

BONOBO SURVIVAL AND A WARTIME CONSERVATION MANDATE

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In 1996 scientists discovered a rock that came from the planet Mars. The rock set off one of the most intriguing scientific debates of our generation. This rock contained tiny fossilized squiggles that NASA scientists claimed could only have been made from living organisms. Perhaps this was evidence of life on Mars. These claims have been hotly debated, but the event caused NASA to reform its policy so that, “The search for life on Mars will be the first and highest priority of our Mars Mission.”¹ Many are familiar with this story, however the irony of possibly finding life on Mars while losing intelligent life forms on Earth should not be lost on us.

The bonobo and its great ape relatives are among the most intelligent life forms on Earth and possibly in the universe. Yet their survival is uncertain due in part to a lack of international awareness, political unrest, and insufficient resources. The bonobo has been touted as the extant ape most closely resembling the prototype of early man,² and the genus *Pan* shares over 98% of man’s genetic identity.³ We may come to realize that it is possible that our fascination and quest for extra-terrestrial life might outstrip our efforts to preserve our closest living relatives on Earth.

Inogwabini Bila Isia and I will present our perspective on bonobo conservation. There are many challenges for conservation in the war-ravaged Democratic Republic of Congo. The bonobo is in the center of what has been called Africa’s First World War, involving at least 7 different nations and threatening the stability of the entire subcontinent. More deadly than Kosovo, the war has displaced over eight million people, causing them to seek refuge in Congo’s forest. Wildlife populations have prevented human starvation. The war presents us with an urgent mandate for conservation.

While we will never be as successful as NASA in raising public awareness or money, we strongly believe that the end of this war and the rebuilding of the Congo must become a national priority. Only then can great ape conservation take hold. The bonobo and the rain forest in which it lives are of global importance to sustaining the health of our planet. Their survival depends on long-term political stability and planned development in this region.

THE BONOBO

Pan paniscus, the bonobo or pygmy chimpanzee, is the last great ape species to be described, receiving full species status in 1933.⁴ Species specific traits show the classic characteristics that distinguish bonobos from their sibling species *Pan troglodytes*, the common chimpanzee, including the graceful build of the female, the narrow shoulder girdle, the small rounded head (hence the common name pygmy chimpanzee). The range in size of adult chimpanzees and bonobos overlaps, but on average, bonobo body weight is about 85% of common chimpanzees.⁵ Bonobos have smaller ears, black facial pigmentation (particularly the infants), and less brow mass.⁵

Unique among the apes, the bonobo represents a more egalitarian society with a less rigid dominance hierarchy. Bonobos occur in mixed social groups of adult males and females and their offspring.

Social organization is maintained not by male domination but by strongly bonded females and males who associate with them.⁶

The striking feature about bonobo social life is that individuals engage frequently in sex that has a social rather than a reproductive function.^{6,7} Bonobos have developed highly ritualized sexual behaviors that are thought to galvanize social bonds and diffuse tension and thereby allow numerous animals to live in close proximity.⁵ Females are known to embrace in a copulating gesture while sharing food. Anthropologists believe that such behaviors lead to lower levels of aggression in bonobos compared to chimpanzees or other great apes.⁵ In summary, the bonobo might be labeled the “hippie great ape, making love not war.”

Bonobos are found only in the Democratic Republic of Congo, formerly Zaire, and formerly the Belgian Congo. Unlike their chimpanzee relatives who once spread across equatorial Africa, the bonobo occupies a relatively small, restricted range within one political boundary.⁴ Living within one country increases the vulnerability of the species to war. This map highlights the historical or maximum range of the bonobo. Bonobos occur south of the Congo River—a formidable geographic barrier that separates the bonobo from chimpanzees and gorillas, which occur together north of the river. Dense, moist, rain forest (swamp forest) covers most of this region. In the southern portion of their range, bonobos occur within a forest-savanna mosaic. The tropical forest of the Congo is of global environmental importance in terms of its diverse flora and fauna, and its potential for carbon storage in mitigating global warming. The Congo contains one-half of Africa’s tropical forests and one-eighth of the world’s.⁹ The bonobo is an important flagship species for the preservation of the rainforest ecosystem of the Central Congo Basin. The survival of the bonobo and the forest go hand in hand. However, the forest is increasingly regarded as an important source of revenue for the country.

