



Spring  
2015

The Official Newsletter of the  
Madagascar Fauna and Flora Group

# *Eighth Continent Quarterly*

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Madagascar Program Director: Maya Moore | Research Director Karen Freeman, PhD

Dear friends and members of the MFG,

Here on the east coast of Madagascar, 2015 is already off to an exciting start. In this edition of the 8th Continent, you'll hear about what's been happening at Parc Ivoloïna's zoo, MFG's newest managing member from "Down Under", and even a new frog species from Betampona!

We will also focus on efforts to examine the impact of MFG's environmental education initiatives, which will culminate in a two-day environmental education workshop to be held at the Isle of Wight Zoo on June 30th and July 1st. We hope to see many of you there.

In addition, we look forward to hearing your feedback about this newsletter and other MFG communications tools (including our new website!) by taking a few moments to fill out this online survey: <https://www.surveymonkey.com/s/2QMJJJN>

As we say in Madagascar, "Misaotra mialoha" (Thank you in advance).

Sincerely yours,

Maya Moore  
MFG Program Director

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Follow MFG updates and Malagasy biodiversity news on Facebook! Members are also invited to share info.



[www.facebook.com/madagascarfaunagroup](http://www.facebook.com/madagascarfaunagroup)

#### *Impressum:*

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## New Zoo Signs Are Up!

After a year of hard work investigating materials that will hold up in the harsh condition of Madagascar's east coast, drafting texts and creating graphics, we are pleased to announce that the new signs have been installed at Ivoloina.

Many thanks to our graphic design team, Jana Grabner and Alain Randriasolo, as well as the Saint Louis Zoo for providing funding for this project.

## Newest Managing Member: Perth Zoo

Perth Zoo is the most recent zoo to join the MFG! Dedicated to saving wildlife and



introducing the community to the wonder of animal species from around the world, they also support conservation projects in Sumatra, Laos, Papua New Guinea, Cambodia, Zambia and, of course, Australia. MFG is proud to now have Managing Members on 5 of the 7 continents. Next up – South America!



## Chinese New Year at Parc Ivoloina

Ivoloina's Chinese New Year Celebration on Feb. 21st was a huge success, with over 250 attendees, a tai chi demonstration, dragon dance performance, and lots of

chinese food. We also watched a documentary on MFG member Taipei Zoo. Thank you to everyone that participated and made this such a great event and happy year of the goat!

## MFG is Connected!

The new website ([www.madagascarfaunaflora.org](http://www.madagascarfaunaflora.org)) was recently launched. MFG has also been working to improve our social networking, with a new Facebook page for Parc Ivoloina (where page visitors have the opportunity to leave comments on their experience via a TripAdvisor app), a new Twitter account (@MadaFaunaFlora) and YouTube Channel. [www.youtube.com/MadagascarFaunaGroup](http://www.youtube.com/MadagascarFaunaGroup)

MFG also now appears on several online platforms including:

**Amphibian Survival Alliance**  
[www.amphibians.org/news/mfg/](http://www.amphibians.org/news/mfg/)

**Lemur Action Network**  
[www.lemurconservationnetwork.org/organization/madagascar-fauna-and-flora-group/](http://www.lemurconservationnetwork.org/organization/madagascar-fauna-and-flora-group/)

**Population-Health-Environment Madagascar**  
<http://phemadagascar.org/who/>

To top it all off (literally, since it is on top of a hill), researchers will be pleased to hear that our Field Research Station at Rendrendry now has internet connection in the office!

## *Increased Emphasis on Enrichment in 2015*



At Parc Ivoloina, we never waste a tree! If one is removed or needs to be trimmed, the branches and trunk are refashioned as furniture for our lemur enclosures.

To further reinforce capacity, Dr. Alison Grande from the Lemur Conservation Foundation, a Managing Member of the MFG, visited Parc Ivoloina on Feb. 16th and met with the Director of Ivoloina Zoo, Bernard Iambana, to discuss improvements to the Ivoloina enrichment program.

Bernard then gave a follow-up training to all of the zookeepers on Feb. 26th, and

will continue to oversee the evolution over the course of 2015.

