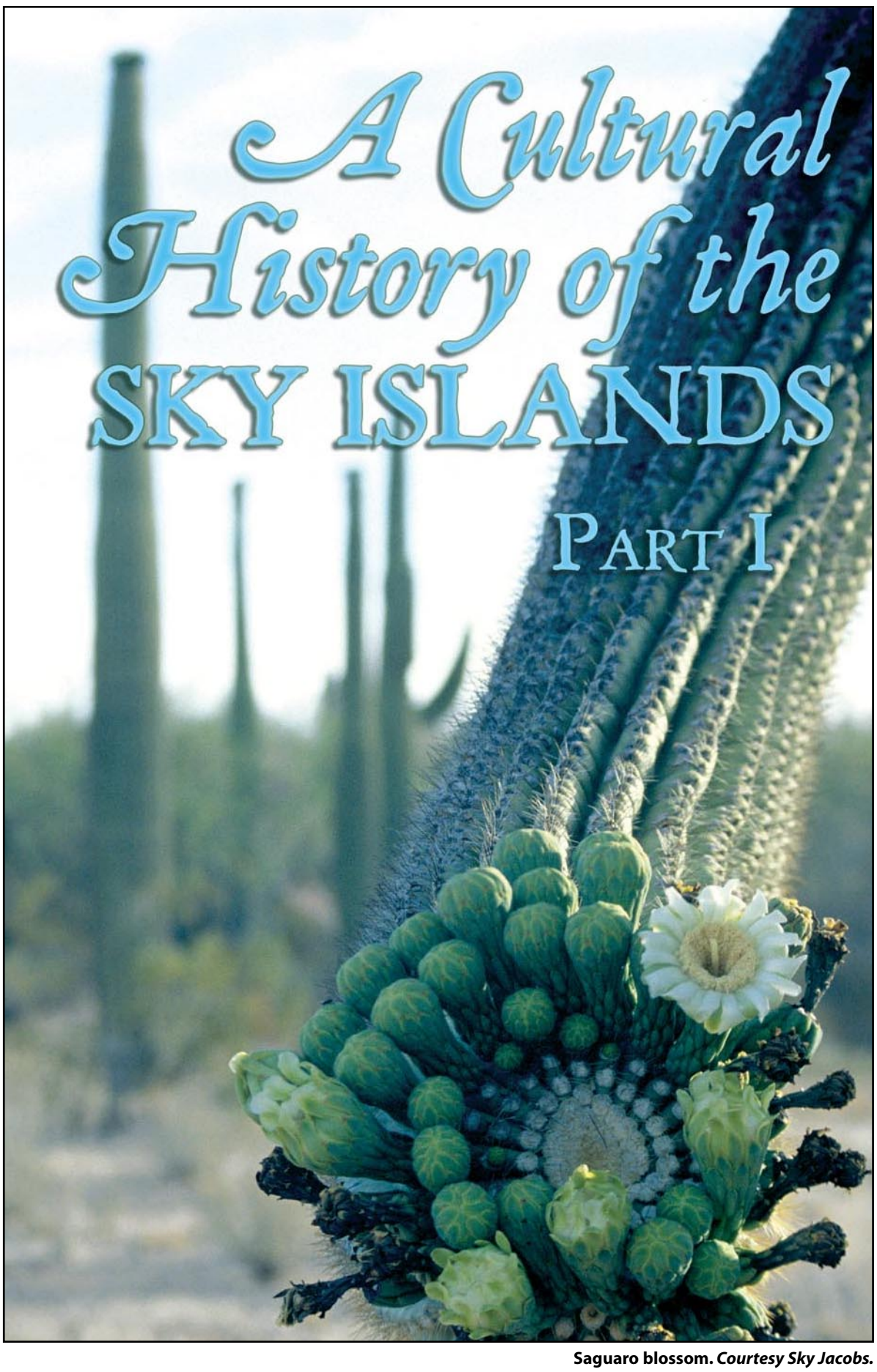
SKY ISLAND ALLIANCE
Protecting our Mountain Islands and Desert Seas

Restoring Connections

Vol. 12 Issue 2 Summer 2009 Newsletter of the **Sky Island Alliance**



Saguaro blossom. *Courtesy Sky Jacobs.*

In this issue:

Plus

Just three words before we head to press:

Oscar is back!

The film Sergio and Marc collected from the remote cameras in Mexico this July adds two new photos of Oscar the Ocelet… watch www.skyislandalliance.org for the latest!

Through the Director's Lens

by Melanie Emerson, Executive Director

In December I came on board at SIA bustling with enthusiasm, energy, hope and excitement. Six months later, I find myself with an even greater sense of what is possible and every day feel inspired by the work we are doing, the work we are conceiving, and the work we have not yet conceptualized. I have not met a group of more dedicated staff, volunteers, members, supporters and board. I have been fortunate to meet a great number of you at local events, here at the office, while hiking in the Sky Islands (I have literally met several members on trails!), and most recently at SIA's Spring Event. I want to thank each of you for introducing yourselves and taking the time to make me feel welcomed. I not only feel welcomed into this organization's community, I feel honored.

In mid-May, many of you joined us for a lovely evening at Old Town Artisans in downtown Tucson, to hear about the Northern Mexico Conservation Program's Cuatro Gatos work: 'Wild Cats of the Sonoran Sky Islands.' Sergio Avila, the Program's coordinator, shared incredible remote camera images of the diversity of wildlife in northern Sonora. We were introduced to the first-ever photograph of a wild ocelot in the region and the first documented sighting in 40 years. Sergio shared another photograph with this tropical species in the snow, demonstrating that they can survive and thrive in the northern extent of their range. Thank you all for participating and making this event a resounding success! (And even though only one person could win this year's Copper Canyon Raffle, tickets for next year's raffle will soon be available!) For those who were unable to attend, I invite you to catch one of **our upcoming presentations**… they are always lively, engaging and informative. It's a great way to see the results of the work that you are supporting.

And just this past week, Sergio and our newest staff member, Marc Trinks (see page 11 for Marc's profile), discovered two more ocelot photographs on their trip to monitor SIA's remote cameras in Sonora. These amazing photographs, documenting the presence of ocelots just 30 miles south of the international border, are something we can all be extraordinarily proud of.

It is Sky Island Alliance members and supporters who made the Northern Mexico Conservation program possible — your generous individual gifts provided the initial support which allowed us to pursue new work in Mexico. And it was your commitment to conservation. Through our 2004 Planning Survey, you recommended that the organization focus resources in the Mexican Sky Islands. Last year, you followed Oscar the Ocelot on his journey, learned about our work throughout the region, and supported his efforts at coming home. It is because of your ongoing support of new endeavors, staff's initial work with the many exceptional landowners in the region, several years of outreach and relationship-building, and generous support from the Veolia Environment Foundation, that we are now able to launch SIA's largest single project to-date: the Madrean Archipelago Biodiversity Assessment to

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Sky Island Alliance is a non-profit membership organization dedicated to the protection and restoration of the rich natural heritage of native species and habitats in the Sky Island region of the southwestern United States and northwestern Mexico. Sky Island Alliance works with volunteers, scientists, land owners, public officials and government agencies to establish protected areas, restore healthy landscapes and promote public appreciation of the region's unique biological diversity.

520.624.7080 ✶ fax 520.791.7709 ✶ info@skyislandalliance.org ✶ PO Box 41165, Tucson, AZ 85717

www.skyislandalliance.org

We Need You… to Volunteer!

Wilderness outreach docents are needed for any of the following three areas: public presentations, guided hikes and tabling events. Docents are trained volunteers whose major responsibilities are to help people in the community learn more about Sky Island Alliance and its mission, to better understand and appreciate the importance of Wilderness, and to promote Wilderness for the Tumacacori Highlands. Public presenters and tabling docents interact with the general public as well as with specific interest groups, such as the faith community and sportsmen's groups. Wilderness hike leaders guide local area hikes and present themed talks on wilderness, sometimes in conjunction with a guest speaker. Schedule is flexible. Docents will receive a T-shirt and free Sky Island Alliance membership. Training and volunteer orientation required.

Wilderness advocates are needed to help collect signatures and written letters in support of the Tumacacori Highlands Wilderness bill. Letters and petitions, addressed to Arizona Senators John McCain and Jon Kyl and to your State Representative can be mailed, copied-to, or hand-delivered to Sky Island Alliance. Send you own letter of support, or help us coordinate ways to reach supporters in your community to do the same!

Contact Jessica at 520.624.7080 x21 or jessica@skyislandalliance.org

be principally focused on the Sonoran Sky Islands. (Please learn more about this multi-year project on page 10.)

Just a few months ago, we conducted a follow-up member and supporter survey. This was a great opportunity for me to find out what you, members and volunteers, value about Sky Island Alliance and to incorporate your priorities into our strategic direction. I especially want to thank each of you who took the time to complete the survey—you provided us with valuable information and perspective. Your support and your voice directly affect SIA's engagement in the work that is of critical importance in the region and of critical importance to you.

Just 12 hours after leaving Old Town Artisans, the SIA staff and board of directors headed to Rancho La Esmeralda in the Sierra Las Avispas, Sonora, for a weekend-long strategic planning retreat. There, we crafted the goals for the next three years of SIA's work—drafted with your feedback, insight, experience and priorities in mind. We listened to what is important to you, we renewed our focus on and commitment to what is core to this organization's mission, and we grew stronger as advocates of this majestic region.

This issue of *Restoring Connections* begins to explore some of the first cultural connections to the Sky Island region… from times when living in this landscape conferred a responsibility that was inextricable, ecological and spiritual all at the same time. It compels us today with a sense of responsibility, a sense of commitment—driving us in our work, reinvigorating our effort, and galvanizing our advocacy. You have been and continue to be a critical component of all of SIA's work and our successes. I am counting on all of us to move forward together as we implement the vision of our new strategic plan and I ask for your continued support as we strive for nothing less than landscape level conservation throughout this incredible region.

Melanie Emerson
Executive Director

Staff at Rancho La Esmerelda, May 2009. *Courtesy Nancy Zierenberg.* Clockwise from top left: David Hodges, Louise Misztal, Sarah Williams, Trevor Hare, Mike Quigley, Melanie Emerson, Tom Van Devender, Sky Jacobs, Sergio Avila, Jessica Lamberton, Acasia Berry, and Janice Przybyl. Not pictured: Marc Trinks and Julie St. John.

The Long View *by Julie St. John, Editor*

I love mysteries. They allow me to call out my Inner Nancy Drew who drops everything, picks me up in her sporty convertible, so we can head out into the desert, looking for clues, puzzling out the progression of events. I love that even in this day and age, with our technologies advancing faster than we can learn how to use them, we still need to go out into the desert searching for clues, or poring over very dusty documents someone recently found in their attic. Of course, some of the very best sleuthing comes from sitting down and listening to the stories of the eyewitnesses, and if we're very lucky, the histories they've inherited from their elders.

My many thanks to Nick Bleser, Graciela Robinson, and Sarah Williams for sharing their connections to the stories. To Ken Lamberton for going out into the desert, searching for clues. To Tom Sheridan and Henry Wallace and many others to come in future issues (this is just Part I) for their finely honed investigative skills. To Joe Joaquin, Richard Shelton, and Ofelia Zepeda for living and breathing the stories.

Some stories are easily accessible or so well-known that they operate as a lingual short-hand in our communities; others are harder to find and perhaps to understand, especially as they fade with time. Nick Bleser (page 4) gives an example of an oral tradition of story-keeping while Tom Sheridan, in *Arizona, A History* (1995), recounts a method which has vanished:

> Before they learned to read and write in government schools, Akimel O'odham (River People, or Pima Indians) living along the Gila River recorded their history by carving notched symbols into the soft wood of willow or ribs of the giant saguaro. Caressing these mnemonic marks, Piman keepers of the sticks would then "tell" the events of the past. The narratives do not march to the same rhythm as Western histories. There are no "great men," no prime movers, no sweeping sense of historical progress. Instead, isolated occurrences are simply described — a battle, a harvest, a strange plague.
>
> Nevertheless, certain trends emerge from those terse recitations — trends that resonate with the fatalistic power of global forces glimpsed only at the local level. The earliest of the surviving calendar sticks begins in 1833, the year of a great meteor shower. Nearly seventy years later, when a tubercular anthropologist named Frank Russell wrote down the stick's telling, the only entry for 1901 and 1902 was the opening of a day school in a nearby Maricopa Indian village. In between, there are stories about Apache attacks and epidemics, battles with the Mohave and Quechan Indians of the Colorado River, and the arrival of telegraph lines and railroads. Seven decades of Arizona history are refracted through the lenses of people who began the century as proud and independent farmers, and who ended it as impoverished wards of the state. The notches on the calendar sticks are therefore both epigrams and elegies. The world they describe was already in the process of being transformed when the records begin. By the time the sticks were entombed in a museum collection, the world was gone.

