VERMILION FLYCATCHER

TUCSON AUDUBON (becoming TUCSON BIRD ALLIANCE)

Winter 2025 | Vol 70 No 1

THRIVING BIRDS, HUMANS, AND HABITATS

TUCSON AUDUBON SOCIETY
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Winter 2025 | Vol 70 No 1

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

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ON THE COVER
Phainopepla by Dan Weisz. Dan Weisz is a native Tucsonan and retired educator who enjoys birding, being in nature, and taking photographs. For the past ten years, he has volunteered with the Raptor Free Flight program at the Desert Museum as both a bird-handler and a narrator.

CONTENTS

PROTECTING BIRDS IS AN ACT OF SELF CARE!

Black-capped Chicakdee, B.N.Singh: flickr.com/photos/bnsingh

Happy Winter, Friends!

For a dozen or more years, as a Buffalonian with a heaping helping of seasonal depression, birds saw me through many dark, cold, woefully gray winters. If not for the lure of those spunky Black-capped Chickadees and ethereal Tundra Swans in the river mist, I might otherwise have languished in torpor on the couch for six months of the year. Now entering my sixth winter season in Tucson, seasonal depression is a thing of the past. Who needs it when you have anxiety coming in hot to take its place? Turns out, even in sun-drenched Tucson, I still need birds to help me out of my head and into a state of wellbeing.

More than objects of interest or an endless source of trivia, for those of us birders and naturalists struggling with mental and even physical health challenges, birds are a vital source of therapy and healing. We can all attest, even if anecdotally, to the health benefits birding has brought to our lives, and in recent years, research has proven as much. Google "health benefits of birding" and watch the results pour in, or read about a few of these studies on page 8.

For those seeking community, birds bind us. In a time of social division, birders share common ground. Birding is exercise. Birding is a sanctuary from the screen, from doom scrolling, from the news. Birding is a feast for the senses. Alas, birding in and of itself does little to protect birds or contribute to their health in return.

More than ever I feel the need to compel the birding community to turn their love for birds into action on their behalf. Birds are under pressure to adapt to unprecedented change and habitat loss, and birding alone will not save them. A future with kestrels, longspurs, and Western Yellow-billed Cuckoos may be entirely dependent on our actions—the actions of this community we have built on their wings.

Fortunately, there are endless opportunities to promote, create, restore, and protect healthy habitats for birds and other creatures, and to have fun while we're at it! Bird counts and surveys, native plant gardens, advocating for native habitat in public spaces—even the food we eat and the coffee we drink can contribute to the health of birds, in Tucson and beyond. Better yet, every action we take to protect the health of birds protects the health of the ecosystem (that's us, too).

Here's to our collective health, and an action-filled new year.

For the birds,

Melissa Fratello
Executive Director
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ALMANAC *of* BIRDS January to March

Winter in the Sonoran Desert is a time of plenty and of transition. Waterfowl from the north descend on Southeast Arizona by the thousands to take advantage of the relatively warm temperatures and lack of frozen water. This is the time to see the rare grebes of the region: Western, Clark's, and Eared. Meanwhile, the residents of the lowland deserts are already gearing up to breed. Black-tailed Gnatcatchers, Cactus Wrens, Gilded Flickers, and more are busy building nests amongst the saguaros and cholla.

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SALTY GREBES

You may have missed this inconspicuous little water bird in Southeast Arizona because it's usually here during winter in small numbers. You might be surprised then to learn that the Eared Grebe can sometimes be found by the thousands only 300 miles from Tucson! This elegant black bird with striking red eyes and golden brown cheeks and flanks is the most abundant grebe in the world. It's found in the western US, Eurasia, South Africa, and eastern Asia, where it feeds on invertebrates in alkaline lakes and ponds. It is highly reliant on these very salty water bodies, and after breeding, most of the entire North American population moves to either Mono Lake in California, or the Great Salt Lake in Utah. These areas serve as staging and molting locations where hundreds of thousands of the highly social grebes fatten up on brine shrimp and alkali flies. The importance of these saline lakes cannot be overstated.

This is where the story takes a fun turn, because the Eared Grebe undergoes the most extensive morphological changes and longest flightless period of *any bird in the world*. At fall staging areas, the birds more than double their body mass by enlarging their digestive organs and also let pectoral muscles shrink so much that they can no longer fly. Then, in a short pre-departure period, these changes are completely reversed, and the just deposited fat is consumed to reduce wing load and maximize flight efficiency. This cycle can be repeated 3–6 times each year (for every prolonged stopover), and as a result, the Eared Grebe can have a yearly flightless period totaling 9–10 months! When ready and food stores run low, most of the US population heads to wintering locations at the Salton Sea and Mexico, with smaller numbers moving to the West Coast and inland sites such as Southeast Arizona.

Similar to other grebes, Eared Grebes form monogamous pairs after elaborate courtship water dances where birds rise up and bow to each other, and run across the water with necks extended. The wintering Eared Grebes you can see in Southeast Arizona look remarkably different from their breeding forms—they are black and white but retain the red eye. Try your luck at Arthur Pack Park, Benson Ponds, Willcox Lake, Canoa Ranch, or Arivaca Lake.

DESERT FLICKERS

Upon arriving in Southeast Arizona years ago, it took me a while to realize that we have a totally unique flicker species here that lives in the deserts of the Southwest. I can be forgiven, as scientists have debated the merits of listing the Gilded Flicker as a separate species and have gone back and forth on the issue. Taxonomists had grouped it with Red-shafted and Yellow-shafted flickers as a single species, the Northern Flicker, but based on limited hybridizing, and habitat and natural history differences, the Gilded Flicker was split from the group in 1995. These birds all look very similar—basically, the Gilded has the gray face and red mustache of the "red-shafted" Northern Flicker, and the yellow wings of the "yellow-shafted" form. Gilded Flickers are not as common or conspicuous as Gila Woodpeckers, and if you don't recognize their piercing, single cries of *peah!* and repeated *wik wik wik wik* calls, you might never know they are even out there among the saguaros. The fact that they mainly forage on the ground for ants doesn't make them any easier to find. It's possible that Gilded Flickers consume more ants than any other North American bird, and their tongues can extend a full five inches to probe anthills!

Gilded Flickers are permanent residents in southern Arizona, southeast California and Nevada, down into Baja and northwestern Mexico, and can be found around Tucson in Saguaro National Park and Tucson Mountain Park where they nest in saguaro cavities. They are most conspicuous from January through March when the birds are very vocal and active when setting up territories and excavating nest holes. Gilded Flickers tend to use areas with the largest and oldest saguaros and shy away from dense, urban areas. Unlike Gila Woodpeckers, these larger and more aggressive flickers are able to withstand nest cavity competition from European Starlings.

The Gilded Flicker population within the US is reported to have declined by an estimated 54% between 1970 and 2014. To document their presence here, our Arizona Important Bird Areas program is conducting spring surveys that anyone can participate in. Stay tuned for more info!

OPPOSITE: Black-tailed Gnatcatcher, Mick Thompson
ABOVE: Eared Grebe, Mick Thompson; Gilded Flicker, Greg Lavaty

THRIVING BIRDS, HUMANS, AND HABITATS

Birds have the power to uplift us. Watching and listening to them and being out in nature makes us feel better, mentally and physically. How can we support the birds who support us? Tucson Audubon is engaged in protecting and improving habitats that directly benefit local bird populations. Creating healthy and sustainable places for birds to thrive not only helps the birds we love, it also supports us. There's a lot to do, let's start today!

Phainopepla, David Quanrud

COMING TO OUR SENSES

I was sitting under a shady mesquite in a quiet wash when a jackrabbit came loping up and sat down beside me and began his morning ablutions. I watched, fascinated by how he cleaned sticky plant seeds from between his toes. Once the jack settled down for a nap, I quietly slipped away, elated that I had been accepted by this gentle wild being.

Most of us are thrilled to see wildlife. It's a gift from nature that fills us with joy and opens our hearts. Connecting to nature benefits our health and well-being and enriches our lives in more ways than we can know. Even listening to bird song has been shown to stimulate the vagus nerve, dropping us into the parasympathetic nervous system, which deeply relaxes and restores us.

But sometimes when we go out, we can't seem to make this connection with nature. We stay at a surface level, unable to turn off our racing thoughts, and thus don't notice much wildlife. Animals sense the stress chemicals we give off and move away. So even though we are outdoors, we may not be present enough to truly experience the depth and richness of the experiences we could have.

There are two major factors that hinder us in connecting to the natural world and to wildlife. One is that we haven't been taught how to connect. We may feel uncomfortable, like we don't belong,

Eye reflection from a jackrabbit, Pinau Merlin

Horizontal line of deer's back, Pinau Merlin

or we are fearful of animals (horror movies like "attack of the giant tarantulas" encourage this!). The other factor is that in our fast-paced urban lifestyles we're constantly over-stimulated. We're bombarded with loud music, sirens, traffic noises, flashing lights, multi-tasking, and technology. Our brains and nervous systems are stressed and overloaded. When we finally venture out in nature to restore ourselves, we're already shut down to stimulation as a form of self-defense and our senses are dulled.

