



August 12th-17th 2012 Cancun, Mexico
Cancun Convention Center

PROGRAM





T. E. Ziegler¹ and T. Deschner²

¹Wisconsin National Primate Res. Ctr., Univ. of Wisconsin, Madison, WI, 53715, USA, ²Max Planck Institute of Evolutionary Anthropology, Leipzig, Germany

The majority of primate species live in social groups where individuals form social bonds that are characterized by high rates of positive social behaviors. These behaviors, such as grooming in primates and nursing in mammalian mothers, facilitate the formation and maintenance of social relationships but their biochemical underpinnings are less evident. With the use of a non-invasive urine sampling method, we can now measure peripheral oxytocin levels in children and nonhuman primates as a means of identifying the effects of behavioral interactions on social bonding. We will review recent studies that demonstrate how sensory stimuli stimulate oxytocin release in children and nonhuman primates. Results from oxytocin measurement in urine demonstrate oxytocin's response to social comforting in stressed children and marmosets and its role in pair-bonding in tamarin monkeys. The excretion time of oxytocin is similar for several primate species providing a useful relationship between behavior and expected release. New methods of collecting and preserving urine samples for oxytocin measurement will be presented evaluated for their use in field conditions.

ABSTRACT # 191

LONG-TERM PATTERNS OF SPACE USE BY SPIDER MONKEYS (*ATELES GEOFFROYI*) IN PUNTA LAGUNA, YUCATAN PENINSULA, MEXICO

S. E. Smith Aguilar¹, G. Ramos-Fernández², F. Aureli², C. M. Schaffner² and L. G. Vick³

¹CIDIR Unidad Oaxaca, Instituto Politécnico Nacional, Hornos #1003, Col. Noche Buena, Santa Cruz Xoxocotlán, Oaxaca, 71230, Mexico, ²Instituto de Neuroetología, Universidad Veracruzana, Mexico, ³William Peace University, North Carolina, USA

Most primate species have stable home ranges and concentrate their activities in a core area within that range. Many studies on primates have used minimum convex polygon and grid cell counts; methods that have proved to be inaccurate, particularly in portraying the internal structure and the long-term patterns of space use. Here, we estimate home ranges and core areas using a 13-year data set from two study groups of spider monkeys in Punta Laguna, Yucatan, Mexico, using the kernel and Local Convex Hull (LoCoH) methods. Both methods generate probability

contours indicating different intensities of use by the monkeys. Core areas were defined as the contour containing observations more concentrated than expected by chance. Home ranges and core areas varied widely in size across years, the kernel method providing estimates about twice as large as those based on the LoCoH method. Home ranges, and particularly core areas, included high proportions of older vegetation types. Yearly home range and core area sizes, estimated with the LoCoH method, were positively correlated with group size, particularly with the number of adult males, while the kernel method showed no correlation. In spite of the size variation, the general location and home range centers varied little over time, suggesting high site fidelity by spider monkeys in their long-term space use patterns.

ABSTRACT # 192

TOOL INHERITANCE? SOCIALLY MEDIATED TOOL PREFERENCES IN WILD CHIMPANZEES

D. Biro¹, S. Carvalho², A. Gwyther¹ and T. Matsuzawa³

¹Department of Zoology, University of Oxford, South Parks Road, Oxford, OX1 3PS, United Kingdom, ²University of Cambridge, ³Kyoto University

Research on wild chimpanzee nut-cracking at Bossou, Guinea, has focused on understanding the cognitive and physical requirements allowing stone-tool cultures to emerge, develop and spread among primates. While social transmission of behaviour is a crucial part of maintaining long-term tool-use traditions, what comprises the "full package" of information being passed on from model to learner is still poorly understood. Our previous field experiments on nut-cracking at Bossou's "outdoor laboratory" have confirmed that chimpanzees show tool function discrimination (hammer vs. anvil) and selectivity among stones based on the type and dimensions of the available raw materials. Here we extend our studies of individual-level selectivity for tools to include socially mediated preferences. We studied the reuse ("recycling") of hammer-anvil composites assembled, used, and later abandoned by chimpanzees by other individuals present. We found clear age-related differences in individuals' propensity to recycle such freshly abandoned tools, with juveniles showing the highest recycling rates, preferentially of tools abandoned by adults. Furthermore, juvenile chimpanzees' nut-cracking efficiency increased when they claimed adult-abandoned tools, indicating that recycling exposed them to "better" tools than