

TOURS

painting with lemurs

By Niki Barnett, DLC Education Coordinator



Tour duration: 60-90 minutes
Maximum participants: 2
Age Requirement: 10 and above
Offered: year-round (afternoons)
Cost: \$95 per person

Description: Lemur Van Gogh? No, but close. We at the DLC consider it abstract art! Experience the Lemur Center through a different medium. Join us on this exclusive tour and learn more about the Duke Lemur Center's behavioral enrichment program. This tour will not only take you behind the scenes into one of our new lemur housing areas, but also highlight some of the activities the staff here at the Center can do to improve the daily lives of our lemurs. Painting is an activity the lemurs enjoy, and something different added to their normal routine. Participants on this tour will get to choose up to three different colors of paint (all non-toxic, water based tempura) and observe the lemurs making their masterpiece first hand! The best part of the whole experience is that you get to take the lemur masterpiece home with you!

TRAVEL

Opportunity to see lemurs in their native land!

By Charlie Welch, Conservation Coordinator

Here is your chance to see lemurs in the genuine wilds of Madagascar! Duke Alumni Travel is sponsoring a tour of Madagascar in October of 2012, led by DLC's conservation coordinator, Charlie Welch. Experience the exotic plants and animals of both rain forest and dry forest sites, and scenic rural countryside of a bygone era. You will also spend a relaxing day at Parc Ivoloina, a conservation center which DLC has been involved in since its inception. A truly unique opportunity! Check out Duke Alumni Travel's on-line site for more detailed information about the exciting tour.

For Alumni Travel:
<http://www.dukealumni.com/learn-travel/wildlife-madagascar>



research · conservation · education
spring 2012



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lemur.duke.edu

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staff announcements

By David Haring,
DLC Registrar/Photographer

We are very happy to announce:

Charlie Welch, the Lemur Center's Conservation Coordinator, has been nominated for the distinguished Indianapolis Prize, the world's premier award for animal conservation, given every other year to an individual who has made extraordinary contributions to conservation efforts involving a single animal species or multiple species! The award consists of an unrestricted cash prize of \$100,000 and the prestigious Lilly Medal, an original work of art. Needless to say, Charlie was nominated for his tireless 25 years of work in Madagascar both at the captive conservation center Parc Ivoloina and at the Betampona Natural Reserve. When asked what he would do with his prize winnings, Charlie said that he would, (no surprise here!) invest the money in our conservation efforts in Madagascar, targeting it towards the Lemur Center's conservation initiative in the SAVA region in the northeastern part of the country. Most likely the funds would be used to build and support a center for environmental education in the town of Sambava. Charlie is one of only 29 conservationists worldwide to receive a nomination; by this spring the nominating committee will whittle the field down to six, with the announcement of the winner sometime this summer. Everyone at the Center wishes Charlie the best of luck in making it to the next round!

Niki Barnett is the Lemur Center's new Education Coordinator! Niki has worked at the Center since August, 2007 when she started as a Primate Technician. She had previously worked as a keeper at the Cheyenne Mountain Zoo and the Phoenix Zoo. A couple of years, and a couple of newborns later, the fiscal impossibility of having two children in daycare forced Niki to become a part time employee. Initially she was Lemur Landing's part-time cashier and gift shop assistant. Within a matter of months, she was pretty much running the gift shop side of Lemur Landing. Soon her skills at providing Lemur Center visitors with a rich educational experience, as well as her obvious talent in the area of fund raising became apparent, and Niki was promoted to Assistant Development officer. When the Education Coordinator position became available, Niki jumped on it, continuing one of the most meteoric career trajectories, this side of a ring-tailed lemur troop, in Lemur Center history!

Lemur Center Director Anne Yoder is continuing her sabbatical in London where she is investigating mouse lemur genetic data in order to delve ever deeper into the question of biodiversity of these amazing lemurs. Her latest entry on the Lemur Center blog provides much more detail on this fascinating work!

*five months in madagascar*

By Brandon Semel, Duke Student

Brandon Semel is a Duke Junior majoring in Evolutionary Anthropology and Environmental Science. He has been a work study student at the Lemur Center for nearly three years. He just returned Spring Semester from five months in Madagascar, and already has plans to return this summer.

Life in rural villages is simple, monotonous, and in constant struggle for survival. That much was made clear to me by the meager bags of corn provided by the World Food Program that sat in the corner of my host dad's small, dark hut. A hailstorm had destroyed the previous season of crops, further straining the already limited resources. It is no wonder that not a single tree exists on the gently rolling hillsides in the Androy region of southern Madagascar. The few that have not been cut down for charcoal or construction grow nearly parallel to the ground, crippled by the constant howl of wind from the Southern Ocean. Yet the contagious levels of happiness and excitement exuding from my host family would sweep away these harsh realities every night as we would come together to perform the traditional Tandroy songs and dances.

