

LEMUR LATITUDES

critters with attitude vol. 7#1



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New Classroom for Tampolo Thanks to EnviroKidz

The Lemur Conservation Foundation has been named a recipient of



Malagash boy meets local fauna

Photo by Amalia Fernand

children about lemur natural history, their status as endangered species, and their conservation imperative. "We are committed to leaving the world a better place than we found it by supporting organizations like the Lemur Conservation Foundation," said Arran Stephens, President and Founder of Nature's Path Organic Foods. "We are extremely grateful to the consumers who have supported our EnviroKidz line and made this possible and proud to be able to give back to this dedicated and hard

Nature's Path Organic Foods' 2009 EnviroKidz Giving Back Award to support LCF's work in Madagascar. The highly competitive Giving Back Program Awards money to non-profit organizations, such as LCF, that support endangered species, habitat conservation and environmental education for children. Nature's Path, North America's number one organic cereal manufacturer is celebrating the 10 year anniversary of its EnviroKidz Giving Back Award this year. For more information go to www.naturespath.com or www.envirokidz.com.

LCF's relationship with Nature's Path began with the development of the EnviroKidz Organic Leapin' Lemurs cereal and cereal bars. The packages describe the work of LCF and inform

-working group." The grant will underwrite the construction of a much-needed classroom/community center at Tampolo Forest Station that in 2006 was elevated to the status of *Systeme des Aires Protegees de Tampolo* (Protected Area System of Tampolo). This title denotes the Malagasy governmental commitment to 1) preserve and maintain the unique biodiversity of Madagascar, 2) to preserve the Malagasy cultural heritage, and 3) to initiate and maintain sustainable use of natural resources to reduce poverty and to create development.

This is a tall order for the people of Tampolo plagued with local poverty, demographic pressures, and a lack of education and understanding of human-

(Continued on page 2)



(“Classroom” continued from page 1)

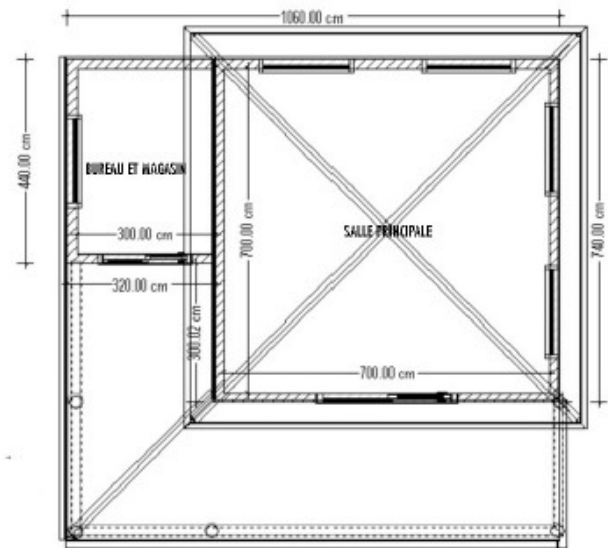
ity’s interdependent relationship with the environment. Such social challenges are directly linked to species extinction and habitat destruction. To help address these problems, the Malagasy government has increased the number of years for compulsory education from five to seven and has mandated that environmental issues be taught at every grade level.

From the fourth grade level up, students at the local schools that serve the three villages surrounding Tampolo (with a total population of about 2000 people) visit the forest station to gain firsthand knowledge and experience of the amazing and unique natural history living in their own backyards. Until recently, their teachers and the Tampolo foresters had no indoor, protected area to assemble them for briefings and instruction. Now they will have a classroom to facilitate these presentations.

The building, however, is even more than a classroom. After school hours, the building will double as a community center for both children and adults. The classroom will be utilized as a study hall where the children of Tampolo can do their homework even after sundown, as the room will have electric lights powered by solar panels and most of the village homes are dark. Children will be given access cards by their teachers allowing them to use the room during scheduled hours when an adult will supervise.