As defined by the AZA Scientific Behavior Advisory Group, enrichment is “a dynamic process for enhancing animal environments within the context of the animals’ behavioral biology and natural history. Environmental changes are made with the goal of increasing the animal’s behavioral choices and drawing out their species-appropriate behaviors, thus enhancing animal welfare.” Effective enrichment

requires an understanding of the natural behaviors and physiology of each species to enhance a species’ behavioral, physical, social, cognitive, and psychological wellbeing.

Categories include

- Environmental Enrichment Devices
- Habitat Enrichment
- Sensory Enrichment
- Behavioral Conditioning
- Food Enrichment
- Social Groupings

Goal-oriented enrichment identifies appropriate behaviors and how they will be safely elicited and documented.



## Spotlight on Fauna and Flora



### Fauna:

#### *Platypelis karenae* sp.

A new arboreal and diminutive species of the genus *Platypelis* from Betampona Reserve, one of the last low-altitude rainforest fragments of eastern Madagascar, was recently described by Goncalo Rosa et al. *Platypelis karenae* sp., named after MFG Research Director Karen Freeman, can be found living among leaves of *Pandanus* spp. and those of a herbaceous plant of the genus *Crinum*.

Phylogenetically, *P. karenae* is sister to *P. tuberifera* yet differentiated by a high level of genetic divergence, its distinctly smaller size, acoustic repertoire, and color pattern. Mitochondrial, nuclear, bioacoustic, and morphological data were used to support the validity of this new species.

### Flora:

#### *Pandanus*

*Pandanus* is a genus of monocots with some 450 accepted species. In Madagascar, there are 84 known species, of which all are endemic. Native to the Old World tropics and subtropics and growing from the coast to mountain habitats and riverine forests, they are often referred

to as Pandanus palms [or screwpines]. However, these plants are not even closely related to palm trees. Rather, they are palm-like, dioecious (with male and female flowers produced on different plants) trees and shrubs, and classified in the order Pandanales, family Pandanaceae.

The female tree produces composed fruits where separate phalanges or drupes are often eaten by animals including lemurs, bats, rats and crabs. They propagate readily from seed, but also are widely propagated from branch cuttings by local people.

Throughout the tropics, Pandanus trees are of cultural, health, and economic importance, and almost every part of the plant can be used. In Madagascar, Pandanus fronds are used to make mats and as thatched roofing material.





## Lemurs: Food and Pets or Endangered Animals

### Bushmeat Research around Betampona

In a recent paper published in the latest edition of *Madagascar Conservation and Development*, Dr. Chris Golden, Director of WCS' HEAL (Health & Ecosystems: Analysis of Linkages) Program, and his team found that, in a survey of nearly 300 households surrounding Betampona Strict Natural Reserve, more than 60% of households had consumed wildlife within the past year, with approximately a quarter of wildlife harvest being illegal and nearly 95% of wildlife harvest being directed to subsistence consumption and not for sale.

Tenrec hunting was the most common form of wildlife harvest in the area with more than 50% of household eating them at an average rate of

four tenrecs consumed per household per year. More than 20% of households were eating bush pig at an average rate of 250g per year.

The average household reported eating approximately five wild animals in the past year. Almost one in five households had eaten a lemur in the past year, yet at very low levels of consumption. On average, 0.75 lemurs per household were consumed per year.

Although rates of wildlife consumption were relatively low compared to other regions in Madagascar where Dr. Golden has worked, what he found was a strong effect of the presence of MFG's permanent research station, Rendrirendry. Wildlife consumption increased by 1.3 times for each kilometer distance from the station.

### Pet Lemur Study

Kim Reuter, PhD candidate at Temple University, has recently started a new research study in collaboration with Dr. Melissa Schaefer (University of Utah) that aims to collect information on the ownership of pet lemurs in Madagascar. This study will utilize citizen science – and the general public – to gather information about sightings of pet lemurs in Madagascar over the past twenty years.



