, Rebecca and Rachel) and Brevard Zoo (Jessica, Suzi, Mary and the volunteers), I would like to especially thank Cheri Purcell of Brevard Zoo for her behind-the-scenes organizational skills, enthusiasm and humor.

Beth Armstrong

Every year when I sit down to go through the articles submitted to the Gorilla Gazette it reminds me of Christmas, in so much as I am able to partake of a diverse feast coming from around the world. What struck me this year was the fact that since I started working with gorillas 36 years ago we are really getting “there.” Where “there” is was only vaguely apparent in 1972. Some things were not much different to today; OPEC had just formed and high fuel prices were crippling the world economy, everyone was worried about the destruction of the Amazon rain forest and America was struggling to extricate itself from a war. With gorillas, many zoos still weren’t able to breed them and those that did were often taking infants away at birth because they were so rare and precious. Enclosures were sanitary and provided good viewing for the public. Institutions, management and the public were paramount. Then innovators, like the late John Aspinall, advocated putting the animals first and having husbandry and enclosures emulate the wild. He found a ready audience in caregivers and the public, but it has taken a long time for every decision maker involved in the lives of gorillas to agree where “there” is. This is just as true for in-situ conservation as it is for ex-situ. Intervention in the wild was actively opposed by the scientific community and the setting up of sanctuaries and reintroductions of orphans to range areas actively discouraged.

Perhaps the poster child for the final discarding of colonial attitudes in conservation is the return of the “Taiping 4” to their native country ... we really have come a long way, kicking and screaming maybe, but we are finally there. If there is a single factor which changed people’s behavior I think it is exemplified in the wonderfully written articles from the Jersey and Knoxville Zoos. Gorillas have such powerfully endearing personalities that it is rare for anyone who has contact with them not to be affected in a very positive way. Innovators such as Beth Armstrong and Charlene Hendry were given support by then Columbus Zoo Director Jack Hanna to start the Gorilla Gazette and begin the Gorilla Workshops. This enabled a movement of like-minded people that finally informed all levels of decision makers. The internet has turned Noam Chomsky’s “Global Village” into a reality and Jennifer Chatfield put “Gorilla Keeper’s Forum” on that world map. Jane Dewar has strived to solicit articles for the Gorilla Gazette from non-English speakers around the world and succeeded spectacularly. Without her efforts we would probably never know that the Lisbon Zoo has reinvented itself as a paragon of modern gorilla care.

So now we regularly see caregivers participating in enclosure design as witnessed by the articles from Boston and Los Angeles. Baby gorillas are only removed out of necessity and re-introduced rapidly, people are innovating freely (if combining rodent control and enrichment in the form of a meerkat/gorilla mixed exhibit isn’t innovative, I don’t know what is). A German caregiver incorporates into the routine, medical training skills he learned in Australia. In the wild orphans are being reintroduced and former Eco-tourists have helped to set up sustainable economic activities. National governments and NGO’s are struggling to balance human disasters and gorilla conservation, but now the wildlife has as much status as the people: the deaths of so many park rangers attest to that fact.

So, can we all relax and rest on our laurels? I don’t think so. What is clear is that many of us know where “there” is, but the journey continues. Some people are lost, some are trying to re-invent the wheel and others have come up against obstacles. It behooves us all to continue to point things out, share information and discuss situations ... after all, look where it has got us already. It is equally important for people to ask questions as it is to give answers. People like Richard Johnston-Scott at the Jersey Zoo are not only exemplary caregivers and managers, but have a lifetime of knowledge and experience to share. That is a resource worth tapping into.

Pete Halliday
The Gorilla Groupie Debate: An Opinion

Recently there was a somewhat heated debate on various internet groups about gorilla groupies and the challenges zoos and keepers face dealing with them. So, just what is a Gorilla Groupie? Gorillaphile? Gorilla nut? In my definition, it’s anyone who follows gorillas as individuals at zoos, where time spent observing or interacting with the gorillas equates to visits with friends or family. Just like everything else in life, there is a wide variety of groupies - and gorilla keepers. Some are reasonable, some are not. Some are simply passionate and some are simply weird. But groupies and keepers both love gorillas, and thus there is a shared bond, which may create hostilities by virtue of differences in personalities and points of view.

Being recognized by a gorilla is a privileged, powerful feeling, that only a few of us understand. In many zoo settings, watching the public is part of the gorillas’ day, and gorillas recognize familiar faces and often seek them out. Just how groupies pass their time with the gorillas is subject to debate. Showing things like mirrors, videos and toys is a form of enrichment, and I wonder what real harm it does. Obviously, when it creates dysfunction in the gorilla group, it’s a problem, but more often than not, it’s merely another part of the gorillas’ captive environment. At Zoo Atlanta in Willie B’s old group, the mothers would bring their babies to play right by the glass viewing window where the public was, making me wonder who was watching who! In many zoos I’ve visited, there are plenty of other comfortable resting spots, yet the gorillas chose places where they could people watch, as part of their day. Whether it’s another species in their exhibit (see pages 67-70) or within their view, gorillas are curious about their environment, and the public/groupies are part of that environment.

Gorillaphiles (my preferred name for us) have invaluable information about gorillas that otherwise may be lost. Jim Davis and Ken/Irene Wenlock have kept studbooks that keepers relied upon when there was no official studbook coming out from the zoo world for years. If you ever need a great photo of a gorilla, Tom and Jan Parkes have photos, video and an encyclopedic knowledge of most gorillas in captivity now or in the past. When researching the Alberta Game Farm (see pages 8-10), the Wenlocks were the ones who had original documents from the zoos and animal dealers involved, confirming what former keepers remembered. In order not to interfere with keeper discussions, groupies started their own internet group,* where all things gorillas are discussed.

So why does there seem to be this animosity between two groups of people who love gorillas? Part of the answer may lie in human nature. Groupies may offer their opinions, which keepers may find insulting or threatening—especially if the groupies point out an issue which is causing concern. Instead of merely saying “thank you for sharing” to a groupie’s comments, zoo staff may take issue with the audacity of an outsider telling them how to do their job. Insecurity and fragile egos are the hallmark of both keepers and groupies, so it’s not that surprising they clash from time to time.

Frankly, I don’t really see much of a difference between a gorilla groupie and a dedicated gorilla keeper. Both have passion and recognize the privilege they enjoy by being near such wonderful souls. I’ve learned never to underestimate or dismiss anyone who loves gorillas, no matter how odd they may seem. With populations being decimated in Africa, it seems a shame that people sharing a passion for gorillas can’t respect each other more. And some groupies may “grow up one day” to do amazing things for gorillas …you never know!

Continued ...

Gorilla Debbie often sought out familiar people to interact with, as shown in these two photos.
Kumba, left at Riverbanks, sought me out after I sat quietly at one end of the exhibit. Did she remember me from our time at LPZ years earlier, or did she, like so many other gorillas I’ve met, just recognize someone who respected and loved her? Timmy, right in Louisville, came to sit near me and showed interest in my t-shirt.

The “Ape House Gang”

Back in the mid 1980’s, I remember gorilla keepers at Chicago’s Lincoln Park Zoo, pulling me aside and telling me, for my own sake, not to be seen associating with the (in)famous LPZ "Ape House Gang," if I wanted to be taken seriously. At other zoos I was advised by zoo curators/staff that unless I had a degree, my observations were mere anecdotes and my opinions had no value, as they lumped me in with others who they considered "overzealous" nut cases. It was difficult, since I admired/respected 99.9% of the keepers I met, yet I didn’t agree with what I saw as an elitist mentality.

The Ape House Gang** consisted of mostly homeless or mentally ill people, who took advantage of LPZ’s free admission and the warm Ape house to while away Chicago’s wintry days, but who were there from opening to closing 365 days a year. I learned more about the LPZ gorillas from Coca Cola Bob, Deaf John, Actor John, Lester, Ralph, Kenny and old man Charlie than I would have ever learned if I waited for the always busy keepers or (back then) non-existent docents to help me learn who was who in the 23 or so gorillas divided into 3 groups.

Sure, Lester and Ralph could get agitated if they didn’t take their meds and listening to Coca Cola Bob’s repetitive questioning like a 3 year old could be a strain, but one thing was clear: These people – who I would cross the street to avoid if I’d seen them in the city in any other venue – loved and knew the gorillas, as much as anyone. The Ape House Gang were my friends and I remain proud to have known them, applauding their honesty in that they let their weirdness out for all to see.

Jane Dewar, Gorillaphile

*To learn more about the gorillagroupiesforum group, please visit [http://groups.yahoo.com/group/gorillagroupiesforum](http://groups.yahoo.com/group/gorillagroupiesforum)

**For more on the Ape House gang see: Primate Investigators Find Gorillas of Their Dreams at Zoo: Chicago Tribune - Chicago, Ill. Author: Dold, R Bruce Date: Mar 2, 1990 Abstract (Document Summary) The Ape House Gang, a group of men who frequent the Great Ape House at Chicago’s Lincoln Park Zoo, know the animals so well they sometimes inform the zookeepers if one has become ill.

All photos from the author’s personal files.
The Original Gorillaphiles
Ken & Irene Wenlock, Wolverhampton, England

What a Guy: Our love for gorillas started way back in 1963 at London Zoo, while on our honeymoon - yes, that’s right, honeymoon! We met and fell in love with a gorilla named Guy. He was a magnificent animal; he was so big and majestic, he looked down at us like he was a king. We were overwhelmed with his presence and from that time on we were hooked on gorillas. In 1963 Guy was the only gorilla in England and we had never seen any other gorillas, babies or young ones, so to come face to face with a 17 year old male, in his prime, was breathtaking. We were frozen to the spot with mouths wide open. We were so impressed, that when we got home we went to the library to read as many books about gorillas that we could find, which in those days were not many at all. But with great luck for us, we obtained a copy of the International Zoo Year book, which had a list of zoos all over the world that held gorillas. We wrote to all these zoos for information on each of their gorillas, and after a few years we had a lot of letters with lots of information (which we still have). Back in 1966 Irene said, “Why not write all the gorilla data that you have in the letters into a book” which was the start of a gorilla studbook.

What can you say about these wonderful animals that has not been said before. Irene and I have gorillas to thank in meeting so many interesting people and making lots of great friends. Just a final word which sums up our love for gorillas: While we were on a holiday to the Channel Islands of Jersey, in June 1978, I phoned my mother at our house, and straight away she said: “I have some bad news to tell you. I had a phone call from London to say a friend of yours had died. His name was Guy.”

Mamfe: Another gorilla with a large impact on our lives was Mamfe, who we first met when he was 2 years old at the Jersey Zoo in the Channel Islands in 1976. The next time we met up with him was at Twycross Zoo in 1985. On several weekends and holidays, we would raise money for the Dian Fossey Fund, and stay in one of the zoo caravans. On mornings when staying at the zoo, I (Ken) would go in with the gorilla keeper, Keith Lloyd, to clean out the gorillas’ night cages. At the time they had Mamfe, Joe, Bongo, Eve, Biddy and Assumbo, and I got on fine with all the gorillas. But after a few years, Keith left and the gorillas had babies, but Mamfe changed. Whenever I was there, he would run to where I was standing and bang on the glass. As time went by, he would get more and more upset with me being there, and in the end we stopped going to Twycross, because we could not get to see the gorillas without upsetting them. One time I even wore a coat with a hood, sun glasses and a scarf around my mouth, but I only fooled Mamfe for a short time, when he walked slowly to the window, looked straight at me, as I was sure I could hear him thinking “Got you! You can’t fool me!” and he smashed the glass by my face! Sadly, Mamfe died in 2007.

Visiting Gorilla Haven: One example of friends we met through gorillas are the Dewars, founders of Gorilla Haven. We have had the honour of visiting Gorilla Haven twice, but mostly I think of it as Gorilla Haven. The first time was in November 1999, for my 60th birthday. Jane and Steuart had a surprise for me: they hired a light airplane for Irene and me to fly over about a 30 mile area, to take a look at Gorilla Haven from the air – a great trip. A photo taken on that day can be seen on the GH website and the Gorilla Gazette (vol. 15, no. 1), where you can only see the perimeter path was done. What a real big change we saw the next time we visited, in July 2007. We could not believe the contrast. The whole area had exploded into a wonderful Gorilla Haven. We were taken aback with the size of the gorilla exhibit and the night room, which are awesome like the rest of the work which had been done since our first trip in 1999. It was good to see Joe and Oliver looking so healthy and happy. We have seen a lot of 40 year old plus gorillas, but none have looked as good and healthy as Joe. What a great place for gorillas – good job, Jane and Steuart on what you have done. Congratulations to you both and your staff in making it so good for the gorillas to live at Gorilla Haven.

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Ken & Irene at Gorilla Haven in 1999. Photo courtesy of Jane Dewar.
What started as an innocent question sent to the zoo biology and gorilla internet groups, touched off a mass emailing campaign between zookeepers worldwide. The question came about when I was organizing the Edmonton Valley Zoo’s library and came across an old guidebook from Al Oeming’s Alberta Game Farm, a now defunct zoo located outside of Edmonton. In this guidebook it said that in the upcoming years the Alberta Game Farm would be acquiring Mountain gorillas, Bakial seals, and Giant Pandas. This intrigued me as I knew of no zoos housing such animals in Canada. To investigate further I made a trip to the City of Edmonton archives looking for information on the Alberta Game Farm and on Polar Park, which is what the Alberta Game Farm was later renamed. In and amongst the newspaper clippings there was an advertisement for Polar Park that claimed it housed the only two mountain gorillas in captivity, Sultan and Zakula. This really intrigued me. So when I had the chance to purchase a used AGF guidebook off eBay I had to jump at the chance. When I received the guidebook there it is on page 46: two young “Mountain Gorillas,” Sultan and Zakula. Since I never heard of any mountain gorillas being in Canada I posed the question: Were there ever any mountain gorillas in Canada? This simple question soon ballooned and an international research team started to evolve literally overnight. Soon there were emails being sent every day and sometimes what seemed to be on the hour. The research team included numerous keepers at the Toronto Zoo, both working and retired. Jane Dewar of Gorilla Haven immediately wanted to know more about these gorillas, so she enlisted her group of gorilla contacts worldwide to assist her in finding out anything about these gorillas. Over the past three years our small group has been on the search to discover all we can about the “mountain gorillas” of the Alberta Game Farm.

Dr. Al Oeming opened the Alberta Game Farm (AGF) in Ardrossan just outside the city of Edmonton, Alberta Canada. Dr. Oeming opened his park in 1959, when his attempt to take over the Storyland Valley Zoo (which also opened in 1959) failed. Prior to opening the Alberta Game Farm Dr. Oeming received his doctorate in biology and was a stampede wrestling promoter. As a promoter he was known for bringing his pet cheetah to the ring. At its peak the 1,400 acre Alberta Game Farm attracted a million people a year. Dr. Oeming displayed numerous rare and endangered birds, carnivores and hoofed mammals, many of which are still rare in zoos today. Dr. Oeming was an animal dealer specializing in rare Canadian Arctic mammals. He had a television show in Canada where he and Leslie Neilson went to the Arctic and captured animals to bring back to his farm. To highlight the change in animals, he changed the name of the park from the Alberta Game Farm to Polar Park. The changing regulations relating to the sale of animals and an increase of debt forced Oeming to close his doors in the early 90’s. Dr. Oeming is still alive although we were
not able to get in touch with him. But we did manage to find out a lot of information from former caregivers and pieced together which gorillas were at The Alberta Game Farm. Of the six gorillas at the AGF during its operation, two were captive bred and four were wild caught. The so-called "mountain gorillas" were Sultan and Zakula. Prior to Sultan and Zakula, Dr. Oeming had Micki and Vicki. Carlos and Gertrude were the last gorillas that the Alberta Game Farm purchased.

The "Mountain Gorillas," Sultan and Zakula, were in fact western lowland gorillas, which Dr. Oeming purchased in 1971, when they were estimated to be about three years old. Dr. Oeming owned the two gorillas until 1986, when facing financial hardships, he sold the pair to the Pittsburgh Zoo for $250,000. On Al Oeming's Alberta Game Farm surplus list he had the gorillas listed as mountain gorillas. Sultan and Zakula were originally listed in the Gorilla gorilla beringei studbook under the entries 22 and 24. The subspecies status was then reviewed by the Gorilla SSP committee and they were reclassified as Gorilla gorilla gorilla. Unfortunately two years after the move Sultan passed away from myocarditis. A former Alberta Game Farm employee said that prior to Sultan being sold, the AGF veterinarian Roy Saito had performed heart surgery on him.

Prior to Al Oeming's "mountain gorillas," he had purchased two other gorillas, Micki and Vicki, both born at the Dallas Zoo. The Alberta Game Farm received both gorillas in 1970, but unfortunately they did not live very long. Micki died the same year he arrived from Para tuberculosis or yersinie disease. Vicki lived at the Alberta Game Farm for two years after arrival and died in 1972 of a stomach virus. Vicki's body was unceremoniously sent by Greyhound in a garbage bag to the Western College of Veterinary Medicine at the University of Saskatoon. A story goes that Vicki's body had shifted on transport and on arrival in Saskatoon the driver and passengers were greeted by a dead gorilla in the luggage hold. Her skeleton is still at the University. The last gorillas Al Oeming purchased were two wild caught gorillas. Their names were Gertrude and Carlos. Al Oeming purchased the gorillas from L. Ruhe, Import Und Export Exotischer Tiere Und Vogel from Germany in December 1973. The Alberta Game Farm gorilla we know the least about is Gertrude, who is listed in the 1988 studbook but her date of birth is unknown. Gertrude and Carlos both arrived in 1973, but Gertrude died soon after arrival in 1974 from drowning. At the Alberta Game Farm the gorillas were kept in a three and a half acre enclosure, surrounded by

Micki (on head) playing with keeper, Ron, as Vicki and Zakula look on.

<table>
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<th>SB #</th>
<th>Name/Gender</th>
<th>Born</th>
<th>Transfers</th>
<th>Parents</th>
<th>Surviving Siblings</th>
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<td>0506</td>
<td>Carlos (M)</td>
<td>1970</td>
<td>1973: to AGF 1980: to Memphis Zoo 1986: to NC Zoo 14Dec00: to Atlanta 01Sep01: died AGF</td>
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<td>1970</td>
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<td>19Aug65</td>
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<td>Jimmy Doe/ Shamba</td>
<td>½ Demba (L'ville)</td>
<td>½ Julu (Col. Springs)</td>
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<td>1970: to AGF 10Oct72: died AGF</td>
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<td>½ Demba (L'ville)</td>
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<td>Zakula (F)</td>
<td>1968</td>
<td>1971: to AGF 1986: to Pittsburgh</td>
<td>n/a</td>
<td>n/a</td>
<td>Mnti, Kambuka, &amp; Anju</td>
<td>Only surviving AGF gorilla</td>
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a tall wall and a water moat. The enclosure was a natural
birch tree area with playground equipment. The gorillas
had access to a heated building during winter, but had
access to the outside too. There are numerous pictures
and postcards of Sultan and Zakula walking along a path
outside in the snow. Al Oeming practiced free contact
with most of his animals, and the gorillas were no excep-
tions. Gorilla keepers were encouraged to enter the enclo-
sure and play with the gorillas. The gorillas were main-
tained on a gruel and willow browse. According to one of
the gorilla keepers, the animals skin and coats were very
poor due to the dry cold climate. No gorillas were ever
born at the Alberta Game Farm.

Studbook Mix Ups: What caused a lot of confusion
for us in our research into the gorillas, is that the Alberta
Game Farm’s gorillas are listed under Edmonton. But the
Alberta Game Farm was not the only zoo that is listed as
Edmonton in studbooks: The Edmonton Valley Zoo, Ed-
monton’s municipal zoo, is also listed as Edmonton in
studbooks. In fact the Pygmy hippo studbook shows this
discrepancy as both the pygmy hippo that were kept at the
Valley Zoo and the pygmy hippos housed at the AGF are
listed under “Edmonton” in the studbook. So even though
the gorillas are listed as being from Edmonton they are
actually from the Alberta Game Farm.

In conclusion our research group has found out lots
of information on the Alberta Game Farms gorillas. Un-
fortunately there is still a lot of information that is not
known about the gorillas that were kept at the AGF. What
was revealed is that Sultan and Zakula were not mountain
gorillas but were western lowland gorillas. We revealed
four other gorillas that we previously had no knowledge of.
Many of the Alberta Game Farm Gorillas did not live
very long and died at a young age. Only Zakula is alive
today. We have tried to the best of our abilities to re-
search everything we could about the Alberta Game Farm
gorillas, but may have missed something. Should you
know any more about the Alberta Game Farm’s gorillas
please contact Jane Dewar of Gorilla Haven as we’re all
anxious to know. Thanks!