So how do we make the deep connection with nature? The key is learning to enhance our senses. Not only is this easy and fun to do, it brings us back into our bodies, healing and restoring us. Here are some tips on ways we can enhance each of our senses.

VISION AND CONSCIOUS OBSERVING

Research has shown that we perceive only 50% of what's actually there. This is our brains, running on autopilot, filtering out information and shutting down too much input. We can take conscious charge again to retrain our brains, minds, and senses.

Even though we are primarily visually oriented, we've lost many of the skills of active observation and have become passive watchers. TV's hypnotic effect and quickly shifting images foster that state of mind.

For example, our brains are programmed with search images for whole animals, but usually animals are hiding when we're around and we see only parts of them. Animals are masters at blending in and it takes our conscious attention and focus to notice that a candelia bush has antlers or a mesquite tree has legs or a bobcat face is peeking out from a clump of prickly pear.

Tree with antlers, Don Altringer

Many trails are designed for hiking and run fairly straight across the landscape and we tend to look ahead down the trail which takes us out of the present moment. If we walk using our peripheral vision, we see lots more wildlife, as our eyes pick up the slightest flick of a deer's tail or the subtle movement of a jackrabbit's ear. Our brains also pick up more information and bring it to our attention. I was meandering along a trail when, without knowing why, my body stopped and backed up several steps. There were fresh mountain lion tracks right there that I hadn't seen but my brain did. Another plus is that the concentration needed to focus on peripheral vision tends to shut down our mind chatter, slowing down our brain wave patterns and generating a calmness and coherence in mind and body.

SHIFTING FROM FAR TO CLOSE

To teach our eyes and brains to perceive more, we can sit above a wash or on a hill and peruse the big picture of the landscape, looking for places an animal might make a den or travel routes it might use. We can imagine how the shadows will slide across the landscape throughout the day and then bring our attention back to observe the minute details around us like a leaf's shape and texture or a pattern in a dragonfly's wings. This kind of focus while observing nature keeps us grounded in the present moment.

Another technique is to look for anything out of the pattern. Most vegetation grows upwards, so seeing a horizontal line may be only a fallen saguaro, but it could also be a deer or other animal's back. It's a great way to spot more animals. Watching for eye reflection (moisture in an animal's eyes), which is different from the eyeshine seen at night, is another great way to see animals hiding or standing still as we walk past.

Peering closely into dappled sunlight and shadow (which breaks up the outline of an animal's form) is another great way to teach our eyes to search for shapes of concealed animals and enhance our deep observation skills. I once walked up on a mountain lion sleeping under the shade of a mesquite tree. She was completely camouflaged even though she was lying in the open. My eyes settled on a long furry branch and it took my brain a few seconds to realize that it was a lion's tail and that I was only a few feet away. I glanced away so I didn't meet her eyes and wandered off. She put her head back down and continued snoozing.

ANIMAL MANNERS

Good animal manners help us to see more than a glimpse of animals fleeing from us. If we want to see animals going about their normal behaviors, we must respect animals' fears and behave accordingly. Staring directly into a bobcat's eyes is an aggressive act and intimidating. Turning away slightly, looking down and peeking from the corner of your eye as though you hadn't seen the animal, allows it to feel safe enough to watch you.

On birding trips, we've all seen when someone points at a bird, it immediately flies off. Pointing and smiling (baring the teeth) at an animal are also perceived as threats. Keeping a polite distance is critical for all animals. It's also very important not to corner an animal or allow a group of people to surround it, as sometimes happens with a snake, tortoise, or Gila monster. Be sure not to stand between the animal and the vegetative cover it wants to escape into. Respecting the animal often means you'll get to see it without stress to either party.

LISTENING

Listening is one of our most important senses for navigating through landscapes, seeing wildlife and experiencing the joy of a natural soundscape. Great Horned Owls can adjust their facial disks to focus their hearing at varying distances to zoom in on prey sounds, 30 feet in one direction or 75 feet in another. Even without a facial disk, we can practice listening in a similar way. Pick a place to sit and listen for the furthest sounds you can hear. Then listen in each direction and then for the closest sounds. Be patient with this. Finally, listen to all sounds at once, which puts us into a slow brain wave state where the mind chatter stops and we feel great peace and belonging and we also begin sensing more intuitive information.

Deer in bed. First deer is obvious, the second better camouflaged. Pinau Merlin

Cactus Wren scolding, David Kreidler

Knowing the sounds of nature aids immeasurably in seeing wildlife and in understanding what's happening around us. Animals are always listening because their lives depend on being aware. It's not only important to understand animal sounds, but to be aware of the sounds we make, such as Velcro, zippers, etc., that give us away. But it is our patterns of walking that immediately announce our presence. Only humans go marching down the trail. Animals walk very differently and much more quietly. If you want to see wildlife, you can learn to walk like a deer (step, step, pause), a fox, or javelina.

It's fine to make noise. Javelina make lots of feeding sounds and soft gruntings to keep in contact with their herd. Deer and other foraging animals, like towhees digging in the leaf litter, also make noises, but these are natural sounds that animals are used to hearing. These sounds are reassuring to them, letting them know all is well and there probably aren't any predators around. We can practice making javelina munching sounds or other natural sounds appropriate to the habitat.

It's also important to learn the soundscape of an area—the sounds of all the birds and animals, the breeze through the leaves—and to distinguish the sounds of normal activities versus alarm calls. Recognizing and correctly interpreting these sounds leads to feeling comfortable and confident in nature. A shaken bicyclist once reported to park rangers that he was chased by a mountain lion. Upon questioning he admitted he hadn't seen the lion but heard it crashing through the brush. Right away we know it was not a lion, as they are known for their quiet stealth. They don't crash through anything, but deer and javelina certainly do—a frightened deer was probably trying to get away from the bicyclist.

MOODS, BEHAVIORS, AND QUIET MIND

Another essential ingredient in nature connection is the quiet mind. Animals must be extremely perceptive to survive. They are sensitive to our vibes and our chemical pheromones, just like a dog sensing our sudden fear or when a dog senses a diabetic's blood sugar rising. If you take a walk while fuming about what happened at work, you're not likely to see much wildlife. They can feel us coming as we broadcast waves of disturbance. Cactus Wrens scold us, a covey of quail flies up and everything for half a mile is alerted. Others, further away, see and hear this diaspora and know there's a predator coming, stop feeding to assess if the danger is coming their way, and will react differently to various threats, such as a human, a dog running loose, or a bobcat.

Animals usually are aware that we're nearby, but it is our mood and behavior that determine how they react to us. Once we learn to relax and quiet our minds, our energetic impact is reduced and we don't generate these alarm reactions. We become part of the natural scene and animals go about their business and we may see them quite close.

SMELL

Smell is our most elusive and mysterious sense, but it greatly enriches our lives. Just think of the scent of the desert after a rain. Smells can tell us much about what animals are nearby and what's going on in the area. In the Amazon there is a tribe whose people can smell urine in the jungle and identify what animal left it from 40 feet away. We too can learn to enhance our sense of smell with practice and attention.

When you pick up a scent, stop and sniff in all directions to locate where it's coming from. The dry air of the desert doesn't hold scent well, but if you wet your nose, you'll be able to detect much more scent. This is why dogs are always licking their noses. Head out to the desert after a rain on a smelling walk. You'll be amazed at how easily you'll detect the wet fur smell of a coyote and a myriad of other scents.

OBSERVING WHILE QUIETLY SITTING STILL

Sitting still is another important skill for connecting with nature and wildlife. Pick a nice spot to sit comfortably and observe everything around you with techniques mentioned above. When we become still, the birds and animals resume their normal activities and we become part of the background. I was sitting on a hill above a wash watching the remains of a deer killed by a lion a few days earlier. After a half hour, a coyote snuck in and sat a few feet in front of me with his back to me. He watched the kill intently until he was sure the lion was not around, then skulked down, tore a leg off the carcass and careened up the hill right past me and ran off with his treasure. He never noticed me.

Practicing these techniques in the wild or even in our backyards, brings a true sense of belonging in nature and a depth of richness and wonder in our connection with animals, nature, and ultimately, with ourselves.

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.

RESEARCHING THE IMPACTS OF

There is a robust amount of research showing the health benefits of nature in general. More recently, researchers have started to assess specific elements of nature and their effect on our health. Here we highlight four studies focusing on birds that have all come out since 2020.

One recent study comes from King's College London showing encounters with birds boosted people's mood. The study involved 1,292 participants from the UK, Europe, US, China, and Australia. Participants were randomly prompted throughout the day to record how they were feeling and whether they could see trees and see or hear birds.