I have known Sky Island Alliance since its very early years when it was a staff of one and Andy got a bunch of people out on the weekends to restore or track or whatever needed to be done. What I love about this extended family of staff, board, and volunteers is that we are generous with our time, our resources and relationships. We have somehow found a balance between shouldering the responsibility for protecting and restoring the Sky Island bioregion, respectfully listening to and communicating with our neighbors, and plunging ourselves whole-heartedly into the landscape… enjoying its mysteries, its beauty, its stories.

Every day our world transforms. As our bodies daily recycle and regenerate, so too do our natural and cultural environments transform. At some point the world we know today will be unrecognizable — through evolution, through attrition, through catastrophe, we don't know — and a new generation of sleuths will eventually seek to uncover, decrypt, and relate to our stories. And so I wonder… as today's technology is not yesterday's, likely it will not be tomorrow's… perhaps it's time to start telling our stories out loud. Or find some ribs from a giant saguaro…

Thank you Reed and Pat Mencke…

for generously donating your 15-passenger van to Sky Island Alliance for our field weekends!

You too can support SIA fieldwork with your donation of:

❁ Landscaping quality tools like shovels (flat and pointed), picks, rakes (preferably hard metal), hand saws ❁ 12-volt tire inflator (runs off of car battery) ❁ Heavy-duty tow strap ❁ Bungee cords ❁ Heavy-duty tie-down straps ❁ Cameras ❁ Binoculars ❁ Double AA batteries

For more information contact **sarah@skyislandalliance.org**

Early Inhabitants of the Sky Islands Region

by Nicholas J. Bleser

Near Arivaca. *Courtesy Melissa Buchmann.*

For more than a hundred centuries humans have been living on the land between the mountain ranges in the Sky Islands region, myriad groups whose modern names would be unknown to them. Until the arrival of the Spaniards and their written records, most of what we know about the earlier peoples comes from what they left behind, but with that first contact we have a brief window into the then-disappearing past. There were many such windows beginning in 1492 and this is a quick look through one occurring almost two hundred years later in the Pimería Alta.

Just as the Spaniards distinguished between an Alta California and a Baja California, so did they geographically divide the peoples of Piman linguistic stock as living in the Pimería Alta or the Pimería Baja. The Upper and Lower Pima country extended from the junction of the Gila and Colorado Rivers for a thousand miles to the south and east in present southwestern Arizona and northwest Sonora.

When the Spaniards arrived in the Pimería Alta in the late 1600s they found approximately twenty to thirty thousand people, roughly divided into three major and quite different lifestyles. Variations in rainfall determined the availability of food and thus the distinctive settlement and activity patterns.

The no-village people consisted of probably no more than three or four hundred people, totally nomadic and roaming the more arid portions of the desert in what is now extreme southwestern Arizona and northwestern Sonora. Their food came from occasional crops of tepary beans, squash and corn in scattered locations when rainfall permitted, but primarily from some sixty wild plants such as saguaro, senita, organ pipe and other cacti; mesquite, ironwood, palo verde and others. They were fed as well by a large variety of insects and animals; iguanas, desert tortoises, jackrabbits, wood rats, shrimps, clams and other seafood; bighorn sheep, bobcats, deer and many other animals.

The two-village people lived in a summer home at lower elevations where they could practice flood plain agriculture with a winter home at a higher elevation near a permanent water source. During the summer rainy season the water was carried down every mountainside arroyo to the plains between the ranges and by building brush weirs at the mouths of these arroyos the people could lift the water to surrounding fields. Agriculture provided perhaps twenty percent of their food; they obtained the rest through hunting, gathering of seasonal foods such as acorns and mesquite beans, and trade. These correspond roughly to today's Tohono O'odham, many of whom still consider themselves two-village people.

One-village Pimans, the largest group, lived along permanent watercourses at slightly higher elevations — portions of the later-named Gila, Santa Cruz, San Pedro, upper Sonora, Cocóspera-Magdalena-Concepción, upper San Miguel and Altar Rivers — and obtained perhaps forty percent of their caloric intake from crops they cultivated. In the Sonoran desert there are some two thousand five hundred species of vascular plants of which perhaps two hundred and fifty have culinary or medicinal uses; about twenty-five of these were cultivated. By planting at the edges of the flood plain of the rivers, they were assured enough moisture for crops; it is uncertain whether or not they diverted water from the rivers to their fields. Hunting, gathering and trade provided the necessary remaining food, and with water available all year migration was unnecessary.

The Piman culture was highly complex, refined over hundreds of years. Permanent villages consisted of family structures, brush houses and storage units, a cooking shelter and shade ramadas all situated with regard to privacy from neighbors. When the first Spaniards were invited to visit the village of Tumacácori in 1691, they found about forty such family groupings. There was only one public building; the round brush structure called the rain house or big house where the men of the village held their nightly council meetings and where ceremonial items were stored. All family structures had to be within shouting distance of this building in order to hear the morning announcements of the day's activities, be it gathering wood, a rabbit hunt or other community chore. Architecture was not labor intensive and used mesquite, grass, saguaro cactus ribs and other plant material.

Local government was by consensus of adult males who would sit and discuss courses of action until all agreed, and there was no method of enforcing obedience. Leaders were chosen for personal abilities — the headman was not an inherited position — and as long as that person could persuade, as long as his wisdom, knowledge and experience suggested a successful course, his ideas would be respected. There were also leaders for other activities such as hunting, games, songs and war. In warfare, there was no method of conquest and subjugation; should a dispute over land use occur with a neighboring village, for example, once it was resolved, life would return to normal.

Economics was based on sharing for equal distribution of wealth, and there was no religion that was separate and apart from daily life. Everything was bound together in a whole way of life that saw the essence of religion in all things, in all actions, and in all people. The Piman language was complex; comparable to any of the languages its speakers encountered in its ability to express abstractions.

Cooperation was the key to desert survival among families in a village and between villages. Men and women shared equally in the work; family, friends and neighbors were bound together for the benefit of all. In native cultures as well as in European cultures of this time, the good of the community took precedence over the rights of the individual, and one was always free to leave.

Many elements of this complex Sky Island culture have survived in the modern Tohono O'odham and Pimas (Akimel O'odham) of southern Arizona, things that at first puzzled those of us outside the culture. One simple example: absence of a written language and reliance on oral history. It seemed to me that passing along past events by spoken words alone would be akin to the parlor game of whispering a sentence along a row of people and the final version being completely different from the original. Not so in this case. O'odham humor is inner directed, and if you have a houseful of O'odham, you have a houseful of laughter. One older person in particular would tell us hilarious stories about herself, and in gatherings of other O'odham friends eventually someone would say to me, "Tell us a Laura story." And so I would relate one of Laura's stories about herself, which these other friends had heard dozens of times. But, if I were to omit or change *one word* from the way I

continued next page

The Apaches: Still a Mystery

Excerpts from Thomas E. Sheridan's chapter in the forthcoming volume, Colliding Worlds: Southeastern Arizona at Contact*, edited by Henry Wallace, to be published later in 2009 by the University of Arizona Press* **www.uapress.arizona.edu** *and the Amerind Foundation* **www.amerind.org**

When did the Apaches arrive in southeastern Arizona? Anthropologists have been debating when and by what route the Athapaskans entered the Southwest for more than a century. They might have migrated from the plains — "dog nomads, hunting the bison, and trading with sedentary neighbors to east and west" — to arrive in the mountains of eastern Arizona in the 1600s. Or small groups of hunters and gatherers might have drifted south from Alaska and Canada along a more direct route, the Rocky Mountain chain, to arrive in the northern Southwest a century earlier.

"One of the major problems in determining when Apache groups reached various regions of the Southwest is the paucity of material remains, particularly ceramics," states Sheridan. "Apaches may have moved into southeastern Arizona before the late seventeenth century, but if they did, they were pre-ceramic." A 1985 conference on Apachean ceramics concluded, "Perhaps one of the more important findings of the group is that the Southern Athapaskans must have learned their pottery-making skills no earlier than the seventeenth century (A.D. 1625-1725) by transference from sedentary neighboring peoples, particularly Plains Village and Pueblo farmers."

Thus, Sheridan continues, "Until more archaeological data are gathered and interpreted, then, we have to rely on the documents." He refers to a 1695 campaign where two experienced Spanish frontier commanders — General Juan Fernández de la Fuente and Nicolás de Higuera from the presidio of Sinaloa — "held a council of war at the springs of San Simón to decide whether to pursue their enemies to the Pinaleños and the Gila River," which according to the advice and knowledge of their Sobaipuri, Opata, and Conchos allies, was the center of the Apache nation.

Interestingly, no historical documents have been found to show the Apaches had similar claim to the Chiricahua, Dos Cabeza, Peloncillo, and Animas mountains, nor to the northern outliers of the Sierra Madre Occidental. In all likelihood, states Sheridan, the Apaches "forged alliances and shared those mountain refuges" with their Janos, Jocome, Suma, Manso, and Chinarra allies during the late seventeenth century in order to "secure access to trails, water sources, and refuges from which to raid Spanish settlements in Sonora and Chihuahua during the tumultuous decades following the 1680 Pueblo Revolt." By the eighteenth century, while the Apaches were beginning to displace or assimilate these allies, the Comanches began driving the eastern Apaches — the Lipanes, Jicarillas, and Mescaleros — off the Southern Plains.

"The seventeenth and eighteenth centuries were periods of enormous political and demographic change as Spanish slave raids, missionization, and colonization further disrupted the tenuous balance of power in the Southwest — a region that was in the throes of great change even before the Spaniards arrived," continues Sheridan. "It is possible, then, that the Athapaskans later identified as Western Apaches and Chiricahua Apaches were migrating into southeastern Arizona and southwestern New Mexico about the same time the Sobaipuris were pushing into the region from the southwest and the Janos and Jocomes were filtering into the region from the southeast." While initially the Sobaipuris may have established friendly contacts with Apaches, Janos, and Jocomes before the Spaniards arrived, Kino's arrival and preferential treatment of the Sobaipuris led to bitter conflict between these frontier Pimans and the Athapaskans and their allies.

Meanwhile, the Apaches relentlessly absorbed or displaced the Jocomes and their neighbors as they pushed deeper into mountain strongholds of southeastern Arizona, southwestern New Mexico, and the northern Sierra Madre. Sheridan concludes: "A century after Kino, Manje, and Fernández de la Fuente left their records, the Janos, Jocomes, Sumas, Mansos, and Chinarras had disappeared from the documentary record in Arizona and Sonora. We may never know the genetic composition of Mangas Coloradas, Cochise, Victorio, Juh, Naiche, or Geronimo. Culturally and linguistically, however, they were Apaches, and southeastern Arizona was their contested homeland."

Early Inhabitants *continued*

told the story previously, they would correct me. And they would always laugh in the same places. From this I gained a new respect and admiration for the accuracy of oral history among the native peoples.

Their culture survives; let us hope it thrives and prospers, for it has much to teach us about ourselves, the natural world, and life.

Nick Bleser has been a Wildlife Linkages tracking volunteer since he took the first training workshop in 2001. His work at Tumacácori National Historical Park has provided him with a rich understanding of the region.

References:

Friar Bringas Reports to the King; Daniel S. Matson and Bernard L. Fontana, translators and editors; University of Arizona Press, 1977.

