

**MITOCHONDRIAL DNA DIVERSITY AND REPRODUCTIVE SUCCESS IN THE ORANG-UTANS AT CAMP LEAKEY, TANJUNG PUTING NATIONAL PARK, CENTRAL KALIMANTAN, REPUBLIC OF INDONESIA.**

G.L. Banes<sup>1,2\*</sup>, S.B. Piertney<sup>1</sup>, B.M.F. Galdikas<sup>3</sup>, L.A. Knapp<sup>2</sup>

<sup>1</sup>*School of Biological Sciences, University of Aberdeen, Scotland, U.K.*, <sup>2</sup>*Primate Immunogenetics and Molecular Ecology (PRIME) Research Group, Department of Biological Anthropology, University of Cambridge, U.K.*, <sup>3</sup>*Department of Archaeology, Simon Fraser University, Burnaby, B.C., Canada.*

\* = Present Address

*Presenter's Email: gb397@cam.ac.uk*

Orang-utans comprise two endangered species endemic to the islands of Borneo (*Pongo pygmaeus subsp.*) and Sumatra (*Pongo abelii*) in South-East Asia. A rapid decline in suitable habitat has confined orang-utans to a vastly restricted range, where they exist in a small number of viable wild populations. Loss of habitat, poaching and the pet trade has resulted in large numbers of displaced orang-utans that are frequently prepared for re-release and continued provisioning at a number of dedicated sites. Camp Leakey was dedicated to rehabilitation and release of ex-captives between 1971 and 1985. A large population presently remains in this location, comprising orang-utans that were brought together from a wide range of locations across Borneo. Almost nothing is known about reproductive success when individuals from a variety of habitats are brought together under artificial conditions. In August 2008, faecal samples were collected from 35 individuals. DNA was extracted and mitochondrial DNA (hyper-variable) sequences were generated using PCR. These data allowed us to examine the genetic diversity of individuals during this period. Mitochondrial DNA diversity was also evaluated in light of male reproductive success. Individuals in the study group rarely shared the same mitochondrial DNA genotype and genetic differences were striking. Kusasi, the dominant male throughout the 1990s and early 2000s, appears to be most genetically different to all other individuals in the breeding population. Here, we will present data on mitochondrial DNA diversity and discuss these results in light of paternity and mate choice in displaced orang-utans.

Keywords: orang-utan, mitochondrial DNA, rehabilitation, genetic diversity.