

**“The University of Tokyo” Part**  
**at Yayoi Auditorium Ichijo Hall, The University of Tokyo**  
**November 13, Thursday**

**13:00μ 13:20            Opening Remarks**  
 Tetsuro Matsuzawa (PRI, Kyoto University)

**13:20μ 15:00            “Zoo and Enrichment” Section**

**Chair:** Yoshikazu Ueno (PRI, Kyoto University)

**Speakers:**

Jon Charles Coe (CLR design Inc.)

Darma Jaya and Made Wedana (The Schmutzer Primate Center, Ragunan Zoological Park)

Hidetoshi Kurotori (Tama Zoological Park, Tokyo)

**Discussant:**

Kenji Wako (Osaka University of Arts)

**15:30μ 17:30            “Conservation in Natural Habitat” Section**

**Chair:** Hiroshi Ihobe (Sugiyama Jogakuen University)

**Speakers:**

Debby Cox (Chimpanzee Sanctuary and Wildlife Conservation Trust)

Ian Redmond (UNEP/UNESCO Great Ape Survival Project)

Roberto Delgado (City University of New York)

Takeshi Furuichi (Meiji-Gakuin University)


**Discussant:**

Juichi Yamagiwa (Kyoto University)

**18:00μ 19:00            Welcome Party**

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**13:00μ 13:20**



**13:20μ 15:00**



Jon Charles Coe (CLR design Inc.)

Darma Jaya and Made Wedana (The Schmutzer Primate Center, Ragunan Zoological Park)







**15:30μ 17:30**





Debby Cox (Chimpanzee Sanctuary and Wildlife Conservation Trust)

Ian Redmond (UNEP/UNESCO Great Ape Survival Project)

Roberto Delgado (City University of New York)







**18:00μ 19:00**





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Debby Cox (Chimpanzee Sanctuary and Wildlife Conservation Trust)  
Ian Redmond (UNEP/UNESCO Great Ape Survival Project)  
Roberto Delgado (City University of New York)

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Jon Charles Coe (CLR design Inc.)  
Made Wedana and Darma Jaya (The Schmutzer Primate Center, Ragunan Zoological Park)

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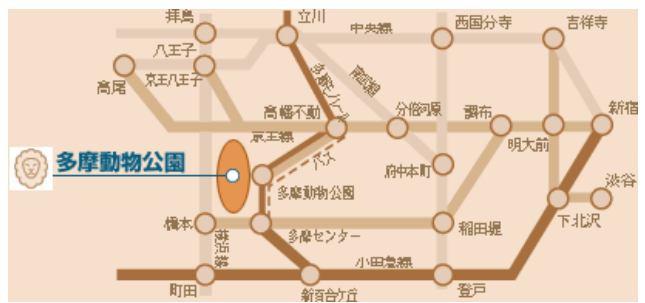
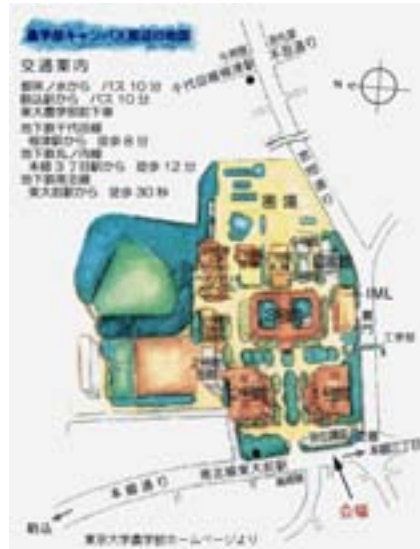
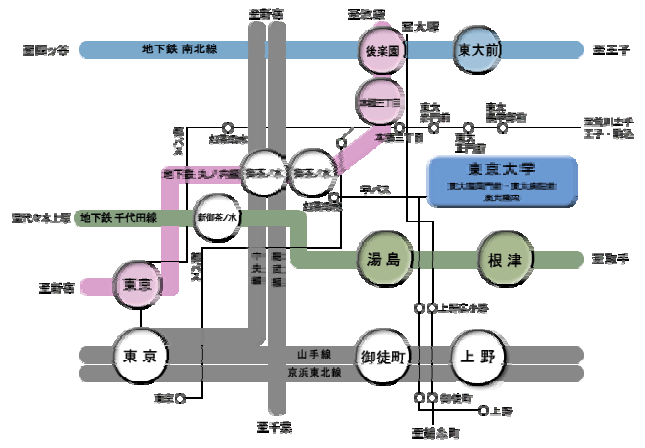
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**Abstracts for**

