



Jaguar Monitoring Begins on Reserva Monte Mojino



Photo by: Yayo Alvarez, Los Llanos de San Pedro.
PROCOCES – CONANP

In September, two jaguar biologists began setting camera traps in areas of ReMM that appear suitable for jaguars and other cat species. The cameras, triggered by a sensor device, are used to photograph wildlife without minimal disturbance by humans. The method has revolutionized the study of jaguars and other secretive nocturnal mammals.

Taking photos over time allows biologists to identify individual animals (based on spot patterns and other distinct physical attributes), record breeding activity, estimate life spans, and calculate size of home range as well as migration patterns. Using the data, biologists can also determine if the population of jaguar or other cat species help in the protection of wildlife corridors.

Large carnivores like jaguars are defined by biologists as keystone species – in other words, their presence is critical to maintaining the integrity and balance of all living things within the surrounding landscape. Remove the keystone species and the ecosystem is at risk of unraveling. This is another reason why scientists study jaguars and other large cat species.

The camera trapping project is being directed by jaguar expert Dr. Carlos López González, from University of Querétaro, whose research focuses on the behavior and conservation of large carnivores. Two of his graduate students, Carmina Gutiérrez González and Miguel Gómez Ramírez, are in charge of managing the camera traps. Carmina is working on her Ph.D., and Miguel is a master's student. They are both research associates with the Northern Jaguar Project (NJP), where they had done extensive monitoring of jaguars and other cats. NJP is ReMM's partner and neighbor to the north. It is a bi-national nonprofit that owns a 50,000-acre reserve in northeastern Sonora. (www.northernjaguarproject.org).

The camera traps were set up in two strategic locations – at Reserva Monte Mojino near Alamos, Sonora, and about 70 kilometers (as the crow flies) southeast at a federal priority conservation site near Choix, Sinaloa. These two areas are important points along a corridor in



Ocelote inside ReMM.

the Sierra Madre Occidental stretching from Jalisco to the U.S. border that is the heartland of jaguars in western Mexico. These areas were selected because little is currently known about jaguars and other large cats in this part of the corridor. Nor is there much information on the abundance of prey for these carnivores. Jaguars, for example, have an extensive diet of more than 80 species, including deer and coati. Because the camera traps photograph an array of wildlife, they will capture an idea of deer and coati populations and other prey species.

Carmina and Miguel set camera traps between September and December 2013, so data are preliminary, but very exciting. The first round of photos has confirmed the presence of jaguar within Reserva Monte Mojino, as well as mountain lion, bobcat, marguey and ocelot. The PROCER-funded monitoring project will continue through 2014. As photos accumulate, a clearer picture will emerge of how to protect not only the keystone species but all living things that share the landscape. Ongoing camera trapping within ReMM is planned, depending on funding from additional sources.



CONANP (Comisión Nacional de Áreas Naturales Protegidas)

is Mexico's equivalent of the U.S. National Park Service. It oversees 176 natural areas, many of international significance, throughout Mexico. These lands comprise about 25 million hectares, or 13% of the country's land mass, and include bioreserves, national parks, national monuments, protected natural and wildlife areas, and shrines. Reserva Monte Mojino lies within one of the CONANP areas – the 93,000-hectare Área de Protección de Flora y Fauna Sierra de Álamos - Río Cuchujaqui (APFF-SARC).



Rare Gecko Found Under Rock in a Road!

Moving rocks washed onto the road during the rainy season is routine for the ReMM staff. That's what Felix García, Lydia Lozano, and Jennifer MacKay were doing one day in July when they were stopped by a rock slide on the road down from Santa Barbara after a night of heavy rain. While they were clearing the road, Felix spotted a lizard under a rock that looked different to him. They observed it for a while and took many photos. Then the humans and lizard went their separate ways.

Photos of the mystery lizard were posted on ReMM's Facebook page as well as on the Herpetologica Mexicana Facebook page, and images were sent to Jim Rorabaugh, a retired reptile and amphibian specialist with the U.S. Fish and Wildlife Service in Arizona. Lydia, along with her colleague, Ing. Bertha Gómez (who helped in the identification process, received many replies and soon realized it was no ordinary lizard. The Herpetología Mexicana group identified the lizard as a black-banded gecko, *Coleonyx fasciatus*, a species endemic to western Mexico. Jim Rorabaugh confirmed the identification. It is seldom found, either because it is rare and patchily distributed or because it spends most of its time in deep, rocky crevices making it hard for herpetologists to find. The discovery of the gecko provides one more important piece of information about the biodiversity within Reserva Monte Mojino.



