REDUCTION OF ENVIRONMENTALLY CAUSED INJURY AND MORTALITIES TO INFANT GORILLAS

It is an undeniable truth that severe injury or death of an infant gorilla is, to say the least, traumatic for both the caregiver and the troop alike. It is also true to say that although the potential for environmentally caused injury and death will always exist in the captive situation, there are a number of preventative measures that should be considered in any gorilla husbandry program. With this in mind, a set of guidelines and techniques were devised by gorilla caregivers in anticipation of the birth of two gorilla infants. At the time of this writing, Mbungi and Ntando are into their second year of life with no apparent injuries, so hopefully his program has had a positive effect on their well-being.

The guidelines are intended to offer technical solutions as well as systematically approaching the husbandry program with infants in mind. These guidelines are:

1) **Roping**

A) Braided nylon (1½” diameter) rope is soaked and painted with non-toxic latex paint (3 coats) to increase rigidity, while still allowing some degree of flexibility. The combination of the wide diameter rope and coated fibres reduced the chance of the rope turning on itself.

B) Roping attached at both ends is made taunt enough so that it cannot twist into a turn or a half knot. This will still allow for a swinging functioning rope.

C) The use of hemp or polyethylene rope has been abandoned due to its potential for fraying as well as the fact that strangulation or constriction of an infant can occur as strands unweave. Potential ingestion of strands is a concern as well.

D) Thick cloth fire hose (the type used by fire departments) is an excellent material due to its low injury potential and multi-use capabilities. The cloth can also be safely dyed to “environmental” colours.

E) The use of chain should be minimized to avoid fingers etc. getting jammed in individual links.

F) Knots at the free end of roping should not be so large that serious injury may occur when rope is swung as a result of display, play, etc.

2) **Nets**

All nets are at least ¾” rope diameter with an opening of 8” x 8” for each square in the net. Nets are made of nylon and painted with latex to increase rigidity. In general, nets are attached in the enclosure in a way to ensure they cannot turn on themselves.

3) **Bedding**

Shockingly, some gorilla programs do not provide extensive bedding materials, but it is essential that these be provided in an enclosure housing infants. The infants’ experience of learning to climb will also have occasional falls and spills so the use of straw and wood wool is mandatory in all indoor enclosures and especially in areas where there is a higher chance of injury (i.e. along cliffs, trees, high ropes, high traffic or dominance display potential). Bedding in high risk areas may also be supplemented with nets or mats to break the fall of infants.

4) **Pools** are kept at a very low 1” level and a gradual gradient is provided.

5) **Free hanging objects** such as pod feeders, or objects serving a play or expressive function are either of low weight or placed very high above or away from the infants’ normal activity area.

6) **Browse** should be examined and cut so that extremely sharp ends and spines, in particular, are kept to a minimum. Branches should not be so large that another larger gorilla could cause injury to the infants.

7) **Caregiver Awareness**

The advent of an infant involves a number of changes for the gorilla caregiver, but one of the most important is developing an awareness of safety towards the infant. Pay particular attention to slides (hydraulic or mechanical) as curious fingers are easily caught in the mesh, crushed at the base of slide, or caught doing slide tracking. These factors are important whether the infant is with the mother or not, so do not assume the baby will always be with the mother during gorilla movement from one area to another.

Of course, the possibility always exists for problems to occur and caregivers must be aware of what they will do (if possible) in this scenario. Separation of other individuals can be difficult as the troop members may easily panic if the infant is in distress. In addition, ensure wire clippers, bolt cutters, knives and other relevant tools are easily available to more easily free an infant from ropes, cords, etc.

Every Zoological institution will be different in terms of the gorillas’ social structure, habitant design and the husbandry employed, but the reduction of negative environmental factors affecting the well-being of the infant gorilla should be of paramount concern.

For more information contact:

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THE SIREN VOICES

The following three articles and the last article of this issue are from HELP, the Friends of Howletts and Port Lympne newsletter (issue #15) and were reprinted with the authors' permission: John Aspinall, Peter halliday, Mark Atwater and Suehisa Kuroda.

It is useful for those who bear the responsibility of husbanding breeding colonies of rare species to at least listen to the advice or recommendations of the various bodies that have been set up to help coordinate breeding programs among zoos and wild animal parks. We must, however, be very careful here to sift the advice for what it is worth. First of all, studbook statistics and computer input can provide one with useful information as to the whereabouts of individuals within each species and their genetic printouts. What we must be careful of is “broad advice” from bureaucratic functionaries as to the destiny of whole species. We have received from the Zoological Society of London a letter signed by Sarah Christie (Assistant E.E.P. Coordinator from Sumatran Tigers) and Sean McKeown (Chairman of Felid T.A.G.) which advises those who hold tigers to “cease breeding from Siberian tigers using reversible contraceptive implants,” and for hybrid or generic tigers advocates vasectomy of all males, “which is quick, permanent and free from side effects.”

In a world where there are a million humans for very tiger, pure-bred, hybrid or generic, these suggestions are, at the least, disturbing. Have the writers ever heard of hybrid vigour? Have not the races of tigers interbred, from time immemorial, with those on the periphery of the range? Such crossing of genes was no doubt beneficial. At Howletts and Port Lympne we have 19 tiger enclosures which house ten pure-bred Siberians and 26 of Indian stock. In terms of genetic mix, the latter have approximately 90% Indian and 10% Malayan or Sumatran blood. One of the founders, Mazar, came from Vienna 35 years ago, and from his conformation we guessed that he was not of the true Indian race. We have bred about 300 Indian tigers and now, after five or six generations, our tigresses seldom throw a cub with any Malayan or Sumatran characteristics. If the opportunity arose, we would be more than willing to return them to the wild state in India, Burma or Pakistan.

