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August 4 (Thursday)
Morning (10:15-12:45)

Room: #201/202

O416701 10:15

Q. Zhang, Z. Q. Zeng, Y. J. Ji, D. X. Zhang, and Y. L. Song: Microsatellite variation of Hainan Eld's deer (*Cervus eldi hainanensis*) in China: Implications for conservation

O416702 10:30

M. N. Shukor, K. M. Yusoff, M. Z. Zana, and A. Yusof: Reintroduction of captive-bred Sambar Deer (*Cervus unicolor*) into the lowland forest of Peninsular Malaysia

O416703 10:45

Plenary, Symposium, Poster and Oral Papers

O416704 11:00

S.-I. Yoon, W. H. Bunn, and N.-S. Shin: Comparative morphometric characteristics and home ranges of roe deer (*Capreolus pygaeus hanschianus*) in Jeju Island, Korea

O416705 11:15

B. Zweifel-Schelly and M. Schrey: Habitat selection of GPS-collared alpine red deer: The role of habitat quality

O416706 11:30

Relationship between food availability and size of deer parks

O416707 11:45

Rizaldi, K. Watanabe, and A. S. S. (traditional hunting on wild boar (*Sus scrofa*) in west Sumatra, Indonesia)

O416708 12:00

L. Bartos: History of sika deer introduction to Europe: Implication for hybridization with native red deer

O416709 12:15

J. Pluháček, L. Bartos, and M. Machová: Variability of male infanticide in captive rebrat

O416710 12:30

R. Kotrba, L. Mojzisoava, and M. Hejman: Perennial woody plants survival: The elimination effect of grazing by non-indigenous common eland in the Czech Republic

Abstracts
of
Plenary, Symposium, Poster and Oral Papers
presented at
Ninth International Mammalogical Congress
(IMC 9)

Roles of Mammalogy on
Coexistence of Wild Mammals and Human

July 31- August 5, 2005

Sapporo, Hokkaido, Japan

Afternoon (15:00-16:00)

Room: #201/202

O426601 15:00

W. C. Wozencraft: A review of the systematics of Chinese carnivora

O426602 15:15

R. Kowalczyk and A. Zalewski: Wintering strategies of badgers and raccoon dogs in Bialowieza primeval forest (Poland)

O427501 15:30

S. O. Landry: Special relationship of New and Old World porcupines

O427502 15:45

E. N. Davis: Dietary partitioning between five sympatric mammalian herbivores at Wilsons Promontory National Park, Australia

Organized by

The Science Council of Japan and The Mammalogical Society of Japan

Website: <http://www.imc9.jp>

Oral

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- 0416701 10:15
Q. Zhang, Z. G. Zeng, Y. J. Ji, D. X. Zhang, and Y. L. Song: **Microsatellite variation of Hainan Eld's deer (*Cervus eldi hainanus*) in China: Implications for conservation**
- 0416702 10:30
M. N. Shukor, K. Mohamad-Zulfikar, Z. Z. Zaina, and A. Yusof: **Reintroduction of captive-bred Sambar Deer (*Cervus unicolor*) into the lowland forest of Peninsular Malaysia**
- 0416703 10:45
B. Parker, S. McPhedran, and S. Kasel: **Comparison of the salivary glands of two sympatric deer species in NE Victoria, Australia**
- 0416704 11:00
S.-I. Yoon, W. H. Byun, and N.-S. Shin: **Comparative morphometric characteristic and home ranges of roe deer (*Capreolus pygargus tianschanicus*) in Jeju Island, Korea**
- 0416705 11:15
B. Zweifel-Schielly and W. Suter: **Scale-dependent habitat selection of GPS-collared alpine red deer: The role of food availability and quality**
- 0416706 11:30
E. Y. Frisman: **Population dynamics and age structure of the deer, *Cervus nippon*: Relationship between food saturation and size of deer parks**
- 0416707 11:45
Rizaldi, K. Watanabe, and A. Bakar: **Traditional hunting on wild boar (*Sus scrofa*) in west Sumatra, Indonesia**
- 0416708 12:00
L. Bartos: **History of sika deer introduction to Europe: Implication for hybridization with native red deer**
- 0416709 12:15
J. Pluháček, L. Bartoš, and J. Víchová: **Variation of male infanticide in captive zebras supports subspecific status of maneless zebra**
- 0416710 12:30
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- 0427501 15:30
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- 0427502 15:45
E. N. Davis: **Dietary partitioning between five sympatric mammalian herbivores at Wilsons Promontory National Park, Australia**

0416708

HISTORY OF SIKA DEER INTRODUCTION TO EUROPE - IMPLICATION FOR HYBRIDIZATION WITH NATIVE RED DEER

L. Bartos

Ethology Group, Research Institute for Animal Production, Czech Academy of Sciences, Brno, Czech Republic

high crude protein contents).

