

VERMILION FLYCATCHER

TUCSON AUDUBON

Spring 2022 | Vol 67 No 2



BIRD SONG

TUCSON AUDUBON SOCIETY

TUCSONAUDUBON.ORG
Spring 2022 | Vol 67 No 2

MISSION

Tucson Audubon inspires people to enjoy and protect birds through recreation, education, conservation, and restoration of the environment upon which we all depend.

TUCSON AUDUBON SOCIETY

300 E University Blvd. #120, Tucson, AZ 85705
TEL 520-629-0510 · FAX 520-232-5477

BOARD OF DIRECTORS

Linda McNulty, *President*
Colleen Cacy, *Vice President*
Colleen Cacy, *Secretary*
Cynthia VerDuin, *Treasurer*

Michael T. Bogan, Alberto Burquéz, Jeanne Calhoun, Richard Carlson, Tricia Gerrodette, Kathy Jacobs, Elisabeth (Lissie) Jaquette, Riana Johnson, Cynthia Pruett

STAFF

Emanuel Arnautovic, *Invasive Plant Strike Team*
Howard Buchanan, *Sonoita Creek Watershed Specialist*
Tony Figueroa, *Invasive Plant Program Manager*
Erica Freese, *Grant Development Specialist*
Matt Griffiths, *Communications Coordinator*
Kari Hackney, *Urban Habitat Restoration Manager*
Jonathan Horst, *Director of Conservation & Research*
Kirsten Howe, *Community Engagement Coordinator*
Saff Killingsworth, *Restoration Project Manager*
isaiah kortright, *In-house Strike Team*
Rodd Lancaster, *Field Crew Supervisor*
Dan Lehman, *Field Crew*
Kim Lopez, *Finance & Operations Director*
Jennie MacFarland, *Bird Conservation Biologist*
Kim Matsushino, *Habitat at Home Coordinator*
Michael McDonald, *Executive Director*
Janel Miller, *Retail Manager*
Richard Morris, *Invasive Plant Strike Team*
Ethan Myerson, *Director of Development & Communications*
Ben Parry-Lemon, *Invasive Plant Strike Team*
Jenna Rabe, *In-house Strike Team*
Jonah Reyes, *In-house Strike Team*
Ryan Ritter, *Communications Manager*
David Robinson, *Conservation Advocate*
Diana Rosenblum, *Membership & Development Coordinator*
Dusty Rowen, *In-house Strike Team*
Taylor Rubin, *Volunteer & Education Manager*
Luke Safford, *Director of Engagement & Education*
Karin Sharp, *Bookkeeper*
Jay Snowdon, *Invasive Plant Project Manager*
Furey Stirrat, *In-house Strike Team*
Roswitha Tausiani, *Retail Assistant*
Olya Weekley, *Community Science Coordinator*
Cally Wilken, *Mitigation Program Manager*
Jaemin Wilson, *Invasive Plant Strike Team Lead*
Matthew Wonsik, *In-house Strike Team*
Tasha Youngs, *In-house Strike Team*
Erin Zylstra, *Community Science Manager*

NATURE SHOPS + NATURE CENTERS

Nature Shop: tucsonaudubon.org/nature-shop
Mason Center: tucsonaudubon.org/mason
Paton Center for Hummingbirds: tucsonaudubon.org/paton

VERMILION FLYCATCHER is published quarterly.
Call 520-209-1802 for address changes or subscription issues.

Vermilion Flycatcher Production Team

Matt Griffiths, *Editor-in-Chief*
Melina Lew, *Design*

© 2022 Tucson Audubon Society; All photos © the photographer

CONTENTS

- 02 Almanac of Birds: April to June
- 04 Interpreting the “Language” of Birds
- 07 Birding By Ear—A Deeper Appreciation of Nature
- 08 The Sounds of Surveys: Increasing Accuracy with Recordings
- 11 Arizona Birding History
- 12 Snakes of Southeastern Arizona
- 14 Habitat at Home Plant Profile
- 15 Annual Report
- 19 Youth in Conservation
- 20 Paton Center for Hummingbirds
- 24 Volunteers
- 25 Birds + Community
- 27 Birds Benefit Business Alliance
- 29 The Final Chirp



HEAR AND SEE THE BIRDS IN THIS ISSUE!

Scan the QR codes to listen to songs and see videos of the birds on those pages. Alternatively, visit TUCSONAUDUBON.ORG/BIRDSONG to find all the birds in the entire issue.



ON THE COVER

Lucy's Warbler by Hemant Kishan. Hemant, who blogs and Flickr-posts under his nom de plume of “digitalplumehunter,” pursues his mission of “Bearing photographic witness to the visual brilliance of our avifauna” with zeal and passion and is particularly fond of the varied birdlife in the Tucson area.

ABOVE: Phainopepla, Mick Thompson

THE UPLIFTING FULL VOICE OF A PLACE

Dear Friends:

Our annual Birdathon is coming soon: April 8 through May 8. As a way to express your solidarity with Tucson Audubon's important bird and bird habitat conservation work, please consider starting a team, joining one, and of course sponsoring one or more teams!

Having spent my whole life here in southern Arizona—and now enjoying it with the 5th generation of our family—undoubtedly our clan's 2022 Birdathon team will include a month-long "home patch" birdcount across the yards of our various households. But I might still sneak away on a hike or two to catch a glimpse of the species that don't regularly visit midtown Tucson.

While I so enjoy the daily birdsong that comes in waves across my garden from various sparrows and finches and flycatchers, Curved-billed Thrashers, Gila Woodpeckers, Northern Cardinals, Abert's Towhees, Anna's hummers, ravens, Cooper's Hawks, and assorted other species—a cacophony of full-throated song giving voice to the life of the natural world in the midst of the perennial rushing of human life across our city—I also long to connect to the plaintive song of a solitary bird calling out across a vast remote landscape and patiently listening in all that silence for a return call.

In the dead of winter, I once spent many days alone in a remote, off-the-grid hermit's hut in the desert foothills at the southernmost end of the Galiuro Mountains. Sitting or perambulating in what I initially experienced as the utter and nearly oppressive silence of that seemingly empty landscape,

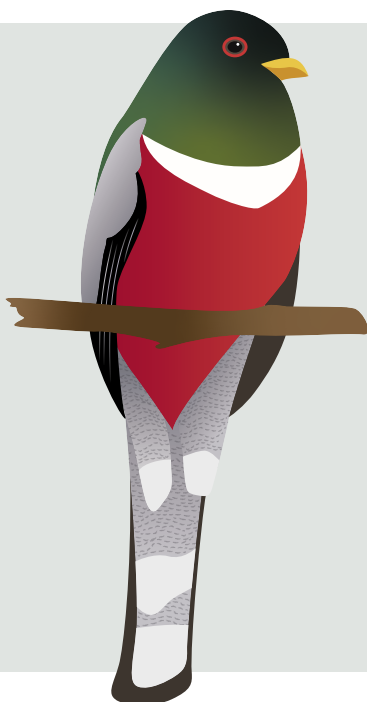
I was waiting to hear, once I'd quieted the internal city-rush of agitation that had become my interior world, what, if anything, would stir or call out in the emptiness of what had become my own barren interior landscape.

By day two, I had calmed down enough to simply become an organ of listening across those cloudless yet chilly winter days and interminably long nights. At first slowly, and then suddenly, both from within and from without, the fullness of life crept back in upon me, including a daily visitation from a male Phainopepla, who'd I'd previously heard faintly off in the distance. He decided to stick around throughout the remainder of my desert sojourn, probably because of a patch of healthy looking mistletoe nearby. Most of the time the two of us companioned one another in curious silence, although throughout the day he'd routinely call out, presumably to some prospective, hoped-for mate. And before I realized it, his song got me singing some of my own improvised wordless melodies, which I swear seemed to initially startle him. Thereafter, our remaining days together were filled with the call and response of song. Days later, I left there with a renewed sense of joy and a transformed spirit. That's what birdsong—the full-throated voice of a place—can still do for me, and I hope, for all of our spirits.



Yours in conservation and community partnership,

Michael McDonald
Executive Director



TUCSON AUDUBON All Together, We Are Southeast Arizona

A LEADING VOICE AND ADVOCATE FOR SOUTHEAST ARIZONA'S
BIRDS AND THEIR UNIQUE HABITATS FOR OVER 70 YEARS

Member benefits:

- Direct support of bird conservation in Southeast Arizona
- Guided birding field trips
- 10% discount in our Nature Shops
- *Vermilion Flycatcher* news magazine
- Discounts on Tucson Audubon classes and events
- Special social gatherings and Birds & Community presentations

Become a member today at TUCSONAUDUBON.ORG/JOIN.

ALMANAC of BIRDS

APRIL to JUNE

Enjoying birds is an auditory experience as much as a visual one. Early spring is the great time of year when Bell's Vireos and Lucy's Warblers return to Southeast Arizona and their lively songs signal the changing seasons.

Matt Griffiths
Communications Coordinator
mgriffiths@tucsonaudubon.org



BELL'S VIREO

One of the most distinctive bird sounds in Southeast Arizona, you know Bell's Vireos have arrived after a winter on the west coast of Mexico when you hear their loud and scratchy two-phrase *cheedle cheedle chee? Cheedle cheedle chew!* song. This "primary song" that really does sound like the bird is asking a question, and then answering it, consists of a rapid sequence of different notes that shows a remarkable variability in structure and demonstrates this species's tendency to alternate pairs of songs. Completely unknown among the primary songs of all other songbirds, male Bell's Vireos sing in alternating pairs, or couplets, that are repeated numerous times before switching to another pair. Singing throughout the summer, you'll most likely hear this song long before you spot the bird as this species inhabits the dense undergrowth of our riparian areas, desert washes, lower oak woodlands, and mesquite bosques. The Least Bell's Vireo, a subspecies in California, was listed as federally Endangered in 1986. To benefit the birds here, you might attract a "greenlet," as this vireo is otherwise known, by planting a native species such as desert hackberry and letting a portion of your yard get overgrown and thick.