The Pimería Alta, Missions and More; James E. Officer, Mardith Schuetz-Miller, Bernard L. Fontana, editors; The Southwestern Mission Research Center, Tucson; 1996.

Muchos venados viven en Rancho El Aribabi. *Courtesy Paul Hirt.*

As Tohono O'odham

by Joseph T. Joaquin, Tohono O'odham Cultural Specialist, with special thanks to Graciela Robinson

"The landscape holds the memories of the past, speaks to us in the present, and is an axion for our future."

Joe. *Courtesy Graciela Robinson.*

"Land is the heart and spirit of the O'odham societies.

"Land is the key to their survival.

"Land is our past, our present and our future.

"Land distinguishes the O'odham as a group, for without it we are like any other citizen in this country.

"Our ancestors fought for this land so that the future generations could continue to exist as a people.

"Land has always been the people, and the people have always been the land. It provides food and shelter, and spiritual comfort."

The ancient ones taught the O'odham to hold the land sacred because of their belief that it was infused with life-giving spirit. That is why O'odham ceremonially honor the land and their relationship to it.

Perseverance is a word very familiar to the Tohono O'odham. Wisdom passed down to us by our ancestors and today's elders helped us survive the early years of reservation confinement and the failed government policies.

The word ethnocentrism means viewing the world and the people in it only from the point of view of one's own culture, and being unable to sympathize with the feelings, attitudes, and beliefs of someone who is a member of a different culture. There may be nothing recognizable as significant to the outsider about a place regarded as sacred by the O'odham — that in no way diminishes the location's value in our eyes.

With the increasing documentation of consultations about protecting sensitive places comes a new set of issues: protecting sensitive information itself from public access.

Federal cultural resource protection laws are born of a foreign system of values. For many years, the O'odham stood in the background with little or no voice as non-Indians made management decisions about tribal heritage sites. Now the idea is turning and the O'odham have acquired a handful of laws to support our role in managing tribal heritage sites.

Laws are a set of rules that non-Indians have established to make it easier for us to live with one another. These rules have grown out of thousands of years of experience, are still growing and changing, and affect us every day and almost in everything we do. As Tohono O'odham we understand that laws encompass all the complex elements of human society. Sometimes it seems like the legal topics, or the language the government uses, are designed to baffle the O'odham. When the Europeans first set foot on O'odham lands, they did not realize that the O'odham already had a set of laws governing their way of life.

In November 1990, when the Native American Graves Protection and Repatriation Act was put into law, I found out that there were other federal laws in place that could help protect our sacred sites and our ancient burial sites. I traveled hundreds of miles across our ancestral lands and witnessed first-hand the desecration of our ancestral burial and sacred sites.

Our ancestral sites are fragile and irreplaceable. As a result of malicious vandalism, these sites are disappearing fast. These people are robbing us of information about our past. Tribal government began to identify these places in the 1950s, primarily in response to the Indian Claims Settlement Act, which required proof of the extent of tribal lands.

Many of these sites are threatened and destroyed by endless number of contemporary forces, including population growth and urban expansion. Competing demands for space — by commercial tourism, recreational and residential development — are often met at the expense of cultural site protection.

Federal cultural resources protection laws are born of a foreign system of values. In order to use the cultural resources laws to protect ancestral sites, you need to speak the language of cultural resources. Just like any other culture or community, the cultural resources community has its own language. If you can "speak the language" it will be a lot easier to persuade cultural resources managers and developers to undertake concrete actions…

Since time immemorial, the Tohono O'odham (Desert People) have been the inhabitants of this land. We have lived on this land from days beyond history's records, far past any living memory, deep into the time of legend.

Tohono O'odham Holy Men have gone into the high places, sea shores and isolated sanctuaries to pray, receive guidance from the spirits, and train younger people in the ceremonies that constitute the spiritual life of the O'odham communities. O'odham religion, oral stories, Creation stories, ceremonial practices, shamanism, and the concepts of power and sacred places for worship are some of the beliefs that tie us as Tohono O'odham to the land.

The O'odham revere and protect the environment and the natural resources that we know as our homeland. In keeping with the vision of our ancestors to live in balance and harmony, we recognize that it is our responsibility to preserve the legacy and to honor the traditions of the Tohono O'odham.

From the underworld, I'itoi led our ancestors, the Tohono O'odham, upward into their land, a land stark and dry, yet beautiful. With patience, the O'odham came to understand the land and from it they learned to shape their lives and their unique and lasting traditions, to respect and to preserve the mutual relationship between people and the environment. When land and environment are damaged, then our culture, our existence and the well-being of future generations are threatened.

Graciela Robinson, one of our dedicated Wildlife Linkages volunteers, worked closely with Joe during her ten years working for the Tohono O'odham Nation. This article comes from a recent conversation they had. Mil gracias, amiga!

The Flood of 1993 and Others *by Ofelia Zepeda*

from Ocean Power *(1995), courtesy University of Arizona Press* ***www.uapress.arizona.edu***

Old trees uprooted,
grasses, twigs, and branches,
all forced,
all pointing with limbs in the same direction,
as if telling us,
the one that did this to us went that way.

Barrel cactus,
hanging in uncactuslike manner,
upside down in between tree trunks and large branches.

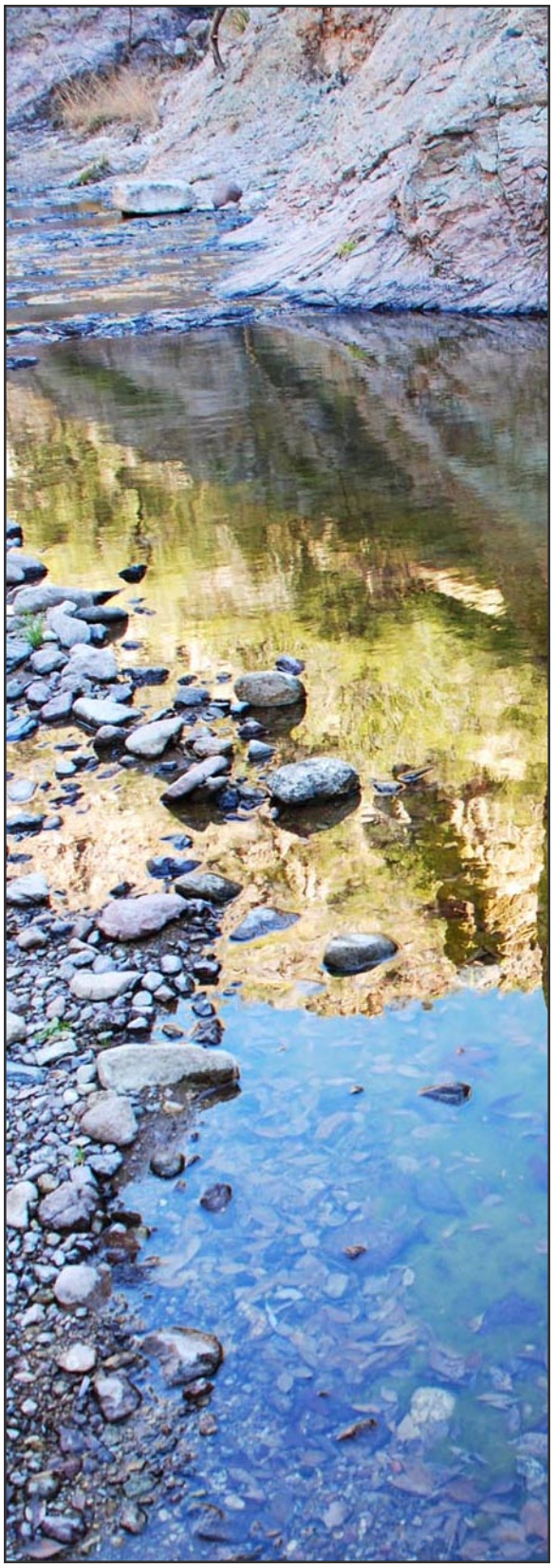
They silently scream,
"My roots are still good, put me in the rocky soil."
The screams are inaudible.
Even if every curved thorn joins in
the Park Service employees don't hear them.
Or if they do, they ignore them.
Too busy repairing concrete.

Bear grass.
With meticulously groomed hair.
Hair, just so.
Every strand in place.
The flooding water though has done its damage.
The groomed hair is now tangled, matted,
indistinguishable shapes.
Those sitting in a row, having the appearance of Diana Ross and the Supremes of the '60s.
Stiff, bouffant hair,
all pointing in the same direction.
Redundantly saying, "The one that did this to us went that way."
Some gathered along the rocky borders,
posing possible solutions.
How to fix the hair.
Another flood perhaps, going in the opposite direction.
Highly unlikely.
Some secretly wished for the ultimate disaster. Fire.
One which they would survive with renewed opportunity.
They concurred.
Life is not so bad to have hair like a bird's nest.
Gone are the days of arrogant, strutting comparisons.

Pigs.
"Pigs," my friend remarked.
"I hated taking care of those pigs anyway.
"I was never so happy as when I saw them floating down the river when it flooded.
"In fact, I think I even waved. I was just a kid then."
Remains.
His ashes are now at the bottom of the hill.
The rain has washed them down,
mixing them back into the dirt from where he came.
He screamed those silent screams.
You thought you heard them in between his laughter.
It was a confused message. Like many messages from adolescents.
A fifteen-year-old can't be expected to understand them all.
The ashes have found their way to the four directions by now.
Mixed with clouds that bring rain.
Or perhaps they have made their way to the Gila River when it flows in Pima country.
Surely some have made their way to the big rivers, floating on down to Mexico,
becoming part of the sandy, warm beach where you smile at the crabs that run sideways.
Trails.
It is mere dirt and rock.
Wiped off the side of a mountain as if by a child playing in a sandbox.
Tony and Ken run softly.
Their lungs rhythmically, quietly screaming.
Following the canyon trail loop.
A trail familiar with every turn, every incline.
They welcome every gentle pain the rocks hand them.
And like two sighted men suddenly gone blind,
they feverishly try to find their trail.
Down on hands they grope for rocks that should have been there.
They feel trees that weren't there before.
The trail has fallen off the side of the mountain.
They balk in their rhythm and look at the side of a mountain,
a side that wasn't there before.
An inconvenience at best.
They debate which way to go that would be closest to the original trail.
Their time cannot be slowed by this act of nature.
Grasses.
Grasses caught in tufts of all sizes,
hanging from every limb that was in the water's path.
All debris carried by water, reshaping a canyon.
Limb caught upon limb in wild, frozen dance postures.
Sand piled in places and manner unaccustomed.
Nature's features reshaped, molested by a watery monster.
Touching everything except the U.S. Park Service picnic tables.
Heavy concrete remains steadfast in the midst of nature's war zone.

Boulders.
Boulders, the size of small cars.
Now sit in the midst of empty streambeds,
quizzically contemplating how to accessorize.

The Department of Transportation and Flood Control.
201 North Stone Avenue, Tucson, Arizona.
Emergencies after 5 p.m. call.



Sycamore Canyon. ***Courtesy Melissa Buchmann.***

Inquiries.
Flooding.
Road Maintenance.
Administration.
Community Relations.
Flood Control and Planning Development.
Operations Maintenance Division.
Emergencies after 5 p.m. call.
Emergencies after 5 p.m. call.
Permits.
Flood plain.
Grading.
Highway use.
Hillside.
Property management.
Emergencies after 5 p.m. call.
Emergencies after 5 p.m. call.
Please leave a message after the scream.

