

# VERMILION FLYCATCHER

TUCSON AUDUBON

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NESTBOXES  
IN THE  
SONORAN  
DESERT

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**Vermilion Flycatcher Production Team**

Matt Griffiths, *Editor-in-Chief*

Melina Lew, *Design*

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**ON THE COVER**

Western Screen-Owl by Doris Evans. Doris Evans was an educator in Tucson Unified School District, Big Bend National Park, and the Arizona-Sonora Desert Museum. She is now retired and continues to enjoy walking the desert trails taking photos and presenting natural history programs.

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# LOSS, HOPE, AND SUCCESS IN ONE LITTLE BOX

Hi Friends,

When I moved to Tucson, one of the things I was most excited about when I purchased my little midtown home was the saguaro cactus standing out front. I sent pictures to friends and family and bragged about looking out my window at this behemoth that has lived my lifetime twice over.

I've since watched and listened to eight clutches of Gila Woodpeckers grow up in that cactus, with dutiful parents endlessly foraging to feed their demanding broods, a cacophony of squeaks and squeals inside. The house and front window splattered in saguaro goo as they drill out new cavities, I imagine the "boots" forming, and marvel at the thought of how many more generations of birds will spring from its well-insulated cradles. I've come to learn the saguaro's role as great hosts and providers, much like the oaks out east.

A future without saguaros would be tragic. Imagine a Sonoran Desert without its icon, its sentinel! Wildfire, increasing temperatures, drought, and invasive plant species pose a significant threat to these desert giants, and all they support. They are refuge, sanctuary, shelter. They are strikingly beautiful; as unique as a fingerprint or a snowflake. And future generations of birds depend on future generations of the saguaro cactus.

So we're busy planting thousands of wee saguaros in burn scars and other target areas. We are hoping that as we monitor them, we might observe clues to help them adapt, or give them the edge they need to get established. Just this year, more than 6,000 saguaro-lings have or will be planted throughout the Sonoran Desert, from the Tonto to Tucson.

Still, we may find that the challenges posed by climate change outpace our ability to maintain a saguaro-studded landscape. While we wait to see if the fruits of our saguaro-planting labor succeed, our team is already working on an alternative option, in the shape of a nestbox.

Nestboxes have led to conservation victories for Eastern Purple Martins, Roseate Terns, Tree Swallows, and even Burrowing Owls, in the form of artificial burrows. We're seeing great success with Lucy's Warblers in our backyards, and hope to see saguaro-dwellers take up residence in our newest box designs.

This mutualistic relationship between humans and cavity-nesters (okay, maybe a stretch, but no doubt, humans benefit deeply from observing birds!) is powerful but gossamer. Its continued success rests entirely on our unwaning interest and support through advocacy, outreach, continued field research, and new versions of nestboxes that keep up with the breakneck pace of climate change.

What strikes me as so profound about nestboxes is their symbolism of loss, failure, hope, and success, all wrapped up in one little abode. They symbolize the habitat we have lost and our collective failure to preserve what birds need to nest. At the same time, they symbolize our success in creating viable alternatives and the hope we have for future generations of all the birds we hold dear.

With hope for the birds and the saguaro, and gratitude for nest and nestbox builders alike,

Melissa Fratello  
Executive Director  
mfratello@tucsonaudubon.org



Saguaro-replicating nestboxes, Karen Howe; Gila Woodpecker and saguaro nest hole, Greg Lavaty

## WHAT'S GOES ON INSIDE A NESTBOX?

How crowded does a box full of kestrels get? What kinds of things do screech-owls eat?

Check out the videos from our live nestbox cams and find out!

[YOUTUBE.COM/@TUCSONAUDUBONNESTBOXES/VIDEOS](https://www.youtube.com/@TUCSONAUDUBONNESTBOXES/VIDEOS)

# ALMANAC of BIRDS October to December



Matt Griffiths  
*Communications Coordinator*  
mgriffiths@tucsonaudubon.org



Bewick's Wren, Mick Thompson

Most birds follow predictable and seasonal movements and behaviors. How do we know that Sandhill Cranes will return to Whitewater Draw every November? Somebody, at some time, took notes, reviewed those notes, and realized, “Hey, all those cranes that left in March are back, they might do this every year! Let’s see if they leave in March again.”

What about the birds in your own personal spaces, such as the microhabitat of your yard or local park? There’s likely not a guide for that—unless you wrote one or it’s an eBird hotspot. In *What the Robin Knows*, Jon Young advocates for everyone adopting their own “sit spot” as a way to enrich our lives by figuring out “what’s really going on out there.” Ideally, you’ll visit your sit spot everyday, or as often as practical, and just watch and listen while focusing on “deep bird language,” or the meaning behind the sounds birds make. This learning takes time and a lot of practice! Soon though, you will start to meet “your” birds, get to know their habits, and find how listening is just as important as seeing.

Going birding every day sounds luxurious to most people in our busy world, so choose a spot that’s easily accessible and remember the well-known health benefits of spending time outside. Luckily for me, and without even realizing it, I have developed my own sit spot by looking out the window right at my office desk at Tucson Audubon’s Mason Center. Sure, I’m bending the rules a bit—there’s a plate of glass between me and the viewing area, and I’m not totally focused, but I record the birds I see and I can hear lots of sounds when the weather is nice and the door is open!

Migration has been very active and fun this year and watching the changes in bird diversity out my window is exciting to track. The feeders and water dish are magnets for sure, but I’ve noted that most migrant species are attracted to the large hopseed bush, hackberry, and velvet mesquite that

offer insects and fruits to the hungry travelers. Plant native species and sit and watch in fall and spring as you might see MacGillivray’s, Wilson, Nashville, and Yellow Warblers, House and Bewick’s Wrens, Rufous Hummingbird, Western Tanager, and various sparrows and flycatchers. Looking back on your notes, you might be surprised to find that some of these birds showed up at almost the exact same time last year!

I have also come to learn which birds are outside and what might be happening by recognizing certain sounds, especially if they are different from the norm. Practicing “ear birding” is helpful everywhere—hearing a new song or a little chip note alerts me to the fact that Brown-crested Flycatchers are back or a migrating warbler is probably in the hackberry. I know to look for a Greater Roadrunner or rattlesnake when I notice the wrens and Verdins have gathered and nervously give alarm calls for minutes on end. When all the birds go silent and disappear it most likely means a Cooper’s Hawk has arrived at the water dish. The hawk or an owl might be perched in a tree when a Northern Mockingbird is giving its *check* calls.

I now know a little bit about the lives of the birds outside my window just by paying attention on a regular basis. It’s fun to keep tabs on the quail family with ten chicks or the young male Northern Cardinal who’s getting more red every day. There’s always more to learn! Set up a sit spot in your yard or find an existing nugget of habitat somewhere near you and just observe and be present. That’s all you have to do!



Wilson’s Warbler, Brewer’s and Black-throated Sparrows, and Green-tailed Towhee share the water dish; Wilson’s Warbler foraging in hackberry, Photos by Erica Freese

# IF YOU BUILD IT, WHO WILL COME?



Western Screech-Owl adult male at nestbox

I have built many nestboxes for cavity-nesting birds over the years. It is always a joy when the intended birds show up to take advantage of your labors. Having nestboxes in your yard is like having front-row seats to fascinating bird behaviors. This screech-owl nestbox was a new experience however, this was a saga.

After hearing Western Screech-Owls in my yard early one morning, I decided to build them a nestbox. To me the idea was simple: if you build it, they will come. I guess I should have asked this question: "If you build it, who will come?"

I didn't hear the owls calling that spring, so I never checked the box to see if anyone had moved in. But early on the morning of March 20, I saw an owl peeking out of the nestbox! Now that I had residents, I began a ritual of setting my lawn chair in my driveway and observing and photographing the show every night.

Since I didn't know if or when she laid her eggs, I ordered an endoscope so I could look into the box without opening it. When she left the box, I peeked in with the endoscope and found it contained five eggs! The typical clutch size is three to five but can range from two to seven.

On the evening of April 12, after I got situated, I grabbed my binoculars and was horrified when I looked up to find the box hole filled with bees! My heart sank and I immediately thought, "That's the end of that nest."

Not giving up, the next morning I called a local beekeeper to remove the bees. He was extremely careful as he brought the box down from the tree and removed the bees. When I looked in the box, I was relieved to see



Western Screech-Owl fledglings; Adult female in nestbox; the box full of bees!; the five eggs, all photos by Steve Vaughan

eggs instead of dead chicks. The night the bees had been in the box the temperature dropped to 49 degrees, but I was hopeful the eggs would be okay because the bees would have kept the box fairly warm.

