

VERMILION FLYCATCHER

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SKY ISLAND
SPLENDOR



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ON THE COVER

Arizona Woodpecker by Mick Thompson. Mick is a volunteer photographer/videographer for the National Audubon Society and spends half the year in Tucson.

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Western Tanager, Francis Morgan

MOUNTAINS OF RECIPROCITY

Whenever I mention “the Sky Islands” to folks outside of Southeast Arizona, I get a look of curious bewilderment in return. And typically, my response has been something along these lines:

“There is this incredible region in Southeast Arizona and northern Mexico where the Sierra Madre meets the Rockies, and mountain ranges rise up from seas of grassland and sparse desert, offering incredible habitat diversity with the changes in elevation. It’s awesome!”

I go on to talk about the species diversity that the region hosts, bragging about having more mammal diversity than Yellowstone, and the ability to escape the sweltering summer heat atop its high peaks.

What I tend to gloss over in my romanticisms are the myriad and intensifying threats having a staggering cumulative effect on this precious landscape. The short-sightedness of our activities and their impacts—the overgrazing, the introduction of invasive species like buffelgrass and bullfrogs, the careless and rushed site selection for extractive industries like mining—or how decades of fire suppression has increased fuels for larger, more intense fires. All of this, combined with a warming, changing climate affecting the regularity of monsoon; therefore growth cycles of plants, and breeding and migration cycles of the birds we love to observe.

As birders, naturalists, conservationists, hikers, bikers, stargazers, and foragers, the Sky Islands of North America, or Madrean Archipelago, provide for us. Time and again, we reap the benefits of their bounty. We

snack on their sour sumac, cool our feet in their streams, peep their bugs, snakes, birds, and pockets of colorful fall foliage. What are we offering in return? If “leaving no trace” is your answer, I implore you to think on that. I’ve come to the harsh realization that my years of just picking up my own trash and trying to stay on trail were not acts of reciprocity, but an absolute bare minimum. I came, I consumed, and I left. In recent years, volunteerism and fostering welcoming, inclusive, and accessible environments for birders have become my acts of reciprocity. What will be yours?

Tucson Audubon offers so many ways for you to find your act of reciprocity, your way of paying back your debt of gratitude to the Sky Islands through action. Volunteer to plant saguaros, pull that pesky buffelgrass, survey species like the Elegant Trogon, Desert Purple Martin, or Elf Owl, or simply donate to support the work of our truly amazing staff as they educate and engage communities while restoring precious habitat. We owe it to this place that gives us so much, and faces many challenges ahead, to lighten its load.

For the birds and their spectacular Sky Island habitats,

Melissa Fratello
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ALMANAC *of* BIRDS

October to December

Birding in Southeast Arizona is great during the seasonal transition period at the tail end of fall and into the first inklings of winter. The lowlands finally cool, and raptors, sparrows, and ducks return in greater numbers. You can enjoy the annual spectacle of thousands of Sandhill Cranes in the Sulphur Springs Valley, or search for fruit-eating rarities such as Rufous-backed Robin or Varied Thrush. There's no shortage of fun birding locations and exciting birds to seek out!



Matt Griffiths
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Yellow-rumped Warbler, Mick Thompson



Black and White Warbler, Matthew Studebaker



Sagebrush Sparrow, Scott Olmstead



Juniper Titmouse, Greg Lavaty

VAGRANT WARBLERS AND “BUTTERBUTTS”

Yellow-rumped Warblers invade the region in October, giving their familiar *chek* calls. This is one of the most common warblers in North America, and they can be found on Mt. Lemmon year-round, but come October birds from the Rockies and western Canada show up in the lowlands of Southeast Arizona to spend the winter. Fondly known by birders as “butterbutts” for their characteristic yellow backside, they are strikingly patterned birds. Males are a cool blue-gray overall, with heavily black streaked sides and breast, white belly, broken white eye ring, and yellow accents on the sides, throat and crown.

“Butterbutts” aren’t the only warblers around—October also offers the greatest chance for finding vagrant “eastern” wood warblers during fall migration, with some spending the entire winter. These birds usually turn up near some sort of water source such as along riparian corridors, lakes, lush mountain canyons such as Madera, or even a random house out in the middle of Santa Cruz Flats! A Black-throated Blue Warbler did this in 2015. Sweetwater Wetlands has been a favored spot for species like Black and White, Tennessee, and Prothonotary Warblers. Cottonwood forests along our desert rivers are fun locations to find Black-throated Green and Chestnut-sided Warblers and Louisiana Waterthrush. American Redstarts have shown up in Madera Canyon and other riparian woodlands, and look for Palm Warblers in more open wet areas, especially those bordering grasslands.

SAGEBRUSH IN THE SANTA CRUZ FLATS?

The agricultural area northwest of Tucson is a well-known winter birding destination for good reason—it’s a raptor mecca and you have the chance of seeing such diverse species as Crested Caracara, LeConte’s Thrasher, Mountain Plover, and the rare Sprague’s Pipit. These birds are great, but I’d like to offer some sage advice of the thrasher and sparrow kind. The Santa Cruz Flats are one of the few (the only?) places where you can score a five-thrasher day (Bendire’s, Crissal, Curve-billed, LeConte’s, and Sage). The smallest of these, the Sage Thrasher is dependent on the sagebrush valleys and plains of the Mountain West for successful breeding. Originally named the Mountain Mockingbird, it has a long and varied song, reminiscent of a mockingbird’s. The beautifully spotted, yellow-eyed, and short-billed Sage Thrasher is fairly common and can be found virtually anywhere in the Flats in winter.

Similar to the thrasher in habitat requirements and behavior, the Sagebrush Sparrow can also be found in the Flats, running between bushes and rarely flying. The stately, gray-headed and white eye-ringed sparrow breeds in the wide open sagebrush valleys of the Rockies and has some of the largest territories of any sparrow. They find the dry saltbush flats of the southwest very similar in winter! The Bell’s Sparrow, a species found just to the west, and the Sagebrush were considered one species from 1957 to 2013, the Sage Sparrow. Take care when identifying these sparrows, their ranges do overlap west of Tucson although Bell’s is still very rare.

REDINGTON ROAD ADVENTURE

This bumpy dirt track crossing the hills between the Catalina and Rincon Mountain ranges and leading down to the San Pedro River is an often overlooked gem in the local birding scene. It’s the largest expanse of grassland and pinyon-juniper habitat near Tucson and attracts birds accordingly. It’s a great winter location for Western and Mountain Bluebirds, various sparrows, raptors, Cedar Waxwings, and Evening Grosbeaks, Cassin’s Finches, and Townsend Solitaires in good years. And last year was a fantastic year for solitaires as the species invaded our region in greater numbers than is typical. This elegant but understated gray thrush inhabits the Mountain West and most populations make short elevational migrations to take advantage of the abundant berries and other fruits found at lower, juniper woodland elevations. These winter fruit resources are essential for survival and solitaires become highly territorial and violent fights determine the ownership of the larger berry patches.

Redington Road is also a reliable location for a bird most people think you can’t find so close to Tucson: the Juniper Titmouse. This little gray bundle of energy with the beady black eyes and head crest is an uncommon, year-round resident of oak-pinyon-juniper woodlands of the southwest. The species is even more uncommon here as Southeast Arizona is on the extreme southwest extent of its range and it’s often found where one-seed juniper is present—its shaggy bark is a preferred nesting material. Until 1997, the Juniper Titmouse and the very closely related Oak Titmouse were a single species, the Plain Titmouse.

SKY ISLAND SPLENDOR

“Sky Island” is a term Tucson Audubon regularly uses when discussing the natural wonders of Southeast Arizona. But what is a Sky Island? The term has its origins in the Chiricahua Mountains when the concept was introduced in a 1943 *Arizona Highways* magazine article and later in the 1967 book *Sky Island* by Weldon Heald. In both, the Chiricahuas were described as a “mountain island in a desert sea.”

The term can be used anywhere in the world, but here in the southwest US and northwestern Mexico the specific “Madrean Sky Islands” describes the region containing 55 to 64 (this number is dependent on interpretation) isolated mountain ranges rising from 3,000 to over 10,000 ft. and surrounded by lower elevation desert valleys. These ranges extend from just north of the Gila River in Arizona to the Río Yaqui in Sonora, Mexico and connect the Colorado Plateau, Rocky Mountains, and temperate north with the Sierra Madre Occidental and neotropical south.

The Madrean Sky Island region is a world biodiversity hotspot due to its incredible array of habitats that range from Sonoran Desert and Matorral Xerifilo (Sinaloan Thornscrub) in the lowlands, to forests of spruce, fir, and aspen on the mountain tops. The increased rainfall and lower temperatures of the higher elevations support this vegetative diversity and the birds and other wildlife one can see vary significantly. As you move from saguaro cactus and upland grassland, through oak, sycamore, pine woodlands, to fir, aspen, and spruce forests, the bird life is constantly changing. From the quintessential Cactus Wren of the desert to the Red-breasted Nuthatch often associated with Canadian boreal forest, Sky Islands offer an incredible range of species in a short distance.

The Madrean Sky Island chain is a direct link to the exciting bird and animal diversity in the Sierra Madre Occidental and adjacent thornscrub, making it possible for birds such as Elegant trogon and Eared Quetzal and animals like the White-nosed Coati to occur in Southeast Arizona. Without the Sky Islands, the natural wonders and bird communities of our region would look very different.



Cave Creek Canyon, Chiricahua Mountains, Matt Griffiths

Sky Island Guide

There are at least 55 Sky Island mountain ranges, and many are little explored! Here are some facts about just a handful of them.



Scan the QR code to see a map of the entire region, or see TUCSONAUDUBON.ORG/SKYISLANDMAP.

Matt Griffiths and Zach Palma
Mexico Projects Manager, Sky Island Alliance

Additional sources:
wildsonora.com
skyislandalliance.org



Chiricahuas, Matt Griffiths

CHIRICAHUA

The Chiricahua Mountains are world renowned for their diversity of plant and animal life and contain National Park-level beauty. Rising from the Chihuahuan Desert grasslands to the mixed conifer forests of 9,773 ft. Chiricahua Peak, the range is heavily influenced by the Madrean biome from the south. Because of this incredible diversity, the American Museum of Natural History founded its Southwestern Research Station in Cave Creek Canyon on the eastside of the range. This lush, Madrean oak woodland canyon, including the famed South Fork area, is known in the birding world for being the first hotspot for Elegant Trogons in the 1970s. Legions of birders have since found their “lifer” trogon here under the beautiful spires and peaks of orange and yellow rhyolite tuff. The thick forest of sycamore, oak, and alligator juniper also supports many other Sky Island specialty birds such as Sulphur-bellied Flycatcher, Arizona Woodpecker, and in 2020, an amazing pair of Eared Quetzals! The higher elevation pine forests are home to Olive Warblers and Mexican Spotted Owls, and are the most reliable (and sometimes only) location in the US for Mexican Chickadee. Chiricahua National Monument was established on the western side of the range to protect the massive area of hoodoos and balancing rocks of rhyolite tuff that are the remains of an immense volcanic eruption about 27 million years ago.