Dry Season *by Richard Shelton, from* Selected Poems, 1969-1981

1
some years the birds
fly south for the winter
and there isn't any

trees beckon to them
but they fly into the desert
which has had no autumn rain

it is late October in a dry season
the coyotes are warming up
for a night of unearthly music
and the moon hangs
by its horns
above the Santa Ritas

I am trying to say something
about my life
in a dry season
while thirsty birds sleep
with their heads under their wings
and coyotes chant *vanity*
vanity vanity

2
when a man loves the desert
he loves it
as he loves a woman

at first in spite of
her imperfections
and later because of them

3
all day I lifted stones
and fitted them into a wall
carrying each one carefully
walking on my heels
like a woman with child

the wall will stand
perhaps five years
before the stones leave me

when they have made
their journeys down slopes
and into deep arroyos
I will slip out and find them
scarred and chipped
in the moonlight
and bring them home

4
there is a bird
who follows me
curious to know what I am doing
and why should he fear me
when he kills rattlesnakes
and outruns coyotes

there is a spider
who struggles so hard
to escape the embrace
of his huge lovesick mate
that he dies of exhaustion

there is a toad
who digs his way six feet up
toward the desert rain
and when he arrives
bleats like a lamb

5
I have chosen this place
and given it a name
it is called my place

a place without subtlety
where morning light
is unfiltered by leaves and the
wind
blows unhampered by leaves

where sunlight hurls itself down
as if each day
would be followed by two nights

sunlight which pierces
the closed eyelid
and impales the eye

and after a day heavy with heat
in which to be empty-handed
is burden enough
the sudden vacuum of dry cold

6
now while the moon pulls darkness
toward a place where somebody
must need it more than I do

and new stones
are struggling slowly
to the surface
I wait with the chollas
who stand under the shelter
of their dangerous long blond hair
and watch for rain

7
I who was promised
little by men
have waited for it gone without
in order to have it
and finally it arrives
as a blessing

Rattlesnake Canyon. ***Courtesy Julie St. John.***

place I have chosen
where I will not pay tribute
to those from whom
I learned the most

if they want it they must
steal it from me as I
stole their knowledge from them

place I have chosen
where exile is home

thicken my roots and extend them
toward secret compartments
of dark water
which will nurture me
that I might live
a life without explanation
in all the books of men

Letters home from a young geologist, 1910

SIA's Sarah Williams is a fourth generation Arizonan. Her great-grandfather, Gene Sawyer, a Harvard-educated geologist from Maine, moved to Arizona when he was hired by the Copper Queen Consolidated Mining Company in Bisbee. These are excerpts from a few of his letters home. Although he mentions sending Kodak photos home to his family, the photos you see on this page are actually from the USGS Central Regional Library, taken and captioned by M.R. Campbell in 1903 to document the Deer Creek Coal Field in Pinal County near Dudleyville.

Canyon north of Oracle on the road from Tucson to Dudleyville.

BISBEE *7 August* 1910

…Mr. Douglas came up to my office and asked me to come down to his. He had there a voluminous report on a big piece of ground in the Catalina Mountains, fifty miles northeast from Tucson, the nearest R.R. point. He told me the company had decided to take it over, the report being very favorable and that he wanted me to take charge. He said if it develops into a mine the company will build the R.R. right in. I am to have complete charge, do all the engineering, installation of machinery, development etc. etc. …Mr. D. and Grebe and I start up there this P.M. to see the place. We arrive in Tucson tonight, spend the night there, and tomorrow take automobile 30 miles and horses 20 miles…

Gila River on the road from Dudleyville to Tucson, showing the character of vegetation, which consists mostly of Cholla, a cactus covered with white spines.

SUNSET EXPRESS *22 August* 1910

…Though only five hours I am finding this trip very enjoyable on account of the relaxation. It is certainly a great relief. It is terribly hot and has been for about four days as we have had no rain. We will probably get showers to-night. …I will be busy in Tucson getting men supplies etc. for two or three days. We will have to get a crew out and work on the road and some freight wagons started in. After we get started in there it will probably be necessary for me to get out to Tucson frequently for awhile for that will be our official headquarters and base of supplies. I am going to have the best horse I can find in Tucson and possibly an auto later on. I will probably have to go down to Oracle from time to time after we are running full swing. Oracle is twenty miles from the mine by trail and is connected with Tucson by telephone…

SANTA RITA HOTEL *28 August* 1910

…My last letter was written on the train coming over here from Bisbee with Mr. Sherman and Bob Lyons. We got into Tucson that night and got an early start the next morning by auto for Oracle. There we took horses and got up to the camp at about two o'clock after 40 miles by auto and 20 by horses. We spent the rest of the day until dark looking over the ground. It is very rough steep country and you have to climb every where so by night we were very tired and "lay quiet" all night. The next morning we were off by six and covered as much more of the country as possible by noon when we started back on horse back. …We got back to Oracle at about six and stopped for supper and then took the machine back to Tucson. …Next I got started figuring on a two ton freight load to contain mining supplies and provision in proportionate amounts to start from here next week Tuesday or Wed. It is a four days haul to camp and I allow they will reach camp about as soon as the road will let them. When that arrives we shall be able to start some work which will be principally tunnels at first. I am going in to morrow with a man who is coming over from Bisbee to look at an old boiler that was used a long time ago for a saw mill in the mountains about two miles from us where there are some pines. If he approves of the boiler I am going to try to get it cheap and bring it over to run a small compressor…

TUCSON *5 September* 1910

…I came down to Tucson yesterday to see about getting a boiler and getting it started in to camp. …It will be an expensive piece of work and I doubt if we can do it in less than ten days or two weeks. …Last Monday when I started for Oracle in an auto we got mired in one of the canyons and finally took the stage back to Tucson, after the stage horses tried to pull the machine out and couldn't. The next time I started from here to Oracle was last Friday, day before yesterday. The man kept me waiting about two hours and finally we got started at about 2 o'clock. If he had started when he said he would it would have been all right but as it was we came to one of the biggest canyons just in time to see a big wall of water rush down it and head us off. In five minutes it was a raging torrent and we had to sit there and wait an hour. It all came from a shower which we could see a mile or so above though the sun was shining where we were. The water finally subsided and we crossed but it was nearly six o'clock then. The man who runs the machine is in with the man who runs the sort of boarding house at Oracle. If he had started from Tucson when he said he would I would have been in camp then and although I hadn't any idea he was purposely working me I'd be damned if I was going to stay there that night or leave my horse there. I put my horse up there when I came to town. They sort of opened their eyes and mouths when I told them I was going to camp that night instead of spending the night there and going in early in the morning, but I had been mad for about three days then so it came natural and I told them to saddle my horse and no back talk. I hadn't any more idea I would get there than I could fly but I finally made it at about twelve o'clock. I dont know now how I made it as it was pitch dark and it is only a faint trail over very rough mountainous country between twenty and twenty-five miles…

APACHE CAMP *12 September* 1910

…I have seen some interesting things since I left Bisbee, particularly on the auto trips between Oracle and Tucson. The wildcats are rather plentiful and I have seen an average of one a trip I guess. …Another thing I saw was a big Gila Monster about two feet long. They are plentiful in some parts of this country but that was the first I ever saw. I have also seen several big rattlers. In these mountains are bear, deer, and mountain lion but the only big game I have seen is some deer tracks…

ORACLE *17 September* 1910

…The thickest kind of game around here is quail. They are usually in flocks of ten or a dozen and on some of my trips between here and camp I have actually seen a hundred or more…

A giant saguaro in the San Pedro Valley, about 4 miles below Mammoth.

Treasure of the Sierra Madre: Species Richness in the Madrean Archipelago *by Tom Van Devender*

In the 1948 movie *Treasure of the Sierra Madre* starring Humphrey Bogart, the treasure was gold. Well there may be 'gold in them hills', but for biologists and conservationists, the treasure is multi-colored, alive, and wild. Conservation International recently declared Madrean Pine-Oak Woodlands in Mexico as one of the global biodiversity "hotspots." In his 1978 *Vegetación de México*, Jerzy Rzedowski, the premier Mexican botanist, stated that the pine-oak forest was one of the most diverse biotic communities in Mexico. In contrast, Steve McLaughlin (1994) reported that the richest vegetation zones in southeastern Arizona are desert grassland and lower oak woodland.

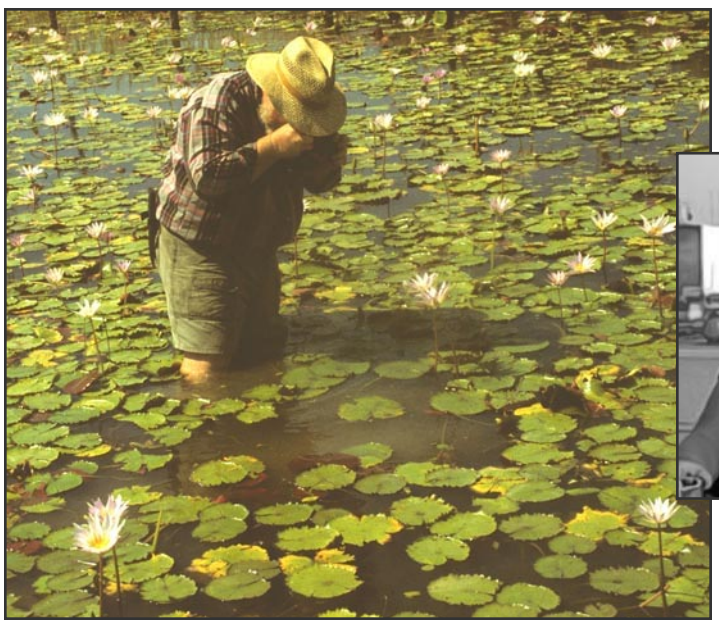
On the second U.S.-Mexico Boundary Survey in 1892–93, Lieutenant David Gaillard took detailed notes on the natural history of the borderlands including the Sierra San Luis and Cajón Bonito in northeastern Sonora. He described the region as "*bare, jagged mountains rising out of the plains like islands from the sea*". The genus of the blanket flowers (*Gaillardia* spp.) is named in his honor. In 1951 in *Natural History* magazine, Weldon Heald, a resident of the Chiricahua Mountains, named these ranges *sky islands* (Heald 1951), evoking the image of continental islands emergent from inland seas of desert grassland or desertscrub. Fred Gehlbach's 1981 book *Mountain Islands and Desert Seas. A Natural History of the U.S.–Mexican Borderlands* stimulated interest in the southwestern United States. His use of *desert seas* was rhetorical and included desert grasslands. In 1992, Charles Lowe, the herpetologist and ecologist at the University of Arizona, coined the term *Madrean Archipelago* for the isolated ranges between the Sierra Madre Occidental in Sonora and the Mogollon Rim in central Arizona.

In 2002, my wife Ana Lilia Reina and I were part of a project with teachers and local residents to study migratory pollinators and the plants they visit in northern Sonora. We discovered that even common plants were poorly collected within 100 km of the Arizona border. This was followed by a series of projects to search for rare cacti and shrubs — every trip was filled with range extensions and new state records! Although biotic inventories actually began with the U.S.-Mexico boundary survey (1848–1853) more than 150 years ago, *la frontera* in Sonora was mostly forgotten as botanists flew through to the tropical forests near Álamos in southern Sonora or to the stark beauty of the Sonoran Desert in northeastern Sonora.

The Madrean Archipelago is a region of diverse wonderful landscapes and mixtures of plants and animals. This area is only the northwestern portion of CI's pine-oak woodland "hotspot," but lowland desert grassland and thornscrub species, and being located in a biogeographical crossroads enrich the biodiversity. Here the New World tropics meet the northern temperate zone, grasslands extend from the Great Plains and Mexican Plateau into southeastern Arizona and northeastern Sonora, and the Sonoran Desert meets the Chihuahuan Desert. The great Río Yaqui drains the northwestern slopes of the Sierra Madre Occidental, and its Río Bavispe tributaries are fingerlike corridors for tropical species to reach southeastern Arizona and southwestern New Mexico.

Only a few biotic inventories in the Sonoran Madrean Archipelago have been published, and specimens are widely dispersed in museum collections in the U.S. and Mexico. The new Madrean Archipelago Biodiversity Assessment (MABA) project at Sky Island Alliance is a visionary new project to compile all historical and future biological records of plant and animals from this region into a database. The records (specimens, observations, and images) in the MABA database will be a *virtual natural history museum*! The database is well along in the design stages, and with the help of Ed Gilbert at the Arizona State University should be ready for data in September.

