

Vermilion

FLYCATCHER

July-September 2016 | Volume 61, Number 3



Engage and Explore
The San Pedro River



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

Tucson Audubon offers a library, nature centers, and nature shops to its members and the public, the proceeds of which benefit its programs.

Tucson Audubon Society

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300 E University Blvd #120 ext 7015
Hours: 10 AM–4 PM, Mon–Sat
Agua Caliente Park, 12325 E Roger Rd 520-760-7881
Hours: 10 AM–1:30 PM, Thu–Sat Please call to confirm hours.
Shop opens earlier and closes later during certain months.
Nature Shop space generously provided by Pima County Natural Resources, Parks & Recreation.

Tucson Audubon Nature Centers

Mason Center
3835 W Hardy Rd, Tucson, AZ 85742
Open most weekdays 9 AM–5 PM or when chain is down.
Paton Center for Hummingbirds
477 Pennsylvania Ave, Patagonia, AZ 85624

Vermilion Flycatcher is published quarterly. For address changes or subscription issues call 520-629-0510. Submissions are due the 1st of the month, one month before issue date. Send submissions as Microsoft Word, RTF, or plain text files to Matt Griffiths at mgriffiths@tucsonaudubon.org.

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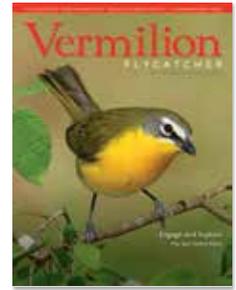
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FRONT COVER: Yellow-breasted Chat by Alan Murphy. See more of his work at alanmurphy-photography.com

To have your photograph considered for use in the *Vermilion Flycatcher*, please contact Matt Griffiths at mgriffiths@tucsonaudubon.org.

Engage, Explore, and Save Your Important Bird Area—The San Pedro River

Tice Supplee, Audubon Arizona, Bird Conservation Director



Yellow-breasted Chat voices are everywhere. I strain my ears over the din of the chats to hear the “sweet-sweet” song of Yellow Warblers in the cottonwood tree canopy overhead. Bell’s Vireos and Lucy’s Warblers are singing from the adjacent mesquite bosque. I hear the far-off whistling call of a Gray Hawk. A male Vermilion Flycatcher lands on a branch nearby. Ah! Glorious spring on the San Pedro River!

The upper reach of the river near Sierra Vista is the BLM-run San Pedro Riparian National Conservation Area, one of the first globally Important Bird Areas in the United States and a critical stopover for millions of migrating birds. Bird watchers visit from all over the world and contribute significantly to the local economy.

Less well-known, but perhaps more ecologically diverse for birds, is the lower San Pedro north of Interstate 10. The 63 miles of river between Pomerene and Winkelman is largely privately owned, but the Arizona Important Bird Areas program recruited volunteers to “engage and explore” as citizen surveyors to document the birds. Wow! Were there birds! Southwestern Willow Flycatchers and Gray Hawks nest here while many other species sing from every thicket in the amazing mesquite bosques that cover hundreds of acres on the floodplain terraces. In 2008, we had collected enough data to designate the “lower” San Pedro River a globally Important Bird Area in its own right. Audubon Arizona has been working with landowners to encourage bird watching and nature tourism in this less well known reach of the San Pedro River.

The river rarely can “float a boat”, as many stretches are dry but with sub-surface flows that support one of the largest stands of cottonwood and willow gallery forest in the southwest. These “invisible” flows and the river are under threat from groundwater pumping to support new developments. Protecting the San Pedro from the fate of the Santa Cruz River requires our voices of advocacy—the birds will thank you!



Treat Yourself to a Little Roadtrip

Karen Fogas, Executive Director

If you haven't visited Tucson Audubon Society's Paton Center for Hummingbirds recently, the experience is worth the trip! This time of year is great for birding around Patagonia, including the Paton Center. As the thermometer climbs in Tucson, getting away to a cooler environment makes a lot of sense, especially since the route takes you through desert grasslands as you make your way to Patagonia.

You will note almost immediately that the Richard Grand Memorial Meadow is flourishing with a wide variety of flowering plants—walk the trail and see how many of the flowers you can identify! As you wind your way through the meadow, you will likely see a variety of birds taking advantage of the newly completed pond for a refreshing drink or bath. The pond creates a completely different feel in the meadow, and numerous new plantings give shape to the bird watching areas of the Center. A recent visit even offered a bobcat elusively hunting at the edge of the meadow. I'm excited to see the variety of native forage that the birds will soon enjoy.

