

BERENTY RESEARCH PROJECTS 2011

RECENT THESES

BUCKLEY, Victoria. 2011. *Scratching as a Measure of Anxiety and as a Functional Displacement Activity During Behavioural Transitions in Ring-Tailed Lemurs (Lemur catta)*. Submitted in part fulfilment of the Roehampton University Degree MRes Primate Biology, Behaviour & Conservation

NEEDHAM, Joanne. 2011. *Post Conflict Spatial Relationships in Wild Ring-tailed Lemurs Lemur catta*. Submitted in part fulfilment of the Roehampton University Degree MRes Primate Biology, Behaviour & Conservation

RAKOTOARISOA Tsiry Fanilonirina. 2011. *Le modèle du régime optimal chez Propithecus verreauxi (Grandidier, 1967) dans le fourré épineux de la réserve privée de Berenty*. Mémoire de fin d'études en vue de l'obtention du certificat d'Aptitude Pédagogique de l'Ecole Normale Supérieure de l'Université d'Antananarivo.

RABESON Eden Florin . 2011. *Approvisionnement en gomme chez le microcèbe de la forêt épineuse, Microcebus griseorufus, dans la réserve privée de Berenty, Sud de Madagascar*. Mémoire de fin d'études en vue de l'obtention du certificat d'Aptitude Pédagogique de l'Ecole Normale Supérieure de l'Université d'Antananarivo.

RASAONA Ndrianaina Nomena. 2011. *Investissements alloparentaux chez l'espèce Propithecus verreauxi de la réserve privée de Berenty (sud de Madagascar)*. Mémoire de fin d'études en vue de l'obtention du certificat d'Aptitude Pédagogique de l'Ecole Normale Supérieure de l'Université d'Antananarivo.

RANDRIATSARA Fetraharimalala. 2011. *Relations affiliatives entre les adultes et les immatures chez les lémurs bruns hybrides (Eulemur fulvus sp) pendant la période de sevrage*. Mémoire de fin d'études en vue de l'obtention du certificat d'Aptitude Pédagogique de l'Ecole Normale Supérieure de l'Université d'Antananarivo.

RAZAFINDRAIBE Rinasoa Miantsa. 2011. *L'exploitation de l'habitat par Lepilemur leucopus dans le fourré épineux de la réserve de Berenty*. Mémoire de fin d'études en vue de l'obtention du certificat d'Aptitude Pédagogique de l'Ecole Normale Supérieure de l'Université d'Antananarivo.

RECENT DISSERTATIONS

RAZAFINDRAMANANA Josia. 2011. *Behavioural ecology of sympatric lemur species Lemur catta and Eulemur sp. in forest fragments, South-eastern Madagascar*. Submitted in partial fulfilment of the requirements of the award of Doctor of Philosophy. Oxford Brookes University, UK.

WEBSITE Created by Chris Klimowicz, The University of Michigan - Dearborn
<http://www-personal.umd.umich.edu/~fdolins/berenty/index.html>

2011 RESEARCH

RING-TAILED LEMUR AND BROWN LEMUR DEMOGRAPHY

RAZAFINDRAMANANA Josia Oxford Brookes Univ., UK, and Université d'Antananarivo.

The following are the census results for this year. Overall, there was a decrease for both species this year.

Brown lemurs Malaza: 38 groups, total population: 308, total infants: 89

Brown lemurs Ankoba: 22 groups, total population: 172, total infants: 40

Ringtailed lemurs Malaza (including spiny): 25 groups, total population: 220, total infants: 62

Ringtailed lemurs Ankoba: 21 groups, total population: 207, total infants: 45

Nine of the brown lemur infants died in 2011

DENDROECOLOGICAL STUDY OF FOREST AGE AND HEALTH

WINCHESTER, Vanessa. School of Geography and the Environment, University of Oxford.

RASAMIMANANA, Hantanirina. Ecole Normale Supérieure (ENS), BP 881, Université d'Antananarivo, Antananarivo 101 – Madagascar

Students: RATO VONIRINA Tsilavina and RAHARISON Sahoby Marin

Sahoby Marin Raharison and Vanessa Winchester collected as much information as possible that could have a bearing on forest health, especially in relation to *Tamarindus indica*, the dominant forest tree. Droughts, water table variations, invasive plants, and rates of forest regeneration were all considered. A fungus that commonly grows on dead or dying tamarinds was identified as non-pathogenic. Riverbank profiles were drawn and flood years were dated from root damage: root distances to eroded riverbanks supplied estimates for bank-erosion rates (between 2.5 near Bealoka to 30.8 cm/year⁻¹ on the Ankoba bank, on the Malaza bank the highest rate was 12.3 cm/year⁻¹). The higher rates, while not an immediate threat to forest persistence, could be important for tree-seedling regeneration on the banks.



RING-TAILED LEMUR POST-CONFLICT BEHAVIOUR (28th March - 24th May 2011)

NEEDHAM Joanne. Masters student, Roehampton University, London, UK
Assisted by RANDRIANTSARA Fetraharimalala. Supervisor Dr Caroline Ross with input from Alison Jolly.

Examined whether lemurs manage aggressive behaviour in the post-conflict period. The dispersal hypothesis and the reconciliation model both predict ways in which individuals will relate to their former opponent post-conflict. In order to investigate post-conflict behaviour, data were collected on a group of wild ring-tailed lemurs *Lemur catta*. The effects of rank, the sex combination of the aggressive dyad, intensity of aggression and season (mating vs. non-mating) were also tested on post-conflict behavior.



Neither reconciliation nor dispersal was present. However, lemur behaviour was affected by conflict as close spatial relations with the social group were reduced. Results suggest that subordinate animals have a greater association with the former opponent and in the social group than do dominant animals. Female dyads are the most dispersed sex combination between former opponents, and in the social group. Results only provided weak evidence to suggest that a rise in intensity of aggression promotes a higher level of spatial separation. However, stronger evidence indicated that the onset of the mating season could reduce close spatial positioning. Collectively these results provide a valuable understanding of management of aggression through space in a species not exhibiting reconciliation.

RING-TAILED LEMUR DISPLACEMENT BEHAVIOR

BUCKLEY, Victoria. Masters student at Roehampton University, UK.

Data were collected on groups A1 and G3 from March 20th to May 24th 2011. The study aimed to show whether displacement activities provide an indicator of anxiety in ring-tailed lemurs and whether these behaviours function to facilitate transitions from one motivational state to another. Behavioural data was collected by doing focal follows on all adults in each group, recording their displacement activities (e.g. self-scratching) and the context in which they

occurred. Analysing the 345 hours of data collected showed that ring-tailed lemurs exhibited elevated rates of scratching in close proximity to dominant or high-risk (more dominant and unrelated) individuals compared to when alone. Additionally, victims of aggression exhibited elevated rates of scratching in the first minute post-conflict. These results provide substantial evidence that scratching is a reliable measure of anxiety in ring-tailed lemurs, being only the third study to examine this behaviour in strepsirrhine



primates. Scratching rates were higher immediately before and after transitions in behaviour when compared to mean scratching rates. Moreover, scratching rates were higher before than after transitions, suggesting that scratching functions to facilitate transitions in behaviour. (Publication: [Buckley, V.](#) and Semple, S. (2012) Evidence that displacement activities facilitate behavioural transitions in ring-tailed lemurs. *Behavioural Processes*, 90, 433-435.)