Sierra El Tigre, Angel Garcia

SIERRA EL TIGRE

The Sierra El Tigre of northeastern Sonora is a rugged Sky Island and covers a substantial area of over 600 square miles. Surrounded by the Rio Bavispe valley on three sides, it is somewhat isolated from neighboring high country, except in the south where it is nearly a peninsular extension of the Sierra Madre Occidental, only separated by a saddle of oak-dotted hills. The Sierra El Tigre is one of the most biologically diverse Sky Islands in Sonora as it rises from a base with thickets of semi-desert plants (Matorral or Sinaloan Thornscrub), through Madrean oak woodlands to the pine forest topping out at 7,743 ft. The range's elevational gradient and rugged topography influence its microclimates, soil types, and vegetation, translating to diverse flora and fauna, as well as economic and cultural land use by human settlements. Historically, the Sierra El Tigre was one of the last places for Apache resisters to take refuge from a changing region, using the rugged terrain as protection from Mexican and US hunting parties as late as the 1930s. It is also a very important mountain range for the surrounding communities due to the history it holds from its first mining settlers, where ruins and cemeteries are still found. Most of the Sierra El Tigre is located within the boundary of the Ajos-Bavispe Reserve, which provides limited protection of the environment. —Angel Garcia



Sierra San Jose, Zach Palma

SIERRA SAN JOSE

Lying just south of Naco, Sonora and Arizona, and the Huachuca and Mule Mountains, the Sierra San Jose is one of the smallest and most interesting ranges in the entire archipelago. This unique range tops out at 8,333 ft. and the upper ridge line (including San Jose Peak) only runs about 3.5 miles from east to west. Although it does not reach the impressive and more expansive heights of the nearby Huachuclas, it differs from other smaller ranges such as the Dragoons and Whetstones in that it has a small high elevation forest that supports apache pine, Gambel's oak, quaking aspen, and a small population of black bears. Permission must be obtained from locals to ascend. Sky Island Alliance currently works with ranchers in the Agua Verde drainage on the west side.



Huachucas, Pat Gaines

HUACHUCA

The Huachuca Mountains are home to a series of biologically rich canyons on the east side of the range that have become some of the most beloved birding sites in the region. Starting in the north on Fort Huachuca, Huachuca, Garden, Scheelite, and Sawmill Canyons spill out into the surrounding Chihuahuan Desert grasslands and have produced many great birds. The Madrean oak woodlands here are home to Elegant Trogon, Mexican Spotted Owl, Buff-breasted Flycatcher, and the first White-tipped Dove documented in Arizona. If that wasn't exciting enough, by traveling south you next run into a series of canyons that are mythical in the birding world. Ramsey Canyon and the Nature Conservancy's Preserve are first, followed by Carr, Miller, Hunter, and Ash Canyons. Carr Canyon Rd. takes you up into the pine forest on the flanks of high point Miller Peak at 9,466 ft., and Miller and Ash Canyons have Beatty's Guest Ranch and the Ash Canyon Bird Sanctuary, respectively—all superb birding locations. At these sites, be prepared to find Greater Pewee, Lucifer and White-eared Hummingbirds, Flame-colored Tanager, or Tufted Flycatcher. Not to be forgotten, the west side of the range also has some lush canyons that feed into the Canelo Hills area and Parker Canyon Lake. The Huachucas are also currently home to the only known ocelot in Arizona, a 12-year-old male known as "Lil Jefe."



Sierra la Madera, Zach Palma

SIERRA LA MADERA (OPOSURA)

Part of Área de Protección de Flora y Fauna (APFF) Bavispe managed by La Comisión Nacional de Áreas Naturales Protegidas (CONANP) of the Mexican federal government, la Madera (also known as Oposura) is a drastic Sky Island on the southwest edge of the region rising like the Catalinas or Rincons do from low Sonoran Desert. This area around the Rio Moctezuma though, has much more of a sub-tropical feel and truly lives up to its name as the selva seca (dry jungle). Fall through spring it's very much a desert, then summer monsoon rains turn it into a jungle of vines, flowers, and green. The foothills and canyons contain dense forests of pitaya (organ pipe cactus), ocotillo machos, fan palms, and creeping flowering vines—one could be easily disoriented and think you're farther south than the Sky Island region. La Madera boasts a pine forest in its upper elevations and high point of 7,743 ft.



Sierras Los Ajos, Zach Palma

SIERRAS LOS AJOS, BUENOS AIRES, AND LA PURICA

A 40-mile continuous chain of Sky Island habitat in Sonora is formed by the Sierras Los Ajos, Buenos Aires, and la Purica ranges. Los Ajos has the highest point in Sonora at 8,629 ft. and contains an excellent mixed conifer forest of Douglas fir, Apache pine, quaking aspen and Chihuahuan white pine. Los Ajos are also in many ways the face of the APFF Bavispe and has been a site used by many international researchers at the Estacion Biologico located there. One can find extensive drainages with impressive quantities of big tooth maple, a true site to be seen in the fall. This is an excellent range to see Elegant Trogons and bird lists here look very similar to those in Arizona Sky Islands. Los Ajos are headwaters for the San Pedro River and Rio Sonora, and in the higher elevations, forests rival those of the Chiricahua Mountains. Traveling south, this Sky Island chain becomes much more narrow and less diverse until it hits the higher elevation again at La Purica at just over 8000 ft. Sky Island Alliance and a handful of other organizations from Sonora and Arizona work in collaboration with APFF Bavispe to support their important mission of protecting not only this Sky Island chain but four others of the region in Sonora.



Rincons, Matt Griffiths

SANTA CATALINA & RINCON

Even though most people consider the Santa Catalina and Rincon Mountains distinct Sky Islands, they are only separated by Redington Hill and habitat of grasslands and pinyon/juniper woodland. Most of our readers are already familiar with the Catalinas and Mt. Lemmon—where you can drive from Mexico to Canada in 25 miles!—so the focus here is on the Rincons. A good portion of the range and most of the higher-elevation habitat of the Rincons lies within the Saguaro National Park East district and is only accessible by hiking trails. This isolation provides a haven for the wildlife of the Sonoran Desert in the lower elevations and those of the mixed conifer forest in the upper reaches of Mica Mountain at 8,666 ft. The east side of the range contains drainages and Madrean oak woodlands that lead to the San Pedro River valley and provide access for wildlife of all kinds. One of these areas is the riparian habitat of Happy Valley where multiple creeks converge. The lush sycamore, cottonwood, and oak woodlands here are great for winter birding and home to many breeders in summer, including Western Yellow-billed Cuckoos that are dispersing up from the San Pedro River.

PINALEÑO

The Pinaleno Mountains are the tallest and one of the most northern of the Madrean Sky Islands. Being just across the Gila River from the Colorado Plateau and the southern extension of the Rocky Mountains in New Mexico, its flora and fauna have very close ties to the mountainous north. It's the only Sky Island with an extensive spruce/fir community, and it has healthy black bear and mountain lion populations, probably contains the southernmost breeding MacGillivray's Warblers, and is home to the endangered Mt. Graham red squirrel. Despite this, the range is still heavily influenced by the Sierra Madre Occidental, with a large ring of Madrean oak woodland. Also known as Mt. Graham for the highest point in the range at 10,720 ft., the mountain rises abruptly from the surrounding Chihuahuan Desert grasslands and mesquite thickets and its upper reaches remain cool even in the middle of summer. All sides of the mountain contain steep drainages with year-round water—Ash Creek is particularly nice and flows over a 175 ft. waterfall. The dense high elevation forests of Engelmann spruce and cork bark fir that support the red squirrel population also benefit Mexican Spotted Owl, Golden-crowned Kinglet, and rarely now, American Dipper. A combination paved and dirt road leads to Riggs Lake at the northern end of the range where Osprey, and more recently, Bald Eagle have nested.



Pinalenos, Matt Griffiths

SANTA RITA

The Santa Rita Mountains encompass a large landmass but the higher elevations are steep and don't amount to a lot of ground. This range is well known in the birding world for its main north facing Madera Canyon, a popular location to find Elegant Trogon and a host of other Sky Island specialties. The entire range is encircled by wonderful canyons such as Florida, Montosa, and Gardner where Five-striped Sparrow, Rufous-capped Warbler, Azure Eastern Bluebird, and many more species can be found. The east side of the range drops steeply down from the high point of Mt. Wrightson at 9,453 ft. and then fans out in extensive oak savannah to Chihuahuan grasslands, while the southern drainages eventually feed into Sonoita Creek. El Jefe, the jaguar that was photographed over several years in the Santa Ritas, disappeared in 2015, but appeared again in 2021 on Sonoran trail cameras.



Santa Ritas, Matt Griffiths

SIERRAS SAN LUIS AND PAN DURO

Located directly north of the Sierra Madre, the combined complex of the Sierra San Luis (high point 8,680 ft.) and Sierra Pan Duro (high point 7,546) represent one of the largest Sky Islands. These ranges are bordered to the north and east by vast Chihuahuan Desert grasslands. The mixed factors of proximity to the Sierra Madre Occidental and expansive wilderness areas, plus on-going conservation efforts, lead to this range being a heavily-trafficked and important biological north to south corridor.

Most of this area touching the international border is free of border wall infrastructure that could affect the movement of large mammals to the Peloncillo and Chiricahua Mountains. Specifically, this area is a well-known jaguar route. One can expect expansive Madrean oak woodlands in the vast mid-elevation habitat, cut in some cases by box canyons such as Cajon Bonito. Recently, this creek, head-watered in the area between the two ranges, has supported a population of beaver.

SKY ISLAND ALLIANCE WORK IN THE SONORAN SKY ISLANDS



Sky Island Alliance (SIA) is an organization that works to protect and restore the diversity of life and lands in the binational Madrean Sky Island Region.

They are building sustainable landscapes with ranchers in their Ranchos Regenerativos project. Sonora is over 80% actively managed ranch land, a majority of the Sky Island region. Through restoration efforts, a successful and productive ranch can also create habitat for wildlife and improve ecosystem functions for local communities. SIA emphasizes the importance of these places as the “factories of water” since Sky Island ranges are the headwaters for rivers that feed cities such as Tucson and Hermosillo.

Sky Island Alliance is currently working with: APFF Bavispe of CONANP; local and state offices to advise and guide environmental conservation initiatives; academic institutions such as UniSierra, a network of regional nonprofits to guide efforts in the binational region; the Sister Parks program between National Park Service units and CONANP Areas Naturales Protegidas to build cross border collaboration between land management agencies from both the US and Mexican governments.