After he completed the bee removal, the beekeeper said the queen bee's pheromone would still be in the box and any bees he didn't capture would return. A quick trip to the hardware store and a couple hours later I had a new box built. I carefully moved the eggs from the old box to the new, hung the new box in the same place, and hoped for the best. I had yet to see mama owl during this period, so now I just had to wait. On April 13, I used the endoscope to check the box, and to my surprise the female was back!

On April 16, I checked in with the endoscope and was elated to see five downy balls of fluff in the nest! During this time, the female broods the chicks for two weeks and the male is the sole provider for the female as well as all the chicks. The male delivers prey for her to break apart as needed for the developing young. After 26 to 30 days the chicks are ready to leave the nest. "My chicks" (after all, I felt I had a hand in their survival) left on schedule. When young screech-owls leave the nest, their flight abilities are limited. Many species of owls leave the nest before they are able to fly. The adults continue feeding the fledglings for six weeks or more while the young develop their hunting skills. By fall the young have dispersed to territories of their own.

Most evenings, I spent about an hour observing and taking a few photographs before leaving them alone for the night. I believe almost any wildlife observations create some degree of disturbance. My goal is to observe and learn while keeping my disturbance to a minimum. After many years in the field, I have learned a great deal about bird behavior.

I know my subjects are fully aware of my presence, so my goal is to not allow my presence to affect their behavior.

In this case, my method of observation was to sit in a chair in the same spot each night before the female looked out. While she was looking out I would keep my movements to a minimum and just watch, or take a couple photos then pause. When disturbed their head movements would get more rapid as they looked side to side. I would also watch their posture and watch the position of the feathers that create their "horns"—they are raised when disturbed or frightened.

Many cavity-nesting birds have a limited selection of nest sites. Most cavities are found in older decaying trees, which may not be something you want in your yard. Many species of cavity nesters can benefit from human-made nestboxes. Everything from bluebirds to swallows and even owls will use them. Think about the species of cavity nesters you have in your neighborhood. How many could use some extra nesting options? If you build it they will come!



Steve Vaughan is a seasoned professional nature photographer and ornithologist, dedicating over five decades to capturing and exploring the wonders of natural history. His exceptional imagery has graced the pages of countless esteemed publications, including *National Geographic*, *Audubon*, *National Wildlife*, *Sierra Club*, and *Arizona Highways*.

Tucson Audubon's Nature Shop has nestboxes of all types for sale, in-store and online. See [TUCSONAUDUBON.ORG/NESTBOX](http://TUCSONAUDUBON.ORG/NESTBOX) for more info.

# KEEPING UP WITH THE KESTRELS



Susan Kozacek first noticed a couple of kestrels on her property in January of 2020. Despite a number of large saguaros near her West Tucson home, there were few cavities available for the birds to nest in. American Kestrels are secondary cavity-nesters which means they cannot excavate their own nesting holes. Instead, they rely on the availability of natural crevices or abandoned woodpecker holes. Kestrels adapt well to human-influenced habitats and urban settings, but the species' population is declining in many regions of the United States, including Arizona. Tucson Bird Count data shows a sharp reduction in local numbers since 2010. Kestrels, like most cavity-nesters, are affected by habitat loss and a lack of available nest cavities. Fortunately, this species readily accepts human-made nestboxes. Susan contacted Tucson Audubon to find a way to help the kestrels on her property.

There were no trees tall enough to support a large kestrel nestbox so we had to get creative. What if we put the nestbox on a saguaro? It's large enough to support a big box and wide enough to shade it from the afternoon sun. This would be the first time attempting this, so we wanted to do it correctly. We used thick wire and fed it through a rubber hose to ensure it would not cut into the cactus or get enveloped by new growth. We also affixed Styrofoam sheets on each side of the box for additional insulation. We then installed a Google Nest camera which allowed us to get a live view of the birds inside and share it publicly for all to enjoy. The box was ready for the kestrel couple! It took little time for them to notice this spacious new apartment. The male claimed the box as his nighttime roost almost immediately.

In the following weeks, we witnessed the male bringing small food gifts to the female, and inviting her into the nestbox to show off the potential nesting spot which she approved of. Susan affectionately named the couple Falco (the genus of falcons) and Kate (a play on a "K" name). On March 6, Kate laid her first egg, followed by four more, each one spaced two to three days apart. They began to incubate the clutch with the arrival of the penultimate egg to ensure they hatch around the same time—both parents develop a brood patch (naked skin on the belly) and incubate the eggs in shifts.

Roughly a month later, we saw small white fluff-balls appear from under the parents. All five eggs hatched within 3 days of each other. Unfortunately, the smallest chick did not make it and was taken out of the box by the female. Thankfully, the other four grew big and strong. We enjoyed watching the variety of prey the parents brought in: lizards, snakes, scorpions, large insects, and even small birds. Within just a few weeks we could tell the females from the males by their emerging adult plumage. As another month passed, the parents made fewer and fewer



Nestcam images: the five eggs and Falco

American Kestrel, Francis Morgan



visits to the box. They called to their chicks from outside, enticing them to come out. The chicks fledged one a day over four days. They typically spend approximately five weeks learning how to fly and hunt from their parents before venturing out to find a territory of their own.

A lot of fun video clips have been collected by the nest camera since 2020. A good one springs to mind right away: after checking the live cam feed one day, I noticed that the view was completely blurred out. Scrolling back in footage I discovered the culprit: a direct upward shot from one of the kestrel chicks into the lens of the camera; it was a bullseye! Fun fact: kestrel nestlings squirt their feces onto the walls of the cavity as a way to keep the nest and themselves clean. The high ammonia content in their droppings keeps the bacterial buildup at a minimum. Reaching into the nestbox opening to clean the lens, the kestrel chicks reacted as you might imagine. Completely surprised by the giant, beige creature, they cowered in the corners until the job was done and the live feed was watchable again. For the moment at least. Not even a week passed when it happened again. We couldn't help but laugh!

Check it out yourself! The clip of the bullseye shot, as well as the complete collection of videos, are on our Nestbox YouTube Channel: [YOUTUBE.COM/@TUCSONAUDUBONNESTBOXES](https://www.youtube.com/@TUCSONAUDUBONNESTBOXES).

In 2023, Kate and Falco did not come back to the box and it eventually got taken over by bees. We are hopeful the kestrels will return and call the box their home once again!



The kestrel box in place, Olya Weekley

**Would you like to help American Kestrels in your yard?**

Kestrels prefer semi-open country of all kinds, especially with available hunting perches providing views of the surrounding land. Nestboxes should be placed between 10 and 20 feet high with an east to north-east orientation. They can be affixed to houses, trees, or poles with an open flight path to the entrance of the nestbox. Overhead shade will keep the box cooler.

Building plans and purchase options can be found at: [TUCSONAUDUBON.ORG/NESTBOX](https://www.tucsonaudubon.org/nestbox).

Olya Weekley  
Applied Conservation Program Manager  
[oweeekley@tucsonaudubon.org](mailto:oweeekley@tucsonaudubon.org)



Nestcam images: the downy nestlings including the moment one decided to squirt the camera; four big chicks almost ready to fledge!

# Will Desert Purple Martins

Desert Purple Martins (*Progne subis hesperia*) are a subspecies of Purple Martins whose breeding range spans the southwestern United States and northwestern Mexico. They nest in cavities created by woodpeckers in saguaros and cardons, both tall columnar cacti. However, invasion by non-native plants into the Sonoran Desert has led to unprecedented cactus-killing wildfires. Saguaros grow slowly and take 100–150 years to achieve the size necessary to host martin nests. As more of these cacti are lost to wildfires and human development, the lack of suitable nest cavities will become an even more limiting factor for the species' population size. Unlike their eastern counterparts, Desert Purple Martins have not been documented to use nestboxes—a suitable design that meets the special needs of desert summer living would be a beneficial conservation tool.

In 2022, Tucson Audubon hosted a contest for nestbox designs that could mimic the temperature-buffering characteristics of saguaro cavities. We received 22 excellent plans: 19 in the adult category and three in the youth category. Each design was then evaluated by the Desert Purple Martin research team and a woodworking expert to assess dimensions, cost-effectiveness, ease of installation, and durability. Next, we placed the prototypes in the field to document the interior temperature of each compared to a nearby saguaro cavity. While it proved difficult to mimic the insulating qualities of the living flesh of a saguaro, three designs came the closest. Each of the winners received a cash honorarium for their accomplishment. While they all use different materials, there is one shared characteristic: the external part of the nestbox is separated from the inside chamber by inches of insulation.



Tucson Audubon crew installing one of the 25 nestbox arrays, Milly Lierman

# Use Our New Nestboxes?



This year we put these three designs to the ultimate test: Purple Martin preference! We created 25 free-standing arrays, each consisting of the three nestbox designs affixed next to each other on a 16 foot post. Since the desert subspecies of Purple Martins is not known to use nestboxes, any documented nesting in an artificial cavity would be an exciting discovery!

