ROUND the WORLD
with Michael and Valerie Lewis
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THE OLDEST ISLAND IN THE WORLD

Report From Madagascar,
Trip Date: June 2008

While you may have heard of lemurs, did you know that Madagascar is the only place they are found and that there are over fifty species? Madagascar is also home to both the largest and smallest chameleons in the world, the largest moth, some of the rarest birds, over 300 species of frogs, and over 1000 species of orchids. Its human inhabitants are an intriguing mix of Africans, Asians and Arabs. All this and much more makes this island a living museum, an extraordinary laboratory. It is a luscious potpourri of the rare, the strange, the astonishing and the marvelous.

Madagascar is the size of Texas, the fourth largest island in the world, and one thousand miles from north to south. 165 million years ago, as the great landmass of Gondwanaland was breaking up, a large piece became detached, first from Africa and then from Asia, forming the island of Madagascar which, today, lies about three hundred miles off the coast of Mozambique. On the eastern side of the country, large amounts of rain from the Indian Ocean result in the dense and dripping rainforests not far from the coast. However, the spine of mountains down the middle of the island causes the western side to be in a rain shadow, producing the stark contrast of dry savannah-like plains and almost desert conditions in much of the west. All this makes for enormous biodiversity.

Zebu cattle pulling ox carts

Humans arrived in Madagascar a mere 2000 years ago. They were traders from Malaysia and Indonesia, who brought their culture of rice farming with them. Later, Africans arrived and introduced Zebu cattle as beasts of burden and a source of meat. In the north, Arabic traders blended into the mix. Eventually, separate kingdoms were established, leading to the different tribes which exist today.

From the air it is clear why Madagascar has sometimes been called the Red Island. Its ancient rocks are overlain with a layer of red laterite soil. However, the island's inhabitants have managed, in their brief residence, to cut down almost eighty percent of the original forest cover, exposing that soil and making it extremely vulnerable to erosion. The result is that the rivers are also red, as tons of eroded soil are washed out to sea. As trees for fuel become ever more scarce, the price of charcoal in the cities increases, making charcoal production in the countryside even more worthwhile. One of the poorest countries in the world, Madagascar faces daunting problems in feeding its eighteen million people, while also conserving its unique environment.

In the capital, Antananarivo, usually called Tana, 40 percent of the population of 3.5 million have no running water or electricity. There are beggars in the crowded streets, and grim shacks line drainage canals at the edges of the city. In contrast, up on the hills overlooking the city, expensive homes line the winding streets, along with stylish French restaurants,

Ringtailed Lemurs

Tomato Frog

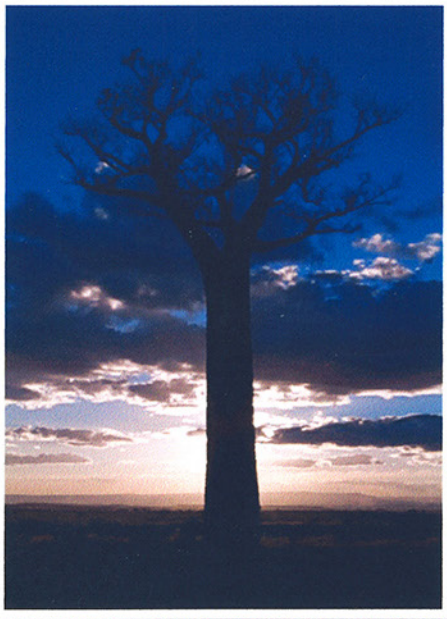
Comet Moth

evidence of the French colonization of the island between 1900 and 1965.

Surrounding the city are large expanses of picturesque rice fields, where farmers work with their Zebu cattle while ducks swim in the water and geese walk along the dykes between the fields. In many small spaces beside the rice fields, brick workers dig clay pits, fashion bricks from the clay and fire them in primitive kilns, all to satisfy the need for housing in a rapidly expanding city.