The Path of the Jaguar intern program gives young biological students experience and future career opportunities while earning a paycheck. SIA invests in the future ecologists who will protect, restore, and fight for the places they call home.

Learn more at [SKYISLANDALLIANCE.ORG](https://www.skyislandalliance.org).

EXCITING BIRDS OF TH

Though a case can be made that *all* of the birds found in the Sky Islands are exciting considering they are surrounded by a sea of desert, here are a few truly special species that make birding in Southeast Arizona so unique.



ELEGANT TROGON

Perhaps no other bird in the US regularly inspires more myth, legend, travel plans, and oohs & aahs, than the Elegant Trogon. Trogon expert Rick Taylor explains it well: “Many American birders regard the Elegant Trogon as the most beautiful bird north of the international boundary. Almost a foot-long with a 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.” With a metallic iridescence on its back and tail, the “Coppery-tailed Trogon” is a great looking and sounding bird. During the summer breeding season, you can often hear the distinctive and repetitive barking calls of male trogons in canyon forests of oak and sycamore in most of the Sky Island mountain ranges of Southeast Arizona. These calls are often the easiest way to find this large tropical bird that is well camouflaged and surprisingly difficult to see when not moving. Elegant Trogon is a mostly Mexican species that ranges down the Sierra Madre Occidental to Central America, but by the late 1970s in the US, Cave Creek Canyon in the Chiricahua Mountains had become ground-zero for birders seeking this so-called “most sought-after bird in Arizona.”



MEXICAN CHICKADEE

Interestingly, Southeast Arizona is the dividing line between the two chickadee species found here, and they don't seem to mix. The Mexican Chickadee is another species from the Occidental whose range spills out into the Sky Island region. It can be found in small numbers in the US only in the Chiricahua and Animas Mountains (New Mexico), restricted to the high elevation pine and fir forest. The Mountain Chickadee, a species from the mountain west up into Canada, also occurs in Southeast Arizona but not in conjunction with the Mexican. Both species seem to be at the extremes of their ranges here and currently do not share habitat. Telling the two apart is easy—the Mexican Chickadee lacks the big white eyebrow of the Mountain. Somewhat surprising, the Huachuca Mountains and Santa Rita Mountains have no chickadee species! Although very understudied, the Mexican Chickadee is known to be different from other North American chickadees in behavior and vocalizations—it doesn't store food for the winter and its calls and songs are unique. Straying a bit from the typical *chicka-dee-dee* call (the number of *dees* a determiner of predator threat level), Mexican Chickadees give a *chick-a-dee* repeated three or four times and also have buzzy trills and frantic warbles reminiscent of wren song. Responding to predators, adults are known to rub the nest cavity entrance with the defensive chemicals of crushed beetles.



THICK-BILLED PARROT

The Thick-billed Parrot is a mythical species in the US—it likely bred in the Chiricahua Mountains up until at least the early 1900s but then disappeared from the region north of the border. This is the northernmost true parrot of the Americas, favoring temperate forests and relying heavily on conifer seeds and usually nesting above 6,000 ft. The current breeding range of the Thick-billed Parrot occupies nearly the full length of the Sierra Madre Occidental, one of the most important timber producing areas of Mexico. The species is listed as Endangered in the US and in Mexico as well where it is threatened by logging and trapping for the pet trade. This colorful bird is a highly social species almost always seen in flocks and their loud calls sounding like human laughter can often be heard over a mile away. Thick-billed Parrots are strong flyers on long, pointed wings—handy when foraging up to 15 miles from nest territories or evading predatory attacks from Northern Goshawks or Peregrine Falcons. During a reintroduction program between 1986 and 1993, parrots bred in the Chiricahuas and farther north on the Mogollon Rim, but the species has not been recorded in the US since. Currently, the closest breeding Thick-billed Parrots are roughly 50 miles south of the border, in sight of the Chiricahuas.

THE SKY ISLANDS

Elegant Trogon, Frank Retes; Mexican Chickadee, Dan Weisz; Thick-billed Parrot, Josh More; Sulphur-bellied Flycatcher, Hemant Kishan; Blue-throated Mountain-gem, Peggy Steffens; Arizona Woodpecker, Shawn Cooper



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SULPHUR-BELLIED FLYCATCHER

If you travel to a lush sycamore-lined canyon in Southeast Arizona and close your eyes for a moment to take in the varied bird song, you can sometimes imagine yourself being far away in a tropical location. Even more so when Sulphur-bellied Flycatchers are around and singing in the tops of trees. It makes sense; this large tyrant flycatcher looks tropical, sounds tropical, and is closely related to Streaked, Variegated, and Piratic Flycatchers—all species that live in South and Central America. Sulphur-bellied, the most northern of these species, spends the winter down in the western Amazonia of South America and breeds up into Mexico and barely enters the US right here in the Sky Islands of Southeast Arizona. It's a boldly patterned, streaky bird with large white eyebrows and mustache, a bright rufous tail, and a yellow belly for which it's named. The sounds of Sulphur-bellied Flycatchers will be your best clue to finding them as they can be difficult to see when silent. Famously described as sounding like a "squeaky toy" or "rubber ducky," these jubilant *weel-yum weel-yum* and liquid *tre-le-re-re*, *tre-le-re-re* calls will have you quickly looking upwards. They seem to prefer areas with walnut and especially mature sycamore trees containing the large cavities in which they nest. They are also one of the last species to breed in this habitat type, waiting to lay eggs until the summer rains begin in early July.



BLUE-THROATED MOUNTAIN-GEM

The mixed woodlands and riparian habitat of Cave Creek Canyon in the Chiricahua Mountains is the best spot in the entire US to find the Blue-throated Mountain-gem, the largest hummingbird north of Mexico. Besides the striking cobalt blue gorget, the Blue-throated Mountain-gem is quite visually understated, and males and females look surprisingly similar. Also breaking with traditional hummingbird natural history, it does not have a flight display, males instead flash the gorget and white tail corners when pursuing females. All of this could be possible because the Blue-throated Mountain-gem has unusually complex vocalizations for a hummingbird—it's traded in bright colors and acrobatic flight displays for singing. During courtship, males sing a quiet "whisper song" and females may respond with an equally complex song, a dueting that's unique. As can be expected with its large size, the Blue-throated Mountain-gem is the dominant species at nectar sources and beats its wings about half as fast as smaller species—still managing a respectable 23 times a second! Feeder stations may have allowed some individuals to winter in Southeast Arizona, but the majority of the population in the Sky Island region retreats into the Sierra Madre in Mexico. This species was called Blue-throated Hummingbird until 2019—it was changed to be in-line with the other members of its genus, *Lampornis*, which includes seven other species of mountain-gems.



ARIZONA WOODPECKER

Many bird enthusiasts visiting the Sky Islands will surely have the Arizona Woodpecker on their lists of must-see species. While most woodpeckers are relatively easy to locate due to their loud calls and drumming, and busy behaviors, Arizonas are notoriously difficult to find during most of the year, especially when nesting. Listen for a loud *pik!* call and a rattling whinny, both similar to those of Hairy and Ladder-backed Woodpeckers but distinctive with a more hoarse ending.

Arizona Woodpeckers are at home in the pine-oak and sycamore-walnut woodlands of Bear, Madera, and Cave Creek Canyons. The species ranges from here and extreme southwest New Mexico down the spine of Mexico's Sierra Madre Occidental to the state of Michoacán—it should really be called the Sierra Madre Woodpecker! Arizona Woodpeckers forage for insects in a pattern similar to Brown Creepers by starting at the base of a tree, then moving up the bark in circles around the tree before flying to the base of the next tree. The Arizona Woodpecker was previously known as the Strickland's Woodpecker, a now separate but closely related species only found near Mexico City. The Arizona Woodpecker's real claim to fame is that it's not black and white like a lot of woodpeckers in North America—it's the only brown and white woodpecker in the US and Canada.

MAMMALS of the SKY ISLANDS

Perfectly camouflaged in the deep shadows of the forest, a spotted shape slips past on silent padded feet. A rabbit prudently disappears. The elusive, elegant ocelot is hunting. Although ocelots are not common in Arizona, they still contribute to the incredible biodiversity of the Sky Islands, which host the highest concentration of mammals in the United States.

As tropical and subtropical mammals like ocelots and coatis expand north into Arizona, they usually follow the Sierra Madre Occidental in Mexico into the Madrean evergreen woodland of the Sky Islands in Southeast Arizona. The lower elevations are usually too hot and arid, with sparse canopy cover, and the higher elevations often are too cold in winter but may be used in summer. There are over 100 species of amazing mammals in the Sky Islands of Arizona, but let's look at just a few of the fascinating stars.



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.

Ocelot, Rick Williams; Coati, Hemant Kishan; Mt Graham Red Squirrel, Geoff Gallice; Jaguar, Dorothy Sutherland; Mexican Opossum, Randall D. Babb



OCELOT

Ocelots are very adaptable, thriving in diverse habitats from rainforest and riparian areas to tropical deciduous forest and thornscrub. In Arizona, ocelots are often found in riparian areas in mid-elevation woodlands of the Sky Islands. In the last 100 years at least 17 ocelots have been documented, including females with kittens. There is currently only one known ocelot in Arizona, a 12-year-old male known as "Lil Jefe", living in the Huachucas.

The ocelot is nocturnal, hunting opportunistically as it walks along trails in its home range, searching out small creatures such as rabbits, rodents, squirrels, roosting birds, reptiles and amphibians and sometimes carrion. Ocelots avoid moonlight and bright areas such as the lights along the U.S.-Mexico border. Both ocelots and their prey prefer darkness, and they move deeper into the shadows of the forest on bright nights. At dawn ocelots bed down in different sheltered resting spots, sometimes sleeping in trees.

WHITE-NOSED COATI

Coatis prefer the oak woodlands and riparian canyons of the Sky Islands. They roam in the Huachucas, Patagonias, Tumacacoris, Santa Ritas, Chiricahuas, and Baboquivaris, as well as lower elevation canyons such as Aravaipa.

Even though coatis are diurnal, they aren't commonly seen and it's always a special treat to find a troop of them. They stand out for both their appearance and their social life. One of the most prominent coati features is their long, flexible snout that can move 60 degrees in any direction, handy for sniffing and rooting about in the dirt and leaf litter, poking into crevices for insects, mice, fruit, lizards, birds' eggs, and other prey items. Another unique feature is the two-foot long, ringed tail, usually carried upright. Coatis often forage in brushy, forested areas, unseen except for their tails sticking up above the vegetation. Like a semaphore, a coati's tail movements signal other coatis, conveying the owner's whereabouts and mood. The tail is also used for balance when jumping or clambering about on canyon walls or rocky outcrops, and when climbing in trees. Coati social organization is also unusual. A tribe consists of females and their young, and juvenile males are kicked out and start solitary lives when they reach sexual maturity at age two. The troop provides safety, security, access to food and reduced predation.



