



Ironwood Essence

Friends of Ironwood Forest

Spring 2023

Lizards of Ironwood Forest National Monument

by Lawrence L. C. Jones

In the fall 2022 issue of *Ironwood Essence*, fellow herpetologist Mike Cardwell wrote about the rattlesnakes of IFNM. So, while we are on the topic of reptiles, I thought I might as well overload you and discuss the rich diversity of the lizards of IFNM and my study there.

Snakes and lizards are so closely related they are placed in the same order, *Squamata*. In general, snakes are inconspicuous and often difficult to observe in nature, while lizards are mostly diurnal and easily observable. Lizards are good fodder as “watchable wildlife.”

As best I can tell, there are only two major references that address lizard presence in IFNM, and they do not completely agree. Averill-Murray and Averill-Murray (2006, *Sonoran Herpetologist* 19:137–141) did surveys for Sonoran desert tortoises in 2001. While they were at it, they recorded all reptile species seen.

They detected 14 species on their 109 transects and listed three others as potentially occurring in IFNM. Ballinger and Cage (*Natural History of the Ironwood Forest National Monument*, Rusty Lizard Press) reported 18 species as present but only discuss 16. I think it is safe to say that at least 15 species occur in IFNM. (See the table below.)

The leftovers possibly occur there or have been extirpated (locally extinct). They include Greater Earless Lizard, Desert (Goode’s) Horned Lizard, Long-tailed Brush Lizard, and South-western Fence Lizard.

Something all these lizards have in common is that IFNM is at an east-west crossroads of



A Long-nosed Leopard Lizard from IFNM. This beauty was found a few inches from one of my (thankfully larger) radio-telemetered Desert Iguanas. Although nearly as large as Desert Iguanas, Leopard Lizards are difficult to detect in dappled sunlight under shrubs, where they often remain immobile. They are related to collared lizards and are famous for their appetite for other lizards (including Desert Iguanas), which can be as large as themselves.



A Long-tailed Brush Lizard is difficult to spot as it lies along a branch. I could find no records of their occurrence in IFNM, but I suspect it is a matter of looking harder for them, as they have been found as far east as Avra Valley Road, near I-10, and just outside IFNM near the Sawtooth Mountains. Beware of confusion with the much more common look-alike in the same genus, the Ornate Tree Lizard, pictured below.

their geographic ranges. I can find no confirmed records of the Greater Earless Lizard west of the Santa Catalina Mountains at this latitude. Both Desert Horned Lizard and Long-tailed Brush Lizards have been recorded off Avra Valley Road, so it seems likely that both occur (or used to occur) in IFNM. Both of these animals are difficult to detect in the wild.

The Southwestern Fence Lizard occurs from about the Santa Cruz River east to West Texas. It was reported as present in IFNM by the Averill-Murrays, but admittedly they are unconfirmed and unvouchered sighting records.

Being a self-diagnosed lizard freak, when COVID rolled around, I got bored and decided I needed to do something outdoors to keep from watching too many Gilligan's Island reruns. So, I started doing cursory road-cruising surveys in Saguaro National Park West (SNPW) in 2020. Because I saw so many lizards, my surveys became formal. I also began a radio-telemetry study of Desert Iguanas and Long-nosed Leopard Lizards.

I was particularly interested in the iguanas, because they are at the eastern fringe of their range and virtually nothing is known about them out here. My literature review revealed that they

moved upland and eastward from the Avra Valley into SNPW in the 1980s or 1990s, perhaps due to climate change. Also, I was very interested in how lizards were using road-associated topography.

Then I started studying Leopard Lizards, because they are just so darn cool (a very sound scientific reason in my book)! Surprisingly, I saw more at SNPW than anywhere else in Arizona, so they were just begging to be studied.

In 2022, I decided to include IFNM as a study area for Desert Iguanas, to compare the creosote flats (typical habitat) of IFNM to the Arizona upland of SNPW. Although I did not put radio-transmitters on Leopard Lizards there, it is also a good place to see this cryptic species.

The lower Avra Valley area of IFNM was a real treat to work in, especially compared to SNPW. There were few cacti, shrub cover was sparse, and there was good visibility. I could easily observe Desert Iguanas going through their daily routine. In the future, I can probably forego radio-telemetry at IFNM and just give my study iguanas individual paint markings to ID, as they are fairly easy to find.

One of my research methods is called



Beware of the much more common look-alike in the same genus, the Ornate Tree Lizard.

