



**SPECIAL  
POINTS OF  
INTEREST:**

- **DLC post-doc Erik Patel is on the ground in Madagascar**
- **DLC has a signed agreement with MNP**
- **There will be a new school and bridge built in the region**

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## A new DLC conservation initiative!

Welcome to the inaugural newsletter of the Duke Lemur Center's Madagascar SAVA Conservation initiative! We are very pleased to have the opportunity to share here our early project progress and activities. But before delving into project news, I would like to give a bit of background about DLC's new "SAVA Conservation initiative". SAVA, by the way, is the acronym for this region of northeastern Madagascar which includes the four towns of Sambava, Andapa, Vohemar, and Antalaha (see map).

Although many conservation organizations are working in Madagascar, overall environmental progress has been slow. The country's unique natural forests, and the wildlife they contain, continue to disappear at an alarming rate. In 2009, DLC director Anne Yoder felt that the timing was right to begin exploring potential sites in Madagascar where a DLC on-the-ground initiative could have an important conservation impact. To summarize a lengthy process, after extensive research and consultation with conservation organizations and colleagues working in Madagascar, we narrowed the list down to two potential areas. After site visits and further consultations, the SAVA region was chosen as the best fit for DLC.

But why the SAVA region? We based our decision on many criteria, such as level of threat to the area's forests, biodiversity present, willingness of local peoples and authorities to work with us, and lack of conservation organizations already working in the area. We also considered the other advantages that a Duke University presence in the area could bring to both sides, in terms of related activities, such as opportunities for students, researchers, and other Duke departments, which could also benefit local people. The SAVA region became the obvious choice.

What will our DLC-SAVA Conservation initiative consist of exactly? As you will learn from this and following newsletters, we will use a multi-faceted approach to conservation which is similar, but not identical to, that used by the successful Madagascar Fauna Group's (MFG) projects, which we have been an active part of for so long. In our SAVA initiative, we also will focus on a range of project components. The first, which has already begun with teacher trainings, is environmental education. It is so important to begin stimulating environmental awareness and conservation understanding among the youth, through a variety of activities. Secondly, we will support reforestation efforts in the region. Returning trees to the landscape is



**Marojejy National Park peaks at dawn.**

(photo by Erik Patel)

## A new DLC conservation initiative! *Continued*



**View from Camp 3**

(Photo by Inaki Relanzon)

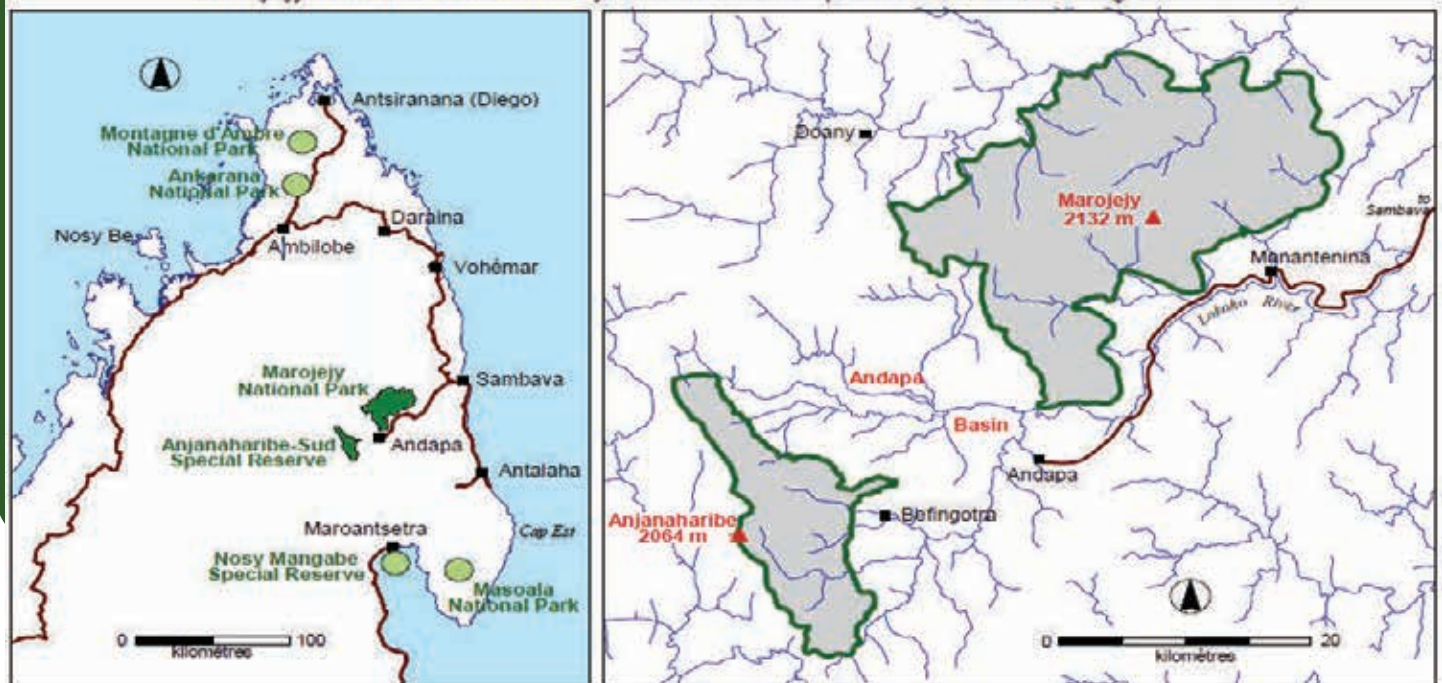
*“Our sincere hope is that after 20 years of DLC conservation work in the SAVA region, we too can claim an important environmental impact in that unique and biologically important area of Madagascar.”*