On a more specific note, recommendations have come to us from Dr. Rosi Kirchshofer, Gorilla E.E.P. Coordinator, as to the disposal of seven of our young gorillas, all of which were born at Howletts. A meeting of the E.E.P. was held at Frankfurt Zoo and, in spite of agreeing to become an associate member, we were not invited to attend, let alone provide any information as to the seven gorillas under discussion. The upshot of the meeting was that we were recommended to send Bamilla, a seven-year-old female, to Twycross Zoo and two smaller females, Matibi (five) and Tamki (four) to Dublin Zoo. The four young males that have integrated with the aforementioned females were to go to a bachelor group in the Loro Parque Zoo in the Canary Islands.

The E.E.P. Committee was apparently unaware that at Port Lympne the first-ever specially designed gorilla bachelor house has been in working order for two years. The committee was also unaware, as we had not been contacted, that plans are under way at Howletts to build a new gorillarium to house two families of up to 16 animals each. To the seven gorillas in question, four males and three females, we are adding three more females, Mumba (six), Kishi (five) and Mambi (two-and-a-half), all Howletts-born, making the sex ratio 4:6. When the new gorilla enclosures are completed Djala, now aged twelve, a totally unrelated male, will join the band as its resident breeding silverback. As a point of interest, we will transfer Kouilou’s group to the other new enclosure. At the time of writing, though not yet nine years old, this magnificent young male has three of six females with him pregnant. He is also unrelated to any in his group. Both Djala and Kouilou are Congo orphans and justify the struggles we made on their behalf to import them in the first place, after permission had been refused by the Ministry on advice given to them by the “Ape Advisory Panel” and the Nature Conservancy Board. The A.A.P. voted to split up the orphans and send them to separate American zoos - just as the E.E.P. committee now wishes to atomize our small integrated group and disperse them around Europe.

One lesson we have learned from past experience is that the placement and exchange of our gorillas with other establishments, when determined by ourselves, has worked out well for the species and the individuals themselves. We sent the Howletts-born males, Kibabo and Kibobo, to Apenheul in the Netherlands and La Palmyre in France respectively. Both bred successfully with all the available females and between them produced six births in a few years. In exchange for them Howletts acquired two unrelated females. We swapped females with Jersey Zoo, Kishka for Bamenda - both bred. Where the decisions were not of our making the consequences have mostly been baleful - Kisoro, in his prime, to Denver Zoo, dead within a few years; Lomie to Chessington, dead within two years; Killia Killa to Edinburgh, dead in a few years. Kouidou to Lincoln Park was a relative success, as he sired six offspring; Kambula, sent to Calgary, Alberta, never bred and was shifted to Fort Worth. Truly a dismal record.

Even recommendations and advice, which are not enforceable, should be given with great care and consideration. If we succumbed to the siren voices of the E.E.P. or A.A.P. we would soon be enmeshed in a network of incompetence, and the astounding reproductive success, in terms of rare and threatened species, that Howletts and Port Lympne Wild Animal Parks have so long enjoyed would come to an end. (I must thank Peter Halliday for his help with this article.)

John Aspinall
Howletts Wild Animal Park
Bekesbourne
Canterbury
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CT45E2
England

ANNOUNCEMENT

1990 GORILLA WORKSHOP PROCEEDINGS AVAILABLE

A collection of abstracts and entire papers presented at the 1990 Gorilla Workshop on topics ranging from wild lowland diets to captive management is now available for $15.00 (postage included). Authors who presented papers at the conference will be given a gratis copy. If interested please contact:

Ape House Staff/The Columbus Zoo, Attn. Beth Armstrong
9990 Riverside Drive, Powell, Ohio 43065-0400

Please make checks payable to: The Columbus Zoo/Gorilla Workshop
GORILLA REPORT

During the last year the majority of our successful births took place in Kijo's group. Foua gave birth on 10th October 1992 to a female named Fou-Fou. This particular birth had some special significance for us as it was the 50th at Howletts and Port Lympne. Numbers 51 and 52 quickly followed. Mushie gave birth on 24th November to a male named Kush and her daughter Juma produced Djimu (male) on the 30th December. All three infants are being mother-reared.

In the adjacent runs the nursery group continues to thrive, although they have perhaps now outgrown the tag of 'nursery' - the youngest being now three-and-a-half and the eldest six years old.

Shamba, in Bitam's group, gave birth to a female infant during the early hours of 29th October 1992. This infant expired in the mid-afternoon the same day. Shamba had suffered a hemorrhage during the birth and the infant was under-developed (weight 1.5 kg) with only partially inflated lungs. These signs indicated a problem with the placenta during pregnancy, resulting in a weak infant. Moula's infant, Oumbi, fell victim to the bullying attentions of adolescent male Tam-Tam during the winter of 1992-93. On 9th April this behavior rendered Oumbi unconscious and temporarily paralysed; but a thorough examination and X-ray showed no permanent damage, and happily he was back to normal in a few hours and returned to his mother. However, as Tam-Tam was destined to leave his natal group on breeding loan, his removal was brought forward to protect Oumbi; he going to St. Martin La Plaine, near Lyon in France, to join four females.

The most exciting developments of the year were the pregnancies of Sangha and Tambabi in Kjala's group. Kjala, however, is not the father of either having ceased to copulate with his females, he allowed Kouilou to do so instead. We expect females Kjouli, Souda and Tamarilla to conceive also in the near future.

