

African Primatological Consortium (APC)

Primate Research and Conservation Training Seminar

Venue: Primate Research Institute, Japan

Dates: 27th November – 10th December 2016

Abstracts for presentations by participants

Sponsored by JSPS and AWF

Contents

General Program.....	2
Program for participant presentations	4
Theme I: Primate feeding ecology and behaviour	6
Foraging and Social behavior of the Black and White Colobus Monkeys in Kipipiri and Karura Forests, Kenya.....	6
Forest fragmentation on de brazzas (<i>Cercopithecus neglectus</i>) survival in Kisere Forest and Saiwa National Park.....	8
Integrating local and indigenous knowledge to model Grauer’s gorilla protection in the community forests of eastern Democratic Republic of Congo	9
Gap dynamics, Regeneration capacity and thermo-tolerance of <i>Musanga leo-errerae</i> and their influence of on Chimpanzee ranging pattern in Kalinzu Forest, Uganda	11
Mother-Daughter Associations in Bonobo Male Philopatric Society at Wamba in the DR Congo.....	12
Influences of forest edges on ranging patterns of chimpanzees (<i>Pan troglodytes schweinfurthii</i>) in Nyungwe National Park, Rwanda.....	13
Theme II : Conservation and management of primates and other wildlife.....	14
Research and Conservation studies on great apes (chimpanzee and gorilla) at Moukalaba Doudou National Park, Gabon	14
Strengthening Leadership for Conservation in Sierra Leone and Liberia through Research and Training on the Critically Endangered Western Chimpanzee (<i>Pan troglodytes verus</i>).....	15
Applying monitoring transmitter collar to the <i>Pan paniscus</i> in order to improve tourism and research activities at Lomako-Yokokala Faunal Reserve	16
The distribution and effects of honeybee parasites and pathogens on colony performance in two agro-ecological zones of Uganda.....	17
Using SMART/CyberTracker to improve protection of Great Apes and elephants in the part of Campo-Ma’an National Park (South Cameroon).....	18
Using Cybertracker-SMART to improve the protection of the eastern chimpanzee (<i>Pan troglodytes schweinfurthii</i>) in the Bili Uere Protected Area Complex (BUPAC).....	19
Using monitoring devices in Schouam, Bouamir and Nkoubar to conserve great apes in Dja Reserve .	20
Assessment of stakeholder’s awareness on Population trends, Conservation threats and features for identifying different members of the M group Chimpanzees, in Mahale Mountains National Park.....	21
Farming the forest edge: Local perceptions of human-primate conflict in six high altitude villages in the Garhwal Himalayas, Uttarakhand, India.....	22
How Young Generations See Bonobos in Thuapa district, DR Congo.....	23

General Program

		AM	PM1	PM2	Evening
27-Nov	Sun	Arrival at Primate Research Institute, Inuyama, Aichi			
28-Nov	Mon	Introduction	Present results of capacity surveys, have a brief information/brainstorm from participants about how they think their project can benefit from conservation planning, SMART, GIS	Introduction to Conservation Planning	Welcome party
29-Nov	Tue	Conservation programs of chimpanzees in Kalinzu and bonobos at Wamba	Introduction to Cybertracker and hands-on exercise		
30-Nov	Wed	Presentations on ongoing projects by participants			
1-Dec	Thu	Methodologies for field observation	Introduction to SMART and hands-on exercise (includes data collection around PRI campus)		
2-Dec	Fri	Collection of behavioral data of Japanese macaques (1/2 of participants) Introduction to cognitive science of great apes (1/2 of participants)	Introduction to GIS and hands-on exercise		
3-Dec	Sat	Collection of behavioral data of Japanese macaques (1/2 of participants) Introduction to cognitive science of great apes (1/2 of participants)	Practice: SMART and GIS		
4-Dec	Sun	BREAK DAY (Optional early afternoon session with Wildlife Protection Solutions, AWF and UMD on acoustic sensors, camera traps, and UAVs)			
5-Dec	Mon	Travel to Kyoto city	Symposium at Kyoto University: Studies and conservation of African primates		Reception hosted by Kyoto University African Study Unit
6-Dec	Tue	Visit to Kyoto city zoo	Visit to Kyoto Aquarium	Travel to Inuyama	

