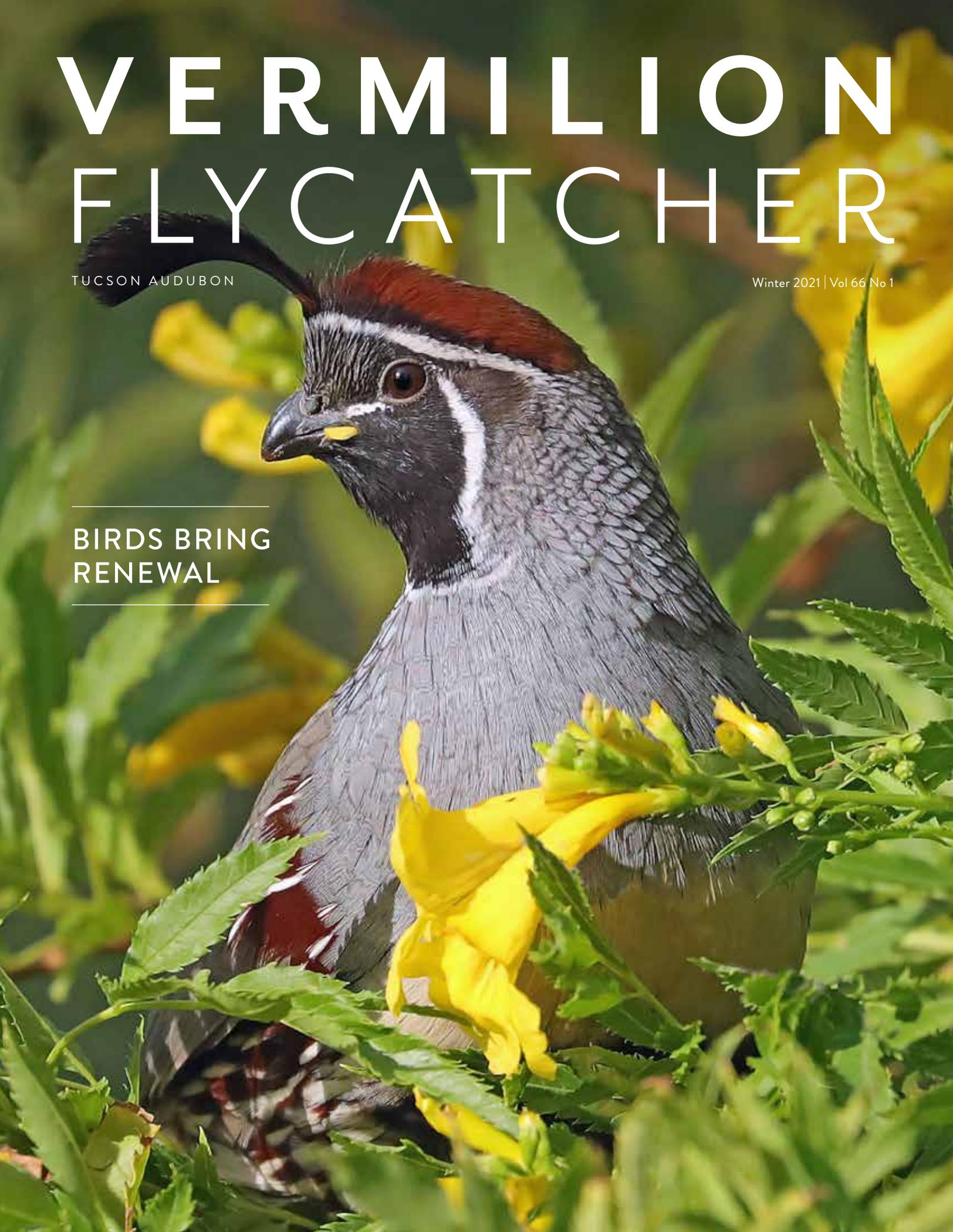


VERMILION FLYCATCHER

TUCSON AUDUBON

Winter 2021 | Vol 66 No 1

BIRDS BRING
RENEWAL



TUCSON AUDUBON SOCIETY

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Winter 2021 | Vol 66 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

Gambel's Quail by Pam Kopen. Pam is an enthusiastic amateur photographer who hopes that everyone will always find delight in nature!

Canon EOS-1D X Mark II, EF100-400mm f/4.5-5.6L IS II USM, f/7.1, 400.0 mm, 1/3200, ISO 2000, Flash (off, did not fire)

LEFT: Worm-eating Warbler by Steven Kersting. One of the many rare species found in Southeast Arizona in 2020

BEST VEST, FORWARD

The last time our staff was able to gather in a non-work setting was all the way back in December 2019. 2019! We met at the Cactus Bowl on Tucson's South Side to enjoy some bowling, games, pizza, and beverages. Socializing beyond our workplaces and the birding trail, we recognize, is an essential means for becoming a high-functioning team. To my complete surprise—and a little bit at the expense of my wardrobe—the staff presented me with my very own “Dundie Award” (fans of NBC's *The Office* will know what this means): **Tucson Audubon's Best Vest.**

Even while working from home, I maintain a ritual of preparing for the work day, including dressing as if I'm heading to the Mason Center, Paton Center, or our offices at the Historic Y. Donning my fleece with its Tucson Audubon logo patch, or pushing a Vermilion Flycatcher lapel pin through the collar of my thick wool vest helps to remind me why I do what I do: to try and make this world better for birds and people. I'm not sure I could do it in my pajamas, to be honest! My vests carried me through the most challenging year of my conservation career in 2020. At the same time, 2020 was also the most successful year for an Audubon organization I've had the privilege to helm. Simply put, *with your unwavering support*, we improved more acres of bird habitat, engaged with more members of our community, and generated more financial support than ever before in the history of Tucson Audubon.

I'm hearing stories every day about the “silver linings” of our shared experience—living through a global pandemic. Amidst all of the pain and loss, anxiety and fear, there have been moments of joy and celebration, along with encouraging undercurrents of resolve and hope. Stories of how birds are helping people to cope and heal continue to fill my social media

feeds and my email inbox. I too enjoyed a refuge in birds that I hadn't previously known, when I embarked on a solo Birdathon effort last spring. I can honestly say that Broad-tailed Hummingbirds and Steller's Jays were an instrumental part of strengthening myself to muscle through the challenging summer. I'm looking forward to seeing those birds again and thanking them for the inspiration.

A New Year is upon us, but my morning ritual is still one arm-hole at time, starting my day as Tucson Audubon's Best Vest. I'm eager to gather our employees again to celebrate our achievements in person, to bond and know each other better, and to smile and laugh over pizza. In the meantime, your Tucson Audubon is forging ahead in strong, capable hands. From sky islands to grasslands, to Sonoran desertscapes and beyond, Tucson Audubon is there, working to make the world better for birds and people.

Keep 'em flying,



Jonathan E. Lutz,
Executive Director

CONSERVATION CAN BE YOUR LEGACY

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Vermilion Flycatcher, Lois Manowitz

Over the years you have supported Tucson Audubon's mission: *inspiring people to enjoy and protect the birds of Southeast Arizona.* When you include us in your estate planning, you join many others as a member of our **Vermilion Society**—and you gain peace of mind, knowing that your values will continue to become action on behalf of birds and their habitats, far into the future.

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We sometimes receive bequests from people whom we have never had the opportunity to thank. If you include us in your estate plans, we hope you will let us know. We value the opportunity to thank you, and your gift can inspire others in their legacy planning.

For more information, please contact:

Keith Ashley, Director of Development & Communications, 520-260-6994.



SOUTHEAST ARIZONA ALMANAC OF BIRDS

JANUARY THROUGH MARCH

As we welcome the new year, there may be many things we are glad to leave behind. Birds, however, are not among them. In looking forward to 2021, we can trust that birds will provide many joys and lasting memories as they continue to surprise and inspire us. I saw 15 new bird species in 2020, but could only have foreseen *maybe* four of those. A beautiful Northern Jacana spending the winter in Tucson? A Greater Roadrunner showing up in my yard for the first time? These unpredictable moments make watching birds an adventure every time you go out, to the wilds or your own yard. For those of us lucky enough to live in Southeast Arizona, and everyone who comes to visit, seeing some of our iconic species brings year-round excitement. I hope you get to experience the joy of these fascinating birds in the coming year.



Greater Roadrunner, Cathy Wasson
Canon EOS 5D Mark IV EF100-400mm f/4.5-5.6L IS II USM,
f/6.3, 286.0 mm, 1/1000, ISO 320, Flash (off)

Matt Griffiths
Communications Coordinator
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GAMBEL'S QUAIL

This striking quail is an archetypal bird of the Sonoran Desert—its grating, four-note *ka-KAA-ka-ka* call one of the most recognizable sounds of a morning in the desert. Gambel's Quail are perfectly suited to the prickly and thorny, dense vegetation here as they sprint away from threats to hide in cactus thickets. More than 90% of this “boom and bust” species' diet is composed of plant parts, so not only does it require healthy, native vegetation for safety, it needs it for reproductive success. Gambel's Quail population levels are heavily influenced by the amounts of winter and spring rainfall—dry years yield fewer food resources and thus fewer young birds.