*Microcebus* Kept in a Bottle

The project aims to collect at least 1,000 submissions from the public about their experiences with captive/domestic/pet lemurs in Madagascar ([www.petlemur.com](http://www.petlemur.com)). You can contribute to this research project by submitting information through the anonymous form ([www.petlemur.com/participate](http://www.petlemur.com/participate)).



Tailless tenrec (*Tenrec ecaudatus*) just before it was cooked. Image taken by MFG agents as they were doing survey work.

## Decades of Caring for Confiscated Wildlife at Ivoloina

Illegal hunting of wildlife for food or the pet market is not unique to Madagascar. Habitat loss and fragmentation have brought humans and wildlife in greater proximity and thereby increased bushmeat and other hunting opportunities. Government authorities confront significant challenges placing confiscated animals and, to help decision makers, the IUCN has developed guidelines that emphasize “.. a need to ensure both the humane treatment of the animals and the conservation and welfare of the existing wild populations.”

The Malagasy authorities have long designated the Ivoloina Zoo as an approved



A local Tamatave resident found children playing with mouse and fat-tailed dwarf lemur infants and brought them to the Zoo where they were successfully hand-reared by veterinarian Fidy Rasambainarivo and the keepers.



Although lemurs and tortoises are the animals most often brought to Ivoloina Zoo, birds have also been rescued such as this Madagascar buzzard (*Buteo brachypterus*) housed in a small basket.

facility for the placement of animals they confiscate. In addition, the Zoo also receives animals brought in by owners who no longer want them and by people who have rescued them from markets or abusive “pet” situations. As an organization of members intimately involved in ex-situ conservation programs, the MFG is well placed to



evaluate how an individual of a threatened or endangered species may be integrated into a regional or global breeding program. Regardless of a species’ conservation status, the welfare of each individual is considered by evaluating its physical, environmental and social needs during quarantine. Should the staff have specific questions on, for example, health or behavioral issues, they can readily turn to an array of MFG members who are happy to contribute their relevant expertise and experience.



Left: A female gray bamboo lemur was held in a small cage or tied outside before being taken to the Ivoloina Zoo. Above: A female black and white ruffed lemur dropped off at the MFG’s office. Veterinarian Fidy Rasambainarivo and Head Keeper, George Totozandry, remove a rope tangled around her body before taking her to the Zoo. Both females were successfully introduced to a companion directly after quarantine.



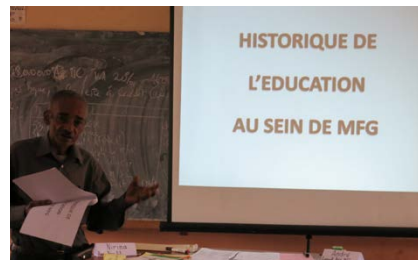
## *Environmental Education Program Workshop held in Tamatave*



As part of a series of workshops examining environmental education programs in Madagascar, the MFG recently held a two-day workshop to take a closer look at our own education program with various stakeholders, including a Saturday School teacher, a member of a parents' association, the mayor of Ambodiriana commune, a local superintendent of schools, the regional UNICEF representative, the Director of Betampona Reserve, and relevant MFG staff.

The workshop started off with a presentation on the history of the MFG program, given by long-time Ivoloina Saturday School teacher and pedagogical advisor, Mr. Gimod. He tracked the conception of the program in the early 90s, its evolution over the years, to where we are now. We also heard presentations on the social, economic and environment

situations in the Tamatave region to better understand the context that we are working in.



The most fruitful aspect of the workshop was conducting SWOT (Strengths-Weaknesses-Opportunities-Threats) Analyses of each of the components of the MFG environmental education program: Saturday School, Saturday School teacher trainings, Green Ambassador camp program, Green Ambassador teacher/mentor trainings, organized park visits by local school groups, outreach events such as World Environment Day and World Lemur Day, and outreach

tools such as the Bitsik'Ivoloina Malagasy-language newsletter and the MFG weekly radio program.

We look forward to sharing our findings at the upcoming environmental education workshop to be held at the Isle of Wight Zoo, as we are always looking for ways to improve. There are also plans to hold a similar workshop in Madagascar later in the year in conjunction with Professor Jonah Ratsimbazafy and the McCrae Fund. One goal is to establish a network of conservation organizations in Madagascar working on environmental education in order to better exchange resources, experiences, and "best practices". Without a doubt, it will be an exciting year for environmental education in Madagascar!