Whenever possible, the ReMM guardians take photos of the fauna they encounter – birds, insects, butterflies, snakes, lizards, turtles, mammals – which is providing a growing library of the wildlife that occurs on ReMM. Check out our Facebook page and help us identify some of the other mystery species.

www.facebook.com/reservamontemojino



Common Ground

NJP and ReMM are both working to sustain large reserves in extremely remote, rugged terrain in Sonora.

NJP is focused on protecting the northern stronghold of jaguars in North America – and simultaneously provides habitat for an array of wildlife, birds, reptiles, invertebrates, trees, and plants.

ReMM is focused on protecting the northernmost tropical deciduous forest in the Western Hemisphere -- and simultaneously provides habitat for jaguars.

Both projects are bi-national with strong in-country backing. NJP is allied with the Mexican nonprofit Naturalia. ReMM is administered by the U.S. nonprofit Natural and Culture International (NCI) in partnership with the local nonprofit Naturaleza y Cultura Sierra Madre.

Because both projects are in the heart of Sonoran cattle country, they are exploring ways to work productively with neighboring ranchers.

**Sharing Experiences,
Sharing Notes.** Staff members from Northern Jaguar Project and Reserva Monte Mojino meet in October, 2013.



Reserva Monte Mojino and the Northern Jaguar Project have a lot in common (see sidebar). For several years, we've talked about NJP and ReMM staffs getting together to learn from each other's experiences.

To make this happen, NJP applied for, and received, a Jaguar Conservation Fund grant from the Woodland Park Zoo. In October, a dozen staff members from both projects met in Alamos and spent two days and a night visiting and hiking around ReMM with plenty of informal time devoted to comparing notes and sharing experiences among the two staffs.

The group also made a presentation to the people of Sabinito, who are neighbors of Reserva Monte Mojino, so they can understand better what's going on at ReMM and also learn about other conversation work happening in Sonora.

On the last day, back in Alamos, the NJP and ReMM staff met in a roundtable discussion with representatives from CONANP and the city of Alamos and three landowners whose ranches border on ReMM.

These cattlemen are cooperating with ReMM and CONANP by allowing camera traps on their properties and all have confirmed jaguar sightings on their ranches. So one topic of interest to the group was explaining NJP's *Viviendo con Felines* (Living with Cats), a partnership involving neighboring ranchers who receive compensation for photos of jaguars taken on their property, and whether a similar project might be of interest to these and other ranchers in the vicinity of ReMM.

In early 2014, the next reciprocal step will take place when four staff members from ReMM head 370 kilometers north to visit the NJP reserve, which is tucked between the Río Aros and Río Bavispe about 50 kilometers from the town of Sahuaripa.

For more information about *Viviendo con Felines*, see:

<http://www.northernjaguarproject.org/outreach/viviendoconfelinos/>

Other Research Highlights

ITSON Scientist and Students Tracking Climate Change in Sonora

Since May 2012, a climate tower has been quietly tracking temperature, carbon, water, and other weather-related data on a hill top in Reserva Monte Mojino. It is part of a network of towers ITSON (Instituto Tecnológico de Sonora) is establishing throughout Sonora to study climate variation in different regions and habitats in an effort to better understand the impact of climate change on Sonora's environment and economy. This information will be equally important to ReMM in determining management strategies to counter and cope with climate change. The project's director is Dr. Enrico A. Yépez, a professor in the Environmental Sciences Department of ITSON. In addition to obtaining valuable climate data, the project is also a training opportunity for students interested in careers in the environment, conservation, and sustainable resources. Dr. Yépez and his students are also collaborating on other projects with ReMM, including the palm restoration and monitoring project.