THE CONGO

The story of the bonobo must be told within the larger story of the Congo. The Congo is about one-third the size of the United States. It is among the richest countries in the world in natural resources. In terms of biodiversity, this country is one of the most important countries on Earth and is

- ranked 1st in Africa for vertebrate diversity,
- 2nd in Africa for plant diversity, and
- 4th in the world for number of mammal species.¹⁰

It is home to the mountain gorilla, chimpanzee, forest elephant, and endemic mammals like the okapi, eastern lowland gorilla, and bonobo.

In addition to the rain forest, there are vast deposits of diamonds, gold, cobalt, and copper.⁹ Because of its many rivers, the country has the largest potential for hydroelectricity in Africa. Water

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is also a potential resource for export to drier regions in the north, for example, to the Sudan.⁹ Yet despite these boundless natural resources, the Congo is one of the poorest countries in the world. Most Congolese continue to live at the subsistence level, where daily survival is their main concern.⁹

HISTORY

Five years after gaining independence in 1960, the former Belgian colony was ravaged by the dictatorship of Mobutu Sese Seko, a former military strongman, backed by Europe and the US.⁹ After nearly 40 years of corruption and mismanagement, the country's infrastructure was ruined.⁹ Social services like sanitation, mail, health, and transportation were destroyed or had to be run by foreign assistance. The mining industry, which was the primary source of revenue for the Congo in the 1970s was allowed to disintegrate.⁹ Mobutu was overthrown in 1997 by the forces of Laurent Kabila. With the change of government, many people held great hopes for the reconstruction of the country and for conservation.⁹ Unfortunately, one year after Kabila's takeover, the country was plunged into the present civil war. Forces, backed by Rwanda and Uganda, once loyal to Kabila, have marched against him. The rebel forces have advanced from east to west to occupy over one-half of the country.¹¹ A peace accord was signed in August of 1999 with the promise of UN peace-keeping intervention, but fighting continues. Early in 2000, the UN approved sending a force of 5,500 peacekeepers to Congo, but analysts predict that this number may be too small. Nevertheless, it is a positive sign that the international community is willing to intervene. The wars have caused further economic collapse. Today the average income is less than \$120 per year!¹² The people must rely on unrefined natural resources to survive.⁹ The average longevity of a Congolese is about 52 years.¹³ There is fewer than 1 doctor for every 30,000 people.¹⁴ The Congo has one of the highest frequencies of TB, parasitic disease, and now AIDS. Diseases such as river-blindness, sleeping sickness, and leprosy still exist.¹⁴ A further challenge to conservation is that Congo has one of the fastest growing human populations in Africa—a 3% annual growth rate.¹⁵ In 1999 there were 60 million people; at this rate, the population will double in 24 years.¹⁶ Most of this population relies on forest products for food, shelter and firewood.⁹

MAJOR THREATS

It is no surprise then that the major threats to the bonobo are the joint practices of deforestation and illegal hunting. Commercial logging and clearing for agriculture result in loss of habitat. There is a need to develop the country. Losses in the mining industry have placed a huge pressure on timber resources.⁹ At present, due to the lack of good roads and rail system, commercial logging in the Congo is far below other Central African nations.⁹ The new economic scheme posed by the present government sees timber production as a key element for future economic development.¹⁷ Within the next few years, analysts predict that timber production could increase from current levels by 30 times, approximately 10 million cubic meters harvested per year.⁹ Currently, moderate levels of forest degradation occur within the bonobo range, but this picture can quickly change with unplanned development.

