THE GREAT APES DECLARATION
PREVENTING THE EXTINCTION OF THE GREAT APES BY AWARDING THEM WORLD HERITAGE STATUS

(The Draft Proposal)
The Ad-hoc Committee for the World Heritage Status for the Great Apes,
The International Primatological Society
(President: Dorothy M. Fragaszy)
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LIST OF SUPPORTING NGOs
Ape Alliance, Budongo Forest Project, Jane Goodall Institute, Mahale Wildlife Conservation Society, Primate Society of Japan, Wild Chimpanzee Foundation

Synopsis

In the order of the Primates, the family of the great apes, Hominidae (the human family) occupies a special status, because it is the taxon to which we belong ourselves. Its nonhuman members, therefore, have a very special significance. They comprise the orangutan from Sumatra and Borneo and the gorilla, chimpanzee and bonobo from Africa.

The great apes clearly stand apart from the other primates in many ways, the most important being the development of such mental characteristics as the capacity for symbolic thought and self-recognition and the related characteristics of higher intelligence and cultural development.

Whereas the human species numbers in the billions and is expanding at an alarming rate, the opposite is true for the other great ape species. These are counted in tens of thousands or at the most a hundred thousand individuals. Their numbers have decreased dramatically during the past few decades. And there is no indication that the rate of decline is decreasing. On the contrary! Continuing habitat destruction by logging and forest conversion, the partitioning of remaining habitats into fragments that are too small to support sustainable populations, and poaching have brought the remaining populations to the brink of extinction. Poaching has become an increasingly severe threat, as it practised not only by locals but also by loggers and roaming military factions. Traders ruthlessly try to capture trophies and young individuals for the pet trade and – especially in Africa – to obtain bushmeat. In many of the habitat countries, these problems are aggravated by political instability and social unrest.

Analyses show that the great apes will become extinct in the wild within this century if we do not take vigorous actions. Therefore, humankind has the moral obligation to prevent this tragedy before it is too late and some of the most interesting creatures on the planet, our nearest relatives, vanish forever from their natural environment.

There is an urgent need for a global conservation strategy to maintain great ape populations within their dynamic and evolving natural eco-systems. Currently, conservation efforts are being made in a piecemeal fashion, where opportunities present themselves and resources are available. Such efforts would have a greater impact if they were part of a systematic approach to a global problem, while

still taking local needs and development objectives into account.

The Global Strategy must provide cohesion to the existing work of many agencies, organizations and individuals; this will allow resources to be used more effectively. Such an approach would help us identify what needs to be done in each Great Ape Range State to ensure the survival of those ape populations.

The Global Strategy proposes to coordinate efforts to halt the dramatic world-wide decline in Great Ape populations and to save all great apes in their natural habitats.

To achieve this aim, the following steps must be taken to implement a United Nations Global Conservation Strategy for the Great Apes:

- Formulate the concept of the World Heritage Species, apply the concept to the great apes, and officially accept global responsibility for their conservation.
- Appoint a Special Envoy (SEGA) and National Ambassadors (NAGA) for the Great Apes. The SEGA is responsible for the formulation and implementation of the Global Great Ape Conservation Plan. SEGA will liaise with, and coordinate efforts between, Range States, other inter-governmental bodies (e.g. CITES, CBD, ITTO, FAO) aid agencies, donor countries, and NGOs. SEGA will achieve this by hosting regular meetings of the NAGAs, other conservation specialists, and scientists to integrate information from all of the range countries and monitor the progress of conservation activities. SEGA will reside in the capital of one of the Range States. In its initial work, a task of the utmost priority is to investigate the role of foreign companies in the bushmeat trade and to act to prevent future illegal involvement.

The NAGA, an experienced supervisor for conservation residing in each habitat country or area, should help to establish the national Great Ape Survival Plan (GASP) and monitor the implementation of GASP.

GASP should include law enforcement, strict prohibition of hunting, eating and trading apes, establishing sanctuaries to accomodate apes confiscated from poachers, monitoring the current situation of the great apes including land use in their habitat such as firewood collection and agriculture, advice on how to reduce damage by subsistence activities, technical advice on sustainable exploitation of the forest, and alternative economic plans, such as eco-tourism and use of non-timber forest resources. In particuar, there is the need for countries to commit to dissuading their people from eating great apes. The UNEP has shown a leadership in this line by having announced GRASP (the GReat Ape Survival Project) in May 2001. GASP and GRASP could be integrated smoothly since the purpose of both parties is the same.

This will need to be done with a reasonable budget supported by the international community. The budget expected from the United Nations should cover the following major elements of the action plan:

1. The Office of the Special Envoy for Great Apes, to be established in the capital city of one of the African range states, at an annual cost of USD 135,000.
2. The Offices of the National Ambassadors: At least 10 ambassadors should be appointed to be stationed in the major Range States. NAGA might be an honorary title bestowed on prominent primatologists/conservationists resident or active in the country/region. The annual running cost of each NAGA would be USD 10,000.

Why Do Great Apes Merit Being Awarded World Heritage Status?

The Problem

There are five forms, or seven species, of great apes on earth. Humans are one of the great apes -just as we are one of the primates, and one of the mammals. The four forms of non-human great apes which belong to the family Hominidae (Groves 1989) are a bridge between humans and the other animals. They are the orangutans of Borneo (*Pongo pygmaeus*, 2 subspecies) and Sumatra (*Pongo abeli*), eastern gorillas (*Gorilla beringei*, 2-3 subspecies), western gorillas (*Gorilla*

gorilla, 2 subspecies), chimpanzees (*Pan troglodytes*, 4 subspecies), and bonobos (*Pan paniscus*). They link us to our biology and to our world. They have many human-like characteristics. Great apes clearly stand apart from the other primates in a number of respects, the most important being their special development of mental sophistication, such as an elementary capacity for symbolic thought and self-recognition, and the related characteristics such as exceptional intelligence and cultural development.