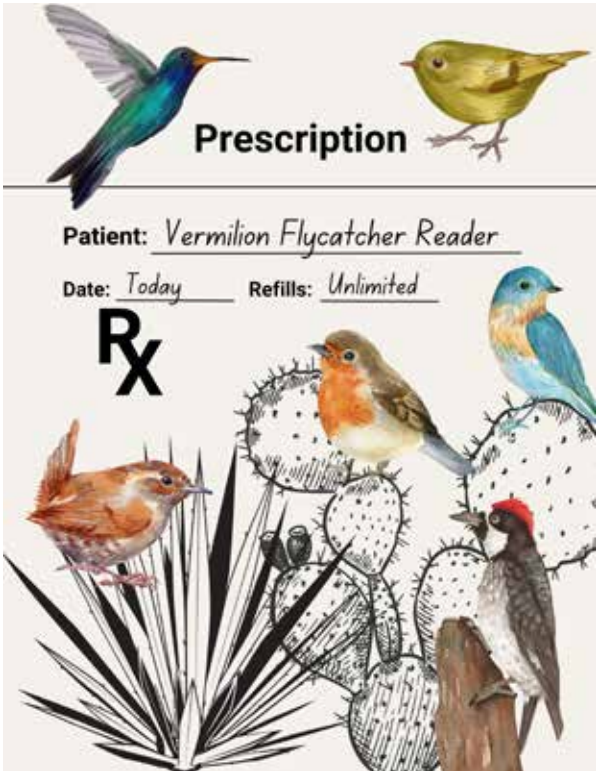
Even after removing the well-established health effect of green space, results were still significant when looking at the specific benefit of birdlife on mental wellbeing. The average mental health wellbeing scores increased when birds could be seen or heard. The even better news was that these beneficial effects lasted once participants could no longer see or hear the birds.

"We need to create and support environments, particularly urban environments, where bird life is a constant feature. To have a healthy population of birds, you also need plants, you also need trees. We need to nurture the whole ecosystem within our cities." *—Andrea Mechelli, Professor of Early Intervention in Mental Health, King's College London*

A study at North Carolina State University engaged 112 college students, staff, and faculty to participate in five >30 minute weekly walks. The participants were randomly assigned to one of three groups: a control group (received no specific instructions), a nature-walk group (instructed to take a specific nature walk at least once a week), or a birdwatching group (instructed to take the same walk at least once a week and notice how many birds they saw). Participants self-reported their subjective well-being and psychological distress using a survey known as the World Health Organization-Five Well-Being Index (WHO-5). The survey asked respondents to assign a rating between zero and five related to statements about their well-being over the past two weeks.

Those instructed to notice birds reported significant increases in positive emotion and significant decreases in distress compared to the other two groups. This suggests that there are specific health benefits of birding (or at least focusing on a specific element of nature).

"Bird watching is among the most ubiquitous ways that human beings interact with wildlife globally, and college campuses provide a pocket where there's access to that activity even in more urban settings." *—Nils Peterson, Professor of Forestry and Environmental Resources, North Carolina State University*



Verdin, Mick Thompson

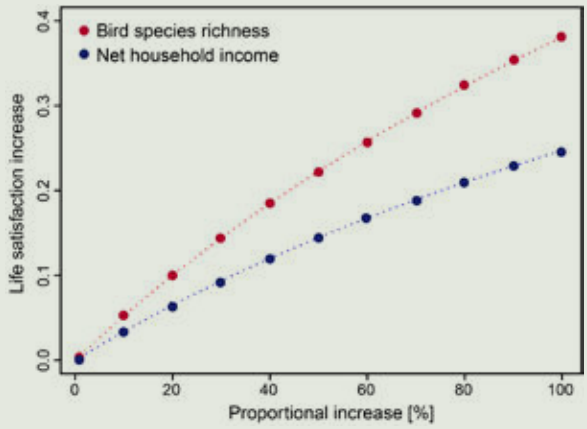
BIRDS ON OUR WELL-BEING

Vermilion Flycatcher, Mick Thompson; Birders in Carr Canyon, Julie Michael

In 2020, researchers assessed the connection between species diversity and life satisfaction by reviewing data from the 2012 European Quality of Life Survey with information collected from more than 26,000 adults from 26 European countries.

Life satisfaction was assessed by asking individuals the following question, "All things considered, how satisfied would you say you are with your life these days?" They answered on a scale of 1 to 10, where 1 meant very dissatisfied and 10 means very satisfied. Data on species richness, other characteristics of nature, and climate for Europe was collected from spatial data (atlas data or species distribution maps) and satellite imagery. Bird data was obtained from the first European Bird Census Council's European Breeding Bird Atlas.

The study showed a clear positive correlation between bird species richness and wellbeing. To take it a step further, the researchers examined socio-economic data and found that having avian diversity in daily life was as important as income in regards to life satisfaction. Fourteen additional bird species in the vicinity raised the level of life satisfaction as much as earning an extra $150 per month.



Estimated life-satisfaction increase in relation to bird species richness and income.

A 2021 study involved researchers from Cal Poly hiding speakers that played diverse bird song recordings along two trails in Boulder, Colorado. They alternated between playing the bird songs and turning off the speakers in weekly intervals. During the treatment week, 10 evenly spaced speakers were hidden 15-30 meters away from the trail in 500 meter stretches. Hikers' exposure to the recordings lasted between 7 and 10 minutes. Each speaker broadcasted a different looping five minute file of songs and calls from common native birds.

Hikers were interviewed after they passed through the sections. Those who experienced the recordings reported enjoying the hike more and a greater sense of well-being compared to those who did not. There was also a dose response; hikers who perceived both more sounds and more varied sounds reported greater well-being compared to those who heard fewer or less varied sounds or nothing at all.

If needed, use this research to justify a healthy dose of nature and birding this year. Resolve to go on a hike, sit on your back porch to watch a feeder, or attend a birding trip with us and know that you are doing a good thing for your health and wellbeing. Now that's a New Year's resolution I can get behind!

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Before pivoting to the conservation field, Erica worked in the healthcare field and received her Master's of Public Health from University of Arizona. She is thrilled to be able to join her love of birding with her commitment to improving health outcomes for humans, birds, and the environment upon which we all depend.

Scan QR code for references:

YOUTH, MENTAL HEALTH,

"Birds are the sound of nature." says Jayden Livingston, an Arizona Trail Ambassador (ATA) and Northern Arizona University student. Jayden recently graduated from the Arizona Trail Association's Ambassador Program, logging 300 hours over eight months learning wildlife tracking, bird language, and ethical naturalism. Jayden's comment reflects how many people perceive the natural landscape. In fact, when I teach youth about the natural history of bioacoustics, they often struggle to imagine a terrestrial world without animal sounds, including bird songs and calls.[1] The "outdoors" is so synonymous with bird sounds that my students describe the thought of imagining their absence as "eerie" and "unsettling." And they're not wrong. Our hominid ancestors evolved paying close attention to the sounds made by birds and, in fact, their survival depended on it. The "eerie" and "unsettling" feeling students describe might be related to the effect one experiences when a forest landscape teeming with bird sounds suddenly becomes strikingly quiet, an indication of a predator in close proximity. The science of perceiving and responding to the songs, calls, and alarms made by birds is called Bird Language, and humans all around the world still practice and rely on it for joy and survival.[2] It is no wonder overwhelming evidence demonstrates the health benefits of bird sounds on the human experience. The calls and songs that have conveyed "safety" to our earliest hominid ancestors do the same for us today. It makes sense why Jayden says, "Birds for me have been a symbol of happiness and freedom."

When I give presentations I often ask the audience to engage in a simple thought experiment. I ask them to remember their first positive experience in nature, and as I gaze out over closed eyes lost in memory, I watch as smiles begin to grow on each and every face. "Would anyone like to share what came to mind?" Often the answers are the same. A tree. Sunlight. The sights and sounds of birds.

Janeya Bonilla, another ATA Ambassador once said, "Birds help me fall into a peaceful mindset and bring about some of my key senses like sight and sound. There is nothing more relaxing than seeing a bird with fiery red feathers, like a flaming torch land within your view. Birds are incredible creatures and watching them freely live their lives makes me happy inside."

I've never met someone who did not share Janeya's sentiment. Each year I guide hundreds of youth through Southeast Arizona's most gorgeous landscapes to help them connect and understand just how special their homeland is. To begin our adventure we always start with a sensory activation exercise, something physicians in Japan prescribe and call shinrin-yoku, or forest bathing. We call it *The Practice of Arrival*. During the deep listening portion of the exercise, the social behaviors of birds echo throughout a landscape, creating a sort of 3D "acoustic map" of the area. Students who are skeptical of the "mindfulness" type activity suddenly become locked in. At the call of a bird, students report losing all sense of themselves, their burdens, and their ego, and are transported along soundwaves somewhere far away. "I have never felt so peaceful in my life. It's like all of my stressors vanished and I was able to just be here now," reported Eden Sprauge, a student at Sky Island High School.