Finding Gambel's Quail in your yard is an exciting event, especially if you live in urban Tucson. This time of year is perfect for improving your landscapes to encourage quail to not just pass through your yard but actually spend time there! You can benefit from joining Tucson Audubon's **Habitat at Home** program to learn how and what to plant to attract more birds and other wildlife. Plan, prep, and plant now to get quail in your yard this year!

To learn more about the Habitat at Home program, visit tucsonaudubon.org/habitat.

Gambel's Quail, Mick Thompson;
Violet-crowned Hummingbird, Mick Thompson;
Elegant Trogon, Cathy Wasson



VIOLET-CROWNED HUMMINGBIRD

When Marion and Wally Paton moved to the banks of Sonoita Creek in Patagonia in 1973, they had no way of knowing they would open up their property to the public and that it would become a world-famous birding destination. What is now the **Paton Center for Hummingbirds**, a major tourism hub for the town and birding location for Southeast Arizona, owes its creation to the Patons' generosity and one inspirational bird: the Violet-crowned Hummingbird. This beautiful hummingbird with stark white underparts, violet-blue crown, and orange-red bill is mostly native to Mexico. Its range barely peeks into Arizona and southwest New Mexico, and for years now, the most reliable spot for US birders to get their “life bird” of this species has been the Paton Center.

The Violet-crowned Hummingbird population in Arizona seems to be growing, and they are now much more commonly found year-round. You can occasionally spot one on our Paton Center Hummingbird live-cam, even in winter. Perhaps because they are so often seen by many people at the feeders there, it is a real treat to see one “in the wild” away from a feeder. I've been lucky to experience this a few times, and it's almost shocking—“I didn't know they could do that!” My guess is that the Paton Center will remain the easiest place to see a Violet-crowned far into the future.

PLEASE NOTE: The Paton Center for Hummingbirds remains closed due to COVID concerns. Watch our website for developing details: tucsonaudubon.org/paton.



ELEGANT TROGON

Perhaps no other bird in the US regularly inspires more myth, legend, travel plans, and oohs & aahs, than the Elegant Trogon. I'll let trogon expert, Rick Taylor, explain it: “Many American birders regard the Elegant Trogon as the most beautiful bird north of the international boundary. Almost a foot-long with an iridescent green back and scarlet red breast, the multihued male trogon exhibits a yellow bill, an orange eye-ring, immaculate white breast band, dove gray wings, and a black-and-white laddered undertail.” This is a great looking and sounding bird. During the summer breeding season, you can often hear the strange barking calls of male trogons in select canyons in most of the Sky Island mountain ranges of Southeast Arizona. This too is a mostly Mexican species, but by the late 1970s, Cave Creek Canyon in the Chiricahuas had become ground-zero for birders seeking this so-called “most sought-after bird in Arizona.”

Thanks to annual surveys co-led by Tucson Audubon, we now know that Elegant Trogons occupy almost all of the local mountain ranges and their population is increasing. In 2020, 201 trogons were detected during surveys, and more are spending the winter in the US. Elegant Trogons have benefitted Southeast Arizona and brought joy to legions of birders for years—give back by helping us monitor this wonderful species on a survey in May 2021. Learn more at aziba.org.

RENEWAL THROUGH RARE BIRDS

NORTHERN JACANA

On September 26, Richard Parent-Johnson called and said he had a strange bird at the Ina Road bridge. He thought it might be a Purple Gallinule, a very rare and colorful visitor from Mexico. About 30 minutes later I pulled up to the bridge and found that it wasn't a gallinule but an even rarer Northern Jacana!

Jacanas are fascinating birds, a chestnut-colored body with bright yellow wing spurs and wing patches, greatly elongated toes, and reversed breeding roles—males raise the chicks and females pair with as many as four males. Amazingly, a juvenile bird had been found in Green Valley about two weeks earlier, but this was only about the sixth bird ever found in Arizona.

Since then, the bird has remained faithful to this one little stretch of the Santa Cruz River south of the bridge, flanked on both sides by tall cattails and a thick mat of seep monkeyflower. I see people there every day looking for it—probably more than a thousand by now. It's noisy on the bridge, but overall it's pretty convenient for such a rare bird. The only hiccup is I do meet a lot of people looking for the bird under the bridge, or from the bank, but it can only be seen from the bridge. I've birded this area hundreds of times, but I hardly ever go up on the bridge. I wonder if Richard hadn't ventured up there if anyone would have found this bird yet. But he did, and I'm glad we get to enjoy this beautiful bird.



Northern Jacana, ©bryanjsmith



Andrew Core is a long-time Tucson resident; Southeast Arizona Rare Bird Alert compiler and eBird reviewer—he is still learning about Arizona's birds.



Mountain Bluebird, Eric Ellingson

URBAN BIRDING BY BICYCLE

Unexpectedly, I found myself with a lot more time for birding this fall when concerns about COVID-19 advanced my planned retirement from teaching by a year. I was already making a gradual return to a serious birding habit, following an extended break, packing binoculars on daily bike commutes and recreational cycling trips. Tracking birds seen “by bike” was becoming a bit of an obsession...

I found myself exploring sites I could pedal to within a 15–20 mile radius of my east Tucson neighborhood. The unprecedented influx of Dickcissels and Clay-colored Sparrows spurred me to scan every soccer and baseball field, and urban park I had previously pedaled by.

And then came an explosion of sorts: wandering Ruddy Ground Doves, nomadic Lawrence's Goldfinches, and montane exiles like Yellow-Eyed Juncos, White-breasted Nuthatches, Mountain Bluebirds, and Cassin's Finches. Not earth-shattering, but still satisfying encounters.

Seeing a really rare bird triggers such an adrenaline rush! This fall brought Roseate Spoonbills, Painted Buntings, and a host of vagrant warblers. But sometimes the reward of birding is encountering a familiar bird in an unexpected place, or finding a new patch to wander through. I'm discovering how gratifying it can be to follow the ebb and flow of seasonal changes and unexpected discoveries close to home. Bonus point: I can brag about reducing my carbon footprint while adding to my bike list!



Sharon Goldwasser began birding in Arizona in 1978 while working as a field biologist, then stayed to pursue a graduate degree in Ecology & Evolutionary Biology studying Lesser Goldfinch song, and recently retired from over thirty years as a science educator.

CANADA WARBLER

On Wednesday, October 21 I left work later than I would have liked. As usual. I wanted to bird but didn't have much daylight left, so I "settled" for a stop at one of my many local patches: Brandi Fenton Memorial Park. Brandi Fenton is not a famous birding hotspot; it's primarily a complex of soccer fields, with a decent stand of old mesquites tucked in one corner, and a few other trees adding some modest habitat value. I arrived with about 15 minutes until sunset, feeling a little rushed, and went straight to the mesquites. Well, when I stepped out of the car, stress turned into euphoria when the first bird I got in my binoculars was a Canada Warbler!

Canada Warblers breed far to the north and east of Arizona and migrate east of the Rocky Mountains. The species has historically been seen in southern Arizona only a couple of times per decade. Fortunately, this mega-rare visitor stayed three nights, and before she disappeared over 100 people went to see her! I've been birding my local patches more than ever since the pandemic began, and it was really satisfying to find such a rare bird in such an unexpected place. In the middle of a crazy week, this little warbler brought me a lot of joy.



Canada Warbler, Scott Olmstead



Scott Olmstead is a high school teacher, member of the Arizona Bird Committee, occasional guide for Tropical Birding Tours, and is a regular contributor to the *Vermilion Flycatcher*.



EARED QUETZALS

Rare birds are priceless gems that bring beauty and intrigue to our world. They appear suddenly and never promise to stay, but with luck a few of them linger. If I could have willed in the perfect bird to combat the depression many experienced due to COVID-19, I could not beat the brilliant Eared Quetzals that appeared in the Chiricahua Mountains in June and were seen intermittently through November. Their dazzling plumage, magnetic flight performances, and vivid vocalizations, coupled with the intrigue that so little is known about this species, drew me up canyon from Portal repeatedly. The marvel of so much time with a rarity filled me with inspiration that sustained me, guiding me through the haze of this challenging time.

It looks like they have gone as winter descends, but I am left with a message of resilience and regeneration. Wandering up from Mexico, the Eared Quetzals seemed to thrive here. They danced around this rugged terrain with ease, showing that the Chiricahuas can provide a wild, spacious realm for them. And then there is intrigue: Were it not for our cold winters, would these amazing birds grace our Sky Island region year-round?

Eared Quetzal, Peg Abbott

Peg Abbott is the owner and a lead guide for Naturalist Journeys, a nature and birding tour company based out of Portal, AZ.