This year, we did not document any Desert Purple Martin nests in our nestboxes, but we had several other cavity nesters use our boxes:

- 3 Cactus Wren nests
- 7 flycatcher nests
- 1 American Kestrel nest
- 2 roosting Western Screech-Owls

The secondary goal of the project, beyond martin use, is to create free-standing, temperature-buffering nesting structures to serve cavity nesting birds affected by increased competition due to saguaro-destroying wildfires and development. Seeing other cavity nesters successfully fledge from our boxes is incredibly encouraging!



Olya Weekley  
Applied Conservation Program Manager  
oweeley@tucsonaudubon.org

This work is made possible through the Wildlife Conservation Society's Climate Adaptation Fund, the Disney Conservation Fund, Arizona Game and Fish, and private donations.

Olya Weekley with nestbox prototypes, Jennie MacFarland; 75 nestboxes freshly coated with white elastomeric roof paint, ready to be installed, Olya Weekley

# THE NESTBOX CAMERA THAT STARTED IT ALL



When Tucson Audubon first ventured into the world of nestbox cameras, it was a novel experiment filled with challenges and unknowns. We eventually had a small arsenal of live cameras, offering a unique window into the natural world. But it all began with one family of screech-owls.

Tim and Norma Helentjaris live on two acres of native desert scrub on the west side of Tucson. Their backyard serves as an oasis to animals small and large. One such recurring visitor is a Western Screech-Owl we ended up naming Howie. According to Tim, Howie has visited his water fountain since 2017, which sparked his idea to install a nestbox near the house. The little owl took to the box right away and raised a family in 2018. Tim suggested we install a camera to get a look at the action inside, and we're so glad we did!

We picked a camera very aptly named Nest (later to become Google Nest, 1st Gen). Its video quality, close-focus, motion detection, and continuous recording capabilities made it the obvious choice. We equipped another nestbox with the camera setup and swapped it with the old one once Howie had left for the night, to avoid disturbing him. We held our breath as we watched the view from inside the new box on our phones, anticipating Howie's return any minute. After about an hour we got a motion alert. Howie flew to the opening and paused. He looked around for a few seconds, and seemingly satisfied, dropped down to the bottom of the box which was lined with a fresh layer of wood shavings.

We have gotten to watch Howie and his mate Holly nest every year since. As is common in nature, they experienced some highs and some lows. 2020 was a rough year for everyone, and Howie and Holly were no exception. Holly laid five eggs and incubated them diligently. Male screech-owls do not help incubate, so Howie had a different role: he kept Holly well-fed, bringing her small rodents and an occasional bird. She only left for a few minutes at night to expel waste. A typical incubation lasts about a month from the last egg laid. At six weeks we began to worry. At two months we watched helplessly as Holly continued to incubate the failed clutch. Eventually, she took the eggs out of the box.

By contrast, 2022 was a particularly productive year. Howie and Holly had five eggs which all hatched successfully. Every year their courtship begins the same, Howie entices Holly into the nestbox with a small morsel of food, waiting for her to follow. It's difficult to tell them apart, considering they look nearly identical, but when you have them side by side, it is easy to see that Holly is the slightly larger owl. Their food exchange then progresses to allopreening (grooming each other), which strengthens their bond even further. Eventually (usually around March) we begin to see eggs in the box. They lay a clutch of 2–7, one egg every three days. Some eggs might not hatch, and those that do, might not all survive. But in 2022, we watched in awe as all five chicks grew strong and successfully fledged.

Watching their unique behaviors has been fascinating! We made an interesting observation the night eggs begin to hatch. Usually Howie keeps Holly supplied with one small rodent meal, but once chicks start to emerge, we find that the larder grows to three or even five rodent corpses lining the box! Obviously, Howie takes his parental responsibilities seriously and he now has a large family to feed. Once the young ones are about three weeks old, Holly joins him in hunting.

While Howie himself is tiny, even this big nestbox becomes crowded when it's occupied by two adults and up to five nestlings. Eventually, Howie chooses to roost away from the family as is common in saguaro cavity nesting. As the chicks grow, they're able to exercise their flight muscles without having to leave the safety of the nestbox. We enjoy watching the jostling as the chicks get older and more curious about the outside. Each one tries to push its way to a spot at the opening to get a look out at their new world. It's quite entertaining to watch!

We have since expanded our live camera collection to include other cavity-nesting species: American Kestrels, Brown-crested Flycatchers, Lucy's Warblers, and Purple Martins. Every year we are touched by the impacts they make on our audiences. We love getting emails from curious, worried, or simply admiring viewers. It is so special to get a look into such a secretive part of these birds' lives.

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If you'd like to follow Howie and Holly's story next year, look for an announcement in January, when we turn on the live feed at [TUCSONAUDUBON.ORG/OWLCAM](https://TUCSONAUDUBON.ORG/OWLCAM) to watch their courtship. You can also find past videos at [YOUTUBE.COM/@TUCSONAUDUBONNESTBOXES](https://YOUTUBE.COM/@TUCSONAUDUBONNESTBOXES).

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**Would you like to help Western Screech-Owls in your yard?**

Screech-owls are well known for their tolerance of humans, adaptability to semi-urban landscapes, and willingness to nest in boxes. Screech-owls of the Sonoran Desert often nest in woodpecker holes in saguaro cacti. They are also common in Arizona suburbs with at least half-acre house lots and natural vegetation. Boxes should be placed at least seven feet high, though heights of 10 to 20 feet prove most successful.

Building plans and purchase options can be found at [TUCSONAUDUBON.ORG/NESTBOX](https://TUCSONAUDUBON.ORG/NESTBOX).

Olya Weekley  
*Applied Conservation Program Manager*  
[oweeekley@tucsonaudubon.org](mailto:oweeekley@tucsonaudubon.org)



Tim Helentjaris is a retired biologist with a keen interest in the life histories and occurrence of our resident birds in Southeastern Arizona.



# Utilizing Artificial Nesting Platforms to Enhance Breeding of Western Cordilleran Flycatchers on Mt Lemmon

The Western Cordilleran Flycatcher (*Empidonax difficilis occidentalis*) is an insectivorous neotropical migrant passerine that breeds throughout higher elevations of the Intermountain West, including the forests on Mt Lemmon and other Sky Islands in Arizona and Mexico. Classified as a crevice-nester and considered nest-site limited, this flycatcher typically places its nests on recessed locations such as rock ledges, nooks in stream banks, behind loose tree bark, or within the roots of wind-thrown trees. The birds also frequently nest on buildings, especially horizontal crossbeams. Any time that a bird species is nest-site limited, the addition of artificial nesting substrates can often enhance breeding.



The addition of 4-sided nestboxes has been shown to increase breeding bird numbers and enhance productivity of numerous cavity-nesting birds around the world such as the Wood Duck and Eastern Bluebird. There have been comparatively few studies to determine if crevice-nesting birds, like the Western Flycatcher, would respond to the addition of artificial nesting substrates.

During a study of Western Flycatchers in Colorado, our research team developed a two-sided nesting platform that flycatchers would readily utilize. In 2018, we moved our flycatcher study to Mt Lemmon, and began supplementing breeding habitat with 2-sided nesting platforms. From 2018–2024 we documented the influence of these nesting platforms on breeding, reproductive success, and adult numbers.

After introduction of the artificial nesting platforms we determined that there were no differences in flycatcher breeding behaviors between natural nest sites and platforms. Clutch sizes were identical, as were incubation and nestling periods.

Each year as we placed out additional platforms, more flycatchers started using them and the total annual number of Western Flycatcher young produced within our study area began to increase. By 2021 the number of fledged young more than doubled, and in the 2024 breeding season platforms produced over three times the number of young than did natural nests throughout our Mt Lemmon study areas.

In addition to making available new nesting sites, platforms have also provided a more secure nesting location with lower egg predation rates compared to natural nests. We initially believed that there would be higher predation rates on platform nests, as predators might develop a “search image” for the structure—this was not the case. The lower predation rates might be because the platform roof hides nests from aerial predators, while natural nests are more visible from above.



Platforms also provide a more stable base for nesting. At natural nest sites the crevice is often shallow, and as young develop the nest can tip out of the crevice. Due to structural issues, nests at natural sites failed more frequently than those on platforms, and we did not observe any eggs or young fall from platform nests.

In Colorado, where initial numbers of Western Flycatchers were low, we found that platforms increased adult numbers over the ten years of study. In an area that contains more suitable natural nesting sites and higher adult populations such as Mt Lemmon, the addition of nesting platforms did not substantially increase breeding bird numbers. In other areas throughout southern Arizona where flycatcher numbers are lower (such as the Chiricahua Mountains), efforts to install platforms could enhance numbers and productivity of Western Cordilleran Flycatchers.