APC-Japan 2016 primate research and conservation training seminar

7-Dec	Wed	Analysis of behavioral data and discussion	Open discussion and individual time for participants to brainstorm ideas for integration of SMART/CYBERTRACKER and GIS into their respective projects, write a concept note and 2 slides for presentation following day.	
8-Dec	Thu	Lecture on methodologies on DNA sample collection and analyses	"Lightning talks" (Part 1): Presentation of 2 slides each on new project ideas to integrate new tools and skills into conservation projects and discussion	
9-Dec	Fri	Demonstration of DNA analyses	"Lightning talks" (Part 2): Presentation of 2 slides each on new project ideas to integrate new tools and skills into conservation projects	
10-Dec	Sat	Discussion on way forward of APC	Visit to Nagoya city	Farewell party
11-Dec	Sun	Departure		

Program for participant presentations

Time	Topic	Responsible	Chairperson
10:00-10:20	Foraging and Social behavior of the Black and White Colobus Monkeys in Kipipiri and Karura Forests, Kenya	Esther Nyawira Gitaka	Takeshi Furuichi
10:20-10:40	Nutritional ecology of female chimpanzees: Significance of variation of macronutrient intake on reproduction	Moreen Uwimbabazi	
10:40-11:00	Forest Fragmentation on De Brazzas (<i>Cercopithecus neglectus</i>) survival in Kisere Forest and Saiwa National Park	Jennifer Wanyingi	
11:00-11:20	Integrating local and indigenous knowledge to model Grauer's gorilla protection in the community forests of eastern Democratic Republic of Congo	NGOBOBO -AS-IBUNGU Urbain	
11:20-11:30	Break		
11:30-11:50	Gap dynamics, Regeneration capacity and thermo-tolerance of <i>Musanga leo-errerae</i> and their influence of on Chimpanzee ranging pattern in Kalinzu Forest, Uganda	Grace Kagoro	Deborah Baranga
11:50-12:10	Influences of forest edges on ranging patterns of chimpanzees (<i>Pan troglodytes schweinfurthii</i>) in Nyungwe National Park, Rwanda	Enathe HASABWAMARIYA	
12:10-12:30	Research and Conservation studies on great apes (chimpanzee and gorilla) at Moukalaba Doudou National Park, Gabon	Ghislain Wilfried EBANG ELLA	
12:30-12:50	Strengthening Leadership for Conservation in Sierra Leone and Liberia through Research and Training on the Critically Endangered Western Chimpanzee (<i>Pan troglodytes verus</i>)	Ibrahim Abu-Bakarr	
12:50-13:10	Applying monitoring transmitter collar to the <i>Pan paniscus</i> in order to improve tourism and research activities at Lomako-Yokokala Faunal Reserve	AMISI LUENGA Moïse	
13:10-14:10	Lunch Break		
14:10-14:30	The distribution and effects of honeybee parasites and pathogens on colony performance in two agro-ecological zones of Uganda	Moses Chemurot	Janet Nackoney
14:30-14:50	Using SMART/CyberTracker to improve protection of Great Apes and elephants in the part of Campo-Ma'an National Park (South Cameroon)	NKONO Julien	