“shadowing,” where I follow Desert Iguanas from a distance to quantify their daily routine. At IFNM, most spent the night in self-dug or rodent burrows, usually in open grassy areas between creosote bushes but sometimes under the bushes themselves.

Desert Iguanas have a daily routine. When they wake in the morning, usually around

8:30-9:30, they poke their heads out and look for danger. After a while, they come out and bask to warm up for the day's activities. Then they poop and begin the rounds of their home range.

Generally speaking, this entailed iguanas walking from bush to bush. At each bush, they would go through an array of stereotypical displays, including head bobs, push-ups, tail curl, and arm-waving. This lets other iguanas know whose turf it is.

Occasionally, they would climb into a creosote bush and eat some blossoms or feed on sprouts and sometimes insects. Because it was difficult for them to navigate the dense grasslands between bushes, they often walked along rodent runways. To avoid predation, they didn't dilly dally between bushes. When spooked, Desert Iguanas explode to the nearest rodent burrow in a creosote hummock for safety.

My emphasis on climate change and use of roadside habitats shows that I am really a conservation biologist. The SNPW and IFNM study areas are situated just on either side of the preferred alternative of the proposed Interstate-11 route.

Desert Iguanas were nearly extirpated from the Avra Valley. Not only did they make a strong comeback, but they are expanding their range upslope and to the east. Thus, this area is an

important corridor for animals adapting to climate change.

The addition of a freeway and associated development would be nothing short of a barrier



Desert (a.k.a. Goode's) Horned Lizard has not been documented from the Avra Valley since the 1960s, so if you come up with a voucher photo of one from there, you will be famous beyond your wildest dreams! Check out that camouflage!

for a plethora of species, reptile and otherwise. Of course, if Desert Iguanas and other species try to expand further to the east, they will have to traverse a metropolitan gauntlet, so that may also prove difficult.

If the reader is interested in viewing lizards, spectators are welcome to join me in IFNM and SNPW. Or you can become a lizard-watcher on your own. You may also want to volunteer for me as a citizen scientist to document Desert Iguana feeding behavior.

If you are keenly interested in herps (reptiles and amphibians), I recommend joining the Tucson Herpetological Society (<https://tucsonherpsociety.org/>). I sometimes lead field trips for them. Also, I studied scorpions at IFNM, so perhaps a scorpining trip may be in order. You would be astonished by the number of scorpions out there.

If you are a winter visitor, though, you might miss out on a good time. Lizards and scorpions appear on the surface about the time snowbirds flock to northern climes.



Regal Horned Lizard. This is the commonly encountered horned lizard species in the Avra Valley.



Desert Iguanas are one of the largest lizards in the USA. They are also the most heat-tolerant species and have been the subject of many studies—but not in central-south Arizona—until now. The Gila Monster and Common Chuckwalla are the two larger lizards. They also occur in IFNM. This lizard was just fitted with its stunning new pelvic radio-harness, so it will be the envy of lizards throughout the Tucson area.

About the Author

Larry “the Lizard Guy” Jones grew up in southern California, then moved to the Pacific Northwest. However, it was too cold and gloomy there, and there were very few reptiles. So he moved to Tucson two decades ago.

He was a wildlife biologist for the federal government until his retirement in 2014. He still works as a Reserve Keeper at the Arizona-Sonora Desert Museum.

Larry has authored over 100 papers and written or edited five books, including *Lizards of the American Southwest* (out of print), and the recently published 912-page tome *Venomous Animals of the United States and Canada: A Guide to Vertebrates and Invertebrates of Land and Sea*.

Key to Table 1 (next page): Lizards of IFNM

Primary and common habitat(s): **A** = arroyos and sandy areas, **C** = creosote bush flats, **F** = foothills and/or mountains, **R** = rocky, boulder, cliff faces.

Source: **BC** = Ballinger and Cage (2014), **AM** = Averill-Murray and Averill-Murray (2006), **LJ** = my observations. Lizards in **bold** reach their east-west distributional limits in or near IFNM.