EASTERN WARBLERS ON THE SANTA CRUZ RIVER

Birding and nature are my "happy places" during any year. My trip to Tucson was the first traveling that I had done since COVID-19 hit, and birding is usually a great socially distanced activity, so I planned a few extra days to check out some favorite places. As finding good birds often is, both eastern warblers I found (Worm-eating Warbler in Marana and Blackburnian Warbler in Tucson) in November was at least part luck. It was through sheer serendipity that I ended up at both locations, neither being my originally planned destination. It is always a rush to find a rare bird, and even more enjoyable when other birders get to see it and feel excited about it too. In this year that feels like we are all socially isolated, to be able to share a special and rare bird that is a lifer for some, or a long awaited state or county bird for others, truly made these finds even more special.



Cathy Sheeter is an award-winning nature photographer, expert birder, and internationally acclaimed wildlife artist.

Blackburnian Warbler, Mike Henry



THE EBB AND FLOW OF DESERT RAINS AND BLOOMS

Guest Authors Mike and Theresa Crimmins

After the brutally hot and dry summer of 2020, many Tucsonans are looking for some signs of hope that the upcoming winter rain and snow season will breathe some life back into our parched landscape. The summer monsoon went down in the record books as the hottest and driest in the observed record, leaving us desert dwellers thirsty for the next rainy season. These two rainy seasons, characterized by very different types of storms, are a key defining feature of the Sonoran Desert. This distinct rainfall seasonality has subsequently shaped the plant communities that comprise Sonoran Desert vegetation, resulting in unique assemblages of plants that flower in response to either summer or winter moisture.



Storm brewing over the Sonoran Desert, Marion Ball
iPhone XS Max, Shutter speed 1/349, f/2.8, ISO 20, Lens 6.6 mm

THE UNIQUE SEASONALITY OF SONORAN DESERT PRECIPITATION

Monthly precipitation totals for Tucson reveal the ebb and flow of distinct wet and dry seasons throughout the annual cycle. Starting at the beginning of the “water year” in October, rainfall amounts typically increase over the next several months climbing to a subtle peak in January and then declining in the spring. There is a clear drop in precipitation from March to April, which is the end of the cool, winter precipitation season and the beginning of the reliably warm and dry spring season that stretches from April through the end of June. By July, summer thunderstorms have typically spread across the southwest, marking the beginning of the summer monsoon that lasts until late September. With the retreat of the monsoon, the cycle starts over again with the prospect of the shift towards cool season precipitation from October through March.

This distinct seasonality with cool and warm season precipitation separated by a dry spring is driven by a seasonal shift in weather patterns across the whole northern hemisphere. From fall to winter, the mid-latitude storm track associated with the jet stream moves south bringing cold air

and Pacific storm systems to the Southwest. These precipitation events are important in terms of producing widespread soaking rains to recharge soil moisture in desert soils and producing snow pack that will melt throughout the spring to produce water for springs and streams. The cooler temperatures and dormant vegetation limit evapotranspirative demand, allowing for precipitation to soak more deeply into the soil.

As the sun angle climbs in the spring, the winter storm track retreats north, leaving behind warm and dry weather governed by high pressure building north. This ridge of high pressure, driven by the warming land surface in western North America gradually builds and strengthens to the point where the southwest U.S. sees a shift in wind from the westerlies that dominate the weather for much of the year, to a subtropical flow out of the south and east that drags in tropical moisture from the south, the beginning of the summer monsoon. The summer monsoon storms are typically both highly localized and intense, resulting in patchy distribution of moisture and high runoff rates, with little infiltration into the soil.



Widespread soaking rains recharge soil moisture in desert soils, Alan Schmierer



Mike Crimmins is on the faculty of the Department of Environmental Science at the University of Arizona and is an Extension Specialist in Climate Science for Arizona Cooperative Extension. He has been in this role for 15 years working with ranchers, farmers, and natural resource managers across Arizona to integrate climate information in their planning and decision making.

Theresa Crimmins is the Director of the USA National Phenology Network and Research Professor in the School of Natural Resources and the Environment at the University of Arizona. She works with an amazing team to support the growth and use of phenology data and resources and also undertakes collaborative research to document plant response to changing climate conditions.

BIRD RESPONSES TO SEASONALLY-AVAILABLE MOISTURE

It's widely known that our summer rainy season has a tremendous effect on birds in Southeast Arizona as hummingbird numbers peak and many species take advantage of the increased resources of the "second spring" to either start their breeding cycle or produce a second clutch. But what is the effect of winter rains on our desert birds?

Recent research has shown that although day length is a key factor in the timing of breeding, other external factors such as temperature, food availability, and rainfall amounts can also impact when species breed. For example, in a warmer than normal spring, birds will mate earlier, and in an unusually cold spring, birds will wait to breed. In a study of 13 Sonoran Desert birds, all were found to delay their normal nesting cycles by several weeks following an abnormally dry winter. At these times, many birds may find it difficult to successfully produce young if they are more vulnerable to heat, predators, and limited food resources—birds may also completely skip breeding for the year after a winter of very low rainfall. As climate models are predicting increased drought frequency in the southwest, it's important to continue researching how the unique rainfall patterns characteristic of the Sonoran Desert may hold keys to the long-term survival of our desert birds.



Cactus Wrens may delay breeding at times of very low rainfall, Laura Stafford



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Spring wildflowers depend on consistent fall and winter rains, Bryan Doty

PLANT RESPONSES TO SEASONALLY-AVAILABLE MOISTURE

The rich biodiversity of plants and animals in the desert southwest is strongly tied to this seasonality in precipitation. The Center for Biological Diversity confirms that, "The Sonoran Desert is the most biologically diverse of the four U.S. deserts. Covering 120,000 square miles of southwestern Arizona, southeastern California, and the Mexican states of Baja and Sonora, its mountains, rivers, and canyons provide luxurious habitat for numerous unique species specially adapted for heat, aridity, and intense summer monsoons." When various Sonoran Desert plants opt to flower is the result of evolution under the seasonal patterns of moisture available that are specific to this region.

The winter-spring flowering season is characterized by a mix of winter annuals and many herbaceous perennial plants in bloom from February through March. Both the diversity of species in flower and the abundances at which they are seen in a particular year are highly responsive to conditions in the previous months. Wet autumn months and warm winter and early spring months is the best combination for the greatest diversity of species to bloom. The most spectacular carpets of spring annuals occur when a triggering rain event of at least 1" falls in autumn and is followed by consistent rains throughout the winter and spring months. When these conditions are met, dense expanses of poppies, lupines, and owl-clovers can grace slopes and open areas. If conditions are less than ideal, many



Palo verde is a dependable spring bloomer, but will respond to increased rainfall with a super bloom like this one in 2019. Doris Evans

annual plants take a pass. Some seeds will lie dormant in the soil for decades, awaiting ideal conditions, at which point they quickly grow, flower, set seed, and senesce. The rapidity with which these plants move through their life cycles has earned them the moniker of “ephemeral” plants.

Fortunately for us, many iconic Sonoran Desert plants flower reliably, even in springs preceded by average or dry winters. Unfailingly, ocotillos and palo verdes bloom in April, saguaros flower in May, and mesquites produce an abundance of blooms (and pollen!) in both months. Likewise, herbaceous perennials like penstemon and brittlebush are less choosy about when winter rains fall. As long as some precipitation occurs in the winter and spring, we should see some of these plants treat us to their colorful blooms, although flowering may be reduced in drier years.

A very different assemblage of plants—both summer ephemerals as well as many herbaceous perennials and woody species—have evolved to flower in response to erratic summer monsoon rainfall. The onset of flowering in summer flowering is a function of the precipitation that falls in the month of July: if moisture falls earlier in the month, flowering begins earlier. Further, wetter monsoons tend to result in greater diversity in the species that are seen in flower. The disappointingly dry monsoon of 2020 resulted in equally disappointing flowering responses in the Sonoran Desert. However, as in winter, even when conditions are poor, we nearly always see creosote and several species of cacti flower in these months.

HOW ARE THINGS CHANGING—AND WHAT CAN WE EXPECT?

Over the past several decades, winter precipitation has varied in concert with The El Niño-Southern Oscillation (ENSO) and temperatures have increased as a result of changing climate conditions. Plants have responded in various ways, including expanding their ranges to higher elevations, abbreviating their flowering seasons, and flowering less frequently.

What does the future hold for the region? Climate models are confident that temperatures will continue to rise unless greenhouse gas concentrations level off and eventually fall. The precipitation outlook is a little less clear. Overall, climate projections indicate a slight drying trend for the winter with precipitation ceasing earlier, making the cool season shorter and the dry spring season longer. Further, there is growing consensus that El Niño events may become stronger and more frequent, causing the southwest to swing more rapidly from very wet to very dry winters. Further, increasing temperatures will result in fewer freezing events, less snow and shorter snowpack seasons, and overall increasing aridity, which will challenge water resources and lessen soil water availability for plants in the spring. These changes are likely to result in notable changes in the diversity, composition, and abundance of plants in flower in the winter and summer seasons, as well as an increase in non-native species, negative impacts to threatened and endangered species, and changes in ecosystem functioning.