MT. GRAHAM RED SQUIRREL

Although larger animals such as bears, pumas and coatis may cross open desert areas to reach other mountain ranges, small mammals like the red squirrels that inhabit the Pinaleno Mountains are basically trapped and isolated in the coniferous forest that is their home. Without crossbreeding, this population evolved into a unique subspecies, the Mt. Graham red squirrel. This squirrel lives only in this Sky Island and is listed as an endangered species with under 200 individuals currently. It is especially vulnerable to climate change as mountain tops heat up, and it is heavily reliant on conifer seeds, resulting in a highly fluctuating population size—a bad cone crop year is usually followed by a population crash. Fortunately, after the destructive 2004 Nuttall Fire, biologists are finding red squirrel middens and nests in new locations where the squirrels are spreading out and utilizing unburned or lightly burned areas.



JAGUAR

“El Tigre” is the largest and most powerful cat in the western hemisphere and the third largest cat in the world. It has the most powerful bite of any of the cats, easily crunching through the skulls of prey. As the apex predator, they were probably always thinly spread across the area since they require huge expanses of wild land with a good prey base.

Although in recent years there have been only a few jaguars documented in Arizona (all males), there was at one time a breeding population here. The last female in Arizona was killed in 1963. Madrean evergreen woodland with streams and springs is their favored habitat, but jaguars are known to be great wanderers and show up (on trail cameras) in many different habitats. Dispersing young males may roam a hundred miles or more looking for a territory. El Jefe, the jaguar who spent many years in Arizona, disappeared in 2015, only to show up on trail cameras in Sonora in 2021. In Southeast Arizona, an area already filled with such rich biodiversity, it is a privilege to have even just a few jaguars.

MEXICAN OPOSSUM

The Mexican opossum is a subspecies of the (non-native) Virginia opossum that is moving northward from Mexico into the Sky Islands. It is the only marsupial in the U.S. and is certainly one of our most unusual mammals. They inhabit mountain canyons and riparian areas (usually above 3,000 feet) and frequent places with nearby springs or streams. Opossums are good climbers, with sharp claws and an opposable thumb on the hind foot and they’re often found in trees. They are the only mammal in the U.S. with a prehensile tail and juveniles can hang from tree branches by their tails. Opossums are omnivores, eating everything from fruit, insects, eggs and mice to snakes, including rattlesnakes (they have an immunity to the venom and rabies as well). This strange animal has one of the smallest brain to body size ratios of any mammal and also has a short lifespan of just two years and yet they are extremely successful and expanding their range.



Arizona’s rugged and beautiful Sky Islands are incredibly important biologically as they support some of the highest levels of biodiversity in the world.

The Importance of Sky Islands in the Annual Cycle of the Western (Cordilleran) Flycatcher



Western Cordilleran Flycatcher with color bands and geolocator on the lower back, Dolores, CO., Andy J. Boyce

For more than a century and a half, the Madrean Sky Islands have been a mecca for ornithologists and natural historians. The ornithological literature of the late 19th and early 20th centuries is filled with the wonderfully detailed and colorful accounts of expeditions and discoveries by Charles Bendire, Elliott Coues, William Brewster, William Earl Dodge Scott, Harry S. Swarth, and Herbert Brandt, to name but a few. The Huachuca, Santa Rita, and Chiricahua Sky Islands in particular, received a great deal of attention, being renowned for producing rare Mexican strays—recent sightings of Red Warbler and Pine Flycatcher at Rose Canyon on Mt. Lemmon attest to the continued northward movement of species that are usually only seen in Mexico. Throughout the 20th century, ornithologists such as Russell P. Balda, Steven M. Russell, James T. Marshall Jr., and J. David Ligon produced a wealth of natural history information, while long-term studies, such as that of Jerry and Esther Brown on Mexican Jays in the Chiricahuas, made substantial and lasting contributions to our knowledge and understanding of birds.

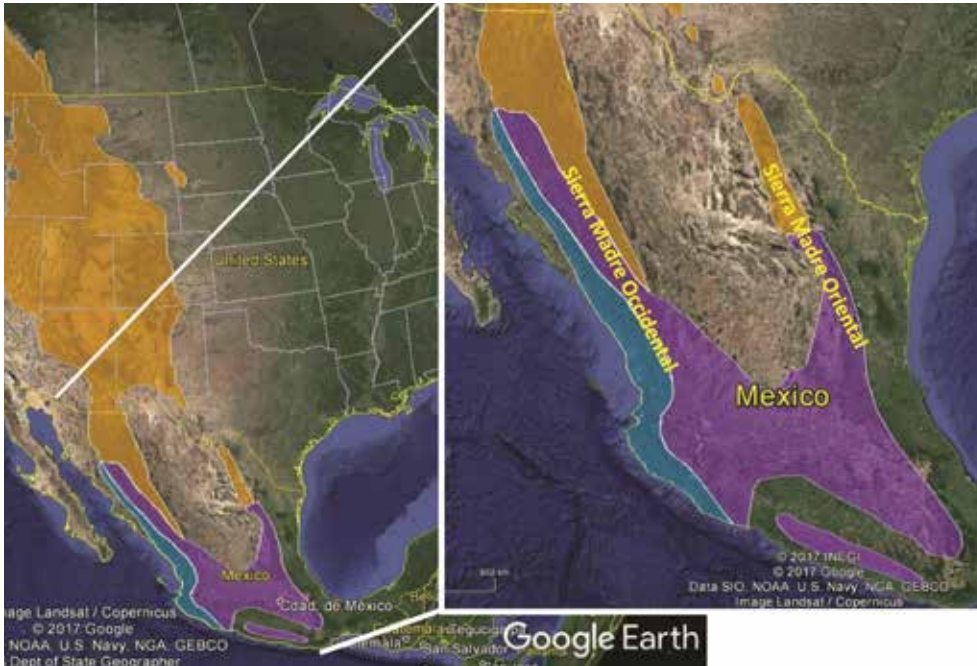
Within the fantastic flashes of hummingbirds, the melodic sounds of warblers, and the raucous cries of the jays that characterize the Sky Island avifauna, our own attention was captured by a comparatively inconspicuous

species, the Western (formerly Cordilleran) Flycatcher (*Empidonax difficilis occidentalis*). The Cordilleran Flycatcher is a very small (0.3 oz) bird, and with their relatively drab plumage, is often overlooked.

Once you become aware of them, however, these birds are easily recognized by their high pitched wee-deep call (sounding much like a squeaking doggy toy) and by their habit of shaking wings and flicking their tails every time they land (as if they were shaking off water droplets). This wonderful little bird catches mostly smaller flying beetles and other insects that they eat or feed to their young.

We began studying the Cordilleran Flycatcher in southwestern Colorado in 2007, and then in 2016, initiated a comparative study of a breeding population on Mt. Lemmon in the Santa Catalina Mountains. This flycatcher breeds from the Canadian border to the Sierra Madre Mountains in southern Mexico, usually in moist habitat and at higher elevations.

Arizona is home to the southernmost US population of breeding Cordilleran Flycatchers. The birds arrive in the Tucson area during late May and nest at 7,000–9,000 feet on Mt. Lemmon beginning in early June. The flycatchers



The currently accepted distribution map for Western Cordilleran Flycatcher (*Empidonax difficilis occidentalis*)
Orange = breeding only, Purple = year-round, Blue = Wintering only; Harold Greeney



Migrating Cordilleran Flycatcher locations in Mexico, Harold Greeney

We wish to thank all of the people from Dolores, CO and Mt. Lemmon, AZ who gave us permission to conduct research on their private lands. We also thank the Catalina Boy Scout Council for allowing us to work in Camp Lawton at Palisades, AZ, the USFS for permission to work on their Catalina District lands, and Henry Johnson for use of his flycatcher photographs. We appreciate T. Melis and S. Vanderkooi's continued support of our research in the US Geological Survey, Southwest Biological Center's Emeritus Program. Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U. S. Government.



Dr. Charles van Riper III, Emeritus Professor and ST Scientist, School of Natural Resources and the Environment & US Geological Survey, Southwest Biological Science Center, University of Arizona

Dr. Harold F. Greeney III, Yanayacu Biological Station and Center for Creative Studies, Cosanga, Napo, Ecuador

choose sheltered crevices as nesting sites and returning birds will often nest in the exact same location they used in previous years. Natural nesting locations include rock faces, root masses from overturned trees, crevices in trees, and behind peeling bark. Human-built structures often provide perfect locations for nests: under the eaves, on top of a light fixture, under the porch, on the breaker box, on exposed ledges, and other cavity-like areas. Their small cup nests are built mostly of moss, dried grass, and leaves and are held together with spider webs that the adults gather on their "whiskers" and wipe over the outside of the nest.

To the human eye, all Cordilleran Flycatchers look alike, so we place tiny colored plastic bands on their legs, allowing us to recognize individuals. In addition, we fit some individuals with a harness and geolocator unit that looks like a tiny black backpack on the lower back and allows us to track the bird's migration movements.

Our data shows the Sky Islands provide not only breeding habitat, but also a migrating corridor to the flycatcher's wintering grounds in southern Mexico. The geolocator trackers allow us to learn exactly what routes the birds take in migration. Preliminary information from our studies has revealed that Cordilleran Flycatchers in southwestern Colorado, and also those from Mt. Lemmon, migrate up-and-down the Sky Islands of the Sierra Madre mountain ranges, and spend the winters in and around Guadalajara and Acapulco, Mexico.

In summary, the Sky Islands provide not only breeding habitat for the Cordilleran Flycatcher, but also act as an important migration corridor, providing suitable stop-over habitat on the way to their wintering grounds in southern Mexico.

ELEGANT TROGONS ON ISLAND TIME

Ten years of surveying five Sky Island mountain ranges



Elegant Trogon, Hemant Kishan

ELEGANT TROGON AZ SURVEY DATA 2013–2023



The sight of an Elegant Trogon barking to declare his territory comes with the backdrop of a canyon in a Sky Island mountain range. Such a scene is much hoped for by many visiting birders. It's an emblem of what makes Southeast Arizona such a special place for birding. Many bird species that occur in abundance in Southeast Arizona are found nowhere else in the US. Many of those, including Elegant Trogons, are closely associated with the large mountain ranges of the region, and it's these ranges themselves that bring the birds here. The Sky Islands that are so familiar to those of use who live in Southeast Arizona are part of a much larger system of mountain ranges, the Sierra Madre Occidental, which is over 900 miles long. Nearly all of this mountain range system is in Mexico with only the very furthest north ranges crossing the border into Southeast Arizona. Many species that are associated with the Sierra Madre Occidental have their furthest northern range in Southeast Arizona, like the mountains themselves.