Table 1

Standard English Name	Scientific Name	Habitat	Source	Comments
Sonoran Spotted Whiptail	<i>Aspidoscelis sonorae</i>	F	AM, BC	All-female species
Tiger Whiptail	<i>A. tigris</i>	A, C, F	AM, BC, LJ	Abundant
Zebra-tailed Lizard	<i>Callisaurus draconoides</i>	A, C	AM, BC, LJ	Abundant
Western Banded Gecko	<i>Coleonyx variegatus</i>	A, C	BC, LJ	Nocturnal
Greater Earless Lizard	<i>Cophosaurus texanus</i>	?	BC	Peripheral; see text
Sonoran Collared Lizard	<i>Crotaphytus nebrius</i>	F, R	AM, BC	Usually on boulders
Desert Iguana	<i>Dipsosaurus dorsalis</i>	A, C	AM, BC, LJ	Awesome critters!
Long-nosed Leopard Lizard	<i>Gambelia wislizenii</i>	A, C	AM, BC, LJ	Awesome critters!
Gila Monster	<i>Heloderma suspectum</i>	A, C, F, R	AM, BC	Venomous, infrequently seen
Desert/Goode's Horned Lizard	<i>Phrynosoma platyrhinos</i>	A, C	BC	= <i>P. goodei</i> ; see text
Regal Horned Lizard	<i>P. solare</i>	A, C, F	AM, BC, LJ	Difficult to see
Common Chuckwalla	<i>Sauromalus ater</i>	F, R	AM, BC	In mountain cliffs and boulders
Clark's Spiny Lizard	<i>Sclerophorus clarkii</i>	F, R	AM, BC	Look for in boulders and trees
Southwestern Fence Lizard	<i>S. cowlesi</i>	?	AM?	Unconfirmed; see text
Desert Spiny Lizard	<i>S. magister</i>	C	AM, BC, LJ	Common around structure
Long-tailed Brush Lizard	<i>Urosaurus graciosus</i>	A, C	AM	Difficult to spot on branches
Ornate Tree Lizard	<i>U. ornatus</i>	A, C, F, R	AM, BC, LJ	Common in places
Common Side-blotched Lizard	<i>Uta stansburiana</i>	A, C, F, R	AM, BC, LJ	Abundant



From the President

by Tom Hannagan

Usually in this space, I would review three or four things that Friends of Ironwood Forest has been involved in recently. This time I'd like to focus on one item. We were in federal court for the first time in FIF history, to stop the proposed interstate I-11.

The FIF took a huge step forward in advocacy last year by joining three partners in filing a legal claim against the new I-11 interstate route favored by the Arizona Department of Transportation (ADOT) and the Federal Highway Administration (FHWA). Our three partners in this action are the Center for Biological Diversity (CBD), the Coalition for Sonoran Desert Protection (CSDP), and the Tucson chapter of the Audubon Society.

The route chosen by ADOT, the so-called "west option," would come very close to the eastern border of Ironwood Forest National Monument (IFNM) and bisect the Avra Valley, creating a barrier to wildlife connectivity between the mountains in IFNM and the Tucson Mountains, which include Saguaro National Park-West and Tucson Mountain Park. The ability of wildlife to move between mountain ranges is necessary for their genetic strength and in turn the continuing health of the species.

ADOT and the FHWA ignored the nearly unanimous objections of all bodies submitting public comments on their choice. In addition to conservation organizations, such as FIF and community organizations in Tucson, the governments of Pima County, the City of Tucson, and the Tohono O'odham Nation also filed formal objections. Even other departments of the federal government, including the National Park System, the Bureau of Reclamation, and the U.S. Fish and Wildlife Service filed comments objecting to the west option.

Our lawsuit claims that ADOT/FHWA did not follow federal law in rushing through their Environmental Impact Study-Phase I (EIS). We feel ADOT ignored three separate federal laws affecting EIS requirements. Of critical importance to us was that the ADOT/FHWA excluded IFNM from any consideration as to environmental impact within the EIS. They felt that the IFNM did not qualify for consideration as a "park."

Their rather flimsy justification for this is that the presidential proclamation creating IFNM did not use the term "park" or "recreation". This is in spite of many references to recreational use in the BLM Resource Management Plan for the IFNM. It is clearly obvious that the IFNM is used for many public

recreational activities from camping to hiking to photography to hunting and so on. It is also clear to all that the IFNM is a wildlife refuge for the only indigenous herd of desert bighorn sheep, along with other threatened plant and animal species.

Rather than waiting for the ADOT/FHWA juggernaut to proceed any further, we thought it was time to do everything possible to stop it. ADOT/FHWA filed their EIS Record of Decision in November 2021. We began discussing a lawsuit by March 2022 and filed the legal claim in April 2022. See CBD's [press release about the lawsuit](#).

There were a series of minor filings by both parties regarding attorneys and other clarifying details. As expected, the defendants filed a motion to dismiss a part of our claim in August 2022. On January 25, 2023, we had our first appearance before a judge.