Finally I come to the group at Port Lympne. After the birth of Kabinda's second deformed offspring on 28th August 1992, she was given an oral contraceptive. As Djoum is obviously infertile, Jomie was given the opportunity to mate with Dihi on several occasions, by separating the pair from the group when Dihi was in oestrus. But Dihi remained loyal to Djoum and refused Jomie's advances - finally not showing any sign of oestrus at all. Also, during the winter and spring Djoum inflicted several bites on his now silverback son. In view of the non-breeding of the group and the deteriorating relationship between Djoum and Jomie, various transfers have been or will be made: Kabinda has been placed temporarily with Tam-Tam to keep him company, Dihi is being integrated into Kijo's group, Djala is being placed at Lympne until further accommodation is constructed enabling us to give him a new group, and Tamba is to be placed with Kouilou and his females. The Port Lympne pavilion will then become what it was designed for, a bachelor house.

Peter Halliday
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ANNOUNCEMENT
THE GORILLA WORKSHOP I CONSERVATION FUND

The Columbus Zoo is pleased to announce the formation of a conservation fund which will support field research and conservation of wild gorillas.

Funds raised from the first Gorilla Workshop 1990 will be used to support in-situ conservation projects dealing with Lowland and Mountain gorillas with a special emphasis on Lowlands.

The fund will allocate $1,300 per year for a period of five years beginning in 1995. The deadline for 1995 proposals is August 15th 1994. The review committee will consist of the Columbus Zoo Ape House staff and our Assistant Director of Conservation and Education. Allow a two month period before hearing back from the committee concerning acceptance or rejection.

A special emphasis will be placed on supporting keeper initiated projects although this will not exclude all-ready existing projects run by field primatologists, rather we would like to promote a cooperative effort between keepers and field researchers.

The following criteria will be used to evaluate proposals:
1) How does the project directly benefit gorillas in the wild?
2) How does the project directly benefit indigenous people surrounding the study site?
3) How does the project emphasize the role of zoos as supporters of in-situ conservation?

A follow-up report would be required detailing accomplishments within a six month period following completion of the project. In addition, a summation of the project to be published in Gorilla Gazette within a six month period of completion of the project.

Please send proposals to:
Ape House Staff, Attn: Beth Armstrong
The Columbus Zoo
9990 Riverside Drive
Powell, Ohio 43065-0440
On 7th April 1993 an accord for the establishment of Leso-Louna Sanctuary and the proposed gorilla reintroduction programme was signed between the Congolese government and the Howletts and Port Lympne Foundation. This agreement marks the start of the Congo project's most ambitious and exciting phase, the outcome of which could revolutionize the world's approach to conservation, as well as making significant progress towards changing the way in which the Congolese regard wildlife in general and gorillas in particular.

The sanctuary lies 140 km north of Brazzaville and covers an area of approximately 500 km². Within the sanctuary two rivers, the Leso and the Louma, will act as natural barriers to the gorillas' range, together with sheer sandstone cliffs that overlook the forests below. The forest themselves encompass many types, from swamp forest bordering the rivers to dry forest on the lower slopes of the canyons, and are home to a rich variety of plant species. It is an area of outstanding natural beauty with breathtaking views, spoiled only by the absence of abundant wildlife, a consequence of overhunting and a complete lack of protection - this despite the fact that the area is within the Lefini Wildlife Reserve. As with many reserves in the Congo, the funds for even the barest forms of protection were simply unavailable, a situation that, thankfully, now appears to be improving with the recent involvement of the New York Zoological Society with the Nouabale-Ndoki Reserve in the northern Congo, and the European Community's funding of Odzala National Park in the middle Congo. Despite the fact that the gorilla project is on a much smaller scale, we anticipate that our presence will have a considerable impact on the resident fauna of the Lefini Reserve, which comprises small populations of elephant, red river hog, sitatunga, duiker (blue, common and yellow-backed), hippopotamus, and several species of guenon.

The chief problems for the sanctuary, and consequently the gorillas, are direct over-hunting and the systematic burning of grassland. The latter practice has several short-term goals, which include encouraging a new growth of grass which draws game out into the savannah, whereupon it can be more easily hunted, and the herding of small mammal species - principally the Gambian rat - into traps set in front of the fires. The damage caused by this practice is that it continually eats away at the forest edges or, at best, halts forest expansion, and secondly that fires restrict the surviving savannah vegetation to species hardly enough to withstand repeated fire damage. The measures that will be taken to tackle these threats will be the employment of park rangers to supervise the sanctuary area and, if necessary, fire-breaks bordering the forests. The replanting of indigenous tree species may well also offer a solution.

Construction will be kept to a minimum and will be designed as much as possible to blend in with the surroundings. Before any of this can be done a 4-km track will require a complete overhaul, improving the only point of vehicle access into the area. We estimate a four-month period for the building work, after which the first group of gorillas will arrive.

For the initial period at the Leso-Louna sanctuary, the gorillas will run in very much the same way as they do at the Brazzaville Orphanage, although with considerably more scope for exploration and a far greater variety of available food. Overnight quarters will be offered and the gorillas will be accompanied throughout the day by the keepers who have worked with the groups over the years at the Brazzaville orphanage. We shall continue to provision the gorillas when necessary, but a close watch will be kept on the amount foraged in the forests, as we do not want this important aspect of their introduction discouraged. Once the gorillas decide that they would prefer to remain in the forest overnight, specially designated areas will be selected and watched over by a keeper.