This article could not have been written without all the research
and information gathered by our research team. I have had the
pleasure of putting it together with the team’s assistance. Those
listed below are all those from the research team and those who
have assisted us with our research. Apologies if we’ve overlooked
someone!

Jane Dewar, President, Dewar Wildlife Trust, Inc.
Wayne Jackson, retired elephant keeper
Ron Gilmour, Former AGF gorilla keeper, Toronto Zookeeper
Heidi Manicki, Toronto Zookeeper
Ken and Irene Wenlock, Gorillaphiles, England
Jim Davis, Gorillaphiles,
Sharon Steele, Former AGF keeper, Toronto Zookeeper
Roseann Giambro, Pittsburgh Zoo, gorilla keeper

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Photos and scans came from a variety of sources. Thanks to all who contributed!
Das Jahr der Gorillas im Zoo Duisburg  
Duisburg Gorillas: Year of Changes  
Stefan Terlindenh, Duisburg, Germany

Editor's Note: We're trying out a new idea: In order to encourage zoos with gorillas in non-English speaking countries to contribute to the Gorilla Gazette, we'll publish articles in the original language, providing a rough translation/recap in English as well. The first such article comes from Germany. Translation provided by Olaf Paterok and Angela Meder.


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Duisburg Gorillas

<table>
<thead>
<tr>
<th>Name</th>
<th>Gender/Geschlecht</th>
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<td>Paignton</td>
<td>28Oct07</td>
</tr>
</tbody>
</table>

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Dann war es so weit. Er sollte die Damen nun auch ohne Gitter kennen lernen, was auch sehr gut verlief. Erzielte zwischen-


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**Duisburg Gorillas: Year of Changes**

*English Recap of Above Article, in German*

A lot happened at our gorilla section during the last year. A new group has been established, new gorillas have come to Duisburg and some individuals had to leave for another zoo. Early in the year we got the news that a young female gorilla named Safari from Taronga Zoo, Sydney, had been chosen as a member of the new Duisburg gorilla troop. She was supposed to arrive at the end of May via Adelaide, Australia and I was the one to pick her and her keeper up at Frankfurt Airport. After the 72 hour flight Safari was happy to leave the crate for her new home and to get to know the other gorillas at the contact bars. Everybody among the staff was excited to see how she settled in and how the rest of the gorillas reacted. During the following days we slowly introduced Safari to the others. First to male Catou, which was no problem at all, then to Momo and Vizuri, which led to some minor quarrels, and finally to high ranking troublemaker Dorle, which caused the expected fighting. Silver-back Catou again showed his good social qualities and tried to sort out the disagreements between the females. A new hierarchy had been established surprisingly quickly and it became obvious that the naturally raised Vizuri and Safari both liked each other and formed a strong bond of friendship and support. From now on hand-reared Momo would be the last in line.

We now had a stable and well functioning group, which unfortunately was soon to be split up. To accommodate the arrival of Jersey born male, Mapema from Paignton Zoo’s bachelor group, Catou and Dorle had to leave the zoo. Prior to the transfer of the two elderly individuals for Valencia Zoo, Spain, I started to get the animals used to the crates to try to avoid knocking them down and thus taking the risk of losing one of them.

Some years ago I was lucky to work for some weeks at Sydney’s Taronga Zoo, where I learned medical training in primates, which I have now been doing with the Duisburg gorillas for about three years. We started with small training sessions and now we are already able to examine teeth, give shots and also do ultrasound with the females. This way we could do all necessary checks on the gorillas prior to the transport. Unfortunately, on the day of departure both Catou and Dorle did not walk into their crates and thus had to be anesthetized. Luckily both came around well and after 30 hours of traveling by car we arrived at Valencia, where we were eagerly expected by the staff. I had three days to get the gorillas accustomed to their new home and keepers and then hurry back to Germany, for Mapema was already on his way to Duisburg.
Lacking a silverback, the Duisburg gorillas were in a bad mood. We hoped to cheer them up by introducing a young blackback to the three. Mapema spent his first night on his own and on the following day he inspected his new indoor area. On day two he got to know the females without a partition. All went very well and after a smooth introduction we were happy to see the young male from time to time displaying to the females. He did not seem to be intimidated at all. It soon became clear that Safiri was his favourite, although he played with Vizuri as well. Momo more and more became a loner. We now hoped that in 2008 we would be happily expecting some babies.


Stop press: In February 2008 there has been good and bad news. After learning that female Safiri is pregnant and Vizuri most likely as well, we heard about male Catou (left) dying at Valencia Zoo on 19 February 2008 - being about 38 years old. After arriving at Duisburg as a 2 year old from Gabon, Catou was alone most of his life with only one other gorilla. We had good hopes for a new life for Catou with a bigger family and it looked like his future was bright. As his caregiver, I will miss him a lot—he was my first gorilla and was always a pleasure to work with. May he rest in peace.

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Editing of Original and Translation/Summary by Olaf Paterok and Angela Meder
When Ya Pili sighed her last breath at seven minutes past six on the morning of Friday 12th October, 2007 it was as if a shining light had suddenly been extinguished on the gorilla section. The playful antics of this endearing, and often mischievous little character had always been the main focus for the group, especially for her mother Hlala Kahilli, and for the other females who when presented with any opportunity would smother her with affection. As she developed physically, and grew in confidence her sometimes outrageously bold interactions with her 240 kg father, Ya Kwanza, became more frequent, and were both fascinating and a delight to witness.

Only a few weeks earlier she had prompted me to laugh out loud when having cheekily snatched a handful of grapes from under the wrinkled nose of the silverback, she then had the sublime nerve to sit well within a massive arm’s reach whilst noisily devouring her prize! Ya Kwanza, chewing thoughtfully cast a brief disconcerting glance in her direction, but then resigned himself to his loss with a deep resonant grumble to which Ya Pili responded with her unique ‘yaaom yaaom yaaom’ vocalisation denoting her pleasure. It was a characteristic Ya Pili sound recognisable to only those who knew her well.

Her regular visits into the gorilla kitchen, and my adjoining office were always great fun, and invariably resulted in her raiding the fruit rack, the milk powder bin, and even my lunch box. She was a bundle of energy, always looking to engage another, whether human or gorilla, in a play activity. Boisterous bouts of wrestling were a favourite as were play chases, and acrobatics on the scramble net. When ropes were installed hanging down from the top of several towering timbers she was the first to clamber up to investigate. Visitors were entranced, “I could watch her all day,” was a comment not infrequently expressed as Ya Pili’s quite natural behaviour entertained all who were fortunate enough to see her.

So when on Friday 5th October Ya Pili appeared to be a little subdued there was immediate concern. In the absence of our resident vet Javier Lopez, local vet John Blomfield was called in, and from this point on was consulted regularly by our veterinary nurse Sarah Hole. At first it was the noticeable periods of inactivity, and lack of interest in certain food items that indicated that something was wrong with Ya Pili. A possible stomach upset was considered as public feeding had been seen the day before. However her stools were normal, and as she was still eating her more preferred choices of fruit, it was decided to begin medication with Calpol to try to ease any discomfort. Augmentin was then prescribed over the weekend as treatment against possible bacterial infection, and this was later changed to Ciproflaxacin which covers a broader range. Unfortunately the successful administration of antibiotics was proving difficult. This was due partly to interference by other group members, and also to Ya Pili’s ability to detect their presence in her food and drink. Although faecals remained normal, samples of both faeces and urine were taken, but nothing significant was detected.

Despite her obvious discomfort, she continued to go outside with the group as usual, but instead of trotting off to play she would curl up often clutching her head, and stomach. Hlala Kahilli was frequently seen to prod and sniff her rear end, but would move off when Ya Pili either turned her back on her or ambled slowly away. Our senior female Kishka, also clearly worried, investigated the ailing youngster in a similar, yet more gentle fashion, but she would then remain in close proximity monitoring the four year old’s movements. Later, on two separate occasions Hlala Kahilli and Ya Kwanza were seen gently
coaxing their lethargic offspring to her feet. All were now exhibiting increased concern. When Ya Pili began to vomit, it rekindled the theory that she had perhaps eaten something thrown in by a thoughtless member of the public, although later this was considered by some to be regurgitation.

The slide to the back dens was being left open wide enough to permit Ya Pili access only, should she wish to come back inside, and this she would do for short periods usually during the afternoons. She continued to accept her favourite food items, some laced with medication, and make her usual forays into the gorilla kitchen, although her locomotion gradually became slower, and at times she seemed a little unsteady. On Wednesday morning as she rose from her night nest to follow her mother outside Ya Pili stumbled, and then made no further attempt to join the others. Once the adults had left the building I made the decision to separate her, and closed the outside doors as she entered the back dens. She seemed quite content to be on her own, although the group soon became anxious. An extra scatter feed helped to take the edge off their concern, whilst we concentrated on getting medication into its youngest member.

Gary Purcell-Jones, Consultant Anaesthetist from the general hospital who over the years has provided invaluable assistance in the treatment of both gorillas and orangutans here at the Trust, made himself available to attend, and we were then able to successfully administer antibiotics both orally, and by intra-muscular injection. Paracetamol was also given to reduce a slight temperature. The fact that Ya Pili’s resistance to being restrained for injection was minimal served to emphasise her weakened condition. She was regularly plied with fluids, but now it was necessary at times to syringe medication into the corners of her mouth. When hand fed she ate reasonably well with grapes, mango and banana being most readily consumed with the occasional accompaniment of her unique burble of appreciation.

Pippa Barrow, Senior Gorilla Keeper who had a particularly close and trusting relationship with Ya Pili, spent hours encouraging and comforting her. The little female responded well, and later that afternoon even managed to summon up the strength to climb into her straw filled plaited hose hammock. It was only when she attempted to lower herself unsteadily to the floor that we decided to temporarily remove all climbing apparatus as a safeguard against her sustaining injury. When let back in later in the afternoon Hlala Kahilli, Kishka and Sakina were given visual and tactile access via the bars to Ya Pili. All three grumbled their pleasure at seeing her again, and received a barely audible response from the sleepy youngster.

Although it was quite shocking to see her so ill I suddenly felt a little more hopeful now that her full quota of medication had been successfully administered, and that her liquid intake had risen to her best for several days. How wrong could I be? Early the following morning I was stunned to find Ya Pili in a state of collapse! She was lying on her back, eyes shut, close to the partition with the anxious females desperately trying to touch her. Her breathing was laboured as I lifted her into a sitting position in an attempt to encourage a response. She trembled and flexed her fingers, but her eyes remained closed. I laid her on her side, and immediately telephoned Gary and Sarah who in turn contacted John Blomfield. Having repositioned Ya Pili away from the partition I proceeded to shut the group outside. Poor Hlala Kahilli—she hesitated in the doorway calling mournfully whilst staring at the still form of her offspring, then as the slide began to close she reluctantly joined her companions. It was heart breaking to see her so emotionally upset.

Within the hour Ya Pili was under examination in the vet centre. Such was her weakened state that no anaesthetic was required as blood samples, and x-rays were taken. Her temperature at this time was recorded at 40.2 C. Fluids, Paracetamol, antibiotics, and antivirals were administered via an intravenous drip, and faecal and urine samples were also taken along with swabs from nose and throat. It was once these procedures had been completed that I suggested to Sarah that we should confirm Ya Pili’s sex. She looked at me in surprise when I said that I had always harboured a suspicion that the youngster could be female. I had in fact sexed her as female shortly after her birth, although later the general consensus among ape staff had been that Ya Pili was male. Despite being able
to handle her she had never taken kindly to being groped, and either she or her mother would always prevent clear observation. As she was so young I knew that sooner or later an opportunity would arise, but never thought for one minute it would be under such tragic circumstances.

Whilst the various samples were being rushed to the hospital by our veterinary biologist Ann Thomasson, we returned Ya Pili to the gorilla building, and settled her on her side into the right hand back den with the intravenous drip still in place. The Paracetamol had reduced her temperature, which from this time onwards was taken every 15 minutes, and fluctuated between 35 and 39 C. Her limbs were massaged regularly, and she was turned from side to side approximately every 20 minutes. In order to control her temperature it became necessary to administer Paracetamol every four hours. Ya Pili’s movements were now for the most part restricted to intermittent bouts of twitching, stretching, and occasionally yawning. She would also clench and unclench her fingers and toes, then at one point during the latter part of the afternoon her eyes flickered, and she made a concerted effort to rouse herself. In the hope that she was at last beginning to recover, all equipment with the exception of the intravenous drip was hurriedly removed from her den. Sadly, although she continued to respond with slight body movements to sound, and thermometer insertion, this was not to be the case. As time progressed movement became less frequent, and coincided only with temperature reduction, which eventually stabilised at 38.3 C.

With the exception of Bahasha, the group had re-entered the building, but was excluded from the back dens, and although she was given access to the left hand side of this area she refused to come in. Unavoidably she was all too aware of the unusual activity taking place, although Ya Pili was barely visible to her, and by late evening had all but ceased to move. Sarah stayed with me working through into the early hours of Friday morning, changing fluid bags, and adding Paracetamol when required. Together we continued to turn Ya Pili, massage her limbs, check her temperature, and wipe away any mucus discharge from mouth and nose, which was a late development. In addition to her key involvement in this emergency Sarah had also to cope with other animal cases, as well as liaise regularly with John, and Gary, and then update Javier, who was away in Spain. Exhausted she eventually left to grab a couple of hours sleep having first instructed me on how to inject Paracetamol into the drip. The next dose was not due for another three and a half hours, and tragically as things turned out it was never to be used.

I had just taken Ya Pili’s temperature (38.3C.), turned her, and was noting it down when her breathing suddenly changed to short sharp gasps. I raised her head slightly, and cradled it in my lap hoping to make it easier for her to breathe, but she emitted three more little gasps, and then stopped. I knew she had gone, but immediately contacted Sarah who arrived within minutes, and did all she could to revive her, but Ya Pili failed to respond. After a week of struggling bravely to fight off an illness, which has yet to be fully identified, she had eventually lost the battle. We were both devastated, and while I cursed about it being so bloody unfair poor Sarah sobbed uncontrollably, and yet nobody could have done more. After she had informed John Blomfield we removed Ya Pili to the vet centre. I then returned to try to encourage Bahasha inside, but she simply stared at me through the door opening then ran off. Sadly she had lost her closest friend, and playmate.

During the night Hlala Kahilli had hooted a couple of times, and from the far end of the building Ya Kwanza had called in similar fashion before slamming the barred partition. The group was clearly spooked, and when let outside at 08.15 all were visibly upset. No interest was shown in food, and for much of the time they kept their own company, and either just sat staring vacantly at the ground or lay belly down with chin resting on forearm looking into the distance. The spark had disappeared. At the end of the day only Ya Kwanza and Bahasha came inside, and that was after considerable coaxing. Hlala Kahilli, Kishka and Sakina chose to spend the night outside although they were left with access to an exhibit area. Whilst appetites gradually improved the following six nights saw the same three females having to be left with building access. Ya Kwanza never came in before 19.00, and twice chose to remain outside until just after 22.00 with Bahasha always coming in shortly after him.
Wednesday the 17th was the first time we were able to shut Ya Kwanza’s group in for the night before 18.00 since the death of Ya Pili. From their gradually improving behaviour over the ensuing weeks certain individuals eventually began to show signs of coming to terms with the loss of the vibrant little female who despite tipping the scales at a mere 35 kgs has left an enormous gap in the group’s structure.

For all who knew her, both human and non-human, this captivating little gorilla will forever remain conspicuous by her absence. Whilst it was clear from the post mortem report that Ya Pili had succumbed to pneumonia, this was considered to be secondary to a suspected viral infection, although even now with tests ongoing, identifying the virus has so far proved to be inconclusive. Once Ya Pili’s body had been released by the veterinary department I buried her in one of the protected planted areas situated at the highest point of our 2000 sq. metre outside enclosure next to her grandmother N’Pongo.

On the 3rd and 4th of December, Halala Kahilli who had recommenced cycling approximately three months earlier was observed being mated on five separate occasions by Ya Kwanza. On the 18th, and again on the 24th of December strong positive results for pregnancy were obtained. This was obviously welcome news as it demonstrated that not only had Halala Kahilli effectively recovered from her tragic loss, but also that Ya Kwanza was still fertile, and able to function following surgery earlier in the year to remove an underdeveloped testes as a precautionary measure against the possibility of it becoming cancerous. In total contrast to her depressed state during her weeks of mourning, Halala Kahilli’s behaviour, post conception, comprised of frequent bouts of boisterous and playful interaction with Ya Kwanza, and youngest female Bahasha. Clearly pleased with herself she seemed to have taken on a new lease of life. However, in the past Halala Kahilli had been known to miscarry early on in pregnancy before conceiving again, and unfortunately this has since proved to be the case. Recent urine analysis has twice shown negative for pregnancy, and at time of writing she has commenced menstruation. She is nevertheless still very good natured, and although disappointed we remain optimistic for the future, and hopeful of another conception.

POSTSCRIPT: As a fitting, and lasting tribute to the memory of little Ya Pili I have put her name to a gorilla fund initiated here on the 25th September last year to help the organisation Wildlife Direct (set up by Dr. Richard Leakey 2 years ago) in their campaign to prevent further, and terrible slaughter of Mountain Gorillas in the Virunga National Park, DRC. "There are only 680 Mountain Gorillas left in the world, and only 140 in DRC. The gorillas have survived one of the bloodiest civil wars in recent history thanks largely to the commitment, and devotion of a team of Congolese Rangers who have continued to protect the gorillas despite the dangers, and lack of support. Over 100 Rangers have died in the last ten years protecting gorillas, and other wildlife in the Virunga National Park." Situated in and around our gorilla complex 'The Ya Pili Mountain Gorilla Appeal' collection boxes and poster presentations, which include some horrific photographs, have both enlightened and shocked visitors to the Durrell Wildlife Conservation Trust, with the result that to-date approximately £1500 has been raised. Further information on the work of Wildlife Direct can be found at www.wildlifedirect.org.

For the past five years Durrell Wildlife Conservation Trust has been helping to fund the bushmeat research project initiated and supervised by Dr. Jeff Dupain of the Centre for Research and Conservation at the Royal Zoological Society of Antwerp. Project Grands Singes (P.G.S.) is based just outside Cameroon’s Dja Faunal Reserve, in an unprotected forest area inhabited by wild populations of both Western lowland gorillas and chimpanzees. In addition to funding D.W.C.T. has also sent staff to assist in the field. Further information on P.G.S. can be found at www.savelebonobos.org.

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All photos by author, unless otherwise indicated.
Exhibit Renovation to Better Accommodate Sub-Adult Male Gorillas

Jeannine Jackie & Daniel McLaughlin, Boston, Massachusetts

Introduction: The Tropical Forest exhibit first opened in the fall of 1989. The three acre indoor and outdoor exhibit space currently houses many different species in varied exhibits including: ring-tailed lemur, ocelot, cotton-top tamarin, pygmy hippo, capybara, saddle-billed stork, dwarf crocodile, Baird’s tapir, mandrill, potto, anaconda, many free-flight birds, two bat species, and western lowland gorilla. Zoo New England decided to renovate the exhibit and off-exhibit holding area due to the increasing need for more complex and environmentally enriched spaces for both bachelor and family gorilla groups. There are currently seven gorillas residing in the Tropical Forest; three males aged 21, 14 and 14; and four females aged 35, 26, 8, and 3. They are exhibited in two groups consisting of a mixed sex group of two males and four females, and one lone adult male. The renovated exhibit was designed to expand the usable space of the pre-existing exhibit while also allowing for maximum containment for all ages of gorillas.

Indoor Exhibit Prior to Renovation: The gorilla enclosure at the Franklin Park Zoo consists of indoor and outdoor exhibits. The indoor exhibit before renovations was an approximately 8,000 sq. ft (100’x 80’) naturalistic rock work “open style” moated exhibit. The three moats were 12’ high and 12’ wide with hot wire around the perimeter. Two of the moats were kept dry with the third having 3’ of water with a waterfall feature. The substrate for gorillas to sit and walk on was concrete and gunite. Climbing opportunities were limited to prevent escape. The outside exhibit is also an open moated exhibit and it is approximately 14,000 sq ft (100’ x 140’) and includes natural grass and plantings with a water course and waterfall. The outside exhibit remains the same today.

Off exhibit area: The original off exhibit area is approximately 1,500 sq. ft. in floor space. It includes six different spaces of varying size with the largest at 560 sq. ft. and the smallest at 112 sq. ft. It also includes 10’ jungle gyms for vertical climbing. There are many opportunities for “run arounds,” “howdies,” and “separations” so it has made an ideal place for introductions to occur throughout the years. A new space with a greater distance from this area was needed to accommodate a potential second group of gorillas.