important, but the deepest value of reforestation is as a teaching tool to change mentalities about forests, and to pass along knowledge on wise management of forest resources. Third, we will also support and conduct research missions in the little known vast wilderness areas of the region. You will read about one such mission in this newsletter. There is still so much to learn from the forests of the SAVA region. On a fourth front, we will be contributing to direct protection of the region's official protected areas by supporting the efforts of the Madagascar National Parks (MNP) department in various ways. For example, we are presently looking at direct support of a neglected village guard system that helps to secure remote park boundaries. These are a few of our initial project components, which we expect will in time expand and diversify.

The SAVA Conservation project will be overseen by myself, and managed on the ground by Dr. Erik Patel, (see article this newsletter) who already has years of experience working in the region. Erik is joined by his long time capable colleague, Lanto Andrianandrasana. That rounds out the project's small team of permanent staff.

Most of you are familiar with DLC's 20+ year affiliation with the MFG conservation consortium, with whom Andrea and I worked for so many years. With a new conservation project on our plate, will we at DLC continue our participation in that consortium? The answer is a resounding YES! This precedent of dual involvement in Madagascar is actually already set by a few MFG members such as Zurich Zoo (also works in the Masoala area), and Missouri Botanical Garden (supports a wide range of research and conservation activities in Madagascar). We are a founding and managing member of MFG, and plan to continue our support of and participation in this effective organization. Long term MFG projects at Ivoloina and Betampona have been very successful in bringing a conservation consciousness to the Tamatave region of eastern Madagascar, and DLC has been an integral part of that mission. Our sincere hope is that after 20 years of DLC conservation work in the SAVA region, we too can claim an important environmental impact in that unique and biologically important area of Madagascar. Let the SAVA Conservation initiative begin!

**Marojejy National Park and Anjanaharibe-Sud Special Reserve, Madagascar**





**Erik with (distracted) Malagasy students.**

(Photo by Abigail Derby)

## On the Ground in Madagascar

We are very fortunate to have Dr. Erik Patel on the ground as the post doctoral director for our DLC-SAVA Conservation initiative. Erik finished his PhD at Cornell in the latter part of 2011, and arrived in Madagascar, on behalf of DLC-SC in mid-January 2012. Although saddled with the many mundane tasks of setting up a new project and living situation (bank accounts, long term visa, housing, etc.) Erik has seen the project off to a quick start, as you will see in this newsletter!

Erik has a lengthy history of over 10 years working as a researcher in Madagascar, much of that in the SAVA region, focusing on his beloved silky sifakas for his PhD. However, Erik has never limited his activities to research alone, often becoming involved with local communities through his own NGO Simpona, developing and supporting projects such as local libraries. Simpona is a major collaborator with our project and supports much of the conservation-based research mission costs. Erik has also been active in working with film companies, and has played an important and courageous role in the battle against illegal traffic of precious woods in the region.

Erik will be based in Madagascar (Sambava) for about ten months out of each year, and will spend part of the remaining two months with us here at DLC. There will no doubt be opportunities for Erik to give presentations on project progress while he is here, so watch the DLC website and facebook page closely for announcements, starting in late August/September.

