BERENTY RESEARCH PROJECTS 2012-2013

RECENT PRESENTATIONS

2013 Prosimian Congress at the Centre Valbio, Ranomafana: Hantanirina Rasamimanana, Anne S. Mertl-Millhollen, Sahoby Marin Raharison, Donald Raymond Tsaramanana, Kathryn Blumenfeld-Jones, Hajarimanitra Rambeloarivony, Josia Razafindramanana

RECENT THESES

SOLOHELY Raoby Elysa. 2012. *Détermination des aires centrales dans le domaine vital de Propithecus verreauxi verreauxi de la réserve de Berenty.* Mémoire de fin d'études en vue de l'obtention du certificat d'Aptitude Pedagogique de l' Ecole Normale Superieure de l'Université d'Antananarivo.

RAMANAMANDRESY Maheninarivo Manampisoa. 2013. *Comparaison des comportements alimentaires et sociaux des Microcebus griseorufus des deux sexes dans le fourré épineux de la réserve privée de Berenty*. Mémoire de fin d'études en vue de l'obtention du certificat d'Aptitude Pedagogique de l' Ecole Normale Superieure de l'Université d'Antananarivo.

RAZAFIMAHATRATRA Anjaramiandry Aingafaniry. 2011. *Etude des agressions maternelles chez lemur catta dans la réserve de Berenty sud de Madagascar*. Mémoire de fin d'étude en vue de l'obtention du Diplôme d'Etude Approfondie en Foresterie, Environnement et Développement de l'Ecole Supérieure des Sciences Agronomiques de l'Université d'Antananarivo

RAHARISON Sahoby Marin. 2013. *Etude dendrogéomorphologique de l'érosion de la berge de la rivière Mandrare au niveau de la forêt galerie de la réserve de Berenty*. Mémoire de fin d'étude en vue de l'obtention du Diplôme d'Etude Approfondie en Foresterie, Environnement et Développement de l'Ecole Supérieure des Sciences Agronomiques de l'Université d'Antananarivo

RECENT FILMS AND TELEVISION

2013 November: documentary film on women primatologists: Nouveaux explorateurs. TF1. http://www.francetv.fr/

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

2012-2013 RESEARCH

LEMUR MATING AND BIRTHING BEHAVIOUR AND CONSERVATION EDUCATION

WALKER-BOLTON, Amber, Dept. of Anthropology, University of Toronto, Toronto, ON, Canada
SEHENOMALALA Nirina Colombe, University of Antananarivo

Conducted between April 2nd 2012 and June 8th 2012, as well as October 10th 2012 to December 5th 2012 to observe the first mating season and birthing season of PhD fieldwork.

Between April and June, 429 focal follows were completed for a total of 107 hours of observation. Data were collected from 730 am to 1130 am and from 130 pm to 500 pm. Data were collected on all scent marking behaviour, agonism and affiliation and mating behaviour as well as proximity maintenance between adult males and females. Mating was observed between April 25th and May 4th. Seven females were observed to mate, and two females from A1 group were seen to mate on the same day but at different times of day.

A1 group consisted of six adult females, and 1 adult male. Two males, Hank and Nok, were observed on one occasion with the group at the beginning of the study and then disappeared after this. RG consisted of four adult females and four adult males. MG consisted of two adult females, two adult males, and two juveniles. LG consisted of three adult females and one adult male.

Between October and December, 319 follows were completed for a total of 80 hours of observation. Data were collected from 6:30 am to 11:00 am and 3:00 pm to 530 pm. Data were collected on all scent marking behaviour, agonism and affiliation and proximity maintenance between adult males and females. Data were also collected on infant development and affiliation between adult males and infants. Seven infants were born during the birthing season, two in A1 group, two in RG group, two in MG group and one in LG.

A1 group consisted of two adult females, and one adult male. This was a major loss of four adult females in the group. One female, FL was known to have died in childbirth on Sept 8th. The other females disappeared for unknown reasons. RG consisted of two adult females and five adult males. Again, two adult females disappeared for unknown reasons. MG consisted of four adult females, six adult males, and one juvenile. LG consisted of two adult females and one adult male, losing one adult female from earlier in the year.

Colombe with Mara, former Directeur de l'école Privée HAH Berenty

Amber with Berenty students

The Red Book Challenge. Conservation lessons were given to 89 students in a public school and a private school in the village of Berenty, and students produced hand-written/drawn "red books" and postcards on nature and conservation. Students were invited to create an original story or poem about Malagasy wildlife and conservation, or to draw pictures of local plants and animals. They also received school supplies of notebooks and colour pencils (a scarce and valued resource). The completed red books and postcards were passed on to a youth conservation club in Fort Dauphin for sale to tourists. Proceeds from the sales are used toward a small conservation/environmental project selected and carrried out by the students. See http://icfcanada.org/lemurs.shtml for more information.

LEMUR DEMOGRAPHY 2012 and 2013

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

Conducted a census of Lemur catta and Eulemur sp. in the entirety of the reserve. In comparison with the census data in 2011, the 2012 results show that the ring-tailed lemur population at Berenty results remains stable with the 47 groups. However, the brown lemur's population has been increased from 41 to 47 groups. This might be due to the presence of other brown lemurs groups from nearby forest (Analamarangy) that come to the reserve to feed in Malaza forest. This increase of the brown lemur population might be resulted from the reproductive success from the last two years, thus increasing their number in the forest. It is highly important to continue the population survey of both species in the next coming years in order to describe their demographic trends, particularly the brown lemurs, in order to establish necessary conservation strategy for the Berenty forest and the lemur species.