AND NATURE

"On my weekly day out in nature, I got to sit with my creosote and watch the birds while listening to their different calls. I would close my eyes, curious as to what they were saying. They were always so playful as some shyly glided within my view while others boldly stared me down. It was a beautiful thing to see everything coexist with one another. It was almost as if the creosote and the birds understood what I was going through." *—Janeya Bonilla*

2.5 million years ago until the turn of the 1800s, our ancestors lived inundated by birds, their movement, their calls, and their migrations. Before the 1800s, 90% of humanity lived rurally. Now, 60% of humans live in urban environments. Those figures tell us that 0.0000008% of human history exists in the urbanized culture and society that we all experience today, one that is so accepted as normal, yet for almost all of hominid history is completely alien.[3] So sudden is this shift away from our natural habitat that the biology of our progeny is still predisposed to listen for birds, search for their movement, and feel the inextricable benefits of their company. "When I see or hear birds it's like I am remembering something about myself and I feel whole again," said Bird, a student at City High School. I remind students often, "You do not need to be a big-bearded, stinky hippy like me to enjoy nature. It is biological. It's ancestral. It's in your DNA and who you are."

Students consistently report feeling connected and within the community when they are among the birds. After-trip reflections in the outdoors are often highlighted by the soothing sounds or captivating colors of birds. "They are some of the only animals that are willing to get close to us in nature," notes Jayden. His awareness is accurate. Birds, with their agility and ability to soar above us, are often comfortable being only a yard or two away. "They're kinda like portals into nature," James Adam said. He noted that when he gets caught up in his thoughts while outside, birds immediately transport him back to the moment.

Youth with no previous hiking experience note that birds have changed their lives for the better. Abby Santibanez, current ATA high school intern, is one of those youth who before joining the ATA's youth nature program, Seeds of Stewardship, had never hiked. She said "I love the birds. Learning about birds, bird language, and our ancestral relationships is just so cool." Her words echo thousands of youth who've come before her. Their anecdotal admissions accumulate into a monumental mosaic that collages a clear image: Nature, and more specifically, birds, help them feel calm, happy, healthy, and stress free. This is evidence showing that we must protect, maintain, and steward the natural environment which is so clearly imperative to the health of our children, their families, the community they live within, and the society that governs their lives.

Patagonia Youth Enrichment Center youth from Patagonia, Arizona explore their local canyons, Treven Hooker; Northern Cardinal, Rosemary Woods; Five-striped Sparrow song contributes to the acoustic map of the landscape, Lois Manowitz; Treven Hooker educating Prescott College students about pincushion cacti fruit and their avian consumers.

Treven Hooker
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Seeds of Stewardship
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Scan QR code for references:

GREEN INFRASTRUCTURE
Creating Healthy Habitats for Birds and People

Green infrastructure (GI) and its benefits for physical and mental health date back as far as the Neolithic period, from sod roofs used widely in Norse countries for insulation and literary gardens planted during the Shang Dynasty in China, to the Hanging Gardens of Babylon, an ancient seventh wonder of the world. Plants have always been valued for their aesthetics and the services they provide. It wasn't until the 1970s, with the emerging field of Urban Ecology, that we began to understand how far society had strayed from creating urban spaces that supported our well-being, and that cities were creating significant environmental problems with detrimental effects on human health. These include warming climates; heat islands; plant and human disease; polluted air, water, and soil; changes in biodiversity; and altered water flows. Municipalities are once again looking to green infrastructure to address these issues.

Green infrastructure is a multi-disciplinary field, relying on the expertise of city planners, utility companies, flood control districts, health professionals, ecologists, and more. Stepping into an urban environment can often be challenging for professionals given the complexity of urban issues. Progress is slow, but impactful and necessary. Barriers range from aesthetic preferences and limited place-based ecological knowledge, to economics and distrust. Inequity in GI dates back to 17th century France as access to nature became a symbol of wealth, where gardens were created to place a visual barrier between the nobles and the poor living conditions of common folk. Unfortunately, these issues continue through the present day, resulting in increased temperatures, severe flooding, concentrated air pollution, and a lack of access to nature. Professionals now use technologies such as the Tree Equity Score, Heat Maps, and Climate and Economic Justice Screening Tools to address the lack of GI in underserved communities.

Climate change, with warming temperatures and increased severity of weather events, has contributed to a recent increase in the popularity of green infrastructure. In Southeast Arizona, trees are planted to provide shade and cooling, and green stormwater infrastructure is installed to reduce flooding, filter stormwater pollutants, improve air quality, and more. The City of Tucson and Pima County are notable leaders in GI for arid ecosystems, hosting a national summit, leading regional tours, and fielding numerous questions from land managers. As a contractor for both the City and County and as regional leaders in ecosystem restoration and invasive species management, Tucson Audubon is uniquely positioned to influence the development of best practices that create resilient environments and healthy habitats for birds and people.

Installing habitat at Desert Meadows Park, Kari Hackney

Desert Meadows Park after, Kari Hackney

Tucson Audubon's unique role among green infrastructure practitioners is to create wildlife habitat through sound ecological restoration. Through our involvement in Grow Tucson, an Inflation Reduction Act-funded grant to enhance urban forests in heat-vulnerable communities, and the Million Tree Initiative, we're ensuring that urban forestry is modeled after healthy forests, which include trees and understory and midstory vegetation. Not only is this an essential habitat component to support a variety of birds in multiple layers of vegetation, but it is also known to decrease air pollution and increase evaporative cooling.

Through our involvement with Tucson Water's Storm 2 Shade program, we're ensuring that landscape maintenance is restorative, unlike the standard landscaping practices that tend to detract from habitat value. We're transitioning landscaping maintenance away from the standard "mow, blow, and go" profit model that relies heavily on gas-powered equipment and contributes to noise and air pollution. Instead, we're restoring ecologic function by supporting native plant and soil health, creating enhanced microclimates, and utilizing the power of native plants to help filter out air, water, and soil pollutants.

Through Community Stewardship Events and our Habitat at Home program, we're sharing skills and place-based knowledge to empower individuals and communities to re-envision and restore our urban spaces. We're helping them create yards and community spaces that support birds and bird-watching, bringing mental health benefits to the places where people live, work, and play.

If you're interested in creating healthy habitats for humans and wildlife alike, contact URBANHABITATS@TUCSONAUDUBON.ORG.

Kari Hackney
Habitat Restoration Sr. Program Manager
khackney@tucsonaudubon.org

Phainopepla in hackberry, Dan Weisz

GI water harvesting basin at the Mason Center, Matt Griffiths

GI collecting rainwater to allow soil infiltration, Kari Hackney

A FIRE-RESILIENT PATAGONIA BENEFITS BIRDS AND PEOPLE

The Town of Patagonia is about to become more resilient to wildfire. Thanks to the Arizona Department of Forestry and Fire Management and the US Forest Service, Tucson Audubon was awarded one of the largest Community Wildfire Defense Grants in the state of Arizona. The $2M awarded will fund Tucson Audubon's Community Forestry Program and Invasive Plants Strike Team to complete five years of mapping, treatment, and monitoring of several projects, which include roadside fuels reduction and minimizing the overall fuel load of specific priority landscapes in the area.The outcomes of this work will have the added benefit of improving habitat quality for birds and other wildlife and also enhance the health and safety of the human inhabitants of the area.

The Community Wildfire Defense Program (CWDG) helps at-risk communities in the wildland urban interface make progress towards creating resilient landscapes and safe and effective wildfire responses. The first objective of this new project will be to gather on-the-ground data about the plant composition, health, and susceptibility to wildfire of vegetation along roadsides in and around Patagonia. Once Tucson Audubon crews analyze this data, we will work with Patagonia Volunteer Fire & Rescue to find ideal places for fuel breaks to be installed to help protect vital infrastructure, homes, and habitats. Tucson Audubon staff and other stakeholders will gather input from the community through events and working groups to bring together what the data shows, what the community wants, and what the grant allows. If you live in the Patagonia area, these meetings will be a great time to voice your concerns so that we can accomplish this work together.

Why is Tucson Audubon uniquely qualified to complete this work? Because of the wildlife and habitat focus of Tucson Audubon, this project is bound to become a model for responsible, sustainable hazardous fuels management in Southeast Arizona and desert, riparian, and mesquite bosque systems throughout the southwest.

How is Patagonia going to change? The most drastic change is going to be on private and public roadsides where crews will remove many non-native plant species that may be more adapted to fire and more likely to spread in the event of a fire. Many of these non-native trees have already been removed and treated once on a previous grant opportunity provided by the State; as an example, the exotic invasive Tree of Heaven planted next to the bridge on the east side of town. Under this previous grant, Tucson Audubon crews removed these trees, planted native trees, and opened up the canopy to allow native plants to come into the area.

