



The Official Newsletter of the  
Madagascar Fauna and Flora Group

# *Eighth Continent Quarterly*

United States of America: Dr. Eric Miller, MFG Chair & Ingrid Porton, MFG Vice-Chair  
Madagascar: Maya Moore, Program Manager, United Kingdom: Dr. Karen Freeman, Research Director

*Dear friends and members of the MFG,*

For over a quarter of a century, MFG has successfully brought together zoos, aquariums and botanical gardens from around the world to lead conservation efforts in the eastern rainforests of Madagascar. For this reason, we dedicate this issue of the Eighth Continent to MFG's 25th Anniversary (1988-2013) which was celebrated recently during the Steering Committee Meeting held at Parc Ivoloina this past November.

While MFG is already well respected and established in the community and conservation field, we are always seeking new ways to improve our sites and programs. Therefore, we also highlight some of our exciting new partnerships, initiatives, and park improvements.

We also dedicate this issue to the members of MFG who make all of this work on the ground possible! Thank you for your dedication and here is to another 25 years!

Sincerely yours,

Maya Moore, MFG Program Manager



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Follow our news and other updates concerning our work and Malagasy biodiversity on Facebook! Members are also invited to share their related information on our site.



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

### **Impressum:**

Madagascar Fauna and Flora Group / Parc Ivoloina  
BP: 442 (en face Hopital Manara-penitra) Morafeno, Toamasina (501)  
Tel. Bureau: 020 53 30842, Tel. mobile: (0261)320510307, Email: mfgmad@moov.mg

MFG c/o St. Louis Zoo  
1 Government Drive, St. Louis MO 63110 USA  
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## 25th ANNIVERSARY *Steering Committee*

Over the course of three days in November, MFG members from across the globe came together to meet at Parc Ivoloina, 12 km from the city of Toamasina on the eastern coast of Madagascar. Amongst the attendees were the Chair and Vice Chair of the MFG (Saint Louis Zoo), as well as representatives from Zoo Zurich, Seneca Park Zoo, Isle of Wight Zoo, Duke Lemur Center, Cango Wildlife Ranch, Taipei Zoo, Missouri Botanical Gardens, as well as Durrell Wildlife Conservation Trust.

The meeting kicked off with a « joro » (thanks to Alex Rubel of Zoo Zurich who generously sponsored the event), a traditional Malagasy ceremony to thank the ancestors and to ask them for future blessings. Meeting participants were also serenaded by the local association, Randramadinika, who sang « vakondrazana », or traditional Malagasy songs and greeted by the MFG's new black and white ruffed lemur mascot, Vari.



We also had a special viewing of the 25th Anniversary MFG

promotional video made by Madasoleil and heard presentations from partner organizations such as the Malagasy Ministry of Environment and Forests and the Veterinary School based in Antananarivo.



The second day of the meeting focused on MFG's research program. Dr. Chris Golden gave a very interesting presentation on his human health research around Betampona. The day concluded with a short visit to the MFG laboratory.

On the third and final day, we took a closer look at MFG's ecoagriculture program as well as the extensive forest restoration project happening around Betampona (now in its

5th phase). Participants were then invited to tour the Model Agricultural Station and Tree Nursery at Ivoloina before saying farewell at the closing cocktail hosted at Ivoloina's lovely « buvette ».



Following the meeting, participants had the opportunity to travel to MFG's permanent research station at Rendrirendry and visit Betampona Reserve where they saw many lemurs including the *Indri indri*.

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## NEW MEMBER

### *Cango Wildlife Ranch*

We are happy to welcome our first member from Africa!



Cango Wildlife Ranch hosts three species of lemurs: ring-tailed, black and white ruffed and brown lemurs in their interactive exhibition called "Lemur Falls."