O416706

**POPULATION DYNAMICS AND AGE STRUCTURE OF THE DEER, *Cervus nippon*:
RELATIONSHIP BETWEEN FOOD SATURATION AND SIZE OF DEER PARKS**

E. Y. Frisman

Institute of Complex Analysis of Regional Problems, Far Eastern Branch of Russian Academy of Sciences, Birobidzhan, 679016, Russia (e-mail: frisman@mail.ru)

The dynamics of a controlled population of *Cervus nippon* will be discussed. The basic components of the deer herd can be derived in accordance with the practice of recording the density of the following age-classes: (1) calves — newborn specimens, appearing in the given period; (2) immature females; (3) mature females, participating in reproduction; (4) immature males; and (5) mature, reproducing males. Because data of these groups were regular recorded for all farms they are considered to be basic variables in the mathematical model of the population dynamics. Analysis of herd composition shows that birth rate and survival of all age classes markedly varies between years in each farm and between farms. The basic factors influencing the values of birth rate and survival are corresponding to food saturation and size of deer parks. For estimating the parameters of the model, 20 years of censuses and births and deaths in a number of deer farms of Far East of Russia were used. Comparison of the parameter values obtained leads to important qualitative results. Variations of the values of saturation by food (f) above some level do not result in a substantial increase in birthrate. However, an increase in the relative values of area of deer parks (s) results in a marked rise of birthrate. An analogous estimation of the dependence of the survival coefficients from the values of f and s shows that increase in f has a more pronounced effect than increase in s . For any fixed value of park area and total food saturation the model enables the determination of equilibrium densities for all age groups. With the necessary calculations optimum densities for each park can be found and moreover, it is possible to give reasonable recommendations for change herd density by changing the park area or food saturation.

✓ O416707

TRADITIONAL HUNTING ON WILD BOAR (*Sus scrofa*) IN WEST SUMATRA, INDONESIA

Rizaldi¹, K. Watanabe¹, and A. Bakar²

¹Primate Research Institute, Kyoto University, Inuyama 484-8506, Japan (e-mail: rizaldi@pri.kyoto-u.ac.jp); ²Department of Biology, Faculty of Science, Andalas University, Padang 25163, Indonesia

Local people in the mainland of West Sumatra traditionally hunt wild boars with trained dogs. This hunting might have originated from Minang Kabau ethnic group in the high lands of West Sumatra and expanded to the lowlands. It is not known when this began, but it has continued over the generations. This report aims to describe information relating to hunting activity. Data on the distribution of wild boars and locations where hunting is carried out across West Sumatra region were compiled from direct interviews at the local inhabitants and hunter groups. Wild boars were distributed in various land-use types across the region. People considered wild boars as an extraordinary pest species. Economical loss from crop damage is considerably high. Hunting with dogs is a way to prevent crop raiding and land damage in addition to snare trapping, poisoning, crops guarding and fencing. Bush meat was not a reason of this hunting because people in the region do not eat pork, as a religious restriction. Hunting occurs mostly in the traditional crop fields adjacent to forest edges. Recently hunter groups were organized hierarchically from a small group in a village to a big group in a district with hundreds of members. Hunting is scheduled regularly, although opportunistic hunting is also conducted. This hunting might not be so effective in controlling wild boar populations because the number of boars killed is very few. However, it could be effective to drive these pests temporarily away from cultivated field. The entire hunting process will be described in detail.