Adult villagers will use the center as well. The foresters and education staff of Tampolo serve the villagers by teaching and demonstrating ways to help forestall environmental degradation. For instance, the Tampolo foresters and staff have established a tree nursery for indigenous hardwoods used to replant deforested areas and a sustainable fish farm that reduces pressure on Lac Tampolo. They also teach bee keeping and methods of sustainable fishing and agriculture. But thus far, the local villagers rarely come to the forest station and the museum interpretive center

built by LCF in 2004. If the classroom doubled as an occasional community center, they



Architectural rendering of new classroom

would be more apt to visit Tampolo Forest Station. The Station which is already a hub of environmental activity, can also become the civic and intellectual center for all residents of Tampolo villages. In this way, the building serves a social need while bringing attention to environmental issues.

As new towers for wireless Internet are being built ever closer to Tampolo, within the next couple of years when Internet access is available, LCF will install four computers powered by solar panels in the classroom, available for the use of Tampolo village children.

We are thrilled that the classroom/community center will become a reality. Three bids have been sought, details are currently being negotiated and finalized, and as soon as a contract is signed, building will begin. It is exciting to know that the Tampolo forest, other fragile areas in Madagascar, and the lives of the local people will be improved with this facility and we are honored to name it after EnviroKidz.

By Penelope Bodry-Sanders





Critter Corner - Perfect and Imperfect Timing

Baby #1

Livening up our annual Board Meeting in April, LCF received a welcome new addition to the reserve. Estella, a female *Eulemur mongoz*, gave birth on April 19th to a healthy infant. The timing couldn't have been more perfect. As we guided our Board Members through the enclosures, they were able to see just how protective a new lemur mother can be. Estella spent the first few days shielding her new infant with her tail while keeping the male at a safe distance. On several occasions Estella positioned the infant in the correct nursing posture while encouraging the baby to feed. For the next few weeks the infant held onto mom's fur with its tiny little hands, shifting only to eat.

Keepers quickly began training mom and infant and Estella soon became tolerant to staff palpating and inspecting the infant on a regular basis. Our training efforts paid off when our astute Animal Husbandry Intern, Laura, noticed some swelling around the infant's fingers and toes. At closer look we noticed that small tufts of hair were twisted around the infant's digits restricting circulation. Mom and baby were escorted to our local veterinarian that afternoon, the tufts of hair were removed and they were reunited within the hour. Now the infant is over three months old and very independent. Our staff enjoys watching the youngster hop from branch to branch or from mom's head to branch. Stay tuned to the next newsletter as we find out if the infant is a male or female. What do you think? Time's up!



Photo by P.Walsh

Time's up!

Baby #2

Shiraz, our female *Eulemur fulvus fulvus*, gave birth to a healthy infant on June 16th, which was several weeks after the typical birthing window. Even though it was a long wait, it was well worth it. We concluded that Shiraz did not conceive until the very end of the breeding season. Normally our local veterinarian comes to the reserve and palpates our female lemurs prior to birthing season. In Shiraz's case, this is not welcomed and we adhere to a "hands-off" approach with this female. Shiraz, al-

though still challenging toward her keepers, takes great care of her infants.

Colony Updates

With the addition of the two infants above, our collection now includes 35 individuals from 8 different species. Keeping our colony healthy is our main concern at LCF. We are very fortunate to have an exemplary veterinary team who contribute to our colony's well-being. It is to our advantage that many local veterinarians welcome the challenge to work with an exotic species from time to time. LCF is extremely appreciative of their dedication and hard work.

In addition to our regular veterinarian, Dr. David Holifield to whom we are always indebted, and our consulting veterinarian, Dr. Cathy Williams, we'd like to acknowledge the following area doctors and specialists who have helped us in special ways:

- Dr. Heidi Ward—ultrasound
- Dr. John Kirsch—surgery
- Dr. Terah Browning—x-rays, surgery
- Dr. Anne Chauvet—MRI
- Staff of Animal ER—emergency procedures



Photo by P.Walsh

By Pattie Walsh



Photo by P.Walsh



Research on the Reserve

Summer is always a time of increased research activity at the reserve. Students are free from their classroom responsibilities and finally get a chance to “visit the field.” Hannah Schotman, a sophomore at New College of Florida, was introduced to the reserve in January, 2009, as a participant in the LCF’s Art/Science Environmental Imperative. Hannah reflected, “I found the lemurs so endearing that I just couldn’t stay away; I began volunteering at the reserve once a week.” She expressed an interest in gaining more experience in animal behavior and data collection so when Monica Mogilewsky, Director, Research and Operations, was looking for students to collect data for the upcoming “birth” season Hannah was a perfect fit.