Our next newsletter will feature Erik's capable colleague and other DLC-SC on the ground staff member, Lanto Andrianandrasana.

***"Erik has a lengthy history of over 10 years working as a researcher in Madagascar, much of that in the Sava Region"***

## Agreement of Collaboration with MNP Signed

As DLC-SC is a guest organization working in Madagascar, we are expected to have formal agreements with appropriate government entities. Madagascar National Parks department (MNP) oversees conservation and management of Madagascar's protected areas, and hence are the principle government branch with whom we will be collaborating. In February an agreement of collaboration was written and signed by the local representative of MNP and DLC-SC. This is an important document which will allow us to work in the realm of conservation in the SAVA region. MNP director of Marojejy National Park and Anjanaharibe Sud Special Reserve, Hervé Bakarizafy, is our primary collaborator, and we are fortunate to be working with such a dedicated individual. Hervé has welcomed our conservation efforts in the region, and we expect to be working closely with MNP in certain areas such as park protection.



**MNP Marojejy and Anjanaharibe Sud Parks director Hervé Bakarizafy**

(Photo by Lanto Andrianandrasana)



# Desperately Seeking Prolemur simus

By Erik R. Patel, PhD, DLC Post-Doctoral Project Director, SAVA Conservation



**The small bamboo lemur, *Hapalemur griseus*, observed by the mission team.**

*(Photo by Tonkasina Jacques Harson "Jackson")*

**"Since 2009, we have completed several lemur surveys in Antohaka Lava which is officially part of the Makira Natural Park."**

The greater bamboo lemur (*Prolemur simus*) is one of the rarest lemurs in Madagascar with at most a few hundred individuals remaining in the wild. Weighing more than five pounds, it is the largest bamboo lemur and the only one with white ear tufts. With jaws more powerful than the other bamboo lemurs, *P. simus* routinely strips the outside of live bamboo stalk to consume the inner pith which leaves an obvious and unique feeding trace of its presence. Although subfossil remains have been found in many parts of Madagascar (indeed it is the most abundant lemur in Madagascar's northern subfossil sites), remaining populations are mainly found in south-eastern and central-eastern Madagascar.

Therefore I was very surprised and skeptical when in 2009, during a remote lemur survey, local villagers told me about a giant bamboo lemur with white ear tufts which was locally named "bokombolo-be" (which means "large bamboo lemur" in Malagasy). We were in the Antohaka Lava Forest, a virtually unexplored and remote forest 20km (several days walk) south of the nearest road by Marojejy National Park in north-eastern Madagascar. The closest known populations of greater bamboo lemurs are several hundred kilometers further south!

Since 2009, we have completed several lemur surveys in Antohaka Lava which is officially part of the Makira Natural Park. Already, we have confirmed a large and remarkable lemur assemblage there including silky sifakas (not previously known to exist just south of Marojejy) as well as the northern-most ruffed lemurs (*Varecia*) in Madagascar which are remarkably varied in their coloration (i.e. various combinations of red, white, and black). During joint surveys with greater bamboo lemur specialists from the organizations Mitsinjo and the Aspinall Foundation, we have discovered about a dozen bamboo feeding traces which everyone agrees can only be made by a large bamboo lemur. Although we have yet to see a *P. simus*, we are now attempting to collect fecal DNA since a number of large fibrous fecals (scat) have been found which also look indicative of a large bamboo lemur.



**The Ruffed Lemurs, or *Varecia*, found by the mission team exhibited a fur color and pattern intermediate between Black and Whites and Red Ruffed Lemurs**

*(Photo by Tonkasina Jacques Harson "Jackson")*

## *Desperately Seeking Prolemur simus* continued

Most recently, our team braved the torrential rainy season and returned to Antohaka Lava in February and March of this year. Several new campsites were established but despite extensive searching no fecal samples were obtained and no greater bamboo lemurs were seen. However, a few potential feeding traces on wild ginger (lingoza) were found in which the outer stalk was removed and the pith consumed. We have only yet surveyed a fraction of the large Antohaka Lava Forest landscape, and *P. simus* can have a very large home range of over 1000 hectares in some places. Therefore we remain optimistic that future surveys will either confirm the presence of *P. simus* or at least another large bamboo lemur species. We must hurry, since virtually all mammals in the Antohaka Lava forest are hunted for food by humans. Lemur carcasses, traps, and even gun shells are all found too commonly. The Antohaka Lava Forest can be seen as the small mountains in the distance. Location is about 20km south of Marojejy National Park.