**"Zoo and Enrichment"**

**"Conservation in Natural Habitat"**

**November 13, Thursday**

**13:00—17:30**

## November 13, Thursday at The University of Tokyo

### “Zoo and Enrichment”

#### ADVANCES IN GREAT APES FACILITY DESIGN

Jon Charles Coe

*CLR design Inc., USA*

Landscape immersion design revolutionized the way great apes are displayed in the mid 1970s and is becoming the international standard. More recent trends such as Activity-Based Design provided both the "hardware"(facilities) and "software" (behavioral management) to increase ape activity levels. Affiliative Design concepts encourage affiliative behavior between apes and zoo guests. These trends and future directions such as development of multi-male Gorilla groups and allowing apes greater levels of choice and self-determination will be discussed.

#### The Schmutzer Primate Center: Supporting Indonesian Primate Conservation

Darma Jaya and Made Wedana

*The Schmutzer Primate Center, Ragunan Zoological Park, Indonesia*

The Schmutzer Primate Center in Ragunan Zoological Park, Jakarta was donated to the Jakarta City by the late Mrs. Puck Schmutzer, an animal lover, and The Gibbon Foundation with which she was involved. DR. Ir. Willie Smits the current Director of The Gibbon Foundation then continue to completed development of the primate center, named The Schmutzer Primate Center or Pusat Primata Schmutzer.

Philosophy

We Strive to provide the best for primates and visitor.

Collection

The collection of the center mostly are Indonesian species and those species mainly came from confiscation program in Indonesia, except for non-Indonesian species such as Gorilla, and Japanese Macaques.

The Primate Center Collections:

Great apes: Gorilla, Orangutan, Chimpanzee

Gibbons: All Indonesian gibbons species

Leaf monkeys and Macaques: Several species of Indonesian leaf monkeys and macaques (including Sulawesi macaques).

Prosimian: Indonesian prosimian (Slow loris and tarsiers).

Holding Facility

The Gorilla enclosure is about 1 Ha inhabited four male Gorillas donated from Howletts Nympe Parks, England. Orangutan enclosure is about 1.9 Ha currently inhabited 9 Orangutans and will be hold about 30 Orangutans in the future.

The Chimps/Bonobo enclosure is the next and could be the biggest great ape enclosure in the center is about 3 ha and will be finished in 2005.

Several cages are built to hold other primates like Gibbons, leaf monkeys and prosimian.

Supporting Facilities

Education facility: Theater, children rooms, multimedia room, library, play ground, adventure trail (with canopy bridges) available to teach visitors and students about primates life history.

Clinic and Nursery: (under construction)

Quarantine facility: 30 rooms available for primate at the quarantine.

Guest House: 3 rooms available for guest who want to stay in the primate center.

#### New Ape Facilities and Enrichment at Tama Zoological Park

Hidetoshi Kurotori

*Tama Zoological Park, Tokyo*

Presently 3 species of great apes (chimpanzees, orangutans and gorillas) are kept in Japanese zoos. However, many of zoos are faced with the problems of aging and subspecies, as a result the total domestic population is slowly decreasing. Our thinking of animal welfare to care the captive animals has been gradually changed for the last several decades in zoos of Japan as well. Many caregivers are making efforts themselves to provide them with enriched and natural environments as possible through animal husbandry. To keeping great apes, caregivers are also devising many creative techniques to encourage their behavior in Japanese zoos.

Since 1989 the Tokyo Metropolitan Government (T.M.G) was forwarding the "Zoo Stock Plan" in order to ensure the survival of species by constructing new facilities in zoos. With respect to great apes, the Tama Zoological Park takes charge of chimpanzees and orangutans while the Ueno Zoological Gardens is responsible for gorillas. But every ape facilities which built in 1970 or so, became too old for use, for that purpose we projected new ape exhibits in the Tama and Ueno Zoo.