Impressed by her hard work, enthusiasm and attention to detail in her initial assignment, Monica gave Hannah the added challenge of examining parenting behavior in the lemur community. When Estella gave birth to her baby (see Critter Corner, this issue), Hannah began collecting observational data on both parents and the infant. With the birth of Shiraz’s infant, Hannah’s observational time was split between the two lemur groups. Collecting data on the behavior of all group members in the presence of infants is an important step in understanding how lemur social groups work for each species. We can learn more about parental investment, interactions and investment from siblings, and the development of social hierarchies. Only a few studies concentrating on infant care in lemurs have been done, and research at the Myakka City Lemur Reserve can make significant strides in our understanding of understudied lemurs, particularly brown and mongoose lemurs.

Research of this type also gives students a chance to learn how to collect data while contributing to a larger research project with immediate significance and impact. For Hannah, “Coming out to the reserve has given me something to look forward to every week, and I feel like the experience I’m gaining in raw data collection and field research will surely come in handy, even though my plans for the future aren’t settled. I love observing the lemurs, and I’ve especially enjoyed watching Estella and Felix’s baby grow and develop its own unique personality.”

Also doing research at the reserve this summer is a research team led by Dr. Lauren Highfill, psychology professor at Eckerd College. Professor Highfill has studied animal personality in a variety of species including dolphins, sea lions, elephants, and dogs. The research team includes four psychology students from Eckerd College. Recent graduate, Caroline Barr, has completed several internships with marine mammals and plans to work as a zoo keeper and trainer. Senior, Liz Flores is also as-



Hannah observing the brown lemur group

sisting with social psychology research and is planning a project investigating cephalopod (octopus) intelligence. Brooke Alexander, a junior, is very excited to participate in this project and more over the next few years. Sarah Nadler, also a senior, will continue to assist Professor Highfill with the exciting lemur project, as well as ongoing dog and sea lion studies.

Dr. Highfill’s team is interested in learning more about animal personalities. The study of animal personalities is relatively novel but unarguably important. Treating animals as individuals, and further, tailoring husbandry programs to individual needs, can provide conservationists, zoo keepers and other caretakers with the ability to greatly improve the lives of captive animals. Such behavioral research also provides a window into the invisible elements of the animal mind and allows scientists to draw comparisons with personality psychology of humans.

With the lemurs, the Eckerd team is focusing on each individual’s varying degrees of sociality, activity, perseverance, and problem-solving abilities. For example, to see how much an individual lemur is willing to persevere in hopes of retrieving a chunk of banana, the researchers will first present the treat to him in a simple puzzle that allows him to obtain it fairly easily. Next, they will give him an apparently identical puzzle, but this one will not be solvable. The lemur’s perseverance score will be the time he devotes to the impossible task of grabbing the second banana. Of course, afterwards, he will be rewarded for his participation—the personality project promises to be nothing but fun for all of the participating lemurs.

Additionally, while working with the lemurs, the students are recording data on how quickly lemurs learn trained behaviors, how much time each lemur spends with conspecifics and their activity levels throughout the day. The staff at MCLR is particularly excited about applying the results of these studies to the everyday management of the lemur colony. Information from personality measures could potentially be used to reduce conflict among group members, create individualized enrichment items, and help with breeding programs. Also, the MCLR staff has expressed an interest in examining whether some lemur personalities adjust more quickly to the free-range environment.

To prepare for the type of testing described in the above example, the researchers will be training some key husbandry behaviors, including target and crate training. This training not only helps make the research easier during this project, but also helps the lemurs and MCLR staff during future husbandry practices. The researchers will be providing many hours of enrichment to the lemurs while the lemurs provide information about their species’ learning abilities and personality traits, all of which will contribute to improving animal care practices. About the team project, Sarah says, “We are all new to the lemur lifestyle, but we are having a blast getting to know each of the furry friends very well!”