Dr. Charles van Riper III is an Emeritus Scientist with the US Geological Survey Southwest Biological Science Center and The University of Arizona School of Natural Resources and the Environment.

Western Flycatcher, Shawn Cooper; Western Flycatcher nestbox on Mt. Lemmon, Charles van Riper

# WE DON'T NEED NO STINKING CACTUS!



For several years in a row I had a Western Screech-Owl family using my backyard nestbox to raise a family. One spring, cable contractors spent a day jack-hammering rocks right beneath the nest and installing cable for my new neighbors. The owls left that night and didn't return. That winter, I would occasionally see an owl in the box and was very hopeful for a return that spring.

But spring came and went and no owls returned. By May I was resigned to not having any birds in that box, but then I noticed some debris in the opening. Over a few weeks I noticed that the debris was accumulating and I wondered what was happening.

Finally, one afternoon I decided to park myself in a chair, stare at the nest box, and wait. The grasses and debris showing in the box was the opening to a Cactus Wren nest! I had never heard of Cactus Wrens using nestboxes or any other cavity, but it sure was happening this time. After entering the box to feed young, the Cactus Wren exited with what seemed to be fecal matter. The wren was cleaning out the nest at the same time it was feeding its young.

I spent a long time at the box and watched as the very active parents returned over and over

again with insects for their young. Each time the adults returned with food, they would land on a thick branch of the tree to the side of the nest box. Very quickly they would dart into the box and then fly out to hunt again.

For a while, the food consisted of one creosote bush katydid after another. In each instance, the Cactus Wren landed in almost the exact same spot, with the exact same species of insect! Somewhere nearby was a creosote bush loaded with katydids. They continued to return often with a variety of insects.

After a while, I was satisfied that I had witnessed something very special and left the Cactus Wren family alone.

Cornell Lab of Ornithology's *All About Birds* website describes the Cactus Wren nest: "The female initiates nest building, but after she selects the spot, the male jumps in to help out. They build the nest 3–10 feet above the ground in a cholla, palo verde, acacia, mesquite, or other desert vegetation where the nest is surrounded by thorns." Cornell does not list "wooden screech-owl nestboxes" as a possible site for a Cactus Wren nest. This is just another example of the adaptability of birds to their ever changing environments.



Cactus Wren with katydid; Feeding time at nestbox; Photos by Dan Weisz

Dan Weisz is a native Tucsonan and retired educator who enjoys birding, being in nature, and taking photographs.



# THE MYSTERY OF THE HOLE IN THE WALL

Doris Evans was an educator in Tucson Unified School District, Big Bend National Park, and the Arizona-Sonora Desert Museum. She is now retired and continues to enjoy walking the desert trails taking photos and presenting natural history programs.



“Whoa! Where did THAT come from!?” I happened to glance up from my computer and see a gaping hole where the wall meets the ceiling. It was about three inches long and an inch or so wide. Indiscernible material was visible in the opening—perhaps insulation, and are those feathers I see? I knew it wasn’t there a day or two ago.

“Well, that’s weird”, I muttered. I suppose many people would ask a repair person to come right over and patch it. But I am not one of those people. I wanted to find out what the story was. I was somewhat concerned that this could be the work of a packrat. I actually like those little guys, but I did not want one to carry in half the desert to stash inside my wall.

After a few weeks of observing this opening, I called my neighbor, a retired contractor who can fix anything. Dave came over, looked at the hole and said, “Well, that’s weird.” He went outside and checked the screening that covers the air vents under the eaves. All were secure except one. The screen was bent down leaving an opening directly across from the location of the interior hole. He took out the board with the bent screen and looked inside. Guess what appeared around the insulation to glare at this intruder? A SCREECH-OWL! What a HOOT, pun intended. Each year I see a family of screeches at my water dish. This must be where they nest! How many years has this been going on?

I have a screech-owl nestbox in my back patio and had a male living in it for a number of years except for spring when he’d disappear to meet up with his lady. Soon thereafter, owlets would appear at my water dish with mom and pop. The female chose the nest site and it seems she found a good one: in my attic space.

I contacted Mike Shaw, a Hawkwatch International Board Member who lives in Tucson. He came over to check out my owl story. I showed him the hole in my ceiling. “Well, that’s weird”, he said. Owls don’t have the right tools to poke holes, so how that opening came to be may remain a mystery. He brought over another nestbox, telling me that there is no problem having the backyard box as well. Screech-owls do quite well living near each other.

Dave came by to finish the job. He had covered the three holes with sturdy screening, then secured the board back in place. My new nestbox was nailed to the wall, just around the corner from the patched board, so it faces the front yard and has more shade.

In the meantime, my backyard box that had not had a resident owl the last two years, suddenly had a little gray, feathery head and big yellow eyes peering from the opening. Is this dad? Will my new box entice a female to move in when she discovers her old nursery is no longer available? Time may tell.



Western Screech-Owl juveniles at the water dish; Screech-owl in the attic space; Screech-owl in backyard nestbox. Photos by Doris Evans



# STORM SISTERS SURVIVE



Sometimes we don't see the fruits of our labor for many years. It's been more than ten years since my husband, Craig Wilcox, used tree-climbing gear to attach a nestbox 30 feet high in a tall pine in front of our Pima, AZ, house. We hoped to attract a pair of American Kestrels or Western Screech-Owls, but the box never saw any use. We knew that a pair of kestrels was nesting each year in our neighbor's palm tree; we gave up on them or their offspring moving to our box.

On June 20 of this year, an unpredicted wet microburst hit Pima, causing extensive damage throughout town. The intense winds snapped the top off of our pine just above the nestbox. There were very high branches that needed to be professionally removed; a crew came over a few days later. While the tree cutter was working, two kestrels kept flying nearby, calling very loudly. They even landed in the branches above him, undaunted by the very loud chainsaw.

Eventually the nestbox needed to be removed to make cuts right above it, and it got a ride down to us. I was going to clean it and have it rehung. When I opened the box, to my surprise and delight, there were four newly hatched American Kestrel chicks inside! What a traumatic way to begin life.

We wanted the nestbox to go back up quickly and without tools, so Craig found a cinch-strap that could be wrapped around the box and

tightened. Our tree cutter hung it about 8–10 feet below where it originally was. Within a half hour of coming down, it was hanging again, so we crossed our fingers and hoped that the parents would accept the disturbance and new location.

They did not waste any time! Within four minutes, both were on branches above the box. A minute later, the female was on a closer branch, flew down to the opening, and hopped through the hole. Less than ten minutes between the time it was rehung and the time she entered was even better than we could have imagined.

With many branches now removed, we could see more activity around the nest box including the female with her head poking out and both parents delivering lizards. As the weeks passed, the chicks had grown enough to poke their heads out and eventually started acting like it was time to fledge. I began a nearly daylong watch with camera in hand for three days.

The magic moments occurred on July 28 when two females fledged! I was thrilled to capture both on video. After a few days of limb hopping, the young birds were flying and ready for their hunting lessons. I saw them eating a bird and a lizard on utility poles near our house. The "storm sisters" stayed nearby until August 9, the last time we saw them with one of their parents, who are here year-round. We're already looking forward to a repeat next year.



Tree cutters working around the nestbox; the newly hatched nestlings; the two sisters nearly ready to fledge. Photos by Diane Drobka



Diane Drobka is an avid birder from Pima, AZ, where she coordinates the Safford Christmas Bird Count, Global Big Day count, and Graham County checklist. She and her husband have enhanced avian habitat in their yard and have attracted 117 species so far.

# FUN NATIVE BEE HOUSES IN YOUR YARD

Rosie Watts is a lifelong nature enthusiast and avid gardener who enjoys creating an environment to attract the birds and other wildlife she shares her yard with.



Several years ago, we won a bee box from Tucson Audubon at one of their volunteer celebrations. That started us on a journey to find more suitable habitat for the native bees already feeding and pollinating in our yard. Biologists estimate that we have over 700 species of native bees in the Sonoran Desert region! Unlike honey bees, which were introduced to North America in the early 17<sup>th</sup> century and nest in social colonies or hives, native bees are solitary nesters and are suffering from habitat loss due to urbanization and manicured yards.

We purchased a couple more bee houses from Tucson Audubon and we were on our way! We started putting various objects with holes in them around our yard: an “artsy” bee box found at a thrift store, cribbage boards, various small wooden objects such as old-fashioned pencil holders, and anything that looked like it might invite small cavity nesters. You can also make bee houses with tubes bundled together (closed at one end).

Some of the boxes sat unused for a year or two before they were inhabited. Once they began being used it was thrilling to watch the bees come and go, see the hole cells plugged up with fresh greenery in the spring, or old cells that have an exit hole from where the adult bee emerged.

Much to our surprise, a leaf-cutter bee entered a repurposed toothbrush holder through the little holes, and made a couple of leaf nests this spring. We were even able to view the “pollen loaf” that the female deposits after laying an egg—food for the future larva when it hatches.

