

TOURS

a path towards new beginnings

By Niki Barnett, DLC Education/Development Associate



it It all began with a vision from our director, Anne Yoder. Over the past few years the Duke Lemur Center has undergone a major face lift. Old caging has been torn down, state of the art housing built, and new landscaping that puts visitors in awe as they arrive at the Center. You wouldn't recognize the place! And now, a new immersive summer tour path. The area behind our main building has always been one of Anne's favorite areas of the DLC campus: quiet, peaceful and wooded. It exemplifies the kind of environment we want to provide our lemurs and our visitors.

The vision for transforming native North Carolina woodland into a tropical oasis could not have been made real without the generous support of our donors. Our guests and lemurs get to enjoy a cooler, shaded, beautiful tour path that not only features lemur species from all over Madagascar, but tropical plants from all over the globe. This tour path allows visitors to have an up close and personal look at these amazing animals while being surrounded by beauty. By next summer the plants will have flourished even more so and the experience even more wonderful for the lemurs and our guests. So thank YOU for making our vision a reality. Please come out and enjoy this wonderful experience if you have yet to!

research · conservation · education
fall 2011



in this issue

annual
report

thanks for
the support

smells like
a lemur

lemur.duke.edu

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Duke University
Duke Lemur Center
3705 Erwin Road
Durham, NC 27705



letter from the director

Looking back over the past year, I feel a remarkable sense of progress towards the fundamental goals of the Duke Lemur Center. The Center has three core missions of research, education, and conservation, with each of these missions experiencing significant enhancements. Lemurs and their loriform cousins are critically endangered. They are not a renewable resource, and it would be impossible to recreate the taxonomic diversity represented at the DLC. The colony is the product of more than 40 years of captive breeding, institutional exchange, and animals caught in the wild. The Duke Lemur Center is the only place in the world where lemurs and lorises are so carefully maintained, and where biological samples, medical records, and other data - collected today and over its 40-year history - allow for detailed investigations of their biology.

Within the past four years, Duke University has invested more than \$10 million to improve infrastructure at the Center and to professionalize its staff. The new Research Department, founded in 2007, has fundamentally advanced research capacity at the Center, as is reflected in a dramatic increase in research activity. For example, whereas less than 38% of the living collection was used in research protocols in 2006, that number has steadily increased to more than 85% in the first half of the 2010 calendar year. The number of biological disciplines served has also shown significant expansion, with projects spanning disciplines as diverse as genomics, virology, cognition, biomechanics, physiology, behavior and ecology - and this list is by no means exhaustive. With increased sophistication in non-invasive methods of data collection, the DLC serves as a model institution for the collection of maximum data with minimal disturbance of vertebrate subjects. Moreover, the non-invasive research methods employed by the DLC contribute to the DLC's system for maintaining animals that are in optimum health, thereby assuring that investigators are retrieving data of the highest possible quality.

Outreach and education are critical aspects of the DLC mission. The DLC serves multiple educational communities, including the general public, K-12, undergraduate, graduate, and postgraduate. In the past five years, the Center has hosted an average of more than 13,000 visitors per year, with K-12 comprising more than 4,000 of these visitors in a given year and college student tours comprising up to 2,400 visitors. With recent enhancements to our web site (<http://lemur.duke.edu/>), the DLC strives to become the world's leader in long-distance learning relating to strepsirrhine biology and conservation. Student programs have experienced a remarkable increase in interest and participation in recent years. In the years spanning 2007 - 2009, at least 28 undergraduates and 36