As we see how they progress, as a group and as individuals, we can encourage and offer an expanded life of independence. The important opportunities we have is that the gorillas are given the chance to manage their own evolution at a pace they are comfortable with. For some individuals, I am sure this opportunity for freedom could not have come too early, but others will have to be gently encouraged all the way - indeed, one or two may never make the transition. The advantage of the Leso-Louna sanctuary is that it can easily accommodate everyone.

One of the heartening aspects of working in the Congo is the surprise that is openly shown when someone encounters a gorilla for the first time - an animal who before had been the dark beast incarnate, but is now undeniably a sensitive, dignified relative. We have no doubt that the Leso-Louna phase of the project will enlarge upon this reappraisal of the gorilla and, in consequence, other forms of wildlife. Although this approach is by definition small scale, it is nevertheless profoundly felt and, provided one also offers relevant information, can have lasting beneficial effects. We have the opportunity to contact many people in the Congo and have undoubtedly changed their attitude substantially.

Of course not everyone is within reach of the orphanage, and not everybody will be receptive to a conservation message. It is here that the role of the wildlife authorities in implementing the confiscation procedure is vitally important. Prior to the creation of the orphanage, if the authorities confiscated a gorilla they were faced with the problem of what to do with it. Brazzaville Zoo had never kept a gorilla alive for more than a few days, and with good reason private individuals were not allowed to keep gorillas. The result of this was that very little effort was made to confiscate and no inquiries were made as to who might be trading in illegally held animals.

With the arrival of the orphanage project came the possibility of placing confiscated gorillas, and an outside organization which could encourage and help in investigations. This has given the Congo a chance to implement its laws relating to trade in endangered animals with far more conviction than was previously possible. One would be naive to think that all is now well and all the solutions have been found, but a good start has been made in a country where, for all its richness of wildlife, there was until four years ago virtually no protection.

For captive gorillas the world over a key has been found that may well unlock a door to future generations - a future that includes the possibility of an exciting, worthwhile existence and a return to Africa.

Mark Attwater
Brazzaville Gorilla Orphanage
United De Protection De Gorillas
BP 13977, Brazzaville,
Republique Populaire du Congo
REQUEST FOR INFORMATION ON GORILLA MATING POSITION.

Last semester one of my students went to see Bibi and Ernie, the two gorillas at the Denver Zoo. After her visit, the student asked me about the relationship between Bibi and Ernie. I told her they were great friends and that, in fact, they had discovered sex and were enjoying it quite a bit. She said, "I know! They did it while I was there!" She told me this had made her uncomfortable (a common reaction of the public) and she had wondered if she should leave. But she stayed to watch (another common reaction).

I asked her if Bibi had been laying on her back. She said, "Yes, and her little feet were sticking straight up in the air!" I remembered how that aspect has also struck me when I watched a video of Maguba engaged in face-to-face mating with Kisoro several years ago at the Denver Zoo.

I have also seen Bibi and Ernie mating ventro-ventrally. According to one of the Denver gorilla caretakers, this is Bibi's favored mating position. It doesn't seem to be Ernie's first choice, but Bibi usually succeeds in maneuvering him into this position. At the Cheyenne Mountain Zoo in Colorado Springs, Juju and Barney have also been observed mating face-to-face, although not frequently.

This seems important, especially in view of all the emphasis that is placed upon the ventro-ventral mating of bonobos. So I'm wondering just how common this mating position is among captive western lowland gorillas. I have put together a brief survey, and I would very much appreciate hearing from you keepers and researchers. I would appreciate your taking the time to complete relevant portions of the survey, whether or not the gorillas at your institution engage in ventro-ventral mating.

Thank you very much for your assistance. I look forward to hearing from you.

Please return survey to:
Sue Woods, Ph.D.
Department of Anthropology
Campus Box 233
University of Colorado
Boulder, CO 80309

Your name ____________________________
Your position: ___keeper, ___researcher, ___other
Name of institution _______________________
Address ________________________________
1. How many sexually active gorillas are currently housed at your institution?
   ___Females ___Males
2. How many of these gorillas have mated ventro-ventrally (face-to-face)?
   ___Females ___Males
3. Are you aware of any other gorillas in the past at your institution who have mated ventro-ventrally? ___Yes ___No Circle one.
   If none of the gorillas at your institution has ever mated in the ventro-ventral position, you may stop here. If you are continuing with the survey, could you please complete a separate copy of the survey for each gorilla who has mated ventro-ventrally.
4. Is this gorilla who mates ventro-ventrally male or female? Circle one.
5. Age _______________________
6. Name _______________________
7. Was s/he previously housed at another institution? ___Yes ___No Circle one.
8. If you answered "Yes" to #7, what was the previous institution? ___9. What percentage of this gorilla's mating are ventro-ventral? 100% 75-99% 50-74% 25-49% less than 25% ___10. Does this gorilla currently have the opportunity to mate with more than one gorilla? ___Yes ___No Circle one.
11. At your institution, has this gorilla had breeding partners in the past other than the gorillas(s) with whom s/he is currently housed? ___Yes ___No Circle one.
12. If the answer to #10 and/or #11 is "Yes," does this gorilla consistently mate in the ventro-ventral position with some breeding partners and the ventro-dorsal position with others? ___Yes ___No Circle one.
13. Which of the following would you say is true? □This gorilla seems to prefer mating ventro-ventrally. □This gorilla prefers ventro-dorsally, but will mate face-to-face if his/her partner wishes. □It is unclear which mating position this gorilla prefers.
Include comments on back of paper please.