THE PATON CENTER'S TRANSFORMATION CONTINUES



The Richard Grand Memorial Meadow has become a haven for butterflies and birds, Dan Lehman



TUCSON AUDUBON'S
PATON CENTER
for HUMMINGBIRDS

Tucson Audubon hopes that Marion and Wally Paton would be incredibly pleased to

see how their property has been transformed into today's **Paton Center for Hummingbirds**, acquired in 2014 with generous help from the **American Bird Conservancy** and **Victor Emanuel Nature Tours**. A forward-thinking family of donors and an international host of visitors 15,000 strong in 2019 has ensured that the property lives up to its great potential as a hummingbird sanctuary and easily accessible biodiversity hotspot. As the engineering and architecture phase begins for the next enormous step in the evolution of this beloved site, we wanted to reflect on a few of the changes you have helped to engage.

In addition to the multiple bird feeders the Patons lovingly maintained for years, birds are now benefiting all over the grounds from native, plant-provided food sources, including nectar, berries, seeds, and insects. The former horse paddock—gracefully reborn as the **Richard Grand Memorial Meadow**—now features a delightful native plant palette, a nature trail and pond, and has quickly become a magnet for numerous butterfly species, mammals, and introduced, endangered Gila topminnows. It's a great place

to observe and photograph hummingbirds not just at feeders, but enjoying diverse native flora.

Habitat restoration efforts along Sonoita Creek have expanded the Paton Center's impact on the entire watershed. Once an ecological wasteland of non-native, invasive plants, the adjacent upstream property is being replanted with natives to benefit multiple bird species. This *Cuckoo Corridor*, now owned and managed by Tucson Audubon, will be a vital link in the renewal of Sonoita Creek in Patagonia.

The most visible sign of what the new Paton Center strives to achieve in the years to come is the backyard viewing pavilion. Designed and installed by D U S T® of Tucson, the pavilion has an organic feel, the sweep of its roof suggesting the curve of a hummingbird's wing. It establishes a tangible connection between the natural world and the viewing public. With the careful planning and attention to detail that is guiding the entire project, the renewed Paton Center for Hummingbird's is sure to inspire people to enjoy and protect the magnificent birds and wildlife of Southeast Arizona, as it has since Marion and Wally first opened their property to nature-lovers some 45 years ago.



Violet-crowned Hummingbird, Roger van Gelder; Paton Center Pavilion, Logan Havens; Cuckoo Corridor nature trail, Dan Lehman

PINE SISKIN

The diminutive Pine Siskin, a species with one of my favorite scientific names, *Spinus pinus*, remains enigmatic despite copious research. During the breeding season these denizens of open coniferous forests nest as far north as central Alaska and northern Canada, but also range as far south as the Mexican highlands, Guatemala, and Baja California. The *Arizona Breeding Bird Atlas* found Pine Siskins in thirteen habitat types with different combinations of firs, pines, and spruces. They are usually year-around residents in Arizona in their mountain breeding range, though when cone crops are poor, local breeding populations disperse to areas that provide more food.

Pine Siskins are small finches with a body length of 4.8 inches, and a 9 inch wingspan. At first blush the uniform brown streaking gives siskins a somewhat nondescript appearance. But upon closer inspection there's more going on. Siskins have two buff to yellowish wingbars, fading to white. There is yellow at the base of the remiges (flight feathers) and a flash of yellow on the tail—both best seen when siskins are in flight. Sexes are not reliably identifiable in the field. Often seen in flocks outside of the breeding season, sometimes with Lesser Goldfinches, the brown streaks distinguish it from that species. The lack of red cap, black around the bill, and the addition of yellow separate it from the very-unlikely-in-Arizona redpolls. The thin bill distinguishes this species from other streaky finches, when the yellow of the siskin cannot be seen.

Pine Siskins are a highly irruptive species and in some years they are present at feeders in good numbers; other years they can be entirely absent. This year will go down as the largest invasion recorded across the United States. While numbers have been rather typical thus far at the Paton Center, it wouldn't surprise me to see a large influx later this winter. The primary reason for these irruptions is lack of food, and reports this year suggest a meager conifer seed crop in the boreal forests of Canada. Once thought of as strictly diurnal migrants, the movement of Pine Siskins has been so large that birds were detected migrating at night—only the second time this has been recorded. Along with Pine Siskins, Cassin's and Purple Finches have been recorded in areas they aren't often observed, so birders should carefully scrutinize all finches. For more information on the current finch invasion, visit the Finch Research Network's website at finchnetwork.org, and everyone is encouraged to record all of their finch sightings, along with all of your bird observations to eBird.



Keith Kamper
Paton Center Volunteer
and Board Member

VERMILION FLYCATCHER (*PYROCEPHALUS RUBINUS*)

Scott Olmstead is a high school teacher, member of the Arizona Bird Committee, and occasional guide for Tropical Birding Tours.



In this column we look at some of our Southeast Arizona borderlands specialty bird species. Birders from all over the US travel here to add birds to their life lists, and we are proud of the birds that make our region unique! But how well do you know your local birds outside of the context of Southeast Arizona? Here we take a broader look at some of our iconic species, and try to see how they fit into the larger birding landscape.

One of the most emblematic birds of southern Arizona, the Vermilion Flycatcher makes an excellent logo for Tucson Audubon. It's flashy, recognizable, and charismatic, and sure is a great conversation starter. If you've taken a walk with your binoculars in one of the city parks, you've likely been asked "have you seen the Vermilion Flycatcher?", "what's that bright red bird that looks like a little cardinal?", or some variation on these two questions. Within the United States, this species is only common in the southern portions of Arizona, New Mexico, Texas, and some localized parts of California. And I challenge you to find anywhere with a higher population density than right here in Tucson. But what about south of the border? How much do you know about the bigger picture?

The Vermilion Flycatcher belongs to the giant Tyrannidae family (tyrant flycatchers), which is the largest family of birds in the world, containing 350–450 species, depending on your taxonomic authority of preference. Within the Tyrannidae, it seems the closest relatives of our logo bird are the water-tyrants and marsh-tyrants of South America. And in many parts of its ample range, Vermilion Flycatchers can be found side-by-side with some of these small, tropical relatives.

Pyrocephalus rubinus (yes, the scientific name *Pyrocephalus* does mean "flame head"!) is found throughout Mexico, is absent from most of Central America except for a few small pockets, and has a widespread though somewhat patchy distribution in Colombia. You can find them in open, arid habitats with scattered trees across South America, including iconic birding destinations like the coastal deserts of Peru, the high Andes of Ecuador, the Pantanal of Brazil, and the Llanos of Venezuela. For the most part they

look similar to our familiar hometown favorite, except in southern Peru, where a dark morph makes up a considerable part of the population. Are these Vermilion Flycatchers really all the same species? In fact, modern phylogenetic analyses suggest that multiple species may be involved.

Have you ever stopped and stared as a male Vermilion Flycatcher fluttered high above you while giving its distinctive trilled song? In addition to genetic evidence, variation in the song is one of the clues that points to multiple species. Indeed, it seems that two populations endemic to different parts of the Galapagos Islands off of Ecuador are best treated as separate species (one now presumed extinct, sadly), and the southernmost population, which breeds at latitudes above the Tropic of Capricorn and migrates into the Amazon Basin for the austral winter, is likely also best considered a separate species, the Scarlet Flycatcher. However, not all taxonomic authorities have accepted these splits yet. Whether one species or several, Vermilion Flycatchers are inspiring birds. And while we sometimes think of this species as ours here in southeast Arizona, in fact it makes just as good a conversation-starter in South America as it does in Tucson.



Vermilion Flycatcher, Jim Hoagland



FREE *to* FLY!

TUCSON AUDUBON'S VIRTUAL FLYWAY

KEEP OUR BIRDS FREE TO FLY IN 2021!

Attacks on the **Migratory Bird Treaty Act (MBTA)** over the course of the last few years have alerted us to the importance of educating everyone about this bedrock legislation so that we can protect it far into the future. **This year we embarked upon an ambitious project to create a Virtual Flyway that both educates and testifies to just how much Arizonans care about birds.**

We've been gathering testimonial works of art and short statements from our members and supporters which we will weave together with a geographic and political story map. Our **Virtual Flyway** is intended to become an inspirational resource in defense of our birds and the legislation that protects them.

In 2021, we will be asking all of you to share more photos like James Poling's Cassin's Sparrow, and works of art like Catalina Ross's Vermilion Flycatcher painting, and Kim Lopez's Bald Eagle drawing, until we have gathered hundreds of personal testimonials to the value of the birds that touch our lives in so many ways.



Cassin's Sparrow, found east of Green Valley, AZ. When I came to Arizona during winter 2020, I wanted to locate and photograph some of the sparrows I had missed in previous years. The Cassin's Sparrow is special to me because I found it without the help of a bird guide. I stopped along the road from Green Valley to Madera Canyon and heard a birdsong I did not know. After checking my app, I discovered that it might be a Cassin's Sparrow. After a few minutes, the bird appeared and gave me some good views. I checked my pictures later with Laurens Halsey, my favorite bird guide, and he confirmed my find. So I am proud of this photograph and hope to learn more about the life story of the Cassin's Sparrow.