Living in Madagascar and unraveling the mysteries of its biodiversity have always been dreams of mine, but not until weeks after living in some of Madagascar's remote southern regions, far from the well-worn tourist track, has it come to hit me just how secondary these issues are to a far more pressing concern: the Malagasy people themselves. Seeing cute baby lemurs at the Lemur Center every week and thinking

how great it will be to one day see their progeny returned to the wild, it becomes easy to forget that the Center's most important role does not lie with complex ideas of research or conservation.

Like the Tandroy lifestyle, simplicity is everything. In Madagascar, the average adult has completed less than five years of school. Education inspires new ideas. Without innovation it is impossible for the Malagasy to find local solutions to their food crises, and impossible for conservationists to find solutions to the deforestation endemic that is slowly robbing the Malagasy of their once extensive forest resources. Seeking simply to educate ourselves and those around us regarding the impact we have on our environment allows us to reach across cultures and continents to make the world a better place both now and well into the future.

*division of fossil primates*

By Gregg Gunnell, Director

The beginning of a new year at the Lemur Center's Division of Fossil Primates (DFP) witnesses continued change. This year we will focus on reorganization of existing collections, upgrading computer and database facilities, and enhancement of fossil collections through continued field work.

The collection facilities at the DFP are undergoing renovation as we move in new specimen cases to house some of our most delicate Egyptian fossils in a climate controlled room which will provide much needed protection against humidity, as well as easier and safer access for researchers. We anticipate hiring two Duke work-study students to help with this reorganization effort. Our present work-study student, Tony Phipps, has been invaluable in helping with the initial reorganization but, sadly, he will graduate this Spring!

DFP director Gregg F. Gunnell and staff specialist Catherine Riddle are overseeing a much needed upgrade to computer and telephone facilities at

the DFP which will bring DFP computing and databasing capacities up to community standards. Riddle will also oversee the implementation of a new database system for storing all specimen and locality information – migration from our old system onto the NSF sponsored Specify 6 database platform will begin later this spring, and hopefully all records will have been migrated by the end of the year.

Gunnell has organized a field season in Egypt that will begin in March, assuring that the Division continues to be a place where Duke faculty and students can gain access to some of the most unique primate fossils anywhere in the world. Gunnell will also conduct field work in Sumatra (Indonesia) and Australia over the summer, searching for new places to continue the DLC's traditions of specimen based research and global engagement. In conjunction with Wake Forest University, the DFP will also renew field efforts within the United States thusly allowing students direct access to paleontological field work. Field work in Wyoming is planned for August and will provide field opportunities for Duke graduate and undergraduate students.

NICHOLAS SCHOOL*collaborating with duke's nicholas school of the environment*
by Charlie Welch, Conservation Coordinator

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 DLC are pleased that a team of four Nicholas School students have chosen to collaborate with us for their Masters Project (MP). Each student in the program is required to complete a MP for a real world "client". Our four students have chosen 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 Ivoloina,

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 students, Gina Angiolillo, Nicole West, Noelle Wyman, and Sanjyot Sangodkar, had hoped to travel to Madagascar to observe training in person but funding did not materialize. They are now using questionnaires, phone and skype interviews to bridge the distance to Madagascar. We are hopeful that once finished, their Masters Project will not only 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 teacher training program.

UPDATES

new winter housing yields cozy lemurs

By Greg Dye, Operations Manager



make sure the heaters were running properly, and they would occasionally have to help thaw out propane tanks when the temperatures got too low to keep fuel flowing to the furnaces.

But thankfully, all that ended in 2010 when Duke University invested more than 10 million dollars to build two new animal housing buildings that are home to more than half of the Center's lemur colony. These new buildings have state-of-the-art heating systems that are designed to keep the lemurs warm 24 hours a day, seven days a week. The heating units are equipped with sensors and advanced communication systems to alert a network of specialists when something stops working or gets out of sync, regardless of the time of day.

All winter long, Duke's heating technicians fine-tune and tweak the settings of both of these new buildings to make sure the lemurs stay warm and heating systems are operating efficiently. The new buildings also feature a back up heating supply, so that in the event one of the main systems stops working another system takes over heating the animal areas until repairs can be made. In addition to being warm, the new buildings also provide the animals with access to natural sunlight all winter long as well as access to the outdoors via spacious connected outdoor yards anytime the temperature reaches forty-one degrees or higher.