Michael and I traveled with a National Geographic tour, which had two enormous advantages. One was that we avoided many hours of travel on Madagascar's notoriously bad roads by flying in small planes on several occasions. The other incomparable bonus was that Dr. Patricia Wright, a renowned primatologist, MacArthur Foundation Fellow, and founder of the Ranofamana National Park, traveled with us as our scientific guide.

In spite of the planes, in order to reach Berenty Reserve in the far south, our first destination, we still had to spend four hours in a bus to travel sixty very bumpy miles from the airport at Port Dauphin. We drove past green hills, small villages with sweet potato patches nearby, and the tell-tale smoke of charcoal burners. To the west of the hills, we came upon the otherworldly spiny forest, a type of flora endemic to Madagascar, which has adapted to the severe heat and dessication of that region. The thin, spiny, tentacle-like branches of one species of the octopus plant reach over twenty feet. Occasional baobab trees, with their huge trunks and relatively small stubby branches, towered above all the other vegetation. Yet another example of the wonders of Madagascar, six of the world's



Baobab tree

Spiny forest

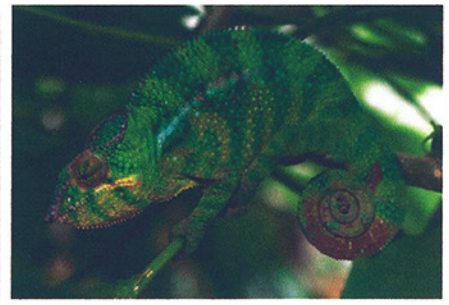
eight species of baobabs are endemic to the island. But, abruptly and shockingly, the spiny forest gave way to vast fields of sisal, a plant related to agave, used for hemp and rug manufacture. Introduced to Madagascar in the 1920's, sisal production meant the gradual removal of the world's only spiny forest. Today, demand has increased because sisal is the ideal biodegradable packaging for our 'green' demands, meaning that yet more spiny forest is being destroyed.

Berenty Reserve is famous for its lemurs, which have become habituated to visitors because they have not been hunted there for over seventy years. Since ring-tailed lemurs move on the ground as much as in trees they can be seen right outside one's cabin, warming themselves in the early morning sun or observing homo sapiens taking coffee on the verandah. The Verreaux's sifakas, creamy white with black faces, are more comfortable

Ringtailed Lemurs outside cabin

Ringtailed Lemur looking through wooden slats

clinging to branches higher up and leaping from tree to tree. When they do come to the ground they bounce across an open space fast and sideways. The red-fronted brown lemurs are as delightfully fluffy, friendly and curious as their companions. On a night walk we saw, by the light of a flashlight, a reddish-grey mouse lemur which would fit in the palm of your hand, and a white-footed sportive lemur. In the same spiny forest during the day most of us walked right past a spiny-backed chameleon, perfectly camouflaged on its branch. Later on our trip we saw many other species of chameleon, large, small and wildly varied colors, illustrating the fact that Madagascar is home to about half the world's chameleon species.



Chameleon

As we moved on farther west the landscape became an endless sea of waving grass. This was Bara country. A fierce tribe, whose lives revolve around their large herds of Zebu cattle, the Bara are reported to be cattle rustlers who are not unwilling to kill in a dispute over cattle. Large numbers of cattle are required as a bride-price and, at the funeral of a rich man, as many as thirty cattle might be sacrificed.

In that same region, the scenes in the rough new settlement of Ilakaka, or 'Sapphire City', are reminiscent of the Wild West. A street of one story wooden buildings reveals storefronts in which gem dealers examine sapphires brought in by prospectors from nearby riverbeds. Many inhabitants carry guns, and bandits supposedly roam the area. Tales are told of impoverished men from remote villages who have never purchased anything, even a banana, who, after selling a sapphire, buy a new SUV but have no idea how to drive.