Gorilla Protection Continues Despite Rwandan War

The endangered mountain gorillas residing in Rwanda's Parc National des Volcans are reported safe in spite of the outbreak of fierce fighting in Rwanda resulting from April 5th's alleged assassination of Presidents Juvenal Habyarimana of Rwanda and Cyrience Niyarimana of Burundi.

The two African leaders were killed on April 6, when their plane crashed just prior to landing at the airport in Rwanda's capital city of Kigali. Rwanda's ambassador to the U.N., Jean Damascene Bizimana, claimed the plane was hit by gunfire or a rocket and the French Embassy in Kigali reported there were no survivors.

Kigali is under siege. From Dian Fossey Gorilla Fund headquarters in Denver, Colorado, Greg Movessian, Development Director, said: "The U.S. Embassy in Kigali advises us that the capital is ablaze with gunfire and street fighting is raging. Mass executions of government officials and religious leaders are reported and the U.S. State Department today ordered the evacuation of all American citizens. At Karisoke research Center in Rwanda's Virunga Mountains, where the Dian Fossey Gorilla Fund oversees gorilla protection, there are no indications of any disruptions in the gorilla preserve. Reached by radio from Morris Animal Foundation's Volcano Veterinary Center located in the village of Ruhengeri, Karisoke's director, Pascale Sicotte reported "The gorillas are okay, the Fossey Fund will continue to operate at Karisoke." While Dr. Sicotte and her staff of four expatriots evacuate to the neighboring country of Burundi, the camp staff of 30 Rwandans will stay to patrol the rainforest and keep watch over the gorillas.

Rwanda has been the site of political unrest since October 1990, when rebels invaded from Uganda. At times, the fighting crossed into gorilla territory in the Parc National des Volcans. In February 1993, the Karisoke Research Center was evacuated by expatriots and Rwandan staff and, for the first time since Dian Fossey established the camp in 1967, the gorillas were unprotected. Two gorilla deaths were directly attributed to the fighting. In the Summer, a cease fire was declared and the staff returned to Karisoke to resume gorilla protection activities. A peace accord was signed in the Fall and the Presidents of Rwanda and Burundi were returning from peace talks in Tanzania when their plane crashed.

Founded by famed anthropologist, Dr. Dian Fossey, the Karisoke Research Center and the Dian Fossey Gorilla Fund are committed to the protection and preservation of the endangered mountain gorillas. The fate of an entire species hangs on our commitment to keep watch even in the midst of these tragic events," Movessian said.

For more information, contact:
Dian Fossey Gorilla Fund
45 Inverness Drive East, Suite B
Englewood, Colorado 80112-5480
(303) 790-2349 or 1-800-851-0103
HOW FOUR STRANGERS BECAME A FAMILY AND MOTHERS SWAPPED BABIES

Describing your family to a group of strangers is difficult. It won't be long into the conversation before most people realize that what is normal for them can seem quite foreign to others. Doesn't everyone have an aunt with 37 cats or a cousin who is passionate about Hungarian military history? In fact, we may be surprised that strangers find these things remarkable. After all, this is the stuff that makes up our everyday lives.

While I don’t think I’m quite ready to reveal all of the details about my immediate family, I wouldn’t mind shedding some light on the lives of another family I spend a great deal of time with. Since 1984, I’ve had the opportunity to work with the gorillas at the National Zoological Park in Washington, D.C. While I’m only a relative in the evolutionary sense, I hope that the gorillas think of me as a close family friend.

I have recently been reminded that many of the things that I take for granted about our gorilla family are quite exceptional. Doesn’t everyone work with a gorilla group that started out as four complete strangers and ended up including two infants who are each being raised by the only other female in the group who isn’t their biological mother?

Maybe I should back up and start from the beginning:

Approximately ten years ago, the National Zoo had six adult gorillas, three males and three females. They were split into three separate pairs, a fairly common situation among zoos at the time. None of them were reproducing. Unfortunately, that was also a fairly common situation among zoos at the time. Overall, the captive gorilla population was not in good shape. The total number of gorillas was not increasing, and the few births that were taking place were repeatedly from the same successful individuals. While this was wonderful for individual gorilla families, it was not in the best interest of the captive population. Many gorillas were leaving few or no descendants, and a few individuals were becoming very well, or overly represented through their offspring. No one wanted to discourage the successful groups, we just needed to increase the number of gorillas who were reproducing. Obviously, this is easier said than done.

Many of the people working with gorillas had witnessed the dramatic increase in sexual activity that resulted when males or females were introduced to a new partner, especially one that was a complete stranger.

Working with this knowledge, many zoos realized that gorilla moves were in order. To organize the cooperative efforts between the facilities housing gorillas, the experts behind the gorilla Species Survival Plan (SSP) began to suggest the moves that would be most productive or, hopefully, reproductive.

At the National Zoo, we needed to honestly evaluate our own success, or lack of it. We had not had a gorilla birth in over ten years. Our two sexually active males appeared to be sterile, and our most fertile male would not copulate. Two of our females would copulate with their partners and one would not. We decided that our first option would be to rearrange the social situation within our own facility. First, all three females were introduced to each other, and second, this trio was housed successively with each of our three males. Over a period of months, we realized that this would not be successful. Sexual activity lessened for some combinations and stayed the same for others. None of the new combinations produced much of an increase. The conclusion was made that some moves would have to take place.

This was not an easy position for us to be in. We understood that the immediate effects would come in at least two ways: One, we would have fewer gorillas living in our Ape House. And two, those of us who worked with the gorillas were going to have to say goodbye to individuals we care deeply about.