If you are interested in getting a closer look at the interior of these amazing new buildings, the Center offers behind the scenes tours during the winter, so you can stay warm while you're looking at and learning about lemurs (call 919.401.7240 to schedule your tour).

As winter comes to a close, we will soon be turning our sights to spring, which means more changes and a different look and feel to the Center. But no matter what season it is, it's always a great season to be a lemur at the DLC!

One of the many fascinating things about the Duke Lemur Center (DLC) is how it changes with the seasons. With each season the focus and responsibilities for the staff change as does the physical appearance of the Center itself. For example during the winter, the Center's focus shifts from the animals being in the forest and outdoor enclosures to keeping them warm in their winter housing. Since all lemurs come from the subtropical island of Madagascar, they are not accustomed to the extreme cold temperatures, snow and/or ice that can accompany North Carolina winters.

Years ago keeping the lemurs warm was a major effort because of their make-shift winter housing. It used to be that starting in mid-October, plastic tarps would cover the animals' outdoor enclosures which were heated with large furnaces. Technicians would rotate shifts and come in after hours to

STUDENTS

By Meg Dye, Student Project Coordinator

If you have been to the Duke Lemur Center in recent years, you will undoubtedly have noticed the Center's physical transformation with the addition of new buildings, landscaping and a beautiful tour path. What is just as exciting as the exterior changes are the changes that are occurring in the new buildings and around the DLC- an increasing number of students. Everywhere you look you will see students- students conducting behavioral research trials, students observing animals in the natural habitat enclosures, students assisting the primate technicians, and students giving educational tours. Students, students, students! And that is just how we like it!

A strategic focus moving forward is to increase student involvement at the DLC. By creating new experiential learning opportunities and expanding on existing programs, our goal is to continue to develop DLC as a testing ground and idea incubator for student projects.

We hope the future will provide a range of opportunities not only for the experienced, focused student who is working with a Principal Investigator, but also for the students who have an interest in prosimian research but don't quite know where to start.

It is an exciting time to be a student with access to an amazing living classroom such as the DLC!



1966: summer of lemurs

By Deborah Brogden

The Lemur Center received this fascinating article last December from Deborah Brogden, a Durham resident who worked at the Lemur Center in the summer of 1966, the year the original lemur colony arrived from Yale University under the care of our first Director Dr. John Buettner-Janusch.

I was a shy junior at Durham High School (class of '67), and was fortunate enough to have some friends who were children of Duke professors. One of them, Anne LaBarre, told me of her summer job at Duke as an animal caretaker at the Primate Facility (as it was called then). Her boss was the (in)famous Dr. Buettner-Janusch. I made bold, called his office, requested an appointment and asked if there might be a summer job there for me, too. What a surprise, my initiative was rewarded; now I also had a summer job at the Primate Facility!

That was the summer that Dr. B-J and his critters relocated from Yale to Duke. Dr. B-J had some problems with Yale, was not happy with them, and accepted the invitation to come to Duke. To show his displeasure with Yale, Dr. B-J named two red-fronted lemurs after the then Yale president. One lemur was Kingman and the other was Brewster. Now, Kingman and Brewster were mighty fine animals and why this was an insult I never did get.

The decision to come to Duke must have happened somewhat quickly as the center was not yet built. That summer we cared for the animals in their traveling cages. The cages were in a holding area not far from where the Lemur Center is now. They were sheltered in a large, rectangular, glorified tent-like structure. In my naivety, I thought little of it. But, truly, that must have been a rough summer for the animals (no air-conditioning). By the next summer, the Primate Facility was up and running. They had gone from travel cages to state of the art.

That summer of '66 was a good experience for me. The staff included some good ole Durham boys who cared for the larger primates. We had some baboons, a patas monkey and a gibbon or two. Additionally, two interesting young men were full time employees. One was a former Airman with the Air Force, he had worked with the chimp space exploration program at NASA.

Various professors would breeze through, conducting blood analysis or different research with some of the animals. And then there was the unpredictable appearance of Dr. B-J. Of course, when he was there, all things centered



on him. Fortunately, he wasn't there too much! Maybe he knew he had a good staff and could depend on them. We got along remarkably well, kept the place running and ended the summer with the same number of animals we had at the beginning.

But that was no credit to me. I was asked to feed a lesser bushbaby, one of the small, nocturnal primates. I didn't usually feed the small ones, but wanted to be helpful. I opened the door and out he jumped. This small critter soon was nowhere to be seen. I started to panic. Luckily, Anne found him. He had climbed up behind one of the industrial sinks in the feeding station. She said that she tried to think where she would go if she was a bushbaby and thought of the back of the sink. I wasn't asked to feed the little ones again.