*“We must hurry, since virtually all mammals in the Antohaka Lava forest are hunted for food by humans.”*



Mosaic of forest and cleared land visited by the mission team.

(Photo by Erik Patel)



# Reforestation Collaboration Agreement



**Village tree nursery being tended to by local women**

(Photo by Erik Patel)



**Sign at one of the village tree nurseries which at the bottom states "to protect the environment is expensive - to do nothing is much more expensive!"**

(Photo by Erik Patel)

As mentioned in the newsletter's introductory article, reforestation will be an important component of DLC's SAVA Conservation initiative. We intended to carry out reforestation efforts ourselves by working with local villagers, focusing on zones that border the important protected areas. However, in the very early stages of the project, we learned that a Belgian NGO, Graine de Vie (Seed of Life), has been working for several years already, exclusively on reforestation, in the SAVA and adjoining Masoala area. Erik and Lanto visited Graine de Vie (GdV) tree nurseries and reforestation sites, and met with the director and personnel of GdV. We learned that GdV is quite a dynamic organization that is quickly expanding its operations, including to some of the sensitive zones around protected areas. Although they have only been working in the region since 2009, they have already planted around 500,000 trees at 5 different sites in northeastern Madagascar, and expect to surpass the million tree mark later this year! Most importantly, GdV is working closely with local villagers – each village that participates in the reforestation (and there are many on the waiting list) is required to sign a 'dina' which is a locally enacted law that prohibits all burning in the reforestation areas. Such assured protection and village cooperation is an essential part of reforestation in Madagascar. Rather than duplicate the work of GdV in the area of reforestation, we have entered into an agreement of collaboration. DLC-SC will support 3 village tree nurseries and subsequent reforestation, at sites in the Marojejy National Park peripheral zone. Erik and Lanto will be

able to monitor the progress of the nurseries, and will have input into the species of trees planted. We will keep you updated on this exciting aspect of the project!

## Collaborative inspections of GdV's nurseries and reforestation.



**From left: Gerard Poncet (GdV, Madagascar Chief), Dorian Andrainy (MBG), Désiré Rabary (Simpona), Erik Patel (DLC), Frédéric Debouche (GdV, President and Founder)**

(Photo by Dylan)

# Teacher Trainings Begin!



**Gimod, the most experienced of the trainers**

(Photo by Lanto Andrianandrasana)



**School administrators, soon to be trainers**

(Photo by Lanto Andrianandrasana)



**André**

(Photo by Lanto Andrianandrasana)

Environmental education of Malagasy students is a top priority of our DLC-SC initiative. In fact, that particular component of our project began even before Erik's arrival, in the form of teacher trainings in environmental education. After extensive planning, in August we sent three Malagasy teacher-trainers to the town of Sambava. The three have had years of experience with Madagascar Fauna Group (MFG) teacher training workshops, and were led by our long time colleague and environmental education specialist André Ratsimbazafy. The first phase of the training program was not actually conducted with the teachers, but rather focused on training of the future trainers – 33 education professionals from the CISCOS (school districts) of Sambava and Andapa.

The keystone of the week-long training is the teacher's manual to environmental education, which was developed by the MFG education team, and approved for use in public schools by the Madagascar Ministry of Education. The manual was designed to dovetail with the existing primary school curriculum, and gives the teachers a source from which to teach their students about Madagascar's environment and ecosystem relationships, topics which are overlooked in Malagasy primary school education. Eventually, each of the 2,431 teachers in the two districts will receive a copy of the manual, and training in how to use it in their classes. In the next phase of the program the newly trained trainers will lead workshops for the school directors. That second phase has just begun, with trainings of school directors, carried out in Sambava and Andapa over the Easter holidays. In the third and final phase, these directors will train the teachers in their schools. The experienced MFG trainers will periodically oversee training sessions to assure quality and consistency. This method of teacher training, using the teacher's manual, has been successfully implemented by the MFG in the Tamatave area for over a decade, and we are all excited to now be transferring that knowledge and experience to a



## Teacher Trainings Begin! *continued*



**School directors in Sambava at the recent Easter training session**

*(Photo by Lanto Andrianandrasana)*

*“Yet most Malagasy kids in the region surrounding the park know little about what is protected inside.”*

different region of the country! Experience has taught us that teacher training goes far beyond the transfer of information to students only. Teachers are often the most respected members of rural communities, so if they receive environmental education and become convinced of the value of conservation themselves, the message is conveyed not only to students, but also to adults in the communities. The training workshops and follow-ups help incite enthusiasm for the conservation issues, and are an effective early step in building long-term trusting relationships with local peoples – a crucial element in any viable conservation project.