First of all in great ape facilities in Tokyo M.G., renewal gorilla house called "Gorilla Forest" has accomplished in 1996 instead of an old house with concrete at the Ueno Zoo passing over 5 years. We accepted "Landscape Immersion" for gorilla enclosures in order to provide a more natural environment on this big project. Gorilla exhibit at the Ueno Zoo has 2 outside enclosures for visitors, and holding areas using high technology are not for display use, and so built under the ground making sure of large space to spend a troop. At that time, from 1980s till 1990s, it is very popular with western zoos to accept this technique, and it is still continued to receive many zoos of the world.

On the other hand, since 1980s in chimpanzee enclosure, the Tama Zoo tried to set up a lot of environmental enrichment got a hint from wild. The enrichment items are as following; "Stone Tools", "Artificial Termite Mounds", "UFO Catcher", "Quiz Trees", "Puzzle Tube", and "Mirrors". New Chimpanzee exhibit called "Chimpanzee Forest" had completed in spring of 2000, however, it is quite difference from the "Gorilla Forest" of Ueno. We have set up 2 tall towers and more artificial tools in this chimpanzee enclosure to enhance their active behavior. An "Artificial Termite Mount" and "UFO Catcher" using until now has improved more useful, these "Stone Tools", "Quiz Trees", "Puzzle Tube", and "Mirrors" are also set up, above all, some chimpanzees are able to catch a can of juice from a "Vending Machine" in exchange for a coin in ape enclosure, and there visitor can observe the highly-developed abilities of chimpanzees.

ç çIn Orangutan facility we had set up an "Artificial Honey Nest" for environmental enrichment for display's sake since 1980, unfortunately Orangutan House became too old for use, we decided to improve as some renewal ape facilities called "Orangutan Forest (tentative name)". We aim to keep natural landscape around the

Tama Zoo as concerns construction. And then to build fascinate facilities we are going to introduce many artificial tools to see active orangutans, moreover to enhance their abilities for environmental adaptation on trees we are planning to construct some tall towers from an enclosure to isolated near-nature enclosures freely using rope of towers. These ideas on the foundation of towers have already built in Washington National Zoo, U.S.A. and Asahiyama Zoo, Hokkaido, Japan. All of 6 orangutans had already moved to previous old chimpanzee

house on May 2003, starting in September 2003. Orangutan and Sun Bear House had been destroyed, and new holding area and indoor exhibits will be completed by the end of March 2004. The following year 1st, 3rd, 4th outside enclosure, 8-9 towers and isolated detached territory will be finished.

I will be speaking about an environmental enrichment until today at the Tama Zoological Park, and I would like to present a conception of new "Orangutan Forest" in this time.

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## November 13, Thursday at The University of Tokyo

### "Conservation in Natural Habitat"

#### **Holistic approach to conserving chimpanzees in Uganda**

Debby Cox

*Chimpanzee Sanctuary and Wildlife Conservation Trust, Uganda*

Conservation of Great Apes requires a multitude of conservation and economic activities in order to succeed. The complexities of conservation of great apes in Africa requires many strategies, including habitat protection, law enforcement and compliance, education and awareness, chimpanzees welfare, and community development. By addressing all these together and dealing with the root causes and not symptoms, we are more likely to have positive long term effects on conserving the remaining wild populations of chimpanzees in Uganda. Over the past seven years, the Jane Goodall Institute in Uganda have been concentrating on the priorities identified in the 1997 Population and Habitat Viability Assessment hosted by CBSG. To date, we have projects in three of the four major forest blocks where chimpanzees are found in Western Uganda. This paper will describe these activities and their positive impact on the survival of chimpanzees in Uganda.

#### **GRASP - the last chance for Great Ape survival (*Gorilla gorilla*, *Gorilla beringei*, *Pan troglodytes*, *Pan paniscus*, *Pongo pygmaeus*, *Pongo abelii*).**

Ian Redmond

*UNEP/UNESCO Great Ape Survival Project, UK*

The dawn of the new millennium does not bode well for our closest relatives in the animal kingdom - the Great Apes of Africa, Borneo and Sumatra. During the last four decades of the 20th century, scientists gained a greater understanding of apes than ever before. And yet during the same period, most populations of wild Great Apes declined dramatically. Many experts are now predicting extinction over most of their range during the next 10 to 20 years. Habitat loss, forest fires, logging, hunting for bushmeat, war and the capture of live infants for sale, have all contributed to this decline. Great Apes are protected by national law in every country they inhabit, but there is a lack of enforcement capacity in most Great Ape range-states. Even in supposedly protected areas, poaching, illegal logging and mining all impact on vulnerable ape populations. International law is also failing to protect Great Apes. All non-human apes are listed on Appendix I of CITES, which bans international trade for primarily commercial purposes, but the high monetary value which some people attach to captive Great Apes acts as a constant lure to illegal traders and hunters. And the illegal commercial bushmeat trade - a proportion of which involves Great Ape meat - continues largely unchecked within and between neighbouring countries in Africa. Finally, war, civil unrest and a