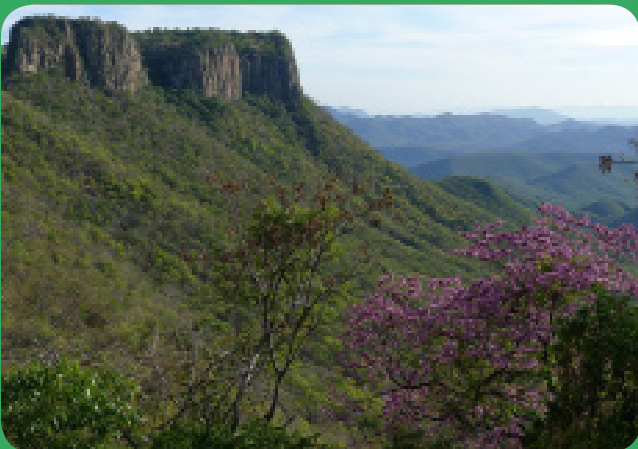


Biologists Monitor Desert Tortoise and Other Reptiles and Amphibians

For three days in August a team of 16 researchers from three universities – University of Arizona, UNAM in Mexico City, and UNISON in Hermosillo – made a rapid assessment of the desert tortoise population within Reserva Monte Mojino. They also recorded 23 other species of reptiles and amphibians. Northwestern Mexico is rich in reptiles and amphibians, but little is known about the life histories of these creatures. That is the long-term goal of the team who came to ReMM: to better understand the distribution and status of the desert tortoise, other terrestrial turtles, and other reptiles and amphibians. A number of these species are threatened by climate change, habitat destruction, have very restricted ranges, or are illegally collected by the international pet trade. In addition to ReMM, the biologists spent three weeks surveying other areas in Sonora and Sinaloa.



In parts of the United States, desert tortoise populations have declined by 90 percent or more. The status of the species in northwestern Mexico is not well known. During their brief visit to ReMM, the researchers located six desert tortoises in two localities. Based on their assessment of the habitat, they believe desert tortoises occur throughout the tropical forest parts of the reserve. One important observation they made is that the restoration of forested areas in the lower slopes and valleys, which has occurred in the last ten eight years with the removal of cattle from ReMM, is providing expanded areas of habitat suitable for desert tortoises and other reptiles and amphibians. Dr. Philip Rosen, from the University of Arizona and one of the leaders of the survey, noted that threatened species like the desert tortoise are likely to benefit as ecological conditions continue to improve within ReMM.



ReMM is in the heart of an area of very high herpetological diversity - almost half of the 160 species of reptiles and amphibians found in Sonora occur in a relatively small zone of tropical deciduous forest between the Río Cuchujaqui and nearby Río Mayo.

Staff Updates

In the past year, Reserva Monte Mojino has appointed a new Director, Program Coordinator, Program Administrator and three new guardians. In addition, three board members have been selected to serve on Naturaleza y Cultura Sierra Madre, A.C., the Mexican nonprofit that helps administer ReMM. Here are brief bios of this new talented and committed crew:



New administrators

Jennifer MacKay was named **Director** of Reserva Monte Mojino in the spring of 2012. She is responsible for guiding the overall management plans that focus on achieving ReMM's mission. She works closely with the guardian staff and is involved in bi-national fund-raising and outreach. She and her husband David MacKay operate Solipaso, which specializes in small-group birding and cultural tours throughout Mexico, and El Pedregal Nature and Retreat Center, an eco-lodge nestled in the tropical dry forest on the edge of Alamos. Jennifer and David have lived in Alamos for 20 years where they have raised their daughters, Salina and Elly.



Lydia Lozano was named ReMM Program **Coordinator** in October 2012. She was raised in Culiacan, Sinaloa, and took an interest in the natural world at a young age. Lydia has a degree in Biology with a specialty in Zoology from the Universidad Autónoma de Sinaloa. She oversees day-to-day operations of ReMM and also works closely with our colleagues at CONANP to ensure that ReMM activities harmonize with management of the federal protected area in which ReMM is embedded. Lydia has considerable experience working with Mexican federal agencies as well as Mexican conservation nonprofits. She and her husband, Jesús Nieblas, also a biologist, have a young daughter Violeta, who is already taking a keen interest in nature.



Lourdes Alcantar was named Program **Administrator** in February of 2014. Lourdes, who goes by Luly, is an Alamos native. She was born in nearby Navojoa, but grew up in Alamos where she went through the Alamos public school system. After graduating, Luly studied Computer Sciences at the technical school, CTec. In 2008, she began working with the local CONANP office. Her primary job was Administrator of the Sustainable Conservation Development Program. She also assisted the Environmental Education team on the different events of the Environmental Calendar for several years. Luly brings a wealth of administrative knowledge to the project, but also has a great local knowledge of Alamos and the people of the communities where we work.

New guardians Rosario Jorge Saucedo Nieblas, Alejandro Grajeda Hurtado, Balvanedo Aguilar Urquidez have joined our veteran guardians Felix García (who joined ReMM in 2006), Alejandro Saucedo (who started in 2009) and Miguel Zayas (who started in 2011). Rosario, better known as Chin, is originally from El Sabinito but lives in Alamos with his wife, Alejandrina, and two children. He is particularly skilled in all aspects of construction. Alejandro, who goes by Cuate, is also from Sabinito, where he lives with his wife, Chayito, and daughter. Before joining the staff, he worked on numerous part-time projects on ReMM and has also helped extensively on the palm research being conducted by Leonel Lopez . Chayito also helps prepare meals for groups visiting ReMM. Balvanero, who goes by Nelo, is from the community of Vinateria but lives in Alamos with his wife, Yulma.. He is also skilled in alternative forms of construction. Chin, Cuate, and Nelo are great additions to the ReMM staff,

(In photo, back row L to R: Cuate, Nelo, Miguelin, Jen, Chin, Alejandro. Front row L to R: Felix, Lydia, Jose Romero, from NCI Ecuador).