O416708

**HISTORY OF SIKA DEER INTRODUCTION TO EUROPE — IMPLICATION FOR
HYBRIDIZATION WITH NATIVE RED DEER**

L. Bartos

Ethology Group, Research Institute of Animal Production, POB1, CZ-104 01 Praha 10-Uhrineves, Czech

International Journal of Primateology

Program for the Twenty-First
Congress of the International
Primatological Society

Guest Co-Editors:

Tamara L. Bettinger and Katherine A. Leighty



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DURING INTRODUCTIONS OF CAPTIVE CHIMPANZEES S. Preuschoft, E. Schritler, M. Reimers, M. Seres [36]

02:20 PM PATTERNS OF WOUNDING INCIDENTS IN CAPTIVE CHIMPANZEE GROUPS WITH ADOLESCENT MALES S. R. Ross, T. L. Bettinger, M. A. Bloomsmith [37]

02:40 PM THE PRELIMINARY RESPONSE OF RETIRED CAPTIVE CHIMPANZEES TO INCREASES IN ENCLOSURE AND GROUP SIZE A. Pultz, L. D. Panu, F. Landon, J. Brent [38]

03:00 PM **SOCIAL DEVELOPMENT OF AGGRESSIVE BEHAVIOR IN A CAPTIVE GROUP OF JAPANESE MACAQUES (*MACACA FUSCATA*)** B. C. Rizaldi, K. Watanabe [39]

COMPARISONS OF HIERARCHICAL ASSOCIATIONS AND ALLIANCES IN BACHELOR 03:20 PM AND BREEDING GROUPS OF CAPTIVE WESTERN LOWLAND GORILLAS (*GORILLA GORILLA*) P. K. Pullen, A. B. Plowman, L. A. Leaver [40]

FORMING AND MAINTAINING ALL-MALE 03:40 PM GORILLA PARTIVITY T. Stoinski, C. Kuhar, K. Lukas [41]

02:00 PM-04:00 PM: Session 6: Ecology I. Moderator: J. Yamagiwa (Kama A)

RED COLOBUS ABUNDANCE IN FOREST 02:00 PM FRAGMENTED: THE ROLE OF NUTRITION, PARASITISM, AND STRESS M. D. Wasserman, C. A. Chapman, T. R. Gillespie, M. L. Speirs, M. J. Lawes, T. E. Ziegler [42]

DIET, ENERGY INTAKE, AND ENERGY 02:20 PM EXPENDITURE BY MOUNTAIN GORILLAS OF BWINDI IMPENETRABLE NATIONAL PARK, UGANDA J. B. Nkurunungi, J. Ganas, S. Ortman, M. M. Robbins [43]

FEEDING ECOLOGY AND ACTIVITY PATTERNS 02:40 PM OF FEMALE *MICROCEBUS BERTHAE* AND SYMPATRIC *M. MURINUS* (CHEIROGALEIDAE) M. Danmahn, P. M. Kappeler [44]

03:00 PM FEEDING EFFECTS OVER INTESTINAL

PARASITES INFECTION IN ALOUATTA PIGRA IN 03:20 PM A MEXICAN TROPICAL RAINFOREST A. González-Di Piero, K. Stoner [45]

FORAGING STRATEGIES OF MONTANE FOREST CHIMPANZEES IN KAHUZI-BIEGA NATIONAL PARK, DEMOCRATIC REPUBLIC OF CONGO A. K. Basabose, J. Yamagiwa, M. Matsubara [46]

FORAGING PATTERNS OF ONE GROUP OF 03:40 PM NORTHERN MURIQÜI (*BRACHYTELES HYPOXANTHUS*) FROM THE JAÓ VALLEY OF ESTAÇÃO BIOLÓGICA DE CARATINGA (EBC), MG, BRAZIL J. P. Boubli, I. M. Mourthe, F. Couto, K. B. Strier [47]

04:00 PM-04:30 PM: Afternoon Break (Lower Level Display Area)

04:30 PM-06:00 PM: Session 7: SYMPOSIUM: Remote Sensing Tools for Great Ape Research and Conservation: Current Applications and Future Needs: L. Pintea and N. Laporte (Princess) [48]

REMOTE SENSING OF CHIMPANZEE HABITAT 04:30 PM CHANGE IN GOMBE NATIONAL PARK, TANZANIA: IMPLICATIONS FOR BEHAVIOR RESEARCH AND CONSERVATION L. Pintea, A. Pusey, P. Bolstad, M. Bauer [49]

REMOTE SENSING AND GEOGRAPHIC 04:50 PM INFORMATION SYSTEMS: AN INTRODUCTION TO TOOLS AND TECHNIQUES FOR GREAT APE RESEARCH AND CONSERVATION W. Walker, N. Laporte, L. Pintea [50]