By Monica Mogilewsky, Sarah Nadler, & Hannah Schotman



2009 Teachers Institute for Conservation Ecology

This year's Teachers Institute for Conservation Ecology, funded by TogetherGreen, an alliance between Audubon and Toyota, was the best Institute yet! The bright, curious and enthusiastic teachers came mainly from the east coast but from as far away as Maine. They represented both private and public schools.



Subject observing class in the field Photo by M.Stuart

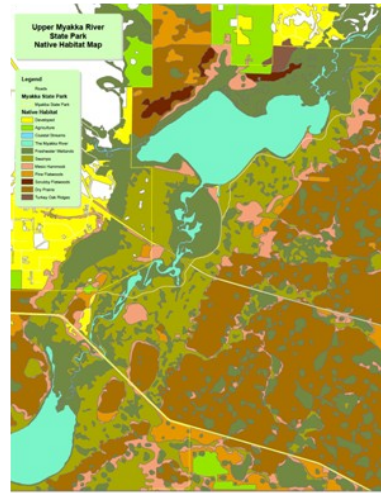
The program is a five-day, research-based summer institute sponsored and conducted by LCF on the Myakka City Lemur Reserve. Led by recognized national scientists, LCF's lemur colony and reserve are utilized to provide high school science teachers the necessary science, inspiration and specialized tools and techniques that enable them to create stimulating conservation curricula for their classrooms. This summer's Institute centered on habitat and ecology as opposed to conservation biology, the focus of previous Institutes.

The Institute faculty, headed and coordinated by Dr. Michael Stuart (retired Biology Professor, University of North Carolina



Class of 2009 with their instructors Photo by K.Lippincott

at Asheville), was excellent. The team comprised two full time instructors, Dr. Stuart, who addressed primarily biology and ecology, and community ecologist Dr. Richard Nisbett,



Myakka Upper River native habitat map created by Dr. Shafer.

(University of South Florida, Department of Global Health) who tied the importance of healthy people to healthy ecosystems.

Of the supporting staff who presented additional material and activities, wildlife ecologist and conservation biologist, Dr. Jennifer Shafer (University of Hawaii) demonstrated the use of technology in conservation ecology through remote sensing, species modeling, and satellite mapping. Monica Mogilewsky (LCF Director of Research

and Operations) was the field training instructor guiding the teachers through the disciplines of field research. Karen Fraley, native plant expert and guide, taught participants about native and invasive flora, demonstrated how to make a plant press and took the students on a tour of Myakka State Park, located near the reserve, noted for its bird-watching and tree canopy walk.

This year a new dimension was offered by Penelope Bodry-Sanders who presented a module on the use of art and music in conservation studies. Penelope's activities were created through consultation with artist Ana Flores (Artist in Residence, RI US Fish and Wildlife) and a fellow recipient of an Audubon TogetherGreen Leadership Fellowship. The teachers themselves, several of whom have taught science for decades, were also great correspondents who brought much knowledge and experience to the proceedings.



Karen Jimenez with her body map

The impact of this program reaches far beyond the 1100+ students who will reap first-hand benefits of this year's institute. It is the inspiration to become advocates for the environment and/or to embrace careers in science and conservation that will ultimately provide a benchmark for this program's success. For now, LCF is edified to know that the teachers evaluate the program as "excellent" and "most useful" in terms of their professional development and their teaching acumen.

By Penelope Bodry-Sanders



Reserve Updates

Land Purchase. Thanks to the generosity of John and Emily Alexander and Judy Rasmuson, LCF acquired an adjoining 10-acre parcel this Spring which ensured that a safe buffer zone between the lemurs and neighbors was maintained. The land is on the southern boundary and was the remainder of a much larger parcel that had recently sold. Higher and drier than much of the reserve's property, with a variety of trees including larger oaks, this addition has many possible uses in our future growth.



Campsite. Scientists and the Board agreed this spring to a plan to develop a campsite for visiting field training students. The campsite will simulate to some degree the conditions researchers face in the field and will also expand the number of students the

reserve can accommodate. A pleasant oak-shaded site was chosen near the current Researchers' House and the undergrowth has been cleared. Tent options are being explored. The field training program at LCF continues to expand and both students and professors have commended the unique opportunity LCF provides for practical training.