General Store

Isalo

Not far from the center of the sapphire rush, across the sweeping expanses of the hot, dry savanna (all of which used to be forested), the great sandstone cliffs and canyons of the Isalo Massif create a dramatic landscape. Within the canyons the crystal clear streams and beautiful waterfalls provide relief from the burning sun for both the lemurs living there and for visitors. If you hike up onto the plateau you may pass the temporary burial site of a person from the Bara tribe, the remains neatly wedged into a hollow or cave in the rock and sealed off with stones and pebbles. After a year the bones are removed, washed, wrapped and placed in their 'definitive' burial site, in a much less accessible spot in the cliff.

From the arid west, after traveling barely two hundred miles north-east, we arrived in the strikingly different landscape of the mid-altitude rainforest in Ranomafana National Park. While water in the Namorona River roared through a gorge near the park entrance it also dripped from the ferns, mosses, orchids, palms, bamboo stands, and multitude of trees in the dense virgin forest that makes up part of the park. It was a relief to be in the green fecundity of that protected forest after having seen so much of the land stripped of its trees.

Ranofamana was where Dr. Pat Wright discovered golden bamboo lemurs, so we set out to look for some. In the rain we scrambled up and slid down steep hillsides while squeezing between the trees, until an excited whisper, "Up there," announced the sighting of three golden bamboo lemurs. Two adults and a young one were stripping off the ceramic-hard outer layers of bamboo branches with ease, and munching on the juicy shoots inside. So far, at least twelve species of lemurs have been identified at Ranofamana.

Lemurs arrived from Africa, probably on floating debris, about 65 million years ago. Once in the relatively protected confines of Madagascar they spread all over the island and adapted to their varied habitats, with the result that today there are at least fifty known species, ranging from the previously mentioned tiny mouse lemur to the indri, which stands almost three feet tall. Most live on fruit and leaves. Yet, while there are more plant species in Madagascar than in Africa or Asia, 68 percent of the island's birds are insectivorous, only 8 percent are fruit-eating, and there are very few fruit-eating bats. So how are the seeds from all those trees and plants dispersed? By lemurs, which thus take on far greater significance than just their cuddly appeal to tourists or their evolutionary interest to primatologists.

Lesser Eastern Bamboo Lemur

When the forest at Ranofamana was threatened by a lumber company in the late 1980's, Dr. Wright set out to protect the lemurs, together with the rest of the abundant wildlife and the many medicinal plants of the area. (Periwinkle in the forest, for example, yields a medicine used for the treatment of leukemia.) She wanted to establish a national park and involve the local villagers by offering them employment, schools, health care and 50 percent of the park's revenues. In the US she received pledges of support, particularly from USAID, but the cash was slow in materializing and the villagers began to wonder about her promises. Thankfully, at that time, her MacArthur Fellowship was announced and she immediately was able to use her grant money to initiate many of the plans, including establishing seven schools and treating the diseases suffered by the villagers. Today, there is an impressive three-story research building near the entrance to the national park, where thirty graduate students can work. Even as deforestation in Madagascar continues, more national parks are being established by the current president.

From Ranofamana we had two long bus rides and a flight to reach our next stop in Perinet Reserve. For some of the journey we traveled through the territory of the Betsileo tribe. They build distinctive two-story houses of pink clay with thatched roofs, in which their animals often occupy the first floor and the family the second. Cooking is done within the house but, incredibly, there are no chimneys, so the houses look as if they are on fire as the smoke seeps out through the thatch, while the windows and doors are black with soot. Dr. Wright pointed out that the smoke is an effective way of controlling rats and insects in the roof. Farther on, we clearly were in a less prosperous part of the country, where the houses were built of sticks and thatch, or sticks and mud. Rice fields were everywhere, as were sacks of charcoal awaiting pickup at the side of the road.