Whereas the human species numbers in the billions and is expanding at an alarming rate, the opposite is true for the other species. These are counted in tens of thousands or at the most a hundred thousand individuals (Ape Alliance 1998, Table 1). Their numbers have decreased dramatically in the past few decades, and there is no indication that the rate of decline is decreasing. On the contrary! Continuing habitat destruction by logging and forest conversion to farmland, the partitioning of remaining habitats into fragments that are too small to support sustainable populations, and, last but not least, poaching bring many of the remaining populations to the brink of extinction. Poaching has become an increasingly severe threat, as it practiced not only by locals but also by roaming military factions. In addition, traders are ruthlessly trying to capture young individuals for the pet trade and -especially in Africa- to obtain bushmeat. In some of the major habitat countries, all this is aggravated by political instability and social unrest.

Analyses of recent developments indicate that the great apes will become extinct in the wild in this century unless action is undertaken immediately to counteract the threats they face (Marshall *et al.* 2000). Therefore, humankind must do whatever it can to prevent this tragedy before it is too late and some of the most interesting creatures on this planet, our nearest relatives, vanish forever from this earth as naturally living populations.

The special qualities of the non-human great apes that merit awarding them World Heritage Status are: (1) their phylogenetic closeness to humankind, and (2) their mental, i.e. emotional and cognitive, capacities, which are related to their exceptional intelligence and cultural development. (3) Social sophistication has also been clearly documented for at least most of them. In addition, (4) they have a special relevance for science. Their physical and mental resemblance to ourselves makes them invaluable for the science of humankind.

Table 1. Current Numbers and Geographic Ranges of Great Apes

Species and subspecies	Approximate number	Approximate range (km^2)
Chimpanzee (*Pan troglodytes*)	203,000	838,000
Western chimpanzee (*P. t. verus*)	40,000	48,000
Nigeria chimpanzee (*P. t. vellerosus*)	5,000	20,000
Central chimpanzee (*P. t. troglodytes*)	62,000	270,000
Eastern chimpanzee (*P. t. schweinfurthii*)	96,000	500,000
Bonobo (*Pan paniscus*)	40,000	120,000
Wetern gorilla (*Gorilla gorilla*)	94,000	445,000
Western lowland gorilla (*Gorilla gorilla gorilla*	94,000	445,000
Cross River gorilla (*Gorilla gorilla diehli*)	200	300
Eastern gorilla (*Gorilla beringei*)	17,000	15,000
Mountain gorilla (*Gorilla beringei beringei*)	300	400
Bwindi gorilla (*Gorilla beringei* new subsp?)	300	200
Grauer's gorilla (*Gorilla beringei graueri*)	17,000	15,000
Bornean orangutan (*Pongo pygmaeus*)		
Western Bornean orangutan (*P. p. pygmaeus*) + Southern Bornean orangutan (*P. p. wurmbii*)	23,133	151,025
Sumatran orangutan (*Pongo abeli*)	12,770	25,955

(Sources: Butynski 2000, pers.comm., Rijksen & Meijard 1999)

Phylogenetic Closeness to Humans

Traditional biology, such as comparative anatomy, has long since recognized the close phylogenetic relationship between non-human great apes and humans (Huxley 1863). They share many morphological characteristics with us, e.g. in the shape and number of muscles and bones and overall proportions of body

parts. Human and non-human great apes have flat chests, long arms and flexible shoulders, and lack an external tail (Pilbeam 1972). They cannot swim, except for humans. All of them usually lie in beds when sleeping. They have similar facial expressions; for example, they can laugh (van Hooff 1967). Humans and the genus *Pan* (chimpanzees and bonobos) share 98.4% of their genetic substance, the DNA. Two species of gorillas share 97.7% with us and two species of orangutans 96.4% (Sibley & Ahlquist 1984).

Mental and Social Characteristics

Non-human great apes express not only the primal emotions of anger and fear but also many that are often categorized as "human emotions," including sadness, joy, despair, jealousy, and sympathy (Goodall 1986). They have more human-like mental capacities than any other species. The sixties brought the first successful studies in which chimpanzees were taught a language system (Gardner & Gardner 1969, Premack 1971, Rumbaugh 1977, Fouts & Mills 1997). Gradually, it has become more evident that these creatures have elementary symbolic thought. There is a bonobo who can understand spoken English sentences (Savage-Rumbaugh & Lewin 1994). This bonobo, who has been exposed to English since birth, knows some 1,000 words and seems to understand grammar as well. When great apes look into a mirror, they can recognize themselves and show fascination in their own facial expressions (Gallup 1970, 1982). They are the only animals for which there is convincing evidence of true imitation(Custance *et al.* 1995), a capacity highly conducive to the development of culture (see below).

Recent research has suggested that non-human great apes can have a "theory of mind" (Premack & Woodruff 1978) i.e. they can take the perceptual perspective of others, and may form a mental representation of the knowledge of others and attribute intentions to them. These capacities may also enable them to feel forms of empathy, as evidenced by observations of behavior, such as social consolation and other forms of altruism (Goodall 1986, de Waal 1982, 1996). Great apes adopt infant orphans who have lost their mothers, and in many instances orphans survive their mothers' deaths due to their foster parents' care (Goodall 1986, Nishida 1994). These characteristics, which they share with us, undoubtedly enable them to develop the complex societies that we see especially in the genus *Pan*. These traits also enable them to negotiate with, to manipulate, and even deceive others. They display a Machiavellian type of intelligence in regulating their social relationships (de Waal 1982, Nishida 1983, Byrne & Whiten 1988). In such activity, both loyalty and opportunism play a role. Thus, adult male chimpanzees show tactical negotiation and selective tolerance and permissiveness (e.g. in access to sexual mates) toward coalition partners. Mutual support and the exchange of services and favors take the form of implicit social contracts based on expectations about one another's behavior and a sense of obligation (de Waal 1991). These expectations can thus acquire a normative character. Here, we encounter the roots of morality (de Waal 1996).