Using digital calculations we estimate that over 46% of the historical range of the bonobo now lies within active logging concessions or standing permits to harvest timber. We conservatively estimate that over 55% of the actual range of the bonobo may be within concessions. There are two places within the region where bonobos are known to occur where logging is prohibited:

1. The Salonga National Park, which is the only federally protected area for the bonobo—Ironically, bonobos were only discovered there within the past 15 years, and we do not know their status, or whether they reside there in significant numbers.¹⁹
2. Another area, the Luo River Scientific Reserve, is designated as a reserve to prevent logging.¹⁹

Given this analysis and current trends within the country, we consider logging to be the most important, long-term threat to the bonobo.

While logging has not yet reached maximum production in Congo, it has opened up the forest and created access routes for uncontrolled commercial hunting of all forms of wildlife. Greater than 80% of the protein consumed in Congo is the meat from wild animals.⁹ As noted at many points during this conference, commercial poaching has become a big business throughout Central Africa.

The war itself is responsible for a sudden rise in bushmeat within the range of the bonobo. The range of the species is divided in half, including a zone of military occupation where several fighting factions meet.¹¹ This region is the heart of the bonobo's range and prime habitat. It is now occupied by troops and displaced people who consume bushmeat or rely on it as a source of income. This combat zone has been located here for nearly one year. That bonobos are increasingly killed is evident from the number of captive infants appearing in urban centers.

When adult bonobos are killed for their meat, their infants are often taken and sold as pets. Most recently an unprecedented number of orphaned bonobos have appeared on the streets of the capital city of Kinshasa. At least 12 infant bonobos have been documented in Kinshasa in the past 5 months. In some cases, these babies have been pets of soldiers.²⁰ Between 5 to 10 adults and sub-adults may be killed in order to capture one infant. To supply this trade, keeping in mind that these are the ones that survived the long journey from the interior, we estimate that possibly between 60 and 120 bonobos were shot and killed to produce the orphans recently appearing in Kinshasa.

Large social groups are easy targets, resulting in high levels of mortality. The continued killing of reproductive-aged adults, especially females, soon outstrips the reproductive capacity of populations to rebound.

"Friends of the Animals of Congo/Les Amis des Animaux au Congo," a volunteer, non-profit group, has set up a sanctuary for orphaned bonobos in the capital city of Kinshasa. Seven of the 12 babies were taken into custody by the sanctuary,²¹ and the group continues to monitor and report new occurrences of orphans. There is a great need to educate the military about the hazards of eating bonobos and taking them as pets. War also brings opportunists. Within the past month, some of the bonobo orphans have been offered for sale to zoos in Europe and the U.S. There was an immediate, negative reaction by U.S. and European zoos. The Bonobo Species Survival Plan (SSP) sent letters informing the Congolese authorities of the situation and that US zoos would reject any such offer that clearly exploits the war situation.

We have no reliable estimates for how many bonobos remain in the forests of the Congo. We know that they have disappeared from much of their former range. Guesses range from 50,000 to 5,000 individuals.¹⁹ Alarmed by the sudden rise in bushmeat trade, some recent reports speculate that there are less than 2,000 bonobos in the wild. The reality is we do not know. One of the most urgent conservation needs for the bonobo is to determine the species' distribution, where significant populations live.¹⁹ Only then can we create realistic conservation strategies that account for the bonobo

and the human populations. With the backdrop of the threats to bonobo survival (poverty, war, no protection, increased logging, over-hunting, and pet trade) what can be done?

CONSERVATION

The Congo has a long history of conservation. Over 8% of the land area is federally protected.¹⁷ The government recently pledged to protect up to 15% of the total land-area.¹⁷ The national authority in charge of protected areas management is the Institut Congolais pour la Conservation de la Nature (ICCN), under the Ministry of the Environment.⁹ Thus, a structure for conservation exists in Congo. However, the ICCN needs technical and financial assistance, and especially training, to be effective. International conservation groups and bilateral donor agencies have traditionally supported the parks in the east. Prior to the war, ecotourism from the parks in the east earned nearly \$1 million a year in government revenue.⁹ In contrast, the Salonga National Park (SNP) in the west was never developed or had the support equal to that of the eastern parks. It is the only park harboring the bonobo. At present, the SNP is only a park on paper without effective protection.²² Well-armed gangs of poachers have traditionally exploited elephants and other wildlife species.