graduate students have completed independent research projects, many of which are being prepared for publication. During the same three-year period, there have been 35 undergraduate and 8 graduate student research assistantships (RAs) assisting our faculty investigators with their research projects. The veterinary department also supports considerable educational activities via the hiring of undergraduate work-study students and the training of veterinary students, primarily from the North Carolina State University College of Veterinary Medicine. The latter training takes the form of clinical rotations and externships in fields as diverse as primate medicine, pathology, pharmacology, epidemiology, and animal behavior. The DLC also strives to impact research, conservation, and education abroad, particularly in Madagascar. Over the past several years, we have brought to Duke and trained several Malagasy scholars in fields as diverse as molecular evolution, conservation genetics, genomics, and veterinary medicine. The DLC sponsored extended visits for three Malagasy scientists for research and training in 2007 - 2009. The three scholars worked in the DLC Director's lab for two months, where they perfected genetic research methods and completed further work on their own data sets focusing on Malagasy reptiles and mammals. The DLC also hosted three Malagasy veterinary students and young veterinary professionals who have a strong interest in wildlife medicine. The veterinary internships have been particularly successful in that each of the three trainees has already acquired a professional position in Madagascar that is directly attributable to his or her training at the DLC.

We are tireless in our efforts to build upon and advance these critical activities in conservation, research and education. But it is the partnership of Duke University, the National Science Foundation, and you, our loyal supporters, that makes our work possible. Thank you. Together we can make a difference.

Anne D. Yoder, Ph.D
Director



a little history "from my perspective"

By Herb Englishman with Betsy Englishman
two tireless Lemur Center volunteers from Durham, NC

In the early spring of 2000, we planned our move to North Carolina. Thirty years of northern New Jersey's cold and sometimes uncertain weather, along with the rising cost-of-living, played into our decision. Arriving in Durham in the late summer, we needed something to do to fill time and help us cope with our "empty-nest" syndrome.

There was a place called "The Duke University Primate Center." We scheduled a tour and immediately fell in love with the lemurs. Becoming a tour guide was probably the last thing we even considered. After all, we were birders, hikers, history lovers, and followers not leaders. After some thought, I inquired, "How do you become a guide?" I wanted to learn about lemurs and then to be able to pass on lemur facts along with the realization that these animals may have some connection to us (humans) today.

Becoming a tour guide wasn't easy. The staff gave me a thick notebook filled with facts and pictures to study. It was like being in college again and being enrolled in Lemurs 101. After some trepidation, I proceeded to give the required training tours, eventually satisfying the requirements to become a guide.

At the time, the tour path, visitors' center, office, and staff space were secluded. They consisted of several desks in a hallway, an information/pay station in one, and the smallest gift shop imaginable. It gave the impression that this was not the primary focus of the Center. The largest visible feature was the beautiful Metasequoia Tree in the front of the building.

The tour of the facilities was a combination of some outside enclosures, entering near the "Leakey Building" site, passing Romeo's (the only Diademed sifaka in captivity) space, entering into the "dark world of the aye-ayes and the lorises," returning into a hall which had a room housing "fossils," a giant elephant bird with an egg displayed next to a hummingbird egg in a display case. Interesting displays. The tour continued, passing a Natural Habitat Enclosure, where you could see Golden crown sifakas romping and playing. Near-by, some Sanfords were busy talking in their silo. Next, we passed by an enclosure housing male ring-tails and several older animals (reminded me of a males-only room.)

I remember that at one time Romeo shared quarters with Titus, a small, beautiful Golden Crowned Sifaka in an enclosure near the nocturnal building. (Loved these guys!) Titus has since passed on of natural causes, but his memory continues.

Although somewhat reminiscent of a zoo, the facilities seemed sufficient at the time for housing and caring for lemurs. We have always appreciated the beauty and gentle appearance of the lemurs, as well as their

excellent care at the Center. Who would have known the future plans of the then Duke Primate Center!

Today there are major changes in both philosophy and housing.

First, the name changed from Duke University Primate Center (We don't house monkeys or apes) to the Duke Lemur Center.

The second, perhaps most exciting change, has been the new living quarters. The new buildings are state-of-the-art for housing these primates.

The new quarters are easier to clean, large enough to provide comfort, offer the animals many choices of locations, and are easy to view on the tour. The animals seem to enjoy their new homes. In addition, the students have opportunities to work with the animals in a natural setting, as well as working close-up in their indoor quarters.

This is a most impressive place to work as a volunteer. Having seen the Center (old and new,) it is truly the place to visit and learn about lemurs. Only a trip to Madagascar would be more rewarding. My bags are packed!