One other way the landscape could change will be towards a healthier habitat for both humans and wildlife. The introduction of non-native plants, expansion of development, and historic suppression of natural wildfire have created pockets and wooded corridors of the community that could be vulnerable to fire. By intentionally reducing the amount of vegetation in the area (most notably non-native ground-cover) and by thinning vegetation that would bring a ground fire into the upper canopies of the forest, more water will be freed for native vegetation to take up. A more open forest system will attract a variety of birds and other wildlife, and, potentially most beneficially, a huge landscape-scale effort to better the health of the forest will attract more of the community to ask questions and engage with the outdoors as they may never have before.

For more information and to attend upcoming community meetings, keep an eye on the Patagonia Regional Times and Tucson Audubon's various social media accounts.

Jay Snowdon
Community Forestry Program Manager
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Invasive Vinca has taken over areas next to Sonoita Creek; Removing invasive Tree of Heaven in Patagonia, both by Jay Snowdon

BIRDABILITY: BUILDING ACCESSIBLE AND RESILIENT BIRDING COMMUNITIES

Interview with Birdability Executive Director Cat Fribley
by Taylor Rubin, Birdability Board Member and former Volunteer & Education Manager at Tucson Audubon

Taylor Rubin: For those who might be new to Birdability, can you share the core mission of the movement and how it connects people with different abilities to birding and the outdoors?

Cat Fribley: Birdability's mission is simple but powerful: we want to make birding and outdoor spaces accessible and welcoming to all, especially people with disabilities and other health concerns. Birding has a unique way of connecting people with nature and with each other, and we believe everyone should experience that connection in a way that works for them. Whether you're new to birding or an experienced birder, there's a place for you in our community.

Taylor: Birding has known physical and mental health benefits, but for many people with disabilities, there are unique challenges to accessing these benefits. Could you speak to some of these barriers and why it's essential to address them?

Cat: Absolutely! Birding is great for mental health—it's stress-relieving, gets you outdoors, and helps you be present in the moment. But many people with disabilities face barriers like inaccessible trails, lack of seating, or limited restroom access, which can make these benefits difficult to reach. We have guidance documents at BIRDABILITY.ORG that discuss both the physical barriers and access considerations for disabled birders and also the mental health benefits of birding, designed to show how birding can support mental well-being, especially for people with disabilities. We want to emphasize that birding is for everyone, and making it accessible means addressing both the physical and mental aspects. Birding can be life-changing, so it's essential that we create more inclusive spaces to share these benefits widely.

Taylor: Birdability advocates for inclusivity in outdoor spaces and birding communities. How can the concept of accessibility be extended to make outdoor spaces healthier and more inviting for everyone?

Cat: Accessibility benefits everyone! Features like smooth paths, benches, clear signage, and accessible restrooms help parents with strollers, older adults, and people recovering from injuries as well. Accessibility also includes fostering a culture of patience, understanding, and respect in birding communities. When spaces and events are designed with everyone in mind, we create healthier, more welcoming environments that invite people to connect with nature and with each other.

Taylor: Birding has the power to foster connections, both to nature and within communities. In what ways do you see Birdability strengthening community ties and encouraging people to connect with each other? How does that help people's health?

Cat: Birding can combat isolation by providing a space where people of all abilities feel welcomed and included. Birdability and other organizations that are allied with our mission create a community that's not just about birding; it's also about support and connection. For people who might feel isolated or excluded elsewhere, birding offers a place to belong, share experiences, work to conserve bird environments, and find friendship. These connections strengthen our mental health, giving people a support network where they can be active and engaged. Birdability is all about fostering these bonds and building communities that value and uplift each other!

Annemarie, Virginia, and Cat at Blair Woods National Park Birdability Outing; Inclusivity Outing in Texas. Photos by Mike Fernandez

WILD BIRD RESCUE A

Juvenile pelican blown in during hurricane

Broken wing bone on raptor; Broken bone pinned. Once healed all metal is removed from bird

Habitat restoration, reducing hazards, and advocacy can benefit birds to help keep their populations thriving, but what happens when individual birds become sick or injured? Wild birds and animals suffer a wide variety of traumas, often human-related, such as being hit by cars, mauled by cats and dogs, striking windows, poisoning, electrocution, sticky traps, and disease.

Fortunately, southern Arizona has the Tucson Wildlife Center, a wildlife hospital that is always open and sees about 4,000 animals a year. And hummingbirds now have their own center—Southern Arizona Hummingbird Rescue treats about 380 hummingbirds annually.

Accidents involving vehicles are a very common occurrence. When a hawk or other patient comes in with injuries after being struck, veterinarians and licensed rehab specialists assess the injuries, perform X-rays and other tests to determine a course of treatment. Veterinarians may perform surgery to pin a fractured wing bone or leg, repair a damaged eye, or perform another major procedure. Great care is taken to minimize stress on the bird as it recovers, and when it is ready to test its wings again, the raptor is moved into a huge flight aviary to regain its strength and prove it can fly well enough to hunt and be released.

Poisoning is another serious problem for hawks, owls, and other meat eating birds (and mammals). The popular use of rodenticides to exterminate rodents offers up easy, but toxic, meals for these predators, often leading to their deaths. The pesticides may contain anticoagulants, causing bleeding and neurological symptoms. Some of these birds may recover with immediate treatment.

Lead poisoning is a major issue for eagles and other scavengers when they have ingested lead-tainted gut piles or carcasses left by hunters. These animals are usually found on the ground, but even a compromised eagle can inflict serious damage on a rescuer, so only trained experts are allowed to capture an eagle. If rescued early enough, these birds can be saved. Vitamin K is given to bind with the lead, which will hopefully then be excreted.

Small to medium-sized birds, Gila monsters, skunks, and many other unintended victims are often brought in stuck on sticky traps meant to catch rodents. Many animals are caught on these inhumane traps when they try to eat an insect or rodent trapped there. It's best to bring in the bird (or any animal) still on the trap, where staff can slowly remove it using mineral oil. However, the bird or animal almost always needs medical care after being released since they sustain so much damage struggling to get free. The use of more humane methods, such as Havaheart traps, saves many animal lives.

Pelagic and coastal birds such as pelicans, Pomerine Jaeger, Red-billed Tropicbird, and petrels are sometimes blown into southern Arizona by hurricanes. It's often juvenile birds that are blown in from the west coast some 350-400 miles away, until winds dissipate enough for the exhausted birds to land. They are usually dehydrated and disoriented in the desert. The birds are rescued, rehydrated, fed, and allowed time to recover their strength. They are then driven to San Diego and released back into the wild.

AND REHABILITATION

It's not uncommon for baby birds that are close to the age of fledging to test their wings and fall from the nest. Parents will continue to feed their young on the ground, provided the area is safe from cats and dogs—leave them alone! If the chick is not yet feathered, it's better to place it back in the nest if it is not injured. Call the rescue center for instructions; they may send a volunteer to renest the baby.

Hummingbirds have their own special needs and now have their own rescue center in Southern Arizona Hummingbird Rescue. In spring, when males are zooming around fighting for mating dominance, they may crash into windows or other objects causing head injuries. Often, they can be successfully treated with anti-inflammatory meds and time. Hummers that have sustained injuries like broken wings or bills must be euthanized as, unfortunately, there's no way to treat those injuries.

During nesting season, many hummingbird nestlings are mistakenly brought in as "orphans" when well-meaning people think they have been abandoned. After two weeks, mothers no longer sit on the chicks and only visit the nest on quick trips to feed the growing babies. The mothers are so fast flying in, feeding, and are gone again in seconds—nest watchers can easily miss the visit.

Hummingbirds have to feed every 20 minutes or so and staff at the Hummingbird Rescue are specialists in feeding babies without injuring their delicate throat tissues. The babies receive different special mixtures with vitamins, nutrients, and minerals specific to their age. The hummingbirds have about an 80% survival rate and are happily released back into the wild.

Dedicated animal rehabbers, veterinarians, and volunteers give even seriously injured songbirds and raptors a second chance at life and to once again fly wild and free.

AZ Game and Fish Department, the Arizona-Sonora Desert Museum, Tucson Audubon, and Tucson Police Deptartment do not rescue wildlife. Please contact these organizations:

- Tucson Wildlife Center, 520-290-9453
- Southern Arizona Hummingbird Rescue, 520-404-9949

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.

All photos by Tucson Wildlife Center

Young hummingbird being fed

Eagle having its tail wrapped. This is to prevent tail feather damage or breakage while in recovery

Baby Barn Owl found on a hay truck, weak and dehydrated. With fluids and many feedings a day he has improved greatly. When eating on his own, he will be raised by the foster barn owls at TWC.

Healthier Birds: How to Make Urban Spaces Safer for Our Feathered Friends

Birding isn't just a relaxing hobby—it's scientifically proven to boost mental health, reduce stress, and foster a connection with nature. Creating habitat pockets in our backyards provides more opportunities to enjoy our feathered friends, but it also presents challenges for bird safety. As urbanization continues, awareness and action can help transform our cities into bird-friendly havens. Planting native plants for food and shelter is a great start. Here are some additional ways to support bird well-being in your community through Tucson Audubon's help or on your own.