LUCY'S WARBLER

Another small bird with a big voice, the Lucy's Warbler has a lot in common with the Bell's Vireo. It arrives in the Tucson area about the same time, to very similar habitat, and you'll most likely hear it before you see it. Its song is a typical run of warbler *whee-tees* somewhat reminiscent of Yellow Warbler and consisting of eight or nine syllables accelerating toward the end. Unlike the vireo, Lucy's go quiet after breeding and become much more difficult to find—you'll have to rely on their sharp, metallic *pink* calls for the rest of summer. It is the smallest of our New World warblers nesting in the most arid habitats of any North American warbler: the mesquite bosques and adjacent riparian forests of Arizona and New Mexico. Also known as the "mesquite warbler" and "desert warbler," Lucy's Warblers are one of only two warblers that nest in cavities. They use Gila Woodpecker holes, old Verdin nests, and all manner of tiny spaces, but by far they prefer to nest in the loose bark crevices of our native velvet mesquite trees. Lucy's Warbler is threatened locally by the loss of these trees. To counteract this, Tucson Audubon's nestbox program is building boxes and getting them out into the community. Add one to your yard today!



Bell's Vireo, Hemant Kishan; Lucy's Warbler, Hemant Kishan
OPPOSITE: Canyon Wren, Greg Lavaty

BIRD SONG

There may not be many experiences in Southeast Arizona more fulfilling and calming than listening to the cascading whistles of the Canyon Wren's loud song echoing off stoney canyon walls. The sense of place these sounds create are at once healing and inspiring. Bird song can mean many things to people, but it's been shown that hearing some songs can offer relief from mental fatigue and stress. The origins of this may go back to when humans lived outside—all is probably safe if our bird neighbors feel comfortable enough to sing.

Birds too rely on song to remain safe, but it also means much more to them. They use songs to relay messages of their health to would-be mates, as well as impress them, and to defend territories. The urge to sing is innate in true songbirds, but specific songs and patterns must be learned. These amazing sounds are produced by the syrinx, a two-sided vocal organ where each side is independently controlled, allowing birds to produce two unrelated pitches at once. The out-of-this-world songs made by thrushes and other birds would be impossible without it!

No matter which bird songs resonate with you, listening to and learning more about them is an opportunity to feel more connected to birds and with the world in general.



INTERPRETING THE “LANGUAGE” OF BIRDS

It was a moonless night in the desert as we meandered along on our walk. Suddenly the Elf Owls went berserk with panicked alarm calls. They had young in their nests which already made them edgy, but the intensity of the alarms (and other factors) indicated to me that a mountain lion was moving unseen through the brush. The folks on the walk were skeptical, not believing anyone could know it was a lion just from the alarm calls. After we had moved on, one of the party went back to get the vehicle. He came back white as a sheet and still trembling and said he saw the lion and it huffed at him. Instantly the group were believers and keenly interested to learn more about bird language.

Birds are always communicating, mostly with sounds and vocalizations, but they also use body language, behavior, and visual cues. Birds must be constantly alert, aware, and observant to survive. Very little escapes their notice. Birds are everywhere and frequently vocalizing, making them a great source of information to us, providing we can interpret their language.

Learning the different species' languages and signals allows us to discover what's happening around us in nature. To understand that the Cactus Wren is telling everyone that there's a rattlesnake under that bush, or

that a father quail is alerting his young that a coyote is nearby, or that the chickadee is warning us that a kestrel is lurking about, opens a new dimension of richness, excitement and fun in nature. We not only see more wildlife and have deeper, more meaningful encounters, we become part of nature and gain a sense of connection and belonging.

Learning the basic types of bird calls—contact, song, aggression, feeding, and alarms—gives us a baseline soundscape to work from. We might then immediately notice a sound (or silence) out of the ordinary, know which bird is responsible, and have a better sense of what it may mean.

Birds are always listening and depend on their fantastic hearing to keep apprised of what's happening. They often make soft contact calls while they are feeding to keep in touch and let their mates or flock members know where they are. They also key in on other feeding sounds, such as towhees scratching in the leaf litter. This lets the birds know all is well and everyone is safe. Song is another indicator that the birds feel secure enough to engage in their normal activities and there are probably no predators in the area.



Cactus Wren, Greg Lavaty

Male birds sing during mating season (spring or monsoon in Southeast Arizona) to attract mates and defend territory. A female can discern a male's health, age, and experience from his song. An older male's age indicates that he's a survivor and probably has accrued some wisdom in the ways of the wild, thus should have beneficial genes and be a good provider for offspring. A male sings in the morning to maintain and defend his territory and let neighbors know he's survived another night. This saves energy as other males can tell he's strong and healthy, so they avoid challenging him to a fight for his territory.

Aggression calls are usually between males of a species and are lower pitched than alarm calls. When a Northern Flicker is having a dustup with an intruding flicker, this is noted but ignored by other birds. Although these loud scuffles may sound like alarm calls to us, if other birds are carrying on as usual, then this is just a personal problem between the flickers. It's when birds give alarm calls, or when contact, feeding calls and songs suddenly stop, that all other birds and animals pause and pay attention, knowing that there's a predator nearby. Even birds quite a distance away immediately notice the cessation of calls and listen to determine if the predator is moving in their direction.

Alarm calls are distinctive and many are unmistakable (even if you don't know the species calling) and give the most information about specific predators or humans. They are listened to and understood by animals across species. I was watching a gang of jackrabbits feeding, dust bathing, and socializing when a pair of ravens perched nearby yelled an alarm call. All the jacks instantly stopped and stared at the ravens, waiting alertly. After a few minutes had passed with no further alarm calls from the ravens, the jacks returned to feeding.

Birds are usually the first to give an alarm as they often have a higher vantage point to survey the landscape and spot predators. Also, the warnings can be specific—not just that it's an aerial or ground predator, but that it's a Cooper's Hawk, rattlesnake, bobcat, or coyote (which all hunt differently and require different evasive tactics). Chickadees have different

alarm calls that even include information about how high or low a raptor is flying, how fast it is, and the degree of danger it presents. Alarm calls tend to be short and higher pitched since long calls would make it easier for a predator to key in on the location of the caller. Some birds can even produce a ventriloquial effect (House Finch, Dark-eyed Junco, Yellow-rumped Warbler, among others)!

Silence is a dramatic alarm. Birds may freeze or slip deeper into the foliage to hide, indicating the predator is right there and it's too dangerous to call. Other sounds also function as alarm calls, such as a covey of quail bursting into flight.

Different birds have specific alarm calls which we can easily learn, enabling us to see more wildlife and interactions. Cactus Wrens vocalize a specific call to warn of rattlesnakes and another to indicate a roadrunner (a nest predator). Mockingbirds make a specific call for an oncoming Cooper's Hawk. Quail, with their many predators, give alarm calls for everything from coyotes and bobcats to snakes or people.

Birds make other sounds in addition to their calls (not counting the non-vocal sounds of vibrating wing or tail feathers of hummingbirds, nighthawks, and mourning doves). Teenage male hummingbirds sometimes "whisper sing". They hide in dense foliage to softly practice their songs, which can only be heard in close proximity, so as not to challenge any adult males.

Birds' beauty and wonderful songs bring us so much joy. But when we learn to interpret bird language (by focused observation and deep listening), we enrich our lives and connect on a much deeper level, with the birds, with nature, and with ourselves.

Learn about bird sounds at ACADEMY.ALLABOUTBIRDS.ORG/BIRDSONG.



Pinau Merlin is a nationally known speaker, naturalist, and writer. She is the author of several books and over 80 articles about the wildlife, natural history, and ecology of the Desert Southwest.



A Northern Flicker dustup, Keith Williams; Common Raven, Dan Weisz; Gambel's Quail, Cathy Wasson



MIMICRY

Birds who are mimics can reproduce the sounds, songs, and calls of other bird species. Some birds mimic calls (often of a predator) as a defense or to trick other birds. Blue Jays are known to mimic a hawk call, then zoom in towards a group of birds at a feeder or food source screaming an alarm call about the hawk it just mimicked. As the birds flee in a panic, the jay takes over the feeder. Other birds, like thrashers and mockingbirds, mimic other birds' songs mostly to impress females with their large repertoires.

Using mimicry can be an important line of defense. Phainopeplas can mimic the calls of a Red-tailed Hawk or kestrel when captured, possibly shocking the predator into releasing the "speaking in tongues" Phainopepla. Baby Northern Flickers in their nest cavity mimic the sound of a hive of bees when a shadow darkens the entrance hole, and Burrowing Owl nestlings can mimic the sound of a buzzing rattlesnake when a coyote or badger sticks its nose in their burrow. This may be enough to cause a predator to reconsider his menu choices!



Northern Mockingbird, Mick Thompson

BODY LANGUAGE

Birds also communicate with body language—posture, behavior, and visual clues. Watching bird behavior is one of the most fun ways to discover what's going on in nature. I was sitting quietly hidden in the brush along a desert wash, when I noticed a sequence of songbirds popping up higher in the bushes and trees, then dropping down again, indicating that either a coyote or bobcat was moving along below. Birds jump up just high enough (conserving energy) to be out of reach of a leaping predator, so how high they jump alerts us to which predator it likely is. Moments later a bobcat appeared and crossed the wash before disappearing again in the vegetation. No matter how stealthily he moved, it was easy to track his progress by the birds' reactions, hopping up out of reach and dropping down again after he passed by. Most disturbances generate a particular pattern of response behavior in the birds and that pattern can often tell us which predator is behind it.

—Pinau Merlin



WHAT'S YOUR FAVORITE BIRD SOUND?

Jeff: The majestic sound of the Red-tailed Hawk embodies the feel of the southwest for me.

Diane: The sound of a Great Horned Owl excites me because it signals that I might be able to catch a glimpse of one of these magnificent creatures. The distinctness of their hooting call is like a beam of light in the night, illuminating the wonders of darkness.



Jeff Vollin and Diane Foray, Members



I live in Virginia part of the year, and with the coming of fall I love the sound of big flocks of Canada Geese flying over. It brings up images of the cool, crisp days ahead, turning leaves, pumpkins, fall mums—one of the best seasons!

Nancy Naeser, Field trip participant



It's hard to think of a favorite bird and its song without also thinking of the favorite places and the memories they created. My favorite bird song belongs to the Canyon Wren. Their song is an unmistakable cascade of happy, descending notes.