Behavioral Flexibility and Tool Use

All of the non-human great apes show immense curiosity about every nook and cranny in their environment. The ability of chimpanzees, bonobos and orangutans to make and use tools has been extensively documented in the wild (Kano 1992, McGrew 1992, van Schaik *et al.* 1996). They do so in flexible manners both in the wild and in captivity (Beck 1980).

When chimpanzees become ill, they selectively eat certain herbs or the bitter pith of certain plants. Chemical analysis has shown that these plants contain elements that can kill bacteria in low concentrations (Huffman 1998). Chimpanzees, bonobos and gorillas also swallow hairy leaves to mechanically evacuate intestinal helminthes (Huffman 1999). Thus, the great apes engage in self-medication, making use of knowledge of the medicinal properties of plants, which undoubtedly is passed on in the form of cultural habits.

Culture

The above examples already emphasize the role of culture in great ape societies. Every known chimpanzee population has its own unique

culture of behavioral traditions. Chimpanzees have been studied in various parts of Africa, and many behaviors have been discovered to be specific to certain regions (Whiten *et al.* 1999). For example, the technique of stone-hammering is confined only to some parts of west Africa, the use of sticks in digging for termites is known only for the chimpanzees of central Africa, and fishing for arboreal carpenter ants is limited to two sites in Tanzania. In addition to such variations in food repertoire and food extraction techniques, chimpanzees show large local variations in social behavior patterns. These include courtship gestures, grooming postures, intimidation displays, and pant-hoot calls (Mitani *et al.* 1992, Nakamura *et al.* 2000, Nishida 1994, Whiten *et al.* 1999). Furthermore, there are variations in the removal of external parasites (Boesch 1996, Zamma in press) and water contact behavior (Nishida 1980). Such behavioral differences between local populations have also been shown to exist in other great apes, especially recently in populations of orangutans (van Schaik *et al.* 1996).

Conclusions

The almost paradigmatic change in our thinking about nonhuman great apes that has taken place in recent decades is only the beginning of scientific explorations that can also contribute to a better understanding of ourselves as a species, of our natural characteristics, and of the ways these are expressed in a variety of cultural manifestations. Such understanding will be possible only if we can study the characteristics of our nearest relatives in their fullest expressions, that is, in the ecological context where their physical and mental, their social and cultural characteristics have evolved and have achieved their evolutionary adaptive significance. Especially important are the broad range of ecological conditions in which each great ape species is found and the variations in relevant ecological factors because these provide us with insights in the flexibility and adaptiveness of the behavior of "our kinds of animals " (Wrangham *et al.* 1994).

In various countries philosophers and law theorists are advocating the attribution of a special status to nonhuman great apes (e.g., Cavalieri & Singer 1993, Peterson & Goodall 1993). This is based on the growing scientific conviction that these creatures have evolved personalities. This has led to the moral obligation to award them the constitutional status and legal rights of preverbal human children and mentally handicapped humans. New Zealand was the first country where this concept was put into law (Taylor & Leonard 1998).

The Current Condition of Great Apes in the Natural Environment

Introduction

Our closest relatives in the animal kingdom - the great apes of Africa, Borneo and Sumatra - are on the verge of extinction (Butynski 2000, IUCN 2000, Rijksen & Meijard 1999). It is doubtful that they can survive this century if we do not take vigorous actions.

During the latter half of the last century, all subspecies of great apes declined dramatically, and the situation is getting worse. Some experts are now predicting extinction over most of their current range during the next ten to twenty years (e.g. Amman *et al.* 2000). Habitat loss, forest fires, logging, hunting for bushmeat, war and the capture of live infants for sale have all contributed to this decline (Marshall *et al.* 2000).

Apes are protected by national laws in every country they inhabit, but there is a lack of enforcement capabilities in most ape range states. Outside protected areas, loss of forest to agricultural land and for fuel is rampant, causing direct loss of ape habitat and ape populations. This process can be expected to continue unabated until human populations reach stability, of which there is no sign in most ape range states.

Even in supposedly protected areas, poaching, illegal logging, and mining all harm vulnerable ape populations (e.g., Rijksen & Meijaard 1999). International law is also failing to protect apes. All non-human great apes are listed in Appendix I of CITES, which bans international trade for primarily commercial

purposes, and only the second generation individuals from artificially bred groups are allowed to be transported over national boundaries. However, the high monetary value that some people attach to captive apes acts as a constant lure to illegal traders and hunters. Moreover, the illegal commercial bushmeat trade - a portion of which involves ape flesh - continues largely unchecked within and between neighboring countries in Africa (Ape Alliance 1998, Amman 2000). Finally, war, civil unrest, and a breakdown in law and order have exacerbated the existing problems in several African countries and Indonesia.

Great Ape Survey Report

Recently, a group of experts made a survey of the conservation status of the great apes living in protected areas (Marshall *et al.* 2000). The result was much more pessimistic than had been expected. The Executive Summary of the Great Apes Survey reads as follows:

1. All of the great ape species are faced with extinction within this century unless action is undertaken immediately to counteract the threats they face.
2. The great apes are unusually susceptible to the major threats to survival, habitat destruction and illegal hunting, that face many of the animal and plant species alive today. This is because all great ape species reproduce slowly, live at extremely low population densities, and require large areas of protected land.
3. Ape populations are declining in 96% of the Protected Areas where active research programs are being conducted. These are the areas where apes have the most protection because there are typically on-site conservation programs in these Protected Areas. Therefore, if apes within Protected Areas are suffering substantial losses, apes outside protected areas have little hope for long-term survival.
4. Ape populations outside of Protected Areas with active research programs (i.e., most apes) are faced with extinction in the very near future (e.g., 10-50- years).
5. Apes in Protected Areas are highly susceptible to extinction due to random catastrophes, erosion of genetic variability, poaching, and other forms of human disturbance because of their small population sizes. The average size of Protected Areas in which great apes can be found is 2,700 km^2. With average ape density ranging from 0.3 -1.0/km^2, the average ape-containing Protected Area has a population of between 800-2700 apes. This small population size is insufficient to guarantee long-term survival.
6. Protected Areas in which formal conservation plans are being implemented are more likely to have slower rates of ape population decline. Therefore, greater on-site research presence and more funding for research and local conservation and development programs are likely to be the best ways to insure ape survival in African and Southeast Asian National Parks and Reserves.
7. While the future of the apes may seem bleak, concerted conservation effort has brought other long-lived, slowly reproductive species, such as elephants and whales, back from the brink of extinction.