The entire breeding population of Elegant Trogons within the US is in Southeast Arizona, with nearly all of them using habitat within five Sky Island mountain ranges (see chart). All of these ranges are also designated as Important Bird Areas (IBAs). Since 2013, it has been a special project of the Arizona IBA program to survey these ranges for Elegant Trogons. The timing of the surveys was strategically scheduled for May every year, when the males are most vocal and therefore detectable. Elegant Trogons usually begin to arrive during April, and the males start establishing territories in May, with some pairs beginning to nest during the month. The majority of pairs lay eggs from late May into June, with fledglings appearing as early as July, but as late as September. Much of this timing is synchronized with the summer monsoon rains. Insect abundance soars in response to the region's rainiest season, so adults have many large insects to feed nestlings, while fledglings can learn how to hunt with lots of targets around.

May of 2023 marked ten complete years of Tucson Audubon surveying for Elegant Trogons. These surveys will continue into the foreseeable future, but with this much data we can now begin to notice trends. The sharp drop in counted birds in 2021 is likely a response to the June 2020 to June 2021 region-wide drought. According to historical sources, Elegant Trogons have been increasing steadily in Southeast Arizona over the last century, with the first sighting in the Santa Rita Mountains occurring in 1918 and the first in the Chiricahuas after 1940. These ten years of data show their numbers are still generally increasing.

Huge thanks to the many people who make these surveys possible. In 2023, an all-time high of 166 volunteers helped survey 103 routes in the five mountain ranges. Over the last ten years, 1,257 "volunteer days" went into these surveys, for an estimated 10,000 volunteer hours!

Jennie MacFarland,
Bird Conservation Biologist
jmacfarland@tucsonaudubon.org



Strike Crews: Stewards of the Sky Islands

The Sky Islands of Southeast Arizona hold a special place in the hearts of all the organisms of our region, some permanent residents, others just passing through for the season. The Tucson Audubon Invasive Plant Program recognizes the tremendous value of these lands and is playing a part in conserving and protecting critical habitat in the Chiricahua, Huachuca, Santa Rita, Santa Catalina, and Rincon mountains. Our invasive plant crews have been growing at a pace often only exhibited by our most aggressive weeds. Our Federal lands crew, the CoATIS, has six crew members and our Local Strike team is up to 12 crew members.

The majority of our work is occurring near the base of the mountains and into their foothills. This is due in part to the invasion of non-native species within these plant communities. Desert plant communities are primarily being invaded by grasses that increase the fire risk to an ecosystem that has minimal evolutionary resilience to fire. This point gets most of the attention, and deservedly so. But the threat of habitat degradation can also occur through the loss of trees or cacti for nesting or seeds and insects for foraging as native plants are outcompeted.

In the southern Santa Rita Mountains, our Local Strike team is currently in the third year of a five-year project to treat 8.5 miles of roadside and approximately 25 acres of former mine sites in Mansfield Canyon. Non-native species had been accidentally brought in with heavy equipment as part of a mine remediation project and the Forest Service wanted to mitigate the spread of these species. The crew surveys the areas and treats non-native target species by spot-spraying individual plants with herbicide from a backpack sprayer. Our crews are trained in native and non-native species identification and we take great pride in preserving our native species—we are really starting to see the benefits of our work! Some areas were overrun with Bermuda grass and were more similar to

a golf course than a mountain creek. We rarely encounter Bermuda grass at these sites now, and the number of native plants popping up is truly heartwarming. When we reduce target species such as non-native grasses, tumbleweed, and tree of heaven to suitable population sizes, the Forest Service will begin reseeding the sites with native vegetation to expedite the recovery process.

How does this benefit birds? Many non-native species create tangible wildfire risks and contain low or no forage value for native insects and other wildlife. A field of non-native lovegrass might look pretty, but if you take a closer look you'll notice less insect and bird activity when compared with native grasslands. The seeds are not suitable for our granivorous birds and less appetizing to our herbivorous insects, resulting in fewer insectivorous birds at that site. This habitat degradation can have a snowball effect that is more difficult to notice than a wildfire. If the resources that our birds depend upon are no longer present in their territories and stop-over sites, they will stop returning. If they can't find suitable habitat elsewhere, we run the risk of losing more species within our region.

Invasive plant projects are not easy, fast, or cheap. Tucson Audubon has taken on this herculean task—if not us, who else will? With your next gift to Tucson Audubon, please consider supporting our Invasive Plant Program, to become part of the solution for saving critically important habitat within our Sky Islands.

Tony Figueroa
Invasive Plant Program Manager
tfigueroa@tucsonaudubon.org



Mansfield Canyon project site, Tony Figueroa



Treating invasives, Dusty Rowen

MOUNTAIN MARIGOLD



Lynn Hassler

Lynn Hassler
Green Gardeners Volunteer Captain
Historic Y



SCIENTIFIC NAME: *Tagetes lemmonii*

FAMILY: Asteraceae (Sunflower)

NATIVE RANGE: Mountains of Cochise, Santa Cruz, and Pima Counties, 4000'–8000'; canyons, rocky slopes and along streambeds in riparian scrub, oak woodland, oak-pine woodland, and pine forest

WILDLIFE VALUE: Flowers provide landing pads for nectar-feeding butterflies; seeds devoured by birds and some mammals

From their bases to their peaks, the Sky Islands of Southeast Arizona offer varied habitats. Elevational changes affect moisture and temperature and allow for environments that are botanically rich and diverse. A handsome and fragrant sky island plant that performs in Tucson gardens is mountain marigold.

This shrubby flowering perennial is a showstopper when it blooms in late summer/fall. Flowers are a brilliant golden color about 1" in diameter. Plants may bloom well into winter if not nipped by frost. Tops may freeze but plants are generally root hardy to the mid or high teens.

Plants grow vigorously to about three feet high and wide. In early spring cut back to near ground level. You might want to prune again in early summer simply to keep plants in bounds since they tend to be a bit sprawling with a floppy growth pattern. Be careful not to prune too late in the season though or you'll miss out on the profusion of fall blooms. Place in well-drained soil in reflected sun to part shade. Plants are short-lived but may reseed.

The lacy green foliage is quite fragrant. Brush against the leaves and they emit an evocative scent—a blend of lemon with a bit of mint. Some people object to the pungency though I find it quite pleasing. The aromatic oils in the leaves also discourage bunnies. Note that it is possible to get dermatitis (blisters followed by prolonged redness) from handling this plant, so consider planting in a low traffic area and use gloves when pruning.

Blossoms attract passing butterflies and various pollinating insects. Once the flowers are spent, plentiful seeds entice mammals and seed-eating birds.

A Highway of New and Exciting Birds

Few places in the United States are as exciting for birding as the mountain ranges in Southeast Arizona: the “Sky Islands.” These ranges are really an extension of the Sierra Madre Occidental, a massive range that ends in northern Mexico. Farther north in Arizona is the higher elevation Mogollon Rim, a southern extension of the Rocky Mountains. Thus, the bird diversity in the Sky Islands is a fascinating mix of Mexican species and Rocky Mountain species. Many of Arizona’s famous specialties, flashy birds like Elegant Trogon, Vermilion Flycatcher, Painted Redstart, and Red-faced Warbler, are species that have their distributions centered farther south in Mexico, and reach the northern edge of their ranges just over the border in Arizona. In fact, we consider species such as the trogon, Sulphur-bellied Flycatcher, or even Tropical Kingbird, scarce in the US, yet just south of the border, they are much more abundant. Similarly, some Rocky Mountain species extend south into the Sky Islands—mainly pine and fir species such as Hairy Woodpecker, Golden-crowned Kinglet, Red-breasted Nuthatch, and Yellow-rumped Warbler—and are relatively uncommon as breeding birds in Southeast Arizona.

A fascinating circumstance is that a number of these Mexican species, in particular the Elegant Trogon, Sulphur-bellied Flycatcher, and Thick-billed Kingbird, favor Arizona Sycamore in the canyons of the Sky Islands, yet a short distance into Mexico, they are more widespread in a variety of riparian habitats. Furthermore, many of these species are migratory

and move out of the northern areas of their range (in Arizona) in fall and winter but are year-round residents in northern Mexico. Several migratory species that just enter Arizona have been expanding their ranges north and west during the past 50 years or more. Species such as Red-faced and Olive Warblers and Dusky-capped Flycatcher are now found regularly near Flagstaff, the Hualapai Mountains near Kingman, and even into extreme southern Nevada and isolated mountain ranges in adjacent California.

We are still witnessing this expansion of Mexican birds north into the Sky Islands. In recent years, species such as Buff-collared Nightjar, Berylline Hummingbird, Tufted Flycatcher, Pine Flycatcher, Black-capped Gnatcatcher, Sinaloa Wren, Crescent-chested Warbler, Rufous-capped Warbler, Slate-throated Redstart, and Yellow Grosbeak (to name a few) have been found in the state. True colonization is difficult for these birds, and local weather patterns, such as drought, or an overly cold winter, have likely prevented many of them from becoming permanently established. Herein lies the excitement as Arizona birders are always on the lookout for the next new species to wander north.

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



Crescent-chested Warbler, Greg Lavaty

HOLIDAY GIFT GUIDE

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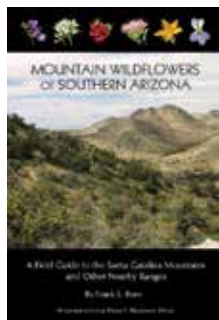
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Costa's Hummingbird, Laura Safford

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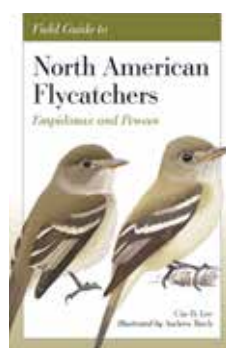
The newest field guide by lauded birder Richard Taylor is a must have on your trips through the Sky Islands and beyond. Published in 2022, this guide features over 500 birds, 900 photos, color range maps and notes on elevation.



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CLIVE BY VICKI SAWYER GIFT BOXED MUG

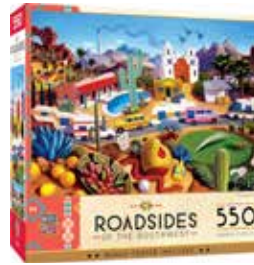
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SOUTHEAST ARIZONA BIRDING FESTIVAL



770 REGISTERED PARTICIPANTS

38 STATES / PROVINCES

5 COUNTRIES

234 BIRD SPECIES

136 FIELD TRIPS

103 FIELD TRIP LEADERS & SPEAKERS

99 VOLUNTEERS

537 HOURS OF TIME

55 EXHIBITORS, SPONSORS, & PARTNERS

1,888 NATURE EXPO ATTENDEES

The 13th annual Southeast Arizona Birding Festival was a smashing success and inspired many people from around the globe to be part of our community. Our field trips found 234 bird species, and just as importantly, introduced participants to the restoration and conservation projects that Tucson Audubon is involved in such as invasive plant removal, Habitat at Home development, mitigation projects, and advocacy at the border.