Linda Elling, Volunteer

HONORABLE MENTION:

Brown-headed Cowbird liquidy song, Diana Rosenblum
 Turkey Vulture hissing/grunting, Taylor Rubin
 Wilson's Snipe winnowing, Luke Safford



Red-winged Blackbird, Lois Manowitz

BIRDING BY EAR— A DEEPER APPRECIATION OF NATURE

Several years after I discovered birding, I began to lose my vision due to a genetic condition called retinitis pigmentosa, which destroys the function of retinal rod cells. Today I retain only a small, central window of sight, which comprises about 2% of the visual field of healthy eyes. This “tunnel vision” often makes it challenging to see birds.

My disability gave me extra incentive to develop good ear-birding skills. Initially, bird sounds simply helped me point my eyes in the best general direction. After becoming more familiar with songs and calls, and more confident with my identifications, it resulted in more accurate reporting—my eBird lists started to contain more and more “heard-only” birds. Now, these constitute the majority of ticks on my local checklists, and I don’t even bother to note them as such.

Yet, when it came to life birds, I continued to accept the idea that one had to see a species for it to *truly* count. During bird outings at distant locales, this would inevitably lead to a lot of frustration. Our most cost-effective trips are usually to tropical forests, as their species diversity is so high. But many of their denizens, such as various antbirds and tapaculos, are extremely difficult for me to see in the dim and impenetrable cover. Still, they were *right there*, singing and calling. I eventually realized that identification by voice (which I verify and document via recordings) was no less accurate than by sight. My biggest thrill now is to capture quality audio of a bird—especially of a new, life bird—and contribute it to a research center such as the Macaulay Library at Cornell. They’ve used some of my recordings to train their Merlin application, which is very rewarding. But most importantly, I have come to appreciate that the experience of a “heard-only” bird is no less valid or wonderful than that of a “seen-only” bird.



Michael Hurben is a low-vision, global birder living in Bloomington, Minnesota.

While there certainly are birders whose study of birds is strictly visual, many birders also rely heavily on what they hear. Visual observation is restricted to the direction you happen to be facing at any given time, but sound has no such restriction. Your range of hearing spans the entire 360 degrees of the compass.

I have derived great pleasure from “birding by ear” since my college days in the 1970s when my biology professor introduced me to it by asking me to learn recorded bird sounds while my sighted classmates were busy dissecting frogs. My final exam consisted of a walk in the woods with my professor, during which I was expected to identify some of the sounds we heard.

Over the years, my interest in birds has made me more aware of my surroundings, and it has provided a link to the outdoors and to a part of the world that most people fail to notice or enjoy only by seeing. When traveling, one of the first things I detect when I get out of a vehicle is the sound of whatever birds happen to be vocalizing. I’m always on the lookout for a good opportunity to record a bird I have yet to add to my sounds collection. In my neighborhood, there’s nothing more uplifting than the sound of the first robin in the spring or the *conqueree* sound of the Red-winged Blackbird announcing that winter is over for another year.

Birding by ear has been fun to learn, and it has given me some common ground with sighted birders. More than anything else, though, it has raised my consciousness and afforded me a deeper appreciation of some of the miracles of nature that can help make life on earth a truly beautiful and uplifting adventure.



Jerry Berrier is a 69-year-old birder who has been totally blind from birth

THE SOUNDS OF SURVEYS INCREASING ACCURACY WITH RECORDINGS

When conducting a bird survey, having the ability to identify bird species by their vocalizations is extremely useful and increases the accuracy of the count. This is vital when birds are skulking in thick vegetation or flying over quickly. It's always helpful, of course, to see a bird and get more clues to their identity, but birds often don't show themselves.

Technology has opened new doors when it comes to gathering scientific data, including the field of recording bird sounds. This is also true for recreational birding, with apps like Merlin that now have an option to "listen" and identify a sound in the field. It is imperfect now, but the possibilities are very exciting. Similar technology can also be utilized by automated recording units (ARUs) as part of a larger survey effort. Tucson Audubon has been on this fun and fascinating journey for several years.

Our Conservation Department first used this technology in the summer of 2015, using recorders loaned to us. As part of the large survey effort for Western Yellow-billed Cuckoos on the Coronado National Forest, we placed a Wildlife Acoustics SM4 Sound Recorder on each of the survey routes. They were put in locations that minimized the odds of being broken or stolen, usually hiding them on large trees.

Sound recorders work especially well when targeting specific bird species and can be programmed to record ambient sound at specified times, their high quality microphones picking up birds songs and calls very well. For the Yellow-billed Cuckoo surveys, we decided that several hours in the morning and evening would work best. The batteries and SD memory cards had to be changed every two weeks, which coincided well with these twice-monthly surveys.

At the end of the survey season, a volunteer for the Coronado National Forest used special software to analyze over 15,000 hours of audio files and then sent us sound clips of positive audio detections of cuckoos. Some of the routes had zero detections, and it was gratifying to have this match our in-person survey results. However, some routes did have cuckoo recordings with date and time noted, and it was so exciting to see how often cuckoos were detected in one area during the whole two month survey window. The technology worked so well that Tucson Audubon now has its own recorders.



A sound recorder placed at a grassland tank, Jennie MacFarland

In the last few years, Tucson Audubon has deployed its small collection of sound recorders to help with several surveys:

CHESTNUT-COLLARED LONGSPUR

These sparrow-like birds are one of the highest priorities for the Important Bird Areas program, and one of the top three fastest declining bird species in North America. Wintering in Chihuahuan Desert Grassland, these highly vocal birds mainly eat the seeds of native grasses and disperse widely in flocks, making them difficult to count accurately. Because they need to drink water throughout the day to help digest the seeds, placing sound recorders near ponds has helped us determine how frequently flocks visit, and which ponds they use most. We are learning what makes an ideal pond, and this information can be used by land owners and managers to guide management decisions for the longspurs' benefit.



ELF OWL

We canceled our April 2020 in-person Elf Owl surveys of Saguaro National Park and Tucson Mountain Park, but on the last day before COVID restrictions went into effect, we were able to place recorders along washes in areas we hadn't surveyed before. We're also exploring how different phases of the moon affect how often Elf Owls call on specific nights.



LUCY'S WARBLER

Every March, singing Lucy's Warblers are a harbinger of spring. On arrival, males sing quite a lot. Our sound recorders can help us determine exactly when they arrive in Tucson, and whether they show up in drainages, rivers, and mesquite zones at the same time each spring.



PURPLE MARTIN

Our desert subspecies of Purple Martin forms large groups before heading south on migration. But when do they actually leave? We will be using sound recorders this summer to help answer this very question!



Listen to a sample survey recording at the QR code below.



Jennie MacFarland,
Bird Conservation Biologist
jmacfarland@tucsonaudubon.org

Chestnut-collared Longspur, Alan Schmierer; Elf Owl, Greg Iavaty; Lucy's Warbler, Hemant Kishan; Purple Martin, Scott Olmstead

SUPERLATIVE SINGERS



LOUDEST BIRD SOUND

The White Bellbird has the loudest call of any bird. It may be unsafe for human ears at a close distance: 125 decibels, 9 decibels louder than the Screaming Piha.

White Bellbird, Hector Bottai



MOST SONGS

The Brown Thrasher has over 2000 songs in its repertoire, increasing a male's attractiveness to females.

Brown Thrasher, Hemant Kishan



BEST SONG

Some say the melodious tunes of the Hermit Thrush are one of the finest sounds in nature.

Hermit Thrush, Greg Lavaty



LONGEST SONG

The Sedge Warbler produces some of the longest and most complicated of all bird songs. With roughly 50 phrases at its disposal, an individual male may never repeat the same sequence during the course of his life!

Sedge Warbler, Stephen Gidley



BEST MIMIC

The famed Superb Lyrebird can imitate the whirring of a camera's motor drive, the click of a shutter, a car alarm, and even the screech of the chainsaw!

Superb Lyrebird, Brian Ralphs

BIRDS SOUNDS QUIZ

How well do you know the songs of some of Southeast Arizona's birds? Find answers at the QR code below.

- 1 *who cooks for you*
- 2 *ko-ah ko-ah ko-ah*
- 3 *ka-ka-ka-ka-ka-kow-kow-kowp, kowp, kowp, kowp*
- 4 *whit-weet whit-weet*
- 5 *chi-ca-go-go*
- 6 *witchety-witchety-witchety*



SOUTHEAST ARIZONA BIRDS: THE MISSING TRACKS

This free, five-album collection includes the unique songs and calls of our regional specialties that are missing from more general birding apps. It is now permanently archived at American Birding Association's website for online listening or offline download to a smartphone. Check out this new valuable resource at ABA.ORG/SEAZ-TRACKS.

BIRDS ENCORE PERFORMANCE



SUNDAY, APRIL 24, 2022

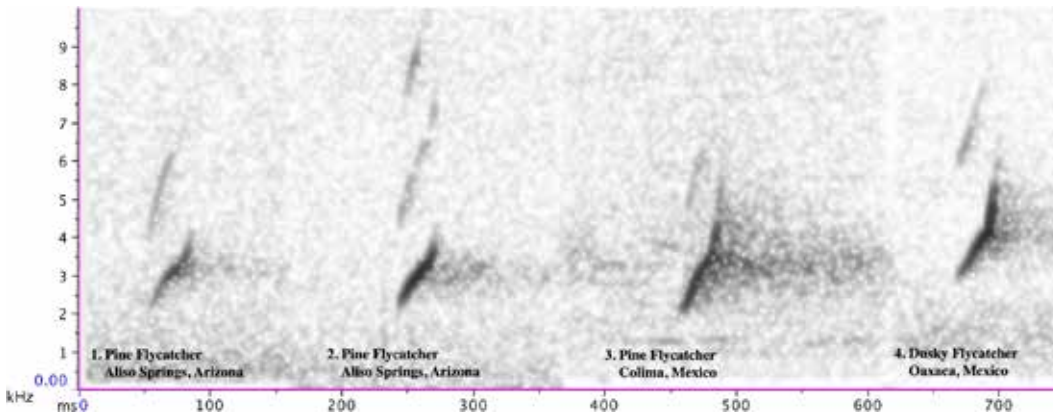
The World According to Sound has teamed up with BirdNote and Cornell's Lab of Ornithology to take you on a virtual sonic exploration of all things avian. You will hear the world's most complex songs, a series of antiphonal duets, slowed down birds, extinct birds, loud birds, quiet birds, and birds that sound like laughter. After the program, there will be a live Q&A with a member of the Lab who will answer your questions about birds and sound. For 25% off tickets use the code "BirdsEncore25" at THEWORLDACCORDINGTOSOUND.ORG/TICKETS.