APC-Japan 2016 primate research and conservation training seminar

14:50-15:10	Using Cybertracker-SMART to improve the protection of the eastern chimpanzee (<i>Pan troglodytes schweinfurthii</i>) in the Bili Uere Protected Area Complex (BUPAC)	Alain LUSHIMBA	
15:10-15:30	Using monitoring devices in Schouam, Bouamir and Nkoubar to conserve great apes in Dja Reserve	ZOKOE Guian	
15:30-15:50	Assessment of stakeholder's awareness on Population trends, Conservation threats and features for identifying different members of the M group Chimpanzees, in Mahale Mountains National Park	Baraka Naftal	David Williams
15:50-16:10	Mother-Daughter Associations in Bonobo Male Philopatric Society at Wamba in the DR Congo	Kazuya Toda	
16:10-16:30	Farming the forest edge: Local perceptions of human-primate conflict in six high altitude villages in the Garhwal Himalayas, Uttarakhand, India	<u>Himani Nautiyal</u>	
16:30-16:40	Break		
16:40-17:00	The conservation status of the Red-tailed monkey in the peri-urban forest fragments of Kampala area	Deborah Baranga	Jef Dupain
17:00-17:20	How Young Generations See Bonobos in Thuapa district, DR Congo	Aya Yokotsuka	
17:20-17:50	THE GREEN CORRIDOR PROJECT : Conservation and Protection of the Bossou chimpanzees	Henry Didier Camara	
17:50-18:10	Threat against the population of Demidoff galago <i>Galagoides demidovii phasma</i> (Galagidae, Primate) at D'jili-Brasseries, Kinshasha, DRC	Viviane	
18:10-18:15	Closure		

Theme I: Primate feeding ecology and behaviour

Foraging and Social behavior of the Black and White Colobus Monkeys in Kipipiri and Karura Forests, Kenya

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Abstract

Conversion of ecosystems for farming and their fragmentation is creating human wildlife conflict zones. Translocation is acknowledged as a human-wildlife conflict management tool with conservation and economic incentives. The objective of this study was to identify habitat characteristics in the fragmented Kipipiri and the single continuous Karura forest and the foraging and social behavior of translocated and non translocated Mount Kenya Guereza. In Kipipiri, 3 fragments were identified for study while Karura is a single forest block. For every group, size and composition was determined. Daily activity time budget was recorded for every focal animal detailing species and plant part fed on. Belt transects of 200m width and varying lengths were laid for habit characterization. The habitats exhibited a mix of indigenous and exotic species with indigenous being preferred as food by the monkeys. Kipipiri was found to have a higher index of species richness. Kipipiri had a higher average group size of 9 compared to 6 in Karura. There was no significant difference in the two habitats with respect to proportion of time spent foraging.

Key Words: Translocation, Mount Kenya Guereza, Foraging, Social Behavior

Nutritional ecology of female chimpanzees: Significance of variation of macronutrient intake on reproduction

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Abstract

Different food items can provide calories at different rates, yet nutritional studies of primates are generally based on the proportion of time spent eating different foods. Accordingly, estimates of energy intake are potentially wrong. And these errors have been carried forward for studies which show seasonal variation in macronutrient intake and seasonality of other behaviours such as reproductive events in primates. Therefore this study seeks to improve the energy intake estimates by using both time spent feeding and feeding rates. Specifically, this study will answer three questions: 1) how is energy intake in chimpanzees influenced by energy intake rates? 2) Is the timing of reproductive events in female chimpanzees related to macronutrient intake? 3) Which nutritional strategies are employed by female chimpanzees to meet their nutrient requirements in a face of fluctuating food availability? To answer these questions, I observed 15 female chimpanzees from the Kanyawara chimpanzee community in Kibale National Park, Uganda for 15 months. Feeding rates were recorded and nutritional analyses assembled for 90 food types. In addition I will use long term data from the Kanyawara chimpanzee project (2010-2015), considering only continuous focal follows. From this data I will also access the demographic data (births, conceptions and estrous females). I will use the time spent feeding on fruits and time spent feeding on preferred fruits as fruit availability indices to assess fruiting seasonality. Using the geometric framework (GF), this study will show which

nutrients are prioritised by female chimpanzees and how they maximise energy intake even when preferred fruit is not always available in their habitats. This study will highlight the value of using feeding rates to understand chimpanzee nutrition, and show if seasonal fluctuation in nutrient intake is still as pronounced when using feeding time and feeding rates. Additionally, this study will show whether the peak in female chimpanzee reproductive events is correlated to high quality macronutrient intake. This will be the first study to use GF on the nutrition of female chimpanzees, and will show whether they prioritise protein just like other frugivorous primates. Overall, this research will contribute to the few studies of nutritional ecology of wild primates using feeding rates and nutrient content of different primate foods.