breakdown in law and order have exacerbated the existing problems in several African countries and Indonesia. There is an urgent need for the development and implementation of a global conservation strategy for all Great ape populations, within their dynamic, evolving, natural eco-systems. The GRASP initiative of UNEP and UNESCO is a response to this need. GRASP's strategy is to give cohesion to the existing work of many agencies, organisations and individuals; by means of National Great Ape Survival Plans, drawn up by governments with the collaboration of all stakeholders, it will enable the application of resources to be prioritised more effectively and identify areas that are currently neglected. The prime purpose of GRASP is to co-ordinate efforts to halt the decline in Great Ape populations, and to increase funding to implement the actions necessary to ensure their long-term survival in their natural habitat.

#### **Communication and Conservation in Orangutan Societies**

Roberto Delgado

*Dept of Anthropology, Hunter College, City University of New York, USA*

Despite previous long-term behavioral studies, a full understanding of the social organization and reproductive strategies of orangutans has been difficult to achieve due to their extended life histories, large home ranges, predominantly arboreal lifestyles and semi-solitary natures. However, because adult individuals are normally dispersed and visibility is limited within their rainforest habitats, long distance vocalizations probably play an important role in regulating individual relationships and social interactions, including reproduction. I used behavioral observations, acoustic analyses and field playback experiments to test predictions for the signal content of male orangutan long calls and to examine potential functions in Bornean and Sumatran populations. The data indicate that 1) orangutan long calls contain sufficient variation to identify males 2) subjects distinguish between classes of familiar and unfamiliar individuals and 3) males indicate their subsequent travel direction. Together, these features are consistent with the hypothesis that long calls serve as a coordinating signal between dispersed parties and have multiple receiver-dependent functions within orangutan communities.

Further study of the possible functions of orangutan communication is not only threatened by habitat loss, poaching and the illegal trade in exotic animals, but also by political and social unrest. However, long distance vocalizations themselves can be used as tools in the conservation efforts to protect the critically endangered orangutan. Acoustic differences between males allow for monitoring of population stability over time. In addition, if

there are ecologically dependent energetic costs associated with signaling, then measures of vocal production may reflect relative habitat quality. Furthermore, variation between sites in acoustic features and calling behaviors probably reflect genetic differences and, thus, the extent of isolation between populations. Finally, censusing techniques such as nest counts can be complemented with vocal surveys that also reliably provide approximate local population density estimates. Hence, communication is key to conservation.

### **Resumption of Bonobo Research and Future Perspective**

Takeshi Furuichi

*Faculty of International Studies, Meiji-Gakuin University*

As the closest relative of human being, studies on ecology and social behavior of bonobos had provided valuable information for the understanding of human evolution. However, most of studies on wild bonobos were interrupted in 1996, when civil war broke out in D.R. Congo. Because bonobos live only in D.R. Congo, we were afraid that there might not be any more chance to study wild bonobos if the war would be prolonged and the habitat for bonobos

would be destroyed.

Fortunately, however, the forces fighting in D.R. Congo basically agreed with ceasefire in 2002. Many researchers returned to their study sites, while some created new study sites.

In August 2002 and August 2003, I visited Wamba area where we had been carrying out studies since 1974, by the financial support of National Geographic Society. Fortunately, many of members of our study group were still alive, and they were not scared at human observers in spite of our long absence. However, there is a report from another study site that the density of bonobos decreased to the half of the density before the war. Standing on the new start lines for bonobo studies, we have a lot of things to do, including the confirmation of current distribution of bonobos, establishment of the system to prevent poaching that have become more popular during the war, and support for education, medical care, and roads and bridges for the local community.

In this presentation, I will report on the current activities for research and conservation, and on my latest trip to Wamba in this August.