New Exhibit: After six months of construction, a 3 million dollar revamped indoor gorilla exhibit opened at Franklin Park Zoo in February 2007. The new exhibit was a vast improvement in many ways including a much more intimate guest experience, better enrichment opportunities and an increase in usable space for the gorillas, which include climbing opportunities and a new softer mulch.
substrate. The new exhibit provides us with a 50 percent increase in floor space and a 25 percent increase in vertical space, with an increased level of containment. Containment was of course a primary concern after "Little Joe," a then 10-year-old gorilla, escaped from the Tropical Forest exhibit (and was safely re-captured 2 hours later) in September of 2003. Since the desire to expand the gorillas' space and increase enrichment was already being discussed prior to the escape, the commitment was made to renovate the entire indoor exhibit. It was decided to completely cover the exhibit by adding a 3" x 3" woven steel cable and mesh ceiling and three layers of ½ inch glass to all open viewing areas. To accomplish this, 30' steel support structures needed to be added to the exhibit along with 80' long steel trusses. This was done while keeping the building open to the public during construction. The gorillas were kept in holding or on their outdoor exhibit (weather permitting), while the other animals were present in their exhibits. Keeping the Tropical Forest open did make the process much more difficult as all of the large support poles, equipment and machinery had to come in and out through the public entranceway while keeping the birds inside the building. This was of course very exciting for our guests who were permitted to safely watch almost the entire transformation process. We decided to offer a soft substrate for the gorillas, so mulch was added to the existing three moats. The 12' moats, including the water moat were filled in with concrete and topped with 2' of hard wood playground mulch. A small 5' x 8' pool was added that allows for varying the height of the water for safe levels for all age gorillas.

Enrichment opportunities were built into this new exhibit. Portions of the two 30' support poles in the exhibit were transformed into 18' climbable trees. The tree in the front of the exhibit has a seat made into it. The second tree features a stilt root system that younger and smaller gorillas can pass through. The exhibit has a 30' x 15' x 12' high planter in the center that was made accessible to the gorillas by the placement of two 9' high x 30' long artificial fallen trees on either side to provide a climbing structure up to the planter. Eye bolts were added to the trees for rope to be hung. In all of the artificial trees small holes were created to hide treats in. A training room with a steel mesh keeper door was added to the front of the exhibit to allow for training demonstrations viewable by the public, wheeling mulch into the exhibit, and for keeper access to the gorillas during the day.

New Off Exhibit Area: The new off exhibit area was constructed in a space that formerly housed African wild dogs and was adjacent to, but 12' below, the existing gorilla holding area. This new off exhibit area consists of four individual spaces with a combined total of 500 sq ft. and covered by 2" x 2" steel mesh panels. Two of the spaces are large two-level areas approx. 14' x 19' x 16' high and two smaller switch dens approx. 8' x 8' x 8' high, totaling approximately 8,000 cubic feet. There are switch doors on both levels allowing for a complete circular "run-around." This new area is connected to the original holding area by a 3' x 4' x 60' long steel mesh chute. All of the den doors are operated by a manual wheel and gear system designed and built by A through Z Consulting. A built-in scale was added to one of the small dens, and a crate training area was built into the second small den. This multi-level holding area is a more three dimensional use of space with increased climbing opportunities and a more open atmosphere for the gorillas.

Conclusion: Refurbishing both our on exhibit and off exhibit areas has helped to improve the husbandry of our gorilla troop by allowing for more natural behaviors to be exhibited through increased enrichment opportunities and by providing the gorillas a much more complex, larger and safer environment. The added vertical space with the multiple trees and access to the center planter has created a more three dimensional space and provides all of the gorillas with an appropriate place to climb. The addition of the glass viewing areas allows for a more personal experience for the guests and at the same time allows for a quieter environment for the gorillas. With the addition of the new off exhibit area our options for
housing gorillas has increased. Having a second separate holding space will aid in our ability to re-introduce our “formerly aggressive” silverback to our female group by allowing us to temporarily remove the two younger males from the introduction area. It will also give us the ability to maintain two completely separate groups if needed in the future, especially important if our two younger males begin to have problems in the mixed sex group. Most importantly, having two separate holding areas will allow us the ability to house a bachelor male group in the future, which is becoming an increasingly critical need for gorillas in North American zoos. The new exhibit has been very well received by the public, the staff, and the gorillas.

**Future Plans:** For the gorillas at Franklin Park Zoo the future plans include the addition of a second outdoor gorilla exhibit that would attach directly to the new holding area. At this time the plan is for a covered walkthrough exhibit which would allow for maximum containment for sub adult groups and bachelor males.

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**Acknowledgements:** Thanks to the following for making this project possible: Zoo New England Board of Directors; Zoo New England CEO/President John Linehan; ZNE EVP/COO Marshall Judges, General Curator Fred Beall; Mammal Curator John Piazza; Project Manager ZNE Jennifer Golden; Exhibit Designer and Consultant URSA International, Nevin Lash, Principal; Exhibit Architects Perkins & Will; Tom Grimble and Steve Hight; Exhibit Contractor Commodore Builders, Tom Comeau, Project Executive; Leann Foley Project Manager, Andy Kekish, Asst. Project Manager, and Tom Gaul, Superintendent; Exhibit Enhancements, rockwork specialists: Copley & Carol; Cable and Mesh construction, A thru Z Consulting and Distribution, Sean Stoddard Principal; Smith Steel, Charles Smith Principal; and The Staff of Zoo New England, especially, Brooks Wardrop, Jen Gresham, Horticulture, Facilities, and the Tropical Forest.

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**Gorillas in their newly renovated exhibit.**
Photos courtesy of Christina Demetrio and the authors.

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Website: www.zoonegland.org

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Sounda had a very traumatic start. She was estimated to be born in January 1984 in the wild of the Congo but sadly, like so many of her kin, became an orphan. Although sweet natured, Sounda carried many scars both physical and mental. The most obvious of which was a wound on her top lip probably from a machete. Fortunately for Sounda she was rescued along with two other gorillas, a male Kouillou, and a female Sangha by Madame Yvette Leroy. When first in Leroy’s care, both the little females were in a very bad way. In fact Chris Furley, the Howletts vet who assisted in their treatment, once said he had never seen gorillas so ill but still alive. However with much care they pulled through and this was the beginning of a life long bond between Sounda and her best friend Sangha. Although now healthy, their future was still far from certain until Yvette Leroy approached John Aspinall for his assistance in taking the trio from an unstable Congo to the safe surroundings of his ever-growing collection in England. John Aspinall fought with the passion he is well known for and after overcoming many obstacles, not least of which was the Congolese government, they arrived at Howletts on the 19th of June 1987.

The trio spent their formative years at Howletts in the ‘hand reared group.’ In 1997 it was decided that the time was right for Sounda and Sangha to leave Kouillou (Kouillou remains at Howletts, the head of an ever growing family with 5 adult females, 6 juveniles and counting!) and join Kifu’s group, in the then new gorilla house at Howletts, where they remained close companions. They made good progress in their new group, with Kifu taking a particular shine to Sounda. On the 4th of July 1998 she blessed Kifu’s group with their first baby, a female named ‘Sanki.’ Sounda proved to be an excellent mother, and Kifu a good (if slightly over enthusiastic!) father. Sanki herself has now gone on to rear her own offspring giving birth to a little boy on the 18th of August 2006.

Although generally happy, the traumas of Sounda’s early years would show in her behaviour from time to time and she would rock in times of stress. If ever there was a bug or illness going around she would invariably be one of the first to pick it up, and it would hit her the hardest. Periodically over the years she would become ill for a few days for no diagnosed reason, generally recovering without treatment. However on the 18th of August 2000 she took ill again. Despite every available medical test, and holistic advice being taken, her illness remained undiagnosed. She had diarrhoea, no appetite, lost condition and we feel sure if it had not been for the constant care she received, coaxing her to eat or drink anything, she would have surely died. This bout of illness lasted 2 months but gradually she ‘appeared’ to make a full recovery.

On the 1st of June 2002 Sounda gave birth to her second offspring, a male named ‘Kouyou,’ the hundredth gorilla birth at Howletts and Port Lympne, and again proved to be a devoted mother. Baby number three came along on the 28th of February 2006, a beautiful little girl ‘Oundi,’ and it was shortly after her first birthday that Sounda’s story takes a turn for the worse. In March 2007, despite still having a good appetite, it was obvious she was becoming ill again. She started losing weight (although her stomach looked bloated) and her coat lost condition and looked dry. Again several tests were carried out, parasite checks, pathogen tests etc., but as before they all came back negative leaving us with nothing to go on. Her behaviour also changed; she looked tired and did not seem to have the energy to intervene when others in the group played too roughly with Oundi. The group size had grown to 15 gorillas, 8 of which were juveniles. It was these juveniles that were later to cause us so much concern.
After weeks of various medications she improved slightly but only for a few days. On the evening of the 15th May Sounda came into her usual bedroom for her tea (evening feed), which she ate as normal but shortly afterwards she became lethargic and uncomfortable. The following morning there was no improvement and she refused all solids. In a drink she was given Baytril (antibiotic), as she had responded slightly to this previously, an anti-inflammatory with pain relief and a wormer. We had given her all this medication before but with no confirmed diagnosis we were running out of options. It became clear during the day that something very serious was happening. Sounda began vomiting and deteriorating rapidly. A sedation was organised. During this sedation x-rays, biopsies and blood tests were taken with Oundi clinging to her mother’s stomach obviously confused and anxious. As Sounda began to come around from the anaesthetic, she suffered a cardiac arrest and despite the very best efforts from the veterinary team, she sadly passed away. Sounda was the sweetest gorilla we have ever had the pleasure to meet, but in the grief and shock all the keepers were feeling, we were faced with what to do with Oundi. By this time it was evening and we decided our priority was to give her some maternal care within this busy group, but she also needed to be able to accept milk from us on a regular basis as at just over a year old, she was not yet weaned.

To get her through the night we decided to set up a ‘foster family’ consisting of a female Tambabi, her 2 infants Kifta and Moanda, and Kouyou, Oundi’s brother who we must not forget had also lost his mother. We left Sounda in a bedroom with the slide open big enough for Oundi and her brother to access her. Oundi had a good feed of fruit and vegetables, then left the groups to settle down. We went home as traumatised and upset as the gorillas. Our thoughts behind this decision were that:

There were no suitable lactating females to consider as a surrogate
We did not want to pull Oundi away from her mother screaming; we hoped that she and her brother would grieve their loss and we could move Sounda’s body away with less trauma.

To give them some support from Tambabi, Kifta and Moanda without any risk to Oundi’s welfare (also these 3 gorillas would not be too distressed being separated from the group)
This group were all gorillas that we could easily go in with if we needed to access Oundi
We knew that Tambabi was not hugely maternal and would not ‘run off’ with Oundi before we had managed to get her used to taking her milk from us
Tambabi’s infants Kifta and Moanda had always spent time with Oundi carrying her around and were always gentle.

The morning found Oundi still clinging to her dead mother but also hungry. The bedroom next door was opened enough for Oundi’s access only and she wandered in and out for the next hour or so for food. This gave us the opportunity to close the slide separating her from her mother. Initially Oundi screamed and Kouyou, her brother, immediately swept her up and comforted her as we quietly removed Sounda from the gorilla house. We then began getting Oundi used to coming into a bedroom by herself to take milk from us, which she got three times a day. She started with semi skimmed cow’s milk (50% water 50% milk) that, luckily, she took to well. She was on full fat milk within a few days with no signs of diarrhoea and taking solids from us readily, knowing she needed to come into a bedroom by herself to do so without getting mugged! At this time her 5-year-old brother, Kouyou, was caring for her 90% of the time.

One week after Sounda’s death it was decided to put the whole group back together, but to leave a safe area that only ‘6 year’ olds (and younger) could access in case Oundi needed it. Within half an hour Kangu an 8-year-old male gave us some cause for concern, playing far too roughly with her. The next few weeks were hard for Oundi. Kangu, often ably assisted by other juvenile males in the group, continued to treat Oundi more like a play thing than a sibling, but with our safe area working well and Kifta, Moanda and Kouyou acting as a tag team, they managed to fend off the worst from her bigger tormentors.

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As time went by Kouyou took more of a back seat in Oundi’s care and left the little females, Kifita and Moanda, to care for her, with little or no support or interest from any of the adults in the group. The only exception was Kifu who would carry her from time to time (whether she liked it or not!). Although initially a little ‘ruffled’ by Kifu’s ‘care’ she quickly realised she was less of a target for bullies whilst in his presence.

Things carried on in this fashion for a while. Oundi began to relax a little and was occasionally observed playing, sometimes alone, sometimes with Kifita or Moanda but she was definitely missing a maternal figure. On the 3rd of June after having spent most of the morning being harassed by Kangu, Oundi looked very lost and alone. At this low point she reached out for someone. That someone happened to be Sangha who on two occasions that day let Oundi hang on to her, although she still allowed Kangu to rough her up without intervening. This meeting seemed to be instigated by Oundi, Sangha being the more reluctant of the two, however whether this planted the idea or not we will never know, but by the middle of June, Sangha would often be seen carrying Oundi. Although initially nervous about Sangha’s attentions with a lot of patience on Sangha’s behalf she won Oundi round. On the evening of the 29th of July Sangha brought Oundi into her bedroom to share her p.m. feed, at which point it was clear that she had decided Oundi was ‘her’ baby. This arrangement they both now seemed very comfortable with and from that day to this you would not really know that Oundi was not her natural daughter; the two are inseparable. Sangha even now allows Kouyou to sleep next to them if he wishes. Why it took so long for Sangha to step in is unclear, we are just glad she did!

Souna’s post mortem revealed severe bacterial peritonitis with massive old scarring, most likely from her illness in August 2000. It was suggested that the birth of Oundi had possibly perforated some old scar tissue and ignited the problem again. In a way it was a blessing she had a cardiac arrest and died that night, as there was no chance of recovery and she may have gone on suffering for a few more days. Sounda is still missed, however it is comforting to see Oundi happy and enjoying life again in the company of Sounda’s oldest friend. Throughout, Oundi has remained approachable and well balanced and to this day has a kind and gentle nature like her mother.
The gorillas’ story in La Palmyre Zoo began in 1974 when Claude Caillé, the park founder, brought back from Cameroon 3 females named Martha, Annette and Natasha, as well as a young male named King-Kong. At that time most zoos around the world were either capturing and importing animals from the wild themselves or using international traders. Fortunately, today these practices are no longer used because gorillas are one of the most endangered primate species on earth due to poaching and deforestation. In 1978 Martha gave birth to her first baby, a female named Sabrina. It was the first baby gorilla ever born in France and also the first one to be hand-reared in La Palmyre. As King-Kong died of a pancreatic fluke in 1979, the zoo had to find a new breeding male. In July 1980, a 16 year old silverback named Migger arrived from the Basel Zoo. Migger had always been very nervous and reactive with people. But he was also a very good breeder, producing 4 offspring during his lifetime, each one of them being males! Martha gave birth to Bwana in 1983 and to Nyuki in 1989, then Annette had Noël (born in December 1986) and Mike (born in 1989). Migger died in 1989 following kidney problems. Although there had been many gorilla births in La Palmyre, only three were females out of the nine viable registered between 1978 and 1992. Natasha even gave birth to twins, which is particularly rare. Unfortunately, neither twin survived. While Bwana and Noël respectively left La Palmyre for the Chiba Zoo in Japan in 1985 and Frankfurt zoo in 1991, Nyuki and Mike still live here in the same enclosure, as they were both hand-reared gorillas.

Only two months after Migger’s arrival, La Palmyre received a 10 year old black-back named Balou, from Apenheul. He was not very tall but extremely powerful. He mated with Natasha and two more births took place in 1983 and 1990. The first born Jock, who loved jumping on his father’s belly, was sent to London Zoo in 2002 and after that to Bristol Zoo, where he bred successfully.

Bongo, born in 1990, is currently our breeding male and strongly resembles his father. Unfortunately, Balou died of heart failure the year of Bongo’s birth. He was only 20 years old. In 1982 the zoo retrieved Johnny, a 5½ year old male, from a private owner. He wasn’t healthy and despite all the care he received, he never fully recovered. He died in 1988. The next gorilla to come in La Palmyre was a handsome 9 year old black-back named Kibobo. He arrived in 1989 from Howletts Park. He was admirably well-proportioned and probably the most friendly silverback who lived in La Palmyre. Till now, he is the only male at the zoo to have produced more than one female offspring: Sabrina gave birth to Emmy in 1991 and to Minnie only one year later. Sabrina had already been pregnant before Emmy’s birth, but she suffered from a placenta previa which led to the cesarean delivery of a stillborn. The births of Emmy and Minnie went well but during the fourth one in 2000, Sabrina died of a placental hemorrhage despite a transfusion. While Sabrina refused to rear Emmy, Minnie has been perfectly mother-reared. Emmy and Minnie were the first females to be born in the zoo after their mother’s birth in 1978, that is to say 13 years after the first gorilla birth, but they both left La Palmyre. Emmy went to Howletts in 1993 and Minnie was sent to the Danish Givskud Zoo in 1999. To date Minnie has given birth to 3 babies: 2 males and one female, but the female was stillborn. As for Kibobo, he died in 2001 of an aneurysmal rupture at the age of 21 years old. The female N’Zia came from Plaisance du Touch Zoo in 1992 but stayed very briefly at La Palmyre (until 1996): she had epileptic seizures and was very stressed by the males, so her integration never succeeded. She was sent to Beauval Zoo where she died in 1999.

After Martha and Natasha’s death in 1990 and 1993, and the departure of Minnie, Emmy and N’Zia, La Palmyre had to find new females to start reproduction again. The first received was Yola, a plump 7 year old gorilla. She arrived in April 1999 from Berlin Zoo. She first lived
with Kibobo, Sabrina and Annette, who had been sterilized after a uterus and bladder infection. After Kibobo’s death, Yola was introduced to Bongo. Despite a huge dominance by Bongo, they got along rather well. Six years later, Ybana, a lovely female born in Zürich Zoo, joined Yola and Bongo as part of the western lowland gorilla European Endangered Species breeding Program. She was born in 1998 and grew within a group of 8 other gorillas. Since her arrival, the dominance of Bongo towards Yola is less marked, although he remains the “king” of the group, especially during feeding time!

Today there are two gorilla groups in La Palmyre. The first one is composed of Migger’s offspring Mike and Nyuki, who were both hand-reared. While Nyuki is rather calm and greedy, Mike is often nervous and keeps posturing and displaying. In the morning, when the keepers come into their building, Nyuki is asleep while Mike is always awake. Mike is also very reactive with the public and throws all sorts of missiles at people. As they are both hand-reared gorillas, Mike and Nyuki do not act as apes most of the time. They are often on alert and do not tolerate any unknown people in their building. Mike recognizes staff members perfectly and when some of them are close enough, he throws clumps of grass in their direction, and he particularly loves throwing feces. We try not to react in order to discourage him from repeating that behavior. The best solution is to avoid coming near to him, but it is quite frustrating for some of us who like him very much or when you need to do observations. Until recently, Mike strongly dominated Nyuki. But a few months ago, Nyuki started to respond to Mike’s aggressions and it seems that Nyuki increasingly gets the upper hand. We are now forced to use tranquilizers for Mike but the situation might be worrying in the next few years if we don’t succeed in integrating each of them in a breeding group as we discussed some time ago. They are indeed genetically important as their mothers are both wild-born, but obviously hard to manage.

The breeding group consists of Bongo, Yola and Ybana. Bongo is now 17 years old and a handsome silverback. He is good-natured and placid most of the time, except when there are newborns with whom he is very aggressive. However he gets along extremely well with the 2 females and even if he doesn’t like to be surprised by anybody as it frightens him, he is a nice gorilla. Yola is a delightful female: always in a good mood and calm. Just like the female Nache in Zürich (see Gorilla Gazette April 2007), she is an “eating machine” and likes every item of food that is presented to her! Despite the arrival of Ybana, which decreased Bongo’s pressure on her, she is still very much dominated by the silverback and avoids contact as much as possible. She had already been pregnant twice but unfortunately the first baby was stillborn and the second one was killed by Bongo. She also previously went through 2 miscarriages after a listeria infection. She is actually pregnant again and we hope that this time everything will be OK for the baby. Bongo will be placed under treatment in order to prevent any aggression towards the newborn.