Key words: feeding rates, feeding time, food quality, energy intake, Geometric framework.

Forest fragmentation on de brazzas (*Cercopithecus neglectus*) survival in Kisere Forest and Saiwa National Park

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Abstract

Information on the state of forest fragmentation and survival of De brazza monkeys is critical input for natural resource management and policy decision. Decrease in forest cover has serious implications on the ecological systems and distribution of the fragile De brazzas. This study intends to determine the population status, distribution and threats facing De brazzas in Kisere forest and Saiwa National Park. The specific objectives include; determining the population and distribution of De brazzas, to investigate the effects of anthropogenic activities on De brazzas and to assess the interaction of De brazza monkey with other primates. To

achieve these, the research will employ various methods including GIS and remote sensing to map and analyse changes in landcover, sightings and line transect to estimate their distribution. The study will also use KWS rangers monitoring data for population census and questionnaires for human-primate interactions. Spatial data analysis will be used to transform and combine data for changes in land cover, while data from sightings and line transects will be analysed for population densities and biomass. Data from questionnaires will be analyzed using SPSS. Research output will forecast the future trends in De brazzas in Kenya and advise the conservation managers on necessary actions required to conserve De brazza monkeys.

Integrating local and indigenous knowledge to model Grauer's gorilla protection in the community forests of eastern Democratic Republic of Congo

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Abstract

Grauer's gorillas are among the world's most endangered primates. Past research on Grauer's gorillas has focused on a high-altitude population from Kahuzi-Biega National Park. Yet, most Grauer's gorillas live in the low altitude primary forests of the east of the Congo basin, including in the community forests and National parks, where terrain, climate and food availability greatly differ from montane forests. We hired local and indigenous people to study gorilla presence, abundance, distribution and continuously tracked a single Grauer's gorilla group ranging at an altitude of 600m between Maiko and Kahuzi-Biega National Park for over 3 years. Along the group's trail, we systematically collected GPS data every 50m, identified food remains and counted nest sites. During the study period, the group's home range had a diameter of around 10 km and nest sites included 20 nests on average. The group's daily travel distance typically ranged between 500m and 2,000m. However, the gorillas only used a small portion of the available habitat. They preferred travelling along valleys and avoided hilltops. The analysis of multispectral satellite imagery revealed that the vegetation in these valleys is different, with a more open canopy than the hilltops. The vegetation undergrowth of the valleys is denser, providing the gorillas with the Zingiberaceae, Marantaceae and Commelinaceae plants they consumed. Understanding habitat requirements of low altitude Grauer's gorillas will help conservationists model a conservation strategy in eastern Congo that are susceptible to host large Grauer's gorilla populations and will help focus conservation efforts.

Gap dynamics, Regeneration capacity and thermo-tolerance of *Musanga leo-errerae* and their influence of on Chimpanzee ranging pattern in Kalinzu Forest, Uganda