## 招待講演者紹介および講演要旨


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11 月 14 日（金）

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




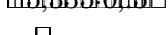





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CHIMPANZEE SANCTUARIES: GUIDELINES  
 AND MANAGEMENT WORKSHOP REPORT  
 (2000) N. Rosen, C. Montgomery, U. S. Seal   




GRASP

the Born Free Foundation, <http://www.bornfree.org.uk/>

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*Gorilla gorilla, Gorilla beringei,*

*Pan troglodytes, Pan paniscus, Pongo pygmaeus, Pongo abelii*


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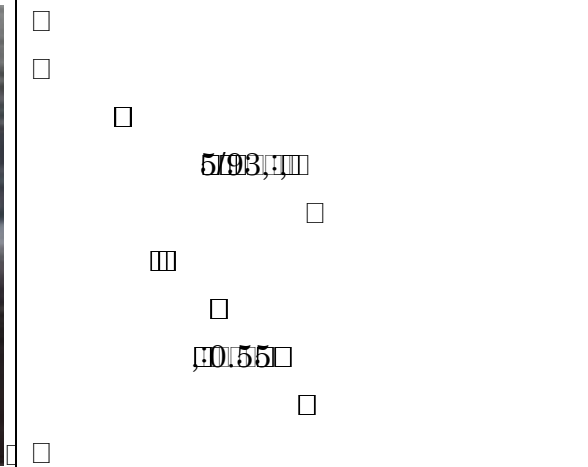
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Chimpanzee Facility Design (2001) L. Brent **B**w *The Care and Management of Captive Chimpanzees* *t* □ R. Fulk, R. Brent **w** □  
 Facility Design for Captive Bachelor Gorillas (h<sup>α</sup> ) *Zoo Biology* *t* □  
 Steering the Ark Toward Eden- Facility Design for Animal Well Being (h<sup>α</sup> ) *Journal of American Veterinary Medical Association* *t* □

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**市民 ZOO ネットワーク  
「エンリッチメント大賞」  
受賞者講演要旨**

**11 月 14 日（金）**

**13:00—14:00**



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## **NGO,NPO 活動報告講演要旨**

**11 月 14 日（金）**

**14:10—17:15**

## 市民ZOOネットワークの活動について

2003年11月14日  
市民ZOOネットワーク  
代表理事 牧慎一郎

### ○ 市民ZOOネットワークについて

市民ZOOネットワークは、動物園などを通じて人間と動物の関係を見直す機会を提供し、人間と動物をとりまく環境に対する意識を高めつつ、動物園と市民と飼育動物とをつなぐネットワークを形成することを目指すNPOです。2001年8月から活動を開始し、2003年11月現在、約150人の方々にサポーターとしてご支援いただいています。

市民ZOOネットワークでは、飼育下の動物たちの暮らしを豊かにするための工夫である「環境エンリッチメント」を活動のキーワードとし、「エンリッチメントの推進」、「情報の収集・発信」、「ネットワークづくり」などの事業を展開しています。

#### 1. エンリッチメントの推進

- エンリッチメント大賞の企画運営
- エンリッチメントに関する調査・協力
- エンリッチメントに関する情報収集・提供
- 「Shape of Enrichment」の日本語版サイト運営

#### 2. 情報の収集・発信

- 動物園に関する文献収集
- 動物園に関する調査研究
- 動物園研究者への支援
- ニューズレター、メールニュース、ホームページ等による情報発信

#### 3. ネットワークづくり

- セミナーの企画運営
- ワークショップの企画運営
- 各種研究会への参画
- 講師派遣

### ○ 市民ZOOネットワークの活動の例

本講演では、市民ZOOネットワークの活動の事例を、いくつかご紹介したいと思います。

例えば、市民ZOOネットワークでは、2003年8月、札幌市円山動物園において、チンパンジーの行動観察ワークショップを開催しました。このワークショップは2日間の日程で行い、初日にはチンパンジーの生態やその観察方法に関する講義を行い、2日目には実際にチンパンジーの放飼場においてじっくりと観察を行いました。このような活動を通じて、動物たちや動物園に対する理解を深めるとともに、動物園の新たな可能性をひろげる教育プログラムの開発を進めていきたいと考えています。

また、市民ZOOネットワークでは、エンリッチメント大賞の企画運営を行っています。「エンリッチメント大賞」は、動物園などにおけるエンリッチメントについての優れた取り組みを公募し、有識者による審査の上、優秀者を表彰するというものです。現在、第2回目の公募を行っているところです。市民ZOOネットワークでは、このような活動を通じて、エンリッチメントに取り組む動物園や飼育担当者を応援すると同時に、来園者である市民がエンリッチメントを正しく理解・評価することにより、市民と動物園をつなぎ、市民の動物園に対する意識を高めることを目指しています。