As the moves progressed, our three females (M’wasi, Femelle and Sylvia) as well as one of our males (Hercules) was transferred to four different facilities. We kept Tomoka, and our oldest male, Nikunba, who was eventually paired with a new female.

In 1983, we were ecstatic to learn that the SSP had selected us to receive two new gorillas, Kuja and Mandara. At the time, Kuja was two years old and Mandara three.

Tomoka had always shown himself to be an exceedingly gentle and patient adult male, both with humans and other gorillas. For those reasons we decided that he should be the first adult contact for Kuja and Mandara.

Kuja (owned by the Brookfield Zoo in Chicago) and Mandara (owned by the Milwaukee County Zoo) had been raised together as peers by a group of dedicated volunteers at the Milwaukee Zoo. Tomoka was the first gorilla that the two juveniles had ever lived with, except for each other.

Initially, we introduced Tomoka and Mandara. Predictably, Tomoka began impressive but totally harmless displays directed towards Mandara. As he strutted, poundéd and produced loud pops from his chest-beating, Mandara responded in a completely inappropriate fashion. Lacking any real training in gorilla etiquette, she responded as though this were play behavior on his part. The more he displayed, the more she chased him around the enclosure. Had three-year-old Mandara exhibited some sign of deference, the displays would have most likely subsided. As her playful chases continued, Tomoka changed his tactics. In an instant, he picked Mandara up, placed her face down on the floor, opened his mouth to reveal all of his teeth, placed them directly on Mandara’s back. The mood changed instantly. He stood up and walked away. After a moment, Mandara rose and silently ran to the opposite corner of the enclosure.

True to his personality, the only thing
Tomoka had wounded was her ego.

This one incident marked a turning point in the history of gorillas at the National Zoo. Mandara was suddenly introduced into the world of gorilla social politics. From that point on, she began the process of becoming a fully functional female in a gorilla group. We now had the potential to build a family.

Next came Kuja. With his easygoing outlook and playful demeanor, he quickly became the third member of the trio.

In the succeeding months, the SSP recommended a variety of moves that enlarged our family. Through the cooperation of a variety of zoos around the country, our group grew to include two more members. In 1987, a floppy-eared adolescent named Gus came to us from the Stone Zoo in Boston. In 1989, Holoko, a twenty-two-year-old female, moved from the Bronx to D.C. and eventually became the fifth in the band.

As the group matured, we began to see how each individual's history began to influence their social abilities. Mandara and Kuja each began to blossom. The juveniles we initially knew started to act more and more like adolescents. Mandara was acutely aware of her place in the social hierarchy, and it looked as if Kuja would never grow into his impossibly large hands and feet. How could one adolescent male gorilla eat so much and still be so skinny? Holoko was shy and preferred not to be noticed too much. Tomoka's limited social history began to have an effect. Maintaining order in the group was difficult for him, and he began to show the strain of being an unconfident silverback. We were not the only ones to notice.

Gus was perhaps the most socially skilled of all the members of the group. He had grown up around three other gorillas and clearly knew how to form strong alliances. One by one, he succeeded in allying himself with all of the group members except Tomoka.

As Gus matured, it was clear that he and Tomoka had established an uneasy truce. Gus was socially confident, and his increasing influence reflected this. He was quick to break up spats and restore order. Tomoka preferred to avoid these situations and could usually be seen heading in the opposite direction whenever tempers flared between any group members.

However, the most telling sign of Gus's position and political savvy was the fact that Mandara and Holoko would only copulate with him, never with Tomoka. In fact, Gus and Mandara would not hesitate to breed right in front of Tomoka.

In 1990, five years after Mandara arrived in Washington, a milestone was recorded for our gorilla group. She was pregnant.

She was the first pregnant gorilla at our zoo in 20 years. After our initial elation, questions began to surface. Would she be a good mother? After all, she was only seven and had been reared by humans. What arrangements should we make? None of us had ever dealt with a pregnant gorilla before. After much good advice from other gorilla keepers, we reached a decision. We weren't going to do anything new. We wanted Mandara to feel as though nothing abnormal was happening. The less disruption the better. The other important factor to remember was the Mandara, Gus, Kuja and Tomoka had never been around babies either. We couldn't predict how they would react, but we had faith in them and hoped for the best.

On May 10, 1991, the dignity of the group filled our Ape House. Mandara had given birth overnight to a healthy male gorilla. The group was calm but protective of the newest member. For her part, Mandara could not have been better. She showed every sign of pure maternal nurturing. She constantly adjusted the baby's position, nursed him regularly, and gently patted him to give reassurance when needed. At the end of each day, Mandara would find her favorite resting spot, cover his head with her hands, and sleep.

Kejana, as we named him, grew steadily. At three months old he was strong and healthy. We really thought that things couldn't get any better. We were wrong. Holoko was pregnant.

I'm not sure which grew faster, Kejana or Holoko's belly. As we reveled in the success of the group, we began to realize that a change was taking place. The truce between Gus and Tomoka was falling apart. On a more and more regular basis, aggression erupted between the two large males. Tomoka was still bigger and heavier, but Gus clearly had the upper hand. It was not long before we all started to accept the obvious.

Holoko was removed from the group which he had helped to create.

Gus began to function as the lone alpha male with ease. Time and again we were reminded that Gus was a skilled politician. As things began to settle down within the group again, our thoughts returned to the impending birth. Holoko was a well socialized female. She had lived in family groups before and had already had three pregnancies before coming to Washington. One resulted in a stillbirth, and the other two babies had been reared by humans. At the time of those births, she had apparently not shown much interest in her babies. But we were optimistic. She had a wonderful role model with Mandara and a supportive group to rely on for security.