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Abstract

Musanga leo-errerae is a secondary tree sp and its perennial fruiting has been found to sustain chimpanzees in Kalinzu Forest. Secondary tree species have been documented to thrive under disturbance. Like many Ugandan forests, Kalinzu experiences a lot of gaps due to timber harvesting and other illegal tree felling activities. It is not clear how the gaps introduced affect the regeneration of *Musanga sp*, a significant source of food source and ultimately the ranging patterns of chimpanzees. Existence of chimpanzees in this forest is sole support for ecotourism. The research is therefore to answer the following questions: 1) What are the gap dynamics of Kalinzu forest and how do they affect *Musanga* regeneration and chimpanzee ranging? 2) To what extent does *Musanga leo-errerae* regenerate naturally? 3) What are the light and temperature requirements of *M. leo-errerae* seed/seedlings? 4) Does *Musanga leo-errerae* undergo senility? Using ten 5km transects and Global positioning System, forest gap dynamics and *Musanga* tree species regeneration distribution will be determined; in relation to chimpanzee ranging that will be monitored by ground dawn to dusk following and cyber tracking. Thermo-tolerance trials and viability of *Musanga* seed/seedling will also be determined under different temperature and light settings.

Mother-Daughter Associations in Bonobo Male Philopatric Society at Wamba in the DR Congo
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Abstract

In group-living animals, transfer of individuals from natal group to another group plays a fundamental role for gene flow between groups. Kin relationship between group-members are determined by the sex-biased transfer pattern. Chimpanzees and bonobos form male philopatric societies, though most mammalian species are female philopatric societies. Based on the availability of kinship, male philopatry implies strong social bonds between male group members and between mothers and sons. However, males do not engage in same-sex coalitions in bonobos which females are high dominance status. On the other hand, high association is formed between females even non-kin relationship. How do daughter leave the natal group in such bonobo societies. I analyzed changes patterns in mother-daughter association using long-term records of “one-hour party” accumulated by Wamba researchers and field assistant in order to reveal the proximate cause of female transfer.

Influences of forest edges on ranging patterns of chimpanzees (*Pan troglodytes schweinfurthii*) in Nyungwe National Park, Rwanda

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Abstract

In a rapidly changing environment and increasing edge habitat, effective conservation of great apes requires the understanding of their ranging habitat selection patterns (Terada *et al*,2015). Studies have found that chimpanzees use forest edges. However, few studies have looked at factors that influence chimpanzee distribution at the forest edges. This study aims at determining the ranging patterns of chimpanzees in Nyungwe National Park, focusing on factors influencing their distribution at forest edges. In this study, I will use long-term GPS data of chimpanzee's distribution and other satellite imagery of the habitat and vegetation type to analyze their use of forest edges. I will define forest edges as: 1) areas adjacent to buffer zone, 2) areas adjacent to human agricultural activities and 3) areas adjacent to roads, and small trails inside the forest. I will look at how ecological and non-ecological characteristics associated to forest edges influence chimpanzee distribution. Among those factors are: 1) elevation, 2) phenology, 3) seasonality and 4) human activities. I expect that chimpanzees will use forest edges following food availability and diversity. Due to potential increase in food resources along anthropogenic forest edges, I predict that chimpanzees will exhibit higher abundance near anthropogenic edges.

Theme II : Conservation and management of primates and other wildlife

Research and Conservation studies on great apes (chimpanzee and gorilla) at Moukalaba Doudou National Park, Gabon

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Abstract

Under the effect of global changes related to the exploitation of natural resources, the pace of species extinction continues to accelerate, despite the protective measures implemented. The definition of a biological indicator for the conservation of biodiversity becomes a very clear approach today since the state of an ecosystem can directly be understood through certain target taxa. Iconic groups such as great apes (gorilla and chimpanzee) are good markers of disruption of ecosystems due to pressures past, current and / or future. These taxa or indicators are real conservation policy support tools to predict and anticipate the management of biodiversity scenarios. Moukalaba Doudou National Park (MDNP) is one of 13 national parks created in 2002 by the Gabonese authorities to respond to threats to local biodiversity. This park, is characterized by its great diversity of habitats and high density of great apes (gorillas and chimpanzees). Few studies on the distribution and ecology of great apes are have been conducted in MDNP despite its importance in planning for sustainable management of biodiversity. This project will (1) identify chimpanzees communities, their habitats and priority ecosystems for conservation in the MDNP, (2) identify response of great apes (Gorilla and chimpanzee) to threats they face, (3) strengthen the capacity of local communities on the conservation of great apes and (4) encourage ecotourism based on the observation of animals.