*Website:*

[www.cango.co.za](http://www.cango.co.za)



## Varecia Variegata

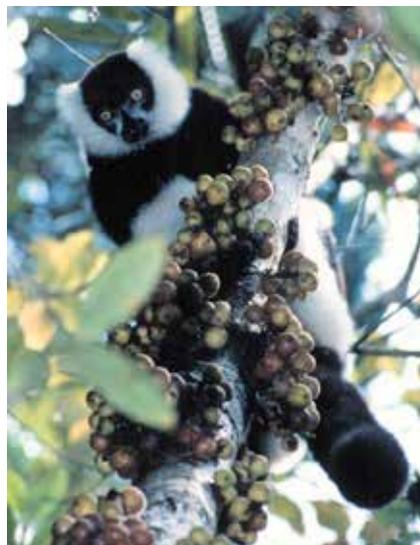
By Ingrid PORTON

Black and white ruffed lemurs, *Varecia variegata*, possess a number of unusual characteristics. Although they are a large-bodied diurnal species, their reproductive biology is more reminiscent of mouse and dwarf lemur species. Like them, ruffed lemurs give birth to litters of up to three infants (up to six in captivity) but they are unique as the only lemur species with three pairs of mammary glands; mouse and dwarf lemurs only possess two pairs. *Varecia* has the highest total energy concentration of all lemurs and they are the only diurnal primate that keeps infants in a nest and transports them by mouth.



Increasing evidence points to ruffed lemurs exhibiting a fission/fusion social organization in which members of a community are comprised of both related and unrelated individuals and both sexes may remain

in or disperse from their natal community. Field studies have shown that female *Varecia* may park their infants in a communal nest which provides each female more time to forage. One study showed that alloparenting increased reproductive success.



*Varecia* are frugivores and do best in primary forest habitat that includes large, mature fruit trees. Because fruit is dispersed spatially and temporally, they require a relatively large home range and are not found in disturbed secondary forests.

The MFG has a long history of working to conserve *Varecia*. Between 1997 and 2001 thirteen captive-born ruffed lemurs were released into Betampona Natural Reserve to determine the feasibility of this as a strategy to add founders to an isolated wild population. We know a released pair had

offspring and one female produced twins with a wild-born male. We are currently working to obtain sufficient biological samples to determine which released males may have sired offspring. This research will also be used to assess the population's current status and how often unrelated individuals are needed to maintain the population's viability. It is because of our history and continued conservation efforts with this Critically Endangered species that we selected the black and white ruffed lemur for the MFG's new logo.

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## Orchids

To date, at least 1,000 species of orchid have been identified in Madagascar, making them the largest plant family on the island, 90 percent of which are endemic.

However, orchids are becoming more rare in the wild, threatened by over-collection and habitat loss.

As Madagascar Fauna and Flora Group focuses on the conservation of threatened plants as well as animals, we felt that an orchid was a good symbol for MFG's plant conservation work and chose the *Angraecum sesquipedale*, commonly referred to as Darwin's Orchid, to appear beside the *Varecia* on our new logo.



## *MFG attends the 5th Annual International Prosimian Congress*

By Nirina RAKOTOMALALA

From August 4<sup>th</sup> to 9<sup>th</sup> the halls of the Centre ValBio at Ranomafana National Park in southeastern Madagascar were buzzing with scientists and conservation practitioners from all over the globe, gathered together to discuss the plight of the prosimians.



With 187 participants from 19 countries, this Congress was a wonderful opportunity to learn about others research and work, while developing and deepening relationships with many important persons in the fields of research, conservation and environmental education in Madagascar.



With the jaw-dropping view of the rainforest on one side, and the spectacular sophisticated infrastructure of the Centre ValBio, the Congress was a productive and inspirational experience.



It was my first time participating in such a big international conference, and really gave me insight into what professional presentations, workshops, and poster sessions should entail.

My colleague, Bernard IAMBANA, presented on metapopulation management of lemurs during the captive breeding workshop.

I also had the opportunity to give a presentation myself, which was a really valuable experience for me. My presentation topic was “Conservation Education”.

The presentation, entitled “From Environmental Education, through the Saturday School Program, to Success at School”, described MFG’s Saturday School Program and

allowed others to learn more about our successful model combining French, math and environmental education.



I wish to thank the members of the conference organizing committee for this memorable moment, and especially MFG who gave me this unforgettable experience!

### *Facts about Ranomafana National Park:*

- The park was established in 1991 and is today managed by Madagascar National Parks.
- Ranomafana means in Malagasy “Hot Water“, which refers to the hot springs found in the region.
- The park is situated 65 km North-East of Fianarantsoa and 139 km West of Mananjary.
- The park is an important example of cloud forest, with very high levels of biodiversity.