USING SOUND TO IDENTIFY RARE BIRDS IN ARIZONA

The importance of learning the songs and calls of birds can't be overstated. Whether one is birding their local patch, or traveling further afield, finding (and identifying) birds often requires more than just getting them in your binoculars. Knowing what species occur in different habitats is important, and actually finding birds is greatly facilitated by learning the sounds they make. This has become even more important in the eBird era. Not only is it important to record what we see, but it's also important to record what

species found in Mexico that is VERY similar to our Ash-throated Flycatcher. Field characters alone (even when documented with excellent photos) may not be sufficient to definitively identify the species, but their vocalizations are very different! Will Russell found a Nutting's Flycatcher wintering at Patagonia Lake by noting the distinctive weep call, and he knew that it was different from the common *pip* call of Ash-throated. Recordings of this individual were instrumental in the acceptance of the record.



we hear if we are to come close to accurately documenting what birds are present. There are numerous ways to access bird recordings today for learning purposes, from sites such as XENO-CANTO.ORG and the Macaulay Library, to the “Merlin” app, which has multiple examples of songs and calls for every species and can even identify your bird recording for you!

Bird songs and calls have played an important historical role in documenting several species in Arizona, such as Black-capped Gnatcatcher, Eared Quetzal, and Arizona's only documented record of Swainson's Warbler. One of the more famous sightings in the region was a Nutting's Flycatcher, a

species found in Mexico that is VERY similar to our Ash-throated Flycatcher. Field characters alone (even when documented with excellent photos) may not be sufficient to definitively identify the species, but their vocalizations are very different! Most birders have great difficulty identifying *Empidonax* in general, and similar species are usually a nightmare, but learning the call notes can be a great help. David heard a *whit* note in very late May, knew that it sounded like either a Dusky or Gray Flycatcher, and that neither was likely at that location that late in the season. He tracked it down, photographed it, and recorded the call notes. Chris Benesh analyzed the calls using sonograms (a visual representation of a sound showing the frequency and duration of its elements, see image above), and he compared them to known recordings of both Dusky and Pine. Amazingly, they matched Pine Flycatcher! Without these recordings, and the analysis that showed very subtle, but definitive differences, this bird probably wouldn't have been recorded as the first of its species in the United States.

Even more amazing was the discovery of a Pine Flycatcher at Aliso Springs by David Stejskal in 2016, establishing a first record for Arizona and the United States (being seen by hundreds of birders!). Pine Flycatcher is an *Empidonax* flycatcher that can be very similar to Dusky Flycatcher in both appearance and vocalizations. Most birders have great difficulty identifying *Empidonax* in general, and similar species are usually a

nightmare, but learning the call notes can be a great help. David heard a *whit* note in very late May, knew that it sounded like either a Dusky or Gray Flycatcher, and that neither was likely at that location that late in the season. He tracked it down, photographed it, and recorded the call notes. Chris Benesh analyzed the calls using sonograms (a visual representation of a sound showing the frequency and duration of its elements, see image above), and he compared them to known recordings of both Dusky and Pine. Amazingly, they matched Pine Flycatcher! Without these recordings, and the analysis that showed very subtle, but definitive differences, this bird probably wouldn't have been recorded as the first of its species in the United States.



Gary Rosenberg is Secretary of the Arizona Bird Committee and co-author of the season bar graphs section of *Finding Birds in Southeast Arizona*.



SNAKES OF SOUTHEASTERN ARIZONA

Southeastern Arizona lies at a convergence of biotic communities: the Sonoran Desert from the west and southwest, the Chihuahuan Desert from the east and southeast, short-grass prairies from the Great Plains, Mogollon Rim and Rocky Mountain woodlands and forests from the north, Sierra Madrean influences from the southeast, elements of subtropical foothills thornscrub from the south, and our homegrown desert grasslands. All of these biomes intermingle to form one of the most biodiverse regions in the country. That biodiversity extends to the serpents of our area and, depending on how you draw the boundaries, about 51 species of snakes occur here. That's 85% of all snake species in Arizona. Carnivorous, and often nocturnal and secretive, they range in size from the diminutive Brahminy Blindsnake (≤ 8 inches, our only introduced snake species) to the Gophersnake (≤ 7.8 feet in Arizona). Unlike birds that are relatively visible and vocal, snakes can be difficult to see. That is especially the case for birders who are usually not looking at the ground, although a number of our snake species can be found high up in trees (California Kingsnakes, Coachwhips, and Whipsnakes). But if you get out into the field beyond the cities, you are bound to encounter some of our slithery friends.

The Western Diamond-backed Rattlesnake is perhaps the most commonly encountered snake in our area. The largest diamond-backs in Arizona are about 5.5 feet in length, but individuals over four feet are uncommon. Ten species of rattlesnakes inhabit southeastern Arizona. All are dangerously venomous, but by and large, rattlesnakes do not want to draw attention to themselves. Probably all of us have walked right by a coiled rattlesnake. They only rattle if they feel particularly threatened. Most bites are to people

who try to pick them up or who step on one. Our sky islands are habitat for three rattlers (Ridge-nosed, Twin-spotted, and Rock) that have their origins deep in the Sierra Madre Occidental. The Arizona Black Rattlesnake comes from the north, and the Sidewinder is a Sonoran Desert species. Rounding out our dangerously venomous snakes is the small (≤ 23 inches) Sonoran Coralsnake. Although it has a potent venom, it rarely bites.

Other commonly seen snakes in our area, all of which can be active by day, include the Coachwhip (a fast snake of many colors), the Gophersnake, two species of patch-nosed snake, and the Black-necked Gartersnake. Southeastern Arizona hosts four species of gartersnakes, which tend to be found in wetlands and riparian areas frequented by birders.

As with birders, snake enthusiasts are intrigued by snakes of subtropical areas to the south, and in our area, the best corridor for animals from the south is where the desert meets the sky island region: the Río Bambuto/Magdalena Valley and adjacent mountains to the south of Nogales. Thornscrub Hook-nosed Snake, Neotropical Vinesnake, Green Ratsnake, and others enter Arizona from this slipstream subtropical conduit, which is also important for birds such as the Rose-throated Becard, Green Kingfisher, and Five-striped Sparrow.

For further information, consult the following books: *A Field Guide to Amphibians and Reptiles in Arizona* (2022), *Snakes of Arizona* (2020), and *Rattlesnakes of Arizona* (2016).

Jim Rorabaugh has worked in Arizona and Sonora as a herpetologist for the last few decades. He is also an avid bird watcher, nature nut, and conservation advocate





BLACK-TAILED RATTLESNAKE (≤ 52 inches): The most common rattlesnake of sky island montane woodlands, it also occurs north to the Mogollon Rim and in desert mountain ranges westward to the Yuma area.



COACHWHIP (≤ 80 inches): Red, pink, tan, to all black, or combinations thereof, this variable snake is very fast and also quick to bite if picked up (it is not venomous). Common in valleys and bajadas.



DESERT KINGSSNAKE (≤ 60 inches): In lowlands and bajadas from Tucson eastward into New Mexico. The similar California Kingsnake is more banded than speckled and occurs mostly west and north of Tucson. Intergrades are found across southeastern Arizona.



GOPHERSNAKE (≤ 94 inches): A common snake from the low deserts into montane foothills, this large constrictor is rare at high elevations in the mountains. A modified glottis allows it to hiss very loudly.



THREE-LINED BOA (≤ 30 inches): Arizona has two true boas, including this one that just barely enters our area from the west, and the pink-striped Rosy Boa in western Arizona. Boa Constrictors have been found in Sonora a mere 45 miles south of the border.



MEXICAN GARTERSNAKE (≤ 34 inches): Eliminated from all but a few wetlands in southeastern Arizona, this species is listed as Threatened on the Endangered Species List. The New Mexico Ridge-nosed Rattlesnake of the Peloncillo Mountains is also listed as Threatened.



HOODED NIGHTSNAKE (≤ 26 inches): Common on bajadas and lower, rocky slopes, this species has yet to be formally described. Two other similar nightsnakes occur in our area.



NEOTROPICAL VINESNAKE (≤ 60 inches): A tropical species that just barely enters Arizona, this surprisingly slender species hunts lizards in shrubs and low trees, and is very difficult to spot amidst the branches and vines.



ROCK RATTLESNAKE (≤ 31 inches): One of three small, Sierra Madrean rattlesnakes that occur in the sky islands. As the name implies, this species is often found in or near rock outcrops and talus slopes.



SONORAN MOUNTAIN KINGSSNAKE (≤ 63 inches): While searching for Eared Quetzals or Aztec Thrushes in rocky, wooded canyons of the sky islands, you might be lucky enough to run across one of these beauties.



YAQUI BLACK-HEADED SNAKE (≤ 13 inches): Another snake that just barely enters the U.S. from Mexico, this is a secretive, montane snake in our area. Three other similar black-headed snakes occur in southeastern Arizona.



WESTERN DIAMOND-BACKED RATTLESNAKE (≤ 66 inches): An adaptable species found from low desert valleys to about 5,000 feet in our area. Most rattlesnake bites in Arizona are attributable to this species.

RED HESPERALOE / RED YUCCA / CORAL YUCCA



Photo by Lynn Hassler



Lynn Hassler
Green Gardeners Volunteer Captain
Historic Y

SCIENTIFIC NAME: *Hesperaloe parviflora*

FAMILY: Agavaceae (Agave)*

NATIVE RANGE: From central Texas south into adjacent Mexico at elevations of 1900–6500 feet

WILDLIFE VALUE: Long-blooming flowers attract night-flying moths and a variety of other pollinators as well as hummingbirds, Verdins, and House Finches. Shredding leaf margins used for nesting material

Stalwart and often used in southwestern landscapes, you may see red hesperaloe/red yucca growing along roadway median strips, where it blooms like crazy throughout the warm season. Think about ambient daytime temperatures of say 100 degrees; couple that with additional generated heat from surrounding asphalt and concrete; top it off with car exhaust and no supplemental irrigation, and you've pretty much got a bulletproof plant.