Strengthening Leadership for Conservation in Sierra Leone and Liberia through Research and Training on the Critically Endangered Western Chimpanzee (*Pan troglodytes verus*)

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Abstract

Our current project seeks to strengthen conservation leadership in Sierra Leone and Liberia by implementing an integrated research and training program at Njala University, focusing specifically on conservation of the Critically Endangered Western Chimpanzees (*Pan troglodytes verus*) as a flagship species. The Chimpanzee is symbolic of the overall conservation dilemma in West Africa – **habitat fragmentation, bushmeat hunting, pet trade, and conflicts with humans** – that require innovative leaders for implementing effective and successful long-term solutions. There are several important conservation efforts underway in the two countries to tackle these challenges, including a focus on protection of transboundary forest areas. As a result, the potential for strengthening conservation efforts between the two countries has increased considerably. Achievements from these efforts will not be sustained in the long-term, however, in the absence of appropriate expertise and leadership across all relevant government and non-governmental institutions. Njala University, is therefore currently using targeted actions and training for Chimpanzee conservation to strengthen leadership in the two countries.

Applying monitoring transmitter collar to the *Pan paniscus* in order to improve tourism and research activities at Lomako-Yokokala Faunal Reserve

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Found only in the democratic republic of Congo, Bonobos are very rare and endangered species of great apes. Due to this situation, we should look forward to keeping this population of great apes. A good monitoring programme of chimpanzee reproduction can be achieved through hormonal analysis. Also, health monitoring can be achieved through analyses of fecal samples. In order to manage zoonotic diseases which can affect ape populations, we are designing a pasture management program for the Lomako-Yokokala Faunal Reserve. In addition, a monitoring telemetry transmitter collar around the system will be applied to the great apes in order to monitor the species wherever they are and treat them with medicine in case of sickness or research activity. This kind of monitoring will also help in anti-poaching activities and to locate bonobos for tourism and research activities.

The distribution and effects of honeybee parasites and pathogens on colony performance in two agro-ecological zones of Uganda

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Abstract

The beekeeping industry in Uganda is an important source of food and employment for many rural households. Beekeeping is also important in rural poverty alleviation, environmental conservation and diversification of the country's exports and the importance of honeybees in pollination is being appreciated. In order to sustainably produce and supply beehive products and services both to the local and the international market, Uganda must maintain a large, healthy bee population. However, Ugandan honeybees which have historically been famed as healthy, are now potentially threatened by parasites like *Varroa* mites which may affect food security if not managed appropriately. Effective management requires efficient honeybee pest and disease identification and control systems to be developed. For this system to be in place, there is need for adequate and accurate information on honeybee parasites with regard to their prevalence, distribution and impacts on colony performance. In order to provide some insights into this, I am conducting this study to: i) identify the key honeybee parasites present, ii) evaluate the variation in infection levels among colonies in areas of different land-uses and elevations and iii) determine how this variation might affect colony strength and productivity in the eastern and western highland agro-ecological zones of Uganda. During the APC training, I will present some interesting findings from this study.

Using SMART/CyberTracker to improve protection of Great Apes and elephants in the part of Campo-Ma'an National Park (South Cameroon)