Forest Management. Under the guidance of our local area foresters and with the go-ahead from the Board and Scientists, the Myakka City Lemur Reserve's forests are undergoing a make-over. The foresters no longer advocate prescribed burns in LCF's original forest because of the added structures and new plantings. Rather, they recommend mechanically clearing the undergrowth making a series of 5 ft. pathways. A skid steer mulcher grinds up the vegetation to make the paths. The paths are less for human navigation than they are designed to open up and thin out the forest which helps prevent forest fires and promotes healthy tree growth.



Another forest project involves creating a canopy highway in the pinewoods with ladders, ropes, tree stands and various other materials. Pine trees are straight, tall and have fewer branches than oaks and these aerial routes for the lemurs help facilitate travel through the canopy.

Selecting new trees to be planted that best suit the lemurs' needs and that will flourish in our central Florida wetland environment is ongoing. See our Wish List, p.8, if you'd like to help.

Staff News and Activities

Executive Director Retiring



Penelope Bodry-Sanders, founding director of the Lemur Conservation Foundation, has announced she is stepping down as Executive Director in 2010. She will remain as a trustee on the Board of Directors. Her position has been posted and applications are being accepted until September 15th. Penelope's letter announcing her retirement and the complete job description can be found on the LCF website.

www.lemurreserve.org

Graduate Degree is Near

Monica Mogilewsky, Director, Research and Operations, has kept busy this summer working on her Masters thesis, "Saving What is Left: Genetic Heterozygosity in the Captive Populations of Crowned Lemurs (*Eulemur coronatus*) and Collared Lemurs (*Eulemur collaris*)." Dr. George Amato, LCF Scientist, LCF Board Member and Director of the Sackler Institute of Comparative Genomics (SICG) at the American Museum of Natural History, is supporting Monica's research efforts, providing materials and lab access at the SICG.

AZA institutions from across the country have contributed samples for this project and Monica has spent her vacation time at the lab in New York City extracting DNA and processing data. According to Monica, "This has been the opportunity of a lifetime. Thanks to Dr. Amato, LCF, and the AZA community, I am learning more than ever about conservation biology, and especially about the potential for genetic molecular methods to contribute to effect conservation."



In addition to pursuing academic training, Monica had the opportunity to further her professional training earlier this year when she received a scholarship from the Zoological Registrars Association to attend the AZA's Institutional Record Keeping course in Wheeling, Virginia. The course work took place over an intense week, with classes held from 7:30 am to 9:30pm. The long days were packed with information about every aspect of animal related records. Such records are needed to providing accurate pedigrees, legal documentation, epidemiological information, and population trends; accurate, consistent and detailed records allow institutions to cooperate more effectively and are critical for effective conservation.

(Continued on page 7)



Staff News and Activities continued

(Continued from page 6)

Intern News

This year has been a busy and exciting time for our Penelope Bodry-Sanders and Mackarness M. Goode Animal Husbandry Interns. With two newborn lemurs and annual exams scheduled, there are plenty of projects to keep them on the go.

From January to July of this year, **Laura Ellsaesser** has used her time to hone in on the skills and expertise she will need while attending vet school. Along with the routine animal care duties, Laura has actively assisted our veterinarian and staff with physical exams, complex medical procedures and administering medications. Prior to her internship, Laura cared for a number of animals at the South Eastern Raptor Center in Auburn, Alabama while attending Auburn.



During her stay at LCF, Laura was often found at odd hours of the night looking for nocturnal creatures in the Florida swamps or in the kitchen baking cookies. Although it is hard to pick one lemur from the bunch, Kikeli, a female mongoose lemur, was a favorite. Now back in North Carolina, Laura is beginning N.C. State's Veterinary Science Program and looks forward to no social life. Laura will make an excellent veterinarian, she has been a valuable member of the LCF team and will be missed.



As we say farewell to Laura we welcome **Nicholas "Nick" Jackson** as our new Animal Care Intern for July through December. Nick, LCF's fourth Animal Care Intern, recently received his undergraduate degree in Marine Science and Biology from the University of Miami. Nick hit the ground running volunteering

to start a day early in monsoon type rains and sweltering temperatures. His good humor has already been recognized and appreciated as well as his animal care skills.