Our Roadrunner Adventure Day on Saturday of the festival engaged over 60 youths and their families at Reid Park and strengthened strategic partnerships for future youth events.

We hope you will join us next year, **August 7–11, 2024**, to celebrate the birds and birding community of Southeast Arizona.



CLOCKWISE FROM TOP LEFT: Burrowing Owl, Donna Bazzo; Roadrunner Adventure Day, Bea Mendivil; Birding by Habitat trip returns successful, Tony Figueroa; Broad-billed Hummingbird, Christina Stark; Presenting Sponsor Carl Zeiss SBE, Joanna Strohn; Nature Expo, Matt Griffiths; Box Canyon trip, John Kramer; Harshaw trip, Steve Valasek

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A VICTORY FOR BIRDS AND PEOPLE IN RIO RICO



Santa Cruz River in the Rio Rico area, BLM

As Tucson Audubon's Director of Advocacy, one of my primary responsibilities is to alert our community to threats to birds and their habitats in southeast Arizona. In doing so, I sometimes fear being a David Downer, continually calling people's attention to the negative. To counter that occupational hazard, I practice a lesson I learned many years ago in the AIDS-activist group ACT UP: whenever possible, infuse your activism with pleasure and joy. For my work at Tucson Audubon, that often means combining advocacy and activism with birding: leading "Birding the Border" field trips to educate birders about the environmental and human impacts of the border wall and border policy; organizing nonpartisan "Birding and Canvassing" events to increase voter turnout among environmentalists; taking policymakers on local bird-walks to help them experience the joy of birding and understand—and perhaps even share—our desire to protect birds and their habitats.

To counter my David Downer tendencies, I also practice another bedrock activist lesson: make sure to recognize and celebrate your victories. So I'd like to use this opportunity to celebrate a recent victory achieved by local community activists and grassroots organizations in Rio Rico.

Most of the 60-mile drive south on I-19 from Tucson to Rio Rico passes through dry, desert landscape. The most eye-catching—and shocking—sight comes at the half-way point, just west of Green Valley and Sahuarita: the massive Sierrita open-pit copper and molybdenum mine. Then come another 20 miles of dry, desert landscape, until things begin to change: trees appear off to the east, beyond the houses of Tubac. A few miles further, in Carmen and Tumacacori, the trees draw much closer, as the Santa Cruz River swings westward and brings riparian habitat almost to the freeway's edge. Finally, you reach the aptly named Rio Rico ("rich river"), and for most of the unincorporated community's 10-mile distance south, the rich, riparian habitat continues.

Birders know the area well, thanks to the birdy stretch of the De Anza Trail that traverses it, and to Tubac Nature Center's annual Hawk Watch, when thousands of raptors migrate along the riparian corridor. This stretch of the Santa Cruz is one of the desert's proverbial "ribbons of green" on which "[a]pproximately 60 to 75% of Arizona's resident wildlife species are dependent to sustain their population, [although they] occupy less than 0.5% of the state's total land area."¹

¹ *Arizona Riparian Council Fact Sheet, No. 1* (2004)

So it was quite a shock when I learned last June that the Santa Cruz County Planning & Zoning Commission was about to review a proposal from Rio Rico's largest landowner to rezone more than 3,550 acres along the river from ranching and agriculture to residential, commercial, and industrial—including mining-related—uses. The landowner had been meeting with the County about his proposal since March, but the County had waited until mid-June to post public notices—some in easy-to-miss locations—only a week before the Planning & Zoning hearing.

Concerned community members leapt into action, spreading the word that a massive redevelopment project, with connections to mining operations, was being rushed through the County's review process with little or no public input. In response to the sudden outcry, the landowner held a public meeting at the Rio Rico Community Center, two days before the Planning & Zoning meeting, to explain his proposal.

The contentious, four-hour meeting, which attracted an overflow crowd, left many attendees more concerned than ever, and while the landowner hastily amended his plan, these community members redoubled their organizing efforts, rallying as many people and organizations as possible to testify at the Planning & Zoning meeting. And that meeting (at which the Commission voted in favor of the main proposal) led to even more organizing, in preparation for a meeting of the County Board of Supervisors. Community testimony there, and the ever mounting, ever more organized public opposition both to the proposal itself and to the County's attempt to rush it through the approval process with minimal public input, led to an unexpected but very welcome result: on the eve of the next Supervisors' meeting, as community members and allies were preparing our testimony for the next morning, news broke that the landowner had withdrawn his proposal.

In a press release, the Director of the County's Community Development Department, Frank Dillon, implicitly acknowledged the County's lack of transparency in dealing with this proposal and recommended that the

County "[d]evelop a clear and consistent procedure for communicating complex and potentially controversial items to the community beyond statutory noticing requirements" (translation: beyond the bare minimum outreach required by law).

Notably, attempts to divide the community along racial and economic lines failed. In response to unsupported claims that "the Hispanic community of Rio Rico" (as if such a monolith existed) supported the plan, because it would create jobs, some Hispanic residents of Rio Rico publicly opposed the plan, demanding that the County protect the health of both the river and the community. At the same time, many white, non-Hispanic opponents of the plan endorsed calls for economic revitalization—with particular emphasis on healthy, living-wage, family-supporting jobs for Rio Rico's working-class residents—as a necessary accompaniment to plans to protect the river and its ecosystem.

This summer's victory is almost certainly temporary. Economic plans this extensive and lucrative are not abandoned after a single skirmish—or even a few. But the activism in Rio Rico offers an inspiring example of diverse community members and organizations coming together quickly and effectively to safeguard the health of a vital river ecosystem and the human beings who depend on it. If the ongoing organizing continues to integrate both ecological and economic concerns, Rio Rico could provide other communities in Arizona (and beyond!) an inspiring and instructive example of successful grassroots activism.

For updates on this issue, contact Concerned Citizens of Rio Rico at saveriorico@aol.com.

David Robinson
Director of Advocacy
drobinson@tucsonaudubon.org



Green Kingfisher, Greg Lavaty; Common Black Hawk, Ned Harris. Both of these species rely on a healthy Santa Cruz River.

We Reflect Our Surroundings

Tucson Audubon has done an incredible amount of work at the Paton Center improving and diversifying the habitats around the house. The old Bermudagrass horse and pig paddock has been transformed into the Richard Grand Memorial Meadow—replete with larkspur, blanketflower, native grasses galore, and a variety of other nectar and larval food source plants supporting a diverse array of pollinators. Appliances and invasive plants have been removed from the creekside viewing area of the front yard making way for dense new native vegetation providing cover for all the shy birds to access feeding stations and to be readily visible to guests. The Cuckoo Corridor has been transformed from 4-acres of solid Johnsongrass to healthy riparian habitat with sacaton, cottonwood, hackberry, and a range of understory plants improving breeding habitat for cuckoos and others.

These improvements, however, only go so far in isolation. For birds with larger territories, the Paton Center improvements do not even create a single functional habitat patch! So why was Wally and Marion Paton's yard so birdy all the time? Why is it even birdier now than ever before?

Location, Location, Location—and Good Neighbors!

The Cuckoo Corridor is becoming a great place for the threatened Western Yellow-billed Cuckoo; each year surveys document more pairs in close proximity and more are seen foraging among the growing vegetation. Immediately downstream of Paton's and into The Nature Conservancy's Preserve there is a well-established cottonwood overstory and healthy mesquites on the overbank due to the perennial flow there. The high humidity and plants that provide good food for caterpillars help make an abundance of big juicy insects, a banquet for cuckoos.

Much of the on-site bird diversity, especially during migration, is due to the presence of the creek and its associated riparian vegetation. A second set of species comes to the site due to it being sandwiched between two incredibly biodiverse mountain ranges, the Patagonia Mountains and the Santa Rita Mountains. Their steep environmental gradients compress numerous habitat types over a small area, and this brings species typically found in higher elevations areas onto the site.

We reflect our neighbors: the Preserve, the Coronado National Forest, all the residences along Sonoita Creek, and even Patagonia Lake State Park. So, when you hear about Tucson Audubon's efforts to preserve and protect these nearby habitats—removing invasives along the creek or in the mountains to prevent inappropriate wildfires, working to fence trespass cows out of important riparian area, or advocating for responsible development—it's also directly working to maintain the long-term vitality of one of the nation's premier birding destinations, Tucson Audubon's Paton Center for Hummingbirds.



Cuckoo Corridor, Jay Snowdon
Yellow-billed Cuckoo, Peter Brannon



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



THE RICH BIODIVERSITY OF THE PATAGONIA MOUNTAINS

The lifeblood of Tucson Audubon's Paton Center for Hummingbirds is Sonoita Creek, which lies between two Sky Island mountain ranges: the Santa Rita Mountains to the north and the Patagonia Mountains to the south. The Santa Ritas cover a more extensive area and reach a higher elevation than the Patagonias, but the Patagonia Mountains are renowned in their own right as a biodiversity hotspot by biologists and naturalists.

Mount Washington, at 7,221 feet the highest peak in the range, lies just two miles north of the Mexican border. Farther south, the Sierra San Antonio are essentially a continuation of the Patagonia Mountains stretching 10 miles farther south. As such, they serve as a gateway for fauna from Mexico. Among the species that have almost certainly used this pathway are two tropical cats, the jaguar and ocelot!

The cottonwood and sycamore that line Harshaw Creek (which feeds into Sonoita Creek) are home to a diverse array of riparian bird species, including Gray Hawk, Thick-billed Kingbird, Northern Beardless-Tyrannulet, and Elegant Trogon. The higher reaches of the Patagonia Mountains harbor small populations of pine forest specialties such as Steller's Jay, Yellow-eyed Junco, and Northern Goshawk.

Birders visiting the Patagonia area often venture into the Patagonia Mountains to search for Montezuma Quail, Rufous-crowned Sparrow, and Whiskered Screech-Owl. Some of the more inaccessible reaches of this range are home to Mexican Spotted Owls. One of my personal birding

highlights in this region was discovering a family group of Barn Owls in a stone grotto in a remote canyon, a reminder that this species occupied a niche here long before they utilized the man-made structures that we generally associate them with today.

Some of the rarest snakes found in North America are found in the Patagonia Mountains, including the Brown Vinesnake and the Thornscrub Hook-nosed Snake. The Barking Frog, a relic from Arizona's tropical past, occurs here as well, though the loud calls for which the species is named are heard only a few days each year during the beginning of the monsoon season.