If you have an interest in providing more habitat for these important creatures in our landscapes, as you can see, it’s very easy to create your own bee houses! Tucson Audubon also has houses for sale in the Nature Shop. For more information, check out the Tucson Bee Collaborative at: [TUCSONBEECOLLABORATIVE.ORG](http://TUCSONBEECOLLABORATIVE.ORG).

Bee house made of tubes, Poppet with a camera; Tube house with ceramic artwork, Rosie Watts; house made from pine cone, Rosie Watts; Cribbage board house, Rosie Watts

# CHASING LUCY

I fancy myself as having a relationship with “my” Lucy’s Warblers,\* though it is, perhaps, one-sided. She is a bird that, to many, would go unnoticed. Small, gray, often hidden—how long had she been visiting my yard before we met? I have no way of knowing.

Among the many things I did not know one fine day in March of 2013, was how a flittery-fluttery pair of *Leiothlypis luciae*s would gently guide me down a new path, one that I continue to follow more than a decade later. On that day, with the scent of sweet acacia on a welcome warm breeze, I volunteered for Tucson Audubon for the very first time. I was part of a team that installed the Lucy’s Warbler nestbox arrays that would help determine the species’ nesting preferences. In doing so, I took the first steps that have had me trailing after this unassuming bird ever since. I periodically monitored those initial nestbox arrays, acquired one of my own, and delighted in the springtime arrival of a Lucy family to my downtown yard. In 2019, despite my careful observations for a Lucy’s Warbler foraging study—Which tree? What time? How often?—I sheepishly realized I had not only misidentified the specific mesquite species, but had completely overlooked the reason for my busy little birds’ tireless foraging. They had constructed a nest in my own array, mere feet from my chair, and were ferrying food to their young. My heart took wing!

I’ve come a long way since misidentifying the trees in my yard, and I credit Little Miss Lucy for inspiring my involvement in community science, conservation, and habitat restoration. Now an Arizona Master Naturalist, I am a lot better at identifying native plants and have put in hundreds of hours enhancing my knowledge, volunteering for a wide variety of Tucson’s extraordinary conservation organizations, and helping spearhead “Project Lucy Tree,” an ongoing phenological community science study. This unexpected path is so richly rewarding for me, yet simultaneously sharpens the painful emotions associated with the realities of anthropogenic habitat and species diversity loss.

All relationships bring both joy and sadness, including those with wildlife. Each spring, my life revolves around the actions of this tiny, soft gray bird. First the unmistakable song, then the anticipation: Will they? Won’t they? So far there’s been at least one nest in my array each year, sometimes two. During the long months of COVID unemployment in 2020, I watched their every action, aided by an Audubon Nest Cam. Joy at the first signs of nest building. Wonder at the addition of one more speckled egg in the box each day. Tears of rage and what was real grief when a neighbor’s cat assaulted the nest on more than one occasion. Incredulity that all eggs hatched on the same day. A gasp when I could first hear the nestlings’ peeping. Frustration over my fledgling attempts at bird photography. Laughter at witnessing nestlings taking their first awkward leap out of their box. The genuine sadness of empty nest syndrome, relieved by happy sightings of the youngsters going about the business of growing up.

In the years since 2020, I’ve had less time to enjoy my annual Lucy family, and I find I miss the intertwining of my day with theirs. But my relationship with them, or to them, remains. Does she recognize the ever improved cat defenses I construct on her behalf each year? Does he recognize my voice as I do his? Do they know my sadness at their inevitable losses? It’s unlikely, but I have no way of knowing; I’m perfectly fine with that.

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\*Wishful speculation, not evidence, has me imagining the breeding pair of Lucy’s Warblers in my yard to be the same individuals each year.



Lucy’s Warbler family in nestbox, Paula Redinger



Paula Redinger is a professional flutist and an Arizona Master Naturalist and enjoys volunteering for a number of Tucson’s wonderful conservation organizations. Fascinated with its stunning vocabulary, she credits the humble European Starling as her “spark bird.”

# HOMES FOR HABITAT: SUPPORTING WILDLIFE IN YOUR BACKYARD WITH NESTBOXES

One of the core elements of the Habitat at Home program is to create safe and nurturing environments for birds, pollinators, and other wildlife. This includes providing essential components such as native plants, water sources, protection from anthropogenic threats, and suitable homes. Homes can be created naturally through the use of native plants and plant debris or artificial nesting structures. Both options provide excellent nesting opportunities, depending on available resources and space.

In southern Arizona, the removal of large trees such as willow, cottonwood, walnut, oak, hackberry, pine, and mesquite, along with saguaro cacti and dead tree snags, has created intense competition for nesting sites among various species. Over-pruning of mature trees has exacerbated this issue, negatively impacting cavity-nesting birds, bees, and bats, leading to increased competition among bird populations.

In response to these challenges, Tucson Audubon developed a suite of nestboxes and best practices for their installation, specifically designed for secondary cavity nesting birds. These nestboxes can be easily integrated into your outdoor spaces, fulfilling the need for secure homes.

## AVAILABLE NESTBOXES

Enhance your backyard habitat with a handmade nestbox available at our Nature Shop, in-store or online. If you prefer to build your own, we also offer detailed building plans on our website at: [TUCSONAUDUBON.ORG/NESTBOX](https://TUCSONAUDUBON.ORG/NESTBOX).

- **Lucy's Warbler nestbox — \$12**  
Lucy's Warblers are found in mesquite bosques, riparian areas, and urban areas especially where mesquite trees occur.
- **Flycatcher nestbox (also suitable for bluebirds, Elf Owls, nuthatches, chickadees, titmice, and wrens) — \$40**  
This size of nestbox is suitable for many species in just about any habitat.
- **Western Screech-Owl / American Kestrel nestbox — \$65**  
Kestrels prefer semi-open country of all kinds (including urban), especially with available hunting perches. Western Screech-Owls inhabit thorn-scrub desert and Arizona suburbs with at least half-acre house lots and natural vegetation.
- **Barn Owl nestbox — \$120**  
Barn owls are found in open country that offers nesting and roosting spots: Sonoran Upland, agricultural fields, and lowland riparian woodlands. They typically avoid high elevations and dense forests.
- **Cavity-Nesting Native Bee nestbox — \$20**  
Bee hotels are suitable to install in any habitat.



Nestboxes for: Lucy's Warbler, Amy Edwards; Flycatcher; Screech-owl/kestrel, Doris Evans; bees, Kim Matsushino



To learn more about our nestbox program, visit: [TUCSONAUDUBON.ORG/NESTBOX](https://TUCSONAUDUBON.ORG/NESTBOX).

Habitat at Home members can now certify their yards as Cavity-Nester Approved!

Check out our Habitat a la Carte menu and guidelines at:

[TUCSONAUDUBON.ORG/HABITAT-AT-HOME](https://TUCSONAUDUBON.ORG/HABITAT-AT-HOME).

Kim Matsushino  
Habitat at Home Coordinator  
[kmatsushino@tucsonaudubon.org](mailto:kmatsushino@tucsonaudubon.org)



# AGAVES IN THE WILDLIFE GARDEN

With their bold sculptural growth forms, agaves attract attention whether growing in the wild or designed into a garden. Plants are characterized by stiff, well-armed leaves that are arranged into a rosette. Whitish to yellow flowers occur on huge stalks, branched or unbranched, that grow from the center of the rosette. In all but a few species the rosette dies after flowering and fruiting, having spent all of its life energy to produce large quantities of seeds. The rosette usually dies, but many species produce “pups,” vegetative offsets that ensure continuation of the species.

Because of their general tolerance to cold, heat, sun, drought, and poor soils, agaves are very useful garden plants in hot arid regions. Rain water travels down the leaves and is channeled into succulent roots. Plants are able to store gallons of life-sustaining moisture, thus requiring little or no supplemental irrigation. Plant in the ground as stand-alone accents, or combine with native wildflowers or perennials to soften the look. Agaves are also excellent choices for container gardening. Since the fleshy, pointed leaves are usually tipped with thorns, avoid planting in high traffic areas.

Flowers produce copious amounts of nectar and pollen. Depending on the species, agave plants are pollinated by nectar-feeding bats, hummingbirds, or insects. In late summer, the fragrant nectar and pollen are major food sources for the bats as they head south for the Mexican tropics. Hawk moths are frequent visitors to the blooms, as are bees and other diurnal insects.

A small bird of arid regions that spends time foraging among agave stalks for insects at the flowers is the Ladder-backed Woodpecker. This diminutive woodpecker has bold black and white bars on its back and is often heard before it's seen—its call note is a sharp *pick* and it often vocalizes in flight, announcing itself with a rattling call. The Ladder-backed sometimes excavates cavities in agave stalks, creating natural nesting “boxes.” Don't hurry to remove dry stalks; they provide nest sites, perching places for many birds, as well as dramatic silhouettes in your garden.