This vast park, larger than the size of Belgium, has never been inventoried.²² Because the Salonga is the only federally protected area for the bonobo, it is important to know the species' status there in order to create a national bonobo conservation strategy. If there is a viable bonobo population, the Salonga will potentially be the largest protected habitat for the species.¹⁹

For the past four years, the Zoological Society of Milwaukee (ZSM) has spearheaded a project with ICCN to conduct a bonobo and large mammal survey of the Salonga. The survey project is divided into 3 phases: (1) a reconnaissance phase, (2) a training phase, and (3) the actual survey. In December 1997, a small team of researchers, led by Ellen van Krunkelsven and myself, set out to conduct the first phase of the survey. The objective was to test the feasibility of river access to the park, search for signs of bonobos, and assess the degree of human disturbance. The results of the reconnaissance mission were encouraging. We found evidence of bonobos in all the areas sampled, and we discovered that a full-scale survey was possible. However, the team also found extensive evidence of poaching in the Park. For example, the number of snares found per kilometer was two times greater than that reported for the Kahuzi Biega National Park. In one area we found a store of smoked crocodiles left by poachers who fled when we approached their camp. An urgent conservation priority is to increase protection within the Salonga through financial and technical support. The war began just 8 months after this reconnaissance mission. The survey field work has been suspended.

The second phase of the Salonga survey project will be to provide on-site training to guards and Congolese researchers so that they acquire the skills to conduct the future survey. It is important to note that this bonobo survey project is one of the first Congolese-led scientific missions. The Congolese government is appreciative of this and is proud of this fact.

In 1991 conservation groups and primatologists called for the creation of the Action Plan for *Pan paniscus*. Published in 1995 by the ZSM, this is the first IUCN sanctioned, single-species action plan.¹⁹ The plan recommends the multi-faceted conservation actions. Due to the lack of knowledge about the abundance and distribution of the bonobo, the Action Plan calls for the surveys throughout the Congo to determine where bonobos are found, how many are left, and their survival status. The Action Plan also calls for professional training in

conservation. Up to this point, most bonobo conservation has been sustained by academic research at study sites. There have been few resources for formal training of the ICCN or government staff.

We consider in-country training to be a key component in conservation. Our aim is to build the capacity of the Congolese to become involved in bonobo conservation and monitor bonobo populations as well as protect them.

The Action Plan also recommends support of research sites. Many sites have studied bonobo ecology and behavior over the period of 25 years. These sites have provided important knowledge about the conservation biology of the species. However, with the exception of the Luo River Reserve, none of the sites are yet nationally protected. The Action Plan calls for the continuation of field research coupled with local conservation education at these sites. Because of their long-term presence and ecological significance, reserves are recommended for the Lou River, Lomako and Yasa sites. In the meantime, the war has brought a halt to all field work and researchers have been forced to abandon these sites.

Very few Congolese have the opportunity to learn about their natural heritage, but there are groups of talented artists and educators that want to effect changes within the country, within the existing system. One such group is called Bleu Blanc (Blue-White). They regularly produce educational magazines for school children. The magazines are very popular because of their cartoon style and color pictures. Their theme is health, education, and conservation. One of the creators of the Bleu Blanc education group is Delfi Messinger. The ZSM and SSP commissioned Bleu Blanc to produce a special edition notebook. Written in Lingala, one of the four national languages of Congo, the bonobo brochure features life history notes about the bonobo. Part of our program is to distribute these booklets to remote villages within the habitat areas of the bonobos—in areas where they may be killed for bushmeat. The aim is to sensitize people to the plight of the bonobo and strengthen traditional taboos against hunting them. The booklet features a story of a revered tribal elder who is offered some bonobo meat to eat. He refuses the dish, and tells the story about how the bonobos saved his mother and him when they were attacked by an enemy tribe when he was a child. For saving the life of his mother, his tribe does not eat the bonobo. The booklet also illustrates how disease may be transmitted from animal to humans and the reverse. With support from the US Agency for International Development (USAID), we will produce 40,000 additional copies of this piece. We will distribute these educational booklets to military outposts in habitat areas where soldiers may also be involved in the increased bushmeat trade.