Red hesperaloe (my preferred common name because it's not a true yucca) is stemless and clumping, slow growing to about 3 feet high and 3–4 feet wide. Arching dark green leaves have loose fibers on their edges, prime material for nest building. I've watched goldfinches collecting the fibers, and it's likely that other birds do so as well.

The flowering season of red hesperaloe is satisfyingly long. From spring through summer flashy coral-red flowers bloom on spikes up to 6 feet tall. The nectar-rich, tubular-shaped blossoms are highly sought after by hummingbirds and are also visited by a variety of pollinators. Verdins and House Finches pierce the flower bases to access nectar. There is a yellow-flowering form, but it is not as striking.

Easy to grow, red hesperaloes do best in full sun with good drainage. Once established, they can survive on less than 11 inches of annual rainfall and are hardy to zero degrees. The only maintenance required is removing dead flower stalks following bloom. Plants are useful for filling barren spots in newly planted gardens, for lining driveways, walkways, or large beds—also excellent around swimming pools (not messy), against hot walls, and attractive in large containers or planters. Plant them alone as accent specimens, or try tucking them among boulders, or massing with other low water users.

*Some taxonomists now place agaves in the Asparagus family (Asparagaceae)

NOTEWORTHY ACHIEVEMENTS



DEAR FRIENDS OF TUCSON AUDUBON,

Like you, I find comfort and joy in the songs of our Sonoran Desert and Madrean Sky Island birds. Strolling through Sweetwater Wetlands, the Cuckoo Corridor at our Paton Center for Hummingbirds, or the trails on mountain ranges is always a delight, with dozens of avian voices joining together in a masterful choral performance.

My six-year journey as a volunteer board member for Tucson Audubon has been a similar delight. I've heard a multitude of voices joining together to ensure the long term success of our mission. Your financial gifts and commitments as members and donors have led the chorus of support that sustains us. Government grants, earned revenue at our Nature Shop and other programs, Festival and event attendance fees have chimed in, to allow our work to grow in impact each year.

I'm pleased to share with you the 2021 Annual Report. More than just a financial snapshot, this is a record of the successes that you have helped our staff and volunteers achieve in 2021. We have secured funding to engage in a long-term project to restore saguaro cactus habitat. We have continued our vital work in community science. We've brought more people into our festivals and field trips and have expanded our capacity in a number of areas. **In short, we've reached new heights in our mission of inspiring the public to enjoy and protect birds.**

I hope your year is filled with the sweet song of our local birds, and filled as well with the comfort and joy of knowing Tucson Audubon has a bright future ahead.



Mary Walker

Mary Walker
Board President



CONSERVATION

- Tucson Audubon staff worked on conservation projects in **AZ, CO, KS, NM, OK, TX, UT, & WY** in 2021!
- The **5.5-ACRE PLOT** between the Paton Center and TNC's Patagonia-Sonoita Creek Preserve was successfully purchased completing a contiguous **2-MILE CORRIDOR** of Sonoita Creek under conservation status
- Successfully launched a brand-new program, **BIRD-SAFE BUILDINGS**, with **120 PROGRAM PARTICIPANTS** to continue our effort of reducing hazards to birds. Distributed **814 FREE ANTI-COLLISION DECAL KITS** to the public
- Installed **17 OWL BOXES AT 16 COMMUNITY GARDENS** of Tucson for mutual benefit of owl habitat and pest control for the gardens
- **218 ELF OWLS** found during surveys with Saguaro NP and Pima County
- **2,167 LUCY'S WARBLER NESTBOXES** installed on the landscape
- Partnered with Arizona Department of Environmental Quality in their **COMMUNITY SCIENCE** effort to gather water quality and flow data along Sonoita Creek

Invasive plant treatment in Mansfield Canyon, Santa Ritas, Tony Figueroa; Kari Hackney planting Arizona eryngo in the Paton Center stream, Dan Lehman; Paton Center Pavilion, Jeff Goldberg/ESTO; Lucy's Warbler feeding young in a nestbox, Paula Redinger; Vermilion Flycatcher, David Quanrud

RESTORATION

- **HABITAT AT HOME: 40 new registrants**, sold **888 PLANTS** during seasonal plant sales, completed **6 HOME HABITAT EVALUATIONS** and **6 HABITAT INSTALLS**
- **CORAZON SIN FUEGO:** With Northwest Fire, completed **8 FIREBREAKS** in the Santa Cruz river to limit fire spread and keep the community safe, and removed **15 ACRES** of invasive saltcedar paving the way for a major riparian restoration project by the county
- Saguaro Climate Adaptation and Post-Burn Restoration Project funded by **3 GRANTS FOR OVER \$500K** throughout Southeast AZ
- Completed a **REFUGIA POND** and stream for desert pupfish in the Patagonia Mountains

RESEARCH

- Our partners on **WESTERN YELLOW-BILLED CUCKOO REFUGIA MODELING** made a presentation to the annual meeting of The Wildlife Society
- **DESERT PURPLE MARTINS:** We made the first official documentation of multiple concurrent martin nests in a single saguaro (9!) and have identified **114 SAGUAROS WITH MARTIN NESTS**
- Our **TUCSON BIRD COUNT** data is being used to inform University of Arizona research on urban habitat



INVASIVE PLANTS

- Secured organizational business license for invasive plant control leading to securing a **5-YEAR MASTER AGREEMENT** with Pima County
- Created the **IN-HOUSE INVASIVE PLANT STRIKE TEAM** with **7 STAFF** working on projects with 3 HOAs and numerous private landowners
- The Federal Strike Team worked at **9 NATIONAL PARKS** and **MONUMENTS** and **10 WILDLIFE REFUGES** throughout AZ, NM, and OK
- Created an **INVASIVE PLANT MANAGEMENT PLAN** for Luke Air Force Base and their auxiliary sites
- Excellent work controlling invasive plants in the Santa Rita Mountains for the Coronado National Forest has led to a **3-YEAR EXTENSION** of that mine-reclamation project



BIRDS + COMMUNITY

SOUTHEAST ARIZONA BIRDING FESTIVAL

- **690 ATTENDEES** from **33 STATES** and **6 COUNTRIES**
- **116 BIRDING FIELD TRIPS**; **216 BIRD SPECIES** seen

VIRTUAL AND IN-PERSON EVENTS

- **8,716 PARTICIPANTS** at **89 EVENTS**

BIRDATHON

- **51 TEAMS** of **135 PEOPLE** collectively found roughly **200 BIRD SPECIES**
- **\$113,816.35** funds raised to support Tucson Audubon's work (48% increase)

FIELD TRIP PROGRAM

- Shared the wonders of birds with **1,460 ATTENDEES** on **162 BIRDING FIELD TRIPS**

VOLUNTEER WORK

- **384 VOLUNTEERS** logged **7,263 HOURS** for a value of **\$207,286** (based on the Independent Sector rate)

NATURE SHOP

- *Finding Birds in Southeast Arizona* guide: **545 COPIES SOLD** and **\$11,463** in sales (216% increase)
- **IN-PERSON SHOP VISITORS: 2,074**
- **ONLINE ORDERS: 17,563 VISITORS** generated **1,379 ORDERS** and **\$58,360** in sales (35.7% increase in orders shipped)
- **OVERALL SALES: 10,325 ITEMS** sold and **\$340,600** in sales (34.6% increase)

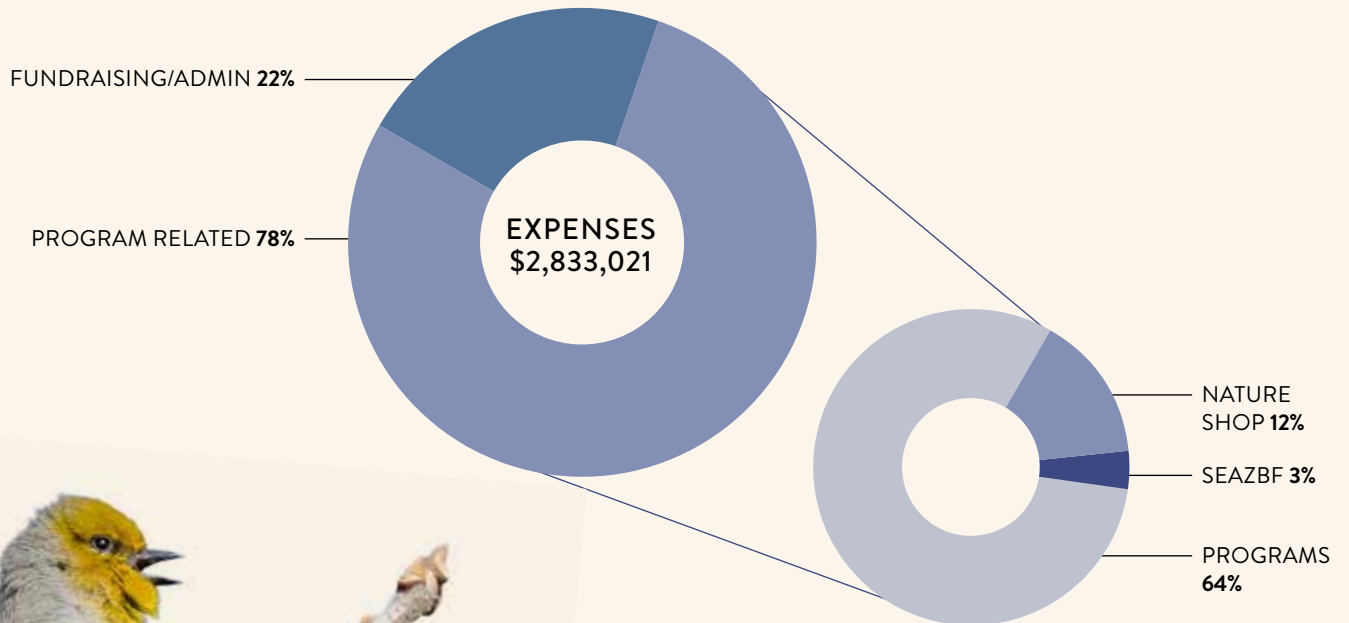
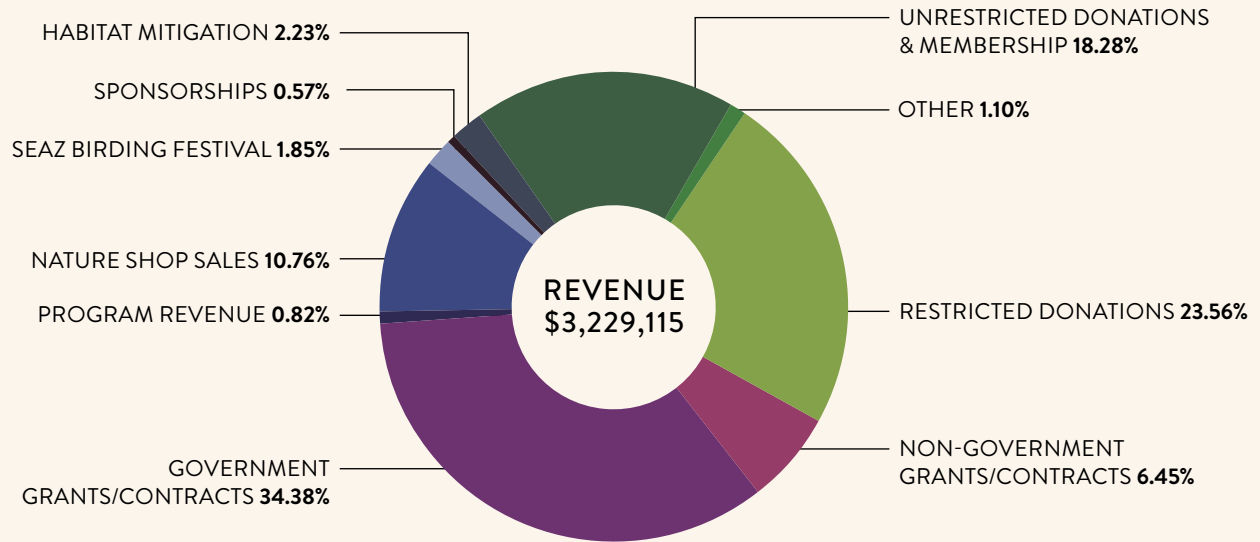
MEMBERSHIP, DONORS, SOCIAL MEDIA