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Abstract

During period from January 2015 to April 2016, in the initiative of African Wildlife Foundation through African Apes Initiative Grants, we determined the status of great apes (*Gorilla gorilla gorilla* and *Pan troglodytes troglodytes*) and African forest elephant (*Loxodonta africana cyclotis*) in the 650 km² of the Campo-Ma'an National Park. The overall objective was to contribute to the conservation and protection of great apes and other mammals in the Park. We used a combination of SMART/CyberTracker to collect data in the field and to analyze and report the information about these animal species. Then Microsoft Office Excel was used to compute the kilometric abundance index of these species and those related to their poaching. This calculation shows that we traveled for 2119 kilometers with a 2328 patrol effort. Direct observations index are 7,10‰ for gorillas, 10,65‰ for chimpanzees and 8,11‰ for forest elephants. Only 1,01‰ index of elephant carcasses were observed. For Great apes nests indices, we recorded 66,43‰ for gorilla nests and 106,49‰ for chimpanzee nests. For elephant dung index, we observed 45,13‰. For human activities, we recorded 9,63‰ of poaching encounter index, 27,89‰ of camps index, 190,70‰ of used cartridges index and 264,71‰ of traps index.

Using Cybertracker-SMART to improve the protection of the eastern chimpanzee (*Pan troglodytes schweinfurthii*) in the Bili Uere Protected Area Complex (BUPAC)

Alain LUSHIMBA

Abstract

With chimpanzee's populations are declining across Africa, it is essential to identify areas of high occurrence of this species, where conservation efforts can have a strong impact. The BUPAC in Democratic Republic of Congo was home to a large population of eastern chimpanzees (*Pan troglodytes schweinfurthii*). This population is under imminent threat of rapid depletion or extinction. Based on the value of the landscape and the escalating threats, African Wildlife Foundation is committed to work with ICCN to protect this species and ensure their ecological integrity. This project aims to deploy systematic monitoring using SMART-CyberTracker tools to improve the performance of ICCN team with updated information on wildlife and human activities as the basis for an effective strategy of action and response. SMART 3.3.1 software was used to develop a data model for patrols. SMART 3.3.1 Ecological Records plugin in combination with the Distance 6.2 software was used to create a chimpanzee census sampling plan by the line transect method. The Cybertracker software entry interface in Runbo 5 device was used to record information on the fields. From September 2015 to September 2016, 1681.92 Km of patrol were conducted by ICCN. The average encounter rate obtained was 0.10 nest site by Km (0.40 nest by km). From 04 to 24 May and from 09 to 22 September 2016 we conducted a survey out of 37 line transects and 38 recces for a total distance of 580.72 Km. The average encounter rate obtained on the recce was 0.30 [0.21 - 0.38] nest site per Km and 0.90 [0.62 - 1.20] nest by Km. The average density obtained was between 0.11 and 1.26 chimp per km². Our results suggest that the BUPAC houses a large eastern chimpanzee population, but that is highly under increasing pressure from habitat destruction, mining and bushmeat trade. Our results reflect the efforts of understanding of the abundance and distribution of the chimpanzee, and highlight the importance of obtaining more robust and

comprehensive data before assessing the state of the chimpanzees and make recommendations to guide conservation efforts.

Keywords: Chimpanzee, nest, SMART, Cybertracker, census, patrol

Using monitoring devices in Schouam, Bouamir and Nkoubar to conserve great apes in Dja Reserve

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Abstract

The presentation focuses on the strategy for the protection set up at Bouamir, Schouam and NKoubar to ensure a cover in permanent patrol on 25% of the total surface of the reserve of fauna of Dja site of the World Inheritance of Humanity by the implementation of Cyber Tracker/SMART. The objectives of our actions in progress include: 1) to secure the three high value conservation sites (Bouamir, Schouam and NKoubar), 2) to set up geo-referred devices (camera traps) to record the shots in the night and vocalization of target species. Data were collected in SMART and were modelled. This modeling made it possible to identify the zones with strong faunal concentration, as well as the species available. Anthropic activities constituted key threats for fauna, especially for the large monkeys in Schouam, Nkoubar, and Bouamir. Furthermore, analyses of these data enabled us to set up observation and monitoring devices in these three sites. Eco-guards were assigned to each site for permanent monitoring to fight against the anthropic activities, which constitute a threat for the fauna in general, and for the primates in particular.