—JAMES POLING



I'm not a birder per se, but have spent lots of time with desert raptors, so I tend to look toward the skies. On a neighborhood walk one spring day, a bright flash of red caught my eye. What I found on a nearby tree branch was such a little beauty! I took a fuzzy photo of what turned out to be this Vermilion Flycatcher. I painted it for practice as a painting amateur. I represented the backdrop of unfocused tree leaves and a playground. I soon found out this was the species in Tucson Audubon's logo and namesake for their publication! After the odd exhilaration I felt upon spotting this bird, I found that I wanted to identify many more of them—and so the journey began.

—CATALINA ROSS



Since I was very young I loved to watch any and every nature program there was. I have always been fascinated by birds, but none more than the Bald Eagle. I remember the first time I saw one in person. I was in awe and watching them catch fish and fly around. They came so close I could hear the wind off of their wings. The beauty, power, and fierceness of this magnificent bird has always held a very special place in my heart. I love to draw, it is my release from the every day. I draw any and every chance I get so this submission is a tribute to the two biggest loves of my life. Enjoy!

—KIM LOPEZ



Contribute to the Virtual Flyway here: TUCSONAUDUBON.ORG/VIRTUAL-FLYWAY



TUCSON AUDUBON **BIRDATHON** 2021

APRIL 9–MAY 9 BIRDING FOR EVERYONE!

The 2021 Birdathon is your chance to enjoy birds while raising critical funds to support the mission of Tucson Audubon. Participating in Birdathon is easy! Simply decide on your approach (don't worry, we'll share ideas and tips!), reach out to friends and family to gather support, and go birding any time between April 9 and May 9.

This year, we're kicking off our annual Birdathon fundraiser with an exciting series of virtual events beginning Tuesday, April 6, Arizona Gives Day. Special guests this year include Corina Newsome, Richard Crossley, and Holly Merker.

All online events will be free for Birdathoners or a \$50 donation for those not conducting their own Birdathon. Register for the kickoff event and Birdathon starting the week of February 15!

Never done a Birdathon, or want some new ideas to make your Birdathon the best yet? Join Luke Safford for one of these upcoming virtual events to learn more:

- Thursday, February 11, 11 am–12 pm
- Saturday, February 20, 10–11 am
- Monday, March 1, 7–8 pm

We're encouraging a friendly dose of competition with prize categories including Big Day, Best Social Media Storytelling, Birdathon Beyond Arizona, Youth Birders, Home Patch, and more.

Curve-billed Thrasher, Mark Mackin

TUCSONAUDUBON.ORG/BIRDATHON

NEW BIRDATHON KICK-OFF EVENTS: APRIL 6, 7, 8 FEATURING THESE SPECIAL GUESTS

CORINA NEWSOME

Presentation: "The Plight of a Salty Sparrow: Opposing Threats and the Need for Equitable Solutions" April 8 at 6 pm

People and wildlife around the globe are experiencing rapid environmental changes due to climate change—especially communities on the coasts. The Seaside Sparrow, a climate endangered species that resides in the Atlantic and Gulf Coast salt marshes of the United States, experiences opposing threats to their survival: nest-predation and nest-flooding. Nest failure from these threats is expected to be exacerbated by sea-level rise, because as Seaside Sparrows elevate their nests to avoid flooding, they increase exposure to predators. Corina will take us behind the scenes of nest-predation in the salt-marsh, sharing footage from the field and discussing findings from her research on the variation in nest-predation threats across Georgia marshes. Corina will also discuss the importance of intersectional approaches to conservation, particularly as it concerns the leadership and perspective of communities that have been systemically pushed into the margins of society.



Corina Newsome is the Community Engagement Manager for Georgia Audubon and a biology Master's student at Georgia Southern University. Corina currently conducts research to conserve the MacGillivray's Seaside Sparrow and connects people with birds across the state of Georgia. Having experienced the hurdles faced by people of color interested in wildlife careers, she has founded several programs to encourage high school students from underrepresented demographics to consider careers in wildlife sciences. Corina's mission is to center the perspectives and leadership of historically oppressed communities in wildlife conservation, environmental education, and exploration of the natural world.

RICHARD CROSSLEY

Presentation: "There and Back" April 7 at 6 pm

One morning Richard woke up and decided he needed to drive to the Arctic Ocean—from his home in Cape May, NJ. With a thick Yorkshire accent, a sense of humor, and a preference for straight talk, Richard relays the story about his 16,000 mile adventure, living in his car, the inspiring people he met, and places he went. Did it shape *The Crossley ID Guide: Waterfowl*? Would he recommend you do the same trip? These are just two of the many questions that Richard will discuss. The answers might surprise you!



Richard Crossley is an internationally acclaimed birder, photographer, and award-winning author of 'The Crossley ID Guide' series. Born in Yorkshire, he also lived in Japan, and birded worldwide before settling down in his beloved Cape May, NJ. Richard also co-founded the global birding initiative Pledge to Fledge, Race4Birds, and The Cape May Young Birders Club.

HOLLY MERKER

Presentation: "Ornithery: For Your Mind, Body, and Soul" April 7 at 1 pm

Watching birds is not only fun, but good for you! Here's why getting your daily dose of *Ornithery* is just what the doctor ordered... Ornithery is the mindful observation of birds, benefitting our mind, body, and soul. Research shows that exposure to nature actively reduces stress, depression, and anxiety, while helping build a stronger heart and immune system. We'll explore our connections to birds, how to practice Ornithery, and learn more about the science behind it.



Holly Merker has co-authored the forthcoming book Ornithery: For Your Body, Mind, and Soul along with Richard Crossley and Sophie Crossley. Holly has a background in art therapy, but today employs birds and nature toward the same goals in her work as an environmental educator. Holly spends every possible moment practicing Ornithery, which she credits helping her defeat breast cancer, and restoring her health mentally and physically.

**STAY TUNED: SUPER SPECIAL VIP GUEST PRESENTER TO BE REVEALED
SOON FOR BIRDATHON REGISTRANTS ONLY!**

HABITAT AT HOME 2021: CREATING MORE OPPORTUNITIES TO SUPPORT MORE SPECIES



Jennie MacFarland

Habitat at Home is one of Tucson Audubon's flagship programs empowering residents of Southeast Arizona to actively engage sound conservation principles in their own yards and communities on behalf of birds and other wildlife. For 2021 we are expanding the program to include a new suite of materials uniquely designed to help anyone build their own Habitat at Home. We need you and we need your neighbors to help us support the greatest possible diversity of species.

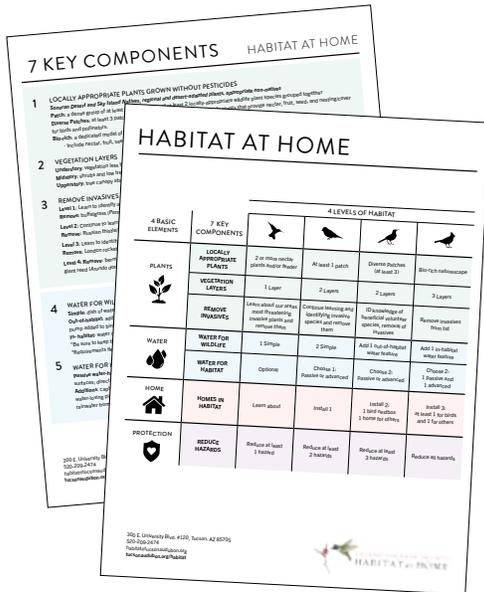


Kim Matsushino
Habitat at Home Coordinator
kmatsushino@tucsonaudubon.org



5 NEW RECIPE CARDS

From our *Crested Cuties* card featuring featuring Northern Cardinal, Pyrrhuloxia, and Phainopepla to our *Nighttime Critters* card guiding habitat choices for nighthawks, bats, and little owls, our five new Recipe Cards provide you with the perfect mix of habitat ingredients to cook up a sanctuary for many different species.



MORE NUANCED PROGRAM GUIDELINES

We've also revised our general guidelines to be both more focused and inclusive. Our concepts are based on the fundamentals of Reconciliation Ecology, helping everyone to invent, establish, and maintain new habitats in our urban spaces.



HABITAT À LA CARTE

Choose from 10 different habitat à la carte enhancements, or engage all 10. These specialized categories help you create habitat for everything from caterpillars to lizards, and include initiatives such as dark skies protection and pesticide-free gardening.