Anne went on to become a veterinarian and last I heard, she practices in California. Dr. B-J eventually left Duke, but the animals stayed, as we well know. I worked two more summers as an animal care technician, got a BA from NCSU, and went on to work for State government. I traveled a lot, but never to Madagascar, home to the lemurs. Now I'm not as shy as I was in high school. I just hope the animals had as good a summer as I had then.

INFANTS!



Birth season 2012 is well underway! Sifaka are the first lemurs to deliver, with births peaking in January and February. This year, Pia, Rodelinda and Rupillia all gave birth in January. The really good news is that two of the three infants are female and all are doing well!

Next up is birth season (March-May) for ring-tailed lemurs, Eulemurs (mongoose lemurs and blue eyed lemurs) and ruffed lemurs. And let's not forget the mouse lemurs! They will be breeding in March and April, with infants born in May and June. Stay tuned for updates!

On the non seasonal breeder (rare for lemurs) front: Our fifteen year old captive born aye-aye, Ardrey gave birth to an adorable infant, Elphaba on 29 November.

ROMEO

romeo: the lemur center's king has passed

By David Haring, DLC Registrar/Photographer



Romeo's that scientists thought that they, in fact, might have located a different subspecies or even a new species of sifaka! At this point, one can only imagine poor young Romeo's reaction had he been aware of the situation: "I don't care if she is a different subspecies of sifaka, bring her to me, and we will make a go of it!"

Alas, poor Romeo, it was not to be. But although no Juliet ever arrived to grace Romeo's threshold, he did enjoy the companionship of several sifakas for a significant part of his lifetime at the Lemur Center. He was introduced to a young Coquerel's sifaka female, Drusilla in 1994, and the two got along splendidly (not to worry lemur purists, Drusilla was a sub-adult at this point in time, and had she continued to live with Romeo she would have been put on the lemur version of the pill!). Then, a bachelor golden-crowned sifaka male, Titus, was introduced to Drusilla and Romeo in January 1995, and this spectacular exhibit (and I do not exaggerate when I say spectacular, as this might have been the most beautiful group ever at the Lemur Center) of three species of sifaka lived together for a year and a half, until Drusilla inexplicably became very aggressive towards Romeo in the summer of 1996 and had to be subsequently removed from the trio.

Titus and Romeo continued to live in harmony for another 5.5 years until they started fighting in January 2002, at which point, sadly, they had to be split up, thus condemning both males to a prolonged period of bachelorhood. Romeo lived alone for another six and a half years, until, well into middle age, he was introduced to another lovely young Coquerel's sifaka female, Matilda (she had just been kicked out of her group) in July 2009. Romeo the old man, and the graceful Matilda lived fairly compatibly for about a year (despite their radical different tastes in music!), although in deference to Romeo's advanced geezer ways and worsening gut problems, they had to be separated for all meals. If not, Matilda might have, in dominant female sifaka fashion, chased Romeo around the dinner table, and wound up with all the choice food items. Alas, a young Coquerel's sifaka male, Lucius, became available (also kicked out of his family group) and at the urging of the Coquerel's sifaka SSP, the young male "stole" Romeo's Matilda from him.

Romeo remained alone for the rest of his life. But do not weep for Romeo! It is safe to say that at this point, he was probably glad to be living by himself since each and every day he entertained a pretty much constant string of visitors wanting to scratch his head, armpit and even crusty chest patch (and entice him with a variety of exotic, tasty foods, all with the Vet's blessing due to his trouble in maintaining a good weight). No way would a fellow sifaka (especially a female) have given him this level of attention! All dedicated Romeo scratchers, whether technicians or guests, came forward with

Surely readers of this newsletter have by now heard the sad news of the death of our beloved Romeo on the 21st of January. At his death, Romeo was the only diademed sifaka (*Propithecus diadema*) in captivity in the world (outside of one animal that we know of in a hotel's park in Madagascar.). He arrived at the Center in October of 1993 when he was about six months old, with his mother, Titania and an unrelated adult male, Oberon. Less than six months after their arrival, Romeo's mom had died, unable to adjust to a captive diet. Then, a few months later, the male died leaving Romeo alone, the only diademed sifaka in captivity anywhere. No one could have imagined at that point that he would continue to hold the dubious distinction of "only captive diademed sifaka" for nearly twenty years!