As a volunteer, I invite those reading this article to the Center. Come and enjoy the animals. Support them with your time as a volunteer and through your contributions. Participate in the "Share-the-Care" program (used to be Adopt a lemur.) You will be able to watch your animal grow and mature and learn about its species through quarterly updates. Enjoy!



Drawing of Romeo, a Diademed sifaka
by student volunteer, Emily Ferrell

amor update

By David Haring, DLC Registrar, Photographer, and Historian



Black and white ruffed lemur

Last newsletter described the recent surgery performed by our fantastic Vet staff on our 30 year old black and white ruffed lemur patriarch, Amor. I am happy to report that after a slow start to his recovery (in which he, a lemur, had healthy vital signs, but was not at all interested in food, if you can imagine that!) Amor has recovered in spectacular fashion from the operation! He is back with his family, free ranging in his multiple acre forest enclosure which lay at the doorstep of his new digs in Ata Aly (Malagasy for "in the forest") a 12,000 square foot state-of-the-art building that is home to more than 60 animals.. He free ranges in the cooler parts of the day, when it gets warm you are more likely to find Amor lounging on the cool concrete pad of Aty Ala's main outdoor hallway, flat out on his back, or sprawled on his belly depending on just how hot it is.

Amor's surgery was just one of the many things that happened this year to his group (consisting of Amor, his mate Kizzy, and their five sons), in what has proven to be an exceptionally eventful one. Just a little over two weeks after his surgery, Amor was acting and eating fine, and was released back to free range with sons Magellan, Krok and Eros. A couple of weeks later, in mid May, the youngest son, Magellan, not even a year old, suddenly became extremely ill. One day he was bounding around in the forest, flinging himself with wild abandon from tree to tree, and the next he was laying around all day, not moving an inch. The Center's veterinarians, the best lemur doctors in the world, were able to nurse Magellan back to health despite not having a confirmed diagnosis of his illness.

Under their excellent care, Magellan recovered, although the severity of his illness was such that it required him to be separated from the group for nearly three weeks. When Magellan was introduced back into the group, he must have been a touch disappointed to find that his mom, Kizzy, was not there, as she had been separated into an adjoining habitat in order to

give birth peacefully without interference from the males. Nonetheless Magellan continued his recovery just fine, even without his mom's care, and he was released back out to free range with Krok, Eros and Amor the first week of June. Meanwhile, Kizzy gave birth to two adorable infants, her fourth and fifth male infants in a row, 2 June, and was successfully raising them while the boys busily went about their business of frolicking in the forest (sound like a familiar scenario, ladies?).

Recently the infants reached the age where Curator Katz deemed it appropriate for them to be introduced to the rest of their family. So, starting 18 July, Saunders and Albert had the opportunity to get to meet their brothers and father, Eros, Krok, Magellan and Amor. The first day saw the pint sized infants chasing poor Magellan around the cage when he became overly friendly, but things have since calmed down. Now Amor and the older boys are brought in from free ranging in the morning, fed, then introduced to Kizzy, Saunders and Albert, where they spend the afternoon. In the evening Amor, Krok, Eros and Magellan are released back to the forest while the Kizzy and the twins spend the rest of the night in the comfort and security of their indoor quarters.

The next big event for Amor and Kizzy's family: introduction of Saunders and Albert to the forest, and introduction of the entire family to the ring-tailed lemur group (Liesl's group of seven) with whom they are going to be sharing their forested enclosure!

It has certainly has been and will continue to be a busy year for Kizzy and Amor's group, this is one prosimian family you wouldn't want to get one of those newsletter Xmas cards from, their extensive goings on would make you feel like a total couch lemur!

charlie and andrea and alena in madagascar

By Charlie Welch, DLC Conservation Coordinator

Hard to believe that I had not been back to Madagascar in a year. For Andrea and Alena it was 4 years. Felt like old times to be traveling with family again. Being together makes it much more of a social occasion when we return to Tamatave, as old friends are much more interested in seeing us all rather than just boring ole me. In any case, we got a good dose of socializing from a Rotary Club dinner dance to graduation parties of Alena's friends. And not to omit Madagascar's Independence Day festivities (26 June). It was a very busy time!