The Patagonia Mountains are home to many rare plants, including such range restricted species as Bartram's stonecrop, Huachuca milkvetch, and Arizona blue star. The Pima pineapple cactus is an endangered species that is at the very edge of its range in the Patagonia Mountains, but the population here is considered important because relatively few of these cacti that occur elsewhere can be found growing on protected public lands.

Among the many sought-after butterflies that occur in southern Arizona, the rare Valeriana Skipper is most often encountered in the Patagonia Mountains in years when it occurs in Arizona at all. The attractive Patagonia eyed silkmoth is known only from a very few sites in Arizona and neighboring Sonora. That this species was described only as recently as 1992 is a testimony to the fact that there is still more to be discovered about the rich biodiversity of our sky island mountain ranges.



Brown Vinesnake, RC Clark; Rufous-crowned Sparrow, Greg Lavaty; Thick-billed Kingbird, Martin Molina

I would be remiss in writing about the Patagonia Mountains without mentioning the potential negative impacts that mining could have on the precious biodiversity of the region, a concern that has led Tucson Audubon to join a lawsuit to overturn the federal approval of a "dewatering" plan that could put both Harshaw Creek and Sonoita Creek at risk. Stay on top of the issue and help Tucson Audubon protect these invaluable resources by signing up for Action Alerts at TUCSONAUDUBON.ORG/E-NEWS.

Louie Dombroski
Paton Center Birder-In-Residence



WE WERE NOT THE FIRST BIRDERS HERE!

We were not the first birders here. The Hohokam people were looking at and giving names to the birds in the Tucson area centuries ago, long before Europeans showed up.

The Indian Ridge University Ruins in the Tucson Country Club are located where the Tanque Verde and Pantano Washes come together to form the Rillito River. In 1985, Alan Ferg of the Arizona State Museum recovered bones from 15 different bird species used by the people there from A.D. 1300–1450. The Hohokam used “quail, ravens, roadrunners, waterfowl, turkeys (probably all domestics), macaws, and parrots, with hawks being exploited in far greater numbers than any other group.”

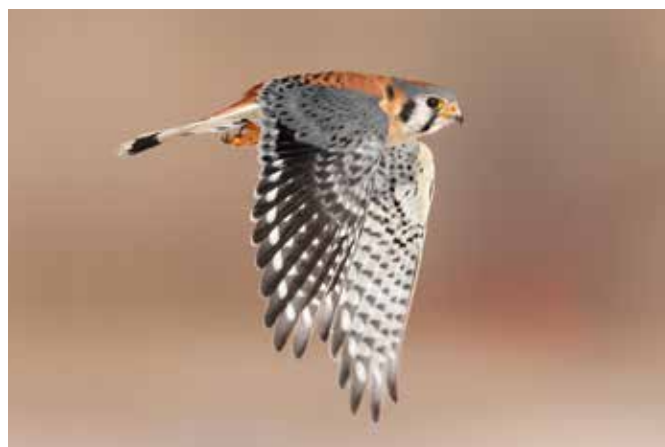
Also found at this and other Hohokam sites around Tucson were clay pottery and shell figurines featuring birds. The original residents also left petroglyphs of birds. These can be seen at current birding spots like Signal Hill in the Saguaro NP West, King Canyon in Tucson Mountain Park, Beehive Canyon in Oro Valley, and Sutherland Wash in Catalina State Park.

Many of our most popular birding spots today sit atop pit houses, villages, irrigation canals, ball courts, and ceremonial platforms. Most are found along the banks of the Santa Cruz River, Canada del Oro, Rillito, Tanque Verde, and Pantano washes. Today, we go birding in the same areas where these people saw and named those birds. Thanks to their descendants, the Tohono O'odham, we can even use similar words to identify those birds.

If you're interested in these connections, join Tucson Audubon this winter for several "Hawks for Beginners" field trips in the Avra Valley west of Tucson. Participants will be able to use bird checklists in the Tohono O'odham language, and in Spanish and English.

So join us on December 19 and February 20, 2024 to look for *haupal* (Red-tailed Hawk), *sisiki* (American Kestrel), and *nuipa* (Black Vulture)!

—John G. Higgins



Sisiki, Matthew Studebaker

ARIZONA CHRISTMAS BIRD COUNTS



The National Audubon Society has conducted Christmas bird counts since 1900. Volunteers from across North America and beyond take to the field during one calendar day between December 14 and January 5 to record every bird species and individual bird encountered within a designated 15-mile diameter circle. These records now comprise an extensive ornithological database that enables monitoring of winter bird populations and the overall health of the environment.

All skill levels welcome! Help is needed on all of these counts, so find one (or more) that interests you and contact the compiler to join a team. **Check [TUCSONAUDUBON.ORG/CBC](https://tucsonaudubon.org/cbc) for the latest on count dates and compilers.**

TUCSON AND SOUTHEAST ARIZONA COUNTS

TUCSON VALLEY

The Tucson Valley Christmas Bird Count will celebrate its 52nd year in 2023!

SANTA CATALINA MOUNTAINS

The count circle encompasses Tanque Verde Creek, Summerhaven, Sabino and Ventana Canyons, and Redington Pass.

AVRA VALLEY

PATAGONIA

SAFFORD

NOGALES

ST. DAVID

ATASCOSA HIGHLANDS

RAMSEY CANYON

BUENOS-AIRES NWR

GREEN VALLEY-MADERA CANYON

PORTAL

DUDLEYVILLE

APPLETON-WHITTELL

AJO-CABEZA PRIETA

LUKEVILLE

ORGAN PIPE CACTUS NM

ADDITIONAL ARIZONA COUNTS

SALT-VERDE RIVERS

PRESCOTT

HAVASU NWR

GILA RIVER

BILL WILLIAMS RIVER NWR

SEDONA

HASSAYAMPA RIVER

JEROME

GRAND CANYON

CHINO VALLEY

PHOENIX-TRES RIOS

SUPERIOR

PHOENIX METRO

CAREFREE

FLAGSTAFF-MOUNT ELDEN

TIMBER MESA

CAMP VERDE

PAYSON

LAKE PLEASANT

MORMON LAKE

TONTO NM-ROOSEVELT LAKE

GLEN CANYON

MARTINEZ LAKE-YUMA

WILLOW BEACH, TBD



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

BIRD-SAFE BUILDING PROGRAM FIELD TRIP with Olya Weekley

October 12, 6:30 AM, Field Trip

In honor of the approaching World Migratory Bird Day we invite you to join Tucson Audubon's Applied Conservation Project Manager, Olya Weekley, to bird the University of Arizona campus while learning about the perils of migration and what Tucson Audubon is doing to help.

BIRDING FOR EVERY BODY AT LAKESIDE PARK

with Marcia OBara

October 17, 7:00 AM, Field Trip

Join Marcia OBara for a leisurely birding experience designed for nature lovers with accessibility challenges; wheelchairs, walkers, or other assistive devices are welcome. The pace is slow, distance short, and terrain even. This month's birding explores the desert oasis of Chuck Ford Lakeside Park to see hummingbirds, sparrows, woodpeckers, and more.



Sandhill Crane, Ned Harris

LAS CIENEGAS/SONOITA "BIRDS AND BREWS"

with Luke Safford

October 27, 7 AM, Field Trip

Let's combine a few of our favorite things in one fun field trip! We'll start with exploring the Las Cienegas area in the morning with a walk at Empire Gulch and various spots around the grasslands looking for returning winter residents. We'll then head to the Copper Brothel Brewery for lunch in Sonoita. \$35/member, \$50/non-member

BIRDS 'N' BEER with Luke Safford

October 30, 7 PM, Virtual Social

"BRAND NEW" TO BIRDING—PART ONE with Luke Safford

November 7, 11 AM, Virtual Class

Being a "brand new" birder can be a little intimidating, but it shouldn't be that way at all! Join Luke Safford for the first session of the "Brand New Birding" series which 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 and nature. Topics in this series will vary but we'll talk about how to bird local hotspots, tips for spotting more birds, equipment for birding, key components of identification, and a lot more.

BIRDING FOR EVERY BODY AT SWEETWATER WETLANDS

with Marcia OBara

November 9, 7 AM, Field Trip

Join Marcia OBara for a leisurely birding experience designed for nature lovers with accessibility challenges; wheelchairs, walkers, or other assistive devices are welcome. The pace is slow, distance short, and terrain even. This month's birding explores the wetlands of Sweetwater to see waterfowl, warblers, woodpeckers, and more.

PARKER CANYON LAKE with Luke Safford

November 10, 6:30 AM, Field Trip

This 130-acre, deep water lake is tucked back on the west slopes of the Huachuca Mountains and is under-birded, but it holds great potential. Grassy hillsides dotted with oaks may hold Montezuma Quail, Mexican Jay, Western or Eastern Bluebirds, Bushtits, and more. Waterfowl will be coming back for the winter and there's an outside chance at Bald Eagle. Bring a lunch with you and some hiking shoes, plan on walking on trails for around two miles at most. Registration required: \$35/member, \$50/non-member

2022: MY BIGGEST YEAR YET with Patrick Maurice & Hunt's Photo

November 16, 11 AM, Virtual Presentation

Patrick Maurice is a birder and nature photographer from Atlanta, Georgia. Patrick has been birding for as long as he can remember and carrying a camera with him for over a decade. While he is primarily a bird photographer, he also enjoys photographing nature and landscapes. Join us as he talks about his travels and the birds he saw along the way in the United States, Ecuador, and Mexico in 2022.

PHOENIX'S WEST SIDE with Kathe Anderson

November 18, 7:30 AM, Field Trip

Sonoran Audubon Society has developed a great route through agricultural fields of the Buckeye/Arlington area west of Phoenix, reliable for Burrowing Owls and diurnal raptors, common desert species, plus waterfowl at canals and farm ponds. A recent trip netted over 50 species, including one Brown Pelican (very rare), White Pelicans, Sandhill Cranes, and a Bald Eagle, among Western Meadowlarks, Loggerhead Shrikes, and White-faced Ibis.

WHITEWATER DRAW WILDLIFE AREA with Luke Safford

November 27, 7:30 AM, Field Trip

An oasis in the Chihuahuan desert grassland, Whitewater Draw is known for its amazing numbers of wintering Sandhill Cranes (10,000+). This Important Bird Area is the winter home for many species of waterfowl (Northern Pintail, Gadwall, Snow Goose) and raptors (Northern Harrier, falcons, possible Bald Eagle) among the many other species found in this marsh/desert habitat. \$35/member, \$50/non-member

"BRAND NEW" TO BIRDING—PART TWO with Luke Safford

December 12, 11 AM, Virtual Class

See November 7 description.