It was certainly never our intention that Romeo spend the rest of his life as the sole captive representative of his species; in fact, in the 1990s a couple of expeditions were sent to Madagascar under the leadership of Ken Glander with the mission of finding Romeo a "Juliet". But both attempts failed to deliver a Juliet into Romeo's waiting arms and willing toothcomb. The first expedition came back empty-handed because the team was unable to locate any population of this species in unprotected forest. But the second expedition fared much better, an unprotected population of diademed sifaka was discovered, and a potential Juliet was captured. However, when she was examined more closely in the bright light of captivity, her appearance was so startlingly different from

the idea that they were providing enrichment for the old boy. But we all know the truth: Romeo was providing us with first class enrichment, as only the scratching of one of the sweetest members of the loveliest species on the planet can do to a human being.

Whenever I write one of these articles about the death of one of the Lemur Center's great old animals, I list their "accomplishments". For captive endangered lemurs this usually takes the form of the number of offspring produced, the number of grandchildren, etc surviving. Or perhaps the number of research projects the animal was involved in. In this regard Romeo did not have much of a CV, with few concrete "accomplishments". He never had a chance to breed, and he was used very little in research projects, given the fact that due to his uniqueness he represented a sample size of one. But most of us are lucky enough in our lifetime to have known one special person, be it a beloved old uncle, or a friend of the family, who, at the end of their lives, although they didn't have much to show in terms of material accomplishments, had managed somehow to profoundly touch and greatly influence the lives of many.

Romeo was surely one of those people, excuse me, animals! As soon as the news of his death reached the public there was an unprecedented outpouring of grief. Yes grief. A week after his death at least four newspaper articles (including a NY Times blog) had

been written and there were at least a half-dozen sympathy cards on display on our senior technician's desk. Sympathy cards for a dead lemur? Seriously? It certainly makes sense to me, but I admit that in my 30 years here, I have grown perhaps a bit lemurcentric. I have seen some pretty awesome lemurs die, and not one of them received a sympathy card. Only Romeo in his passing elicited such an outpouring of grief in the lemur and local community inspiring such words as those which follow (garnered from newspaper headlines, obits and quotes of lemur center staff), which I think pretty much sum up how all who knew him felt about this wonderful animal: "Lemur Center legend Romeo dies at 19" "Romeo, the sweetheart of the Duke Lemur Center is dead" "He was a beautiful inquisitive animal who reminded us of our close connection to other primates whenever we met his eyes. We will miss these exchanges with him terribly." "Romeo was an exquisitely beautiful creature, and was gentle and responsive to his caretakers. To see him was to be enchanted by him, and for those who cared for him day in and day out, he was a vivid presence. He was also a symbol of hope and optimism".

To donate on behalf of
romeo go to
lemur.duke.edu

RESEARCH

girls rule! By Mel Norris

Who's the boss at your house? I'll wait while you have a lively discussion with your housemates/siblings/parents/children/significant other...

Seriously though, in most mammal species, the dominant sex is the male. However, among lemur species, it is common for females to be dominant. Duke EvAnth graduate student Joe Petty is interested in whether female dominance is associated with hormones such as estrogen and testosterone, and if so, how. Are the females dominant over the males, or are the males deferential to the females, and is either state associated with an elevated level of hormones in one or the other sex?

On the day I visit him, Joe is recording the interactions between Margret and Tarantino, blue-eyed black lemurs (*Eulemur macaco flavifrons*), a species listed as critically endangered in the wild. Each observation period is 50 minutes, and Joe holds a calculator-like device, into which he can quickly input codes for distance between the two, and who initiates contact and maintains proximity or distance. These lemurs are beautiful, the males a glossy black and the female a rusty brown, with huge blue eyes and graceful demeanour.

At first it seems like the lemurs are just bouncing around the enclosure, but after a while it becomes clear

that Tarantino is keeping a wary distance between himself and Margret. There doesn't seem to be any aggression between the pair, although Tarantino does give a non-dominant male, Presley, a warning cuff when he gets in the way.

Male deference is also obvious when we observe a group of mongoose lemurs (*Eulemur mongoz*) in a different location. Paco, the male, is very careful around the two females, Maddie and Carolina. When we hear the clank of food bowls being filled down the corridor, the two girls race to the front of the enclosure and look eagerly towards the sounds. Paco, however, remains at the back, and does not jostle for position on the perch.

Later, this behavioral data will be correlated with hormone levels, measured from blood and fecal samples which are collected at regular intervals. The study also includes pairs of lemurs from the other 5 *Eulemur* species, all living at the Duke Lemur Center. Two of those species, Red-fronted and Collared Brown lemurs, do not show female dominance over males, so Joe can use the results from these pairs as a useful comparison.

Joe hopes that this study will provide insights into *Eulemur* social systems and reproductive behaviour that will lead to better management of captive animals.