And of course, there are other changes. We now have a design concept for the pavilion—a beautiful, light, airy design that will complement the yard, the house, and the site. Staff members have been slowly moving feeders in preparation so that when construction begins in the fall there will be minimal disruption to the birds. The advantage for people is that there will be even more places to sit and enjoy the birds, especially hummingbirds. This summer we will make the pavilion design available for visitors to preview.

We are also gathering information regarding options for the house, which we will share once there is a solid plan. Our goal is to enhance the Tucson Audubon Paton Center for Hummingbirds in ways that we believe Wally and Marion Paton would appreciate while still keeping the sense of intimacy created by watching birds in the Patons' backyard. This is challenging given the aging buildings, flood plain regulations, and changing needs of the Center. We ask all our members to help by offering your ideas and feedback for this cherished place.

This summer, I hope your birding takes you to the Tucson Audubon Society's Paton Center for Hummingbirds for an experience you are sure to enjoy.

On a different note, you will notice as you read this issue of the *Flycatcher* that much of the magazine is devoted to the beloved and endangered San Pedro River. We have endeavored to take you into the magic of the San Pedro from a variety of perspectives, from a variety of writers. But like any truly wondrous place, there is nothing like experiencing it firsthand. In 1540, Coronado described the San Pedro in terms that evoke a river quite different from the San Pedro of today. If we do not act, in similar fashion future generations may well experience a river system much like the Santa Cruz, dry and largely degraded. Please enjoy these perspectives and join us in doing all we can to assure that this incredible treasure continues to provide sustenance to the incredibly wide variety of species who depend upon it and that it will be an oasis in the desert for generations to come. ■

STORYTELLING SUCCESS IN BENSON

On June 12th, Tucson Audubon hosted *Storytelling and Poetry on the San Pedro*, a gathering to build public awareness about serious issues affecting the San Pedro River, including the proposed Villages at Vigneto mega-development.

Those in attendance greatly appreciated the moving and insightful readings of esteemed authors Richard Shelton, Ken Lamberton, Robert Houston, Midji Stephenson, and the uplifting antics of M.C. David Fitzsimmons of the *Arizona Daily Star*. The music of Ted Ramirez, against the backdrop of the iconic Singing Wind Bookshop, offered so generously by Winn Bundy, completed the experience. A credit to the draw of these esteemed authors, about 200 people attended on a warm June Sunday afternoon. Among them were Steve and Lauvon White of Sierra Vista. In a *Sierra Vista Herald* article written about the event, Lauvon was quoted saying, "This event was more than awesome. It brought out a very deep, passionate and emotional awareness about how fragile the river really is. I'm so glad we decided to attend. And what a beautiful setting for something like this."



Authors Midji Stephenson, Robert Houston, Ken Lamberton, and Richard Shelton with Karen Fogas; Joanna Strohn

2016 MEMBERSHIP DRIVE Drawing for Swarovski Binoculars

\$2,800 Value

Join Tucson Audubon... and see birds better

- All **NEW MEMBERS** automatically entered
- **CURRENT MEMBERS** entered each time you recruit a new member (ask your friends to share your name on their membership form)

- El 8.5X42
- Large field of view
- Edge-to-edge sharpness
- Versatile
- Bright images in poor light conditions



Drawing will take place on January 2, 2017



Broad-billed Hummingbird, Joan Gellatly

TUCSON AUDUBON CLASSES

GARDENING TO ATTRACT BUTTERFLIES

Saturday, October 8, 10–11:30 a.m., Cost: \$25

Not only are butterflies aesthetically pleasing, but they are also important pollinators. Join naturalist Lynn Hassler for tips on how to attract these beautiful creatures into your home garden. Lynn will offer ideas for plant combinations that sustain butterflies through both larval and adult stages and provide a list of attractive low-water-use plants. We will spend some time outside in the Tucson Audubon Wildlife Garden.

REGISTRATION INFO: tucsonaudubon.org/education or education@tucsonaudubon.org



Bordered Patch butterfly (Chlosyne lacinia)

Weekly bird walks are listed at tucsonaudubon.org/fieldtrips

General Information Tucson Audubon field trips are offered at no charge and are led by expert volunteers. Bring money to cover your share of carpooling and any required entry fees (e.g. for state parks). For specific information about a trip, contact the leader of that trip. Please dress appropriately: wear sturdy shoes, a hat, and sunscreen. Bring plenty of snacks and water for yourself, as well as binoculars and a field guide. For most trips a scope can be useful.