The attorney for FHWA/ADOT tried to justify their motion to dismiss by saying that taking into account the negative impact on the IFNM and other public lands was something they "might consider" in Phase II of the EIS process or sometime later. The judge repeatedly questioned the attorney as to why this wasn't done, or shouldn't have been done, sooner rather than later. Our CBD attorney argued that federal law clearly requires consideration covering impact as soon as possible in the overall process.

In fact, we all know that ADOT's preference for the Avra Valley route could be materially affected by having to deal with the environmental impact on IFNM. The judge did not disagree with our line of argument. We conservationists in attendance (basically the only attendees other than members of the press) were very pleased to see the interest expressed by the judge and the performance of the CBD attorney, Wendy Park.

There is no deadline for the judge to rule on the motion to dismiss. He could decline the motion, grant it, or put it into some form of abeyance until later in the main trial. We will update you all when we get this ruling, and for other key stages of the legal claim over time. This is a rather long-term process.

I very much want to thank everyone of you who have continued to support FIF so that we have the capability to fight for the Monument. Your energy and goodwill are major factors in our continued efforts to protect the local treasure called Ironwood Forest National Monument.

The Desert Fence Busters

by Trica Oshant Hawkins



I've been coordinating various volunteer conservation projects for well over 20 years now. In all that time, I can honestly say that the most gratifying work I have ever done (with or without volunteers) is removing old, abandoned barbed-wire fences.

Nothing says "accomplishment" like a wide open landscape you know is safer for wildlife and allows them freedom of movement for migration, foraging, finding mates, predator avoidance, etc. Sharing that satisfaction with a group of volunteers and other like-minded conservationists is, well, exhilarating.

Those "like-minded conservationists" I'm referring to are the Desert Fence Busters, who have collaborated over the past couple of years to make these impactful fence removal projects happen.

Through my work with the Arizona Wildlife Federation (AWF), I've been involved in projects to remove abandoned barbed-wire fence from public lands for several years now. However,

working *collaboratively* with Desert Fence Busters takes this work to a whole other level.

In the past two years with AWF's Volunteer for Wildlife program, I've organized four different projects, through which we've removed five miles of fencing. Those projects typically involve myself (representing AWF), a couple of agency partners, and volunteers (usually less than 20 folks per project).

In roughly that same amount of time, through six Desert Fence Busters projects, we've removed an estimated 21 miles of fence and taken 15,300 pounds of metal off the landscape to be recycled. Now that's impact! See what we can do when we collaborate?

For a group of six different non-profit conservation organizations, a cadre of volunteers, and county, state, and federal agencies to collaborate and accomplish so much so quickly is nothing short of extraordinary. There is a certain magic with the Desert Fence Busters that one rarely experiences in the conservation field.



Collaborating among different organizations without “turf wars” or power struggles is rare indeed, yet somehow this group simply gets along and gets things done. We’ve come to honor, respect, and learn more about each other’s work and mission, but more than anything, we share the same goal: to help wildlife by getting abandoned barbed wire off the landscape...to bust fence!

While fences serve many purposes, with both positive and negative effects on wildlife and people, *abandoned* barbed-wire fencing poses nothing but hazards for animals on the landscape. Wildlife get entangled in the wire, often resulting in death. Fencing also disrupts the natural movement of wildlife, causing individual stress and population declines.

Many of these fences were installed during the era of intense cattle ranching in the southwest, which coincided with the invention of barbed wire in the late 1870s. To hold on to their public land grazing allotments, ranchers had to show “improvement” on the land. Building fences was (and still is) one of the primary methods of “improving” one’s grazing allotments.

However, there weren’t (and still aren’t) any directives stating that those fences had to be removed once ranchers and their cattle moved on. As land ownership and grazing allotments changed, the relics of the cattle industry remained on the landscape. And they still do to this day.

It is estimated that there are 620,000 miles of fence on private, city, county, state and federal landscapes across the west. But no one really knows how much of that is abandoned barbed-wire fence, also known as “ghost fence.”

We do know it is a significant amount. As an example, in the 776 square miles that make up the Sonoran Desert National Monument (an AWF fence removal project site), it is estimated that

there are at least 40 more miles of abandoned fence that needs removing...that we know of.

So, there’s a lot of work to be done!

The beauty of the Desert Fence Busters is that we have a variety of agency land managers that identify and map abandoned fence that needs removing from their respective lands. Once a project site is scouted and identified, each of the different non-profit organizations reaches out to their respective database of volunteers, inviting them to participate in the project.