Assessment of stakeholder's awareness on Population trends, Conservation threats and features for identifying different members of the M group Chimpanzees, in Mahale Mountains National Park

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Abstract

The study focused on assessing the awareness of different stakeholders on population trends, conservation threats and features used in identifying different members of the M group Chimpanzees in Mahale Mountains National Park. Fifteen respondents from 5 different stakeholders were interviewed using a questionnaire with closed and open ended questions. The results were coded and analysed using SPSS and Ms excel. The findings revealed that 33.3% of the respondents perceive the population trends of M group Chimpanzees to be declining due to emigration while 20% said the population is increasing due to immigration and reproduction. In case of conservation threats found in M group, the finding reveal that 78.57% of the respondents considered Yellow Baboon to be the major threat to group and 45% of the respondents suggested that reducing their population is one of the effective approach to mitigate their perceived negative effects. Lastly, the study shows that 57.41% of the respondents use both individual appearances and individual behavioral features to differentiate one individual from another while 42.59% use only individual appearances features to differentiate them. The study recommends the need to conduct an intensive study to assess the level of food competition between M group of chimpanzees and Yellow Baboon and global position tracking devices to monitor the group.

Keywords: Awareness, Population trends and Conservation threats.

Farming the forest edge: Local perceptions of human-primate conflict in six high altitude villages in the Garhwal Himalayas, Uttarakhand, India

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Abstract

Himalayan mountain villages are economically poor largely due to low agricultural production and inadequate connectivity with cities, resulting in lower employment options. Another contributing factor is the damage to subsistence crops by wildlife. A questionnaire survey was administered to 215 households of the six villages that make up the high-altitude subsistence farming community of Mandal Valley in Uttarakhand state, India. We aimed to elucidate the relationship between farmers and wildlife, particularly the central Himalayan langur *Semnopithecus schistaceus*, a species whose conservation status remains unknown. Subsistence crop damage by wildlife was seen to be a major cause of low crop yields and the economic burden of the people. The perception of langurs was complex. While several responses were largely negative, considering langurs to be agricultural pests, evil spirits or crop raiders that should be killed, the majority view was sympathetic and considered it the responsibility of humans to protect them. Planting of fodder tree species around terraced fields and overexploitation of the surrounding forests for subsistence activities was perceived to have led to a recent increase in crop-raiding by langurs and other wildlife. An understanding of the socioeconomic status of the local people, as well as the actual and perceived impact of langurs and other wildlife on their daily lives, is essential to formulate management and conservation plans and conduct rural development plans and other empowerment activities in the Valley.

How Young Generations See Bonobos in Thuapa district, DR Congo

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Abstract

Bushmeat hunting is the biggest threat to great apes in Central Africa. The Bongando ethnic group in Democratic Republic of Congo traditionally has a taboo against eating bonobo (*Pan paniscus*). The Luo Scientific Reserve, which is located in the Bongando residence, was established in 1990 to protect bonobos, and actually Bongando in Wamba have been protecting bonobos by existing researchers. They re-evaluate their local perceptions to bonobos and get benefits using these cultural resources. However, researching another village, the situation revolving around bonobos is dramatically different. This study aims to examine how local perceptions towards bonobos have been different within and beyond the Luo Reserve between young generations. I stayed and interviewed residents of village Y where is 90km away from Wamba. Residents were asked about the relationship between bonobos and humans. Results show that the perceptions towards bonobos among 2 villages diverged. Village Y is adjacent to villages that another ethnic group Mongo live. It is said Mongo don't have traditional taboo to bonobo meat. According to my research 65 % of young generations have eaten bonobo meat in Village Y. Though older people blame their children for eating it, young generations are not even going to listen. What is more, if hunters kill bonobos, police will not arrest them, though bonobo is protected animal in DR Congo. It is concluded that the biggest threat to bonobos in rural areas might be disappearing taboo against bonobo meat.