Data from 2013 shows that there is a slight variation of the population number of both species. There is a visible decrease of the brown lemur population living in Ankoba forest (237 in 2012; 171 in 2013). Though, a slight increase of brown lemurs in Malaza has been recorded. This might result from the movement of few groups from Ankoba to Malaza forest. However, the general result outlines a reduction of the brown lemur population in Berenty reserve compared to the 2012 survey. A remarkable increase of the ring-tailed population in Ankoba has been recorded in 2013. This might be due to the high availability of food in Ankoba compared to Malaza, resulting to a successful reproduction, and also possibly due to the reduction in brown lemur number in the area. In 2013, only 2 groups of ring-tailed lemurs were seen to live permanently in the spiny forest. Most of the ring-tailed lemur groups use several habitat types in Malaza forest and are also ranging in the nearby Analamarangy forest. This is one of the reasons ring-tailed lemur data from Malaza forests were not divided into the different habitat types existing in the area. More surveys are needed to evaluate this change in distribution pattern and demographic trends.

Brief, in contrast with the 2012, the census data from 2013 describes variation in population numbers for both species that occur mainly in the Ankoba forest. The stability in the ranging pattern of the ring-tailed lemurs needs to be investigated in the next population surveys.

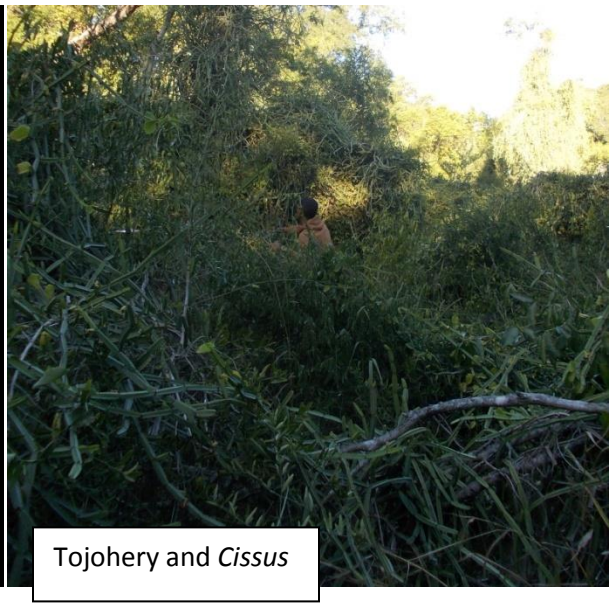
FOREST REGENERATION AND DEGRADATION, AND LEMUR FEEDING ON INVASIVE *OPUNTIA*, JUNE-JULY

RASAMIMANANA, Hantanirina. Ecole Normale Supérieure (ENS),BP 881, Université d'Antananarivo, Antananarivo 101 – Madagascar
MERTL-MILLHOLLEN Anne, University of Oregon, Eugene, OR, USA
Students: RAKOTONOMENJANAHARY Saotra and RASAMIMANANA Tojohery (ENS)

The students were trained in the field by Dr. Hantanirina Rasamimanana to acquire the appropriate needed competencies to deal with invasive species issues in Berenty Reserve. This involved the following methods:

- The forest regeneration and degradation was monitored using line transects parallel and perpendicular to the river and in sample plots in former burn areas, and the density of tamarind seedlings in the forest was assessed.
- Saotra Rakotonomenjanahary studied lemur feeding on the invasive *Opuntia* sp. in 2 ring-tailed troops G3 and D1A as well as the abundance of this plant in their respective range.
- Tojohery Rasamimanana studied the extent of *Opuntia* sp., *Cissus quadrangularis* another invasive plant and *Tamarindus indicus* the native dominant plant of the reserve and the main feeding resource of ring-tailed are competing in the gallery forest of the reserve.
- Tojohery also studied the regeneration of two burned areas in the gallery forest.

Saotra



Tojohery and *Cissus*

Regeneration from burn. Most of the species in both sites are drought-tolerant and common throughout the xerophytic scrub and native ones. The large burn site has 3 native big tree species *Albizzia polyphyla, Maerua filiformis, Acacia farnesiana*, while the little one has only *Crateva excelsa.* The herbaceous dominate on 91% of the area after 7 years burn to be replaced by scrub vines within 15 years. The big trees in the large area might have already been there while it was burning but did not die. While *Crateva excelsa* seedling in the little area might have been carried by animals.

Sifaka census. Eight students from ENS were trained to actively contribute to solve environmental issues by collecting census data on 2 diurnal lemur species in the Berenty reserve, Propithecus verreauxi (sifaka) and Lemur catta (maki) and the phenology of all tree species along all trails at 1m inside from their edge, both sides.

Sifaka census results: The sifaka were counted during their birth period August 2013. Comparing with the 2010 lactating period December- January 2010-2011 there is an increase of troop and individual numbers, mainly in Ankoba and Malaza forest so the total number is more than 350 individuals. This increase is due to an important increase in Ankoba forest. The number in the spiny forest remains always the same