The rainbow hedgehog cactus (*Echinocereus rigidissimus*) is common on rocky slopes in desert grassland in southeastern Arizona and northern Sonora has a beautiful flower in April.



left: **Tom photographs capomo (waterlily) flowers in southern Sonora.** above: **Marc and his wife Kristi in Jalisco.**

The three-year MABA project, with funding by the French-based Veolia Environment Foundation and support from the U.S. National Park Service and the Turner Foundation, began in April and is moving along nicely. I was hired as the Project Manager in May, and will lead the biodiversity assessment and scientific collaborations via scientific field expeditions in key areas, as well as conduct botanical and herpetological research himself. Marc Trinks, who started as the Project Coordinator in July, will be responsible for coordinating the logistics for field expeditions, managing the database, maintaining project records and preparing project reports, as well as engaging in outreach, website content, communication and coordination with SIA staff, supporters and contractors.

The MABA project will include remote-sensing from satellite images to recognize oak woodland or pine-oak forests in northeastern Sonora, and help MABA scientists refine the definitions of a "sky island" to be included in the region. MABA activities will include mini-expeditions/biological inventories by teams of scientists, knowledgeable amateurs, and students in at least five major mountain ranges in Sonora. An interactive map of the Sky Island ranges linked to the MABA database on the project website is envisioned as an effective way to use the records in an active, engaging way. This will provide land managers, ranchers, conservation organizations, researchers, and students with the information they need to understand the biodiversity of the MABA region, and to devise a broad range of conservation actions to protect the biodiversity.

Meet MABA's Stellar Staff *by Sergio Avila*

The distinguished career of **Thomas R. Van Devender, Ph.D.,** includes 25 years as Senior Research Scientist for the Arizona-Sonora Desert Museum, where he conducted research on a broad range of natural history activities. He has published

continued next page

MABA's Stellar Staff *continued*

well over a hundred research publications on desert grassland, the cacti of Sonora, the Sonoran desert tortoise, and packrat middens and the paleoecology of the southwestern deserts. He is coeditor with Francisco Molina-Freaner on a book entitled *Diversidad Biológica del Estado de Sonora* to be published in 2009 by the Universidad Nacional Autónoma de México (UNAM) in Hermosillo, Sonora.

Tom has a long-term interest in the flora and fauna of the Sonoran Desert Region, and has collected over 20,000 herbarium specimens. Many of them are deposited into the herbaria at the University of Arizona (Tucson), the Universidad de Sonora (Hermosillo), and UNAM (Cd. México). He and his wife Ana Lilia Reina-G. have a special interest in the flora of *La Frontera*, the 100 kilometer zone in northern Sonora just south of the Arizona border — especially in Chihuahuan desertscrub on limestone, desert grassland, and tropical plants at their northern range limits. Tom is also a herpetologist with strong interests in the biogeography of the Sky Island Region. He can be reached at VanDevender@skyislandalliance.org.

Marc Trinks, M.S., comes to Tucson after two years in the Peace Corps as a Natural Resources Management Consultant at *Bosque La Primavera,* a 75,000-acre Natural Protected Area outside of Mexico's second largest city, Guadalajara, in the state of Jalisco. Through the challenges of working for the closest and largest protected area to a city of 5 million inhabitants (and approximately 250,000 visitors annually), he became well versed in balancing public use and working with local *ejidos* and landowners to convert their existing land uses to more sustainably managed and economically viable options. His responsibilities also included fire management, designing and constructing wildlife-friendly fences, building and installing bat houses with local university students, and helping form the park's first-ever group of park rangers.

Previously Marc worked for the Wake County Open Space Department in North Carolina, advising farmers and landowners about conservation easements through the county's Farmlands Preservation Program. For his master's degree he designed and performed a monitoring and restoration program for acquired open space properties using GIS and historical land use patterns to devise individual management plans. He can be reached at marc@skyislandalliance.org.

Both Tom and Marc are fluent in Spanish and have extensive experience working and living in Mexico. Please come by and welcome them, or send them a quick email. For more information, please visit: **www.skyislandalliance.org/maba.htm**.

Get Outdoors! Wilderness Hikes Are Here!

Join us for a Wilderness adventure! Sky Island Alliance will be hosting several hikes and weekend camping trips into the wild — with guest speakers and fun learning activities for the whole family! For more information about our Wilderness hikes or to volunteer to lead a workshop, contact Jessica at jessica@skyislandalliance.org or 520.624.7080 x21.

View details about upcoming hikes at **www.tumacacoriwild.org/monthly_hike.html**

From top: **Dick Krueger, Frank Baker, and Jessica Lamberton.**

Saturday August 15: Art in the Wilderness

Do you love to watercolor, sketch and be creative? Join us on a trip to the wilderness to expand your artistic creativity in a variety of media. Materials are provided, but you are also welcome to bring your own supplies. Participants will receive the *Art in Wilderness* exhibition book with two CDs of music and poetry. A selection of artwork and poetry will be featured in Sky Island Alliance's next *Restoring Connections* newsletter. *A workshop fee of $40 is required. Kids participate free!*

Many thanks to these photographers from our recent Wilderness hikes!

The wide, dry Santa Cruz River on the Tohono O'odham Reservation looking toward Martínez Hill in the distance.

Native Water

by Ken Lamberton. Photos courtesy the author.

This article is excerpted from Dry River: Stories of Life and Redemption on the Rio de Santa Cruz, *to be published Fall 2010 by the University of Arizona Press* **www.uapress.arizona.edu**.

On a June morning of what meteorologists are saying will be record-hot, 108-degree day, I arrive at Pima Mine Road and the Santa Cruz River. Joining me is Danita Rios, a 26-year-old Tohono O'odham woman assigned by the San Xavier District Council to "monitor" me.

Two weeks ago, I met with the six-member council to argue my case for hiking across the reservation. It wasn't an easy sell. The men and women grilled me on my purpose, questioning my intentions. "Why exactly do you want to hike through our lands?"

A month earlier I had written a letter to Austin Nunez, Chairman of the San Xavier District of the Tohono O'odham Nation, asking for permission to hike along the Santa Cruz River across tribal lands to the mission. I expected a permit, some signed form like the one I received from Pima County to hike across Canoa Ranch. Instead, Austin Nunez wrote back saying I needed to make a request to the District Council and that he had asked that I be placed on the agenda for the next meeting. "If they agree," he wrote, "they will require you to hire a monitor (guide) who must be with you at all times during your hike through our lands." He enclosed with his letter several pages of "Monitor Guidelines" that included information about rules and regulations and payment.

At Tuesday's meeting, I came up first on the agenda. Speaking into a microphone to the members, I answered their questions about my project and agreed to hire a tribe monitor, share a draft of my writing with the council, and send a copy of the book after its publication. The council voted 5 to 1 to grant my request.

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Government in the San Xavier District, one of eleven political districts of the Tohono O'odham, or Desert People, has evolved somewhat since it was formerly established in 1937 following Congress's passage of the Indian Reorganization Act. For the next thirty years, an eleven-member, all-male council of tribal elders mostly made decisions for the community that involved organizing events like cattle round-ups. The Bureau of Indian Affairs provided the police force, schools and teachers, health care, and food services.

Then, in 1968, Congress passed the Indian Self-Determination Act and the O'odham began taking charge of these programs and services, with their funding sent directly to the tribe rather than to a federal agency. With these new revenues, and those gained through their casino enterprises, the tribe's government grew to fourteen departments employing eighty people, expanding from services for housing, education and health care to elder care and the protection of natural and cultural resources. The tribe now has a community center, an elder center, and a cooperative farm, and there are plans to build a recreation center and expand the education center and farm. The San Xavier District has become a model of what self-determination and autonomy can do for indigenous peoples.

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With Danita close behind me, I slip through a barbed wire fence and begin walking across the San Xavier District, home to about 1800 people living on 72,000 acres in the eastern portion of the Delaware-size, three-million-acre nation. On my right, the Santa Cruz River cuts a sheer-walled trench forty feet into the loamy desert soil. Nearly eight miles distant, the volcanic mound of Martínez Hill rises above mesquite trees and cholla cacti. Our destination lies four hours away.

Happy New Year, I think about wishing Danita when I notice fruit on the saguaro cacti splitting open and falling to the ground like discarded pairs of wax lips. The June ripening begins *Hasan Bakmasad,* the "saguaro moon," and the start of the O'odham New Year. It is the time of the cactus fruit harvest with its wine feast, a ceremony holy to the people. It involves songs and stories and dancing along with the fermentation, drinking, and regurgitation of saguaro fruit syrup. The ceremony is a gift from *I'itoi,* the O'odham Elder Brother and Creator, who taught the people that the wine becomes a medium through which to pray for rain. The sacred intoxication and regurgitation represent "throwing up the clouds," and it is said that the saturation of the people with saguaro-fruit wine is like the desert becoming saturated with water, that during the driest and hottest and leanest time of the year, this is how the people summon the summer thunderstorms.

I'm certainly praying for an early *Jukiabig masad* or "rainy moon." At seven o'clock, it's already ninety degrees under a hard, azurite sky. The desert here, probably some of the most inhospitable on my journey, is baked ground, scored by decades of runoff erosion into deep, steep-sided gullies that we must continually backtrack around, moving farther and farther from the river. Creosote bushes are spindly-legged tarantulas dying on their backs. Even their shadows whither in the sun.

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According to Texas A&M geosciences professor Michael R. Waters, prior to about eight thousand years ago, this part of the Santa Cruz River was a shallow, braided stream, broken into separate reaches and organic-rich marshes or cienegas, which deposited sediments over a broad floodplain. Then, and for the next 2500 years, the river's character changed and it began eroding its banks and carrying away its sediments, significantly widening and down-cutting the valley bottomland. Between 5500 and 2550 years

ago, the Santa Cruz again went through a period of depositing sediments and saw the reemergence of its cienegas. Although there have been times when the river was stable, for the past 2500 years this sediment flex and flux pattern has grown in frequency, repeating itself with six periods of channel cutting and channel fill. With the drought of the 1890s (but possibly beginning as early as 1849), the river started another cycle of degradation, which continues to this day.

Waters, who in the 1980s studied the alluvial sequence on the river here, originally attributed the causes of these changes not only to climate but to impacts from human settlers, including those initiated by the canal-building Hohokam, ancestors of today's Tohono O'odham.

I admit I'm not a geoarchaeologist and do not fully comprehend all the nuances, but there appears to be a relationship between the river's erosion/deposition cycles and its human presence. Southwestern archaeologist Stephanie Whittlesey says that the Late Archaic Period (between 3500 and 1650 years ago) "witnessed a veritable explosion of occupation in southern Arizona and associated changes in settlement, subsistence, and human organization." During this time, she says, communities grew in size and became relatively permanent, shifting to rivers due to "the increased importance of maize agriculture." Many of these river settlements were of considerable size. Several in the Tucson Basin, like the 2200- to 2400-year-old Santa Cruz Bend Site, held 200 dwellings grouped into smaller "villages" of houses arranged in a circle. Although little is known about water control in the Late Archaic, recent discoveries near Tucson show that farmers were digging wells to tap water tables and diverting perennial and floodwater into canals. These canals are the oldest known in North America, predating others by a thousand years.

The Dairy Site, downstream from the Cañada del Oro confluence in northwest Tucson, shows early evidence of the larger, skillfully engineered canals characteristic of the Hohokam. What began as simple shallow ditches soon developed into miles and miles of adobe-plastered canals up to thirty feet wide and ten feet deep, the earth dug with stone and wooden tools and carted away in woven baskets.

And even right here, where I'm hiking today south of Martínez Hill, some scientists believe the Hohokam may have dug a headcut, a channel intended to intersect the water table and carry water into irrigation canals, that altered the course of the entire river. For some geohydrologists, this would explain why the river doesn't follow a more natural, geologically sensible course along the western margin of the basin.

With the advent of this culture around 700 A.D., an increasing population and reliance on irrigated agriculture must have placed substantial pressure on the Santa Cruz River. By their peak between 900 and 1300 A.D. (William H. Doelle, an expert on the Tucson Basin Hohokam, estimates the population rose to 6000 or 7000 around 1000 A.D.), these ingenious people were irrigating thousands of acres of desert in the Santa Cruz valley. Interestingly, Michael Waters wrote in 1988 that, following a time of stability, "a degrading river accompanied by erosion of the floodplain existed during the A.D. 1000–1150 period." This was the height of the Hohokam population expansion.