And of course a busy work time as well, at least for two thirds of the family. The trip started out with my teaching the conservation component of the second James Madison University/ Appalachian State University study abroad, which was again based at Ivoloina. Professors Christof den Biggelaar (ASU) and Roshna Wunderlich (JMU) carried the majority of the study abroad, while I slipped in for a few days only. As last year, an important high point for the American students was inclusion of 3 Malagasy students from the GRENE environmental program at the University of Tamatave. It was again a very good group of young men and women, and a success on all fronts, thanks mostly to Christof and Roshna.

Much of our time in Madagascar seems always to be taken up with meetings, and this trip was no exception. In Tamatave Andrea spent much time meeting with MFG Project Manager An Bollen to discuss MFG issues, and in planning for the upcoming MFG meeting at DLC. I met with Mr. André of the MFG teacher training team to plan our training sessions in the SAVA region. André will lead the DLC sponsored trainings, along with 2 other experienced MFG trainers. While in the SAVA region there were meetings with Madagascar National Parks (MNP) environmental education personnel and school district officials. Meetings, meetings, and more meetings.

While in the town of Andapa we met colleague and friend, Yale masters student Rachel Kramer, who is doing socio-economic work in the Marojejy National Park peripheral area. She was about to leave on a month long walk-about to do village interviews, and shared some of her valuable time with us. Rachel made arrangements for us to get together with Desiré, at his private reserve of Antanetiambo, near Andapa. You may remember that Desiré visited DLC with Erik Patel last fall, when he was in the US to accept a Seacology Foundation award. We spent an afternoon visiting Desiré's private reserve, which though made up of mostly secondary forest, will someday recover its former grandeur. Desiré's initiative serves as an inspirational model for local action to preserve disappearing forest fragments. He is using the Seacology award money



to expand the small reserve, and improve its protection. Our most important meetings were back in Tana, with MNP and Ministry of the Environment and Forests (MEF). The meetings went well, and our DLC conservation initiative was accepted with enthusiasm. The MNP director of environmental education will attend the SAVA teacher trainings in August.

overview

The economic situation in Madagascar has degraded even since my last visit a year ago. Poverty levels are on the rise. Instability is causing increasing problems with corruption, crime, and general circumvention of rules and the law. The two issues combined are contributing to pressure on forests and other natural resources countrywide. Unfortunately, there seems to be little hope for political change, though elections are still promised before the end of the year.

The SAVA region seems somewhat disconnected from many of the above mentioned problems, despite the undercurrent of the illegal rosewood trade. Our time there was very positive in all ways. Meetings with the trainers, and with educators in the SAVA have the trainings on a good planning path.

Important meetings put us on solid footing with MNP and MEF at the national level. This was a critical step in our conservation initiative.

2011 madagascar fauna group meeting at dlc

By Charlie Welch, Conservation Coordinator



committee plus observers, the meeting was held at the comfortable and accommodating R. David Thomas Conference Center on campus. It was a perfect venue.

MFG Program Manager, An Bollen was here from Madagascar, and presented the impressive list of the year's conservation activities. The activities include environmental education, sustainable agriculture, capacity building, conservation-based research, and so much more. An seemed to go on endlessly presenting all that the MFG is doing. Unfortunately, the MFG will be losing An, as she has decided to move on in a different direction. Replacing her will be extremely difficult. Each time that I am in Madagascar, and pass through Tamatave, I am always impressed with An's commitment, dedication, and just plain tirelessness! She just keeps going, under conditions which could generously be called sub-optimal. We will miss her enormously, but all wish An the very best in her next challenge.