Ybana is a smart, good-looking and endearing gorilla with a strong personality and sturdy, playful character. After a quarantine period to be sure that she was in perfect health, Ybana first met Yola, with whom she got along extremely well. Then she was presented to Bongo and after some memorable chases (always in Ybana’s favour, as she is much more agile and fast-moving than Bongo), everything went back to normal and the first matings were observed. Ybana is much less timid with Bongo than Yola. She doesn’t seem to be afraid of the silverback and while she never stays close to him for long periods, she doesn’t hesitate to pick up food from just in front of him. There is only one problem: since her arrival,
Ybana refuses to use the bridge between the indoor enclosures and the island, so she persistently stays inside. We think there may be 2 reasons: first, she isn’t used to water (in Zurich there wasn’t any water between the inside and the outside enclosures), and secondly, she might have touched the electric fence and has been afraid of it ever since. So the hatch between the outdoor and indoor areas is always opened during the summer months in order to let Bongo and Yola go outside if they want to. We all hope that Ybana will soon decide to follow them. As we are currently building a new exhibit without any water or electric fence between the inside rooms and the island, we hope that she will be more confident there. The current facilities for great apes were built in 1977. They became obsolete and we are aware that our animals not only need more space but also better adapted enclosures. The new exhibit will provide 4 islands of 1000 sq.m each. The building will occupy an area of 2000 sq.m. The opening is scheduled for 2009.

Several matings between Bongo and Ybana occurred since their first meeting in spring 2005. In April 2007, we learned that Ybana was pregnant! Of course this would be her first offspring so we had to remain cautiously optimistic until the birth. Finally Ybana gave birth to her baby on Sunday the 2nd of September, 2007 at 6.30 p.m. Unfortunately she was still in the day room with Yola and Bongo, who hadn’t been tranquilized as the birth wasn’t expected so soon (we concluded that matings had occurred during the early part of the pregnancy). Immediately after the birth, Bongo started to be aggressive as usual. He took the baby and didn’t want to give him back to Ybana. She tried to recover him but Bongo bit her (we inferred it because she had a wound on her right hand). Then the baby was left alone with Yola in one of the two day-rooms whilst Bongo continued to prevent Ybana from going to the other side close to her baby. As the vet thought the baby had a broken leg, the staff decided to close the hatch between the two rooms, then to encourage Yola to go in her night-room (which succeeded) and finally the zoo team managed to hold the baby. The X-ray showed that he had a hip dislocation. It was then decided to hand-raise him, while his dislocation was treated. The baby weighed 2.6 kg and was named Monza.

Bongo, Yola and Ybana refused to go back to their night-rooms for two days. Ybana wasn’t in great form after the birth, which seemed normal considering her trauma. She was really depressed and refused to eat for a while. Bongo was stressed too: it took some time before he came to the gate to see his keeper and he made many displays. After some days, the situation turned back to normal. And what about Monza? After 2 months of care in the zoo nursery, during which his injured leg was completely immobilized, he finally recovered well and was sent to Stuttgart’s special nursery for hand-reared great apes. This facility offers them the chance to be raised with conspecifics and to develop normal relationships. By now Monza is very well integrated in his new home and has met playmates. Among them is Mary, a little female barely older than himself and with whom Monza seems to get along very well. The most amazing thing is that Monza’s great grandmother, Mimi, who is currently rearing her 11th offspring, lives in Stuttgart. And the gorillas’ future in La Palmyre remains encouraging as new matings between Bongo and Ybana were recorded at the end of November 2007.

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In 1964 Fred Zeehandelaar, an animal dealer, brought a female western lowland gorilla from Cameroon, Africa to America. Later that year, she was sold to the Philadelphia Zoo at an estimated age of 1-2 years and was given the name Katherine (Kathy). She joined a gorilla group at the Oklahoma City Zoo in 1971, where she lived with Moemba, Boma, and Fern in the old primate building for many years. The building was old style but did have an outdoor yard with a climbing structure, so the gorillas were fortunate enough to get out, exercise, and enjoy the sunshine.

Over twenty years later, the Zoo initiated plans for a new state of the art gorilla habitat. A promotional drive informed the public that the apes were about to make the “Great Escape” from their old cages to a new area with yards full of beautiful foliage, shade trees, and waterfalls. In 1993, Kathy and the rest of her group were moved to their new naturalistic exhibit, a drastic change from the days of “primates behind bars.” It was an emotional moment for keepers as they watched the apes enter their new exhibit for the first time. The apes rolled in the grass, lay beneath trees, and now had the opportunity to see the public from a very different viewpoint.

Of all the gorillas at the zoo, Kathy is best known for her amazing maternal skills. Kathy gave birth to the Zoo’s first gorilla baby, “Fredrika,” in June 1974. Since then, Kathy has had several other offspring: Earnst,* Emily, Kokamo, Kali, Samson, and George. She has successfully raised all her babies and graciously shows them to zoo guests as they peer through the viewing windows. Three of her daughters still reside at the Oklahoma City Zoo with another gorilla group. At present, Kathy’s group includes Bom Bom, a silverback from the Audubon Zoo; Kelele, a 13 year old female from the Toledo Zoo; Kathy’s 12 year old granddaughter Acacia (daughter of Fredrika); and her 4 year old son George, sired by Bom Bom.

For many reasons, Kathy stands out as one of the Oklahoma City Zoo’s favorite gorillas. She survived the difficult voyage from Africa to America and learned to adapt and thrive in the zoo world. She made the transition from life in the “old zoo” to the modern environment of The Great Escape, where she can roam, explore and forage. Kathy was the oldest captive female to give birth when she had George at age 41. Her unique way of “walking backwards” and an eye loss due to an injury in 1998, make her even more memorable and easy to distinguish from other members of her gorilla group. She is loved by keepers and visitors alike and has proven to be an amazing animal.

*See Earnst’s (or Ernie’s) story on pages 54-57.

Another story by this author follows...

Katherine peering around at the photographer, January 2008 and with her last child, George, in 2006.
Photos courtesy of Steve Carpenter and Tom Parkes.
A Keeper’s Visit to the Tayna Gorilla Reserve
Debi Mangrum, Oklahoma City, Oklahoma

It was a cold Oklahoma morning in February of 2007 when we left the comforts of our home, to travel around the world into the heart of Africa. This was the trip we had been planning for over a year. Our schedule included visiting the Tayna Gorilla Reserve, The Tayna Center for Conservation and Biology (TCCB), and the Muyisa Primary School for war orphans. It would be a trip we would always remember, that would take us back to the D.R. Congo, and would change our lives forever. It all began in 2002 when fellow zookeeper Mary McFarland and I headed to Kenya after winning the trip through Bowling for Rhinos. We went for the animals, which were awesome, but once there, we completely lost our hearts to the people and most of all the children. We knew as soon as we set foot off the plane onto the African soil, it was in our blood and a part of us.

It was two weeks after our return to the States that I met Pierre Kakule Vwirashikya. Pierre was in Oklahoma as a guest speaker along with Dieter Stekls and Alecia Lilly from the Dian Fossey Gorilla Fund International (DFGFI). Pierre Kakule Vwirashikya is the founder of the Tayna Gorilla Reserve, located in the Lubero Territory in the North-Kivu Province in DRC. Tayna is the flagship project of DFGFI for community conservation. Tayna’s success became the model for starting eight other community reserves, which have joined together to form an association called UGADEC (Union of Associations for Gorilla Conservation and Community Development).

In 2003 Pierre and the people of Kasugho began building TCCB. This university is the only one in the country where students can come to specifically study conservation and biology, and learn how to not only help themselves and their country but to protect all the animals in their area (with focus on the gorillas and other endangered species). In January of 2004, approximately 200 students began a three-year degree program with courses in wildlife management, botany, and medicine. Prior to TCCB anyone that wanted to study conservation had to go to Cameroon or Tanzania. Now the staff at TCCB is not only creating a completely new generation of scientists to work in the region, they are also bringing young people together from different cultures.

At Tayna they know the best way to succeed is to get the local people involved. The best way to get them involved is to find a way for them to benefit from the work being done by Tayna. That is why Tayna’s focus is on conservation, education, and helping the local population. There are many ways Pierre has been able to help his community. He has built two well systems, built a community clinic (the previous clinic was 4 hours away across very rough roads), started agricultural programs, and built a primary school for children left orphaned from the civil conflict in the surrounding areas. Our trip to Tayna led us through Kenya, where we visited Orphanages, a Day Aid Center, and into Rwanda where we were able to see the Mountain Gorillas of “Susa Group,” the genocide memorials in Kigali, and visit Karisoke Research Center in Ruhengeri and attend the celebration of their 40th anniversary. However, I will never forget the day we crossed the border from Gisenyi into Goma DRC. We left the beautiful lush green terraces of Rwanda to enter a completely different world just yards away. Right across the border in Goma everything was black with dust, lava and ash from the last volcanic eruption in 2002. Yet there were still vibrant colors like Rwanda, however we found them in the people of Congo. Colors were everywhere you looked: the women in their elaborate dresses, bright green bananas piled high on man-made wooden bikes. After spending the night in Goma, we headed for Butembo. It was a 1-hour flight over some of the most amazing beauty I have ever seen. I will never forget flying over the Congo Basin. I have never seen anything like it in my life and it will remain in my memory forever.
Once we reached Butembo, Pierre’s staff met us. We were able to visit the Tayna Butembo offices, as well as visit the local radio station. We got a fair amount of sleep (even through a small earthquake) and the next morning took a four hour drive to Tayna, located near the town of Kasugho. It was a breath taking drive through dense jungles and rolling green hills, ferns that looked as if they were from prehistoric times and trees that seemed to reach all the way to heaven. We noted along the way places where trees had been cut down along the road and next to them small trees had been planted with protective barriers around them. We asked about this at the University and were happy to find out the new planting of trees was done by the TCCB students.

So finally, after leaving America, five different planes and seven hours on the road... we were at Tayna!! I will have to say I have never felt more welcome anywhere in my life! As our road narrowed to the point where you didn’t dare stick your head out the window (unless you wanted branches across your face), we suddenly emerged from the dense vegetation to see smiling faces and extended hands from every direction to welcome us. We arrived at our humble homes where we would stay (which we actually helped build with money from Gorilla Golf — see the Gorilla Gazette, April 2005). There we were greeted by the professors of TCCB as well as the teachers of the Muyisa Primary School. After a brief introduction we headed to Muyisa. It was a lovely walk up winding mountain roads.

Once there, we were greeted with songs and poems from the children welcoming us and giving their message of conservation. You see, they realize the importance of teaching children, even at this young age, about how to save the animals and their habitats. We spent the next four days getting tours of the water systems, the clinic, and the different aspects of the University. It was amazing to see first hand how the money from the Oklahoma City Zoo’s AAZK Gorilla Golf had really made a difference. They are doing such amazing work. The students are so eager to learn, they are like sponges soaking up information.

It was a sad day when we had to leave Tayna. It was such a long road getting there and the time went by so fast. We did, however, end up staying an extra week in Goma on our way back, and actually found ourselves in Tribunal Court, not for any reason one might think. It seems we would be returning to Congo again in the near future and this time bringing a part of it home to the U.S. While in Congo, it was placed in our hearts to adopt two of the children from Muyisa. We will be returning to get 7-year-old Uzima Katungu Mchang, as well as Mumbere Matungulu McFarland. (Say that one fast 5 times... heck try to say it fast one time!) We are very excited to bring the children to America and to be able to continue to educate them on their culture and the need for conservation in this part of the world. Who knows the differences Uzima and Matungulu may make one day in their country. So for now, we wait to return to a place that forever holds our heart. We are hoping to return in early 2008... but that is another story...

Above: Debi with her soon-to-be new daughter, Uzima.
Below: Mary and Debi at the Muyisa school.

All photos courtesy of the author.

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This is a story of women weaving beautiful baskets in a remote corner of Uganda with few visitors to appreciate them; of talented young men in Rwanda with little hope of making a living through their traditional crafts. It is also a story of a retired couple from California who wanted to give more than money to a cause they were passionate about; who decided to donate their business skills and support the communities that truly can contribute to the preservation of the endangered mountain gorilla. That is how Virunga Artisans was born. And after just one year, it is starting to change the lives of these few people who came together because of the magnificent mountain gorilla.

**The People:** Gorilla survival greatly depends on the well-being of the people who live adjacent to the parks where they live. Virunga Artisan products are the handiwork from these villages across the Virunga/Bwindi highlands of Central Africa. Far from the region’s larger cities, these artisans create remarkable works of art as they balance their traditional social structure and way of living with the forces of modernity. These communities are on the immediate perimeter of the national parks and have the greatest impact on mountain gorilla habitat. The villages have no running water or electricity and the people traditionally have made their living from subsistence agriculture. It is a harsh existence and the women must often walk many miles just to get enough water for the day.

But when given an opportunity, these hard working people added weaving, carving or painting to their very long days in order to improve the lives of their families. In addition to economic empowerment, there is a real sense of accomplishment and pride in the traditional baskets, carvings, hand painted apparel/home furnishings, premium coffee and tea that they create. You can see the change in a group of disenfranchised young men in Kinigi or stoic women in Nkuringo who turn into enthusiastic, positive people looking to a better future. Earnings from the sale of their crafts have started to make a difference in the lives of the artists and their families, including the ability to buy books and uniforms so their children can go to school and have access to health care.

Virunga Artisans works with the International Gorilla Conservation Program (www.IGCP.org) Business Enterprise Team to foster viable economic opportunities within these communities. They provide training, materials, and financial support in developing value-added products from local resources, improving the quality and marketability of traditional crafts, creating sustainable businesses, and sourcing market outlets in the region and US/UK. By marketing their quality crafts, coffee and tea, Virunga Artisans enable these local artisans to make a living outside the parks, which strengthens their communities and helps preserve fragile watershed and gorilla habitat.

**The Products:** The exquisite baskets woven by the women of Nkuringo are of traditional design. Each artisan has developed her own style and personally tags and signs her work. Each basket takes between 20-30 hours to weave. Since there is no electricity to work in the evening, each basket can often take weeks to complete. There will always be variation in size, shape and color as each artist has her own style and the color of the grasses vary as the seasons change. The Rwandan Peace baskets are woven by the women of the Kinigi Weaver’s Associ-
Each basket is hand-crafted from sisal and consists of literally thousands of stitches. The pattern tells an ancient story of friends walking together, visiting neighbors along the way. These baskets now stand as a symbol of peace and reconciliation in a country rebuilding itself after genocide. The unique wood carvings reflect the artisans’ use of gorilla motifs, including the silverback and his family, on bowls, candlesticks, holiday ornaments and more. Each artist displays an individual interpretation of these remarkable creatures living in the forests nearby.

The organic teas and coffee are grown and harvested by local cooperatives on the hills near Volcanoes National Park in Rwanda. This misty, high altitude environment provides the optimal climate for growing premium tea and coffee. The candles, bags, scarves and ties are hand painted by a group of artists trained through Virunga Artisans. Using both traditional Rwandan designs and gorilla motifs, each item is truly a work of art.

Founders Story: Richard Cunningham and Katie Doyle were experienced visitors to Africa and had seen much of the continent’s wildlife before their first trip to see mountain gorillas in 1980. Yet nothing had prepared them for the effect these magnificent creatures would have on their lives. The experience of sitting just a few feet away from a 500-pound silverback and his family, and making that connection with our closest relatives, was truly a life changing experience. After many more trips to Africa, several to see the mountain gorilla, the opportunity arose to assist the International Gorilla Conservation Program’s Business Enterprise Team. Richard and Katie began working with women’s groups and artisan associations, taking traditional arts and developing sustainable businesses to support the communities living adjacent to gorilla habitat.

Seeing the high quality of the artisan works and knowing there was an unfulfilled need in both the local and international markets, they founded Virunga Artisans in 2006. Virunga Artisans hopes to model a successful small business for the community groups to follow, and show the artisans that their products are viable, saleable goods. All of the proceeds from the sale of Virunga Artisan products go to wages based on fair trade principals for the artists, their associations, or the International Gorilla Conservation Program Business Enterprise.

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APE CONSERVATION EFFORT

Ape Conservation Effort, Inc. (ACE), a Georgia not-for-profit corporation, is comprised of volunteer members who share a passion for animals and a commitment to saving the great apes (bonobos, chimpanzees, gorillas, and orangutans). ACE hopes to raise awareness of the plight of the great apes and support for their conservation, by conducting fundraising activities. 100% of profits will be distributed to internationally recognized organizations, working in the animals' homelands of Africa and Indonesia, such as Dian Fossey Gorilla Fund International, The Orangutan Conservancy, Mountain Gorilla Veterinary Project and Sumatran Orangutan Conservation Programme.

Currently, ACE has some 40 dues paying members, with the following Board of Directors.

Laura Mayo (President)
Julie Gaines (Vice President)
Erin Harris (Secretary)
Lisa Westin (Treasurer)

For more information, please visit our website at: www.apeconservationeffort.com
Kolmården is the only animal park in Sweden, in fact the only one in the Scandinavian Peninsula, to accommodate gorillas. They have been featured here since the end of the 1960’s. Even so, we had to wait until 2006 to greet the first gorilla infant born at Kolmården. This is the main topic of this article. Kolmården joined the EEP Gorilla project from the outset. At that time we housed three individuals, none of whom is alive today (Rafael, Kicki and Chikita). At the moment we have the good fortune of housing five gorillas at Kolmården: Efata, Iris, Naomi, Nasibu and Enzo. The simian building also includes a large group of chimpanzees (22 individuals), six white-handed gibbons and a smaller group of pygmy marmosets. We normally have three full-time keepers working at the simian compound, but during the hectic year of 2006 two more employees were temporarily added to the workforce.

To start where it all began, I went down to Hannover Zoo at the beginning of 1998 to pick up the female gorilla Naomi. Aged 4 at the time and hand-reared, she was later to become the mother of the most celebrated gorilla in Sweden, namely Enzo. At that time there were three gorillas present at Kolmården: Efata, Iris and Chikita, a very resolute lady, aged 34, and eldest of the threesome. Sad to relate, she passed away at the end of 2005, 41 years old. Naomi adjusted well to the group and was well received by Efata. Four years later, we were lucky enough to get a young and incredibly intelligent little guy named Nasibu from Stuttgart. With more activity than ever before in the group, prospects looked good. Unfortunately, Naomi came to develop a not entirely uncommon behavior during her estrus periods. She never invited the male to mate, but more than willingly invited humans with whom she could make eye contact, in particular her keepers. This extremely annoying behavior escalated over time and something definitely had to be done about it. We started to cover the display windows of the compound with tarpaulins, to prevent Naomi from making eye contact with humans during her estrus periods. A surveillance camera enabled us to monitor group interaction. It did not take long to realize that she had switched focus to the sounds we made, so these measures clearly were insufficient. In the winter season, when the park was closed, we resorted to more drastic methods.

We simply kept away from the simian compound during Naomi’s estrus peaks. A keeper who was a complete stranger to the apes helped us, entering the building only briefly to feed chimpanzees and gorillas. These periods were recorded on videotape, and presently we could note that our efforts began to make a difference. Her provocative and vexing behavior softened dramatically when there was no one to approach but the other gorillas. Finally we could note that Efata was allowed to mate with Naomi, a fact that was considered a major breakthrough. Thus came the best day so far in the simian building at Kolmården: finally a positive pregnancy test! This was on September 10, 2005, and we were all smiles. A number of measures were taken with the aim that Naomi herself should nurse the infant. A couple of years back we had begun to “clicker train” our gorillas, which is greatly appreciated both by them and by us. Now more focus was placed on training/playing with Naomi. She quickly learned to press her belly against the bars, to facilitate ultrasonographic scans. We also taught her to hand over a number of things on command through custom-made doors in the metal bar walls. This proved to be very useful later on, in the handling of Enzo. We were unanimous that she should give birth to her infant in the big compound with the rest of the group. The exact date and time were impossible to pinpoint, so starting several weeks in advance, we began 24 hour surveillance. The situation was relayed on a more or less daily basis by Swedish media, with journalists calling in the middle of the night and many TV and radio broadcasts made from the simian compound at Kolmården.
Early in the morning of April 1, 2006, Kolmården’s first gorilla infant was born, and it was magic to behold! Naomi held the infant close to her while the other gorillas eagerly watched from a respectful distance. Our main concern at first was to establish if the infant was being nursed. They were monitored around the clock and soon we could see that Enzo was gently but firmly pushed away when he sought to suckle her. A decision was made to sedate Naomi so that the infant could suckle. This went well, but was done only twice, on day 2 and 3. Concurrently the infant was given antibiotics and liquid. We soon noted that the infant became weaker by the hour, and that Naomi too showed a rising anxiety. A swift decision was made to separate the infant and bottle-feed it, which I know is a controversial thing to do, and everyone is entitled to their opinion. In any case, all steps in this process were hot topics in the media, with big headlines each and every day. Enzo spent around 9-12 hours a day in the simian building, as much as possible in plain view of the other gorillas, often snugly nestled in a baby carrier worn by one of us keepers. All feedings of the infant naturally took place in close proximity to the other gorillas, an arrangement which pleased them very much. The rest of the time was shared by two people who took him home at night. In the summer of 2006 he was shown to park visitors, which really was a fringe bonus from the fact that we, the keepers, showed him to the gorilla group in their outdoor compound. At times our two veterinarians had to work around the clock, for example when Enzo contracted scarlet fever, but their joint efforts solved the medical problems that arose. During this entire process there were only a few people who were allowed close contact with the infant.