## How can creative practice with natural material provide an educational framework for sustainable acting?

By Jana GRABNER

In August 2012, I visited the “Centre d’Education à l’Environnement” (CEE) at Parc Ivoloïna for the first time. In a personal interview with Nirina RAKOTOMALALA, the Education Program Manager, commented on a lack of creative practice. I will now use this need as a startingpoint for my master in “Art Teaching” and for my internship at MFG.

In the CEE one can already find a small selection of products from creative projects. Objects such as vases with flowers made from recycled plastic bags, bottles, painted clay bowls, small animals sculptured from papermâché or an energy efficient stove made from clay are presented on a small table.



By creating an energy efficient stove, children first have to understand why it is better to use energy efficient stoves to cook. They have to learn where to get and how to handle the material they are working with. The shape – which is needed for an optimum result – has to be designed precisely.

As one can see at this example, children have to learn about relations of problems and solutions, be able to handle the material and gain construction skills in order

to create the stove. This creative process, from distinguishing a problem until having a final object, involves different, iterative steps. I will now use a commonly used design-process-components to give examples how these could serve in Environmental Education to educate for more sustainable solutions during

*Understand* - Learning and discussing about environmental problems helps to understand their relation to our own behavior.

*Observation* - By observing and interpreting one’s environment children interact and connect with their surroundings.

*Point of view* - The reflexion of behavior helps distinguish one’s personal position and can provoke a decision on how I want to continue.

*Idea finding* - Thinking yourself, even if it does not necessarily lead to one solution helps to pay attention and train to focus on developing further one own’s ideas.

*Experiment* - The use of natural material allows children to gain knowledge about qualities, characteristics of the material, as well as information about its ecological relevance.

The last two steps would be Prototype and Test, but those are more design specific and can be replaced by Experimenting and Creating Prototype - xx

Test - xx

(Topics of renewable and non-renewable resources, as well as their cultivation and harvesting can be risen by the teaching persons.) This process aims to encourage young people to find and realizing ideas to minimize the negative impact on the natural environment.

The final results do not just represent the object, but also embody traces of tools and the decisions that have been made during the process. Raw material, artifacts and other documents like photographs, sketches and notes from different stages of the process could be displayed in an exhibition at the CEE (or be used for the presentation if it is in school class context).

This exhibition would not just display the product but the different components of the creative process – which is at the same time a learning process. The exhibition strives to provoke visitor’s reflection about sustainable acting and to inspire them to adopt certain practices to change for an.

The given infrastructure at Park Ivoloïna already provides various spaces to offer creative practice workshops for children. A broad range of natural material such as clay, soil, fibre, plants and observable objects can be found on site.

An introduction of new long-lasting workshops should not replace existing, established programs. It rather aims to facilitate the understanding of the concept of *sustainability* by using creative practice with natural material as educational framework. This approach is not only suitable for Malagasy children - who statistically have a



## Silhouettes of the extinct

The elephant bird (*Aepyornis maximus*), an enormous, flightless bird which once lived only on Madagascar, was brought to extinction by humans around 500 years ago. Today, one can still find evidence of its existence in pieces of its enormous eggs. We are happy to have two of these eggs in our CEE exhibition, showing Malagasy children just how extraordinary this animal once was. But just an egg does not give the full impression of this enormous extinct species. So we wanted to add a size relation possibility for children.



In spring of 2013, the playground next to the Environmental Education Center (CEE) got a new building for kids to climb up and slide down. Julien Vogler, a volunteer from France, built it during his three-month sojourn at Parc Ivoloïna. As the new building has quite an impressive height (3.5 meters) we thought to use this height to demonstrate the size of Madagascar's famous elephant bird!

We also chose to demonstrate the size of two of Madagascar's

extinct lemur species: a koala lemur (*Megaladapis*) and a sloth lemur (*Palaeopropithecus*).



Through a process of tracing, drawing and welding at a local metal manufacturer, their shapes were transformed into metal silhouettes. As the silhouettes have quite a thin outline, they might not be visible at the first sight, but remind on the fact that these animals already disappeared a long time ago.