Are Great Apes Being Protected by the Framework of World Heritage Sites?

The emergency of the extinction of our closest relatives should be broadcast to the public, and by mobilizing a heightened awareness new effective conservation measures must be urgently implemented. Since this is an international problem that affects all people on earth, the United Nations should take the initiative in planning the global conservation of the great apes. Of course, the United Nations has played a great role in conserving them by designating the World Heritage Sites (WHS) and the Biosphere Reserves (BR) for some of the important habitats of the great apes.

Great apes are distributed in tropical Africa and Asia (Nowak 1999). Habitat countries of gorillas are 9 African countries: Uganda, Rwanda, DRC (Democratic Republic of Congo), Congo, Equatorial Guinea, Gabon, CAR, Cameroon, and Nigeria. Chimpanzees inhabit 21 countries: Mali, Sudan, Senegal, Guinea, Guinea Bissau, Liberia, Sierra Leone, Cote d'Ivoire, Ghana, Angola, Burundi and Tanzania, in addition to the gorilla-inhabiting countries. Bonobos are confined to the DRC. Orangutans are distributed in two countries: Indonesia and

Malaysia. Orangutans inhabit 21 Protected Areas (PAs), while African great apes inhabit 63 PAs, which include three open sites "protected" by researchers.

Are non-human great apes celebrated by the United Nations? Table 2 lists all of the World Heritage Sites that harbor one or two species of great apes. Figure 1 shows their locations. Indonesia has three natural World Heritage Sites (WHS), namely Ujung Kulon National Park (abbreviated as NP hereafter), Komodo NP, and Lorentz NP, but none of them have orangutans. Uganda's two WHS (Bwindi Impenetrable NP and Rwenzori Mountains NP) harbors either both gorillas and chimpanzees or chimpanzees only. Cameroon has one WHS (Dja Faunal Reserve), which harbors both gorillas and chimpanzees. Cote d'Ivoire has two WHS sites, Tai NP and Comoe NP, both of which have chimpanzees. The Mount Nimba Strict Nature Reserve, located in Cote d'Ivoire and Guinea, harbors chimpanzees. The DRC has five WHS, and all of them (Virunga NP, Kahuzi-Biega NP, Garamba NP, Salonga NP and Okapi Wildlife Reserve) harbor either gorillas, chimpanzees, bonobos, or both gorilla and chimpanzees. Senegal has three WHS, one of which (Niokolo-Koba NP) harbors chimpanzees. Tanzania has four WHS, none of which have chimpanzees. CAR and Mali has one WHS each, neither of which harbors great apes.

In terms of the ape habitat areas, WHS occupy almost 50% of all protected areas inhabited by great apes (see Table 2 and 3). This is because WH great ape sites include the largest national parks and game reserves such as Salonga National Park, whose area amounts to 36,560 km^2. The mean area of the 11 WH sites with great ape habitats is 8,328 km^2, while that of the non-WH sites is only 1,141 km^2. Therefore, it could apparently be concluded that from the viewpoint of conserving African great apes, UNESCO has designated WHS efficiently. However, some of these big parks such as Virunga have no great apes at all within most of the park boundary. Since we have currently no information on the size of the area inhabited by great apes, we cannot help satisfying ourselves with the above calculation.

Moreover, it is difficult and not practical to designate all the great ape habitats as WHS since there will need to be a lot of discussions and negotiations among the people at stake if we dare to do so, which will require a decade or more by the time the final decision is made. Therefore, there is an urgent need for an alternative measure. By formulating a new concept of the World Heritage Species for the great apes, (1) each habitat country will be encouraged to make more stringent conservation plans for great apes, in particular, by placing capturing, eating and trading them under a ban, (2) CITES officials can

Table 2. Protected Areas of Great Ape Habitat Designated as World Heritage Sites

Country	Site	Status	Desig.	Area (km^2)	Pan tro sch	Pan tro tro	Pan tro ver	Pan pan gor	Gor gor gra	Gor ber ber	Gor ber ber	Gor ber ?	Head P tro	Head P pan	Head Gor
Senegal	Niokolo-Koba	NP, BR	1981	9130			x						150		
Guinea/Cote d'Ivoire	Mount Nimba	SNR/BR	1981	220			x								
Cote d'Ivoire	Tai	NP/BR	1982	3500			x						1800		
Cote d'Ivoire	Comoe	NP/BR	1983	11500			x								
Cameroon	Dja	GR/BR	1987	5260		x		x							
D.R. Congo	Okapi	GR	1996	13726	x										
D.R. Congo	Salonga	NP	1984	36560				x							
D.R. Congo	Garamba	NP	1980	4920	x										
D.R. Congo	Kahuzi-Biega	NP	1980	6000	x					x					250
D.R. Congo	Virunga	NP	1979	7800	x						x				280
Uganda	Rwenzori Mountain	NP/BR	1994	996	x								50		
Uganda	Bwindi Impenetrabl	NP	1994	321	x							x	100		300
Total				99933									2100		830
Mean				8328											

NP=National Park
GR=Game Reserve/Faunal Reserve
BR=UNESCO Biosphere Reserve
SNR=Strict Nature Reserve

be expected to take more vigorous action against border transgressions in the illegal trade of great apes, (3) foreign logging companies working in the ape habitats will be required to refrain from doing harm to great apes by their own governments, whose policies must conform to UN commitments, (4) developed countries such as Japan will be encouraged to use more ODA money for the conservation of great apes, and (5) by using great apes as the flagship species, more attention and resources will be granted to all of the PAs, which will facilitate the IUCN's basic concept of biodiversity/ecosystem conservation.