On April 11, 1992, those things were apparently not enough. Shortly after the staff left for the day, zoo visitors reported seeing the following events from our public area:

Holoko remained in view of the visitors most of the afternoon. At one point, she moved into an adjacent off-exhibit enclosure. Approximately fifteen minutes later, Mandara appeared on exhibit holding eleven-month-old Kejana and a newly born infant. While we will never know what transpired exactly, we do know that there was no sign of aggression between the females, and the newborn was perfectly healthy. Also, Holoko showed absolutely no interest in him.

On the other hand, Mandara could not have been more attentive. It was clear that she had made the choice to spontaneously adopt this new male infant and meant to keep him. She carried both, usually Kejana on her back and the infant (Baraka) on her stomach. She also nursed both, sometimes alternating and sometimes both at the same time, one on each breast. As the weeks passed, Mandara began to wean Kejana. He was mad to walk instead of ride, and his nursing time got shorter and shorter. As one would suspect, he did not willingly cooperate. However, Mandara was persistent. Kejana decided to take matters into his own hands. From his perspective, there was another perfectly good gorilla to get attention from: Holoko.

Whether she was planning on it or not, Kejana became her new shadow. He constantly pursued interactions with her, and even though she rarely responded, Kejana was not deterred. He still spent much of his time with Mandara and Baraka, but Holoko's defenses were starting to wear down. Her maternal skills certainly needed a little polishing, but Kejana was all she seemed to need. Even though it occurred a few months after delivery and the baby was already over a year old, Holoko had become a proud mom.

These days, everyone stopping by to visit our gorilla group has the privilege of watching two young gorillas each being raised by their very own affectionate, protective, fully capable mom. While we can't accurately predict the future for our group, we are confident (and hopeful) that neither Mandara nor Holoko will have the chance to let their mothering skills get rusty. Just in case any of you might visit Topeka, Milwaukee or Columbus, stop by and see their gorillas. I'm proud to report that M'wasi's is currently breeding regularly with her adult male companion, Femelle is raising a daughter, and Sylvia (the dominant female in her large group, by the way) has adopted and is raising her own baby. It's nice to know that old friends are doing well.

A PETITION FOR PEACE IN RWANDA

YOUR HELP IS NEEDED!

News reports from Rwanda are devastating...estimates of 100,000 dead and 2 million homeless since April 6, 1994...most innocent victims of a civil war. You can do something to help! Please copy and distribute the enclosed "A Petition For Peace In Rwanda" to colleagues, friends, family, businesses, museums, universities, churches, schools, electronic mail systems, etc...be creative. If each of us uses our own networking system, we can be a formidable force. The situation in Rwanda is grave and hundreds of thousands of signatures are urgently needed!

Ask people to contact as many schools as they can, as this is an excellent way for children to not only learn about conservation but also to be actively involved. The signatures of children can have a significant impact on world leaders.

Your signature can make a difference. Your petition, along with petitions from thousands of others who care about the people and gorillas in Rwanda, will be delivered to U.S. President Bill Clinton, to the U.N. Secretary general Boutros Boutros-Ghali, to representatives of the European Community, and to Rwandan political representatives.

I realize that each of you responded to past requests for help, and now I am appealing to you to do even more. I know that each of you has little free time, but I am afraid that time is running out for the people and the mountain gorillas who live in the beautiful little country of Rwanda. If we do not do something and do it quickly...I'm afraid it will be too late!

Together we can let world leaders know that there are hundreds of thousands of people who really do care about the people, land and the endangered mountain gorillas of Rwanda.

Thank you,

Charlene

Charlene Jendry
Great Apes Keeper
Coordinator - Partners In Conservation
Columbus Zoo
We, the undersigned, urgently appeal to all parties involved in the conflict in Rwanda to work together to secure a lasting peace for all the people of Rwanda.

Furthermore, we appeal for the protection of the endangered mountain gorillas, whose existence is threatened by the current conflict.

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GORILLA/KEEPER RELATIONSHIPS

Zoo gorillas are keenly aware of their captive condition. Gorillas share almost 98 percent of their DNA with humans and are highly intelligent, individual, emotional and psychologically complex beings. Even in the best zoo environments, captivity imposes unnatural stresses that would not be endured in the wild state. Major among these pressures is the fact that their lives are controlled day in and day out by humans. It is not to suggest that the wild is Utopia, however there is a great difference in the degree of self-determination between the wild and captivity. In the wild gorillas decide when, where and what they eat, where they sleep and who they live with.

Along with cohesive social groups, spacious, natural enclosures, satisfying, complete nutrition, harmonious relationships between gorilla and keepers are of the utmost importance. Captive gorillas are less stressed, and more stimulated and easier to manage if they have close and trusting relationships with their keepers. These relationships need to be healthy ones of mutual respect and not of over-dependency and/or over-control. Ideally there are at least four to five keepers working regularly with the gorillas with whom they are very compatible. This arrangement allows flexibility, prevents keepers from becoming over-burdened and avoids the gorillas becoming too dependent on just one or two people. It is important for younger keepers to work with the gorillas and to train with more experienced keepers, thus providing continuity in the gorillas’ lives.

The gorillas’ potential for good health, contentment, reproduction and longevity will be enhanced if they feel good about their caretakers. These relationships need to be nurtured daily by time spent with each individual gorilla as well as time spent in proximity to the entire group during feeding and observation of group interaction. Ideally, the gorillas are individually separated for a brief period twice a day and are hand fed some of their favorite food items. This time reinforces a positive relationship between gorilla and caretaker, making separation easier when it becomes necessary for illness, immobilization, breeding programs and transfers. It is also important for there to be some play between gorillas and keepers to create a more relaxed atmosphere for both.