Lynn Hassler  
Green Gardeners Volunteer Captain  
Historic Y



Emerging flower stalk; both photos by Lynn Hassler

# SOUTHEAST ARIZONA BIRDING FESTIVAL

Thank you to everyone who participated in the 14th annual Southeast Arizona Birding Festival, it was a huge success! It was the most well-attended festival to date and together we inspired many people to protect and enjoy birds in the region we love—the whole reason we do it!

We want to brag about a group of people who helped with a portion of the festival that you may not know about: Roadrunner Adventure Day (RAD). Sarah Gandaria and Nichole Engelmann, on behalf of the US Fish & Wildlife Service, stepped up to lead RAD. Together, with a group of volunteers, they hosted over 70 kids and their families at Reid Park on the Saturday of the festival. Music, food, face painting, and birds, what could be better? Thank you to all who supported this fun event!

We hope you will join us next year, August 6–10, 2025, to celebrate the birds and birding community of Southeast Arizona.



Announcing first bird of the festival, Matt Griffiths; Green Kingfisher, John Kramer

227 BIRD SPECIES

102

FIELD TRIP LEADERS & SPEAKERS

151

FIELD TRIPS

Dragonfly, Dax Quelland



Rivoli's Hummingbird, Peggy Steffens

902 TOTAL REGISTRANTS

10

COUNTRIES

43

STATES/ PROVINCES



Face painting at RAD, Sarah Gandaria



Paton Center field trip, Tom Brown

1,850

NATURE EXPO ATTENDEES

112

VOLUNTEERS

60

EXHIBITORS, SPONSORS, & PARTNERS



Donito Burgess cactus, April Bartholomew

# VOLUNTEER POWERED: A YEAR OF HABITAT RESTORATION AT PATON

Cally Wilken  
Mitigation Program Manager  
cwilken@tucsonaudubon.org



This fall marks the one-year anniversary of the Tucson Audubon Restoration Team's regular volunteer events at the Paton Center for Hummingbirds. Amazing work has been accomplished over the past year!

## JOHNSONGRASS WARRIORS

Last September, volunteers flocked to the Paton Center's "New Parcel" to begin tackling an unmitigated Johnsongrass infestation, a mature forest-like stand, up to 7 ft tall, over a 1.5-acre swath where not much else could grow. Johnsongrass is a nonnative invasive grass that thrives in areas with ground moisture and open canopy—the exact conditions present at our site next to Sonoita Creek.



What makes Johnsongrass so persistent and resilient is its ability to store carbohydrates in its rhizomes (root-like underground structures). If you repeatedly mow it or partially pull a plant out of the ground, it can regenerate from just a small piece of rhizome left behind. Volunteers took to the field with shovels and pickaxes, meticulously pulling the plants out by the root, leaving piles of dead plants and exposing live rhizome networks to die.

We found that most of the Johnsongrass that sprouted with this year's monsoon rains came from seed, which is exactly what we expected. This outcome shows the volunteers' work of treating the 1.5 acres was successful—it's much easier to deal with new seedlings than with mature plants with complex rhizome networks. Thanks to their hard work and dedication, our field crews have made progress in keeping the infestation at bay for the first time since we acquired the parcel.

LEFT: The Johnsongrass "forest" in summer 2023 before first treatment; MIDDLE: Volunteers digging dormant Johnsongrass out by the root in the fall of 2023. Left to right: Will Nelson, Carolyn Smith, David Christiana; RIGHT: Cottonwood seedlings in the Paton nursery, all of which are being planted this fall by Tucson Audubon staff and volunteers. Photos by Cally Wilken

## NATIVE PLANT CHAMPS

After months of mostly Johnsongrass work, volunteers began planting native species in the treated areas, including:

- Giant sacaton—a bunchgrass that provides durable ground cover, stabilizes soil, and stands firm against encroaching Johnsongrass.
- Netleaf hackberry—a medium-size tree that will help establish a healthy midstory canopy, alongside the elderberry trees we already have.
- Fremont cottonwood—a signature large tree in the Sonoita Creek riparian corridor, which provides invaluable habitat for birds and wildlife.
- Various milkweeds and other pollinator-supporting plants.



Volunteers' planting efforts helped support two grants that wrap up this December. One, from the Arizona Department of Forestry and Fire Management, focuses on invasive plant removal and replanting with native species. The other, from the Coronado National Forest, aims to establish a new generation of cottonwoods along Sonoita Creek. We were ambitious in

taking on two large grants at once, but we are on track to meet all goals, thanks in no small part to our volunteers.

## CONTINUING THE WORK

While we are leaps and bounds ahead of where we were a year ago, there is still a lot of work to be done. With temperatures cooling off in the fall, we are back to hosting two volunteer events each month—the first and third Wednesdays—and would love to see new and familiar faces alike! We will also likely plan one or two specialty events to finish our projects this year. Sign up for all events on our website and keep an eye on the volunteer e-newsletter for updates regarding additional opportunities.

# SURPRISES AT SWEETWATER

Alex Patia  
Sweetwater Wetlands Coordinator  
apatia@tucsonaudubon.org



## RARE AND NOT SO RARE BIRDS

The streak of rare birds at Sweetwater Wetlands in 2024 did not slow down this summer! On June 18, I observed a **Western Yellow-billed Cuckoo**, a threatened species that passes through Sweetwater during migration but has not bred... yet. This was probably my most exciting bird encounter of the year as it was paired with an especially fearless **Greater Roadrunner** at the same spot, a double cuckoo special! Easily the best sighting of summer came on June 25 when Steve Nord saw a **Scissor-tailed Flycatcher** passing through. Two **Black-bellied Whistling Ducks** arrived on July 2 and only stayed two days. I last observed the **Least Bitterns** on July 14 before the great storm of July 15. The high winds brought down many trees, closing Sweetwater for five days while the debris was cleared from trails. August 15 saw a female **Painted Bunting** among the large numbers of migrating **Lazuli Buntings** along the Santa Cruz River. The plentiful monsoon rains this summer have created especially lush vegetation on the river corridor and the birds have taken notice! I observed an odd sounding oriole on August 30, an apparent **Orchard Oriole**. With southbound birds already arriving in large numbers and a great monsoon season, who knows what other exciting birds will show up during fall migration!



## UPCOMING HABITAT RESTORATION PROJECTS AT SWEETWATER

Since May this year, Tucson Water has been battling invasive water lettuce that likely arrived in a dumped pet fish tank. Shortly after its arrival, most of the water birds that should have nested such as Mallards, Ruddy Ducks, Pied-billed Grebes, and American Coots, left as they could not swim through the thick mats of this tropical floating plant. Herbicide treatments were unsuccessful in containing the spread, so the eastern basin will be drained and burned in October. The water lettuce has to be completely eliminated; if any survives it will take over again in a couple of weeks. On August 29, a group including Tucson Water staff and Tucson Audubon volunteers donned waders and entered the water by the ramada with rakes and bags to remove as much water lettuce as possible ahead of the burn. The western basin will be burned on November 13 to manage the cattails, and the area will be deepened to allow the water to stay open. These efforts will improve habitat for the birds and allow better viewing for birders!

**Note: Sweetwater will be closed for two days following each burn.**



Yellow-billed Cuckoo seen on June 18 hiding in the canopy. Neotropic Cormorant sunning itself: an uncommon but welcome visitor! A fearless Greater Roadrunner investigates me near the other cuckoo sighting! A young Common Gallinule, one of the few water birds to successfully fledge at Sweetwater this year. A young Green Heron that likely hatched in the willow thickets at Sweetwater. All photos by Alex Patia.



# VOLUNTEERS ARE THE HEART AND SOUL OF THE DESERT NESTBOX PROGRAM!



CLOCKWISE FROM TOP LEFT: William Mortensen, Eagle Scout project; Flowing Wells High School builders; George Kleindienst building boxes; Olya Weekley and John-Lee Walker installing a Barn Owl box at Sweetwater Wetlands; hanging a Lucy's Warbler box at Casas del Norte; Saddlebrooke Woodworking Club

Over the years, our dedicated team of volunteer woodcrafters have built thousands of nestboxes used for research, fundraising, and public outreach. Budding young naturalists have played a key role in installing and maintaining these boxes between seasons, while community scientists have helped gather detailed nesting data. This valuable information led to the creation of a nestbox design tailored specifically for Lucy's Warblers. With this knowledge, we are better equipped to support this unique species as it faces the challenges of habitat loss.

Our volunteers pour their time (over 2,500 hours!), skills, and resources into making this Tucson Audubon program as strong and impactful as it is. Their passion and commitment not only support the wellbeing of local cavity-nesting birds but also foster a deeper connection between the community and nature.