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# 野生ボノボの保護のために

ピーリア(ボノボ)保護支援会

Wamba Committee for Bonobo Research

古市 剛史



アフリカ中央部にカギ型に流れるコンゴ川に囲まれた密林にだけ住むボノボ(ピグミーチンパンジー)。加納隆至氏が野生のボノボの研究を始めた頃の推定で約2万頭、コンゴで内戦が始まる前の1996年頃の推定で5千~1万頭、その後6年間続いた内戦がようやく終わった今、いったいどれだけのボノボが残っているのかは、まだ確かめられていない。

ボノボの激減の理由のひとつに、医療研究所や動物園への密売やペットとしての販売を目的とした密猟がある。コンゴ盆地の奥地で食肉目的で母親が殺され、生き残ったアカンボウは、コンゴ川を往来する船に乗せられて、首都キンシャサに運ばれてくる。売り渡し先の決まっていないボノボは、土産物市場の

炎天下に置かれ、哀れに思った白人が買ってくれるのを待つ。だが、いくらかわいそうに思っても、それを買うことはまた次のボノボを運んでくることにつながるのだ。

そんなボノボの孤児たちを、コンゴの政府の許可のもとに没収してキンシャサ郊外の施設で育て、このボノボたちを使って、ボノボの保護のための教育活動を進めているのがクロード・アンドレ氏を代表とする「コンゴのボノボの友達」というNGOだ。戦争中、自腹を切ってボノボの孤児の保護に乗り出した彼女の活動は、多くの人々の共感呼んだ。ボノボの危機を何とかしたいけれど、戦争の続くコンゴには行くことすらできない……。少しでも何かできることがないかと考えた私たち日本人研究者も、ピーリア(ボノボ)保護支援会という組織を作って、募金活動を展開した。

保護支援会は、クロード氏の活動を新聞記事やニュースレターで紹介し、日本で集まった募金をクロード氏に送って施設の整備や餌代、医療費の助けにしてもらった。また、野生のボノボの研究の経験を生かして、施設のデザインやボノボの育て方についてもさまざまな助言をしてきた。昨年キンシャサ郊外の森に引っ越しした施設では、今も10数頭のボノボが生活し、ボノボの保護活動のひとつのシンボルになっている。

長く続いた内戦も、最近ようやく収まりつつある。昨年夏、今年夏と、日本人研究者も久しぶりに調査地をおとずれ、コンゴ人研究者との共同で調査と保護の活動を再開することができた。また、内戦ですっかりだめになってしまった学校教育や医療の立て直し、道路や橋の再建に力を注ぎ、世界が注目するボノボを大切にしていけることが、長い目でみると自分たちの利益につながるのだということを理解してもらおうと努めている。森の中での研究・保護活動と、首都キンシャサの出口での保護活動。この2つがうまくかみ合ってボノボを絶滅から救うことができればと願っている。



## ～ウガンダ・カリンズ森林のエコツーリズム計画への取り組み～

特定非営利活動法人カリンズ森林プロジェクト  
橋本千絵



1992 年以来、アフリカのウガンダ共和国カリンズ森林保護区において、チンパンジーをはじめとする霊長類の学術調査が行われてきました。カリンズ森林の近くに住む人たちは、チンパンジーやサルを食べる習慣がなく、それらを対象とした狩猟も行われないため、調査当初からチンパンジーやサルたちはあまり人間を怖がりませんでした。

1998 年にウガンダ森林局が、調査地域内での伐採を始めました。択伐(ある一定の大きさ以上の木のみを伐採する)ということで始まったのですが、実際は皆伐にちかい状態で、伐採林班の2km四方は丸裸になってしまいました。



伐採されてしまった場所は、チンパンジーのよく利用する地域でしたが、伐採の後には、さすがに利用する頻度が激減しました。このような伐採が続けて行われれば(当初の計画では1年に1林班ずつ次々に切っていく予定でした)、カリンズ森林にはチンパンジーの住める場所はなくなってしまうでしょう。