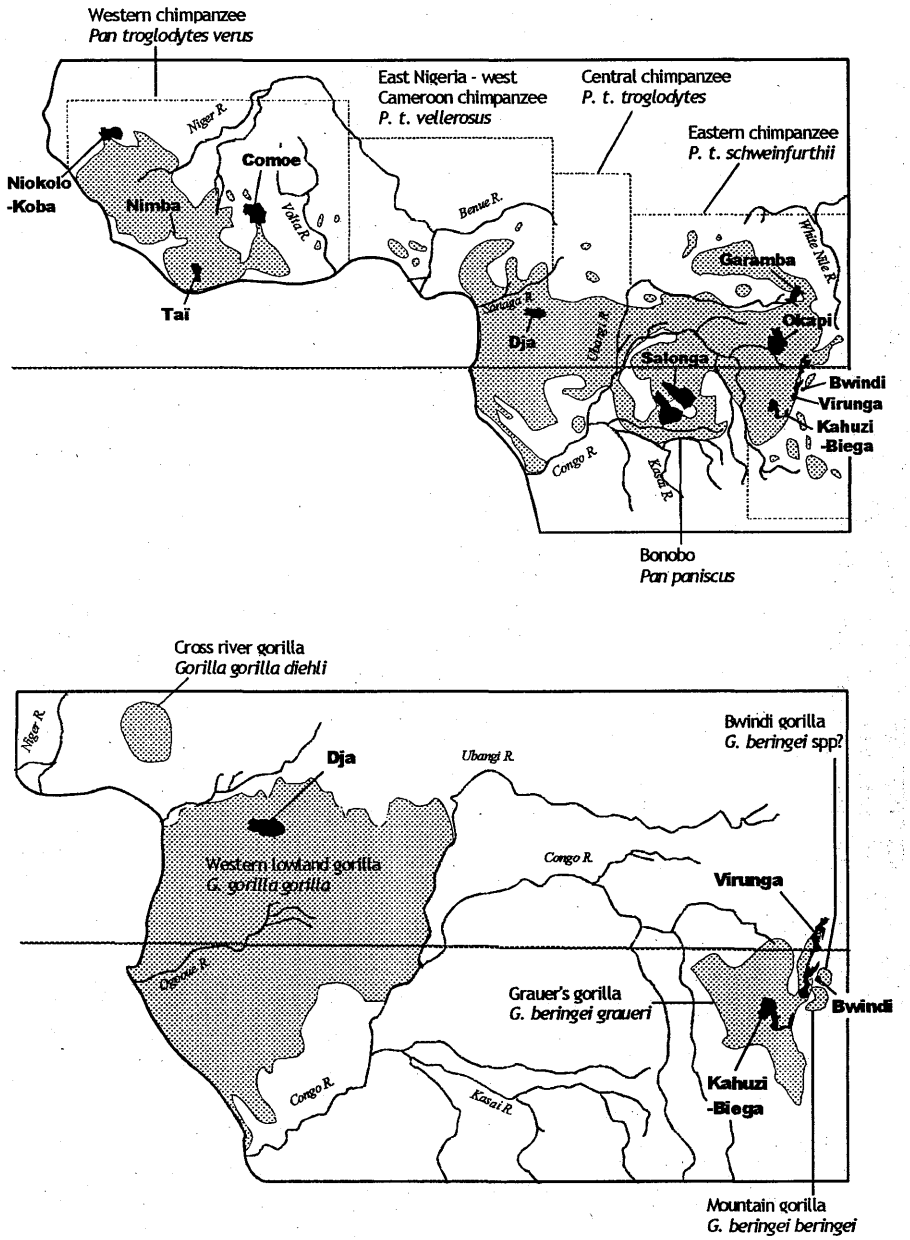

Fig. 1 Map of World Heritage Sites harboring great apes

Great Apes Play an Important Role in Biodiversity Conservation

There may be some argument that it is contrary to the current mainstream policy of biodiversity conservation to accord great apes special treatment. However, this is not the case for the following reasons.

1. Keystone species in tropical ecosystems

Great Apes live in forested areas and mainly eat fruits. They usually swallow the seeds along with the fruit's meat (Galdikas 1982; Kano 1992; Kuroda *et al.* 1996; Nishida & Uehara 1983; Watts 1996; Wrangham *et al.* 1994). In addition, they tend to select ripe fruits with fully developed seeds for their diet, so the seeds can germinate after they are passed in their feces. There are even evidence that the germination probability becomes higher When seeds have passed the gut of great apes than when they have not (Takasaki, 1983). Great apes travel great distances and visit many different types of vegetation (Suzuki 1969, Yamagiwa *et al.* 1996). This not only broadens the distribution of these plants but also serves as a means of sowing the seeds of new forests in areas where vegetation has been destroyed by human beings. In other words, the great apes serve a very important function in reforestation.