- **INCREASED MEMBERSHIPS BY 5.12%**, representing roughly **3,347 INDIVIDUALS**
- Received contributions from **1,508 DONORS**
- **INCREASED OUR SOCIAL MEDIA FOLLOWING TO 24,600**, an increase of 13%

PATON CENTER

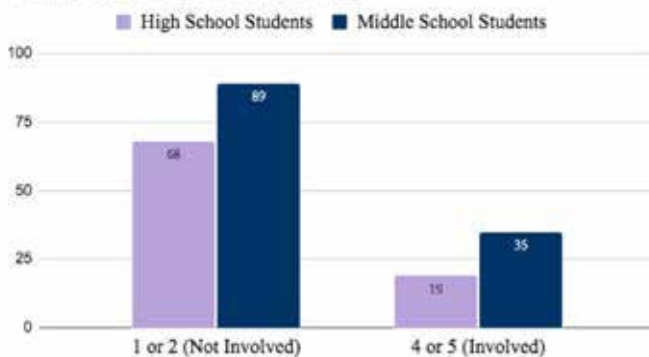
- Daily operations and visitor services handled by **16 DEDICATED VOLUNTEERS**
- **188 BIRD SPECIES** seen (eBird)

2021 FINANCIALS



IDENTIFYING BARRIERS TO YOUTH INVOLVEMENT IN CONSERVATION

Youth Involvement In Conservation

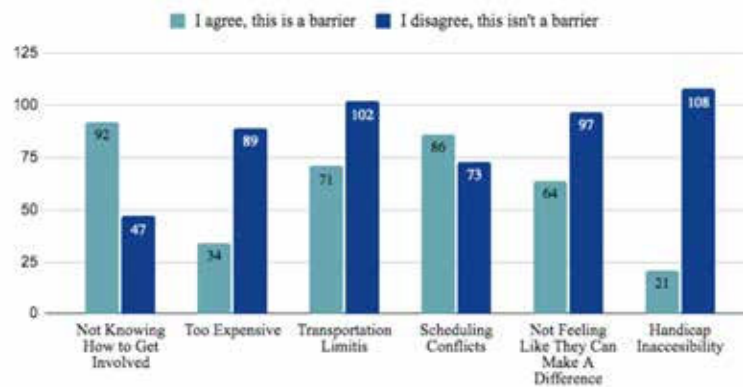


Despite my desire and ability to engage in environmental advocacy, I've experienced barriers to becoming more involved. As a Youth Engagement Intern with Tucson Audubon, I sought to explore this issue by surveying 290 students from Tucson to examine and bring awareness to the most important barriers students face preventing them from becoming involved in environmental conservation.

My starting assumption was that youth engagement in conservation in Tucson was low. Our survey confirmed this assumption, as only 18.6% of students reported being involved or very involved. First, we investigated student attitudes towards environmental conservation: interest and importance. The majority of students did not report an interest in becoming involved with conservation. However, 100% of middle school students and 65% of high school students responded that environmental conservation is either important or very important. In other words, although students know that environmental conservation is important, lack of interest is a potential barrier to their involvement in it.

We also investigated potential indirect barriers, such as time spent outdoors and awareness of conservation issues through various channels. Although lack of time spent outdoors does not appear to be a potential barrier, there is a notable lack of awareness of conservation issues, specifically those that Tucson Audubon focuses on. Students did not report hearing about conservation issues from parents, friends, social media, organizations like Tucson Audubon, or from teachers. Additionally, students reported a lack of formal education around conservation, especially in high school—middle school students reported participating in conservation lessons three times more often than high-school students.

What Do Youth Identify As Barriers To Becoming Involved In Environmental Conservation



We also asked students to identify direct barriers to involvement in environmental conservation, such as not knowing how to get involved, program costs, transportation limitations, scheduling conflicts, and handicap inaccessibility. Our results showed that the only issues more students agreed were barriers to involvement were scheduling conflicts and not knowing how to get involved.

Finally, we used logistic regression to determine which of these barriers best predicted youth involvement in environmental conservation. The results showed that no single barrier is a significant predictor of youth involvement. However, hearing about specific environmental issues from a range of sources, having school lessons, and spending time outside can together predict how involved students are in environmental conservation. This predictive model becomes more accurate when we include how important students believe conservation is and how interested students are in becoming involved with environmental protection. If environmental organizations developed a way to get youth more involved while considering these barriers, the world could be a different place. I truly believe my generation can solve this crisis, we just need to be given the ability and chance to do so.

For a more in-depth discussion of these survey results read the blog post at [BIT.LY/VEFL_YOUTH](https://bit.ly/VEFL_YOUTH).



Ruby Lenertz, a senior at City High School and the Youth Engagement Intern with Tucson Audubon, has been involved with environmental advocacy since freshman year.

ENSURING THE RIPARIAN CHORUS LASTS LONG INTO THE FUTURE



Gray Hawk in a cottonwood tree, Ariana La Porte; gallery forest on Tucson Audubon's new parcel, Kari Hackney; TNC's Patagonia-Sonoita Creek Preserve, Lily Douglas

The faintest tinge of green is just beginning to color the pale gray winter bones of the giant Fremont cottonwood trees that draw a connect-the-dots style line along Sonoita Creek. The trees are uniformly massive, most exceeding 80 feet in height with canopy spreads that nearly match. These are the trees anchoring the critical habitat value of the Sonoita Creek corridor, and for the protection of which The Nature Conservancy (TNC) created the Patagonia-Sonoita Creek Preserve, the downstream neighbor of the Paton Center for Hummingbirds. These are the trees which host innumerable bird species—migrating warblers foraging on the tiny insects covering the nascent buds, crying Gray Hawks and squawking Great Blue Herons nesting high in the branches, *knowlping* Western Yellow-billed Cuckoos feeding their young with caterpillars plucked from the mature leaves, and so many more.

While these trees in all their magnificence inspire awe, one doesn't have to look closely to notice some cracks in the façade, an unraveling stitch in the pattern. A dead branch here, a dead tree there, the results of both natural old age and the stresses of adapting to the ongoing intense regional drought for which last summer's brilliant monsoon offered only a temporary respite. More importantly, where's the next generation? Where are the seedlings, saplings, and middle-aged trees to be the giant sentries when the current ones die? Unfortunately, they don't exist—there have been no new cottonwoods established along the creek since the flood of 1983.

As trees that have tied their lives to streams and riverbanks, cottonwood populations need disturbance. Yes, floods can topple healthy individuals (and pose many risks to humans living closeby). But without floods and the disturbance they bring, the conditions for new cottonwoods to naturally grow ceases to exist.

This spring Tucson Audubon is launching a project to intentionally establish a new generation of Fremont cottonwoods on our 11 acres and within TNC's Preserve. This project will include collecting seed later this spring and having it grown by a couple local nurseries. That way we're sure that the genes of the trees we'll plant along the creek match those that have thrived along Sonoita Creek for milenia.

After only a couple years these fast-growing, seed-grown trees should be 10–20' tall and already starting to serve as good foraging habitat for cuckoos and other species. In time, they will replace the massive trees we see dotting the sides of the creek today, and the creekside will remain awash in the sounds of birds.

You may wonder why we aren't using the common shortcut to cottonwood establishment by using "pole plantings." A couple reasons: Poles are best harvested from young trees with long straight limbs. These old trees have inaccessible, giant limbs that are 80' up! Also, poles create clones, so the remixed genes from seed will put us on better footing long into the future. Finally, planted poles must be placed in the water table. Even right next to the creek, that would be 20' in most areas, and digging a 20' hole just doesn't sound reasonable!



Jonathan Horst
Director of Conservation & Research
jhorst@tucsonaudubon.org



SONG SPARROW

An exuberant song erupts from an elderberry bough, a brush pile, or a thick sedge tussock at Tucson Audubon's Paton Center for Hummingbirds. It consists of a pleasing trill introduced by a fanfare of crisp, clear notes, and ends with a few more of the same as a brief encore. Folks visiting from many parts of North America might recognize this as a familiar tune from their backyard or garden. It's a Song Sparrow, and since that name can only be awarded to one species, the one that was given the scientific name *Melospiza melodia* is as good a choice as any. Some have likened the introductory notes of its song to the beginning of Beethoven's Fifth Symphony. While the key and chord progression might be off, the pacing of the notes and their bold and abrupt nature make this an apt comparison.