Besides taking care of his extensive personal animal collection back home in New Jersey, Nick has worked for a private veterinary hospital in New York and Dolphin Discovery in the British Virgin Islands. He looks forward to learning more about primates and their care. Planning to attend vet school in 2010, the experience he will gain at LCF will be invaluable.

Volunteer Spotlight

Jan Munsell, a graduate of the inaugural Teachers Institute in 2007 enjoyed her experience at the reserve so much that she has been a loyal volunteer ever since. A K-5 teachers' aid for students with exceptionalities in the Sarasota County public school system, she has made many trips out to the reserve with truckloads of enrichment equipment, bamboo, trees and plants and other items she has scavenged in the city. An enthusiastic recycler, Jan does an amazing job keeping an eye out for useful materials.



Just a few of the wonderful enrichment items include several toddler (and lemur) friendly playhouses, durable nursery "toys," and lemur sized ladders. These items are used as "furniture" to provide physical and psychological stimulation for lemurs living at the shelter enclosures. Jan has also put in many hours preparing fruit juice ice pops, fruit smoothie treats, and puzzle feeders to stimulate foraging behavior in the lemurs as well as to help keep them cool during the long, hot summer days.

Jan is full of fresh ideas for providing enrichment for all of the lemurs at the reserve and is always willing to take on a challenge commenting that, "I learn something new every time I am out there...and the lemurs are just so cool!" She is our "go to" person for crafting new ways of encouraging natural behaviors like foraging, scent marking, and exploration. Many thanks to Jan for her dedication, enthusiasm, hard work, and creativity – from all of the staff and lemurs at LCF.

Position Evolves

Pattie Walsh's title has changed and she is now Manager, Animal Care. This change more accurately reflects her range of

responsibilities which include managing basic animal husbandry routines, training and enrichment programs to supervising the interns and volunteers, as well as encompassing her specialized skills as a pathology technician.



As the position and colony grows Pattie will continue to develop her skills to meet the needs

of the LCF Lemur Colony.



LCF's Wish List



Photo by M.Stuart

Contribute to the Canopy.

We are planting native Florida trees and shrubs in our forests for future generations of lemurs to enjoy. The new trees are carefully selected to suit the terrain and to make the lemurs happy. A healthy forest canopy is vital to the lemurs' survival.

If you would like to be a part of our long-range forest management plan by contributing a tree, please contact us and we will provide you more information.

Need Help Recycling? Perhaps you have one of the following items, new or used, that you no longer want. We would be happy to make a new home for them and free up some space for you. Gifts-in-Kind are tax deductible!

- commercial grade freezer
- microscope with 100X lens
- heart monitor and/or blood pressure monitor
- electric golf cart
- wood chipper
- small backhoe
- leaf blower
- additional dinnerware service for the Center (Booths' Chinese Tree pattern)
- glassware and dishware
- outdoor/patio furniture
- 4-drawer lateral file cabinet for library files
- small book cart for library

Especially for Tampolo

- 2 night vision binoculars
- 2 waterproof stop watches
- video camera for night filming
- Field notebook computer

Little Gifts Always Appreciated!

- general office supplies - photocopy/printer paper, file folders, pens, highlighters, paperclips, post-its, legal pads, etc.
- postage stamps
- general cleaning supplies (green products preferred) - detergent, bleach, windex, soap, sponges, paper towels, etc.
- towels

It's the Simple Things

For our lemur enrichment program and supporting our green initiative, we need an endless supply of clean cardboard boxes or tubes. See details at:

www.lemurreserve.org/donation.html



Eulemur sanfordi patrolling their habitat Photo by M.Stuart



Lemur catta enjoying his meal. Photo by J.Munsell

The Lemur Conservation Foundation (LCF), Incorporated in Florida (1996), is a 501(c)(3) not-for-profit publicly supported organization (EIN 59-3359549) dedicated to the preservation and conservation of the primates of Madagascar through captive breeding, non-invasive scientific research, education, and reintroduction. LCF is certified by the Association of Zoos & Aquariums.

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