Since great apes need a large area to survive, if they are to be protected at all, other smaller animals and plants will also be preserved. They

Table 3. All of the Protected Areas/Research Sites of Great Apes

Country	Site		Area (km^2)	Pan tro ver	Pan tro vel	Pan tro tro	Pan tro sch	Pan pan	Gor gor die	Gor gor gor	Gor ber gra	Gor ber ber	Pon pyg pyg	Pon pyg abe	Head Pan	Head Gor	Head Pon	Sources
Senegal	Niokolo-Koba	NP/WH/BR	9130	x											150			
Guinea	Bossou	OA	30	x											20			
Guinea	Diecke	FR	700	x														
Guinea/Ivory Coast	Mount Nimba	SNR/WH/BF	220	x														
Sierra Leone	Tiwai Ilsand	GR	12	x											50			
Sierra Leone	Gola	GR	745	x											75			
Sierra Leone	Outamba-Kilimi	NP	808	x											70			
Liberia	Sapo	NP	1000	x														
Cote d'Ivoire	Tai	NP/WH/BR	3500	x											1800			
Cote d'Ivoire	Comoe	NP/WH/BR	11500	x														
Cote d'Ivoire	Azagny	NP	190	x														
Cote d'Ivoire	Marahoue	NP	1010	x														
Cote d'Ivoire	Mont Peko	NP	340	x														
Ghana	Ankasa	GPR	343	x														
Ghana	Nini-Souhien	NP	160	x														
Ghana	Bia	NP/BR	78	x														
Togo	Fazao-Malfakassa	NP	1920	x														
Nigeria	Akure	SNR	32		x													
Nigeria	Gashaka-Gumti	NP	5860		x													
Nigeria	Omo	FR			x													
Nigeria	Afi Mountains	WS			x				x							25–30		J. Oates
Nigeria	Cross River	NP	4000		x				x							20–25		J. Oates
Cameroon	Takamanda	FR	700		x				x							60–85		J. Oates
Cameroon	Mone River	FR							x							<50		J. Oates
Cameroon	Dja	GR/WH/BR	5260			x				x								
Cameroon	South Bakundu	FR				x												
Cameroon	Korup	NP	1259			x												
Cameroon	Nki	PCA	1858			x				x								
Cameroon	Bwombi-Mwo	FR				x												
Cameroon	Kimbi	GR	56															
Cameroon	Lobeke	NP	2000			x				x								
Cameroon	Douala-Edea	GR	1600			x				x								
Cameroon	Campo	GR	3000			x				x					75	250		
CAR	Dzana-Sangha	PCA	3159			x				x								
CAR	Dzanga-Ndoki	NP	1222			x				x								
Congo	Nouabale-Ndoki	NP	3866			x				x								
Congo	Conkouati	GR	1443			x				x								
Congo	Lekoli-Pandaka	GR	682			?x				x								
Congo	Odzala	NP/BR	1266			x				x								
Gabon	Lope	GR	5360			x				x					1250			
Gabon	Petit Loango	GR	500			x				x								
Gabon	Wonga-Wongue	PR	480			x				x								
Gabon	Minkebe	PCA	6000			x				x								
Gabon	Mont Doudou	GR	3320			x				x								
Gabon	Ipassa-Makokou	SNR/BR	150			x				x								
Gabon	Moukalaba-Dougoua	GR	800			x				x								
Eq. Guinea	Monte Alen	NP	1400															
DRC	Lomako	OA	30					x										
DRC	Salonga	NP/WH	36560					x										
DRC	Luo	OA	350					x										
DRC	Parc Bososandja	?						x										
DRC	Garamba	NP/WH	4920				x											
DRC	Itombwe	?	162				x				x							
DRC	Okapi	GR/WH	13726				x											
DRC	Kahuzi-Biega	NP/WH	6000				x			x						250		
DRC	Maiko	NP	10830									x						
DRC	Virunga	NP/WH	7800				x				x					280		

Sudan	Bire Kpatous.	GR	5000	x								
Uganda	Rabonogo (Murchison Fall?)	NP	200	x						20		
Uganda	Budongo	FR	825	x						600		
Uganda	Bugoma	FR	365	x						450		
Uganda	Kasato	FR	250	x						100		
Uganda	Kagombe	FR	300	x						100		
Uganda	Itwara	FR	90	x						100		
Uganda	Kibale	NP	560	x						550		
Uganda	Semliki-Toro	GR	548	x						200		
Uganda	Rwenzori Mountains	NP/WH/BR	996	x						50		
Uganda	Dura R., E. Kasese	NP	200	x						30		
Uganda	Kashosha-Kitomi, Kyambura	GR & NP	399	x						500		
Uganda	Kalinzu-Maramagambo	FR & NP	580	x						350		
Uganda	Bwindi Impenetrable	NP/WH	321	x		x				100	300	
Uganda	Mgahinga	NP	29				x					
Uganda	Kigezi	GR	328									
Rwanda	Volcans	NP/BR	140				x					
Rwanda	Gishwati	FR	61	x						30		
Rwanda	Nyungwe	FR	900	x								
Burundi	Kibira	NP	400	x						225		
Burundi	Bururi	FR	33	x						50		
Burundi	Rumonge	NR	50									
Tanzania	Mahale Mts.	NP	1577	x						700		
Tanzania	Gombe	NP	52	x						100		
Tanzania	Ugalla-Tongwe East	FR	2800	x								
Indonesia	Gunung Leuser	NP	4513					x				5070
Indonesia	Siranggas	GR	17					x				15
Indonesia	Dolok Surungan	GR	47					x				30
Indonesia	Dolok Sipirok	NR	21					x				57
Indonesia	Sibual-buali	NR	15					x				21
Indonesia	Barumun	GR	104					x				186
Indonesia	Rimbo Panti	NR	9					x				10
Indonesia	Gunung Palung	NP	250				x					143
Indonesia	Gunung Niut	NR	30				x					17
Indonesia	Danau Sentarum	PCA	149				x					99
Indonesia	Bentuang Karimun	NP	1310				x					1330
Indonesia	Bukit Baka	NP	142				x					81
Indonesia	Bukit Raya	NP	165				x					220
Indonesia	Tanjung Putting	NP/BR	753				x					488
Indonesia	Kutai	NP	486				x					277
Malaysia	East Tabin	WR	63				x					42
Malaysia	Kulamba	WR	62				x					99
Malaysia	Crocker Range	NP	29				x					29
Malaysia	Kinabalu	WR	51				x					25
Malaysia	Danum Valley	?	131				x					224
Malaysia	Lanjuk Entimau	WS	217				x					349
Total			192905							7745	1235	8812
Mean			1989									

NP: National Park, parc nationale
PR: Presidential Reserve
GR: Game Reserve, Faunal Reserve, reserve de faune
GPR: Game Production Reserve
WR: Wildlife Reserve
NR: Nature Reserve
WS: Wildlife Sanctuary
FR: Forest Reserve, Central Forest Reserve, reserve forestiere
SNR: Strict Nature Reserve
BR: Biosphere Reserve
PCA: Proposed Conservation Area
OA: Open Area with long-term ape research

can play a crucial role as the keystone species for biodiversity conservation.