The meeting concluded with an evening visit to DLC, which everyone seemed to enjoy thoroughly, despite the incinerating summer heat. All had been looking forward to escaping from computers, and actually getting to see lemurs, and our new facility. The lemurs did not disappoint, with the sifakas and aye-aye as easy to predict high points. And, of course, what meeting held in North Carolina would be complete without a traditional NC bar-b-que. Not available in Paris, I might add!

As most of you know, DLC is in the process of starting an independent conservation initiative, in a different region of Madagascar. Of course, the DLC will continue to support the MFG. We recognize that what the MFG achieves in terms of conservation is not only remarkable, but continues to grow and evolve. Some other members of the MFG also have their own independent conservation projects in Madagascar, yet remain long term active members of the MFG, and that speaks volumes. Those who really know conservation and Madagascar see that the MFG is a truly effective organization when it comes to achieving real grass roots conservation results. I guess the bottom line is that there are certainly no shortage of conservation needs in such a biodiversity hotspot as Madagascar, hence room for plenty of projects and initiatives. We appreciate to all the gracious supporters who have helped both the DLC and the MFG get this far! Much remains to be done.

The Madagascar Fauna Group (MFG) is a conservation consortium of 27 institutions, mostly zoos, in the US and Europe, that are committed to protecting Madagascar's stunning biodiversity. Duke Lemur Center (DLC) is a founding and managing level member of the consortium. The MFG maintains in-country projects at Ivoloina Conservation Center, and Betampona Nature Reserve, both in eastern Madagascar, near the city of Tamatave. The MFG main office includes a natural history library, and is located in Tamatave. In the US the MFG is based at the St. Louis Zoo where Chair Dr. Eric Miller, and vice chair Ingrid Porton both work.

As the MFG projects are long term, now running at over 20 years, the conservation impact in the region from various project components, continues to build and expand. Relationships are built over the long term, and relationships at all levels are probably the single most important aspect moving any conservation project forward. Long term is important. Relationships are vital.

At last year's Madagascar Fauna Group meeting in Paris, the DLC offered to host the 2011 meeting. A bold offer indeed, to follow up ANY meeting taking place in Paris. Not sure that I would call Durham the Paris of the US, or southeast, or even NC... I would however venture to say that this month's MFG meeting here was a success.

The MFG steering committee meets each year, to review the year's projects activities, and set the budget for the upcoming year. Since we lack large enough meeting space here at DLC for the



Crowned lemurs

smells like a lemur

By Lydia Greens, Duke '11

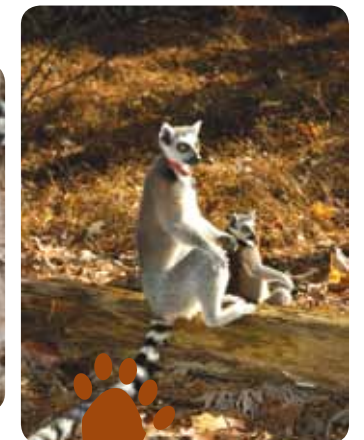


Lemurs scent mark a lot. The pungent aroma of their enclosures was something I could hardly fail to notice when I began as an undergraduate work-study student at the DLC. I started as a tour guide, later becoming a work-study animal technician, and finally working as an undergraduate researcher. I quickly discovered that upon walking into an enclosure I could tell whether a sifaka, a Eulemur or a ruffed lemur lived there, solely by the smell. Eau d' Lemur is a perfume so unique that the only way to appreciate it is to come for a visit and experience it yourself. As I spent countless hours leading tours, cleaning enclosures, and collecting lemur behavioral data, I wondered why lemurs are so particularly odoriferous. What was the function behind all the fragrance?

Luckily, I was given the opportunity to investigate this question when I joined Dr. Christine Drea's research lab at Duke, a lab that specializes in lemur olfactory communication. The Drea lab had already shown that ring-tailed lemurs rely on olfactory cues to convey information to others, including their sex, individual identity, genetic quality, and reproductive

state. Male ring-tailed lemurs can even sniff out if a female is on birth control! For the past year, I have been working on a project examining what information is communicated in the scent marks of a different species, the Coquerel's sifaka. Sifakas are social, diurnal lemurs that can often be seen scent marking nearby trees with complex mixtures of urine and glandular secretions. Males also use their teeth to gouge notches into trees. To explore the function of these various signals I collected behavioral data on the sifakas' natural scent-marking patterns, and collected samples directly from their glands to determine the chemical make-up of their odor signals, and what information these chemicals convey. But not to worry, no lemurs are harmed in the research process. Many of our sifakas are happy to give up their odors if it means an extra peanut or two!