しかし、伐採に対してやみくもに反対するというわけにはいきませんでした。というのは、伐採というのは、森林局だけではなく、地元の社会にも経済的な利益をもたらしていたからです。

そこで、私たちは、伐採に代わるものとして、森林局にエコツーリズム計画を提案しました。幸い、森林局も賛成してくれ、2001 年にはアセスメントを行い、2002 年春には正式にウガンダ政府にエコツーリズム計画が認められました。そして、2003 年には、実際に計画がスタートしました。

カリンズ森林のエコツーリズムの大きな特徴は、「環境教育と研究」という大きな柱がある点です。

ツーリズムの方は、研究参加型のプログラムが中心です。これは、1週間滞在して、実際に研究者が調査するのについてきてもらい、調査に参加してもらおうというものです。これによって、単に「動物を見る」だけではなく、実際のチンパンジーやサルの生活を実感してもらい、動物とその生態系全体を理解していただくことを目標としています。



2003 年

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# マハレ野生動物保護協会

Mahale Wildlife Conservation Society

マハレは、日本人チームの手によって1960年代から現在まで継続して研究が続けられている世界的にも有名な野生チンパンジーの調査地です。日本の協力によって国立公園になった珍しい例でもあります。

「どうぶつ奇想天外！」などのTV番組でもたびたび紹介されていますので、ご存知の方も多いことと思います。

世界中のいろんなところと同じように、チンパンジーの住むアフリカの森でも環境破壊や密猟などは大きな問題となっています。

マハレの森は国立公園に指定されており、伐採や農業、狩猟が禁止されています。それでも、ふだん調査をしていない地域などには野火が入ったり、密猟者が入ったりしています。また、人間が昔持ち込んだ帰化植物が広がって、もともとあった植物が減少しているところもあります。

国立公園のまわりになると、森の破壊はより深刻な問題となっています。チンパンジーや野生生物にとっては、国立公園だけが棲みかなのではなく、まわりの森もやっぱり大切な棲みかなのです。

このような森や動物を保護するためには、公園の近くに住むたくさんの人たちの理解と協力をえる必要があります。たんに動物を獲ってはいけない、木を切っ  
てはいけない、と禁止するだけではなかなか効果はあがりません。

こういった状況を少しでも改善するために、日本人研究者も協力してマハレ野生動物保護協会（本部タンザニア・会長：ホセア・カユンボ教授、副会長：西田利貞教授）を設立し、マハレの自然を守る活動を地道に続けてきています。現在のところおもに地域の人たちに対する環境教育活動や、森林内の移入種対策の援助、ビジターセンターの建設などの活動をおこなってきました。



## ポスター発表要旨

### ポスター掲示時間

11月14日（金）

10:00—17:00

11月15日（土）

10:00—15:00

### 発表者在席時間

11月15日（土）

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P01ç Does a young gibbon understand seeing-knowing relationship ?

Yoichi Inoue, Etsuko Inoue, Shoji Itakura

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Orangutan active budget and using of space in Sepilok Orangutan Rehabilitation Centre.

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Status and Research of great apes in the Moukalaba-Doudou National Park, Gabon.

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Where has a mango gone? -Food sharing in the community of the chimpanzees-

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Who is the nearest neighbor?: Developmental change in chimpanzees

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Introduction for Behavior Study in Zoo

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P26ç Association between blue monkeys (*Cercopithecus mitis*) and redtailed monkeys (*C. ascanius*) in the Kalinzu Forest, Uganda

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Environmental Education in Kenya: Outreach Education for Schools

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0 Gunung Leuser National Park w00000000

Emergency report: Flash floods swept through orangutan reserve in North Sumatra, Indonesia --- the outcome of illegal logging in the Gunung Leuser National Park

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**P01**

**Does a young gibbon understand seeing-knowing relationship ?**

Yoichi Inoue<sup>1</sup>, Etsuko Inoue<sup>2</sup> and Shoji Itakura<sup>3</sup>

<sup>1</sup>Nishimaizuru High School, <sup>2</sup>Chutan-yogo School, <sup>3</sup>Kyoto University

4-year-and-8-month-old white-handed gibbon (*Hylobates lar*) was tested whether it could understand seeing-knowing relationship.

Experiment 1: The experimenter (the hider) presented the two cups and indicated the correct target by tapping at the baited cup. If the subject took a cup with a food reward, it was the correct choice.