The bonobo sanctuary in Kinshasa operated by the Friends of the Animals of Congo, has immeasurable education potential. This group can meet the urgent need for conservation education of urban Congolese. The role of educating urban populations can not be overlooked, and it is here that the country's future decisions about conservation will be made. When the bonobo infants appear in Kinshasa, either as pets or for sale, it is important to get them off the streets—especially with the threat of international trade.

PRESENT SITUATION

To summarize, the present situation is as follows:

Bad News:

- Localized fighting still continues in the Congo (but the front is not likely to advance further west).
- All fieldwork on bonobos has been temporally suspended.

- There is mass proliferation of guns into the region.
- Protection of wildlife species outside the national parks is non-existent and minimal within the parks.
- Wildlife populations are threatened with local extinction.
- Bonobos and great apes are falling prey in alarming numbers.

Good News:

- There are encouraging signs that foreign troops may start withdrawing from Congo within the near future.
- Uganda and Rwanda have agreed, at least, to hand over Kisan-gani (the largest city held by the rebels) to the United Nations peacekeeping mission.

Against the widespread perception that Congolese are not aware of or concerned about of the destruction of their parks and wildlife, here is proof that they are. The picture shows the traditional chief signing an accord with the Salonga ICCN authorities. The community will assist ICCN to prevent poachers from accessing the park. This is a profound development that must be supported and upheld.

PATHS TOWARD THE FUTURE

The path to conservation is not a linear route. Conservation must proceed on many different fronts simultaneously.

(1) Protection: There will have to be major efforts put forward in law enforcement both inside protected areas and within forest concessions. This includes hiring, training, and equipping extra patrols and creating check-points along major rivers and roads. Additional reserves are needed, and advocacy for these reserves should begin now while policies are being developed. One point to emphasize is that citizens across the country must be informed about the law. A major campaign could be started using national media.

(2) Forestry Policies: The need to develop the country and timber production will increase. Given that over 50% of the bonobo's range is slated for commercial logging, unplanned development will be disastrous for the species. Thus we advocate four things:

- First, restrict logging in several areas, such as the Lomako Forest, Yasa, and enhance protection of the Lou River Reserve.
- Second, associate conservation with the allocation of forest concessions to require and ensure that biological inventories be conducted prior to permitting sites.
- Third, fund studies that examine the effects of different forestry practices on bonobo survival; determine if there are bonobo-friendly forms of timber harvesting.
- Lastly, create policies to discourage hunting within concessions, e.g., closing roads, importing food supplies, etc.

(3) Reinforce Conservation Capacity of the Salonga: The international community must build the park infrastructure to support law enforcement, training and biological monitoring. Given the current trends and competing interests within the country, we must protect areas already designated for preservation.

(4) Education, Training, and Public Awareness: In each of the categories listed thus far, education and training are the foundation.

The Congolese must be provided with opportunities for self-improvement. Training at the professional and university level is vitally important for them to take charge of conservation.

In conclusion, we must do all we can to promote the peace process and stop the war. Our policy makers must hear from this delegation, and we should applaud and encourage their intervention and support of the UN peacekeeping effort. This does not necessarily mean sending troops, but diplomatic and economic intervention could create neutral zones for conservation to proceed, as in the case with polio vaccination programs (World Health Organization) that proceeded despite the war.

Secondly, we richer nations must recognize that conservation is something people think about when their own survival is secure. If we want great apes to survive, we will have to provide the financial impetus and the technical support to get it going. We need funding.

Ultimately conservation must be done by the Congolese. People say to us that the bonobo needs another Jane Goodall to promote the species, but what the bonobo really needs is for us to help create the economic and social conditions in the Congo so that the next "Jane Goodall" is black—a Congolese celebrity for conservation. Creation of such opportunities should be our collective goal.

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