Waters today says some of his ideas have changed, and he blames the river's prehistoric downcutting on climatic causes only, not the Hohokam. But it intrigues me that there may be a relationship, a cause-effect that traces a history of the rise and fall of the Santa Cruz River in conjunction with the rise and fall of a human presence here, possibly beginning as long ago as 2500 years. Just the idea gives me hope, hope that the current "degradation" of this part of the Santa Cruz isn't permanent but part of a natural cycle, that the river will return again as it always has — once we move to more sustainable ways of living along it.

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At seven-thirty, we take our first break. Danita's black hair, which she has pulled into a tight bundle at the back of her head, is gleaming. I'm thinking that the silver stud poking through her lower lip must be heating up as well. But she is all smiles as we talk about her work for the tribe's cultural resource center, how she normally works with archaeologists on the reservation. "This is probably the first time you've had to hike for miles in one hundred degree heat with some crazy white guy," I tell her.

"Yes," she answers, "But I like seeing this part of the river."

The river has broadened, its sheer banks now several hundred yards apart forming a terrace dotted with mesquite, blue paloverde, and acacia. A much narrower, sheer-banked channel carves a second terrace on our right making a layer cake of the otherwise flat terrain. Looking at my map, I'm thinking that this must be the area where the Santa Cruz River once veered to the northwest, passing closer to the San Xavier Mission than it does today, into what we now call the West Branch. Somewhere ahead is the 1913 cutoff dike that carried stormwater to the eastern Spring Branch and away from the mission's adobe walls and fields.

On the way to the restoration site, the trail goes through a riparian gallery of mesquite, cottonwoods, and willows.

We head northeast to climb out of the river terraces and step onto a level plain studded with hundreds of mesquite stumps. Danita says that people once came here to cut firewood. Some of the trees, by the table-top diameters of their sawn and weathered trunks, must have been gigantic.

Premier ornithologist Herbert Brandt visited here on more than one occasion in the 1930s and '40s and, in his typically florid style, described what he called a "noble woodland of mighty mesquite trees." He writes of how the forest reminded him of a Sinaloa jungle, of trees like "grand old patriarchs" ruling over centuries of droughts and storms. "Here, there are, indeed, trees of heroic dimensions; the bole of one stately specimen that we measured reached a girth of 13 feet 6 inches, and a diameter of more than 4 feet, 3 inches; while the height of another capitol-domed giant was calculated to be 72 feet." Brandt goes on to say that he returned to the forest in 1945 but by then people had cut many of the largest trees. It was the beginning of the end. For by the 1960s, as the water table began to fall, the ancient mesquite bosque shrank into stumps. Gone, too, were the millions of roosting white-wing doves, whose raucous calls may have drowned out Strategic Air

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A ramada at the restoration site with a close-up of the interpretive sign.

Native Water *continued*

Command's new F-86 Sabre fighters flying out of Davis-Monthan Air Force Base in the early fifties.

The cause of the demise of this mesquite bosque is complicated, but central to it was the rise of mining and agriculture in the valley, specifically groundwater over-pumping from three main sources outside the tribe: the City of Tucson, the American Smelting and Refining Company (ASARCO), and Farmers Investment Company (FICO).

Today, the Tohono O'odham Nation is changing this. It began in the late 1970s when the tribe filed a lawsuit charging that Tucson and these companies had sucked water from beneath the San Xavier and Schuk Toak districts in violation of the 1908 Supreme Court "Winter's Decision," which mandated a sufficient water supply for Indian reservations. The result came in 1982 with the Southern Arizona Water Rights Settlement Act. The Act, however, required modifications before it could be fully implemented, and two decades of wrangling ensued, involving as many as thirty-five parties including federal, state, municipal, and tribal governments, corporate entities, and private farmers. It seemed everyone in the state who drank or bathed or ran a hose to a garden plot jumped into the fray.

In December of 2004, President Bush signed the Arizona Water Settlements Act, allocating to Arizona's Native Americans nearly half (47.2 percent) of the 1.5 million acre-feet of water that flows through the Central Arizona Project (CAP) canal. Then, in 2006, Secretary of the Interior Gale Norton resolved the original complaint of the two Tohono O'odham districts by signing the Southern Arizona Indian Water Rights Settlement. The agreement meant that Tucson would pay to repair sinkhole damage and that both ASARCO and FICO would reduce groundwater withdrawals affecting the reservation. The districts would receive at no cost an annual 37,800 acre-feet of water from the CAP and 28,200 acre-feet from other sources, along with a 15 million dollar trust fund to develop their water resources. The Nation's cooperative farm, once dependent upon the seasonal vagaries of the Santa Cruz River, would now sprout green with water drawn from the Colorado River more than 200 miles away.

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If there remains any evidence of the wagon road, this impossibly straight and narrow channel is it. Danita and I follow a cow path and drop off the former mesquite plain into a riverbed pinched tightly between fifty-foot high walls of earth. Mesquite trees grip the loose rim for purchase, their twisted and shredded roots clawing at the crumbling banks or flailing in the open air. In places we walk in shade.

Soon we spook at pair of owls, an adult and juvenile great horned, which hopscotch ahead of us along the right wall, slipping soundlessly in and out of occasional dark crevices. "I hope this isn't a problem for us," I say, tentatively, recalling a bit of Native American mythology about the night birds carrying off the souls of the dead.

"Some people say it could be. Owls are a bad sign. But," she says, offering encouragement, "maybe it's because we're having two funerals today."

Farther on, Danita suddenly stops and points to a high break in the wall. "Is that another owl?" she asks.

I don't immediately see it, and then an erect figure materializes and I notice that it's watching us through slitted eyelids with a look of absolute disapproval. "Yes," I answer her. "Good eyes."

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At eight-thirty we rest again, finding shade in the river's broken chocolate walls just beyond where an equally large drainage enters from the southeast. I lean against a giant clod of dirt the size of an adobe house and look at my map. It tells me this is where the entire eastern half of this valley discharges into the Santa Cruz, what was once called the Spring Branch. I'm thinking that the wagon road's accidental rerouting of the main channel into this branch must have made the 1913 cutoff ditch obsolete. For after 1940, the Santa Cruz River would no longer flow toward the San Xavier Mission (and into the protective cutoff dike) but along a course closer to the dark shoulder of Martínez Hill where it flows today, when it does flow.

Martínez Hill, our destination that I've kept in my sights all morning, is named for José María Martínez, who filed for a land grant between the river and the volcanic outcrop in 1851 when this place was still México. His heirs were the only non-Indians allowed to remain on their land after the formation of the reservation and subsequent evictions in 1881. Apparently, José and his children were good neighbors. The grave of José's son, Nicolás Martínez, lies in front of the mortuary chapel in the original (1797) O'odham cemetery at the southwest corner of the San Xavier Mission church. His gray marble obelisk, inscribed "NACIO EL 5 DE ENERO 1848 MURIO EL 19 DE MAYO 1885," is the only headstone remaining in what is now a cactus garden.

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At ten a.m., our faces red and salted from a hot slog on loose, shining sand, we climb over a fence and enter a cottonwood grove where the Santa Cruz bends west as it bumps into Martínez Hill. I smell water, green and wet, and then see a dark ribbon soaking the ground. We drop our packs in shade, reveling in a drop in temperature of maybe fifteen degrees.

While Danita rehydrates, I pull out my camera to record what my eyes can't believe I'm seeing. Trees — tall, cool, shimmering cottonwoods and ash, bordering a slow-moving slip of water. I'd heard about the O'odham project, but this is unexpected.

Next to a ramada of ocotillo branches, a large sign reads: "Riparian Restoration Project." The interpretive sign shows two large aerial photographs of the area, the largest with Martínez Hill in the background, with color overlays of the new wetlands. It says that the project has "re-created a native wooded plant community and wetlands" and that the area represents a river terrace of the former Santa Cruz River. "As the river is now dry," it goes on, "there is no longer enough water to keep the plants alive. The plants you see here must be irrigated with Central Arizona Project water. This water comes all the way from the Colorado River."

Earlier, I had spoken with Mark Briggs, a restoration ecologist with the World Wildlife Fund, who helped design the site in 2001 and then implement it in 2003, describing it as two wetland ponds with a ring of cottonwoods, willows, and mesquite. "It is only a beginning," he said, explaining that the tribe has begun another restoration site, Site Number Two, farther upstream. "The San Xavier District has plans to restore the river here," he told me. "The elders remember what it was like not too long ago."

Even more substantial is the use of CAP water to restore the District's farmland. What was once a few small plots of corn and squash on either side of I-19 is becoming a thousand acres of cotton and wheat, alfalfa and heirloom vegetables — all free of pesticides and artificial fertilizers — under a 23.8 million dollar farm rehabilitation project. The San Xavier Cooperative Farm will benefit from new irrigation systems, a high-efficiency infrastructure of piped water, improved roads, and flood protection.

I like to think of the Tohono O'odham Nation as a model for sustainable living on the Santa Cruz. One of the tribe's main priorities is to develop a water management plan that includes a large-scale groundwater recharge operation within the District. You won't find water sprinklers soaking golf courses here. You'll be challenged to find even one or two small Bermuda lawns for that matter. These people understand better than most of us that we live in a desert and that water is a limited resource. They have understood this for thousands of years, since the days they farmed along the river terraces at the foot of A Mountain where Tucson had its beginning.

Admittedly, the Tohono O'odham model is quite small, especially when we're talking about a human presence of a million people in the Tucson Basin alone. Small but not insignificant. We can do better by simply raising our consciousness concerning how we treat water, as we did before the CAP with Tucson's "Beat the Peak" program. It's an extreme example, but I know two Tucsonans, brothers Rodd and Brad Lancaster, who live "off-main" in a comfortable home — with a garden yet — supplied entirely by harvested rainwater. This, in a desert that receives less than twelve inches of precipitation each year.

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Scrambling over boulders to get out of the river channel at last, Danita and I walk northwest toward the beaming "White Dove of the Desert," the Kino mission of San Xavier del Bac, which the Jesuit founded in the native village of Wa:k, "where the water appears." (The Spanish had trouble pronouncing the O'odham name of this place where the Santa Cruz River, which Kino called the Rio de Santa Maria, rose to the surface again.)

At the mission, Danita's work is done. I thank her and remind her to drink lots of water for the rest of the day. She says she's going to bed, and as we part, I'm thinking she will be happy to get rid of this crazy gringo who hikes in the desert heat.

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Immediately to the east of San Xavier mission I climb the Hill of the Cross to get a look at the River of the Cross as it continues north toward Tucson. On my left stands the magnificent White Dove which, with its unfinished bell tower, has become a symbol of community for the O'odham and Hispanic Catholics here, as well as many others in the region who identify themselves with our rich and varied Southwestern culture.

From the hilltop, I see a new unplanted farmland stretching before me to Valencia Road, its wild geometry of furrows reminding me of 1880s hand-drawn maps of the fields that once filled the valley between here and Martínez Hill. Although today human technology wrests water from a distant river to irrigate this soil, I want to believe that these two volcanic outcrops might one day again raise the Santa Cruz to the surface to nourish the hard, immovable land of Bac.

It was the path of water that brought the Native inhabitants to the place, water for life and water for direction in life. It was the same for all who would follow them, whether Spanish or Mexican or American. Water creates community. And sometimes more. Writer Peggy Schumaker says that water in the desert is always holy. If this is true, then San Xavier del Bac, the place where a river rose out of a rock, must be as sacred as Horeb.

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Get Inspired! Dave Foreman to speak at Gila River Festival

Controversial. Inspiring. Magnetic. These are some of the terms that have been used to describe Dave Foreman, the keynote speaker at the fifth annual Gila River Festival, scheduled for September 17-20, in Silver City, New Mexico.

Foreman is currently the Director and Senior Fellow of the Rewilding Institute, a non-profit organization based in Albuquerque, Dave's hometown. With a long history in the conservation movement, he was named by *Audubon Magazine* as one of the 100 Champions of Conservation of the 20th Century. In his keynote address, Foreman will explore the connections between Leopold's conservation ethic and Gila River protection.