Without their tireless efforts, the nestbox program simply wouldn't thrive as it does! Thank you!



Olya Weekley  
Applied Conservation Program Manager  
owekley@tucsonaudubon.org



Alexis Stark  
Volunteer & Engagement Coordinator  
astark@tucsonaudubon.org

# NATURE SHOP HOLIDAY SALE



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### Tucson Audubon Embroidered Patch

**\$6.50**  
Sale: \$3.90

This lovely embroidered patch features satin stitching and an iron-on glue backing and our vibrant logo, the Vermilion Flycatcher.



### Tucson Audubon Embroidered Field Hat

**\$26.00**  
Sale: \$15.60

Stay protected in style with the new version of our field hat, now featuring a back flap. Perfect for sunny days and camping, this hat features a neck flap and adjustable drawstring. A mesh vents keep you cool while the embroidered logo adds a touch of personality.



### Tucson Audubon Tumbler

**\$8.00**  
Sale: \$4.80

Introducing our 16oz tumbler, perfect for on-the-go sipping! With double wall insulation, this tumbler keeps your beverages hot or cold for longer. Plus, it's BPA free for added peace of mind. Hand wash for best results.



### Tucson Audubon Trogon S/S Tee

**\$28.00**  
Sale: \$16.80

This trogon tee boasts a robust military green hue and is made from 100% soft cotton. The shirt also features the crowd favorite and elusive Elegant Trogon!

Also available in forest green.



### Kids Tucson Audubon Flycatcher Tee

**\$24.00**  
Sale: \$14.40

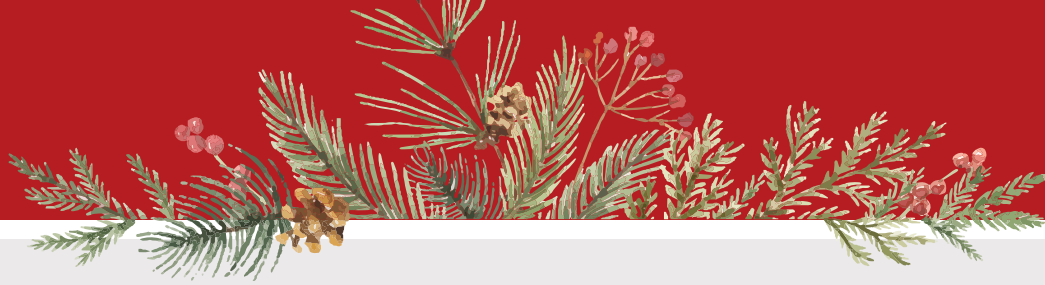
Our iconic vermilion flycatcher design, now available in kid's sizes! Awaken your kid's curiosity for conservation and birding with this comfortable, 100% cotton t-shirt.



### Tucson Audubon License Plate Cover

**\$3.00**  
Sale: \$1.80

Show off your true feelings on the road with this playful blue license plate cover! Featuring the slogan “I'd rather be birding!”, this plastic cover is the perfect addition to any vehicle.



**Elegant Trogon Wooden Ornament**  
\$8.00  
Sale: \$4.80

Easily recognized by the iridescent green back, scarlet breast and their unusual, stout-bodied profile, Elegant Trogons are a prized sighting for birders who visit Southeast Arizona! Commemorate your latest trogon sighting with this lovely wooden ornament.



**Cactus Boot Canvas Bag With Logo**  
\$24.00  
Sale: \$14.40

Introducing our adorable canvas bag, the perfect substitute for pesky plastic grocery bags! Sturdy and stylish, this tote features a whimsical design with desert birds, cacti, and a cowboy boot, as well as our logo!



**Tucson Audubon Zipper Pull**  
\$4.00  
Sale: \$2.40

Add a pop of personality to your jacket with our logo zipper pull. This small enamel charm is easier to grab than most common apparel zippers for those with dexterity issues!



**Tucson Audubon Trucker Hats**  
\$20.00  
Sale: \$12.00

Awesome trucker hats with the Tucson Audubon logo (black or camo) or Southeast Arizona Birding Festival logo (black only). Adjustable, one size fits all.



**Paton Center for Hummingbirds Lapel Tee**  
\$34.00  
Sale: \$20.40

Crafted from 100% pre-washed cotton, this sky blue, unisex shirt features a back print and one-of-a-kind lapel accent. Stay cool and comfortable while boldly showing your support for the Paton Center for Hummingbirds!



**Tucson Audubon Magnet Stamp**  
\$4.00  
Sale: \$2.40

Jazz up your fridge with our magnet stamp! Made in the USA with acrylic, this unique stamp-shaped magnet features a stunning photo of a Costa's Hummingbird.



**Tucson Audubon Aluminum Bottle with Straw**  
\$24.00  
Sale: \$14.40

This eco-friendly bottle features a charming cactus design and the Tucson Audubon logo. Sip sustainably and in style knowing it's made and designed right here in Tucson. Hydration never looked so good!



**Audubon II Western Tanager Stuffed Animal with Sound 5.5"**  
\$9.95  
Sale: \$6.00

This delightful stuffed animal captures the essence of the Western Tanager species with its authentic bird sound and lifelike design. Join us in fostering a love for wildlife and inspiring young explorers! Our online store has many more of your favorite species.



FIND UPCOMING EVENTS AND REGISTER AT:  
[TUCSONAUDUBON.ORG/NEWS-EVENTS](https://TUCSONAUDUBON.ORG/NEWS-EVENTS)

October–December: every first & third Wednesday, 10am–12pm  
**PATON CENTER HABITAT RESTORATION VOLUNTEER DAYS**  
 Help us restore habitat for birds at the Paton Center! Volunteers will help pull and remove invasive Johnsongrass and other problem species near the Paton house. Must be able to walk on uneven terrain and through thick brush, stand for long periods of time, and operate a shovel. We are looking for 10–15 volunteers for each date. Registration required.

October 3, 11am, Virtual Presentation hosted by Hunt’s Photo & Video  
**ETHICAL WILDLIFE PHOTOGRAPHY with Keith Wallace**  
 Join Keith for an educational journey from birding to creative backlight. Learn all the best practices for ethically photographing birds and wildlife, while gaining an understanding of storytelling through imagery. Keith’s work has been published with local and regional non-profits, environmental agencies, and wildlife foundations.

October 20 and November 2, In-person Event  
**BIRDING AND CANVASSING AT REID & LAKESIDE PARKS with Environmental Voter Project**  
 Meet up with fellow volunteers for a joyful morning of birding and non-partisan canvassing. We will mobilize registered voters who care deeply about the environment and climate change but need some encouragement to vote in upcoming elections. Add to the fun by joining us for optional pre-canvassing birding! Long-time and first-time canvassers are all welcome.

October 22, 11am–12pm, Virtual Presentation  
**WHERE TO GO BIRDING IN THE WINTER with Luke Safford**  
 The winter months offer fantastic opportunities for a variety of raptors, waterfowl, longspurs, and more. Of course thousands of Sandhill Cranes in the Sulphur Springs Valley is always a draw, and we’ll touch on Whitewater, but less well-known locations will be discussed too!

November 19, 11am–12pm, Virtual Event  
**SHOW US YOUR BIRD with Luke Safford**  
 This will be an interactive virtual event that depends on YOU sharing your bird pictures with us! Send Luke your recent, or favorite, bird picture and we’ll take the opportunity to hear your bird story, talk through its identification (maybe you don’t know what species it is!), and discuss the hotspot where you found it. Not only will this be fun, but we’ll learn some tips on identifying birds and discover new birding locations. Feel free to join, even if you don’t have a picture to share!



November 22, 6–8pm, In-person Event  
**BIRDS N BINGO**  
 Come out to Bawker Bawker Cider House for some birds, brews, and bingo! Put your bird ID knowledge to the test, compete to win sweet birdy prizes, and sip some of the best cider in town with friends from Tucson Audubon!

November, Date TBD  
**FIELD TRIP LEADER TRAINING**  
 Over the last year, Tucson Audubon led over 300 field trips throughout Southeast Arizona, and as proud of that as we are, we want to continue to lead more people on more outings, to new and exciting places. If you are interested in becoming a field trip leader, and helping to further our mission of inspiring people to enjoy and protect birds, this is the training for you!

December 5, 11am, Virtual Presentation hosted by Hunt’s Photo & Video  
**BIRD PHOTOGRAPHY IN THE DESERT: CHALLENGES AND OPPORTUNITIES with Henry Doyle**  
 Wildlife photographer Henry Doyle recently visited Tucson for a week-long birding trip. Join him as he goes through his trip and the shots he took, from Vermilion Flycatchers to Yellow-eyed Juncos. Henry will also discuss the challenges of shooting in the desert as well as the opportunities presented in this unique environment.