BIRD-SAFE BUILDINGS: PREVENTING DEADLY WINDOW STRIKES

Every year, up to a billion birds die from colliding with windows in the US alone. Birds can't recognize glass, mistaking reflections for habitat or transparent panes for clear flight paths. Moreover, artificial lights can confuse migrating birds, leading them off course or into buildings. Up to 50% of all window strikes leave no evidence at all. Even if a bird flies away, quite often they do not survive the injuries and become easy prey for predators. We can change this:

- **Move Feeders Closer**: Place bird feeders and water features within 0–3 feet of windows. If birds take off from this close range, they can't gain enough momentum to injure themselves.
- **Make Windows Visible**: Add decals, screens, or hanging cords outside your windows to help birds see the glass. It's important to apply these methods on the exterior of the glass and space the patterns at most 2" by 2" to protect even our smallest species.
- **Reduce Light Pollution**: Close curtains or blinds to prevent light escaping. Use shields on external light fixtures to direct light downwards. Install timers, dimmers, and motion sensors where possible.

DEATH PIPES: SILENT KILLERS IN URBAN AND RURAL AREAS

Open-top vertical pipes, "Death Pipes," pose a hidden threat to small wildlife. Cavity-nesting birds, lizards, and rodents explore such pipes for places to nest, roost or forage. Once inside, they become trapped, facing a slow and tragic end. Open pipes are most commonly found anchoring fences, holding up signs, ventilating vault toilets or chimneys, and more. Help us find and cap Death Pipes:

- **Inspect and Cover**: Survey your property for open pipes. Cap them with tight-fitting lids or improvised covers like rocks or sticks. For pipes serving a ventilation or irrigation purpose, install a screen to close them off.
- **Report**: If you see open pipes on public lands, report them via an online form available at TUCSONAUDUBON.ORG/DEATHPIPES. If the pipe does not serve an obvious function requiring that it stay open, we ask that you temporarily cover it using items at hand. Tucson Audubon will work with the managing agencies to cap clusters of reported open pipes.

Olya Weekley and Inez Huerta installing window decals at the Mason Center; Vermilion Flycatcher on a closed off pipe, Dan Weisz; Example of a catio, Cat Topia; Screech-owls can be threatened by the use of rodenticides, Doris Evans.

CATS INDOORS: PROTECTING BIRDS AND PETS ALIKE

Outdoor cats kill billions of birds each year in the US. They're natural hunters, and even well-fed ones will hunt for sport. Cats that are allowed to roam outdoors are also in danger of death or injury resulting from diseases, poisons, cars, or predators. Here's how to keep both birds and cats safe:

- **Build a Catio**: A "catio" (cat patio) is a safe, screened off space that lets cats enjoy the outdoors without endangering wildlife or themselves. Support Tucson Audubon and have Cat Topia help you build your own catio! See our blog post for more info: TUCSONAUDUBON.BLOGSPOT.COM.
- **Leash Training**: Taking your cat for supervised walks on a leash provides exercise and enrichment.
- **Fix the Numbers**: Spay or neuter your cats to reduce the stray cat population. Work with local shelters to do the same with the stray cats in your neighborhood.
- **Indoor Enrichment**: Provide toys and climbing opportunities for your indoor cats to keep them happy. Install a window perch for them to enjoy watching wildlife from a safe distance.

AVOID POISONS: PROTECT INSECT-EATING BIRDS AND RAPTORS

Insectivorous birds are among the fastest-declining bird groups. Pesticides don't just eliminate pesky bugs—they eliminate food sources and poison the birds that eat them. Similarly, rodenticides can harm more than their intended targets. Predators like owls and hawks often catch poisoned rodents, ingesting the toxins themselves.

- **Natural Bug Control**: Encourage natural predators in your garden, like birds and beneficial insects, to manage pests organically. Plant native species and install water features to attract insect-eating birds.
- **Natural Rodent Control**: Install nestboxes to attract rodent-eating raptors like screech-owls and kestrels. Tucson Audubon offers nestbox construction plans and purchase options at the Nature Shop.

Olya Weekley
Applied Conservation Program Manager
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BE A BIRD ADVOCATE: SMALL CHANGES, BIG IMPACT

By taking these simple steps, you can make your home and community safer for birds. Share these tips with friends and neighbors! Bird health is interconnected with our environment's health, and by protecting our feathered friends, we create more vibrant, biodiverse urban spaces for everyone.

Birding is good for your soul—let's make sure our cities are good for birds, too.

More information and methods to reduce hazards to birds can be found at: TUCSONAUDUBON.ORG/REDUCING-HAZARDS-TO-BIRDS.

NEW BIRDS AND OLD FRIENDS AT THE WETLANDS

Alex Patia
Sweetwater Wetlands Coordinator
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It has been an extraordinary fall for rare birds at Sweetwater Wetlands! I love this time of year; the flocks of White-crowned Sparrows and Yellow-rumped Warblers feel like old friends I haven't seen in months, coming back from their travels in the North. Birding provides so much joy, and the arrival of both common and unexpected birds in fall gives me something to look forward to. It is a reminder that as chaotic and unpredictable as our human lives can be, the birds will migrate as they have for eons. For me, there is something comforting about observing these cyclical seasonal changes.

Sweetwater has been changing, too, with successful burns to kill invasive water lettuce and control cattails. Thanks to weeks of preparation work by Tucson Water, the western basin burn targeted cattails while leaving willows in and around the basin unscathed. With both west and east basins full of open water, Sweetwater is prime for some fantastic winter birding with large flocks of waterfowl.

The season started with a find on a Wednesday morning bird walk: an Eastern Kingbird that split its time between Agua Nueva and Sweetwater for a few days. On the next Wednesday bird walk, September 11, I had a very special bird call as it flew right past my group, a bird I recognized from time in Alaska and the UK: a White Wagtail! This bird unfortunately did not stay put and flew by too fast for photos, but if approved, this will be only the fourth record for Arizona. Two weeks later, on yet another Wednesday bird walk, Luke Safford spotted a juvenile Broad-winged Hawk flying over, only the fourth record for Sweetwater. A Magnolia Warbler found on the 29th by Bente Torvund was a Sweetwater first, but not found again. On October 4, I heard another familiar but out of place call: a Bobolink that flew in with some Red-winged Blackbirds only to promptly leave, a third record for Sweetwater. I regularly see Black Phoebes at Sweetwater, so I had to do a double take when I saw an Eastern Phoebe on the 12th.

The most exciting find for me was on our first cool morning of fall on the 19th when I arrived to find a Rufous-backed Robin that put on a good show for many birders. This was a first for Sweetwater and was last seen on November 6. Also on the 19th, I found a Tennessee Warbler at Agua Nueva that has been seen on and off at Sweetwater since. The very next day, a juvenile Yellow-bellied Sapsucker arrived and is still being seen, only now there are two of them! A Gray Catbird was heard by everyone in my November 6 group, although seen by none. On the 7th, Steve Nord let me know he had seen a tiny Empidonax flycatcher that we were able to refind and identify as a Least Flycatcher, a first for Sweetwater and only the second record for Pima County. An immature female Chestnut-sided Warbler arrived on November 11 and has stuck around to delight many visitors since. Hopefully she will stick around until the Tucson Christmas Bird Count on December 17 and stay the rest of winter as one did back in 2011–12.

It is shaping up to be a great winter for birding at Sweetwater Wetlands and I hope to see you out there! Visit tucsonaudubon.org/field-trips to sign up for a Wednesday morning bird walk with Luke Safford, Donito Burgess, and myself.

Greater White-fronted Goose; Northern Harrier; Rufous-backed Robin; Chestnut-sided Warbler. All photos by Alex Patia.

THE SEASON OF THE SPARROW

For me, the last couple of months at the Paton Center for Hummingbirds have included a lot of computer time and paperwork related to roof construction. This week marked the end to all of that with the new HVAC unit installation on our beautiful new dark green roof! This means I get to spend more time out in the yard, greeting our guests and seeing what new birds this year's migration has brought in. It is quite obvious that I missed the arrival of our winter birds!

The giant pecan trees in the yard are dropping their leaves, the morning temperatures have dropped considerably, and we have some really great birds at the Center. I often tell our visitors that we have two shifts of birds, our summer birds and our winter birds. The best times for birding are during the shift change, when both sets of birds mingle together.

There is a really nice group of birds to be found now, especially if you include our nearby expanded areas. As always, the main yards are stocked with lots of hummingbird feeders, keeping our Violet-crowned Hummingbirds happy despite the chilly mornings. Be sure to keep an eye on the brush piles—we always put a little seed at the edge of each one, attracting significant avian traffic. There has been a tremendous amount of new plantings along the Cuckoo Corridor trail, just to the northeast of the Paton Center. I also highly recommend you take the time to walk the new Birding Trail to the southwest of the yard. It's a quarter-mile loop through the riparian area and includes new benches overlooking the treated water that is released into Sonoita Creek.