But wait – there's more! In honor of the 100th anniversary of Aldo Leopold's legacy in the Southwest, the 5th Annual Gila River Festival will celebrate the historical connection of Aldo Leopold, America's most influential conservationist, to the Gila. New Mexico's last wild river, the Gila, flows through the heart of Aldo Leopold country. The river originates in the Gila Wilderness, the first wilderness area in the U.S., originally proposed by Aldo Leopold.

The Festival will bring together experts, conservation leaders, artists, and scientists from many disciplines to foster an appreciation of Aldo Leopold, the importance of his conservation ethic to the protection of the Gila River, his influence on the creation of the National Wilderness Preservation System, his relationship to the wild places he loved, and the legacy of wildness he represents. This year's Gila River Festival features an Aldo Leopold living history presentation, guided hikes and field trips (with themes as wide-ranging as wolf, native flora, natural history, birding, wilderness, and archaeology), Leopold film festival, kayak trips, kids' activities, gallery tour, and more.

For more information about the Gila River Festival, September 17–20, visit **www.gilaconservation.org** *or call 575.538.8078.*

Protecting Our Mountain Islands and Desert Seas…

Sky Island Alliance's dedicated staff advance the organization's goals every day — in the field with volunteers, around the map table planning strategies, in the office, at the meeting, doing outreach… you name it, if it's important to the Sky Island region, we are there. We hope you're inspired — let us know!

Landscape Restoration Program: Bats, Broads, and Bullfrogs *by Sarah Williams*

Data Collection to protect migratory bat populations in the Santa Rita Mountains. We partnered with Bat Conservation International in February and March to conduct external mine surveys for potential bat habitat. Over the course of two weekends, volunteers drove long stretches in four-wheel drive territory and hiked miles through desert scrub to find abandoned mines in the western edges of the Santa Ritas. Once located, we took specific data on features of the entrance and surrounding habitat of the mine. The data gathered helps BCI to determine which mines are appropriate for bat habitat critical for the protection of migratory bats like the Townsend's big-eared bat (*Corynorhinus townsendii)*.

Watershed/Riparian Restoration in the Burro Mountains of New Mexico. The first days of spring brought about our annual Tres Allianzas work weekend. We joined forces with the New Mexico Wilderness Alliance and the Upper Gila Watershed Alliance to implement proven riparian restoration techniques on an ephemeral stream in an area known as Axel Canyon Preserve. Volunteer efforts included stabilizing erosion areas in and along the creek bed using post vane structures and one-rock dams.

Road and Campsite Surveys in the Chiricahua Mountains. In April SIA we headed to the Chiricahuas to collect data on eroding roads, illegal ATV trails, sprawling campsites and other human created impacts. We worked with the Great Old Broads for Wilderness who hosted a training to teach the new volunteers how to use a GPS, digital camera and monitoring form to collect information. We had over 20 participants that came from all over the west to hike and survey roads with ages ranging from 36 to 81.

Bullfrog Control in the Tumacacori Highlands and on the Buenos Aires National Wildlife Refuge. We had four field weekends in the months of May and June dedicated to bullfrog eradication in the western and southern reaches of our region. Bullfrogs are non-native, voracious predators that have significantly contributed to the decline of native leopard frog populations. Volunteers have dedicated many hours hiking to investigate area water sources and seining stock waters through mud and muck to capture bullfrog tadpoles and juveniles before they grow large enough to breed and spread.

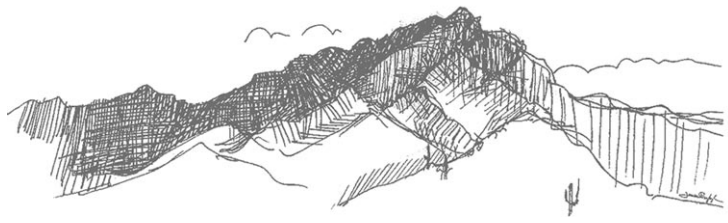
Northern Mexico Conservation Program: Growing, maturing, and achieving

by Sergio Avila

During he first half of 2009 the Northern Mexico Conservation Program (NMCP) has continued its growth, diversifying opportunities of fieldwork, education and conservation. As part of NMCP, the Madrean Archipelago Biodiversity Assessment, or MABA, is an exciting new opportunity to expand our working area, establish new work with regional landowners, universities, and NGOs, and generate baseline information about the unique biodiversity of the region. Sky Island Alliance appreciates the support and commitment of the French-based Veolia Environment Foundation. *Merci beaucoup!*

In this issue of *Restoring Connections* you can read about the two new staff positions filled for this multi-year project, as well as historical and scientific background of the Mexican Sky Island region, by project coordinator Tom Van Devender. Tom's scientific expertise is quickly paying off by establishing new collaboration opportunities with local and regional universities, agencies and landowners; developing research methods and scientific protocols, a database, and a scientific advisory team. In addition, in late August, Sky Island Alliance staff will lead a training workshop for students from two universities in Sonora: UNISON and UNISIERRA, hosted at Rancho El Aribabi. For an introductory MABA video, please visit Sky Island Alliance home page.

As part of our broader work in the region, Sky Island Alliance is now a working member of the "Gila to Yaqui Watershed Alliance": an initiative to bring together conservation groups, government agencies, landowners and universities to advance in research, conservation, restoration and advocacy across the spine of the Sky Island region, between the Gila and the Yaqui rivers. Representatives from BIDA, A.C., Naturalia, Fundacion Cuenca Los Ojos, Defenders of Wildlife, Northern Jaguar Project, The Nature Conservancy, Malpai Borderland Group, Animas Foundation, Universidad de Sonora, Universidad de la Sierra, University of Arizona, Northern Arizona University, University of Georgia,



SEMARNAT, CONANP, and numerous landowners, were present at a two day workshop in Moctezuma, Sonora. SIA has placed itself as a lead on research and will continue participating to promote the public appreciation of the region.

We continue to monitor wildlife movements in several Sonoran ranches across the Mexican Sky Islands: El Aribabi, La Esmeralda, Las Avispas, San Bernardino and Las Anitas. Some of the best wildlife images and videos from our remote cameras were shared at Sky Island Alliance's Spring event, where over 150 SIA members, volunteers and supporters enjoyed the tales of the Wild Cats of the Sonoran Sky Islands.

Sky Island Alliance board and staff members held a three-day strategic planning retreat at Rancho La Esmeralda. It was a successful and fun time, where in addition to planning the goals and actions that will lead our work for the upcoming years, we had the opportunity to share time with NMCP supporters and collaborators, hike along La Esmeralda's canyons and oak woodland hills.

For more information, please visit: **www.skyislandalliance.org/jaguars.htm**.

Policy & Planning Program *by Louise Misztal*

Changes of all sort come to the Sky Island Region. In the near term we have entered the monsoon season which brings rapid, dynamic changes in temperature and water flow on a day to day basis. In the long term, the region is experiencing changes in temperature and precipitation patterns. All of these dynamics affect the wild places and species of the region. The management of public lands in the U.S. portion of the region is also changing.

The Coronado National Forest, managing 1.7 million acres in Arizona and New Mexico, has been working to revise its Land and Resource Management Plan over the past 4 years. Sky Island Alliance has been meeting with Coronado Planning Staff and submitting comments on draft pieces of the new plan in anticipation of its release to the public.

On June 30, a federal court ruled that the 2008 planning rule, the rule guiding plan revision, was not compliant with federal law and prohibited the Forest Service from implementing the rule. This ruling is an important step toward better protection for wildlife, forests and water on our

National Forest lands. It also means that the timeline and structure of plan revision will change. In the meantime we are working with the Forest Service to assure a conservation-based Land and Resource Management Plan. Core protected areas that are safe from human disturbance are a crucial tool to protect biological diversity on the Forest and we are submitting maps and recommendations to the Coronado regarding lands with wilderness characteristic that should be studied and recognized in the new plan.

Motorized recreation continues to have a huge impact on the Coronado through proliferation of user-created roads, habitat destruction, and noise and dust pollution. The Coronado is working to address this problem through a planning process that will make changes to their system of roads and trails. This is an important opportunity to lower road density in order to improve habitat and wild places.

This spring, after determining it can only afford to maintain 9 percent of its road system at current maintenance levels, the Coronado released proposed changes to its system of roads and trails on the Santa Catalina and Rincon Mountains. Unfortunately these changes do not go far enough to address habitat damage and out-of-control motorized recreation. Sky Island Alliance swung into action to protect quiet, wild places for human and non-human species alike by co-hosting a workshop to provide the public with tools to take action to protect quiet recreation opportunities and unfragmented habitat. We submitted in depth comments on the proposed changes, and are working with the Forest Service in advance of the next proposal to try and ensure it does more to address the currently unmanageable system of roads. The Santa Rita and Tumacacori Mountains are being analyzed now and the Coronado expects to come out with proposed changes later this year. Look for announcements on our website and email listserve. If done right, the Forest will be prepared to start obliterating roads and defragmenting habitat in the next couple of years with the help of federal money, and folks like Sky Island Alliance's dedicated volunteers.

Keep up-to-date on what changes the Coronado National Forest is proposing by visiting **www.skyislandaction.org**.

Wilderness Program *by Mike Quigley*

While we hear and see a lot about climate change legislation, renewable energy, health care reform — all important topics, to be sure — other important issues make their progress towards passage without such fanfare. So it is with the Tumacacori Highlands Wilderness.

In Washington, Congressman Grijalva and his staff are doing the very real, sometimes challenging, and often time-consuming work of engaging Congressional leaders, the new Administration, and other key stakeholders, to clear the path for the Tumacacori Highlands Wilderness Act. Typically, successful Wilderness bills take years of effort. In fact, the 1964 Wilderness Act itself was an accomplishment years in the making. Sometimes good things take time.

Vine snake encounters paparazzi on a recent Wilderness Hike in the Tumacacoris.

In Arizona, we've continued to raise awareness of the importance of the Tumacacori Highlands as our state's next designated Wilderness. We've tabled at the Tubac Festival of the Arts and the Arizona Game and Fish Expo. We've given substantive presentations on the values of the area and designation at churches and schools. We've led hikes into the Tumacacori Highlands - because the area speaks so eloquently itself. And we're very pleased to have received the support of the Santa Cruz Valley Citizens Council (SCVCC) — an informed, influential, and responsible group (and one in which many of you participate).

In the next few months we'll be releasing a new campaign brochure, we'll be giving more presentations and keeping in touch with existing supporters, and, of course, we'll be going into the Tumacacori Highlands and enjoying our wildlands — see the calendar page on the Sky Island Alliance website for information on upcoming Wilderness Photography and Art in Wilderness workshops. Or join us in September for a special celebration of the Centennial of Aldo Leopold's arrival in the southwest with a workshop trip to the Escudilla Wilderness.

Keep it wild, enjoy our wildlands, and please help us help Congressman Grijalva make the Tumacacori Highlands Arizona's next Wilderness area!

Wildlife Linkages Program *by Janice Przybyl*

Sky Island Alliance, along with agency partners and other organizations, made significant progress on two wildlife crossings projects within the Tortolita Linkage — the Oracle Road wildlife crossing and the I-10/Avra Valley underpass.

Oracle Road: Sky Island Alliance, ADOT, AGFD, and the Coalition for Sonoran Desert Protection scrutinized the road profile of SR77, the surrounding landscape, and land status, among other factors, to groundtruth possible locations for wildlife crossing structures. It was determined that the best opportunities — based on ecological needs and land status — would be within a mile stretch around milepost 84. Reports to critters@skyislandalliance.org from nearby residents substantiate this observation as there is a concentration of roadkills and sightings at MP 84. This summer ADOT will submit a proposal to RTA for funds to construct the wildlife crossings. Structures include two enhanced culverts and an eco-bridge. We are pleased that Sky Island Alliance and our volunteers are contributing toward a transportation project for the continued benefit of wildlife in the area and a project that represents a large and critical undertaking by many organizations and agencies.