THE SCIENCE BEHIND HABITAT AT HOME: URBAN GREEN SPACES ARE GREATER THAN THE SUM OF THEIR PARTS



Jennie MacFarland,
Bird Conservation Biologist
jmacfarland@tucsonaudubon.org

Urban “green spaces” have received a lot of attention lately, and for good reason. Habitat loss is a leading source of human-caused bird mortality, and urbanization is a major cause of habitat loss and fragmentation worldwide. The rate of creeping urbanization can be difficult to comprehend. We’ve all witnessed an urban lot of primarily natural habitat suddenly cleared and transformed into homes, businesses, roads, or parking lots. This sort of change is fairly easy to wrap one’s head around. A bird lover may even consider how many individual Verdins or gnatcatchers have been displaced from that former patch of desert. But when the scale is much larger, change can be more difficult to understand. These days, it’s not one block we’re losing—it’s 30 blocks in one fell swoop. The changes are staggering, but it doesn’t mean we can’t study them at all.

The **Tucson Bird Count (TBC)** was created precisely to research urbanized spaces in an effort to help us transform them into genuinely productive habitat for native birds. Since its founding in 2001 at the University of Arizona, the primary goal of the TBC has been to compare natural areas outside Tucson with different types of urban areas within Tucson, to determine where native birds are most abundant and diverse. This information can help us understand what factors make some parts of Tucson better habitat for wildlife than others, leading to smarter decisions when enhancing urban spaces for native birds and wildlife.



Black-tailed Gnatcatcher, Tom Ryan

Not all “green spaces” are created equal. The presence of native plants is one of the most important factors rendering one patch of urban habitat more useful to birds than another. Native plants host more insect life, and insects are a vital food source for birds. This is especially true for baby birds, as 96% of songbird species feed insects to their nestlings. Without a robust insect population, most birds cannot breed successfully. The easiest way to create this important food source is to add native plants to your urban space.

A second major factor adding habitat value is the size of the habitat patch. Bigger pieces of habitat consistently support a greater diversity of bird species than smaller ones. On the surface, this seems extremely obvious, but there are also hidden complexities. This concept applies in a very viable way to a dedicated unit of space, such as an urban park. But what about a cluster of what we would consider segregated and finite spaces, such as individual yards within a neighborhood?

Birds could certainly view all the yards in a single Tucson neighborhood as one continuous piece of habitat, and data from the Tucson Bird Count shows that this is indeed the case. Therefore, the **very** best way to make Tucson a better place for birds, and ourselves, is to plant native plants in our yards, **and** to encourage as many other neighbors in Tucson to do likewise. This is Tucson Audubon’s goal with the **Habitat at Home** program. We’ve created very detailed and specific information for birders and Tucson Audubon members, but also for a general, non-birding audience. The whole really can be greater than the sum of its parts!



SPRING-BLOOMING WILDFLOWERS NEED WINTER RAINS



Lynn Hassler
Nature Shop Garden
Volunteer Captain

In the desert southwest, spring is by far the biggest wildflower season, and we were fortunate to have two quite rewarding years in a row. The reason? Mass germination and prolific growth are dependent upon the timing and amount of winter rains. Annuals germinate only during a narrow window of opportunity in the fall or winter, after summer heat has subsided and before winter cold arrives. In our area that is sometime between early October and early December. What is needed is a gentle soaking rain of about an inch to induce germination and then enough monthly rainfall thereafter to sustain growth. Unfortunately, it's not looking too promising for the spring of 2021 since rainfall has been scant.

Of course, the timing is not always precise, and seeds of different species have different germination requirements. In 2020, for example, winter rains were heavy in January. The wildflowers adapted by germinating a bit later. As our climate continues to change, it is difficult to predict how this cycle may be upended.

If rainfall is sparse, plants may be very short in height and may produce only one flower with a few seeds, but this can be enough to ensure future generations. Wildflowers have a highly adaptable survival strategy for avoiding drought. Seeds can remain dormant in the soil for 10 years or more, waiting to germinate until a dependable rain year allows them to bloom profusely.

Some spring-blooming wildflowers that rely on winter rains include the flashy annuals Mexican gold poppy (*Eschscholtzia mexicana*) and desert lupine (*Lupinus sparsiflorus*), and perennials such as Parry penstemon (*Penstemon parryi*).

Create a wildflower patch in your own garden by sowing seeds in October or November. If rainfall is undependable, then you will need to water. Soils should be kept moist until seeds germinate. Thoroughly but gently, sprinkle the area every day until seedlings emerge; then you can cut back on the watering. Newly planted seeds and seedlings are a treat for wild birds and other animals so you may need some protection such as bird netting or wire fencing.

Since all annuals complete their life cycle in one short season, they eventually shrivel up and die. Don't remove plants until they have set seed. Let the seeds fall onto the ground to be dispersed by birds, or collect to sow again next fall.

If you intersperse your annuals with some perennials then the impact of the die-off won't seem quite so dire. Parry penstemon is a short-lived, but show-stopping perennial. Pink tubular blooms (popular with hummingbirds) are arranged tightly on stems rising to 2–4' and add height along with color contrast to the purple-blue lupines and yellow-orange poppies.

LEFT: Mexican poppies and desert lupine; RIGHT: Parry penstemon. Photos by Lynn Hassler

YOUR SEASONAL NESTBOX MAINTENANCE GUIDE

Winter is the perfect time to get your yard ready for local, cavity-nesting birds. Currently, the most abundant providers of cavities are saguaro cacti excavated by woodpeckers and flickers, and the demand for nesting locations is high. Because urban trees are regularly pruned of the mature, split branches and buckling bark that Lucy's Warblers utilize, humans can help to increase available nest sites. Consider installing a nestbox to provide safe nesting spots for many of the cavity-nesters we have here in the Sonoran Desert.

If you already have a nestbox installed, January through March is a good time to visit it to make sure that it's safe and ready for birds to start using it again. First, inspect the nestbox for any damage or weathering. Give it a good tug to test the screws. Next, open the box up and clean out the old nest and droppings while wearing gloves and a mask.

Owls and kestrels start pairing up and nesting earlier than most other species, so be sure to get their nestboxes ready before the end of January at the latest. They can also be used for roosting at any time of year, with some breaks during summer. All maintenance is best done after the bird leaves its roosting spot, which is in the evening for owls—be patient and grab a flashlight! It is especially important to wear a mask when cleaning out owl and kestrel boxes due to the nature of prey that they bring in. Replace the contents with a fresh 2-3 inch layer of pine shavings (not dust). This will insulate the eggs since owls and kestrels do not make their own nests. New boxes are best installed in the fall, when young birds are dispersing away from their parent territories. For nestboxes for other species, make sure to have them ready by the first week of March.

Don't have a nestbox yet? No problem! We offer four different sizes of boxes for many local species at our Nature Shop. Here are some of the likely cavity-nesters for each habitat type:

LOWLAND DESERT: Lucy's Warblers, Brown-crested and Ash-throated Flycatchers, Western Screech-owls, and American Kestrels

RIPARIAN: Lucy's Warblers, Ash-throated and Brown-crested Flycatchers, Bewick's Wrens, and Western Screech-owls

SKY ISLANDS: House and Bewick's Wrens, Western Bluebirds, Mountain Chickadees, White-breasted Nuthatches, Bridled Titmice, and Whiskered Screech-owls

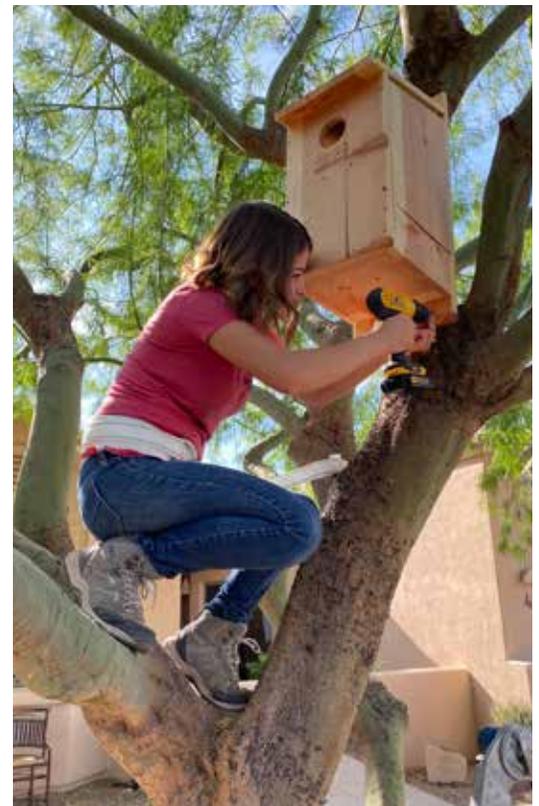
GRASSLANDS: American Kestrels, Barn Owls, Eastern "Azure" Bluebirds, and Ash-throated Flycatchers

Once you've picked out a nestbox for your yard, it's time to install it. Each species has different height requirements which can be found on our website. Nestboxes in the hottest environments do best in shade, with north- to east-facing exposure to avoid the harsh afternoon sun.

Questions? Contact Nestbox Program Coordinator Olya Phillips: ophillips@tucsonaudubon.org.

ON BEHALF OF THE CAVITY-NESTERS, THANK YOU!