No matter which part of the Center you are visiting, one thing you are likely to see is a good number of sparrows. In fact, I call this "The Season of the Sparrow." The Song Sparrow is the lone sparrow of summer, but that really changes once the winter migration starts. We see an influx of White-crowned and Lincoln's Sparrows, while Brewer's, Lark, and White-throated Sparrows are not uncommon. This year we have also been treated to a fairly rare visit by a red subspecies of Fox Sparrow. We hope it sticks around through the winter!

No matter the time of year, there is always something fun to find here at the Paton Center for Hummingbirds. We look forward to your next visit.

White-crowned Sparrow (top), Fox Sparrow (left), and White-throated Sparrow, Tom Brown

TUCSON AUDUBON'S
PATON CENTER
for HUMMINGBIRDS

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TUCSON AUDUBON BIRDATHON 2025

APRIL 1–30

THE 2025 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 Erica Freese at efreese@tucsonaudubon.org.

WHO? You! Absolutely anybody can participate in this tradition begun in 1987. You can: form your own team or donate to a team

WHEN? April 1–30. You make the call: Take 24 hours, half a day, a week, or the whole month!

WHERE? Take your birding anywhere on the planet!

PRIZES? Yes! We're continuing our **COMPETITION CATEGORIES**, including Big Day, Grand Champions, High Flyers, and more!

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.

Never done a Birdathon or want new ideas to make your Birdathon the best yet? Watch the video workshop!

TUCSONAUDUBON.ORG/BIRDATHON

Verdin, David Kreidler

The Saguaro, Hub of the Sonoran Desert
VIDEO SERIES

It's been over 20 years since we've seen new generations of saguaros establishing in their native landscape. This is especially concerning considering that over 100 animals depend on saguaros for food and nesting. It is hard to imagine what our landscape would look like without them.

Tucson Audubon recently finished its first saguaro restoration project which included saguaro planting, creation of saguaro-replicating nestboxes, and saguaro protection. We learned a lot throughout this project, and to share our knowledge with you, we created an entire video series about it! In total, we have six videos that cover:

1. An introduction to the project and general overview of saguaros
2. Saguaro population threats and how to plant a saguaro
3. Managing invasive grasses to protect saguaros from wildfire
4. Visiting the saguaro nursery to learn about propagation
5. Designing, installing, and monitoring saguaro-replicating nestboxes
6. Final thoughts on the project and our next steps

Find the video series on our YouTube channel (YOUTUBE.COM/TUCSONAUDUBONSOCIETY) under the playlist, *The Saguaro, Hub of the Sonoran Desert*.

Thanks for watching!

Saguaros waiting to be planted, Alexandra Mitchell

Aya Pickett
Restoration Project Manager
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This project was made possible by the Wildlife Conservation Society through its Climate Adaptation Fund. Support to establish the Climate Adaptation Fund was provided by a grant to the Wildlife Conservation Society from the Doris Duke Charitable Foundation.

Elegant Trogon, Roger van Gelder

DOWN & DIRTY DUST BATHING

You may have already turned your garden into a wildlife-attracting haven by providing water and plants that offer food, cover, and shelter. If so, you are probably observing all kinds of fascinating bird behaviors: dominance and competition, predation, drinking, unusual eating habits, singing, courting, nest building, and parental activities. Then, there is bathing—and we're not just talking about water here. Creating an area of loosened soil for dust bathing birds can add a whole new dimension to your viewing pleasure.

I recently watched a pair of Gambel's Quail flail about in the soil of my garden. The male, looking less than his usual elegant self, was particularly enthusiastic about this activity, groveling in the dirt like an exuberant dog, rolling over and over. As the quail situated themselves, they created shallow hollows in the dirt, after which they proceeded to peck and scrape the soil loose with their feet, sifting dust through their feathers. Using their wings like a shovel, they flicked the dust onto their backs.

This behavior, known as dust bathing, is thought to be an activity for feather maintenance, keeping feathers healthy and looking their best. It helps dislodge mites, fleas, and other parasites. In the case of quail, dust bathing also helps maintain an optimum amount of oil on the feathers. During the hottest months of the year, hollowed-out depressions in the soil also provide cooler temperatures and often moisture.

Most of us think of soil as the substance in which plants grow. As gardeners, we're used to thinking about it in terms of its ability to anchor plants, its structure for holding minerals and water, and its fertility—whether or not it holds the nutrients necessary for plant growth. But a bare patch here and there goes a long way for our avian friends.

Sites where birds scratch and peck for seeds and soil-borne insects tend to soften over time, making them ideal dust-bathing spots. If you have very hard, compacted soil, get out your cultivator and loosen things up, possibly adding some sand to lighten the soil consistency.

Lynn Hassler
Green Gardeners Volunteer Captain
Historic Y

TUCSON AUDUBON SOCIETY
HABITAT *at* HOME

Crested Caracaras bathing, Dan Weisz; Gambel's Quail family dust bath, Doris Evans

RESTORING HABITATS, REVITALIZING HEALTH

Spending time in nature has a way of refreshing both our minds and bodies. Whether it's birdwatching with friends or helping an ecosystem thrive, being outdoors benefits both nature and our well-being. This connection was evident during a recent Santa Cruz River Community Stewardship Event hosted by Tucson Audubon and the Tubac Nature Center, with generous support from the Santa Cruz Valley National Heritage Area.

With a shared mission to restore vital habitat along the Santa Cruz River in Tubac, volunteers and staff joined forces to remove invasive plants like Johnsongrass and buffelgrass, which threaten native ecosystems. They also planted native seeds collected on-site, helping to build a healthier and more resilient environment. For all those involved, the day wasn't just about clearing weeds or scattering seeds, it was about connecting—with the land, the local birdlife, and each other.

The event also offered a chance to learn. Tucson Audubon staff members Megan Ewbank and Kari Hackney shared their expertise on managing invasive species and the importance of native plants, inspiring curiosity and a deeper appreciation for Arizona's unique habitats such as the cottonwood-willow forest at the event site. This rare and endangered forest type prevents erosion and improves water quality, and serves as a popular wildlife corridor for mountain lions, bobcats, and coatimundis. The forest canopy provides nesting opportunities and migratory habitat for neotropical birds like Yellow-billed Cuckoo, Gray Hawk, Summer Tanager, and Yellow-breasted Chat. Due to its importance to these regional bird populations, the Upper Santa Cruz River is designated an Important Bird Area.

A big thank you to the volunteers and staff who made this event a success. Their work not only improved the health of the Santa Cruz River, but also showed the power of teamwork to create spaces where both wildlife and people can thrive. When we care for nature, we care for ourselves.

If you are interested in participating in a future restoration event in Tubac, please visit the Volunteer Opportunities page at TUCSONAUDUBON.ORG/VOLUNTEER.

Summer Tanager, Hemant Kishan

Alexis Stark
Volunteer & Engagement Coordinator
astark@tucsonaudubon.org

Restoring habitat along the Santa Cruz in Tubac, Alexis Stark

TUCSON AUDUBON SOCIETY

BIRDS & COMMUNITY

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

February 13 & 15, In-person Workshop and Field Trip
IT'S ALL IN THE FAMILY: SPARROW IDENTIFICATION WORKSHOP with Homer Hansen
Cost: $125/member, $175/non-member
Join local bird expert Homer Hanson for this 2-part ID workshop focusing on sparrows. Often skulky and elusive, these "little brown jobs" are often overlooked in the field. As part of this workshop, you will learn how to find and observe sparrows. Useful foraging behaviors, vocalizations, and flight characteristics will be reviewed. This workshop covers 34 species of sparrows, towhees, and longspurs that may be found in the Southwest.

February 22, Field Trip
WILLCOX AREA INCLUDING COCHISE LAKE AND GOLF COURSE with Luke Safford
$50/member, $75/non-member
Wintering Sandhill Cranes are always a big draw at Cochise Lake, but we'll also focus on other great birds found around the golf course. Getting there early gives us the best chance for Scaled Quail, along with Lark Sparrows, Chihuahuan Meadowlark, and most likely a huge flock of American Wigeon. Waterfowl are in great numbers with 15+ species possible. After the lake and golf course, we'll visit the old cemetery area which hosted Crissal Thrasher and Sagebrush Sparrow last year. Limited to 10 participants.

February 27 & March 1, In-person Workshop and Field Trip
IT'S ALL IN THE FAMILY: RAPTOR IDENTIFICATION WORKSHOP with Homer Hansen
Registration fee: $125/member, $175/non-member
Join local bird expert Homer Hanson for this 2-part ID workshop focusing on raptors. Homer will introduce you to the orders and families comprising our western diurnal raptors and present family and generic structural, plumage characteristics, sexual dimorphism, and hunting behaviors useful for identification.