I-10/Avra Valley Underpass: Sky Island Alliance worked with the Coalition for Sonoran Desert Protection to bring together a diverse range of stakeholders associated with the underpass to discuss what is currently being done and to identify remaining obstacles and next steps. At a recent meeting over 30 people attended including representatives from the Town of Marana, Pima County, AGFD, USFWS, Arizona State Lands Department, TEP, and the various private landowners and developers. Three crossing structures were presented as alternatives for the I-10 underpass: two versions of enlarged underpasses with landscaping and fencing, and the third an eco-bridge that would span the railroad tracks, two frontage roads, and interstate… all at once! The eco-bridge was the most supported alternative. Our next challenge is to translate this enthusiasm into positive steps forward.

Cochise County Wildlife Linkages: An opportunity to work on mapping Cochise County Wildlife Linkages emerged though our continued involvement with the Arizona Wildlife Linkages Working Group. The statewide linkage assessment is being refined through a county-by-county approach. Sky Island Alliance will be coordinating with AGFD to conduct an experts' workshop to identify key species and habitats threatened by fragmentation. The goal is to produce a mapping tool that is useful to county planners and land managers.

Join us for the Tucson Film Premiere of:

Lords of Nature

A 60-minute documentary on the key role of top predators

Free! Wednesday, September 2 at 7pm at The Loft Cinema, 3233 E. Speedway

Lords of Nature reveals the critical role top predators play in healthy ecosystems, and how their return after a long absence can restore ailing ecosystems. From award-winning filmmakers Karen and Ralf Meyer of Oregon-based Greenfire Productions, the film journeys from the farm country of northern Minnesota to the Yellowstone Plateau, to the rugged open ranges of central Idaho and to the canyons of Zion in Utah — all areas where top predators have returned after decades of banishment. In each case, the predators' return has led to restoration the local ecosystem's health.

After the film, stay to hear local experts talk about how the film's findings relate to the top predators in our area — the endangered jaguar, recently reintroduced Mexican gray wolves and local cougars

For more information: Janice Przybyl at 520.624.7080 x15

Sponsored by Sky Island Alliance, Sierra Club Rincon Group, Defenders of Wildlife, Western Watersheds, Center for Biological Diversity and Animal Defense League of Arizona.

Join Sky Island Alliance for our annual Labor Day Camping Trip:

September 5–7 at Luna Lake… *PLUS*

In the Footsteps of Aldo Leopold:

A Conference Celebrating Leopold's Land Ethic!

Join us as we celebrate the centennial of Aldo Leopold's arrival in Arizona. The conference will be held on Labor Day Weekend (September 5–7) in the White Mountains, near the site of Aldo Leopold's first posting as a U.S. Forest Service ranger. The date also marks the 25th Anniversary of the creation of the Escudilla Wilderness and the 45th Anniversary of the signing of the Wilderness Act that made permanent the National Wilderness Preservation System.

Highlights include:

- **A retrospective look at Aldo Leopold's impact on the conservation movement and literature.**
- **A prospective look at what needs to be done to ensure that the landscape that helped shape Leopold's vision will be protected for future generations.**
- **A celebration of the land itself, including hikes where Leopold traveled in the White Mountains.**

Registration fees for the conference will be $25 per person or $40 per family. This fee includes both days of the conference and the opportunity to camp at the group site at Luna Lake. Meals are extra. Participants may choose to bring their own food to the meal events.

To registration for the conference, visit
http://leopoldcentennial.org/registration.html

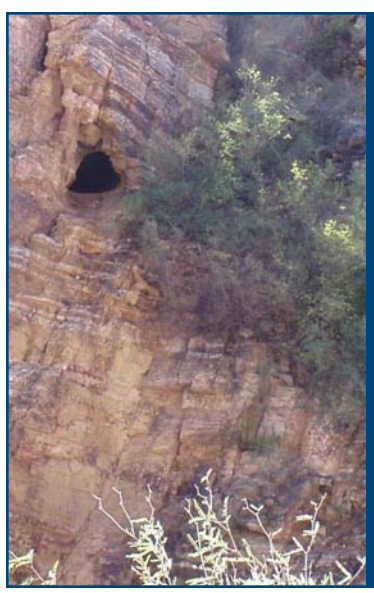
To RSVP for the Sky Island Alliance Labor Day camping trip at Luna Lake, contact **jessica@skyislandalliance.org**

The conference is sponsored by Sky Island Alliance, the White Mountain Conservation League, the Arizona Wilderness Coalition, and the Grand Canyon Wildlands Council.

Our fond farewells and best wishes go to former staff member Lahsha Brown and retiring board member Brooke Gebow for their dedication to the protection and restoration of the amazing Sky Islands we call home...

We look forward to building on Lahsha's initial efforts in the Peloncillos and Cochise County, and look forward to getting out in the field again soon with Brooke, who assures us she will continue on as a volunteer.

...Many, many thanks!



Next issue? Inspire us!

Send your essays, art, poetry, photography, book reviews, & ideas to

julie@skyislandalliance.org

It's so easy, and helps us tremendously...

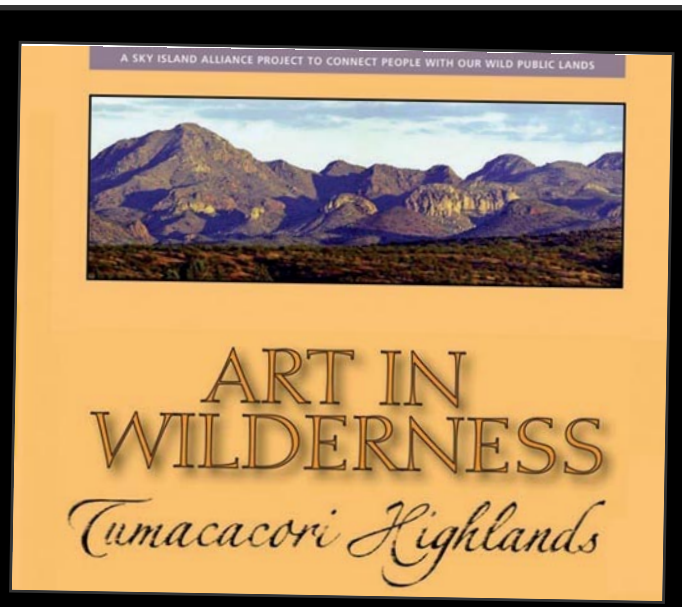
By donating just $10 a month, you can turn your yearly $35 membership contribution into $120. Or, by donating $50 every quarter, your yearly contribution would total $200! There are many different donation options through our Legacy Club program. If you are interested, please call Acasia at 520.624.7080 x10 or click on the Donate Now button at

www.skyislandalliance.org

You can be part of JAGUAR *and* OCELOT conservation efforts in the Sky Island region! Adopt a camera and support on-the-ground research & conservation.

INTERESTED?

Contact Sergio Avila at **sergio@skyislandalliance.org**.
For more information on this project, please visit
www.skyislandalliance.org/jaguars.htm



A magical collection from 19 artists, poets, writers, photographers... Beautiful 4-color reproductions of original art... 2 CDs with music and readings...

As inspiring as the wild lands they seek to protect...

Available through www.skyislandalliance.org

Landscape Restoration Field Dates

Aug 14–16 **Las Cienegas National Conservation Area Roads Weekend:** Spend a weekend in the lush, green grasslands of the Sonoita Valley helping to protect public lands!

There are always more opportunities to rejoice in / restore our Sky Islands! Watch **www.skyislandalliance.org** for the latest schedule! or contact Sarah at 520.624.7080 x23 or **sarah@skyislandalliance.org**

SKY ISLAND ALLIANCE
Protecting our Mountain Islands and Desert Seas

Join us!

Join or renew here OR through our secure website:
www.skyislandalliance.org

If you received this newsletter and it's time to renew your membership, please send in your check! If you are reading a friend's newsletter, consider joining us. We rely on members for our basic operations. Contributions are tax-deductible; we are a 501(c)(3) organization.

Basic membership is only $35, but if you add a little to that, here's a sampling of what your dollars can do: **$50** will help us survey 30 miles of roads… **$75** will sponsor volunteer training workshops… **$100** will close one mile of road.

Fill this out, or donate online. It's quick, easy and safe!

Name: _____

Address: _____

City, State & Zip: _____

Phone & Email: _____

❑ $35 ❑ $50 ❑ $75 ❑ $100 ❑ Other $_____ *(any amount helps and is appreciated!)*

❑ My check is enclosed
❑ Please bill $_____ to my: ❑ MasterCard ❑ Visa ❑ American Express

Card No.: _____ Exp. Date: _____

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Card billing zip code if different: _____

Sky Island Alliance, PO Box 41165, Tucson AZ 85717

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Just tell us how many of each size:
Men's cut: ___XL ____L ____M ____S Women's cut: ___XL ____L ____M

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OR purchase them online at www.skyislandalliance.org

SKY ISLAND ALLIANCE
Protecting our Mountain Islands and Desert Seas
P.O. Box 41165 Tucson AZ 85717
www.skyislandalliance.org

Since 1998, volunteers working with Sky Island Alliance have spent more than 50,000 hours turning their concern for our surrounding environment into tangible, hands-on action. As a grassroots organization, we could not achieve the results we do without the efforts of our dedicated volunteers — the real roots in "grassroots." The purpose of this column is to celebrate our volunteers and to share a little bit about who they are.

Volunteers Make It Happen

by Sarah Williams, Field Associate & Volunteer Coordinator

"Hey, is anyone sitting in this blue and white striped chair?" I asked one evening around the campfire after a successful day's work of closing unauthorized roads out at Las Ciénegas National Conservation Area. I hadn't noticed anyone using it and was itching to rest the legs. "That's Zoe's chair, but you're welcome to sit there," replied Pat. Zoe is the faithful Australian Shepherd companion of Pat Hux, a veteran volunteer who rarely misses a weekend out at Las Ciénegas because it's her favorite place (so far) in the Sky Island region — it's close to Tucson, green and thick as nearly any jungle during monsoons *and* dog friendly. Just ask Zoe, the camp dog with its own camp chair. She may sound like a privileged pup to some of you but SIA volunteer dogs work hard too. And besides, at the end of a full day's play, Zoe still seems to prefer the fresh dirt by Pat's feet.

It was a one-day tracking workshop at the Audubon Research Ranch in Elgin that first lured Pat into Sky Island Alliance five years back. From there she participated in a Fort Huachuca Track Count and then decided to try her hand at landscape restoration, remarking that "those outings are by far my favorite — I like the hands-on work and feel a tremendous sense of accomplishment in doing my part for Mother Earth."

This deep appreciation for the planet and what it provides carries through in Pat's enthusiasm on field weekends. When I asked her what she likes most about volunteering with Sky Island Alliance, I discovered Pat relishes her time spent outdoors with SIA (and Zoe), camping in remote places, learning something new each time about her wild surroundings and having fun while getting her hands dirty. It all helps to bring balance to Pat's life, especially given her indoor day job as supervisor for Tucson Electric Power's Treasury Services Department.

Being a steward for the land isn't the only thing that keeps Pat coming back. It's also the interaction with her fellow volunteers. "They're kind, caring people who have a strong sense of appreciation of our natural environment and who demonstrate a strong passion to protect it. The bonding that takes place among the volunteers and the friendships that are born are rewarding and satisfying." This proved evident once again last spring when a pair of volunteers came to Pat's aid as she tried to navigate a gnarly road in the Santa Rita Mountains that led to our weekend campsite. It was the first run in her new jeep. The other volunteer, we'll call him "Rocinante," gingerly guided Pat over the hills and through the rutted gullies of this intimidating dirt road, showing her that jeeps can handle quite a bit before requiring four-wheel drive.

An avid traveler, Pat is out to see as much of the globe as she can in her spare time. This is perhaps what adds to her motivation for volunteering. "Supporting SIA gives me the opportunity to satisfy this innate drive I have to give back to our planet which has provided for me so well for so long. Now it's my turn to take care of it in anyway I can. We all need a little help to thrive and survive, and that includes extending a helping hand to all plants and animals as well." The Earth could use many more understanding hands like those of Pat Hux.