Perinet Reserve, now combined with the nearby Mantadia Reserve to form Andasibe-Mantadia National Park, is the most visited park in the country. It has much to offer: luxuriant rainforest, many species of lemurs and other mammals, reptiles, insects, and spectacular birds. During one magical day there our skilled local guides found all six species of diurnal lemurs and one nocturnal type (the eastern woolly, a fluffy ball sound asleep in the fork of a tree.) The thrill of seeing the strikingly beautiful diademed sifakas, with their orange-tinged legs, arms and tails, was almost immediately superseded by the sight of a troop of indri above us. The largest of all the lemurs, the black and white indri has almost no tail and is known for its loud and distinctive cry. Sure enough, no sooner had we spotted them than the group began a whooping which set one's eardrums rattling. They stopped as suddenly as they had begun, then started up again. All this to announce their activity in their territory to other troops.

White Browed Owl

Black and White Ruffed Lemur

Later in the day, we hiked in stunning Mantadia park, much of which, remarkably, is still primary forest. We passed giant polysandra trees supported by huge buttresses, each worth close to a million dollars to a timber company. Our trail also passed fern trees, lianas, fungi and many kinds of palms. Our guides again cleverly found lemurs: red-bellied, black-and-white ruffed, greater dwarf, and common brown. We were startled by the troop of six black-and-white ruffed lemurs when, as if a button had been pressed, they all began a powerful hooting cry. After perhaps thirty seconds they all, as suddenly, stopped.

After the profusion of the eastern forests, our flight north for three hundred miles once again dramatized the awful denudation of so much of the country. All we saw were rocks, scarcely a tree in sight, and rivers full of red soil eroded from land where, once, the forests retained it.

On the northwest coast the remote fishing village of Anjajavy seemed to have been constructed for a movie set on a fantasy island. Fishermen from outrigger canoes were cutting up their catch of small hammerhead and grey sharks on a golden beach lapped by the clear water of the Mozambique Channel. Close to the beach, the village built on the sand consisted of sizeable thatched houses with woven matting walls, each surrounded by a stockade to keep in the chickens and turkeys, and keep out wandering goats and cattle. There was a languorous air about the Sunday market beneath large shade trees in the middle of the village. Some thirty women sat in a circle selling their vegetables and fruit, while dozens of smiling children, all healthy, clean and well-dressed, rolled and played in the ubiquitous warm sand. Through 'Ecole du Monde,' an NGO working in the area and supported by the hotel where we stayed, several programs were operating in Anjajavy and three other villages. A small clinic is run by a midwife, who is mainly concerned with pre- and post-natal care, deliveries, vaccinations, contraceptive distribution, and malaria treatment. A women's cooperative grows vegetables using water pumped by windmills. The elementary school compound

Boys on beach

included bright, new showers. In one of the classrooms a list of rules on the wall began with:

Take a shower before coming to the classroom

Brush your teeth

Cut your nails

Children older than about eleven were not around in the village because they go to boarding school in Mahajanga, the largest town in the area, on scholarships from the NGO. Compared with the children we had seen in some poor villages in other parts of the country, with dirty and torn clothes, matted hair, and bad teeth, the children of Anjajavy were clearly benefiting enormously from the NGO's efforts.

Around our hotel, the dry deciduous forest, sadly diminishing like so many other wooded areas, was home to many birds, including vangas, vasa parrots, crested couas, tiny malachite kingfishers, and flocks of grey-headed lovebirds. Coquerel's sifakas and brown lemurs watched us from high branches. Also of note in the area are the strange-looking limestone karst formations, known as 'tsingy.' Yet another curiosity of Madagascar, these rocks have been eroded into outlandish shapes, with razor sharp pinnacles above caves teeming with bats, rodents, spiders, insects and the occasional crocodile.

Coquerel's sifaka

The wondrous world of Madagascar is in a race against charcoal burners. At the same time, nickel, graphite, oil, ilmenite (from which titanium dioxide is extracted), and the aforementioned sapphires have been discovered on or near the island. Will the revenues from these minerals help the islanders, the forests and the wildlife, or will there be more destruction and poverty? Biologists, conservationists and lemur-lovers are trying to study, protect and rescue the extraordinary wildlife of the 'Red Island.' Michael and I feel so fortunate to have seen spectacular Madagascar at this time, before the inevitable changes occur. ✣

Man carrying wood

Village scene

Young girl