While visitors may recognize the song, they may be puzzled when they spot the singer. The subspecies that is resident in Southeast Arizona is lighter colored than those from other parts of the species's range. The medium to dark browns of other Song Sparrows' plumage is replaced in ours by a paler orangish brown, sometimes leading them to be mistaken for Fox Sparrows. Song Sparrows are one of the streakiest of sparrows on their undersides, but our resident birds are marked with streaks that not only sport the telltale paler ruddy color of this form, but are also reduced in number. This allows more of the white base

color of the breast and belly to show through, rendering the bird paler still. Identification is more challenging in the winter, when we also have members of the darker-plumaged migratory northern subspecies of Song Sparrow visiting, along with Lincoln's Sparrows, and rarely, even an actual Fox Sparrow. Song Sparrows occur year-round at the Paton Center, but they and all their aforementioned streaky-breasted relatives are outnumbered from October through April by the abundant plain-breasted White-crowned Sparrows. When summer arrives, though, Song Sparrows are the most likely sparrow to be seen.

A habitat generalist in much of its range, in Southeast Arizona the scarcity of water strictly limits Song Sparrows to riparian areas. They're often easy to see at the Paton Center, though they occur all along Sonoita Creek, as well as along the Santa Cruz and San Pedro Rivers wherever there is dense enough vegetation to provide food, cover, and suitable sites for nesting. The restoration work that Tucson Audubon has done on their adjacent property just upstream from the Paton yard (nick-named the "Cuckoo Corridor") has improved this habitat for Song Sparrows and many other species. The acquisition of the property on the downstream side of the yard will help assure that Sonoita Creek continues to offer a long, continuous swath of good habitat for Arizona's foxy Song Sparrows.

Louie Dombroski
Paton Center Birder-In-Residence



Song Sparrow, Tom Brown

Investment Protection • Life Care • Bountiful Amenities



be
yourself



AN APPROACH TO SENIOR LIVING SO UNEXPECTED, IT'S TURNING HEADS

Just when you thought you had senior living all figured out, discover why Splendido stands out from the crowd. Well-appointed homes and services to suit your style—all in a dynamic Life Plan Community that's uniquely designed with the future in mind, so you can live life with confidence.

(520) 762.4084 | SplendidoTucson.com | Oro Valley, AZ



SOUTHEAST ARIZONA BIRDING FESTIVAL

AUGUST 10-14, 2022

Registration opens Tuesday, April 26
See the schedule and register at:
TUCSONAUDUBON.ORG/FESTIVAL

Held at the DoubleTree by Hilton Hotel at Reid Park

Join us this August as we celebrate the diversity of bird life in Southeast Arizona. Explore new and favorite locations with expert field trip leaders, share a drink with other birders from around the globe, and make connections between the birds we love and the conservation work being done to preserve them.



PRESENTED BY



VOLUNTEER SPOTLIGHT: TUCSON AUDUBON'S MEMBER LIBRARY

This quarter, I want to shine the spotlight on Sherry Massie, Volunteer Librarian for Tucson Audubon. Sherry has been volunteering with Tucson Audubon and our Library since 2010. She had previously worked as the Library and Archivist for the Department of Defense so you might say that she knows a thing or two about libraries! She started working with David West, the original Tucson Audubon librarian, but soon she took the reins and ran with them.

Sherry explained that “while the initial collection was organized by subject, [she] felt a better way to access it would be using Library of Congress (LC) Cataloging. . .with an online catalog” which launched in 2013. This huge undertaking was made possible by Sherry’s tireless efforts, expert knowledge, and a generous bequest from the estate of member and volunteer Eugene Loring. Have I mentioned how amazing Tucson Audubon volunteers are? Deservedly so, Sherry won the Volunteer of the Year award that year. To date, the online catalog is still up and running and the library has about 2000 volumes. Wow!

Sherry has been the Library’s fearless leader for over a decade, but she hasn’t done it alone. Past volunteers include Sheryl Kistler, Olga Harbour, Carol Eagle, Hal Myers, and Pat McGowan. Of note, Pat volunteered with Sherry from 2013–2021, earning him the rank of the longest-serving volunteer library assistant!

Want to learn more about the Tucson Audubon Library and check out Sherry’s handiwork? Visit TUCSONAUDUBON.ORG/LEARN-ABOUT-BIRDS/TUCSON-AUDUBON-MEMBER-LIBRARY or come see it in person at The Nature Shop! It’s open Wednesday–Friday, 10 am–4 pm, and Saturday, 10 am–2 pm. I hope to see you all there!

Taylor Rubin
Volunteer Program & Engagement Coordinator
trubin@tucsonaudubon.org



FIELD TRIP LEADER TRAINING

I also want to take this opportunity to extend a warm welcome to our new group of Field Trip Leaders! This intrepid bunch just completed Field Trip Leader Training where they learned about the three pillars of field trips: people, birds, and logistics. I’m looking forward to signing up for a field trip led by each and every one of them!

We’d love to welcome more people to the Tucson Audubon volunteer team! If you are interested in learning more, please visit TUCSONAUDUBON.ORG/VOLUNTEER.



REGISTER ONLINE AND FIND DETAILS AT:
TUCSONAUDUBON.ORG/NEWS-EVENTS

Thursday, April 14, 11 am–12 pm

FOUR SEASONS OF BIRDING IN NEW JERSEY: CAPE MAY AND BEYOND | Presenter: Gregory Prelich

New Jersey is a compact state with diverse habitats on the eastern flyway, making it a convenient and productive destination for birding. Cape May is the best-known birding locale in New Jersey, but other regions of the state are equally good. In this program we will explore what a good day or two of birding would be like in each of the four seasons, highlighting the seasonal differences and the eastern species that would be difficult to find in Arizona.

Tuesday, April 19, 11:00 AM - 12:00 PM

SPRING NATIVE PLANT SALE SELECTION GUIDE |

Virtual Presentation; Hosts: Kari Hackney & Kim Matsushino

Join Kari and Kim as they discuss the available plants at the upcoming Spring Native Plant Sale. Learn the plants' characteristics, benefits, and needs to better assess which will work best for you and your outdoor space.

Monday, April 25, 7–8 pm

BIRDS 'N' BEER–RARE & INTERESTING BIRDS IN SOUTHEAST ARIZONA | Host: Luke Safford

Thursday, April 28, 11 am–12 pm

UNDERSTANDING AND ADDRESSING THE THREAT OF POISONING TO AFRICAN VULTURES |

Presenter: Corinne Kendall, North Carolina Zoo

African vultures are one of the fastest declining groups of birds and poisoning is the primary threat to their survival. This talk will discuss why vultures are important (even if they aren't pretty), what's happening to them in Africa, and how the North Carolina Zoo is working to save them.

Tue, May 10, 11 am–12 pm

INVITE ROADRUNNERS TO YOUR YARD WITH OUR "RECIPE" | Presenter: Jennie MacFarland

Saturday, May 14, 6:30-8:30 PM

NIGHTTIME MIGRATION: SABINO CANYON NIGHT WALK

Join us at Sabino Canyon for an evening walk in celebration of World Migratory Bird Day! This year's theme for WMBD is focused on light pollution and its effect on birds. Did you know that many birds migrate only during the night? Come discover why as we celebrate the night sky, and spring migration, look for nocturnal birds and reptiles, and enjoy the beauty of the Sonoran Desert on a warm evening!

Wednesday, May 18, 10am – 11am

THE BEAUTY OF NATURE LIES IN THE DETAILS with Hunt's Photo | Virtual Presentation by Maresa Pryor-Luzier

Nature has so much to offer. From close-up, to wildlife and landscapes, Maresa will explain lighting, depth of field, backgrounds, and vision.

Monday, May 23, 7–8 pm

VIRTUAL EVENT: BIRDS 'N' BEER–RARE & INTERESTING BIRDS IN SE ARIZONA | Host: Luke Safford

Tuesday, May 24, 11 am–12 pm

VIRTUAL CLASS: BIRDING THE CALENDAR–WHERE TO GO BIRDING IN JUNE & JULY | Instructor: Luke Safford

Tuesday, May 24, 6–7:30 pm

BIRDATHON WRAP UP PARTY at the Mason Center

Monday, June 27, 7–8 pm

VIRTUAL EVENT: BIRDS 'N' BEER– RARE & INTERESTING BIRDS IN SE ARIZONA | Host: Luke Safford

Tuesday, June 28, 11 am–12 pm

VIRTUAL CLASS: TIPS ON IDENTIFYING BIRDS | Host: Luke Safford



White-backed Vultures, Scott Olmstead



Cape May Warbler, Hemant Kishan

BIRDATHON 2022

APRIL 8 to MAY 8—THERE'S STILL TIME TO PARTICIPATE!

The 2022 Birdathon is your chance to enjoy birds while raising critical funds to support the mission of Tucson Audubon. It's fun and easy to participate—visit TUCSONAUDUBON.ORG/BIRDATHON to get started or contact Luke Safford at lsafford@tucsonaudubon.org.

WHO? You! Absolutely anybody can participate in this tradition begun in 1987. You can:

- Form Your Own Team
- Donate to a Team

WHEN? April 8 to May 8. You make the call: Take 24 hours, half a day, a week, or the whole month!

WHERE? Take your birding anywhere on the planet you like.

PRIZES? Yes! We're continuing our **COMPETITION CATEGORIES** and jazzing up our pool of prizes.

WHY? Birdathon is a great way to have fun with friends and family, spotting birds while helping with this community fundraiser to support Tucson Audubon.



Celebrate Birdathon with us!

BIRDATHON KICK-OFF PARTY at Bawker Bawker Cider House
Tuesday, April 5, 5–8 pm
Get inspired by new and returning Birdathoners alike!