Olya Phillips
Community Science Coordinator
ophillips@tucsonaudubon.org



Bewick's Wren utilizing a nestbox, Philip Shoffner; Olya Phillips installing a Screech-owl nestbox

BIRD-SAFE BUILDINGS: SAFE LIGHT, SAFE FLIGHT

BIRD-SAFE BUILDINGS PROGRAM LAUNCH

Tucson, like many other cities, is experiencing rapid urbanization, resulting in habitat loss for many bird species. When birds forage and interact in close proximity to buildings, the possibility of window strikes becomes a serious problem. In fact, 365 million to 1 billion birds die from window collisions every year in the US alone. In response, Tucson Audubon is launching a two-fold, **Bird-safe Buildings** program to keep birds safe and flying in our urban skies. The first component of the program will work to mitigate residential window strikes. The second part is to create a **Safe Light, Safe Flight** initiative to appropriately manage the lighting of high-rise buildings during peak migration season, so that birds aren't negatively impacted by light pollution. Currently no such program exists in Tucson, leaving birds entering our major migratory flyway vulnerable. This program will result in safer travel routes for migrants and safer nesting habitat for residents. This will impact millions of birds in local urban, suburban and rural settings.

BIRD-SAFE BUILDINGS AT HOME

Most bird strike fatalities that happen in residential areas involve low-rise buildings. While birds feed and interact, they often confuse reflected habitat, as well as habitat seen through windows, and fly into glass. Birds

that hit windows die, get injured, or become stunned and highly susceptible to predators. More people have been staying home this year, now realizing how many birds really hit their windows each day. Many Tucsonans are actively working on making their yards wildlife-friendly and are ready to take action in their homes to protect birds. We encourage people to first identify their most problematic windows. Are there windows that you have seen strikes occur? Do you have windows facing feeders and water features, or creating a mirror-like effect? Target those windows first and work your way around the house. For best results, position feeders either 0–3 feet from a window (birds cannot gain enough speed to do damage that close); or more than 30 feet away (to allow more room to maneuver). Also, turn off indoor and outdoor lighting when not in use. This not only helps the birds but also minimizes our city's light pollution. All window treatments should be done on the outdoor portion of the glass, spaced two inches apart in all directions to protect even our smallest species.

There are many methods you can use that could work with your aesthetic. Artistic? Try seasonal tempera paint on the windows! Minimalist? Try the *Feather Friendly* dot pattern that preserves your view. Learn how to take action on our website and find DIY tutorials and links to American Bird Conservancy approved products from our Nature Shop.



Mirrored windows create an illusion of extended habitat, David Howe



Nina Mason Pulliam Rio Salado Audubon Center with applied feather-friendly window treatment

FOR TUCSON BIRDS

SAFE LIGHT, SAFE FLIGHT TUCSON

Programs managing the use of lights in highrise buildings have been popping up across the United States at increasing rates. Tucson Audubon is happy to receive a National Audubon grant to jump start one right here in Tucson! For birds migrating over land in search of suitable stopover sites, lights and reflections of a metropolitan area can be confusing, often causing collisions, injuries, and fatalities. With this program, we will begin by identifying problematic buildings around Tucson. Since we don't have as much of a downtown congregation of buildings as some larger cities, we'll conduct surveys along a dispersed network. Factors such as the building's reflective and transparent windows, as well as the number of above-ground stories will be considered. The surveys will take place during peak migration activity in Tucson: April–May and September–October. Any injured birds will be taken to our program partner, Tucson Wildlife Center, and any dead birds will be entered into the Liberty Wildlife Non-Eagle Feather Repository Program in Phoenix. Their feathers are then available for Native American ceremonial needs.

The data we gather will help us understand what birds and areas are most affected. Importantly, it will help us demonstrate the problem and urge building managers to turn off lights during peak migration to ensure birds' safe passage.

THE DETAILS

Learn more about what you can do in your home and take the pledge to help our local birds by going on our website: tucsonaudubon.org/window-strikes. Everyone who takes the pledge will receive a certificate and decal recognition for program participation free of charge.

We are currently looking for volunteers to do walking routes and office tasks for the program. Please contact Olya Phillips at ophilips@tucsonaudubon.org with questions about the program and volunteer opportunities.



Olya Phillips
Community Science Coordinator
ophilips@tucsonaudubon.org



Silent evidence of bird collisions can be found on many residential windows around the world, Bill Gracey



Turn Your Used Car Into Support for Tucson Audubon

There's an easy way to get involved with Tucson Audubon! Donate a vehicle. We handle the pick-up and paperwork all for free—and use the proceeds from the sale of your car, truck, RV or boat to protect birds in south east Arizona.



Easy process
Free pick-up
Tax-deductible*
*Consult your tax advisor

Donate Today: 855-500-RIDE | tucsonaudubon.org



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* quarterly magazine
- Discounts on Tucson Audubon classes and events
- Special social gatherings and Birds & Community presentations

Become a member today at TUCSONAUDUBON.ORG/JOIN.



Did you attend any of our 114 virtual events in 2020? We enjoyed talks on everything from dragonflies to water harvesting, visited far-away places like Australia, revisited local birding hotspots, and virtually sipped on a drink together while sharing the latest scoop on rare birds of Southeast Arizona. It's amazing how we've learned to connect in this new way. While we still miss seeing you in person, let's continue connecting together online, and inspiring one another to protect and enjoy birds.

More information at: TUCSONAUDUBON.ORG/NEWS-EVENTS

Get involved with your Tucson Audubon community through one of these upcoming events:

Tuesday, January 12, 10–11 am & Thursday, March 11, 11 am–12 pm
THE “BRAND NEW TO BIRDING” SERIES | HOST: LUKE SAFFORD
 The “Brand New to Birding” series will encourage you as a beginning birder, give you tips for getting started, include next step activities, and continue to ignite your passion for birds.



Thursday, January 14, 11 am–12:30 pm
THE ART OF WATERFOWL PHOTOGRAPHY | PRESENTERS: CAMERON DARNELL AND HUNT'S PHOTO
 Cameron will explain how to approach the challenge of waterfowl photography and how to create thoughtful, story-telling images.

Tuesday, January 19, 11 am–12 pm
BIRD-SAFE BUILDINGS PROGRAM LAUNCH | PRESENTER: OLYA PHILLIPS
 An astonishing 365 million to 1 billion birds die from window collisions every year in the US alone. Learn more about our program plan and what you can do to minimize these window strikes, starting in your own homes!

Thursday, January 21, 12–1 pm
ENGAGING YOUTH THROUGH COMMUNITY SCIENCE IN SOUTHERN ARIZONA'S NATIONAL PARKS | PRESENTER: ELISE DILLINGHAM
 Learn about the National Park Service's Desert Research Learning Center and Sonoran Desert Network, and ways they are engaging youth through science in partnership with Tucson Audubon Society.

Monday evenings, January 25, February 22, March 2, 7–8 pm
BIRDS 'N' BEER: RARE BIRDS IN SE AZ | HOST: LUKE SAFFORD

Thursday, Jan 28, Friday Feb 19, & Tuesday Mar 30, 11 am–12 pm
BIRDING THE CALENDAR | HOST: LUKE SAFFORD

Thursday, February 4, 11 am–12 pm
TIPS ON IDENTIFYING BIRDS | HOST: LUKE SAFFORD

Tuesday, Feb 9, 11 am–12 pm
LUCY'S WARBLER NESTBOXES | PRESENTER: OLYA PHILLIPS

Wednesday, Feb 10, 6–7 pm
BIRDING THAILAND | PRESENTER: ANDY WALKER

Thurs Feb 11, 11 am–12 pm, Sat Feb 20, 10–11 am, Mon Mar 1, 7–8 pm
MAKING YOUR BIRDATHON THE BEST | PRESENTER: LUKE SAFFORD

Tuesday, Feb 16, 1–2 pm
HAWAII'S BIRDS ON THE BRINK | PRESENTER: MANDY TALPAS
 Mandy Talpas, a local guide and conservationist, invites you to learn about Hawaii's beautiful birds battling extinction and the projects in place to help save them.



Loon, Cameron Darnell; I'iwi, Robby Kohley

TUCSON CLIMATE PROJECT DRIVING SYSTEMIC CHANGE

Guest Author Nick Spinelli



WHAT IS THE GOAL OF TCP?

The **Tucson Climate Project** is designed to drive systemic change in Tucson (and beyond) around environmental issues. It's asking questions like: *Who is here? What work is being done? How are people and organizations connected? Where are the gaps? And, importantly, What are the needs?* The outcome(s) of the Project will largely depend on what TCP finds the environmental community to be asking for.