New Board Members of Naturaleza y Cultura Sierra Madre, A.C.

Leonel López Toledo is a biologist with a PhD in plant ecology who has been palm research on ReMM since 2009. He has a Master of Science degree from the Autonomous University of Querétaro and a doctorate from the University of Aberdeen in Scotland. He is currently a professor and researcher at the Institute for Research of Natural Resources at the Universidad Michoacana de San Nicolás de Hidalgo in Morelia, Michoacan.



Heriberto Urías is a lawyer in Culiacan, Sinaloa. In addition to his work in the private sector, he supports a number of nonprofit conservation groups, providing legal advice on issues related to establishing their organizations and acquiring properties for conservation. In addition to his involvement with Reserva Monte Mojino, he is a founder of the non-profit CISA, Tierras para la Conservación, A.C.

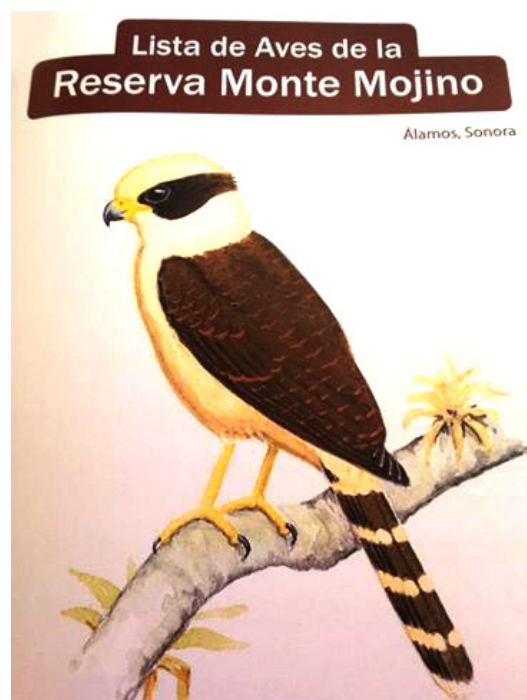


David MacKay is co-owner of Solipaso, with Jennifer MacKay, and leads birding and natural history trips throughout Mexico. David attended Prescott College in Prescott, Arizona, where he studied Environmental Education. He has spent the last 20 years exploring Mexico and the mountains and habitats around Alamos. David has a deep knowledge of the tropical deciduous forest and the people who inhabit it.

Thank You

* Thank you to the Virginia Wellington Cabot Foundation for the third consecutive grant they have awarded Reserva Monte Mojino to support our conservation work. The most recent grant, received in the spring of 2013, has provided funding for operations, to purchase a used 4WD vehicle (perhaps the most essential piece of equipment in the field), and to make infrastructure improvements at El Guayabo, the gateway field station on ReMM, which is used as a base for researchers and visitors to ReMM. The Virginia Wellington Cabot Foundation has stood by ReMM at a critical time of growth as we have been building new partnerships and increasing outreach. We are very appreciative.

* Thank you to Ernesto Enkerlin-Hoeflich, Dana Gardner, and Museo de las Aves de México for permission to use Dana Gardner's painting of the Laughing Falcon on the cover of our recently published Lista de Aves de la Reserva Monte Mojino.



Wish List

- A Guide to the Birds of Mexico and Central America, by Steve Howell and Sophie Webb
- Guía de Campo de las Aves de Norteamérica, by Kenn Kaufman
- The Trees of Sonora, by Richard Felger
- Gentry's Rio Mayo Plants, edited by Paul Martin et al.
- The Tropical Deciduous Forest of Alamos: Biodiversity of a Threatened Ecosystem in Mexico, edited by Robert Robichaux and David Yetman
- Binoculars, new or used
- Digital point-and-shot cameras
- Used, reliable 4WD vehicles and/or ATV
- Hummingbird feeders
- Solar power equipment
- Rain gauges
- Motion sensor cameras for wildlife monitoring
- iPad

After many month of working on a website for the project, ReMM finally has a presence in the online world. Please visit our new site and keep checking back to stay updated on all of the latest ReMM news!

www.montemojino.org



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