2. Flagship species in tropical ecosystems

Being large and resembling humans, great apes are very popular with people, especially children (Morris & Morris 1966). This popularity indicates the World Heritage potential of these species, since the public clearly cares for great apes. As such, they can become the Flagship species that can represent the tropical ecosystems. The utility of the popularity of great apes in the biodiversity conservation cannot be stressed too much.

3. Eco-tourism as a sustainable relationship with great apes

Tourism programs with gorillas and chimpanzees in Rwanda, DRC, Tanzania and Uganda have been successful (Weber 1993, Nishida *et al.* 2000). Orangutan rehabilitation centers have attracted a great number of tourists from all over the world (Rijksen & Meijard 1999). Although careful monitoring of the habituated population is necessary to prevent the transmission of diseases from human to nonhuman great apes (Wallis & Lee 1998), the ape-based eco-tourism could provide a good income for the local communities on which they depend for survival on a long-term basis, in addition to earning precious foreign currency. This is a sustainable relationship between humans and great apes. However, because the great ape habitats largely fall outside of current World Heritage Sites, they remain particularly vulnerable to human persecution.

Global Conservation Strategy for the Great Apes and Action Plans

Introduction

There is an urgent need for the development and implementation of a global conservation strategy to save all great ape populations within their dynamic and evolving natural eco-systems. Currently, conservation efforts are being made in a piecemeal fashion, where opportunities present themselves and resources are available. Such efforts would have a greater impact if they were seen to be part of a systematic approach to a globally defined problem, while still taking into account local circumstances. Such a global strategy must also be integrated with the development objectives of range states and be sympathetic to the needs of local communities.

The Global Strategy will give cohesion to the existing work of many agencies, organizations and individuals; this will allow resources to be used more effectively and help to identify areas that are currently neglected. The UNEP has shown a leadership in this line by having announced the Special Envoy for the Great Apes and GRASP (the Great Ape Survival Project) in May 2001. Thus, it would not be an insurmountable task to identify what needs to be done to ensure the survival of those ape populations.

Aims and Objectives

The prime purpose of the Global Strategy is to coordinate efforts to halt the decline in great ape populations and to ensure their long-term survival in their natural habitat. Where possible, this should be done in tandem with the sustainable development objectives of the Great Ape Range States. To achieve this aim, the following steps must be taken:

1. At the level of the United Nations

(1) Formulate the concept of the World Heritage Species, apply the concept to the great apes, and officially accept global responsibility for their conservation.

(2) Undertake an investigation into the role of foreign companies in the bushmeat trade and act to protect the great apes from incidental extermination.

(3) Appoint a Special Envoy (SEGA) and National Ambassadors (NAGA) for the Great Apes. The SEGA is responsible for the formulation and implementation of the Global Great Ape Conservation Plan to halt the decline in great ape populations and to ensure their long-term survival in their natural habitat in harmony with a sustainable lifestyle of the local communities. SEGA will liaise with, and coordinate efforts between, Range States, other inter-governmental bodies (e.g. CITES, CBD, ITTO, FAO), aid agencies, donor countries, and NGOs with

relevant projects in great ape range states. SEGA will achieve this by hosting regular meetings of the NAGAs, other conservation specialists, and scientists to integrate information from all of the range countries and monitor the progress of conservation activities. SEGA will reside in the capital of one of the Range States. In its initial work, a task of the utmost priority is to investigate the role of foreign companies in the bushmeat trade and to act to prevent future involvement.

The NAGA, as an experienced supervisor for conservation residing in each habitat country or area, should help to establish the national Great Ape Survival Plan (GASP) and monitor the implementation of GASP until great apes are protected effectively. This will need to be done with a reasonable budget that is supported by national and international communities.

GASP should include law enforcement, strict prohibition of hunting, eating and trading great apes, monitoring of the current situation of the great apes including land use in their habitat such as firewood collection and agriculture, advice on how to reduce damage by subsistence activities, technical advice on sustainable exploitation of the forest, building sanctuaries that accomodate orphans, and alternative economic plans, such as eco-tourism and use of non-timber forest resources. In particular, GASP should include a powerful campaign and education measures to broadcast that *No Eating of Apes* to be permitted; *No Trade in Apes* to be permitted; and *No Capturing of Apes*, except for their benefit or to protect humans.

2. At the level of the Great Ape Range States

At a National Level:

The government of each Great Ape Range State should develop, adopt and implement a national Great Ape Survival Plan (GASP). The NAGA should work with the government in a range country to establish the national GASP. This would gather and organize the current knowledge of each species' population and distribution, relevant legislation, and other pertinent factors. Where deficiencies are found, research would be undertaken to remedy them within a designated time frame.

Each GASP would seek to:

(1) Determine the current situation and recent trends of each ape population and of all remaining ape habitats. Where this information is lacking, immediate surveys should be undertaken to provide this basic data. The GASP should include maps to show the extent of ape habitat now and in the recent past, with national parks and reserves superimposed. Recommendations should be made to:

- Improve the level of protection of all areas of ape habitat.
- Maximize the area of habitat available to apes (not necessarily in National Parks if multiple uses are possible that are compatible with ape conservation and welfare).
- Reclaim corridors of land between fragmented areas of ape habitat.