Arrival Arrive *before* listed departure times. Trips leave promptly at the time given.

Carpooling Sites Tucson Audubon strongly encourages carpooling, and for some trips it may be required. Check our website for frequently used carpooling sites. You are expected to reimburse the driver for the actual cost of fuel. Drivers and trip leaders are not expected to contribute.

Rare Bird Alert Listen to the latest rare bird alert at 520-629-0510 x3. Report rare birds at 520-629-0510 x3 or rarebirdalert@tucsonaudubon.org.

Tucson Audubon has a spectacular array of services for birders:

- *Finding Birds in Southeast Arizona*
- The Tucson Birding Trail Map
- Volunteers to chat about birds and birding at our nature shops
- The southeast Arizona rare bird alert
- Our web page, including a portal to the AZ/NM birding listserv and other resources
- Tucson Audubon field trips

TUCSON AUDUBON FIELD TRIPS

Kendall Kroesen, Field Trip Coordinator

A few key factors give us superb birding in July, August and September in southeast Arizona. Summer brings increased humidity and “monsoon” rain showers, especially to our sky island mountains and high-elevation grasslands. Abundant moisture and warm temperatures (but not exorbitant ones at those elevations) make for pleasant and food-rich times for birds with an abundance of insects, flowers, berries, and seeds. Species like Botteri’s and Cassin’s sparrows, although already present, become much more vocal and active as food resources become optimal for reproduction.

By July, due to this abundance, the full range of nesting migrants has entered our area. Relatively late migrants that aren’t found in the cooler spring weather include Sulphur-bellied Flycatcher, Yellow-billed Cuckoo and, in limited localities, Common Nighthawk. A full range of southeast Arizona specialty hummingbirds are present like White-eared, Berylline, Violet-crowned, Lucifer, and sometimes Plain-capped Starthroat.



Birders enjoy a Tucson Audubon field trip to Tanque Verde Wash in May. Kendall Kroesen

August and September bring waves of southward migrants or post-breeding wanderers. In August, the first wave of migrants includes several shorebirds, Lazuli Buntings, Calliope and Rufous hummingbirds, migrating warblers, Lark Buntings, Cassin’s Vireo, swallows like Bank and Tree, and several flycatcher species like Olive-sided. Rarities like Painted Buntings and Dickcissel may show up as well. Later in September, our wintering birds start to arrive—everything from ducks to juncos!

It is not possible for field trips to cover all the fantastic river, grassland and mountain sites during the summer, but Tucson Audubon aims to give our patrons a taste of this fantastic diversity. Continue to check tucsonaudubon.org/fieldtrips for the latest trip offerings.

For not just a taste but the *full meal* of summer birding, sign up for the Southeast Arizona Birding Festival, August 11–14.

Tucson Audubon surely has one of the most successful field trip programs in the country. This year through May we have run 95 field trips with 1,379 total trips by participants (of course some people went on more than one trip). Birders hailed from at least 32 states and Canadian provinces. Forty volunteer trip leaders made this possible. Thank you! And a special thanks to John Higgins, Larry Liese, and Jim Rorabaugh for staffing our field trip advisory committee.

SPECIAL EVENT: NOVEMBER 12

Presenting: Paul Bannick, Owl Aficionado

SAVE THE DATE!

Blockbuster bird books can be as hard to come by as a good look at a secretive bird—for instance a reclusive owl—but Tucson Audubon guarantees you an epic experience with Paul Bannick's ***Owl: A Year in the Lives of North American Owls***. And not only will we have the book for you, we will have the author as well!



A juvenile long-eared owl perched in a golden currant, spreads his wings to make himself look more formidable to potential predators. Paul Bannick

Paul Bannick—renowned photographer, author, and conservationist—will launch his first full book in eight years with us on November 12, and you are invited. The day will include a morning bird walk with Paul, a lunch time book signing, a bird photography workshop, and an evening presentation with book signing. (Watch our weekly member e-mail for more details.)