This research formed the basis of my undergraduate honor's thesis, and although I graduated from Duke this past May, I am incredibly fortunate to continue this project at the DLC as a full-time researcher in the Drea lab. I am not yet sure where my work on sifaka olfactory communication will go next, but I do know that I will follow my nose to get there.



Ring-tailed lemurs

LEAVE A LEGACY

You can help give lemurs a future, help Duke Lemur Center protect, study, and care for these unique endangered animals, and leave a legacy all at one time. Call Lari at 919.401.7252 or email Lari.Hatley@duke.edu for more information on Planned Giving.

non-invasive research - by the numbers

By Sarah Zehr, PhD, DLC Research Coordinator

Fiscal Year 2010-2011

Total number of research projects: 90
 Undergraduate Principle Investigators (PIs): 18
 Graduate student PIs: 18
 Undergraduate Research Assistants: 37
 Graduate student research assistants: 14
 Animals used in non-invasive research projects: 211

As anyone who has written a grant proposal knows, research is not all just the fun and games of data collection and analysis. Therefore, we aim to give our student researchers a taste of what the future holds as an academic, and so they too are subjected to the rigors of submitting project proposals for approval and obtaining funding for their research. There are two sources of funding that are specifically geared toward undergraduates, namely, the Molly Glander Fund (administered by the DLC) and the Duke Office of Undergraduate Research Support. Financial support from these two sources allows our students to learn to consider and describe the significance of their research, design and adhere to a project budget, and experience the joy of successful grant writing. On behalf of our undergraduate researchers, the DLC would like to acknowledge the important roll these funding agencies play in undergraduate education and offer our sincerest gratitude.



*philanthropy-
by the numbers:*

538 donors
 Gave 761 gifts
 for a total of \$294,970.18

many, many thanks!

TRAVEL

want to see madagascar for yourself?

Duke Alumni Travel is planning a trip to Madagascar. Our own, Charlie Welch will be the guide. This trip will showcase a different season and new areas of Madagascar than our last trip. So, it should be a fascinating experience for all. Let us know if you are interested. We will keep you updated as the plans progress. Call Lari at 919.401.7252 or email Lari. Hatley@duke.edu for more information.

Gifts in Honor of

Ms. Karen M. Sheffield in honor of Kit Sheffield's birthday
 Mr. Richard E. Shaw Ms. Holly F. Reid in honor of Meredith Barrett/to supp:Charlie Welch's work
 Mrs. Jeannette Kinnikin Rinehart in honor of Andrea & Charlie-for purchase of golf cart
 Mr. Charles G. Catotti in honor of Anne Yoder and Dave Harts wedding
 Dr. James M. Gill II in honor of Anne Yoder and Dave Harts wedding
 Mr. and Mrs. Jeff Hatley in honor of Anne Yoder and Dave Harts wedding
 Mrs. Kimberly L. Hill in honor of Anne Yoder and Dave Harts wedding
 Ms. Andrea Susan Katz Mr. Charles R. Welch in honor of Anne Yoder and Dave Harts wedding
 Ms. Anne R. Kelley in honor of Anne Yoder and Dave Harts wedding
 Mr. Jeff Langenderfer for DLC conservation in honor of Ann & Dave Hart's Marriage
 Ms. Jane W. Yoder in honor of Anne Yoder and Dave Harts wedding
 Ms. Nan S. Hess in honor of Bill Hess
 Ms. Anne R. Wakefield in honor of Carter and Tyler Duncan
 Mr. and Mrs. Stewart W. Welch in honor of Charlie Welch, Andrea Katz and Alena Welch
 Ms. Marie H. Grauerholz in honor of Dr. Joseph A. Soldati
 Dr. Sandra L. Ayres Mr. David Telchholtz in honor of Dr. Peter Klopfer
 Dr. Lynne B. Bermont Mr. William A. Bermont II in honor of Dylan and Paul Arrouet's wedding
 Ms. Sarah H. Domingos in honor of Elizabeth B. Domingos
 Mrs. Anukriti S. Hittle Mr. Alexander A. Hittle in honor of Gaiatri Hittle's 8th b-day/to support Aye-ayes
 Mr. Geoffrey Brooke, Sr. & Ms. Antoinette M. Brooke in honor of Geoffrey Brooke's birthday