Thursday, February 27, In-person Social
BIRDS 'N' BEER IN CELEBRATION OF LUCY'S WARBLERS!
Join us for a drink at Borderlands Brewing Company in celebration of the return of Lucy's Warblers to Southeast Arizona! We'll have resources on how to invite these cuties into your yard and specially designed Lucy's nestboxes available for purchase.

February 28, In-person Social
BIRDS 'N' BINGO at Bawker Bawker Cider House
Come out for some birds, brews, and bingo! You'll put your bird ID knowledge to the test, compete to win sweet birdy prizes, and sip some of the best cider in town with your friends from Tucson Audubon!

Saturday, March 8 and Tuesday, March 11: Spring Break
YOUNG BIRDERS WALK at Reid Park
Calling all young birders! Kids of all ages and their guardian(s) are welcome to join. We'll explore the ponds and surrounding areas at Reid Park. We'll definitely look for birds, but we'll have a fun nature activity and also stop to investigate anything interesting that catches our eyes. We'll search for desert bird species like Gila Woodpeckers, Vermilion Flycatchers, and Great-tailed Grackles. We'll also look for waterfowl like Mallards, American Coots, and Neotropic Cormorants. Limited to 6 families.

March 15–18, Two field trips per day!
TUBAC DE ANZA TRAIL & HAWKWATCH
Join us for a walk along the Santa Cruz River before taking in the amazing raptor migration at Ron Morriss Park. We'll hit the De Anza Trail in hopes of finding a variety of songbirds including Cassin's Kingbird, White-breasted Nuthatch, Lark Sparrow, and Lucy's Warbler. You'll then have the opportunity to take in the spectacle of migrating Common Black, Gray, and Zone-tailed Hawks. Limited to 10 participants on the walk, but no limit on HawkWatch participation.

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WOO HOOT! *BIRDY NEWS BITES WORTH CELEBRATING*

MASON CENTER SAGUARO GOES VIRAL!

Long-time volunteer and Tucson Audubon educator Doris Evans has been snapping a photo of this Mason Center saguaro since 2006 and her annual updates are always highly anticipated and joyously received by our audiences. To our great surprise, the reaction to the 2024 edition was on a whole new level as the November 20 Instagram post went viral! At press time it had over 1.3 million views, with over 76,000 interactions, and 12,000 shares. We reached many new people with this post—over 99% of viewers were not followers, a flip from all our other posts! See TUCSONAUDUBON.ORG/DORIS-SAGUARO for a closer look at the image.

Thank you, Doris, for your commitment to taking these photos over the years!

"I took the first photo in 2006 when I noticed tiny arms had sprouted. I snapped a photo and thought it would be fun to take a yearly snapshot to record the arm growth. Little did I know that almost 20 years later I would still be doing it. Because I happened to take that first shot on a November morning, I continue going back the same time each year to get the lighting about the same. Though I do walk the trails other times of the year, it's always a special day when I walk up to my old friend, say "hi" and take its yearly portrait. The arm growth has slowed, but there is growth. A close look comparing last year and this year shows a few inches of growth on the main stem and arms." *—Doris Evans*

Tucson Audubon's Mason Center saguaro chart, Doris Evans

GIFTS IN HONOR OR MEMORY OF

In honor of Barbara Croft from Helen Holliday & John Baffert

In honor of Canny Clark from Susan Clark

In honor of Chris & Sandra Marshall from Jonathan Marshall

In memory of David Taylor from Joan Donnelly

In memory of George West from Elizabeth Andrews & Karen Sturnick

For Ginny & Les Wagner from Julia OConnor

In honor of Irene Dickinson from Richard Brong

In honor of Jan & David Labiner from Susan Watt

In honor of Janine Higgins from James Randall

In honor of Jim Hoagland from Carol & Ken Massanari, Janet Kukulinsky, John Antonucci, Judy & Dave Matthews, Linda Shannon-Hills, and Toni & Lowell Graves

In memory of Joan Goldberg from Joanne & Michael Goldberg

In memory of Justin Camus from Elizabeth Camus

In memory of Karl Elers from Mary Jo Jones

In honor of Lisa Mainz from Patty Zishka

In memory of Margaret Caldwell from Marcella Caldwell

In honor of Martha Matte from Jordie Gunther

In memory of Mary Ann Preda-Helfrich from Morgan Dennis

In memory of Mary Juregens from Patricia Stroh

In honor of Melissa Fratello from Tricia Gerrodette

In honor of Michele Russell from Sarah Russell

In honor of Michelle Aguirre & Scott Dafforn from Alex Dafforn

In memory of Wayne Collins from Ellen Blackstone

In honor of William Bruce Robinson from Edwin Robinson

Killdeer, Mick Thompson

SUPPORTING THE BIRDS WHO SUPPORT US

We meet on a winter morning in east Tucson at the confluence of the Agua Caliente and Tanque Verde Washes. "Welcome to Isabella Lee Natural Preserve. Have any of you ever been here before?" I ask. One birder raises her hand. This preserve is a mesquite bosque, or forest, that is a magnet for birds. Historically, these forests covered much of southern Arizona but are now among our most imperiled habitats due to development and excessive groundwater pumping.

We head to a sunny meadow to listen for birds. Native cottonwood trees tower above the mesquites, and a clump of dead trees, called snags, are silhouetted against the sky. Every trip to Isabella Lee holds a surprise, and this morning, it's the drumming and sharp keyer calls of the Northern Flickers, who have returned for the winter. We count four of them perched high in the snags.

After every birding trip, I return home lighter and more optimistic. I feel like my old self again. Is it the beauty of early morning light on the mountains, the meditative quality of birding, the excitement of seeing a favorite bird, or the connections I make with others who love birds, too?

I've been a casual birder all my adult life, but that changed in 2017 when my daughter, Claire, died unexpectedly. I have precious memories of teaching Claire about birds. I remember her excitement when we found a sock-like nest of moss and lichen quivering with a dozen or so Bushtit chicks. For weeks, we checked the nest each morning to hear the chicks explode with cheeps when the parents fed them.

After her death, I poured out my sorrow to the birds in my yard. They listened without offering platitudes or words of advice. Birding trips became a safe haven where I found women to talk to about birds and nothing else.

So, how do I repay the birds? I'm fortunate to have free time in retirement to devote to birds. I volunteer for Tucson Audubon, make my home a bird haven, and educate others about the importance of native habitats.

Have birds enhanced your quality of life, supported your physical and mental health, and contributed to your experience of awe and sense of community? Here are some ways to thank the birds who have helped us:

- Join Tucson Audubon at the highest membership level possible
- Make your house and yard bird-safe and welcoming
- Volunteer at habitat restoration work parties, bird surveys, or fundraisers such as Birdathon
- Attend educational events such as the Southeast Arizona Birding Festival
- Contribute generously to Tucson Audubon to support our valuable work at TUCSONAUDUBON.ORG/APPEAL

Karen Howe
Tucson Audubon Board Secretary

Scan to donate:

Northern Flicker, Shawn Cooper

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Winter 2025 | Vol 70 No 1

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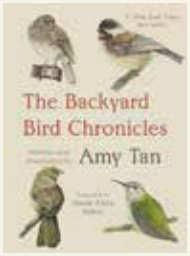


***The Backyard Bird Chronicles* by Amy Tan**
$35.00

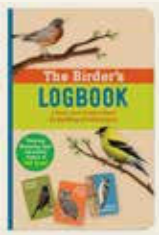
In 2016, Amy Tan grew overwhelmed by the state of the world. In search of peace, Tan turned toward the natural world just beyond her window and, specifically, the birds visiting her yard. *The Backyard Bird Chronicles* maps the passage of time through daily entries, thoughtful questions, and beautiful original sketches.

Sparrows Sweatshirt
$60.00

Featuring hand-illustrated depictions of six beloved sparrow species—Song, Lark, Field, White-crowned, Swamp, and Eastern Towhee—this lightweight sweatshirt by Bird Collective captures the charm and diversity of these remarkable songbirds

Starry Night Adult Tee
$24.00

Created by Samuel Bartlett, this unique, glow-in-the-dark t-shirt is sure to delight even amateur astronomers! This shirt is made in the USA and printed on 100% cotton using water-based inks.



The Birder's Logbook
$6.99

Spark your child's curiosity about nature with this exciting seek-and-sticker birding book! Featuring 100 colorful, photo-realistic bird stickers, this interactive book is designed to help young birders explore the world of North American birds.

Solar Water Wiggler
$74.00

The Solar Water Wiggler features a unique agitator action that creates continuous ripples without needing batteries. Moving water attracts more birds!

WindowAlert Window Decals
$7.95

WindowAlert decals help prevent birds from accidentally striking windows. Each decal has a special coating reflecting ultraviolet sunlight that birds see as a brilliant glow.