Without human socialization, infants that are mother-reared in a group are potentially more stressed by zoo management routines and are more difficult to manage than are wild captured or hand reared gorillas. Infants can be socialized along with their mothers through bars. Providing the infant the option (and its mother the option) of allowing it to come out with the keepers for socialization is beneficial.

Intervention such as giving medication and supplement feeding of an infant while it remains with its mother will be more easily accomplished by keepers who have consistently nurtured their relationships with the gorillas. The onset of illness, both physical and psychological, will be more readily recognized by a caregiver who knows the gorillas well. Gorillas are more likely to be open and indicate how they are feeling to someone with whom they have an emotional bond. Breeding programs require potentially traumatic changes such as separation from a family group, long distance transfers, and introduction to new animals. These events can be softened by familiar keepers participating in the transitions, thus increasing chances for success while lessening the chances of illness and injury. As much as possible, it is important for keepers to gradually change routines to accustom the gorillas to upcoming changes in their lives.

Ideally, the gorillas’ daily routine is relaxed and moves at a gorilla-like pace. Keepers need to allow gorillas as much control and freedom over their own lives as possible. Often in a tense situation, playing with the gorillas or giving them some favorite food before a desired behavior is accomplished, relaxes them and ultimately encourages cooperation. Most management routines can be accomplished in a positive manner if the keeper is allowed time to think through and try various options. As gorillas are empathetic and will be affected by the emotional state of their caretaker, keepers need to be relaxed and not over-worked or over-stressed. Time to be with the gorillas to observe and think about them are activities that need to be acknowledged for their importance. Zoo managers must defend the close relationship between keepers and gorillas and be supportive of these working requirements in order to maximize overall success. Effective management decisions require input from keepers who know the gorillas best. Keepers who intimately know the gorillas under their care can reliably and courageously represent their best interest.

Zoos promoting close relationships between gorillas and keepers have had significant breeding success, which includes mother rearing. At Howletts/Port Lympne gorilla keepers enter the enclosures with the gorillas on a regular basis. Certainly there are other reasons for their success, such as numbers of animals, diet and interesting enclosures. However, it is likely that the close relationship with keepers has contributed to a lower anxiety level in the gorillas. Keepers do not have to enter the gorillas’ space to have a close relationship, although if it can be done safely, it would be worth considering.

As captive management becomes more progressive, perhaps keepers can distance themselves and allow the gorillas more freedom in managing their own lives. In the future it may be possible to release several groups into large preserves where their lives could progress with a minimum amount of interference. If the time ever comes that captive gorillas could be released to the wild, certainly a less managed program would be necessary for the transition. With improved care, gorillas are beginning to recover from the traumas of their initial captures and years of misunderstanding and mismanagement in zoos. As captive generations become healthier and more like wild gorillas, there will be possibility for repopulating them to indigenous areas. To whatever degree they are managed, it is critical they feel unpressured by humans. When making life decisions for the gorillas, keepers and managers need to do so with knowledge, respect and compassion for the individual, the group and gorilla culture. The caretaker must develop a sensitivity for these magnificent beings and a willingness to learn from them.

Violet Sunde
Woodland Park Zoo
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In the southern Congo, on the other hand, gorilla populations have been rapidly disappearing. My colleagues found few gorilla traces during their survey in the area. Logging companies enter the deep forest and poachers, following the logging roads, kill off all larger mammals as bush meat. Consequently, only a disturbed and silent forest remains, and some gorilla infants are sold as pets in the cities.

Both the killing and selling of gorillas are forbidden by law in the Congo, but many people do not know the law and the local governments’ power does not reach these villages. Some foreigners also encourage poaching by paying large sums of money to get a gorilla infant. It is necessary to make the law well known and to enforce control over poaching. It is also necessary to educate the local people and logging companies about how gorillas are important in maintaining the health of the forest, and about their closeness to humans.

The Gorilla Release Project, organized by Howlett and Port Lympne Wild Animal Parks, has already started to implement such a program in Brazzaville, where confiscated gorillas are being rehabilitated for their safe return to the protected forest. Many Congolese people see their activity and have come to realize just how human-like gorillas are and how much they deserve to be protected. The presence of this project has also encouraged us to continue our own efforts for gorilla conservation at Ndoki and elsewhere in the Congo.

Dr. Suehsa Kuroda
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Inexpensive & Effective Enrichment Activity

At the Little Rock Zoo in Arkansas, we have found an inexpensive and effective form of enrichment activity for many zoo animals. In our great ape yards we plant pumpkins. The vines are used as nesting material and the blooms are sometimes eaten. The fruits make great toys as well as being a favorite snack.

All the great apes especially enjoy the center pulp and seeds. The last few years we have tried them all over the zoo. We had mixed reviews from other primates, capybara and elephants. Bears, giant anteaters, river otters, African crested porcupines and Aldabra tortoises spent a great deal of time with them. The Grizzly bears and giant anteaters really loved them. We cut small holes for the anteaters and they licked the pulp. Pumpkins float so they make great toys in exhibits with pools. We would be curious to know how well they were liked in a hippopotamus pool.

Bruce Roberts
Great Ape Keeper
Little Rock Zoo
Little Rock, Arkansas
DON'T FORGET

Deadline•Deadline•Deadline

The deadline for articles for the next issue of the Gorilla Gazette is September 1, 1994.

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