When Enzo was past eight months of age, we decided there would be no more exits from the simian building in the evenings. This coincided with a case of the flu among the adult gorillas, so we wanted to postpone the introduction for a little while. And so he slept alone for a short period, only separated from the other gorillas by a plexiglass door. The reintroduction to Naomi commenced smoothly, and she had no problems turning him over to us so we could feed him and check his weight and temperature several times a day. This and other events and reactions within and around the gorilla group were carefully recorded and written down each day - notes that might be useful in the future. From February 6, Enzo and Naomi chose to sleep together. When we considered the mother–infant relationship fully balanced, the remaining group members were introduced one by one at intervals of a couple of days, beginning with the silverback Efata, then the female Iris and the blackback Nasibu. Nasibu himself chose to wait a little longer. Iris and Efata were

Left: Father and son, Efata and Enzo. As Sweden’s “first gorilla,” little Enzo shows off his big personality!
pleased to assist Naomi in the care of her infant. Nasibu, on the other hand, was rather rough with Enzo, and when in possession of the infant would hastily throw him down whenever one of the others came close. One of these incidents led to a showdown, when Efata gave Nasibu a hefty bite in his leg. No trace of this injury is visible today, but his behavior improved considerably. Today Enzo and Nasibu have a good time together; they often play and cavort without interference from the others. Enzo is a healthy and secure little guy who comes up to the bars three times a day to get his lacto-formula, everything else we leave to the other gorillas, and they handle it just fine. We have also noticed a marked improvement in adult social interaction, which is nice.

So, in retrospect, I think we managed well beyond the expectations, by having Enzo fully reintroduced to the rest of the group at ten months of age. I believe this was mostly due to the fact that we never let the other gorillas lose contact with Enzo, and that we, who work with these animals, gave a keen ear to what the gorillas “told us.” And, of course, the group is a small one, and the individuals are very co-operative. It may be added that Naomi gave birth to yet another infant, a female one, on March 21, 2007, but this offspring did not survive. A subsequent autopsy revealed lung edemas and an extremely low birth weight. These findings indicate a premature delivery, but let’s hope prospects will be better next time. Finally, I wish to express my gratitude to everyone, neither mentioned nor forgotten, who put in hard work, great experience and solid advice, for the benefit of the Kolmården gorillas.

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A Keeper Memorial

23Feb08: A memorial fund has been set up by the North Carolina Zoo Society to remember keeper Cori Palermo from the North Carolina Zoo who recently passed away peacefully at her home. Her passion and love of all the animals that she cared for was second to none, and she was an inspiration for everyone that worked with her at the zoo. Her care will be continued on by her co-workers, but a memorial fund has also been put in place to immortalize her love and compassion. The money collected will go towards two projects dedicated in her name that will directly benefit the animals.

Checks made payable to North Carolina Zoo Society with the memo directed to the Cori Palermo Memorial Fund. All donations should be sent to:

North Carolina Zoo Society
4403 Zoo Parkway
Asheboro, NC 27205 USA

Gorilla Gazette, May 2008, Page 34
Prague Baby News
Markek Zdansky, Prague, Czech Republic

Left: Moja and mom. Right: Kijivu and her baby Tatu.
Photos courtesy of the author.

It is morning, 14th October 2006 and we are doing cleaning. Suddenly, I see Kijivu urinating. Immediately after cleaning, I do a pregnancy test, because Kijivu was mating with Richard three weeks previously. I break out in a cold sweat when I see two lines meaning that Kijivu is pregnant again. I am happy and surprised at the same time, as I did not expect this so early. Moja (her daughter) is only 2 years old, but it obviously depends on each individual animal. Kijivu gave birth 30th May 2007 in the morning about 12.45 a.m. It all started at night around 11:00 p.m. with a phone call from Radio Leonardo, who together with a group called "Gorilla Tribe" were observing our gorillas on the internet 24 hours a day. I was sleeping, but the phone woke me and I was told that Kijivu was behaving in a strange way, she was nervous and could not sleep. I got out of bed, had a look on the web and immediately knew that something was wrong. I went to the zoo. Prague was almost empty, so I reached the zoo in 15 minutes. Kijivu was walking around the enclosure, touching herself between her legs. Shinda was following her and smelled her – clear signs that Kijivu was going to give birth. The whole group was awake and waiting. Around 12:45 a.m. it started and Kijivu pushed out a baby within a few seconds. She immediately started to clean him, she bit the umbilical cord and at around 5 a.m. I observed the first nursing.

Conservation Pioneer
Stella Brewer

Obituary: Stella Brewer Marsden (19Apr51 to 24Jan08) was a pioneer of chimpanzee rehabilitation and the founder of the Chimpanzee Rehabilitation Trust (CRT), the first sanctuary/release project of its kind.

Author of the books, "The Forest Dwellers" and “The Chimps of Mt Asserik,” Stella was appointed OBE in the 2006 New Year's Honours for services to wildlife conservation and development in The Gambia. Married in 1977, Stella is survived by husband David and their sons, John and Daniel. Her family will continue with her work to ensure the long term welfare of her chimpanzees. Stella now lies alongside chimpanzee Zwockle, with her spirit keeping a watching eye over her chimps. For more information about Stella’s amazing life's work, please see these websites:

www.chimpanzee.org.uk
http://www.gambiahorseanddonkey.org.uk

(Photos provided and text approved by Stella's sister, Heather Armstrong and husband, David Marsden).
Located in the Netherlands, AAP* is a European sanctuary for exotic animals specializing in hosting apes and monkeys. Other small exotic mammals can also find a shelter there, including raccoons, skunks and prairie dogs. Animals that finally live at AAP often come from the following sources: illegal trade, research laboratories, circuses, illegal zoos or directly from private people. Frequently these animals have been seriously abused and severely neglected. At AAP the animals receive the professional care needed for their recovery. Its aim is to make the animals mentally and physically healthy and place them in a more natural environment, such as a natural enclosure or in a renowned zoo.

AAP works in close cooperation with various organizations. On a daily basis, AAP often deals with fellow sanctuaries, animal protection societies, zoos, veterinarians, the police, the General Health Inspection Service, and other governmental institutes, both in The Netherlands and abroad. Over the past 30 years, AAP has gained much knowledge and experience and is well-known for its expertise. AAP shares this knowledge with others including fellow sanctuaries and animal protection societies. Moreover, AAP believes it is important that the problems with exotic animals be dealt with at the source, such as in countries like Thailand and Indonesia. For that reason AAP staff members often participate in exchange programmes.

**Primadomus:** AAP has developed a special retirement plan for those apes which cannot be placed elsewhere. In part it consists of the Chimpanzee Complex on four Islands in Almere. This is a special shelter facility for chimpanzees which require special care and was put into use in 2001. The Chimpanzee Complex is complemented by a project named 'Primadomus' in Spain. For Primadomus, AAP purchased a plot of land of approximately 180 hectares, located about 45 kilometers west of Alicante. This mountainous area possesses exceptional qualities for lodging large groups of primates with respect to space and environment. Moreover, the climate is very suitable for most types of primates. A large part of the land, currently a nature reserve, will remain in its present condition.

The first animals to go to Primadomus are 11 chimpanzees. AAP has been combining these into a group known as 'Donkey's group' over the past years. Eventually there will be room for some 150 animals (70 chimpanzees and 80 other primates) at Primadomus.

*Aap means "monkey" or ape in Dutch.

**Primadomus land in Spain above and Donkey (right).**

Photos courtesy of the author.

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Gorilla Gazette, May 2008, Page 36
Introduction of Three Sub-Adult Female Western Gorillas To a Reintroduced Silverback
Tony King & Christelle Chamberlan, Kent, England

Attempts to release orphaned mountain gorilla infants to the wild population have always failed, even after initial promising results in some cases (Harcourt 1989, Mudpikwa 2002, Whittier 2004). This has led to the current plan to wait for a female orphan to reach sub-adult age before introduction, and thus to more closely mirror wild female immigration events (Whittier & Fawcett 2006, Childs 2007, 2008). We present here a case-study of the closest comparable event in western gorillas, that of the introduction of a rehabilitated group of three sub-adult females to an unknown reintroduced silverback, and subsequently to three adult females, in the southwest Lefini Reserve (Republic of Congo). The reintroduction programme for western gorillas to two sites within the former range of the species in the Batéké Plateau region of Congo and Gabon, managed and financed by the UK-based charity The Aspinall Foundation as part of Projet Protection des Gorilles (PPG), is described in detail elsewhere (eg Courage 2002, King 2005, King & Chamberlan 2007, Pearson et al. 2008). Most releases have involved mixed-sex groups into areas separated to some extent from other reintroduced groups. We describe here the preparations and post-release results concerning the most recent release of the programme, of three sub-adult wild-born females, undertaken in Congo in 2006, which resulted in the introduction of the females to a silverback released over three years earlier within a mixed-sex group.

The three females were wild-born orphans of the illegal bush-meat trade, two originating from the north of Congo, the third from the southwest. The youngest was the first to arrive at the PPG-Congo gorilla sanctuary. She had been orphaned at less than 2 months old, and spent the next six months of her life as part of an Italian family in the coastal city of Pointe-Noire, where she was named Hélène. Her earliest memories are therefore of her adopted human family, and indeed it was her transfer from that family to PPG, in June 2001, which constituted her first traumatic experience. As with all gorillas in a stressful situation, she struggled to adapt to her new life, suffering from the stress and related digestive problems. A natural fighter though, she reacted by biting a lot, and stood up for herself against all strangers. Meeting other gorillas proved another frightening experience - on her first day she sat frozen still with her eyes tightly shut. Over the course of the following year, attempts to integrate her into a free-living rehabilitated group of older orphans ultimately failed, and she was finally withdrawn from the group in October 2002, when the arrival of three new orphans allowed the formation of a new rehabilitation group.

Two of these were Likendzé and Matoko. They were discovered together in a tiny cage of chicken wire in the dark corner of an outdoor shed in the capital city of Brazzaville. An elaborate trap was immediately set-up by government officials to confiscate them and give them a chance of survival. Highly traumatized, they arrived in a wooden case only just large enough to fit them in, but when given the opportunity to leave it, they refused, scared of what might happen to them in the hands of humans. Clinging tightly to each other, Likendzé would simply bow her head and hide her eyes when approached, Matoko would show her impressive teeth in defiant warning. Despite their tiny emaciated bodies, the size of their hands, feet and teeth showed that they were about 3.5 years old, old enough to fully understand what they had been through. Either one alone would not have survived the experience, but together they were hanging on to the threads of their existence – single gorillas of this age have never been received at PPG-Congo as they are too psychologically fragile to survive the trauma alone.

Hélène (left) and Matoko with Likendzé when they arrived. Photos courtesy of Véronique Barazzutti and Sinead Lynch.
We didn’t see them move for three days and we had no idea if their legs were broken or not. The initial stage of their rehabilitation involved the building of their trust in humans. This was helped by their introduction to Hélène in November 2002, whose life-story was in contrast to theirs. All three benefited from the union, Hélène learning forest skills from the much more experienced Likendé and Matoko, while Hélène’s exuberance and confidence in human presence brought Likendé and Matoko through their mistrust of people.

A first accidental introduction to a silverback: Six months before the release to the southwest Lefini, the group experienced meeting a silverback for the first time since being orphaned. Four adult males were caged at the Lesio-Louna while awaiting their transfer to a forested island at the south of the Lefini reintroduction site in 2007 (King & Chamberian 2007). On April 9, 2006 one of these escaped and found his way to the wooden dormitory in the forest where the group had been returned following news of the escape. The 17 year-old silverback Kola, broke into the wooden cage to ‘release’ the three females, aged 7 (Likendé and Matoko) and 5.5 (Hélène). During this time, and presumably immediately after, we could hear lots of screaming. Matoko apparently fled, and found her way quickly to the staff camp, although she had never previously been there. Hélène and Likendé remained with Kola, and the three were located together the following morning. Given Hélène’s human upbringing, we tried to recapture her by offering her human comfort, but this didn’t work, and we had to anaesthetise her to prevent her returning to Kola in the forest. Neither method was possible for Likendé, and she remained with Kola in the forest until we finally succeeded in anaesthetizing him nine days after his escape.

Given the extent of the screaming during the initial ‘introduction,’ we had been very concerned for the safety of the three females. As it turned out, Matoko and Hélène both had various wounds, but none very deep, and some may have been due to trying to escape from the dormitory rather than from bites by Kola. It was Likendé who exhibited the worst injuries, including one particularly deep bite-wound on her right fore-arm (appr. 4cm deep x 1 cm long), plus shallower wounds on her left inner shoulder, right inner shoulder, below her right eye, left breast, left hand, right hand, and chest, although again, some of these smaller wounds may have been due to trying to escape from the dormitory. Although we didn’t get a close look at Likendé until after the recapture of Kola, all her wounds appeared to date from the first day, with no fresh wounds apparent. We treated all three females with oral antibiotics, but this was precautionary and may not have been necessary.

The release: The three females, aged 7.5 (Likendé and Matoko) and 6 (Hélène), were released in the southwest Lefini Reserve on the 15 October 2006. By the standard classification used for mountain gorillas, they would be considered sub-adult (6-8 years; between puberty and fertility). There is evidence to suggest that western gorillas may develop more slowly than mountain gorillas, in which case at least Hélène could still be considered juvenile. However, all three had already begun oestrus cycling, Likendé one year earlier and Hélène and Matoko in the two months prior to release, so we will respect the mountain gorilla classification and consider them all as sub-adults. The transfer from the Lesio-Louna base-camp to the release site was medically supervised by Dr. David Hayman, a British veterinarian who had undertaken TB tests on the group earlier in the year. Project staff had managed to get all three into their dormitory the previous evening, despite the fact that earlier in the week they had started to refuse to enter the dormitory, preferring to sleep outside. Each was anaesthetised for a final TB test, blood haematology and serology exam, and for placement in individual transport crates, before they were given an antidote to the anaesthetic so that they were fully recovered for the two-hour drive to the southwest Lefini, and the 25 minute boat journey to the release.

Left: Kola, one year after his escape and encounter with the 3 females; Right: Makoua, warning us to keep our distance from the females 10 days after their introduction in 2006. Photos courtesy of Tony King.
site. The three cages were lined up together, some fruits were left amongst some bushes just in front of them, and they were released simultaneously. They headed straight for the fruits, which they ate murmuring contentedly. Their usual caregivers stayed until 17:30. The next morning, the 3 gorillas were found close to the release site in good health, having ignored the small shelter provided and slept in the forest despite heavy rain during the night.

**Introduction to a reintroduced silverback:** We had considered three options for the integration of the three sub-adult females to the reintroduced population: a) introduction to a solitary silverback (Bangha); b) introduction to the first released group (silverback Makoua, three adult females and a baby); or c) introduction to the second released group (nine individuals aged between 7.5 and 12 years, without a silverback, plus two new-born babies). The first option was rejected due to the overly aggressive behaviour of the silverback to other released females, which had led to him becoming solitary from the first released group, and unable to initiate females to transfer from the second released group. We therefore delayed the release of the three sub-adult females until Bangha had been removed from the release site by transfer to a forested island. The second option was our preferred option, given the relatively gentle nature of the group silverback, but we still had doubts over his reaction and also that of the adult females in the group, particularly the dominant female (Djembo). Therefore we had chosen the third option, as none of the males had reached their full size, and we felt we could control the situation to some extent should the introduction go badly. The three females were therefore released a little to the north of the home range of the second group, to give them a month or two to settle in to the site before the introduction.

As always, the gorillas had a better plan, and two weeks after the release, the silverback from the first group had found the three females. The monitoring team had noted that Likendzé had begun oestrus on the 31st of October, and that all three were in oestrus on the first of November. The 15 year-old silverback, Makoua, was observed directly at the release site on November 2nd, in the company of Matoko, having encountered the group earlier that morning or late the previous evening. Matoko appeared fine, while noise high in the trees nearby indicated the presence of one or both of Likendzé and Hélène. On the 3rd of November, Makoua was observed with Matoko and Hélène, while indirect observations suggested Likendzé was slightly apart from the others. On the 4th of November, Makoua and Matoko were again observed together, with Matoko still in oestrus. Likendzé was thought to be nearby, while Hélène was observed alone, scared and nervous, with small wounds on her leg, ankle and hand. The following morning Hélène was found alone again, but by the afternoon, all three females were observed with Makoua, all calm and with no evident tension, roughly 3.5 days after the initial encounter.

The group of four continued to stay together calmly for the following days, with the minor wounds evident on Matoko and Hélène healing slowly. However, they began heading south, so to avoid them meeting the second released group, it was decided to lead them northwards, with the hope of integrating them with the remainder of the first group. On the 10th of November Makoua was quite aggressive with Matoko, including giving her a fairly serious bite on her back. This was thought to be due to Matoko approaching the staff team too closely. By the 15th of November, the group of four had been led to the core home range of the first released group. They were not observed directly again until the 18th of November, when the two groups were observed together, calm and in good health, with no fresh injuries. This enlarged group of eight remained together for about nine days, after which there was a period of about three weeks during which the three sub-adult females became more-or-less separated from the others, although on one occasion they were observed with one of the adult females.

Matoko, Likendzé and Hélène, three months before their release in 2006. Photo courtesy of Tony King.
Even the silverback Makoua lost them for a few days, and made an unsuccessful trip to their release site, presumably to see if they might be there, although the following day, December 18th, all eight were observed together. Since then, the group has remained together, and within the original home range of the first released group. Although taking a little over six weeks to stabilise, the introduction of the three sub-adult females to the silverback and three adult females was finally successful.

**Conclusions:** Every gorilla has their own distinct personality, so it is almost impossible to make general conclusions about complex social interactions, especially based on small sample sizes. We have demonstrated, however, that the introduction of sub-adult orphan female gorillas to a free-ranging and unknown silverback is possible. Apart from disease transmission, which should be controlled by extensive veterinary procedures, the major risks involved appear to be a) serious injuries to the females, which can probably be reduced by careful selection of an appropriate silverback; and b) the fleeing of the females, which we observed with one of our three females during the first accidental encounter with Kola after he escaped from his cage. Both these risks may be exacerbated with rehabilitated females by the presence of well-known humans, as a scared female may well attempt to find protection with the humans (effectively her ‘natal’ group), which in our experience only leads to increased aggression from the unknown silverback to assert his dominance. Another point worth noting from our experiences was that in the second case, the silverback and the three sub-adult females stabilised into an apparently cohesive and generally calm group within 3.5 days. Conversely, subsequent integration with three adult females and an infant took about six weeks to stabilise.

With wild gorillas such a lengthy integration time may be unfeasible, so it appears that introduction to a solitary silverback may be a more straightforward option than introduction to a group. Further considerations, such as the timing of introduction within the oestrus cycle of the female, could probably be helped by studying the results of captive introductions. We hope that our experiences with free-ranging, wild-born gorillas will be of help for future introductions, and especially with the delicate case of wild mountain gorillas.


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Gorilla Re-Introduction in Gabon
Liz Pearson et al., Franceville, Gabon

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 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 primarily 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

Elephants are just one of the novel experiences the gorillas have to learn to live with. Photo courtesy of Paul Aczel.
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 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

_Lekedi with Okeli - the first baby born within the reintroduced population, in October 2007._ Photos courtesy of Vially Ognele.
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 km² 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 feeding, 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-oldest 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 (Kierulf 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
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 international 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.

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:
New Great Ape Exhibit at Lisbon Zoo
Eric Bairrão Ruivo, José Dias Ferreira, et al., Lisbon, Portugal

**Introduction:** Lisbon Zoo is a 124 year-old non-profit organization, located in the centre of the capital city of Portugal. It is a leading zoo in Europe with a major role in research, education and conservation. It is also a key player in the several Zoo and Aquaria organizations in which it participates, namely in EAZA, the European Association of Zoos and Aquaria. It has a large and diverse animal collection with more than 320 different species and a good breeding record, having bred African Elephants, Indian Rhino, Giant Anteater and Pied Tamarin, just to name a few. It participates in 66 EEPs (European endangered-species program), 48 ESBs (European Studbooks), and 49 ISBs (international studbooks) which represents a total of 163 ex-situ breeding programs involving 135 species and subspecies. Portugal has been, for many centuries, a country with many colonies around the world in Africa, Latin America and Asia. This situation allowed Lisbon Zoo to always have easy access to a large and diverse number of wild animals and therefore no serious attempts to breed the species in the collection were ever made. After 1974 (The Portuguese Revolution), Lisbon Zoo went through a period of decline, with no money for investments, during which most of its animal collection was sold in order to guarantee the continued functioning of the institution. In 1990, a new Board started an ambitious plan to renew Lisbon Zoo and turn it into a key player in both the world zoo scene and the conservation of our global biodiversity. It was within the framework of this plan that a new Ape facility was built.