CELEBRATING COMMUNITY AND NATURE

In this issue, we celebrate the Sky Islands and the opportunities our education department has only begun to tap into. Tucson Audubon is excited to be able to collaborate with organizations around Tucson and emphasize how important it is for our youth to be exposed to the biodiversity we enjoy and take care of. Teaming up with the Arizona Trail Association, we will begin offering Field Leader training to young adults taking part in the *Arizona Trail Ambassador Program*, providing mentorship opportunities in outdoor leadership and empowering a greater number of public land stewards and environmental advocates. We love

the idea of sharing with young members of the community the diverse roles they may take on in the conservation world and in the community.

Bringing young people to the field of conservation includes the commitment of highlighting how this land is not only rich in biodiversity but also in ancient wisdom and culture. Youth can and should learn about the cultural significance of conservation by listening to the traditions, practices, and vast wisdom of the original stewards of this land, the people from the Tohono O'odham Nation and the Pascua Yaqui Tribe.

Both the Tohono O'odham and Yaqui cultures emphasize the interconnectedness of humans, nature, and the spiritual world. As we listen and learn from the ancestral lands and Sky Islands, we gain a better understanding of how we may continue to care for biodiversity through science and cultural preservation. Acknowledging the land promotes understanding, collaboration, and the appreciation of past, present, and future conservation initiatives.



ROADRUNNER ADVENTURE DAY

The Southeast Arizona Birding Festival brings Tucson Audubon staff together as a cohesive team. From the advance planning to the last minute details, it is bittersweet to see it come and go, especially because we get to see many of our good friends only once a year. This year's family event was graciously supported by our RAD Tucson community. Roadrunner Adventure Day (RAD) had over 60 kids and their families in attendance at Reid Park. Adventurers of all ages came out on a roasty day to celebrate birds, our diverse culture, and the many ways we can enjoy the outdoors as environmental stewards.

We enjoyed storytelling, birding, crafting, singing, dancing, and snacking, but most importantly, we got to celebrate each other and the way we care and love the natural world and the way it loves us back.

Bea Mendivil
Education Coordinator
bmendivil@tucsonaudubon.org



FESTIVAL VOLUNTEERS: WE COULD NOT HAVE DONE IT WITHOUT YOU!

The 2023 Southeast Arizona Birding festival was a smashing success and we could not have pulled it off without our incredible assemblage of volunteers. Over the course of five days we had 99 volunteers contribute 538 hours of their time!

Well before the festival began, volunteers Donna Gil, Inez Huerta, Riana Johnson, and Sharon Freeman-Dobson made sure all the festival registration packets were assembled. Andrea Serrano and Peggy Steffens helped by maintaining the hummingbird feeders at the DoubleTree before, during, and after the festival. Guests entering the hotel lobby were greeted by April Bartholomew, Lisa Partin, Olivia Renteria, Edith Bailey, Shari Montgomery or Jean and Tim Murphy. The registration team of Carol Allen-Rasoul, Donna Allen, Frank Huebner, Karen Vandzura, Jean Ashby, Melinda Correll, Marie Davis, Faboila Calvo, and Lisa Walton made sure each attendee received a warm welcome along with their itinerary and swag bag. The snack team leaders of Cynthia VerDuin and Tina Whitecotton worked for weeks ahead of the festival prepping snacks, while Laura Couchman, Cindy Borchard, Virginia Johns, and Chris Bittle joined the crew during the festival to make sure all of the field trips had the food and drinks they needed for the day. Thomas Stevenson, Gerry Hodge, Henry Johnson, Matt Vandzura, Jenise Porter, Linda Matson, Nadine Sheehan, Bob Orenstein, Holly Mansfield, Tom Richardson, Ryan Marose, Pamela Harig, Daniel Clark, and the rest of the van crew made

sure the vans were clean, gassed, and ready for each day's adventures. And while there's just simply not enough space to list each individual who volunteered, whether you were at the Habitat at Home table, helping with the Nature Expo, assisting at Roadrunner Adventure Day, taking photographs, counting attendees, or selling merchandise with the Nature Shop, know that you were an integral part of the festival and your contribution was vital to our success.

I also believe our former Volunteer Coordinator, Taylor Rubin, deserves a great deal of recognition and an enormous thank you. As many of you know, Taylor left Tucson Audubon prior to the festival to pursue her PhD, but she was instrumental in recruiting and coordinating volunteers. Her organization, planning, and clear communication set all of us up to have a successful festival. We can't thank you enough, Taylor, and we wish you all the success in the world!

Finally, I want to give special attention to our Festival Volunteer Coordinator, Rhianyon Larson. Rhianyon is a student at the UofA in the School of Natural Resources, as well as a former Tucson Audubon intern. Rhianyon stepped in and did an incredible job. She was the point person for all festival volunteers, ensuring everyone knew their role and had the resources necessary to perform their duties. Everyone at Tucson Audubon extends our sincerest gratitude to Rhianyon and we can't wait to see where she goes from here!



Our volunteers make the Festival possible each year, Joanna Strohn; Rhianyon Larson



Roadrunner Adventure Day volunteer hosts



Donito Burgess
Community Engagement Manager
dburgess@tucsonaudubon.org

We'd love to welcome more people to the Tucson Audubon volunteer team! [TUCSONAUDUBON.ORG/VOLUNTEER](https://tucsonaudubon.org/volunteer)



branch out



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CELEBRATE THE NATURE SHOP WITH US!

The Tucson Audubon Nature Shop is celebrating its 40th anniversary this year! We couldn't have made it this far without our dedicated members, customers, volunteers, and community. Thank you for all of the support given for the past four decades.

Join us at the Nature Shop on November 17 from 5–7 pm to celebrate this milestone with us. Eat, drink, and enjoy the company of bird lovers and nature enthusiasts like yourself!

Please visit TUCSONAUDUBON.ORG/EVENTS for details and to RSVP.

2do FESTIVAL DE LAS ISLAS DEL CIELO

OCTUBRE 2023
MOCTEZUMA, SONORA

ECOLOGÍA • MÚSICA • GASTRONOMÍA
TALLERES • JUEGOS • PINTACARITAS



Kimberlyn
DREW

17-year Tucson Realtor
20+ year Tucson Audubon Member, Supporter & Volunteer
MBA • Associate Broker • Birder

KimberlynDrew.com
520.237.1408



Sandhill Cranes aren't the only frequent flyers bringing joy to southeast Arizona. Tucson Audubon's very own Frequent Flyers make our work possible through giving monthly. **Will you join this growing flock?**

Monthly Sustaining Gifts Are Easy, Effective, and Eco-friendly

By joining Frequent Flyers, you can help Tucson Audubon balance our resources throughout the year, reduce fundraising expenses, and consume fewer resources by eliminating the need to send paper renewal notices. TUCSONAUDUBON.ORG/DONATE

WOO HOOT!

BIRDY NEWS BITES WORTH CELEBRATING

WHO'S SINGING AT THE PATON CENTER?

One of birding's newest technologies has come to the Paton Center for Hummingbirds! We recently received a very generous donation of a Haikubox. We didn't just get a bunch of cool poems, the box is actually a Bird Sounds Listening device. Much like the Merlin app that has become so popular for identifying bird calls, this is a permanently mounted, 24/7 listening device that records and reports bird calls within its range. It relies on tens of thousands of verified recordings to identify calls in the Paton Center yard—you can hear who's singing whenever you want! As of today, our Haikubox has recorded 89 different species of birds in just a few weeks of operating. Check it out at TUCSONAUDUBON.ORG/HAIKUBOX.

You can also download the Haikubox app on your phone to see the full list of birds and recordings at the Paton Center and find other Haikubox locations in the US and Europe!



GIFTS IN HONOR OR MEMORY OF

In honor of Alma & David Mock from Alma Felton

In memory of Bob Ulvang from Renna Ulvang

In memory of Bobby Skwarek from Lora Klausegger

In memory of Chris McCooey from Olivia Chui

In memory of Judy Clark from Laurie Clark

In memory of Karl Elers from Arthur & Pixi Lewis

In honor of Kathe Anderson from Bob Cosburn

In memory of the Kerrs from Alison Mauldin

In honor of Laurie McCoy from Kathleen Williams

In memory of Marc Miller from Barbara Hansen, Carolyn Owens, Edilia Margie Dalton, Elizabeth Miller, Erika Castilblanco, Jenn Toothaker & Jonathan Mabry, Kim Miller, Laura Sullivan, Margaret Wilkie, Melissa Sorensen, Tamara Miller, Toni & Kevin Garve

In memory of Margaret Caldwell from Marcella Caldwell

In memory of Mary & Edmund Caldwell from Steve Caldwell

In memory of Mary Lihosit from Tammy Calhoun

In memory of Michael Mardis from Eric Olson

In honor of Mike Mardis from Donna & Mike Mardis

In memory of Richard Flower from Bill Flower

In memory of Robert "Bob" Skwarek from Matt Feodoroff

In memory of Terrie Merritt from Katie Homfeld

In memory of Tom Lane from Rebecca Lane-Estrada



Broad-tailed Hummingbird, Matthew Studebaker

ISLAND GETAWAY

Who hasn't dreamed of an island getaway? When life gets to be too much, and you just need an escape, what's better than a cool breeze, some fresh air, and a change of scenery? Sure, most island getaway daydreams include sandy beaches and rolling surf, but a trip to the Sky Islands is much cooler, and a whole lot closer to Tucson.

Just a few weeks ago from a campsite high up in the Coronado National Forest, I could look out over the vast "ocean" of the Tucson valley. My island adventure brought me into the ponderosa pines, nearly 8,000 feet above sea level. I had left behind the Gila Woodpeckers and Vermilion Flycatchers of my backyard and was among the Steller's Jays and Mountain Chickadees. The light filtering down through the treetops was dappled and cool. Like any good island adventure, everything we saw, heard, and felt, was a welcome change from life back home.

Though it was magical, I can't say that it was all paradise. Even the most gorgeous vista came with the sight of charred trees and swaths of empty land; tragic reminders of the dangers posed by wildfire. The changing climate, ubiquitous invasive plant species, and thoughtless human activity all combine to create a precarious situation in our Sky Islands. The precious mountaintop habitat is just one unlucky lightning strike or careless human decision away from devastation.

Through our invasive plant mitigation, saguaro replanting program, and other habitat restoration activity, Tucson Audubon Society works diligently to protect the lofty ecosystems of the Sky Islands, the Sonoran Desert floor, and all the biological communities in between. When you support Tucson Audubon (using the envelope included in this issue, or the letter we'll send you this winter), this is the good work you make possible. *Thank you for ensuring a safe, magical island escape for future generations of birds and people.*

Ethan Myerson
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SKY ISLAND SPLENDOR

The majesty of the Sky Islands amazes and excites us all. Share your Sky Island experiences, and learn how you can be involved in Tucson Audubon's efforts to protect this awe-inspiring habitat.

TUCSONAUDUBON.ORG/SPLENDOR



Galiuro Mountains Lynn Jacobs