We decided to show only outlines of the animals to ease the impression that they already

disappeared before photographs. The silhouettes give an idea of the size and the shape of the animal, without speculating on certain characteristics of the animal. The shape and proportions have been taken from the book "Lemurs of Madagascar" by Russel A. Mittermeier et al. and with illustrations from Stephen D. Nash.



These silhouettes will from now on educationally enrich the playground. For our CEE teachers it will be easier to convey the message about current extinction threats to Malagasy fauna and flora, while showing just what impressive creatures once lived on this island. We also plan to add a sign at the shelter of the playground which will help visitors understand extinction of the megafauna in Madagascar.



## Print-publicity redesign

This year we decided to upgrade our print publicity and map for the park. We had Alain Rasolomampandra and Jana Grabner as the creative team to redesign our informative brochure and the map of the zoo.



After doing research on GPS tracked maps of the park area, a painting of the trail network and the zoo was done in watercolor. Portraits of the park's animals are used as icons to locate them in the park, link their scientific names to them and create a checklist of which animals the visitors has already spotted.



The brochure provides all useful information such as the entrance prices and the description of the way from Tamatave, as well as again a print of the map to attract the visitors by making them already imagine walking around in this inspiring environment.



The map was also printed on a large aluminum sign to hang at the park to facilitate visitors orientation on site.



The first edition has been printed in French and will be distributed in hotels and tourist destinations in and around Tamatave. When the material has proven its success we plan to translate it also in English and Malagasy to reach a broader audience.

*Contact for creative work:*  
[www.cyana.at](http://www.cyana.at), [mail@cyana.at](mailto:mail@cyana.at)  
[facebook.com/alainrasoloart](https://facebook.com/alainrasoloart)





## *A Varecia alumini has joined the zoo!*

MFG is happy to announce that since MFG's 25th Anniversary meeting in November a new lemur has joined the zoo. It is the only one of its kind, a *Varecia alumini*. Its kind was born out of the idea to create a representation of the efforts MFG has made to conserve Malagasy biodiversity since 1988.

Let us give you a short insight in the steps of creation:

1. The first step was to create a small clay model to get an idea about the position and the scale of abstraction.



2. The second step was to melt 30 packages of white candles to create a piece of wax big enough to carve the lemur sculpture out of it. After two days of carving and modeling with beeswax, the wax-model was finished.

3. It got picked up from Madame Stephanie, who is the creative mind behind Alumada, a cooperation working in recycling of aluminum.



The lemur model was then transformed into aluminum in a procedure which is called "lost wax": The wax-model is casted in a special soil, then heated so the wax melts, runs out and the melted aluminum can take its place.



4. Finally, a small plaque saying, "Madagascar Fauna and Flora Group, Conserving Malagasy Biodiversity Since 1988", was added. For the pedestal, we chose a eucalyptus trunk (as it is an exotic species and will not be missed in any forest).



The recycling of aluminum has an important role in Malagasy culture and everyday life; almost everybody living in Madagascar is cooking with pots, so called "marmites", made from aluminum in a village called Ambatolampy.



At the 25th Anniversary celebration the *Varecia alumini* was a welcomed sight for taking pictures of the guests and participants. So far our one it is the only one of its kind, but if requested to Alumada another one could come to existence. It could even be shipped abroad!

*Website:*  
[www.alumada.mg](http://www.alumada.mg)





# *Photo Pick*

## *Prolemur simus Mother and Baby*



We are happy to announce that in November 2013 a *Prolemur simus* baby was born. After hiding for days in the fur of it's mother's belly we were finally able to take a snapshot. The youngster is our second *Prolemur simus* juvenile in two years, after little Aurelie was born over a year ago.

# 25 YEARS OF CONSERVING MALAGASY BIODIVERSITY THANKS TO THE MEMBERS OF MFG

## Managing Members

Lemur Conservation Foundation  
 Zoological Society of London  
 Missouri Botanical Garden  
 Duke Lemur Center  
 San Antonio Zoo  
 Saint Louis Zoo  
 San Diego Zoo  
 Cologne Zoo  
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 Cango Wildlife Ranch  
 Tropical Butterfly House  
 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 Vice-Chair Ingrid Porton at [porton@stlzoo.org](mailto:porton@stlzoo.org)