**The History of Gorillas at Lisbon Zoo:** Lisbon Zoo has been keeping lowland gorillas since 1959, and held them in an old style enclosure comprising four 30m² indoor exhibits with one 6m² isolation room each and one 50m² outdoor exhibit. At that time, gorillas were coming from the wild and being kept in isolation from each other. It was only in 1991, with the arrival of the 6 year-old female gorilla Bak, that the gorilla husbandry was changed and Bak was put together with one of the two existing males (Cucu), keeping the other male (Matias) in a separate enclosure. Three years later, in 1994, Bak gave birth to the first gorilla born at Lisbon Zoo, unfortunately a stillborn. In 1995, the male Matias died and Lisbon Zoo continued to keep the pair Cucu and Bak. No more births were recorded. In October 2006, after almost one and a half years of construction work, Lisbon Zoo opened the new "Templo dos Primatas" (Primate Temple, in English); an exhibit built to house gorillas, chimpanzees, Sumatran orangutans and pileated gibbons in a naturalistic environment provided with furniture selected to provide all the stimulation that each of these species need.

**Description of the new Gorilla exhibit:** The inside area consists in a single "T" shaped building to house the four species. The service area/kitchen is in the centre of the building, surrounded by the gorillas on the left side, the chimpanzees on the right side and the orangutans and pileated gibbons in front (design was conceived to prevent visual contact between the three species). Each species has three climate controlled (24-25°C) main indoor exhibit/night quarters (all indoor exhibits with skylights) and four smaller isolation rooms, two of which are equipped with a common restraining area (all rooms have interconnecting doors). Observation by the keepers is possible from almost any location in the building, as indoor areas are divided by metal bars and/or wire mesh in each species' area. All indoor exhibits have climbing structures, platforms and automatic water dispensers available. The outdoor areas for gorillas and chimpanzees include two large islands (1420m² for the gorillas and 1190m² for the chimpanzees) facing each other, but separated by water and a 4,5m high artificial rock visual barrier.

**Left:** Keeper Maria Martins with Toto and Sofia (left/right) in 1964.
**Right:** Matias, being fed by keeper Arminda Dias.

Photos courtesy of Lisbon Zoo.
Each island is equipped with furniture selected to provide exercise and resting opportunities for all animals (horizontal and vertical tree logs, ropes, burlaps, hammocks, etc.). Shade and automatic water dispensers are also available in the outdoor area. The outdoor area for Sumatran orangutans and pileated gibbons includes two islands (total area: 367m²), both accessible from one another (with the possibility of creating two separate islands) and equipped with large vertical wooden poles, wood platforms and tree logs, horizontal ropes, liana ropes and hammocks. As in the other two species’ exhibits, shade and automatic water dispensers are available in the outdoor area. All indoor and outdoor furniture was carefully designed, selected and placed in order to provide the animals with as many opportunities to exhibit as many of their natural behaviors as possible. Regarding security, a water moat combined with electric fence (powered by three different mains/battery powered energizers) and a 4,5m high artificial rock (professional climber tested) with electric fence on top, keep the animals in their enclosure. The water moat is 1,2m at the deepest point with a shallow area to prevent any animal from drowning.

The Transfer of Cucu and Bak to the new enclosure (21 Sep 2006): When the new enclosure was ready to accommodate animals at the end of 2006, the two gorillas (Cucu and Bak) were tranquilized and transferred there. So they could become familiar with their new enclosure, they were kept in the inside area for the first week and this also allowed staff to closely monitor them. When the animals were given access to the outside area for the first time, Cucu came out immediately and started exploring his new territory. Ten minutes later he jumped into the water moat and as he touched the inside margin hot wire he jumped back to the enclosure and ran to the inside exhibit. For a while we all thought that he was going to swim his way out or drown. Bak didn’t want to leave the inside exhibit and stayed by the door observing Cucu from a distance. After this incident, Cucu went through a period during which he didn’t feel safe in the outside exhibit and, for a week, he was only coming out to get the food scattered around the outdoor area by the keepers. Then he got used to it and started spending more and more time outside. The first time Bak came to the outside area, almost a month after we first opened the doors, she got tangled around the margin hot-wire, damaging the poles and insulators, and ran back into the inside area. From that moment on, she always kept a safe distance from the water moat and never touched another wire. Knowing that these animals lived for most of their lives in a small concrete and steel-bar exhibit and had never before experienced the feel of grass, mud, hot wire, 8 meters tall wood climbing structures, rope lianas, and water (deeper than a drinking bowl) we can say that it is impressive how quickly they have adapted to a completely different environment, husbandry and daily routines.
Sample Summer Routine

**Hour**

**08h00** - Individual and group observation; 
- Outdoor facility is cleaned prepared for the animals; 
- Keepers prepare food items for 1st meal of the day; 
- 1st feed, browse and enrichment items are scattered outside facility.

**09h00** - Animals are given access to outdoor facility.

**10h00** - Indoor facility cleaning is started / new bedding material is provided; 
- Group observation.

**11h00** - 2nd feed; 
- Enrichment items are prepared.

**12h00** - Keepers lunch break.

**13h00** - Animals closed in the inside enclosure; 
- 3rd feed and more browse (if available) scattered around outdoor facility.

**14h00** - Animals are given access to outdoor facility.

**16h30** - Cucco is closed in its sleeping quarter to have his medication and part of the 4th feed; 
- Cucco is given access to one of the indoor facilities; 
- The three females are kept in the outside facility until 19h00.

**19h00** - The three females are closed in the inside enclosure; 
- 4th feed - part of the diet is handed over to each animal individually, allowing close physical observation. Cucco receives the rest of his 3rd feed. 
- Individual and group observation; 
- Anguka’s training behaviour (app. 5 minutes); 
- The three females are gathered into two indoor facilities for the night. Cucco spends the night in a different inside facility but has contact with the females through the mesh.

**20h00** - Keepers leave.

Sample Gorilla Diets

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<td>Lettuce</td>
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<td>(kg)</td>
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<td>Meal eggs</td>
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Sample Enrichment Plan

<table>
<thead>
<tr>
<th>Day</th>
<th>Enclosure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO</td>
<td>Outside</td>
<td>Cardboard tubes with seeds &amp; hay.</td>
</tr>
<tr>
<td></td>
<td>Inside</td>
<td>Portion of rubber hose with fruit &amp; probes</td>
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<tr>
<td>TU</td>
<td>Outside</td>
<td>PVC tubes with fruit &amp; hay.</td>
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<td></td>
<td>Inside</td>
<td>Cardboard box with seeds, fruit &amp; hay.</td>
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<tr>
<td>WE</td>
<td>Outside</td>
<td>Hide dried fruit &amp; seeds on floor under hay; tennis balls with seeds; cardboard box with seeds, fruit &amp; hay.</td>
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<td></td>
<td>Inside</td>
<td>Portion of rubber hose with seeds &amp; hay.</td>
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<tr>
<td>TH</td>
<td>Outside</td>
<td>Cardboard tubes with seeds &amp; hay.</td>
</tr>
<tr>
<td></td>
<td>Inside</td>
<td>Portion of rubber hose with dried fruits.</td>
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<tr>
<td>FR</td>
<td>Outside</td>
<td>Small ice cubes with fruits.</td>
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<tr>
<td></td>
<td>Inside</td>
<td>Paper rolls to unroll.</td>
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<tr>
<td>SA</td>
<td>Outside</td>
<td>Banana tree leaves.</td>
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<tr>
<td></td>
<td>Inside</td>
<td>Hide dried fruit &amp; seeds on floor under hay; PVC tubes with dried fruits &amp; leaves.</td>
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<tr>
<td>SU</td>
<td>Outside</td>
<td>Portion of rubber hose with yogurt &amp; probes.</td>
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<tr>
<td></td>
<td>Inside</td>
<td>Portion of rubber hose with fruit &amp; probes.</td>
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</tbody>
</table>
Introduction of Ulca to Cucu and Bak (10Oct2006): When Ulca arrived at Lisbon Zoo, after a two-day road trip from Köln Zoo (Germany), she was isolated in one of the sleeping quarters for 24 hours and then went through the following introduction steps during a 10-day period:

1. Visual contact between Ulca, Bak and Cucu;
2. Introduction of Ulca to Bak in two of the inside exhibits. Cucu isolated in one of the inside exhibits. All animals separated during the night;
3. Ulca and Bak together in the outside area. Cucu isolated in the inside area. All animals separated during the night;
4. Introduction of Ulca to Cucu in the inside exhibits. Bak isolated in the outside exhibit. All animals separated during the night;
5. Ulca, Bak and Cucu together in the inside exhibit. All animals separated during the night;
6. Ulca, Bak and Cucu together with free access to the all the areas (inside and outside). Ulca, Bak and Cucu together in the inside exhibit during the night.

Two keepers from Köln Zoo were present and helped during Ulca’s introduction. During this period, no serious fights or wounds occurred.

Introduction of Anguka to Cucu, Bak and Ulca (04Jun2007): When Anguka arrived at Lisbon Zoo, after a 36-hour air trip from Taronga Zoo (Sydney, Australia), she was isolated in one of the sleeping quarters, without visual contact with any gorilla for 24 hours, and then went through the following introduction steps during a 15-day period:

1. Visual contact between Anguka and the females (Bak and Ulca) and visual contact (from a distance) between Anguka and the male (Cuco);
2. Cucu, Bak and Ulca in the outside exhibit during the day (9h00 – 19h30); Anguka with access to all the rooms in the inside exhibit during the day; Anguka in one of the inside exhibits with visual contact with the females and male (from a distance), during the night (19h30 – 9h00);
3. Introduction of Anguka to Ulca in the inside exhibit during the day; Cucu separated from the group in one of the sleeping quarters but with visual contact; Bak in the outside exhibit during the day; Ulca showed some aggressive behaviour towards Anguka during the day – small wound; Ulca and Anguka together in one of the inside exhibits during the night; Cucu and Bak together in one of the inside exhibits during the night;
4. Introduction of Anguka to Cucu in the inside exhibit – two bouts of aggression resulted in minor wounds.
5. The same but with Ulca, Anguka and Cuco; Bak in the outside exhibits during the day and in one of the inside exhibits during the night;
6. The group had free access to the outside enclosure during the day.

Anguka’s Australian Keeper acted as an excellent advisor for the development of the plan to introduce the gorilla Anguka to our group, as well as during the implementation of that plan.
Conclusion: Keeping gorillas in an adequate social structure in a naturalistic and rich environment was one of the main goals of Lisbon Zoo’s master plan implemented in 1990. This resulted in a beautiful and functional facility in which animals, public and staff can participate in a unique experience.

Above: Gorillas in their new exhibit.
Left, top to bottom: "Ladies of Lisbon." Bak, Ulica and Anuka.

Copyright of the photos is Lisbon Zoo, and the author of photos of the new facility is Susana Nolasco.

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I arrived in England on March 19th 2007 at 1 pm. Hardly had I deposited my bag, and in spite of the tiredness and cold weather, I had a strong desire to visit the Zoo and particularly, the gorillas. Peter, the man with whom I was going to stay for the time I was in Bristol, immediately drove me to the Zoo where I met Dave, a senior staff member of the Education department, whom I had already met in Cameroon on several occasions. The section 3 personnel in charge of primate welfare gave me a hectic welcome. Everybody at this section was eager to meet me. After introductions, one person was appointed to show me around the zoo. When we arrived at the gorilla enclosure, I first saw a female with a young gorilla of about two years old and suddenly a male appeared at the back of the enclosure. At first sight, I couldn’t believe my eyes. He was big! I never imagined that a gorilla could attain such a size. His name was Jock, it was the first adult male I had ever seen and that amazed me. Despite his weight and strength, I also admired his calm and caring nature shown to the members of the group. Bristol Zoo possesses five gorillas, comprising one dominant male, two adult females and two youngsters. My first day in England remains highly memorable.

My second day at the zoo was interesting as well. I assisted the keepers during the daily routine (cleaning, feeding and observing). Bristol Zoo possesses a good number of primate species. The personnel at section 3, take care of primate species and each keeper doesn’t have a fixed post as at CWAF. Each keeper has a day he/she works in the different primate enclosures. Work starts at 8 a.m. and ends at 5 p.m., with two breaks a day from 11 am to 12 noon and 1 pm to 2 p.m. What is done first after the morning briefing is the observation of the animals, the taking of the body temperature and afterwards the animals are fed on one side of the enclosure so as to enable the keeper to clean the other side. Contrary to CWAF practice, they have no direct contact with the animals. There is a big difference between gorillas living in European Zoos and those in Cameroonian sanctuaries. The gorillas’ food at Bristol Zoo is of high quality and quantity. I believe that excess food and lack of enough exercise is the cause of the astonishing body weight. I also realized that the European climate is not appropriate to most animals living there. When the weather is too cold or when it snows, they spend most of their time indoors and most of the rooms are not large enough.

My social relation with the workers was good and they are serious, ambitious and creative people. In Cameroon, we find more men than women in conservation business while in England it is the contrary. My first week at the Zoo permitted me to work in different enclosures. I worked with animals such as, the red ruffed lemurs, ring-tailed lemurs, Geoffroy’s marmosets, white-faced saki monkey, tapirs and my favourite, the squirrel monkeys. March 27 was my birthday and also the first day to be very close to the Bristol zoo gorillas. They were surprised to see a foreigner stand closer, and more precisely, in the area strictly reserved for zoo personnel. The two year old, Nakomi, showed off his usual display. Jock was surprised but probably was more interested by my skin colour. Romina, the mother of Nakomi was also kind with me because I tried to communicate using gorilla language. Only Salome, the female gorilla with a three month old baby, stayed away.
Everyday when the weather was good, the gorillas were fed at 2:45 p.m. During that time one keeper delivered a talk to visitors. He recounted the history of each gorilla, their origin, their adaption and evolution in the zoo, and why they were kept in the zoo. During my stay in Bristol, the Director organized two tours to two other zoos, namely, Paignton Zoo and the Twycross Zoo. These visits permitted me to see some differences in enclosure design and environmental enrichment. I also had the opportunity to visit Monkey World, where I was amazed by the quality of the enrichment and the large enclosures allocated for the animals. That opportunity permitted me to learn a lot. For example, animal care and nutrition are different. But there is one common thing, all have one goal, the protection of species, no matter the condition of work, the means at their disposal, this is the fundamental value of conservation.

I wish to thank Jane Dewar for her trust in my work and for providing me this opportunity to visit European zoos. It is important to be motivated and encouraged. I would like to thank Bristol Zoo, CWAF and all who had contributed to make my visit a success.

Editor's Note: In December 2007 Bruno left Cameroon and moved to Australia, where he recently got married.

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Shanghai Surprise! Baby News

By Lu Feiran 2008-2-19

The stork was busy at the Shanghai Zoo ... A baby gorilla was born on Sunday (17Feb08), the first gorilla born in a Chinese zoo since 1982, officials said. Because the mother, Astra, who came from Holland, is nursing the baby closely, keepers do not know whether the two-kilogram baby is a "he" or a "she." Before the 13-year-old female gorilla came to Shanghai, she gave birth in 2006 but the baby died a month later because of a lack of milk. "This time the mother is showing great affection to the baby, and we cannot take the cub away from her," said Pan Xiwen, a zoo official. "We'll know the baby's sex in a couple of months when it grows older." Officials discovered Astra was pregnant last July, and from then on, the gorilla received special care. Keepers made special meals for her every day and her health during the pregnancy was closely monitored.

Email to Jane Dewar 24Feb08:
Astra gave birth to one baby on the morning of February 17, 2008. Up to now Astra and the lively baby are all in good conditions and still live with their family group together.

Xiong Chengpei
Director
Shanghai Zoo

Astra and her new baby. Photo courtesy of the Shanghai Zoo.

Shanghai Zoo's website (in Chinese) has photos of the gorillas: please find further information on the website: http://hj.sh.gov.cn:7002/xingxing
Impact of a Birth on the Social Relationships of a Group of Western Lowland Gorillas
Aude Desmoulins et al. St. Aignan, France

Introduction: Female gorillas are breeding at a low rate in captivity. Successful breeding is strongly related to maternal behaviour and mother’s background. Females who have been hand-reared and/or grown up out of their natural social surroundings, with no opportunity to observe and learn parental behaviours, have only little chance to develop appropriate maternal behaviour when they reach breeding age. However, their breeding success can be increased if they are integrated in a group where maternal behavior can be observed. This study tries to determine the influence of a birth on social behaviours in a group of western lowland gorillas by researching changes in individual’s proximity and behavior towards the mother/baby dyad. Then, based on the assumption that females will learn maternal behaviors from this dyad, the chances that hand-reared females of the group will rear their own young can be evaluated.

Material and method: See photos, below, with Kabinda as the gorilla who gives birth in the group.

Data collection and analysis: Subjects were observed using the focal animal sampling method; where positive social behaviors (proximity research, plays, breeding behaviors) and agonistic behaviors (threats, offensive and defensive behaviors) are recorded. Distances between specimens were collected using the scan sampling method. Proximity between individuals is described by classes of distances: Contact, distance lower than 1m, between 1 and 5m, 5 and 10m, and distance higher than 10m.

Results: Most of the behaviours adopted by the group towards Kabinda after the birth are behaviours of increased proximity and interest, mainly illustrated by the attitude of females but also a little by the male’s attitude (cf. Fig. 1). Inge interacts the least with Kabinda and adopts more defensive behaviours than the others with regard to her.

Interpretation - Conclusion: This study shows that all members of the group sought out Kabinda’s proximity and they become closer to Kabinda following the birth (Inge less so than the others). Sheila has never bred or seen a baby since reaching sexual maturity. The results demonstrate that she is very close to Kabinda and even more so since the birth. The opportunity to observe the normal maternal behavior of Kabinda can thus potentially lead Sheila to a successful breeding. Since Kabinda’s daughter Khala’s birth, the proximity of Inge towards Kabinda has not really increased. The slight increase in proximity could be due to the proximity between Kabinda and Sheila, as Inge is very close to Sheila. An assumption of lack of interest by Inge for newborns can be made, but Inge is not primiparous: she has already had seven babies in another group. She reared none of them; but in a normal social organization, we can theorize that she will know how to take care of her next infant, expected in January 2008. Tamarilla has already had two unsuccessful births, but these were for medical reasons. Furthermore, she shows an interest in both Khala and Kabinda. The assumption that she will successfully rear her offspring is highly probable. This study will be continued in 2008, when Inge, then Sheila, will give birth.

Fig. 1: Graphic representation of the analysis of binary data based on the behavioural data of the group towards Kabinda.

Kabinda-Inge

Kabinda-Sheila

Kabinda-Tamarilla

Fig. 2: Mean % of scans per week (± SE) where every dyad is observed in a distance class = p-value < 0.05 (Mann-Whitney)

Kabinda-Inge: They spend significantly more time under 1 meter of distance one to each other since the birth (Mann-Whitney: p-value = 0.0316 < 0.05), but this remains however at a low frequency.

Kabinda-Tamarilla/Kabinda-Sheila: a significant increase of their proximity (< 1m) after the birth can be noted (Mann-Whitney: p-value = respectively 0.0049 < 0.05 and 0.0057 < 0.05).

Photos courtesy of Nicolas Canfrère and Agathe Laroye.

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Gorilla Gazette, May 2008, page 53
Echoing down the halls of the Great Ape building, Ernie’s doleful calling for Bibi is distinctly a sound of mourning. Keepers can barely contain their grief when working with the 25 year old silverback, now alone for the first time in eighteen years. Ernie’s vocalizations and altered behavior is evidence to keepers that Ernie is deeply depressed by his mate’s passing on Christmas day 2007. No longer is he initiating play with staff, perpetually grumbling when food is present or building his nest in his usual spot. Speaking anthropomorphically, Ernie’s life has been turned upside down. After all, the two gorillas spent a large part of their lives together, bonded as the quintessential pair. Ernie was only seven years old when he was first introduced to the then 20 year old Bibi. In effect, Ernie’s life was shaped by this feisty female, making him the gorilla that he is today.

The story actually begins in Gabon, Africa where Bibi was born sometime in 1968. She lived in Africa with her family for almost three years. It was at this time that the infamous Fredrick J. Zeehendelaar, a Dutchman who was one of the world’s largest suppliers of exotic animals, confiscated Bibi and brought her to the Denver Zoo in Colorado in Jan. 1971. At only 41 pounds, Bibi’s age was estimated to be around 2.5 years old. Initially she was placed with a wild-caught gorilla, named Thomas. By 1972, another female, named Maguba, was introduced to the group. Bibi would give birth to a baby girl, named Tambu, on October 12, 1975. Perhaps it was Bibi’s young age, inexperience, or interference from Thomas, which led her to abandon the infant which, after being pulled by keepers, passed away from a staph infection at only 12 days old. This would be Bibi’s only offspring.