BIRDATHON WRAP-UP PARTY at the Mason Center
Tuesday, May 24th, 6–7:30 pm
Celebrate a successful Birdathon and win prizes



TUCSONAUDUBON.ORG/BIRDATHON

Greater Roadrunner, Mick Thompson

BIRDING TOURS

FROM OUR BIRDS BENEFIT BUSINESS ALLIANCE

TUCSONAUDUBON.ORG/ALLIANCE

MOWGLI EXPEDITIONS

MOWGLIEXPEDITIONS.COM

BIRDING TRIP TO COSTA RICA

March 30–April 9, 2023

\$3350 per person (twin sharing)

This trip to Costa Rica is a unique birdwatching trip. In addition to birding in Arenal and Monte Verde, which are favorites for birders, we travel to some of the non-touristy places which are also fantastic for birdwatching. Local guides. Group Size: 4–8

BIRDING TRIP TO COLUMBIA

April 19–28, 2023

\$3350 per person (twin sharing)

Colombia is one of the best birding destinations in the world, having more species than any other country (about 1,950). Today, Colombia is very safe, especially the places and lodges we'll be visiting. The Colombians are a warm and friendly people and the country has a charm not many others have. Local guides. Group Size: 4–8



Hawk Migration; I'iwi, Rob Ripma Orange-breasted Sunbird, J Boyle

SABREWING NATURE TOURS

SABREWINGTOURS.COM

COSTA RICA: RAPTOR MIGRATION SPECTACULAR

October 16–25, 2022

\$4,099

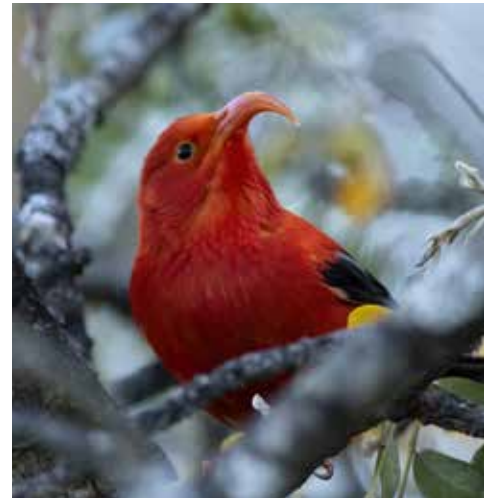
Costa Rica is well-known as one of the top birding countries in the world, but many birders don't realize that this wonderful country hosts an incredible raptor migration. This tour will visit the amazing site of Kèköldi where millions of raptors pass overhead each autumn.

HAWAII: ISLAND HOPPING FOR ENDEMICS

November 6–15, 2022

\$6,299

Hawaii might be best-known for its incredible beaches but, for birders, it's known for its incredible list of endemic birds. On this tour, we will work to find the endemic species on Oahu, Kauai, and the Big Island. Each island will offer us new and exciting birds to observe!



EXPLORE SOUTH AFRICA WITH TUCSON AUDUBON AND BIRDING ECOTOURS

CAPE TOWN AND PELAGIC TRIP: SEPTEMBER 24–OCTOBER 1, 2022

This amazing trip allows you to experience the endemic-rich, scenically beautiful, "Fairest Cape" including the opportunity to join a 1-day **Cape Town pelagic sea trip** for albatrosses and many other birds. We expect to see **African Penguin**, **Cape Rockjumper**, dazzling **sunbirds** and extravagantly long-tailed **Cape Sugarbirds**. **Southern Right Whale**, **Cape Mountain Zebra** and other special mammals are also likely to be seen.

Leaders: Luke Safford and local guides

Cost: R55,915 person—shared room (prices in South African rand)

Single supplement: R6,145

VIEW FULL TRIP INFORMATION AND ITINERARY AT TUCSONAUDUBON.ORG/EXCURSIONS

WOO HOOT!

BIRDY NEWS BITES WORTH CELEBRATING

WOODWORKERS FOR WARBLERS

Seven volunteers from the SaddleBrooke Ranch Woodworkers Club, joined Jim Hoagland, “the Birdman of SBR” to build and donate Lucy’s Warbler nestboxes to Tucson Audubon. They exceeded their goal of 30 by making 55 boxes! These nestboxes will be used in our continued effort to provide more safe places for Lucy’s Warblers to nest in the Tucson area.

Thank you SaddleBrooke Ranch Woodworkers!

SaddleBrooke Ranch Woodworkers Club. From left to right: Curt Kamada, Leslie Gordon, John Vanderwall, Bren Hirschberg, Mike Close, Gary Truax, Scott Saxon, and Jim Hoagland.



GIFTS IN HONOR OR MEMORY OF

In memory of Beth Davis from Janice Crist

In honor of Bill Lisowsky from Sarah Metz

In memory of Carol Forsythe from Marilyn Carney

In memory of Carol Ingram from Astrid Gambill

In honor of Chad Robinson from Sharon Robinson

In memory of Clark Atkinson from Joan Warfield

In memory of Deb Finch from Deborah Kiley, Leonie Batkin & Ronald Thorn

In memory of Ed Montgomery from James Metcalfe, Kaye Crandall & Carol Pierce, and Shari Montgomery

In memory of Jeannie Louise Green Ryan from Cliff Green

In memory of Jeff Ranger from Marla Dernay

In honor of Jim Hoagland from Alastair Stone, Alexander Langoussis, Barbara Nicolich, Beryl Readdy, Dian Gowen, Doris Carlin, Edith Kellogg, Ellon Jarvis, Gary Truax, Gordon Moro, Gretchen Malaski, Jamie & John Calhoun, Jan Smith, Jennifer Valverde, Judy & David Matthews, Julie Peck, Karen Handschy, Laurie McCoy & Thomas Campbell, Liese Razzeto, Linda Shannon-Hills, Lucinda Savoie, Lucy Lange, Maria Astaire, Maria Astaire, Mary Fung, Nancy Hurlburt, Nancy Thornton, Sandra Goodwin, Sharon, Sheilah Britton, Sherida Sowerby, Stephen Kaestle, Susan Armstrong, Susan Gitelson, Tim Connelly, Toni & Lowell Graves, Vickie Atkinson, Susan, Elle Strandberg, and Liza Strub

In memory of Joan Goldberg from Joanne & Michael Goldberg

In honor of Jonathan Horst from Bonnie Paton Moon & Richard Moon

In memory of Kathleen Curley from Ed Curley

In memory of Mary Anderson from Peter Anderson

In honor of Mary Fitzgibbons from Mary Williams

In honor of Mary Walker from Patti Caldwell & Bob Gary

In honor of Olya Phillips from Ethel-Marie & Doug LeVasseur

In honor of Peggy Steffens from Ron Shannon

In memory of Roger Gibbs from Marilyn Browning

In memory of Ruth Catalano from Cathy Poplin

In honor of Sara DeRouen Pike from Amy DeRouen & Corey Perez

In memory of Shirley Pierce from Kaye Crandall & Carol Pierce

In memory of Silvia Vangundy from Elizabeth Hoffman

In memory of Zeppelin Kellam Neal from Sylvia Verlander



Black-throated Sparrow, Greg Lavaty

FIGHTING FOR WHAT WE LOVE

Birding has brought me joy since I was a child watching finches, nuthatches, woodpeckers, and more at our backyard feeder. Whether identifying a life bird and checking it off in the index of my field guide or watching the behavior of everyday species, I was enraptured by birds. And I've grown only more so over the ensuing decades. Birding enriches my life emotionally, intellectually, psychologically, physically, creatively, and spiritually.

But, increasingly, birding also brings me pain, grief, sadness, anxiety, and anger. Humans' rampant destruction of natural habitats; our poisoning of land, sea, and air; our reckless, climate-altering consumption of fossil fuels—all this and more makes me ever more painfully aware that birds, along with countless other living things, are in dire peril.

Some birders respond by tuning out distressing news about birds, the environment, even climate change, avoiding anything that might lessen the pleasure that birds and nature bring them. And to be honest, I understand and even share this escapist impulse. But I refuse to succumb to it. I believe in fighting for what I love. More to the point, I believe in fighting for what I love alongside like-minded, like-hearted others. Together we can achieve far more than any of us could achieve alone.

What's more, the fight itself, regardless of what we do or don't achieve, brings its own rewards. I learned that lesson years ago, as an AIDS activist in the days before effective HIV treatments. Taking part in collective action has brought me immeasurable friendship, comfort, courage, joy, and meaning—plus a whole lot of fun!

That's why I've joined Tucson Audubon as the new Conservation Advocate, devoting my love of birds and my activist experience to an organization with an unparalleled history of supporting birds through recreation, education, conservation, and advocacy. From now on, I'll be writing an advocacy column in the *Vermilion Flycatcher*. I'll also be sending out action alerts; organizing advocacy-focused events, including "Birding with a Purpose" field trips; and organizing a Tucson Audubon Advocacy Strike Team.

So, stay tuned—or, better yet, send me an email to tell me you'd like to get involved. Let's work together to protect birds, people, and the planet!

David Robinson
Conservation Advocate
 drobinson@tucsonaudubon.org



Crested Caracara, Ned Harris

The *Vermilion Flycatcher* is the newsletter of the Tucson Audubon Society, a chapter of the National Audubon Society. National Audubon Society members and members of other chapters may receive the *Flycatcher* by becoming a member of Tucson Audubon. For more information visit: TUCSONAUDUBON.ORG.



NON-PROFIT ORG
US POSTAGE PAID
TUCSON, AZ
PERMIT #1345

TUCSON AUDUBON NATURE SHOPS

PLEASE NOTE

The Nature Shop is OPEN for regular Shop hours.

Vulnerable Shopper Hours: Fridays, 10–12.

Face coverings required at this time. Coverings are optional for vaccinated guests at all other times.

ONLINE NATURE SHOP

Shop with us anytime online.

New merchandise added continually.

TUCSONAUDUBONNATURESHOP.COM

NATURE SHOP

300 E University Blvd #120, Tucson 85705

(corner of University & 5th Ave.)

Regular Nature Shop hours:

Wed–Fri, 10–4 & Sat 10–2

There's never any sales tax since we're a non-profit.
All purchases support our mission to protect
birds and their habitat.

EXPLORE THE WORLDS OF OUR SONGBIRDS



Wild Republic Birds
\$12.99



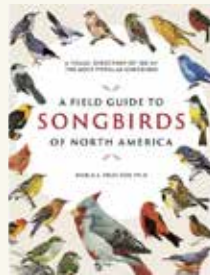
Tucson Audubon
Flycatcher Cap
\$20.00



Bird-Spotting Opolo
\$30.00



Oriole Orange Feeder
\$15.00



Field Guide Songbirds
North America
\$14.99



Audubon Songbird
1000-piece puzzle
\$20.00



Ornithotherapy
\$25.00



NA Warbler
Foldout Guide
\$9.00