## Community Outreach: First Annual World Lemur Day

By Lauren van Sicklin, Peace Corps Volunteer in Ambonivato

2014 saw the launching of the first “World Lemur Festival,” an awareness-raising campaign on the plight of these unique primates. Like many of our member zoos that also held events, the MFG hosted an all-day arts & activity fair for children at Parc Ivoloina. The event kicked off with music and dancing from local groups in the community and a performance by the Malagasy artists Mika and Rah’Pinta. Thereafter children were divided into smaller groups and guided to activity stations with games and various crafts and given tours of the park.

To draw attention to differences among lemur species, we developed activities such as using bamboo pens to draw pictures of the bamboo lemurs which were hung on bamboo plants located near their exhibit. At another station, children could look through the Ako book on indri and talk with a university student who had studied them in the wild. On the zoo tour children were encouraged to use their observational skills to identify physical or behavioral differences among the lemurs they saw and direct their questions to a student who was playing the part of a talking lemur.

Each event had an activity leader from Parc Ivoloina, as well as high school students from MFG’s Green Ambassador Program. The students, who helped keep the kids engaged, gained valuable experience in leading activities



and promoting environmental education. During the lunch break, students from a local youth development organization read stories they had created on the importance

of conserving lemurs.

The event was a huge success and we are already looking forward to organizing another one next year.





## Kianjavato Exchange Visit

By Lauren Van Sicklin



Several MFG staff recently visited Kianjavato, a town in southeast Madagascar, to visit and learn more about projects run by two NGOs: Madagascar Biodiversity Partnership's (MBP) and Conservation Fusion.

For the past few years, MBP has work to connect forest

fragments by reforesting the bare stretches of land between them. To encourage participation in the tree planting program, MBP has developed a conservation credit program. Single mothers from each fokontany take turns going to planting events; credits are determined by the

total number of trees planted and shared equally among the women who participated. Women can trade credits for products such as bicycles, energy efficient cook stoves, and solar panels. Sometimes women combine credits to buy bigger items they can share such as a sewing machine.

The MFG was interested in learning more about the conservation credit program to consider whether a version of this model could be applied to the MFG's reforestation of Betampona's Zone of Protection, a program that was developed in 1997 in collaboration with Madagascar National Parks (MNP) and the local communities. In exchange for planting native trees in the Zone of Protection, participants were originally given fast-growing trees that could be used for firewood or construction or clove trees and, more recently, crop seeds.

In addition, an annual festival is organized by the MFG to thank all who participated as well as distribute prize money to the village and individuals who were most successful. For individuals, success is defined by number of trees planted and the number that survived where as the winning village is evaluated on the continued quality of a forested area in or near Betampona.





## *Kianjavato Exchange Visit (continued)*



We also visited with Conservation Fusion, an education-focused NGO that works with nine schools around the Kianjavato area. They help these schools to increase environmental education opportunities through hands-on activities such as developing a school garden or participating in tree planting events with MBP's staff.

Like the adults who participate, the children earn conservation credits which they use to improve their school in an environmentally-friendly way such as purchasing solar

panels. Each school has a garden that is cared for by the students with the guidance and help of their teachers. The gardens are used to teach students how to grow a variety of vegetables and fruit trees and to develop healthy eating habits. If the garden is large enough, the vegetables grown are used for a school lunch program; if not the produce is used to generate income that supports the teachers association's educational activities. One school used the bounty of their fruit trees to make jam.

Because an integral part of Conservation Fusion's success has been working through the teacher's association, we will explore the interest our local teachers may have in adopting this idea.

The visit allowed us to learn a lot about these two programs as well as share what we have learned through our programs such as successful tree nursery and planting out techniques. The visit helped reinforce the idea that collaboration is an important part of conservation.



## *United Nations: Here's the Dirt*

The United Nations has recently declared 2015 the International Year of Soils. The central aim is to increase awareness and understanding of the importance of soil for food security and essential ecosystem functions.