In June of 1981, Bibi was transferred to Cincinnati on a breeding loan; a venture that would prove to be unsuccessful. By July of 1984 she was sent back to Denver. This time, she was housed with a male named Joe (now at Gorilla Haven) and her former room-mate, Maguba. In the following years, Bibi would be bitten and attacked several times by Joe, who seemed to have a preference for Maguba. In 1986, during an immobilization for exploratory surgery to her abdomen, several health concerns became evident. Fistulous tracts were discovered within her bowel along with a mass of adhesions. The vets surmised that Bibi’s condition was the result of a chronically abscessing appendix. For the next 13 years, Bibi would be on various rotating antibiotics, several of which she would garner a resistance to.

In the intervening time, Ernie would be born at the Oklahoma City Zoo on December 7, 1982 to the parents, Moemba and Kathryn (see page 27), both African born. Ernie was the third offspring for the pair and fortunately was successfully mother-reared. In 1989, the decision was made to send Ernie to Denver. Dr. Sue Woods, professor of Anthropology at the University of Colorado, was observing the gorillas at Denver during this time. She fondly remembers the first intro: “Joe was still at Denver and got along well with Maguba, so the decision was made to intro Bibi to Ernie. After her next health checkup, Bibi was put into a cage adjoining Ernie’s. They were very interested in each other around the edges of the door separating them. I’ll never forget their intro. Ernie had been miserable separated from other gorillas. He kept following Bibi around, but she was avoiding him. After a bit, she seemed to sense his need for the touch of another gorilla. She stopped up on a shelf, he stretched toward her, and she touched him all over his body with her hands. He was absolutely quivering. They bonded immediately. When it was time to move them across the aisle, Ernie was moved the day before Bibi. When we left that evening, his pitiful hoots filled the building and broke our hearts.” Even in the beginning, Ernie’s attachment to Bibi was strong. Dr. Woods remembers the rapport between the two gorillas as being mostly play, play biting and laughing. However, due to
Bibi’s advanced age over Ernie, she could take advantage of certain situations that she could not have done with Joe. From Sue Wood’s dissertation written in 1992, she wrote: “Ernie was an accomplished nest builder. Bibi wasn’t but she loved nests, especially Ernie’s. Bibi was dominant over Ernie, so she could expropriate his nests. She did. Ernie wised up to Bibi’s nest scrounging. When he saw her heading for his nest, he would get out of it, pick the whole thing up, and carry it off, bipedally, to a safer spot.” Bibi, who formerly was afraid of the dominant Joe, had now settled into a less stressful relationship with the younger, more playful Ernie. Over the next few years, Ernie and Bibi’s relationship would be tested, as they were sent into new situations. Moreover, as Ernie got older, the dynamics between the two would change, but their bond would remain strengthened.

In 1994, the pair made a transition to Cheyenne Mountain Zoo in Colorado Springs, CO. This was supposed to be a temporary holding; however, it turned into a five year stay. For the first three years the couple was housed alone. Ernie was maturing into a young silverback. His mood was not always as playful as previously noted and Bibi, unfortunately, would sometimes take the brunt of this developing silverback’s aggression. Ernie and Bibi were eventually housed with four females, three of whom were hand-reared. Records show that Ernie was aggressive during the initial intros with these four gorillas. Dr. Woods noted that Bibi, being a favorite of Ernie’s, eschewed her subordinate rank and quickly became the dominant female in the group. One such example of Bibi’s effect on Ernie can be seen when she and Roxie, the mother-reared female, got into a fight. As Bibi and Roxie screamed at each other, Ernie ran over and put his mouth on Roxie’s shoulder. Bibi, forgetting the squabble with Roxie, ran to Ernie and he let Roxie go. Although Ernie did mate with Roxie at times, Bibi was still his girl and her dominance in the group supported her role in the silverback’s life. The pair mated often, usually in a vociferous display and in several positions, with ventro-ventral being favored. Their solicitous relationship would endure for many years.

Once again, the decision was made to move both Ernie and Bibi to a new facility. In 1999 the Knoxville Zoo in Tennessee welcomed the pair. Knoxville had recently built a new gorilla exhibit which was holding a bachelor group: Sam and Scotty. When Ernie and Bibi arrived, Scotty was transferred back to Cheyenne Mtn. Zoo for breeding, leaving the zoo with two groups. To the staff’s dismay, Ernie was reluctant to enter the large gorilla enclosure, instead preferring the safety of the concrete courtyard adjacent to the exhibit. Amy Chester, Lead Keeper of Apes, noted how Ernie was so protective of Bibi at this time. It appeared that Bibi was more comfortable with the exhibit than Ernie, and would wander out, but Ernie would quickly call her back. Amy recalls how Bibi faithfully stuck by his side. It took behavioral training and many months for the pair to feel comfortable going out onto exhibit, but they eventually came to love being in their new surroundings and willingly shifted out. Dr. Ed Ramsay, zoo veterinarian from the University of Tennessee, decided to take Bibi off antibiotics during this time. Bibi’s health improved and her fistulous tracts seemed to heal thereafter. As Bibi matured however, the move down the hill would take her more time as she cautiously maneuvered the steep slope onto exhibit. Ernie was always the gentleman, patiently stopping and waiting for Bibi, making sure she was close to him. Ernie was now 18 years old and had garnered an undeniable dominance over Bibi. Although, and perhaps due to the pair’s background, Bibi was allowed to get a bit shrewish with Ernie from time to time. Sometimes during a group feed, Bibi would vocalize and thrust her arm towards him.
wailing so loudly keepers could hear her on the other side of the building. To onlookers, the scene was reminiscent of an enraged wife scolding her husband. A few times, Bibi’s hand would actually make contact with the silverback, slapping him on the arm. Ernie would just sit and ignore this feisty spectacle. It took a lot from Bibi before Ernie would showcase his dominance over her, usually with only a bluff.

When keepers would ask both of them to shift together, sometimes Bibi would sit with her hand on her hip not budging, much to the chagrin of the keepers. The ever-so-patient Ernie would walk towards her and then move to where the keepers wanted them, time and time again, trying to peacefully get her to move with him. Usually, Bibi would give up her stubbornness and shift. If not, Ernie would tackle her in a non-abusive manner, and Bibi, without a sound, would quickly follow. While at Knoxville, the pair’s days were spent lounging in the exhibit or getting cozy in the courtyard. The sounds of their courtship and mating could be heard in the hallways of the Great Ape building frequently. They had turned into an old “married couple.” In her final days, keepers noticed that Ernie had begun to give his nest up to Bibi even though her nest, not quite as impressive, was built next to his. His massive hay and blanket-filled bed situated in his favorite spot was now accommodating a very sick Bibi. Unlike in his youth, he did not scoop up his nest and run away with it. Instead, like a loving, dutiful partner he slept on a pallet, something keepers had never witnessed prior to Christmas Eve. Bibi seemed to take comfort in the warmth of Ernie’s nest. All day and through the night, when a keeper came to check on her, Ernie was either sitting near Bibi or lying on the pallet. And when vets came, Ernie would quickly jump in front of her, the ever-loyal spouse.

Like a son to a mother, Ernie had taken solace in Bibi’s touches when he was only seven years old. Through the years he had Bibi as a playfellow and eventually as a loving mate. Bibi was his shadow, always there for company and companionship. Due to her heritage, she kept Ernie entertained with her feisty-wild-caught-backtalk. She nurtured him as a child and grew to respect his dominance as he matured into a young silverback. Likewise, Ernie was her protector in stressful situations, making sure she was safe. Patient and respectful, he was her gentleman companion. It was truly an altruistic deed Ernie did, giving up his nest to Bibi when she most needed it; a behavior that solidifies an ultimate act of affection that the two gorillas shared.

"(Bibi) …died of respiratory arrest during an emergency immobilization. The cause of her illness at necropsy was diagnosed as a necrotizing bacterial fasciitis and myositis." Lisa New, Curator, Knoxville Zoo, Feb 2008.

ERNE UPDATES:

16Feb08: Since writing this article in January, Ernie has improved somewhat. He has started to grumble again, not quite as frequently as before Bibi’s passing, but it’s an improvement from Christmas Day. He has shown some potential play behaviors too, but again, it doesn’t seem his heart is totally in it yet. One good thing, is that a bachelor group, Kwashi and Bantu, is also housed at KZG. Having another 25 year old silverback, Kwashi, to display towards seems to help break up Ernie’s day. Bantu, who is only 10, tries to give his best “silverback” display towards Ernie, but Ernie only watches him in amusement not reacting at all. Sometimes, Ernie can be seen sitting at the window quietly watching Kwashi and Bantu. When Bantu isn’t trying to play “silverback,” he and Ernie will sometimes both sit at the window together, gazing at one another through the glass. Ernie certainly isn’t the same gorilla he was prior to Bibi’s passing, but it seems with time, his old behaviors are starting to emerge.

means topic continues ....
**ERIE UPDATES, continued:**

**27Feb08:** We decided to try a howdy (door for) Ernie and Bantu and it went really well. At first, they were both tight lipped and stiff stance (while we were hand-feeding them both). Bantu was more aggressive than Ernie! He's going to be so much like (his father) Kwasha. Ernie eventually started a running game with Bantu, running from the howdy to the viewing glass between the courtyard and the dens. Back and forth, both would display between the window and then run back to the howdy. At first, Ernie had a tight lip, but soon, both he and Bantu had play faces and were actually having fun! Ernie was touching Bantu and smelling his fingers. Bantu put his back to the howdy and let Ernie touch him. Then Bantu did what he normally does to keepers: he spun around trying to grab Ernie's fingers! The play faces were wonderful to see! I think this was fantastic for Ernie. He was even spinning (one of his play behaviors) during the running game and doing his horse gallop. It was great seeing him with another gorilla, even if it was only through mesh. We're going to keep it up and who knows where this will lead?!

(Meanwhile, the 25 year old silverback) Kwashi was locked in the back dens with his lunch and a bunch of goodies. The howdy lasted for nearly two hours and Kwashi was in seventh heaven. We could hear him grumbling in the back dens enjoying some alone time and the back porch. Bantu harasses the heck out of him these days, so this may help to give Kwashi a break now and then, while keeping Bantu occupied.

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War Orphans
Virginia Echavarria: Wildlife Direct: DR Congo

Two orphan lowland gorillas (grauei) were rescued by the MONUC on the 4th of January 2008. They were being taken to the market by poachers. MONUC brought them to ICCN Mutsora station, in the northern sector of Virunga National Park. Dr. Eddy and Andre from MGVP traveled from Goma to Mutsora to look after them. Dr. Jacques traveled as well some days after. Mapendo, the small female, was in better condition when she arrived. Vumilia, the older male, had a serious wound in one wrist and diarrhea. MGVP doctors guessed they had been in captivity in small cages. Both started to recover slowly, and had the company of each other. Mapendo would follow the male everywhere. There was cautious optimism and they were barely stable. Suddenly Vumilia collapsed at midnight on Saturday the 12th. Dr. Eddy managed to revive him once but he finally died (the next day) at 2 am on January 13, 2008.

MONUC: Mission de la ONU en DR Congo (United Nations)
ICCN: Instituto Congolais pour la Conservation de la Nature
MGVP: Mountain Gorilla Veterinary Project

Death of an Orphan
Dr. Lucy Spelman, Mountain Gorilla Veterinary Project, DR Congo

Excerpted from blog dated 28Jan08 at http://discovery.blogs.com/quest/gorillas/ Reprinted with permission:

After 10 days of caring for the two orphaned Grauer's gorillas in Mutsora, we thought both would live. Vumilia was weak, but he regularly drank plenty of water and ate fairly well, especially fresh fruit. We continued preparations to move him and Mapendo to Goma. Workers rushed to construct a temporary home at the Dian Fossey Gorilla Fund International (DFGFI) office there. The staff of the NGO WildlifeDirect arranged for a plane flight. Soon, we'd have all four orphans in one city. Thirty-six hours before the planned move, Eddy called me in the middle of the night. Vumilia had suddenly cried out and collapsed. Using CPR, Eddy managed to revive the young gorilla. I called Dr. Magdalena Braum, our new regional field vet who lives near me in Ruhengeri. We traded phone calls with Eddy, offering ideas and advice, hoping the problem wouldn't recur. But it did and Vumilia died. We'd be meeting a plane carrying one live gorilla — and one dead one. Early on the day of the flight, Magda and I drove to Goma, stopping at the DFGFI office to check that everything was ready. Unfortunately, the walls of the outdoor gorilla enclosure still reeked of fresh paint and the newly poured cement floor in Mapendo's night house needed another day to dry. I decided that our part-time office space was the better — indeed the only — option.

Out went the desks and bookshelves and in went a mattress. When we let Mapendo out of her transport crate, she looked around calmly and walked straight into Andre's waiting arms. With Mapendo settled, we began the postmortem on Vumilia. As with any complicated procedure, each of us had an assigned task. Magda and Eddy
collected samples; I photographed; and Jacques recorded the findings and helped weigh or measure the various internal organs. The staff of DFGFI-Goma provided us with a makeshift tent; two of its sides open to the fresh air and a table. The flies found us quickly, however, making for a long afternoon. At least the weather was cloudy. The little gorilla was emaciated and stunted. Though he’d been eating while under our care, he had no fat stores and his muscles were severely atrophied. His knees and elbows were abnormally large, the result of bony swellings characteristic of metabolic bone disease. Known as rickets in humans, this problem results when a young, growing animal is fed a diet too low in calcium or too high in phosphorus. Without access to sunlight, it develops more quickly. This condition, along with the scars around his wrists, suggested that Vumilia had been captive for many months.

The gorilla’s internal organs were pale in color with tiny pinpoint hemorrhages in some areas. We did not find any evidence of a communicable infection — good news for Mapendo and all who worked with Vumilia, though these findings are only preliminary. Next we apply for permits, ship the samples to the University of California, Davis, and wait for the tissues to be analyzed by the expert veterinary pathologists. Only then will we be able to determine the cause of death. Sometimes, we never find out for certain what happened. Clearly, Vumilia suffered from months of malnutrition, rickets and severe stress, all of which contributed to his death and may have been enough to kill him. We found a small amount of food – partly digested fruit – lodged in the gorilla’s larynx, right at the opening to the trachea or windpipe. This could explain what happened at the very end. If the gorilla vomited a mouthful of food and choked on it, he may simply have been too weak to cough it out on his own. Eddy’s CPR cleared the airway, but only temporarily. This is only speculation, but it’s also our best guess until the final report comes in.

Three days after the postmortem, Magda returned to Goma to check on Mapendo as well as Ndeze and Ndagasi. Earlier, we’d noticed patchy hair loss on Mapendo; by the time of Magda’s visit, the condition had worsened and the little gorilla was itching. The problem looks like ringworm, so Magda started Mapendo on the appropriate medication. She and Jacques hope to confirm the diagnosis with analysis of hair samples. Fortunately, the new orphan is taking her bottle quite well and shows no overt signs of rickets. Milk, sunlight and plenty of fresh browse will ensure that Mapendo does not suffer the same fate as Vumilia. Mapendo has two new caretakers, Jean Paul and Babo. Like Andre and the group caring for the mountain gorilla orphans, both are ICCN staff who have helped care for orphaned gorillas in the past — namely Pinga and Serufuli, two of the eight orphans who live at the Kinigi facility in Rwanda. The rangers have been stuck in the city since last summer anyway. The situation in the Virungas section of the park is chaotic and the forest border is being destroyed by illegal charcoal manufacture. We have no news of the gorillas that live in the area.

**MGVP was established in 1986 as the first organization of its kind, providing veterinary care for free-ranging mountain gorillas. This species lives on the brink of extinction, with no fall-back breeding population in sanctuaries or zoos. The many threats to the mountain gorilla—in addition to naturally-occurring health problems—include poaching, war, and habitat loss, as well as susceptibility to human and domestic animal diseases. For more about our patients and recent events, go to Dr. Spelman’s weekly blog: discovery.blogs.com/quest or look for the Gorilla Doctors blog on Wildlife Direct www.wildlifedirect.org/index.php For more information on the science behind mountain gorilla health, go to mgvp.cfr.msstate.edu/mgvp/**
When the Los Angeles Zoo sent its gorillas to Denver and Atlanta while their new habitat was being completed, no one thought their return to L.A. would take 4 long years. Jim was slated to remain in Denver as a breeding silverback, and Angel was to join the Denver troop permanently as well. The 4 year absence of gorillas at the zoo made their return even more eagerly anticipated, with zoo patrons asking daily about the gorillas. If there was ever a question about the gorillas’ popularity at the zoo, it was answered during their hiatus.

Campo Gorilla Reserve was designed by Jones and Jones, and as primary gorilla keeper, I had unprecedented input into the design. From being included in the interview panel to select the design firm to haggling over water features, I was a part of the team. It was an eye-opening experience, and sometimes frustrating. Led by principal designer Mario Campos, the team worked long hours trying to juggle space, needs, cost and every other aspect of a new and different gorilla habitat. I tried very hard to be the voice of the gorillas on the team. The end result is an exhibit the zoo can be proud of. The compound includes two habitats, one for a family group and one for a bachelor group. There is also an airy, functional and flexible holding building and an outdoor steel mesh off exhibit area that can be used for introductions or temporary space for gorillas if one of the habitats needs renovation.

The habitats are lushly planted and terraced, showing gorillas at visitor eye level or above. A small waterfall and stream run through the space. The visitor areas are also well planted and viewing is from a dedicated path that winds past three open, moated views and two glass viewing windows where visitors can get close to the gorillas. Minimal graphics are augmented by an education cart manned by staff who can answer questions and engage visitors. Benches, trash receptacles and donor panels are all unobtrusive and blend perfectly with the plantings and surroundings. The dedicated path and separate viewing areas limit the size of crowds that can occupy an area. All of these features do seem to immerse the visitor in the habitat. Off exhibit housing for the gorillas consists of a simple, but functional building. Nine “bedrooms” have multiple divider doors to allow any or all to be closed off, yet with all doors open, a “baffle” is created to allow freedom for the gorillas, while no gorilla can dominate the area. The family and bachelor bedrooms are separated by a shift/squeeze cage with a built in scale. Gorillas can be shifted through this area, and an overhead transfer also allows shifting from any bedroom to any other bedroom, either habitat or the outdoor off exhibit area. Each habitat has two doors leading to the bedrooms. Former Zoo Director Warren Thomas is honored and remembered with a panel describing his role as director and his love of gorillas, and the path leading to the gorillas is named Thomas Trail. Although he didn’t live to see the habitat built, he offered support and guidance during design.

The family habitat, houses silverback Kelly, born at the zoo 21 years ago, and the first mother-reared gorilla in LA; Evelyn, another LA-zoo-born gorilla; Rapunzel, born in Cincinnati; and Glenda, Kelly and Rapunzel’s offspring born during their stay in Denver. The family has settled in well, and one wonders if the gorillas know that while the terrain has changed, it is their old, familiar home. Built on the old site of the gorilla exhibit, this new habitat is larger and offers a more complex space, with different levels and some secluded spots. Glenda and Evelyn both visit the windowed viewing area to interact with visitors up close. The “bachelor” habitat houses Hasani (13 yrs) and Jabari (10 yrs), two males from Disney’s Animal Kingdom. Both have also settled in well to their new environment. Hasani and Jabari are very popular with visitors. Hasani is the picture of an up and coming silverback, while Jabari can be a bit of a clown.

It is hoped that Campo Gorilla Reserve is the next step in the LA Zoo’s long history with gorillas. The habitat offers a better visitor experience and serves the gorillas well. The off exhibit areas are flexible and modern, offering countless options for training, enrichment and managing the gorillas. It appears the gorillas approve, and the keepers are happy with a building that works for them.
Back in LA: Gorillas enjoying their new outside exhibit.
Photos courtesy of the author.

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Petit Evengue, now referred to as the “Fernan-Vaz Gorilla Project” (FVGP), is a project that focuses on caring for gorillas rescued from the bush meat crisis. It was initiated in 2000 with the aim of bridging ecotourism and gorilla conservation. The idea was to develop and integrate tourism into Gabon’s national economy, which could also contribute to sustainable conservation and management of both rescued and wild western lowland gorilla individuals and populations, respectively. Thus, a family of four western lowland gorillas was transferred from the Centre International de Recherche Médical de Franceville (CIRMF) to the then-called “Petit Evengue” project (see Gorilla Gazette, April 2004, pages 16-17). The initial objective was to improve the family’s quality of life by releasing it onto an island locally referred to as “Petit Evengue.” Tourists would then be allowed to view these gorillas in a semi-captive and natural setting. Two releases were attempted but failed, which subsequently lead to placing this family into a semi-natural forested electrified enclosure. In February 2006, two adult female gorillas and one of the female’s offspring unfortunately passed away. The cause of their death remains unknown but was likely linked to a lack of continual “in-the-field” management.