**The training team, from left: André, Gimod, Modest, and Lanto**

*(Photo by Lanto Andrianandrasana)*

## A Walk Through the Forest Like Never Before By Hilary Brueck, Peace Corps Volunteer

Marojejy National Park in verdant northeastern Madagascar is a wondrous place for foreign researchers and film crews alike. They can explore its massive green mountains for months at a time, in hopes of nailing that one great photo or discovering the next spectacular endemic species.

Yet most Malagasy kids in the region surrounding the park know little about what is



**Students before starting the hike to Marojejy with the author, Hilary Brueck on the right.**

*(Photo by Hilary Brueck)*

protected inside. Perhaps they have heard the call of the indri lemur now and again late at night as they are nodding off in creaky bamboo huts. Maybe they have even caught a glimpse of a brown mouse lemur on quick weekend jaunts into their secondary ‘forests’ of farmland to pick up bananas, cassava or mangoes. But their lives are so removed from the beauty and wonders around the corner in the primary forests of the park. The creatures and attractions of the forest remain so hidden from days in the rice fields and nights roasting plantains over charcoal fires.

So when my enthusiastic English Clubbers from the local high school asked about arranging a trip



## *A Walk Through the Forest Like Never Before Continued*

into the park to see things they had only head rumor of, I knew this was a once in a lifetime opportunity I had to help them afford. They'd have the rare chance to see those endemic and unique plants and animals so vital to a thriving ecosystem on the island. Near the teens' homes, most of these living beauties have been long destroyed or chased away; a result of slash and burn farming and massive logging, as well as lots of hut development and city sprawl, to allay bloating population numbers.

Growing up in these sprawling villages, the idea of setting foot inside the park boundaries remains a mystery for most all locals. Entrance fees into the park for Malagasy nationals aren't really a prohibitive cost, at shy of 50 cents a day. But add to that all the necessities of a trip into a park: transportation by bush taxi, guides, enough food to last a few days in advance, and a few porters to help carry it, and you've got enough Ariary to feed a small family for weeks. It's no small feat getting raincoats or proper camping attire either. It's easy to see why so few of the locals could ever hope to make it into the park as anything more than a member of park maintenance staff. When the students agreed to chip in a whopping ten cups of rice and ~1USD to contribute to the trip (for a total contribution equivalent to more than three dollars a student), I knew they were serious about committing to the

***"Growing up in these sprawling villages, the idea of setting foot inside the park boundaries remains a mystery for most all locals"***



**Guide Desiré Rabary explaining the natural processes of the forest**

*(Photo by Hilary Brueck)*

experience. Duke Lemur Center's SAVA Conservation project contributed the remaining funds needed to make the Marojejy visit become a reality for the students!

As always, the great spirits of this aptly-named "many spirits" park ("Marojejy" means "many spirits" or "much rain" in Malagasy), delivered an absolutely astonishing experience. We saw so many great animals and ancient plants, tracked silky sifaka lemurs with local lemur specialist Nestor (taking notes along the way), climbed high peaks to reveal leafy green plant species older than dinosaurs, and with the help of local guide Rabary Desire, learned enough about medicinal plants to keep our whole crew healthy. The kids found it amazing how different the primary forests of Marojejy were from the deforested landscapes near their homes, and how many different

types of plants and animals exist in Marojejy, from lemurs, down to the eels in the clear, pristine ponds and the wacky bugs on the forest floor. We even held our own competitive panel to judge the students' fieldwork: impressively professional-looking drawings and field notes from plant and animal species seen throughout the park. In the end, we enjoyed our trip and thrived in the wild, aside from the few leeches that got away with a little more blood than we would have liked. The kids had a new respect for each other, a new spirit of togetherness, and some rare time for communing with unspoiled nature.

After a quick four days the club members returned to town life Andapa. We were all a little smellier, of course, but their eyes and minds were opened wide to the world-class forests remaining around them, to that special, protected world lying just over the hills, in the cool rivers and lush canopies of ancient Marojejy.