At MFG, we run a number of projects “on the ground” which highlight the importance of soil quality. For example, Christian Rambelison, MFG’s Ecoagriculture Program Manager, trains farmers around Ivoloina and Betampona on composting techniques to improve their fields’ production levels.

Veronique Ravololonarivo, the Head of MFG’s Lab at Parc Ivoloina, conducts soil quality analysis (both qualitative and quantitative) for researchers, students and partner organizations who are trying to understand how soil quality affects anything from reforestation efforts to rice paddy production.

Participants in our Saturday School Program also enjoy a hands-on unit in compost-making, and Jean Francois Solofo Niaina Fidy, Head of the Ivoloina Forestry Station, has been rearing earthworms successfully for the last few years.



## *Employee of the Year: Jean Francois*

Jean Francois Solofo Niaina Fidy has been selected as the 2014 MFG Employee of the Year.

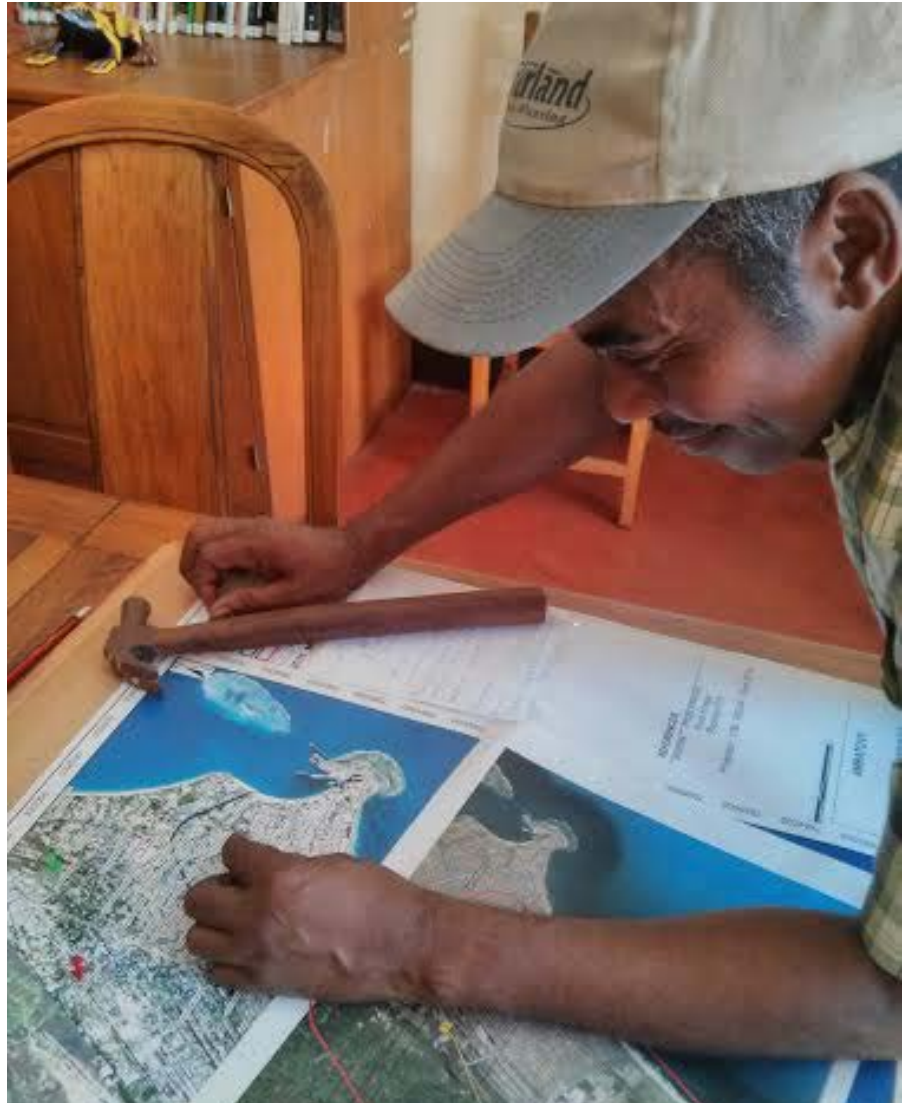
For those who have had the pleasure of working with Jean Francois, you know that he is extremely bright, easy-going, and all-around enjoyable to work with.