Three of the most important assumptions underpinning TCP are as follows:

1. *There is a need for **ecological restoration** in Tucson's urban core, as well as equitable development of, and access to, green spaces.*
2. *There is a need for increased **inclusion, diversity, equity and access (IDEA)** in environmental work, as well as awareness of these issues and why they matter.*
3. *There is a need for **community-centered** work, with schools like Changemaker serving as a link between the needs of local communities and organizations in southern Arizona.*

So, what are people here saying? *All of the data that the Project compiles will be analyzed in our first report, to be released in the Spring of 2021. This report will feature results from the needs assessment as well as map the environmental networks found in and around Tucson. It will be TCP's tool for mobilizing resources to address our biggest environmental issues—as defined by community members themselves.*

WHAT HAS TCP ACCOMPLISHED SO FAR?

TCP started with just three contacts. As of November 2nd, 2020, over 100 individuals have been interviewed as part of the Project, voluntarily offering their time (and their perspective!) for over 108,000 words of interview notes. Those numbers are only expected to grow, and will form the basis of TCP's final report.

WHO ARE THE FACES BEHIND TCP?

Right now, just two! Luis Perales, CEO of Changemaker High School, is the Project mastermind. Nick Spinelli, an AmeriCorps VISTA member with Arizona Serve, is running the Project day-to-day.



Luis Perales (left) and Nick Spinelli

WHAT IS THE TUCSON CLIMATE PROJECT?

The Tucson Climate Project (TCP) is a needs assessment and network analysis of the environmental community in southern Arizona. It is designed to be people-centered in its approach and community-oriented in its outcomes. TCP is a project of the K20 Changemaker Campus and a collaboration between several key players, including Changemaker High School, Prescott College, and the AmeriCorps VISTA program. The Project, along with the **Tucson Climate Chats** podcast, kicked off on July 20th, 2020.

HOW DOES TUCSON AUDUBON SOCIETY CONNECT TO ALL OF THIS?

To date, TCP has interviewed five Tucson Audubon Society staff members, including Executive Director, Jonathan Lutz. As one of the Project's most engaged—and enthusiastic—participants, Tucson Audubon has expressed a strong interest in supporting this initiative as its needs develop. From 2014 through 2019 Tucson Audubon and Changemaker High School partnered on a number of exciting projects focused on growing student skills for the green economy. The collaboration included: removing invasive plants and introducing natives to the Changemaker campus, introducing students to GPS and GIS mapping skills, selling student-built nest boxes in the Tucson Audubon Nature Shop, and supporting the student-lead Swan Wash Park Rainwater Harvesting and Restoration Project. These collaborations brought learning to both the Tucson Audubon and the Changemaker communities as they joined together to achieve authentic, shared goals foundational to both of their missions.

WHAT ABOUT THE TUCSON CLIMATE CHATS PODCAST?

The Climate Chats podcast (#TUCC) is an extension of the Tucson Climate Project, focusing on organizations and individuals working on *climate, poverty, and service* throughout the Sonoran Desert. At the time of this writing, 13 episodes have been recorded. New episodes are typically uploaded on Fridays, with guests joining from Sierra Club, Colectivo Sonora Silvestre, Defenders of Wildlife, High Schoolers for Climate Justice, Citizens Climate Lobby and more. Want to interview? Know someone else who would? Reach out!



Changemaker students built a variety of nestboxes in their MakerSpace and sold the boxes at the Tucson Audubon Nature Shop.

FOR MORE INFORMATION:

For all things TCP, email Nick at nspinelli@arizonaserve.org

Collaborators:

K20 Changemaker Campus: k20tucson.org

AmeriCorps: americorps.gov

Arizona Serve: arizonaserve.org

Prescott College: prescott.edu

Changemaker High School: changemakerhighschool.org



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In honor of Anita Jones from Helen Jones

In honor of Ann Bond from Nancy Jacques

In honor of Barbara Croft from Helen Holliday & John Baffert

In honor of Beth Acree from Janet Wilkerson

In honor of Canny Clark from Susan Clark

In memory of Carl Haussman from Nancy & Terry Lutz

In memory of Cello Quirk from Deborah & Jim Quirk

In honor of Craig Anderson from Nyla Butler

In memory of Dorothy Pauline Rita Spagnuolo Capurro from Diane Foray

In memory of Grace & Dick Van Duivenbode from Maureen Gillardi & Roy Van Duivenbode

In memory of Hester Weston from Daryl Ragan

In memory of Jeanne & Bill Casey from Leslie Carter

In honor of Jim Hoagland from Ann Ruhlin & Paul Brocker, Barbara & Robert Drury, Catherine & Theodore Wierman, Jackie Hathhorn, Jacquelyn & James Bradford, Jamie & John Calhoun, Judy & David Matthews, Karen & Donald Malek, Laurie McCoy, Robert Bedotta, Stephanie Kapolnek, Susan Lucarelli & Roger Cowles, Sheilah Britton, William Buetow, Sandy Jessop, Edith Kellogg, Erika MacMahon, Deborah McClarence, and Linda Shannon-Hills

In memory of Joan Goldberg from Joanne & Michael Goldberg

In memory of Joseph Nimrichter from Lynn & Dale Mason

In memory of Joyce Gelhorn from Cindy Maynard

In honor of Julia Gordon from Gale Harris

In honor of Kimberlyn Drew from Susan Crosson

To Madge McDuffie from Charles McDuffie

In honor of Marcia & Ty Tingley from Will Lidwell

In memory of Margaret Stremersch from Ann Reeves

In memory of Marion & Wally Paton from Bonnie Paton Moon & Richard Moon

In honor of Matt Griffiths from Cynthia & Howard Lawrence

In memory of Moira Shea from Emily & Neil Clark

In honor of Nyla Butler from Craig Anderson

In memory of Paul Christiana from David Christiana

In honor of Prudy & Bob Bowers from Jon Bowers

In honor of Richard Fray from Carolyn & Jon Grainger

In honor of Robert Roselle from Chris Ridgway

In memory of Ruth Bader Ginsburg from Chuck Berman

In memory of Ruth S. Hileman from Karen & Gilbert Matsushino

In honor of Virginia & Ken Lopez from Norman Lopez



American Kestrel, Dan Weisz

THANK YOU FOR

Flying INTO THE
FUTURE

WITH US



At the close of 2020 several friends forwarded me a web article entitled *Study: Birds are Linked to Happiness Levels*. The study was originally published in a journal called *Ecological Economics*. The researchers found that increased happiness can be very specifically linked not just to birds in general, but to having access to a diversity of bird species. *The article notes:* “The authors calculated that being around fourteen additional bird species provided as much satisfaction as earning an additional \$150 a month.”

So, what...that's \$10.71 per species? Does this mean the 46 species I saw in my yard last year raised my salary by \$492.66 a month? (Before or after taxes? And don't tell my boss!)

Back in 2014 when Tucson Audubon partnered actively with Changemaker High School, students regularly approached me to share cell phone pics of birds. *What's this? What's this? Is this a Golden Eagle?* One grainy shot captured a Yellow-headed Blackbird strolling through the school parking lot. Another was not a Golden Eagle, but a Harris's Hawk perching regally on a backyard chain link fence. My conclusion: You don't have to be a seasoned birder to derive great pleasure from experiencing a diversity of species. You just need access to see them, name them, know them.

I'm not opposed to measuring our quality of life on a dollars-per-bird-species index if that's the best way to pitch the value of biodiversity to folks who just don't get it...but I also think there is so much more afoot here. What if bird diversity (*and all forms of diversity!*) keep us happy in the same way that water and oxygen keep us alive? What if there is no such thing as happy, healthy humans without the wild world touching our lives in meaningful and mysterious ways? And what better ambassadors of that wild world could possibly exist than those that fly, sing, and squawk at us in every possible color, shape, and size?

Our *Flying into the Future* winter appeal aimed to tell the story of all the ways Tucson Audubon is working to adapt bird conservation and enjoyment to the unreasonable demands of these turbulent times. What if the generous donation you made to support our efforts to preserve, protect, and promote the incredible bird diversity of Southeast Arizona was one of the greatest investments in the future of human happiness that anyone could make?

Keith Ashley
Director of Development & Communications
kashley@tucsonaudubon.org



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 Friend of Tucson Audubon. For more information visit: tucsonaudubon.org.



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Shop with us anytime online.
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MAIN SHOP

300 E University Blvd #120, Tucson 85705

(corner of University & 5th Ave.)

Regular Nature Shop hours:

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AGUA CALIENTE PARK SHOP

The Nature Shop at Agua Caliente Park is permanently closed.

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

REFRESH YOUR GEAR FOR A NEW YEAR OF BIRDING ADVENTURES

As we welcome a brand new year, one thing remains exceedingly clear: many of us are learning, reevaluating, or even rediscovering the importance of spending time in nature. Now is a great time to refresh your birding gear or get a friend into birding with some high-quality gear, vetted and approved by local birding experts and bird- and nature-lovers. Whether you're spotting a Phainopepla along the Birding Loop in Catalina State Park, chasing an Elegant Trogon in Madera Canyon, or delighting in an Anna's Hummingbird at your own feeder, the Nature Shop has everything you need to get started on your birding adventures, and when you shop with us, in person or online at tucsonaudubonnatureshop.com, you're supporting Tucson Audubon.



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