Experiment 2: The procedural order was as follows: 1) the hider hid a raisin in one of the two cups (the baiting procedure was hidden from the subject's view by the cardboard barrier). 2) The hider took away the barrier and the other experimenter (the changer) covered the hider's face with a big opaque paper bag. 3) The changer switched the locations of the cups and took a paper bag off from the hider's face. 4) The hider presented the cups and indicated the cup of the location in which the hider believed that the food was in, but it was not correct. If the subject took the cup not pointed at by the hider, it was the correct choice. We tested 16 trials in each experiment in two days.

A young gibbon displayed the ability to select the correct option to obtain the food reward in each experiment with no training. This result suggests that a young gibbon is capable of understanding seeing-knowing relationship, which is important to mental state attribution."

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**Orangutan active budget and using of space in Sepilok Orangutan Rehabilitation Centre.**  
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<sup>1</sup>𐄇𐄇𐄇𐄇<sup>2</sup>Sabah Wildlife Department, Malaysia 𐄇<sup>3</sup>Institute for Tropical Biology and Conservation, Universiti of Malaysia Sabah  
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Interaction of a zoo-born infant gorilla with his mother in the third year of infant life~

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Status and Research of great apes in the Moukalaba-Doudou National Park, Gabon.

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Yuji Takenoshita, Juichi Yamagiwa

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P12

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P13

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P26

**Association between blue monkeys (*Cercopithecus mitis*) and redtailed monkeys (*C. ascanius*) in the Kalinzu Forest, Uganda**

Moe Fukaya

PRI, Kyoto University

Mixed-species primates association has been reported in many study sites. In the Kalinzu Forest, Uganda, Blue monkeys (*Cercopithecus mitis*) and redtailed monkeys (*C. ascanius*) are often observed to forage together. I conducted a research from August to October 2003 to examine how blue and redtailed monkeys form a mixed group. I used two methods. First, I followed one individual of a blue monkey group, while an assistant followed one individual of a redtailed monkey group. We recorded the location of the focal animals by using GPS every 1 minute. Secondly, when the study group crossed the paths, I recorded the number of monkeys of each species crossing every 1 minute. Blue and redtailed monkeys form a mixed group positively and it seems redtailed monkeys are responsible for mixed association. After redtailed monkeys encountered a group of blue monkeys, they followed the blue monkeys, especially when they crossed the paths."

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P27

**Environmental Education in Kenya: Outreach Education for Schools**

Sayaka Tsutsumi  
WCK / JOCV  
WCK, Ministry of Tourism and Information, Kenya / JOCV, Japan International Cooperation Agency (Current affiliation: Graduate School of Letters, Kyoto University)

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Kenya has been internationally noted for rich biodiversity including many species of primates. The conservation policy on the national governmental level has focused on sustainable use of wildlife as resources for eco-tourism. However on the community level, the importance of conservation issues have not fully reached the people on the ground. Besides improving socio-economical factors such as Basic Human Needs, environmental education for the youth is the key for sustainable development. Here I report on outreach environmental education projects that were implemented as part of cooperation scheme to the Ministry of Tourism and Information, Kenya. Aspects of educational strategies and evaluation are discussed."

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P28

**Bukit Lawang w  
Gunung Leuser National Park w**

**Emergency report: Flash floods swept through orangutan reserve in North Sumatra, Indonesia --- the outcome of illegal logging in the Gunung Leuser National Park**

Sayaka Tsutsumi  
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Graduate school of letters, Kyoto University, Japan

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On November 2, 2003, flash floods swept through an orangutan reserve in North Sumatra, Indonesia, killing more than 200 people and making other 1,400 homeless. The 2,500 inhabitants of the Bukit Lawang village, in the Gunung Leuser National Park, lost their family members, home, and source of income --- ecotourism. The park is among the last refuges for wild orangutans, tigers, rhinos and elephants, and efforts are being made to nominate it as a World Heritage Site. Orangutans in the rehabilitation center are reported to have escaped immediate damage of floods, but long-term consequences are inevitable. Illegal logging in the national park has been blamed for the cause of floods. Factors surrounding illegal logging are complex; it involves those who have to log the forest for living, those who trade logs (internationally and illegally), corrupt officials, and ignorant end consumers like us. Understanding these structures, as well as bringing up an alternative for logging, is essential for sustainable conservation of the Gunung Leuser ecosystem.

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