# New School and Bridge!



**Teachers Association president signing agreement for school construction**

(Photo by Lanto Andrianandrasana)

Although building of schools does not sound like an activity that would be directly related to conservation, such community development projects can be a very important aspect of recruiting local support of our objectives. DLC-SC has been asked to manage a grant from the Seacology Foundation to build a school and footbridge over a river (to ensure rainy season school access) in the village of

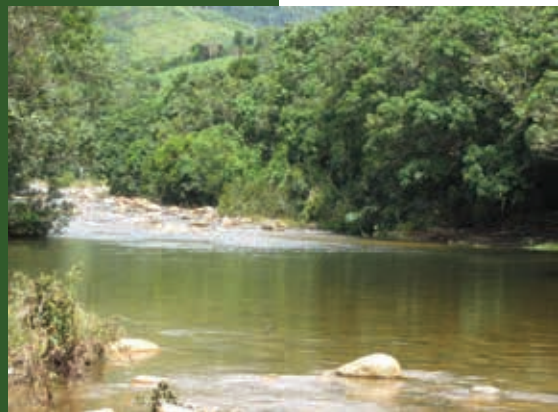
Antsahaberaoka, which is in a remote area squeezed against the edge of Marojejy National Park. These educational community development projects are explicitly in exchange for renewed protection

of that region of Marojejy, where Erik's team had found an

## Site for school to be built

(Photo by Lanto Andrianandrasana)

unusually high density of silky sifakas several years ago. Oversight of the construction will be a collaborative effort of the local CISCO (school district), MNP, and DLC-SC, which will strengthen our relationships with these key organizations. Being involved in the construction of a school in such a remote and sensitive zone near the Park will only reinforce our conservation efforts in the area. Stay tuned for construction updates in future newsletters!



**Location of footbridge to be built**

(Photo by Lanto Andrianandrasana)



**Rice paddies**

(Photo by Nancy Raposa)



**Village boys**

(photo by Charlie Welch)



# DUKE CONNECTIONS

## Collaborating with the Duke Nicholas School of the Environment

We at Duke are fortunate to have one of the world's premier schools for environmental science and policy – the Nicholas School of the Environment. Dean Bill Chameides best explains the school's mission:

".....we engage with scientists, governments, industry leaders, conservation practitioners and communities throughout the world to address critical issues like climate change, energy, water quality, ecosystem management and conservation, and human and environmental health...We strive to produce a new breed of environmental leaders"

We at the Duke Lemur Center are pleased that a team of four Nicholas School students chose to collaborate with us for their Masters Project. Each student in the program is required to complete a MP for a real world "client". Our four students chose to study the teacher training programs in Madagascar that we have been involved with for years – first through the Madagascar Fauna Group (MFG) at Parc Ivoloïna, and now in our own SAVA conservation

initiative. The only way to know if techniques to achieve conservation goals are working and are having an impact is to periodically evaluate them. As the teacher trainings have been developed by the MFG, evolving over more than a decade, there is a need to both describe the current methods, and to take a critical look at what they are accomplishing.

The Nicholas students, Gina Angiolillo, Nicole West, Noelle Wyman, and Sanjyot Sangodkar, had hoped to travel to Madagascar and observe some of the trainings in person, but funding did not materialize. So instead they used questionnaires, phone and skype interviews to bridge the distance to Madagascar. We are hopeful that once finished, their Masters Project will not only



**Nicholas School students from left: Nicole West, Gina Angiolillo, Noelle Wyman, and Sanjyot Sangodkar**

give us a comprehensive description of the training that can be referenced and applied by other conservation projects, but also give us an objective evaluation of the impact of the trainings. In fact the team's formal project presentation in early April did just that. We look forward to the finished written report (80+ pages) which will contain more details.

Many thanks to Gina, Nicole, Noelle, and Sanjyot for their hard work on this challenging project, and also to their advisor Dr. Pamela George.

# Thanks!

On behalf of myself and DLC SAVA Conservation, I would like to extend a very sincere thank you to all of our loyal supporters. Although we do have certain project activities that are supported by grant funding, and we expect that amount to grow, the majority



(Photo by: Alena Welch)

of the project support comes from our donors. Simply put, a DLC-SC initiative would be impossible without you. We can't thank you enough – your support is helping to preserve one of the most biodiverse regions of one of the most unique and endangered places on the planet.

*Charlie*



**Duke Lemur Center**  
**SAVA Conservation**  
Madagascar

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*Miaro atiala, mamboly fiainana*

*"Protect the forest, and life will grow"*