He has run the tree nursery at Parc Ivoloïna since 1998, and we are pleased to announce that he has just been promoted to Ivoloïna Forestry Station Manager.

This past year, Jean Francois was an invaluable team member for the help that he provided for the invasive toad surveying efforts.

Born and raised in the nearby village of Ambonivato (population 1,700) where he stills live with his wife and four children, Jean Francois was elected as President of Ambonivato in 2002.

Jean Francois – From all of us at MFG, we thank you immensely for all of your hard work and dedication these past 17 years!





## Lemur Conservation Foundation

The Lemur Conservation Foundation (LCF), one of MFG's managing members, is a conservation organization with an exclusive specialization and focus on lemurs and promotes lemur conservation through its participation in managed breeding programs, scientific research, environmental education, and by incorporating art into our conservation programs.

Established in 1996 by Penelope Bodry-Sanders, LCF has grown to be an important partner in the conservation and preservation of lemurs. LCF is an Association of Zoos and Aquariums certified-related facility occupying 100 acres in Myakka City, Florida. The property features naturalistic semi-free ranging habitats ranging from 9 to 13 acres.

Over the years, LCF has grown from eight lemurs donated by the Duke Lemur Center to over 45 lemurs. LCF's conservation breeding program is focused on 4 key species: *Lemur catta*, *Varecia rubra*, *Eulemur mongoz*, and *Eulemur collaris*, but LCF also cares for a group of *Eulemur fulvus* and the last remaining male *Eulemur*



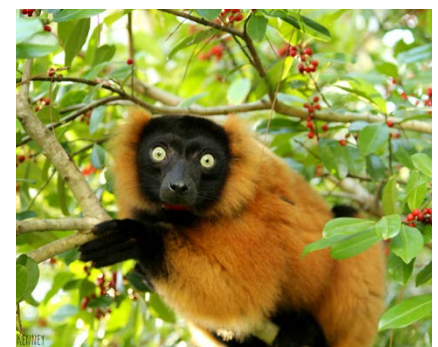
*sanfordi* in U.S. and European managed populations.

For over ten years, LCF has made significant contributions to in-situ conservation through its partnership with ESSA-Forêts in its long-term conservation strategies at the Protected Area of Tampolo, one of the remnant littoral forests in Eastern Madagascar. LCF underwrote the construction of the Tampolo Museum and Interpretative Center, the construction of a guesthouse for visiting scientific researchers, and a classroom/community center using funds from the EnviroKidz Giving Back Program.

Currently, LCF is funding efforts in Madagascar's Anjanaharibe-Sud Special Reserve (ASSR), a large (almost

105 square miles) mountainous rainforest reserve located in northeastern Madagascar. ASSR is an important habitat for the critically endangered silky sifaka and is also home to a unique indri population with all black pelage.

LCF also produced a children's book, *Ako the Aye-Aye*, written by Alison Jolly, illustrated by Deborah Ross and translated into Malagasy by Hantanirina Rasamimanana, that gave birth to the Ako Project – an international environmental education program.



## *Photo Pick*



**Photo of a rainbow over the boat during the 2015 teambuilding  
on the Canal des Pangalenes**

# CONSERVING MALAGASY BIODIVERSITY

## THANKS TO THE MEMBERS OF MFG

### Managing Members

Naples Zoo at Caribbean Gardens  
Lemur Conservation Foundation  
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Duke Lemur Center  
San Antonio Zoo  
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South Carolina Aquarium

These institutions pay annual dues which contribute to the operating costs of the MFG's many efforts in Madagascar. If you would like to learn more about becoming a member, please contact MFG Chair Dr. Eric Miller at [REMiller@stlzoo.org](mailto:REMiller@stlzoo.org) or Vice-Chair Ingrid Porton at [ingrid.porton@gmail.com](mailto:ingrid.porton@gmail.com)