Agencies like the Arizona Game and Fish Department provide resources such as tools and fence rollers. Friends of Ironwood Forest sets up an information table and welcomes volunteers. BKW partners load and haul away the dropped fencing and T-posts. All of the groups help in organizing the projects and share costs of providing lunch, snacks, and beverages.

Through the Desert Fence Busters, we are truly making an impact on our beloved Sonoran desert landscape. We are improving the habitat for wildlife... and for people. Together, we are making a difference.

There are some who say the future of conservation is in collaboration. With the Desert Fence Busters, that future is now.

The Desert Fence Busters includes the following partner organizations: Friends of Ironwood Forest, Arizona Wildlife Federation, Coalition for Sonoran Desert Protection, Arizona Game and Fish Department, BKW, Bureau of Reclamation, City of Tucson, Friend of Buenos Aires National Wildlife Refuge, Mule Deer Foundation, Pima County, Saguaro National Park, and Tucson Audubon Society.



Photos by Jim Avramis

FIF Sponsors Booth at Tucson Festival of Books

The Friends of Ironwood Forest sponsored a booth at the Tucson Festival of Books for the first time over the weekend of March 4th and 5th.

Book sales of three titles were offered, but the main reasons for having the booth were to raise awareness, provide education on various aspects of the Monument, and to inform folks of the supportive role of the Friends.

We were amazed at the number and constant flow of visitors to our booth. We surpassed our expectations and succeeded in meeting our goals, by far. An added bonus is all the valuable feedback and information we received from attendees.

We distributed close to 500 of our new maps, logo stickers, and information flyers. We were also able to add a significant number of names to our information and volunteer distribution lists.

As far as outreach goes, we received positive feedback from Festival attendees and all those involved in organizing and staffing the booth. This venture has provided a very successful opportunity for meeting the outreach mission for our organization.

Thanks go out to board member Leona Lansing for taking the lead on this new venture and to the many volunteers who helped make this happen.

Like any of our events, a lot of planning, logistics, and volunteer help are involved. Melanie Morgan, Executive Director of the Tucson Festival of Books said, "This is the busiest year I've ever seen."

We were indeed stunned by the crowds, and uplifted by all the great feedback we received.



Waterman Interpretive Site



Photo by Leona Lansing

Representatives of FIF attended a celebration of the establishment of the Waterman Interpretive site on October 22 last fall, hosted by the Bureau of Land Management (BLM).

This celebration marked the end of a sustained, 12-year restoration campaign involving hundreds of volunteers from

numerous nonprofit groups, who spent more than 7,000 hours toiling away at the site with BLM support but no real funding. "It's an affirmation of a lot of effort," said John Scheuring, who headed up the project as conservation chair of Arizona Native Plant Society.

Our Mission

Friends of Ironwood Forest is a local non-profit organization that works for the permanent protection of the biological, geological, archaeological, and historical resources and values for which Ironwood Forest National Monument was established.

FIF provides critical volunteer labor for projects on the monument, works with the Bureau of Land Management and many other partners, and strives to increase community awareness through education, public outreach, and advocacy.

The Ironwood Gallery

Send us your favorite photographs of IFNM.



*Spring flowers along Pipeline Road
Photo by Jim Avramis.*

FIF Partners

Alliance of Arizona Nonprofits
Archaeology Southwest
Arizona Desert Big Horn Sheep Society
Arizona Game and Fish Dept.
Arizona Native Plant Society
Arizona Wildlife Federation
Bureau of Land Management
Center for Biological Diversity
City of Tucson
Coalition for Sonoran Desert Protection
Conservation Lands Foundation
Dove Mountain Hiking Club
Friends of Buenos Aires National Wildlife Refuge
Historic Y
Mule Deer Foundation
National Park Service, Saguaro NP
National Parks Conservation Assn.
Old Pueblo Archaeology Center
Pima County
Public Lands Foundation
Saguaro National Park
Sierra Club
Sky Island Alliance
The Rock Band
The Wilderness Society
Tohono O'odham Community College
Tohono O'odham Nation
Tortolita Alliance
Town of Marana
Town of Marana Chamber of Commerce
Tucson Audubon Society
Tucson Cactus and Succulent Society

Your Financial Contributions at Work

We rely on the financial support of people like you to help us with our mission to protect the natural and cultural resources of Ironwood Forest National Monument. We also work to increase awareness of the monument and improve visitor experience there.

Please consider donating to support our work. We couldn't do this without you. You can donate online at <https://ironwoodforest.org/donate>