Owl: A Year in the Lives of North American Owls

As the back cover of the book notes, “owl” is a short word that “encompasses a world of mystery.” In *Owl*, Bannick shares 210 of his incredible photos exploring North America and Canada’s

19 distinct owl species. Bannick uses his intimate yet dramatic images to illustrate four primary nesting owl species—Northern Pygmy, Burrowing, Great Gray, and Snowy—throughout the course



Nine juvenile Burrowing Owls engage one another outside of their burrow. Paul Bannick

of the year in four distinct habitats. Each stage in an owl’s life is chronicled: courtship, mating, and nesting in spring; fledging and feeding of young in summer; dispersal and learning independence in fall; and, finally, winter’s migration. Unusual irruptions and the everyday struggle to survive are also covered.

In addition to the four featured owls, the fifteen other species of North American owls are generously depicted throughout the book and woven into the narrative presenting both the life cycle and varying habitats. Bannick’s startling images reflect the owls’ shared behaviors as well as some surprising exceptions and adaptations. More than just a backdrop, the four featured owl habitats—forest, grassland/steppe, boreal, and Arctic—reveal wildly rich stories of their own.

Owl is a stunning follow-up to Bannick’s bestselling title, *The Owl and the Woodpecker* (2008), giving bird lovers yet another gorgeous photographic tribute, an engaging natural history, and a compelling call to preserve the habitats that sustain these most iconic of birds.



Paul Bannick is an award-winning and widely published wildlife photographer specializing in the natural history of North America with a focus on birds and habitat. He has received the Canon Prize of the International Conservation Photography Awards and won first place in the “Birds and Their Habitat” category

in *Audubon* magazine’s annual contest. Paul lives in Seattle. Learn more at paulbannick.com.

224 pages, 10 3/4 x 9 1/2, 200 color photos, color maps, hardcover, \$34.95. ISBN 978-1-59485-800-0. NATURAL HISTORY/BIRDS/PHOTOGRAPHY. Rights: World.

EVENTS CALENDAR

July 7: Volunteer day at Paton Center (every Thursday)

July 14–15: Yellow-billed Cuckoo survey training, Hereford, AZ

August 7–10: Southeast Arizona Birding Festival Pre-trips

August 11–15: Southeast Arizona Birding Festival

August 15–22: Southeast Arizona Birding Festival Post-trips

September 12: Living With Nature (Tucson)

September 24: Habitat at Home Plant Sale and Open House

October 1: Living With Nature (Green Valley)

October 8: Gardening to Attract Butterflies

October 24: Living with Nature (Tucson)

Birdathon Success, 29 Years and Counting...

Tucson Audubon's 29th annual Birdathon Fund-raiser earned \$30,862.90 to support all aspects of the organization's work on behalf of birds in southeast Arizona. Forty-eight birders, divided into 19 teams, combed habitats from Tucson's urban parks to the peak of Mt. Lemmon and from the Willcox Ponds to Patagonia Lake. Each team's goal was to spot as many species as possible in a 24-hour period—and to have a good time! Three hundred twenty-three individual donations supported the teams' efforts. With all teams' sightings combined, participants recorded a total of 188 species.

The 2016 Birdathon wrapped up with a celebration party at La Cocina's Dusty Monk Pub with about 50 people in attendance. The following teams earned major prizes and awards:

- **Grand Prize:** Valiant Verdins (Brian Nicholas, Janine McCabe, Kendall Kroesen) spotted an impressive 134 species and raised \$6,275.40
- **Most Species Seen:** The Wrenegades (Corey Perez, Tim Helentjaris, Chris Rohrer, Sara Pike, Matt Griffiths, Jennie MacFarland) with a team-record 174 species
- **Most Funds Raised:** The Gila Woodpeckers raised \$3,859 (Maia Stark, Jeannette Hanby, Helen Kalevas)

Eleven-year-old Maia Stark spoke to the gathering about her motivation to support Tucson Audubon by participating in Birdathon year after year. Though Maia considered not participating this year, she asked herself, "If



Maia Stark, Matt Griffiths

I am not going to act on behalf of southeast Arizona's birds, who will?" While Maia's team won the Most Funds Raised, the final award for **Youngest Birder** was presented to Alyssa Miller of the Uniburros. Alyssa is 25.