OPERATIONAL HABITAT MONITORING FOR 05:10 PM SPECIES CONSERVATION: REMOTE SENSING TOOLS FOR CHIMPANZEE CONSERVATION IN WESTERN UGANDA N. T. Laporte, A. J. Plumptre [51]

04:30 PM-06:00 PM: Session 8: ROUNDTABLE: Developing Effective Presentations: A Discussion for Students and Field Assistants: K. A. Leighy (Bwindi) [52]

04:30 PM-06:10 PM: Session 9: Conservation I. Moderator: S. Arrigo-Nelson (Kidepo)

04:30 PM ACCESS TO *LEUCAENA* BUT NOT FUR CONDITION CORRELATES WITH

Female chimpanzees, adolescence is a turbulent time. As young males begin challenging existing hierarchies social unrest is common. Managing adolescent male chimpanzees within their social groups is the biggest challenge facing the Chimpanzee Species Survival Plan today. If zoos can manage young males through these difficult years, they typically mature into compatible adults. Currently there are no published studies to guide decision-making during these tumultuous years. Determining acceptable rates of aggression, when aggression warrants removal from a group, or what level of wounding should be expected is not available. A multifaceted study was instituted in 2005 to collect data on these questions. One component of the study focused on incidence of wounding. Data were collected on chimpanzee groups at 20 zoos during a six-month period. Location and severity of all wounds (n=558) were recorded. 10.3% of wounds required some form of veterinary intervention. Almost half the wounds (44.7%) occurred on the head or trunk. Individuals in large groups (>7) received nearly half the number of wounds as individuals in smaller groups. Preliminary analyses indicate the number of adolescent males in the group does not effect wounding frequency, however in cases where the "inflicter" of the wound was identified, 31% of the assailants were adolescent males. These findings should assist those managing captive chimpanzees in better understanding and handling behavioral problems with adolescent males.

Abstract # 38

THE PRELIMINARY RESPONSE OF RETIRED CAPTIVE CHIMPANZEES TO INCREASES IN ENCLOSURE AND GROUP SIZE

A. Pultz, L. D. Panu, F. Landon and L. Brent
Chimp Haven, Inc., 13600 Chimpanzee Place, Keithville, LA, 71047, USA

Wild chimpanzees live in large, mixed sex groups that display a fission-fusion social organization. To provide a social environment more like that of wild chimpanzees, Chimp Haven has integrated smaller groups of 3-4 individuals into one large group of 18 individuals. This large group has access to a 5 acre wooded habitat and other areas throughout the facility that allow them to choose their social companions. The preliminary study took place over

a 14 week period that began two weeks prior to the first groups being introduced and ended a month after the chimpanzees were released into the habitat. Data were collected on the chimpanzee's location including whether they were arboreal, terrestrial, inside or outside. The chimpanzee's nearest neighbor was also recorded, whether they were touching or within arms reach. Data were collected during daytime and nighttime hours and were utilized to make management decisions about potential group formations. The chimpanzees have become more arboreal over time and less terrestrial, independent of their introduction into the habitat. By the end of the 14 weeks, the chimpanzees also spent less time inside and spent more time in proximity to each other when outside ($r = -.65$). The results of this study indicate that the chimpanzees are responding positively to living in large groups in a large naturalistic environment.

Abstract # 39

SOCIAL DEVELOPMENT OF AGGRESSIVE BEHAVIOR IN A CAPTIVE GROUP OF JAPANESE MACAQUES (MACACA FUSCATA)

B. C. Rizaldi and K. Watanabe
Primate Research Institute, Kyoto University, Inuyama, Aichi, 484-8506, Japan

Social development of aggressive behavior was studied in a captive group of Japanese macaques. Social interaction of infant monkeys belonging two cohorts born in 2002 and 2003 were continuously recorded along with their developments by 30-min continuous sessions (in total, 1854 sessions) for two years. Submissive behavior appeared at around four months of age, when infants started to explore their circumstances and try moving away from their mothers. No significant difference was found in the ages at the commencement of submissive behavior between two cohorts ($t=0.865$, $df=8$, $p<.05$). Aggression of infants appeared later than the submissive behavior. The age at commencement of aggressive behavior was significantly different between two cohorts ($t=7.965$, $df=8$, $p<.005$) and infants who had more close-aged associates performed aggression in earlier ages. Dominance rank among peers was established soon after aggressive behavior appeared and it generally followed dominance ranks among their mothers. The dominance rank among