December 14 through January 5  
**CHRISTMAS BIRD COUNTS**  
 National Audubon Society has conducted these counts since 1900! Volunteer help is needed on a variety of count locations across Arizona; all skill levels are welcome. Participate in one or many! For the complete list, contact info, and to sign up, visit: [TUCSONAUDUBON.ORG/CBC](https://TUCSONAUDUBON.ORG/CBC).

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# WOO HOOT!

## BIRDY NEWS BITES WORTH CELEBRATING

### DESERT PURPLE MARTIN MEGA-ROOST FOUND IN SAHUARITA!

This summer marked the fourth year of the Desert Purple Martin Project through Tucson Audubon. We've been investigating this intriguing subspecies by mapping over 200 nesting saguaros and determining their breeding timeline in detail. Evening roosts are an important social function of martin behavior, and we've known about a large roost along the San Pedro River near Mammoth since 2013, but we'd been unable to pin down others. This August, a large roost site in Sahuarita was finally pinpointed north of the Green Valley Water Reclamation Facility in the pecan orchards! We watched as thousands of martins wheeled around, socializing and hunting insects. Just before sunset, they funneled down to a few specific pecan trees to roost, a spectacular display of flight agility and teamwork. It was so exciting that we went a few evenings later to watch again. We plan to go earlier and more often next summer to discover even more information. We're already looking forward to next year's Desert Purple Martin work!



Desert Purple Martins gather in Sahuarita before roosting in the pecan orchards, Richard Fray

## GIFTS IN HONOR OR MEMORY OF

- In memory of Anne MacFarland from Jennie MacFarland
- In memory of Daniel Fowler from Sheila Edwards
- In honor of Dolores Ludolph from Zach Ludolph
- In memory of Dominga Jimenez from Julia Pena
- In memory of Grace & Stanley from Lori Butler
- In memory of Ian Kuhl from Kelley Binder
- In honor of Jayne & David Raffety from Lindsey McNulty
- In honor of Jean Taylor from Kaety Byerley
- In memory of Joan Northway from Laura Bolyard
- In honor of Julia Gordon from the Windibrow Foundation
- In honor of Laurie McCoy from Melonee Nichols
- In honor of Matt Griffiths from Sue Fletcher
- In honor of Mike Mardis from Donna & Mike Mardis
- In honor of Milly Lierman from Melissa Fitzgerald
- In memory of Natalia Duarte from Lynn Freeman
- In memory of Paul Cooke from Nancy Cooke
- In memory of Peter Ruh from Kernan Ruh
- In memory of William Mangun from Jean Mangun



Burrowing Owl, Dan Weisz

# SHARE YOUR “NEST” WITH THE BIRDS!

This spring I installed a Lucy’s Warbler nestbox at my home. There are no mature mesquites on the property so I put it in a large desert willow. I’d seen Lucy’s Warblers in nearby mesquites so I was hopeful they wouldn’t mind a change from their usual tree of choice.

Within a month I started seeing signs of a nest being made but only once did I actually see a bird. I was especially surprised then when my partner said he saw chicks in the nest! How had these birds laid eggs and incubated them without me ever spotting them? I’ve now learned they are notoriously sneaky birds.

I was set on getting new photos of a Lucy’s Warbler using a nestbox to put in our Nestbox Program’s marketing material. I balanced myself on the brick wall of my yard and waited. Both parents came close but were aware of my presence and would not show me the location of the nest. My consolation prize was having a juvenile Northern Cardinal come check me out and the almost constant buzz of a Broad-billed Hummingbird as background noise. I abandoned my roost and plotted a new plan.

The next time I set up a ladder on the opposite side of the wall from the tree. In addition to being partially hidden by the wall, it was also tucked into a large hopseed bush. I found my new perch and settled in. This new plan worked! Within a few minutes the parents were alternating visiting the nest. I could finally see there were three chicks inside who eagerly stretched their necks out each time a parent approached. I was excited to get a few photos but more interested to find a deep sense of gratitude for these birds and their way of adapting to sharing a world with us.

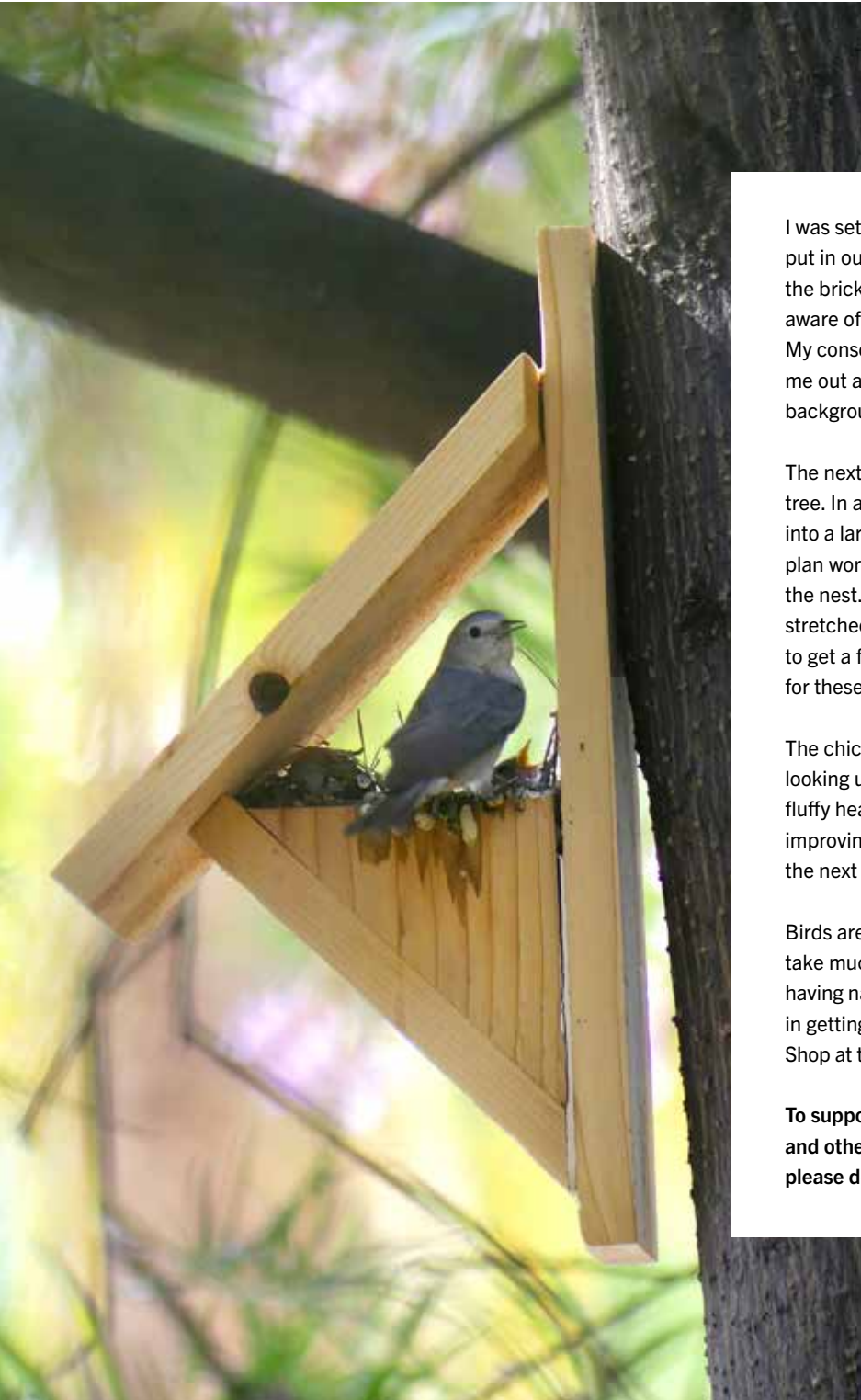
The chicks fledged months ago but I still find myself automatically looking up at the nestbox in hopes of catching a glimpse of the chicks’ fluffy heads. As we head towards cooler weather, I plan to continue improving habitat around my house to be as welcoming as possible for the next Lucy’s Warbler family or whomever else wants to move in!

Birds are one of the most accessible wonders of nature and it doesn’t take much to make your own backyard more inviting, whether it’s by having native plants, water, food, or a nestbox or two. If you are interested in getting your own nestbox, or as a unique gift, please visit our Nature Shop at the Historic Y or shop online at: [TUCSONAUDUBON.ORG/SHOP](https://TUCSONAUDUBON.ORG/SHOP).

**To support Tucson Audubon’s Nestbox Program  
and other important habitat improvement projects,  
please donate today!**



Erica Freese  
*Director of Development & Communications*  
[efreese@tucsonaudubon.org](mailto:efreese@tucsonaudubon.org)



Lucy’s Warbler family in nestbox, Erica Freese

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Sandhill Cranes, David Quanrud



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