Ms. Alexandra E. Hall in honor of Grace Hall's 11th Birthday
 Ms. Nancy Jenkins in honor of Jan Rinehart's special birthday
 Mr. John D. Gatenbee in honor of Katherine Miller
 Ms. Alison Cain in honor of Keith Morris
 Ms. Dana B. Edwards in honor of Keith Morris
 Dr. Kathryn M. Andolsek Dr. Don W. Bradley in honor of Kendall E. Bradley
 Dr. Thomas R. Walsh Mrs. Elizabeth A. Walsh in honor of Molly Walsh
 Ms. Jen M. Franklin in honor of Patricia Hughes
 Mr. and Mrs. Rodney Snyder in honor of Periwinkle and the other lemurs
 Ms. Sophia Liang in honor of Polly van de Velde and Allan Chrisman
 Mr. Charles A. Pell Prof. Leslie J. Digby in honor of the DLC Staff

Gifts in Memory of

Ms. Sandra C. Zimmer for a Lemur adoption for Winnie Held in memory - August Held
 Mr. Richard C. Clancy for a Lemur Adoption in memory of Geraldine Clancy
 Mr. Mathias J. Vorachek for Lemur Adoption in memory of Bryce Vorachek for Judy
 Mr. and Mrs. Keith Vorachek in memory of Bryce J. Vorachek

Mr. and Mrs. Jeff Hatley in memory of Helen Katz
 Mr. Bradley Lewis Campbell Mrs. Nadia B. Campbell in memory of James Martens
 Ms. Dominique Bideau-de Rozario in memory of Mrs. Suzanne and Mrs. Colette de Rozario

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 Jeff Hatley
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 Carol Holman
 Dr. Don Hoover
 Dr. Denis Marcellin
 Dr. Don Meuten
 Dr. Barbara Sherman
 Ruth P. Stanton
 Dr. Michael Stoskopf

volunteers-by the numbers:

Since January, 2011:
 342 tours were led by our tireless volunteers
 32 people completed training and served as Technician's Assistants (TAs)
 The TAs donated a total of 863 hours of service
 3 people served as interns - 2 with the technicians and 1 with the Veterinary Department
 1 Research Assistant

thanks to all!

OPERATIONS STATEMENT**STATEMENT OF OPERATIONS
JULY 2010 - JUNE 2011***revenue*

Annual University Allocation 1,442,313
 Other University Support 332,074
 Endowment Income 148,011
 Annual Giving (donations) 265,548
 Tours, Education & Merchandising 172,240
 Research & Research Cabin Fees 85,601
 Grants, Government 379,438
 Grants, Foundations 4,821
 Reserve from prior year 1,226,879

Total Income 4,056,925

expenses

Salary & wages 1,615,810
 Facilities (building & utilities) 466,171
 General Operations
 Animal Care & Operations 168,490
 Development / Public Relations 48,207
 Education & Merchandising 79,126
 Conservation 28,601
 Undergraduate Research Awards 2,339
 Equipment/Acquisitions 55,701
 Capital Projects 173,274
 Reserve for future programming 1,230,902

Total Expense 4,056,924

GIFTS

\$1-\$99

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 Dr. Alison J. Abramson
 Ms. Kendall Alford-Madden
 Bank of America Foundation
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 Mr. and Mrs. Richard W. Bailey
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