Although we feel it necessary to be liable and transparent with respect to this tragedy, we also wish to move forward by keeping Kessala, Kim and Ozangue’s death as a constant daily reminder that FVGP’s current management scheme requires continuity, up-to-date husbandry adapted to in-situ conditions, a multidisciplinary approach, and daily dedication. Once the mismanagement had been acknowledged, it was now necessary to focus on the remaining resident gorillas and those who would undoubtedly become victims of the on-going bush meat crisis. In parallel, it was also crucial to eventually address both education and law enforcement in order to attenuate this established and well-known bush meat phenomenon. Lastly, besides the obvious fact that the project’s management scheme needed to be completely exclusive to tourism management, the project needed to implement strict policies and regulations adapted to the unofficial concept of “responsible tourism.” Although there are no defined guidelines for “responsible tourism,” a basic rule-of-thumb is to prioritize individual gorilla welfare and well-being while educating national and international visitors by providing them with a non-invasive and positive experience with the gorillas. In the FVGP’s context, a non-invasive and positive experience could be simply defined as “educated, regulated and supervised viewing of semi-captive gorillas without any physical contact and with minimal visual contact between humans and gorillas, all-the-while considering the gorillas’ well-being as the project’s top priority.”

The role of “responsible tourism” in conservation has become, in my opinion, indisputably important since it can assist with (1) Educating the global community on its direct role in the growing and on-going bush meat crisis; (2) Contributing to the local and national economy if tourist dollars are truly redistributed into the right hands; and (3) Contributing to sustainable conservation if tourist dollars go toward financing conservation projects, educating local populations, and enforcing law.

The Fernan-Vaz Gorilla Project (FVGP) today. As of November 2006, it was established that the overall goals of the project would be to:

- Provide up-to-date care and improve the quality of life of all FVGP resident gorillas;
- Rescue gorillas who are victims of the bush meat crisis in line with legal confiscation protocols;
- Contribute to the protection and conservation of wild western lowland gorillas;
- Apply responsible tourism sensitive and aimed solely at contributing to the welfare and conservation of gorillas.

Photo of Kessala with her son, Ozangue (on back) and daughter, Kim, taken Jan. '05 by Chisato Abe.

Gorilla Gazette, May 2008, Page 62
As such, the following objectives were established;

1. Apply and develop up-to-date standards of care and protocols, respectively, adapted to rescued gorillas who become victims of the African bush meat trade;
2. Re-introduce orphaned gorillas using scientifically recognised guidelines (i.e. IUCN);
3. Provide formal training to local staff specific to gorilla husbandry and conservation;
4. Establish a scientific database on various parameters from rescued gorillas kept in semi-captivity;
5. Develop and build relevant housing infrastructures with well-defined capacities;
6. Develop and promote responsible tourism through policies, regulations and education;
7. Educate local populations on conservation;
8. Facilitate non-invasive research that aims to contribute to gorilla welfare and/or conservation;
9. Fight the bush meat trade through law enforcement using local and national authorities, and;
10. Develop a network with relevant experts and members of the global community.

In an ideal world, all gorillas orphaned by the bush meat crisis would return to the wild. Unfortunately, some of these gorillas have lost their critical survival skills and have become desensitized to the presence of humans. As such, these gorillas have lost their potential for re-introduction and are destined to a semi-natural captive setting within a sanctuary in their country of origin.

However, even for those orphaned gorillas with a promising re-introduction potential, the road ahead is a long, challenging and uncertain one.

The FVGPs rehabilitation Centre: Quarantine and Forest Education: As of October 2007, all incoming gorilla orphans go directly into isolation within a quarantine facility conceived and built for this precise purpose. The quarantine facility allows for a gradual integration of the orphan to his or her new surroundings including their keeper and, more importantly, allows for a series of health tests to be undertaken, with results that will hopefully ascertain a disease-free status, for the individual being screened for this will qualify this individual to the re-introduction program being currently developed. The minimum quarantine period is 3 months, but may be longer if clinical signs warrant an extended period. Many diseases, known as (anthro-) zoonoses, can bi-directionally be transmitted between humans and gorillas. If no proper quarantine protocols are set in place and religiously followed, an orphan may unknowingly transmit a disease to other gorillas. The transmission of this disease may then compromise any gorilla's re-introduction potential, let alone be detrimental to gorillas and humans in the vicinity.

Once the quarantine period is finalized and an orphan is considered “disease-free”, social integration and rehabilitation within the forest follow. Social integration is never straightforward and depends on each gorilla’s temperament and behaviour. The most basic and essential requirement is a gradual approach tailored to each

Orphanage and quarantine buildings.
gorilla’s circumstances. Socializing young gorillas as early as possible is definitely the key to a higher level of success. But if done too early it may actually be more traumatic to the gorilla and compromise its long-term social success in a group. The immediate outcome of an integration process is unpredictable and can sometimes be very distressing to the “integrees,” as well as for the humans externally involved. Knowing when to interfere (in as much as it should be minimized) is the biggest challenge.

There’s unfortunately no given recipe and so one must learn as one goes, using as gradual a process as is needed, which will depend on the individual gorilla and the group’s individuals and social structure. As a general rule though, gorillas usually adapt well to each other with time by developing close ties or simply tolerating each other’s presence. However, relationships between individuals in a given group tend to be dynamic over time.

Once social integration has been accomplished, the group now starts the long road toward learning to function and adapt to its environment. At the FVGP, the orphans being rehabilitated go into the forest from 8:00 am until 5:30 pm everyday. They sleep in an orphanage at night since they are not yet confident within the forest. Anecdotally, it seems as though the orphans, depending on their previous experiences, appear to indirectly teach each other different skills (i.e. nest building strategies, different plants and plant parts, danger avoidance such as snakes, etc.). Although this can never replace the role of one or more experienced adult gorillas, each orphan’s bank of knowledge may be contributing, and indeed critical, to the group’s long-term ability to function and survive in the wild, though again, this is purely anecdotal. The human keepers also try and add to this knowledge by showing them different food resources and introducing them to different biotypes on the island. Moreover, the keepers are being trained to minimise human contact to a level where simple TLC is allowed under stressful circumstances.

Our long-term goal within the rehabilitation centre is reintroduction. Phase I consists of 1. Quarantine, 2. Social integration, and 3. Supervised forest schooling. Phase II would consist of re-locating the orphans onto an island locally known as “Grand Evengue,” which is located across “Petit Evengue.” On this island, we would simulate what would eventually be done in the final phase, that of reintroduction on mainland. We are currently developing a reintroduction program proposal, but no definite plans have been established as of yet.

The sanctuary consists of a 4,000 sq.m. forested electrified enclosure. Mabeke, a 27-year-old silverback who lived at the CIRMF for 20 years, shares the enclosure with two other males: Owendja, a 6 year-old male juvenile and Izowuet, a 4 year-old male juvenile. In the last year, a number of 8 local staff have been specifically trained in gorilla husbandry. A number of individuals were “trialed,” but only a few have made “the cut” as not everyone is able to work with these sensitive animals. Two of these 8 gorilla keepers remain daily at Mabeke’s enclosure. They provide the sanctuary gorillas with 5 daily feedings and take observations every 15 minutes from 7:45 am until 5:30 pm. Observations are taken on nutrition, basic behaviour, activities, as well as various clinical signs that the keepers have been trained to recognise. It is well known that gorillas are resilient individuals and tend to instinctively hide their clinical signs. We have developed, over the last 15 months, statistical data on each individual’s average daily feeding, resting and activity level as percentages spent performing these throughout the day. We are assessing whether this may help us detect health concerns by assessing more than 5% deviations in these established values as disease indicators. The number of kilocalories ingested by each gorilla is also estimated by the keepers at the end of each day for comparison with standardized and recommended kilocalorie intakes where weight, age and health status
are taken into consideration. The keepers are trained to evaluate the quantity, quality and variety of foods offered to the gorillas as part of a sound nutritional program. They also provide the on-site veterinarian with both a verbal and written report at the end of each day, at which point in time discussions are held with the goal of improving any aspect of the project’s daily operations.

With respect to tourism, a maximum of two 30-minute guided and supervised visits are allowed per day taking into consideration the gorillas’ feeding times and resting periods during which time no tourists are allowed. A mandatory conservation lecture is held prior to each visit at which time visit regulations are also communicated and reminded to the visitors. A maximum number of 8 visitors are allowed per visit, and all children below 15 years of age are required to wear a face mask. Only one visit per visitor per day is allowed, and rarely is there more than one visit per day.

With respect to the orphans being rehabilitated in the forest, only one 30-minute daily visit is allowed very early in the morning. The orphans are viewed from within an enclosure which has the only purpose of preventing human contact. Human contact is not allowed so as to (1) Prevent and minimize disease transmission, (2) Minimize stress, and (3) Minimize sensitization to the presence of humans in light of a future potential reintroduction in the wild.

Curbing the bush meat trade: the on-going challenge: It is well-known that every great ape conservation project is as successful as their efforts to curb the bush meat and live animal trades. Thus, a successful conservation project will eventually be one where no more individuals, under the right circumstances, require human assistance and that the species these sanctuaries are fighting to conserve eventually survive in a sustainable way in the wild. Unfortunately, and I specify unfortunately because it is a reflection of the on-going bush meat crisis, the FVGP has rescued four young gorillas since November 2006. It has done so, however, within the limits of the project’s carrying capacity. It is quite challenging to respect what is lightly termed “carrying-capacity” since the bush meat crisis does not discriminate timing and ideal scenarios. And although there is no specific definition of what a sanctuary’s “carrying-capacity” should be, the FVGP has focused on the following parameters for each incoming gorilla orphan:

1. Project’s financial budget;
2. Available infrastructures (the limiting factor being the quarantine facility since it is the first step of the rehabilitation process);
3. Number of available and adequately trained staff;
4. Social demography of the project’s current gorilla group destined for re-introduction unless lifelong semi-captivity is otherwise a viable option;
5. Implementation of legal confiscation procedures using local and national authorities aiming at curbing the live animal trade.

However, it must be mentioned, in defence of all projects where the carrying capacity has been reached and perhaps even exceeded, that it is challenging to refuse any victim of the bush meat crisis. And this is why it is important, through organizations like the Pan African Sanctuary Alliance, for any project to continually be in touch and develop standardized procedures for maximising the successful placement of any great ape orphan. Most importantly though, it is also important for any project to develop sustainable and long-term strategies that will contribute to preventing other orphans from entering this repetitive cycle of the bush meat crisis through both education and law enforcement. But even then, within the field, it’s not as straight forward as one would think.

SO, can tourism play a role in curbing the bush meat crisis? The answer is not straightforward either. But responsible tourism CAN play an important role in conserving gorillas and other threatened species. It can do so by promoting and developing educational campaigns; by contributing to the local and national economies; and by helping in-situ conservation projects educate the global community and enforce law. The sound and responsible management of any given eco-tourism-driven conservation project is challenging and requires continual re-thinking.
But gorillas of those projects aren’t aware of these challenges or their inherent human politics. This is why it is important for the global community to take action and become liable for its responsibility in perpetuating the bush meat crisis. We can ignore the important role of ecotourism in conservation or we can re-define its role as a community. We can criticise welfare organizations or acknowledge their voice. We can act alone inefficiently or act together and prosper. But in the best interest of the gorillas, we best work together for that is where hope lies. And perhaps we will see the day where local populations can continue to safely prosper; where national and international tourists will understand their role in conservation while experiencing unforgettable moments; and where gorillas can one day rekindle with freedom or finally be left alone to enjoy life as they know it.

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All photos courtesy of author, unless otherwise indicated.

Death in a Bachelor Group

For more information on the gorillas at the Ragunan Zoo in Jakarta, Indonesia, see previous issues of the Gorilla Gazette including June 2003 (page 17) and April 2005 (pages 56-7).

Personal emails from Amos Courage to Jane Dewar
(Reprinted with permission)

24Feb08: “Dear Kidjoum died last week, the facts are these; he was attacked by one of the other males one month ago sustaining seemingly superficial wounds but was separated together with one of the other males (Kiih) whom he got on well with. He initially responded well to a course of antibiotics drinking and eating small amounts and until last Friday when his condition and appetite deteriorated, dying on Monday (18Feb08).”

03Mar08: “There are further tests to do but it looks like he had massive brain hemorrhage which is not something I have come across before.”

Kidjoum in 2005. Photo courtesy of Hannah Barlow.
How Another Species Can Be Perfect Enrichment
Tjerk ter Muelen, Limburg, The Netherlands

Since March 2005 we have kept a small group of gorillas at GaiaPark Kerkrade Zoo. When the building was designed we already knew that we would also keep another species of primates in that building. A number of species crossed our minds: Patas monkeys, cherry-crowned mangabeys and L’hoest guenons. All very nice and interesting species, however Arnhem Zoo offered us 0.5 black mangabey (*Lophocebus albigena atterrimus*). This was, of course, a nice group to start with. We could not find any information about other zoos having mixed species exhibits with this species of mangabey, so we had to see how it would work out. Our gorillas came from Primate Park Apenheul, so they were used to Patas monkeys. We could not imagine the gorillas being a problem but with mangabeys you never know. We have three extra enclosures for the mangabeys and from those, different ways for them to get into the gorilla enclosure. We even have an extra outside enclosure for the mangabeys in case they were afraid or for whatever other reason. (more info about the enclosure in GG 2005).

After the first few weeks, during which the mangabeys could get used to the enclosures (inside and the island), the big day of introduction came. All my colleagues gathered to see this. We opened the sliding doors and they all walked to the island peacefully. The mangabeys and gorillas seemed to have no problem with each other. Of course the gorillas had to get used to the very active and vocal mangabeys, but they did not seem to be bothered a lot. That night both species were separated again, and the same procedure repeated the next morning. We still follow this procedure to have some control over the mangabeys at least once each day. After several weeks both species spent more and more time together and the mangabeys started to groom the gorillas. The mangabeys even joined the gorillas at the public feeding and this resulted in attractive feeding competition. Of course a mangabey is much quicker than a gorilla, however in the first weeks, when a mangabey stole some food and ran away, silverback Makula thought he could get the food back, poor guy!

There are a lot of differences between both species. One noticeable difference is the external swellings when mangabeys are in heat. For our gorillas this appeared to be very interesting. When the mangabeys are in heat they spend literally all the time in the neighborhood of the male gorillas. Makula did not pay any attention to them but M’tonge (our blackback) really was interested. He grabs them by the tail and swings them around and checks the swellings every five minutes. One would imagine that this would probably hurt or at least frighten the mangabey, however; they seem to enjoy it a lot. When M’tonge does hurt them they bite his fingers so they can escape, but always they soon return. For a medium sized primate species such as the mangabey, a big enclosure gives real space to develop monkey behavior, and at the same time we are sure there are also benefits for the gorillas in this mixed species interaction. At the time of introduction we had three gorillas; one silverback, one adult female and one adolescent male. Because the latter spends so much time with the mangabeys he has less time to harass the silverback and his female and he never seems to get bored.

Besides those three, we introduced a young hand-reared female. She spent a lot of time alone, simply because she had to learn how to be a gorilla. But sometimes you can see her relaxing with some mangabeys around, so she has at least some social contact. In August 2006 a baby gorilla was born. As long as the umbilical cord was still attached to the baby we did not let the mangabeys together with the gorillas. After reuniting both species, the mangabeys quickly found a new routine; every morning when we let them all together the first thing they would do is make a good check on the baby and mother. Then they groomed the baby just as they do the mother, Irala. She took a little time to get used to it in the beginning until she realized they would not harm the baby, after which she had no problem with it.
Every step in the development of the baby was closely observed by the mangabeys and now that the baby is growing up she also likes to spend a lot of time with them. When something “different” happens, for example like a bird comes too close, the baby has not only her parents to defend her, but also the mangabeys make sure she is “safe” all the time. And mother Irala has learned that she has a lot of nannies, so this makes her life as a gorilla mother a lot easier. To illustrate this, just have a look at the pictures: They tell much more than I can write in 100 pages!
The past ten years of keeping gorillas at the Royal Zoo of Amsterdam (Artis) has had its ups and downs. We lost some gorillas to illnesses, received two males who did not breed and received a new young female. In 2001 it was time to change some things at the gorilla enclosure. The gorillas didn’t breed and boredom was our biggest problem; so we created a mixed exhibit with Sykes monkeys (cercopithecus albogularis albogularis). (Ed. See Gorilla Gazette June 2003, page 24). The combination worked well because the Sykes monkeys and the gorillas both seem to enjoy it and they played together a lot. Because of the arrival of the new male (first Ivo, in 2002, and later changed for Akili, in 2005) the Sykes monkeys are somewhat cautious. Akili lets them go and most times he ignores them. When Akili is sleeping or he is outside, the Sykes monkeys are seen playing with the female gorillas again. Another change at the gorilla enclosure was putting deep litter in the inside enclosure. The advantage for the gorillas was not walking on the concrete any more (better for the joints), and more humidity so their hair/coats improved a great deal. Less water is needed when cleaning, which saves the keepers time and is also better for the environment. One of the biggest disadvantages is the increase in mice. We found a natural solution: in the small mammal house there were two surplus meerkats, so we introduced them to the indoor gorilla enclosure. We made some adjustments so the meerkats had a safe haven and made sure that they could not escape through the kitchen. The first day they immediately ran through the whole exhibit and the gorillas were very surprised. Akili, the male, didn’t move from the top of the climbing frame, which is his safe spot! On the floor the females wanted to touch the meerkats, who reacted by loudly barking and trying to bite the gorillas! After a few hours the whole group was settled. The next day the meerkats were making tunnels in the deep litter. They do their job; they eat the mice or chase them away. Binti loves nagging them and Akili loves to fish for them (poking with a willow stick in the holes).

The first young gorilla was born March 2007 after a period of ten years. Binti gave birth to a son named Bwana, who is her first offspring and she has no problems at all raising him. During the evening of 12 July, 2007, Dafina gave birth to a dead male infant. One hour later Shindy gave birth to a healthy son named Shomari. In the past Shindy had three youngsters but she never fed them properly and they all died. Because of this history we had prepared different scenarios and plans. The unexpected happened when Shindy raised her son all by herself. The next morning she was laying on her back and let Shomari drink. Shindy is a very good mother who is taking good care of Shomari. The two little ones are growing very well and now they have begun walking through the inside enclosure. They also have begun to play with the meerkats and each other. Bwana goes to the meerkats with a willow branch just like his mum and tries to touch them. We can see Shomari regularly sniffing at the meerkats and sometimes they are sitting nose to nose! Shomari is somewhat careful towards them but also tries to touch them. They enjoy their company and play with the meerkats. Akili is less interested in the meerkats than his little sons, he is a little afraid of them, especially when he wants to come to the inside enclosure and they are standing in front of him! Dafina is also pregnant again and we hope that this time everything is going all right.

Brothers Shomari (top) and Bwana enjoy their unique neighbors.
Pictures courtesy of Arjan Haverkamp.

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Gorilla Gazette, May 2008, Page 69
More Mixed Species in Captivity & in the wild.

Center photo: Gulf Breeze Zoo, FL courtesy Jane LaFave. Clockwise from top center: Mbeli Bai, Congo and Rwanda courtesy of Liz Williamson; Disney’s Animal Kingdom and Bronx Zoo courtesy of Lisa Dempsey; Apenheul courtesy Lilian Bartens; Gorilla Haven courtesy of Jane Dewar; Gulf Breeze, FL courtesy Tom Parkes; Apenheul courtesy Leo Hulsker; Amsterdam courtesy Gerard van der Kroon; Howletts' hand-reared baby, Kimba and babysitter, Rex courtesy of Richard Johnstone-Scott.

(Photo montage compiled by Jane Dewar)
Deadline for the next issue of the GORILLA GAZETTE is December 15, 2008!

For articles for the next Gorilla Gazette, please send documents (preferably in Word format) by email or hard copy, including photos with captions to the following addresses. If emailing photos, make sure they are in JPEG formats; otherwise original photos can be scanned and returned to author if mailed. Documents may be faxed to (USA) 706-374-4491.

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Record Breaker At the Dallas Zoo:
JENNY World’s Oldest Gorilla in Captivity!
55 years old. 1953-2008

Left: Jenny in early 2008, courtesy of Cathy Reeder.
Right: Jenny enjoying a snack courtesy of Cathy Burkey.

Thanks to Chisato Abe for artwork featured on pages 1, 4, 23, 34, 40 and 57.

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