(2) Assess the existing national legislation to establish whether it adequately protects great apes and their habitat and recommend revisions or new laws where necessary to achieve the following objectives:

- The hunting, eating, trading and private ownership of apes as well as the destruction of ape habitat should be illegal.
- The harvesting of timber and non-timber forest products, mining of minerals, building of roads and buildings and agricultural development should be permitted in areas of ape habitat only where such activities and their consequences are not detrimental to the survival of the apes.

(3) Assess the level of law enforcement and, where this is inadequate, identify and recommend measures needed to protect great apes and their habitat, for example:

- Where necessary, law enforcement agencies (police, customs, wildlife officers and rangers, etc.) should be given increased manpower, training, equipment and resources.
- Where communities live in or adjacent to ape habitat, measures should be taken to encourage active participation in ape conservation.

(4) Assess the environmental impact on great apes of extractive industries such as logging, mining, and oil exploration. Then, in conjunction with the appropriate government ministries, CEOs of the companies concerned, and development agencies such as the World Bank

and the EU, identify ways to mitigate this impact, for example:

- Logging concessions should be awarded for periods longer than the generation time of the tree species being harvested, to encourage long-term planning.
- The awarding of contracts should be contingent upon the activity being ecologically sustainable.
- The workforce of the company should not engage in, nor be nutritionally dependent upon, hunting for bushmeat.
- Access roads should be disabled after use, unless they are part of a planned road network with appropriate measures to control the commercial bushmeat trade.

(5) Encourage the development of sustainable projects to benefit people living in or near great ape habitat, such as eco-tourism based on carefully controlled ape-watching and use of non-timber forest products. Ape-tourism has already been developed with mountain gorillas in DRC and Rwanda and some populations of chimpanzees in Tanzania and Uganda. Apes are seen as an important economic resource that can improve the lives of neighboring communities.

At an International Level

Each Great Ape Range State should:

(1) Develop cooperative efforts with other Range States, in particular where areas of ape habitat are contiguous with similar areas in neighboring countries so that trans-frontier conservation agreements can be implemented. There should be no trade in bushmeat, live infants, or other ape products between countries.

(2) Participate in and cooperate with inter-governmental agreements such as CITES,CBD, ITTO, and FAO. In particular, the range states should support such initiatives as the CITES Bushmeat Working Group and the Lusaka Agreement Task Force for fighting wildlife crime.

(3) Include ape conservation as a key factor in programs funded by multi-lateral and national aid agencies. In particular, the government should conduct rigorous and transparent Environmental Impact Assessments (EIA) prior to any major development initiatives in or around ape habitats. The NAGA or designated person should be involved in EIA.

(4) Consult with and agree appropriate work plans with all stakeholders, including local communities and relevant NGOs, to ensure that they share ownership of the GASP.

3. At the Level of Donor or Developed Countries

(1) Governments of the developed countries (GODC) such as France, Germany, Japan and Malaysia that have logging companies in the great ape habitats should require these companies to adopt a Code of Conduct designed to minimize the impact of their activities on wildlife. The Code of Conduct should be worked out with the Government of the host country.

(2) GODC should allocate substantial amount of ODA money to support, where needed, the implementation of the GASP by each habitat state and provide support for training and capacity building. It will also be important for GODC to communicate serious concern over great ape conservation to habitat countries when negotiating local ODA plans. Where political will is not forthcoming, ODA should be reassessed and, if necessary, reduced or cancelled.

(3) GODC should financially help the newly formed CITES Bushmeat Working Group to bring the international component of the illegal bushmeat trade under control.

(4) GODC should provide more research funds to encourage field scientists to conduct scientific research on the great apes in various parts of Africa, Borneo and Sumatra. The US has recently passed the Great Ape Conservation Act, which will provide funding for some of the initiatives needed. It has become apparent that the presence of researchers in the field is one of the most effective ways to increase conservation of great apes, in addition to the benefits of gathering vital information on the current conditions of the great apes.

(5) Importers and consumers of tropical timber should ensure that all such timber has been certified by a body such as the Forest Stewardship Council (FSC) as being harvested from sustainably managed forests. Timber lacking this certification should be denied import permits.

Budget for Action Plan Expected of UNESCO

1. The Office of the Special Envoy for Great Apes.

The office of the Special Envoy for Great Apes, to be established in the capital city of one of the African range states, such as Libreville, at an annual cost of USD 135,000.

2. The Offices of National Ambassadors.

At least 10 prominent primatologists or conservationists resident or active in the country/region should be appointed as national ambassadors for great apes. Each ambassador should be assisted for residence, office and salary by each habitat country or NGOs. However, ambassador's cost of travel and communication with the SEGA, the fellow NAGAs and UNEP should be provided by the UN. Each NAGA should be provided with USD 10,000 for such cost. The following countries or areas should be considered as sites for the ambassadors.

(1) Far Western Africa (in charge of Senegal, Mali, Guinea Bissau, Guinea, Sierra Leone, and Liberia)
(2) Cote d'IVoire (Cote d'IVoire, Ghana, and Nigeria)
(3) Cameroon
(4) Gabon (Gabon, Equatorial Guinea, and Angola)
(5) Congo (Congo and Central African Republic)
(6) West DRC (left bank and north-west area of right bank of Congo River)
(7) East DRC (north-east area of right bank of Congo River, Eastern part of DRC, and Sudan)
(8) Eastern Africa (Uganda, Rwanda, Burundi, and Tanzania)
(9) Sumatra (Indonesia)
(10) Borneo (Indonesia and Malaysia)

3. Annual Funds Requested

Special Envoy	
Salary	$60,000
Salary for secretary	$20,000
Cost for activities	$40,000
Office	$15,000
Total	**$135,000**
Ambassador (per position)	
Travel and communication costs	$10,000
Total (=x10)	**$100,000**
Annual Meeting	
Travel cost	$30,000
Conference rooms, etc.	$5,000
Total	**$35,000**
Overall total	$270,000

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