Please join us in 2017 for Birdathon's Big Thirty Year Anniversary! 🍷



Clockwise from top left: Kendall Kroesen and the Valiant Verdins win the Grand Prize; Keeping track of the funds raised; Wrenegades on Mt Lemmon, Corey Perez; Tim Helentjaris, Matt Griffiths, Sara Pike and Jennie MacFarland (Wrenegades) win for Most Species Seen; The crowd at the Dusty Monk; Special bird drinks for the evening; Maia Stark (with Diana Rosenblum) and the Gila Woodpeckers win for Most Funds Raised; Jonathan Horst, Melina Lew, Alyssa Miller and Danny Kirk (Uniburros)

Living with Nature Monthly Program Season Wrap-up

Tucson Audubon has had regular member meetings since its founding in 1949, which now run monthly from October to May with a Holiday Potluck in December. Several years ago, we added meetings in Green Valley, which are always well attended. In 2012 the Tucson meeting was moved to Pima College, a more central location, and were renamed Living with Nature.

Attendance was down at the Tucson meetings during 2014–2015, and one of Executive Director Karen Fogas' first directives was to study the program and find out why. Research showed that most people liked the meetings but wanted more speakers on key topics: mostly birds and birding! Accordingly, this season's topics included Yellow-billed Cuckoos, Ferruginous Pygmy-Owls, Gray Hawks,

Greater Roadrunners, Birds of Mexico, a tour of Birding on Seven Continents, and How to Plan a Birding Trip. Other topics included Sky Island biology, bird conservation in national parks, climate change, and light pollution. As a result, meeting attendance was up at all locations for the 2015–2016 season. Total attendance (not counting the holiday potluck) went from 609 to 843! Meetings now begin with a half-hour social and snack time at 6 pm to minimize driving in the dark while the main program starts at 6:30. A big "THANK YOU" to all of our speakers this year!

Please join in! Consult the next *Vermilion Flycatcher* in October for meeting times, locations, and topics in the coming year.

Habitat at Home

Kendall Kroesen, *Bringing Birds Home Program Manager*

Can you give me a home where the birds go to roam?

Tucson Audubon's Habitat at Home program is helping Tucsonans create safe, sustainable habitat for birds right at home.

Many of you have already incorporated some Habitat at Home improvements in your yard: native plants, rainwater tanks, invasive plant control, nest boxes, water dishes, window strike reduction, etc. You may not have to do much more, if any, to have your yard recognized as bird habitat—*Habitat at Home*—by Tucson Audubon. A beautifully-designed sign (see below) will designate your yard as providing native habitat for birds.

Here's a step-by-step guide

1. Read the information at tucsonaudubon.org/habitatathome
2. Sign up for Habitat at Home (\$25 for members of Tucson Audubon)
3. Consult with us about the best ways to help birds in your own yard
4. Contact us when you are ready for a yard evaluation
5. As your yard progresses in offering habitat, we will provide a beautiful sign recognizing your yard
6. Call Kendall Kroesen any time with questions: 520-209-1806

Why have your yard recognized?

What if there was not only the patch of bird-friendly habitat in your yard, but patches of habitat all up and down your street? A suburban mega-patch! That would be great for birds! With the simple steps above, you can get a suburban mega-patch started that Tucson Audubon will recognize with an attractive sign. Once this beautiful sign goes up on your yard, your neighbors will be envious. They'll say: "I gotta get me some of that!" Pretty soon there will be habitat all up and down the block and across the alley because of you!

Why? By creating bird-friendly habitats in cities, we can go beyond supporting individual birds to supporting whole species. This is done by expanding species' local populations into the urban area. That's why we need as many people as possible to begin transforming their yards all across Tucson. When we create a lot of suburban mega-patches, then we will really be creating a bird-friendly city.

Which bird populations need help? There are 47 species on the Audubon Arizona "Watchlist" due to decreased population, decreased range, vulnerability to threats, and population trends. Here are just a few of the watchlist species that we might be able to help through Habitat at Home.

Costa's Hummingbird: Suburban development has removed the desert scrub vegetation this species depends on. A hummingbird feeder helps, but Costa's also needs native plants that attract its insect prey and provide places to nest. Costa's typically nests 3–6 feet off the ground in plants like foothill palo verde, blue palo verde, jojoba, ironwood, and hopbush. Do you have any of these plants in your yard?

Lucy's Warbler: This is the only warbler nesting in the Tucson basin. Given enough native plants, Lucy's might be able to find enough to eat in our neighborhoods; however, it requires holes for its nests. The few woodpecker holes in our neighborhoods are mostly taken by House Sparrows and European Starlings. You can buy or build a Tucson Audubon nest box with a hole that's too small for the sparrows and starlings.

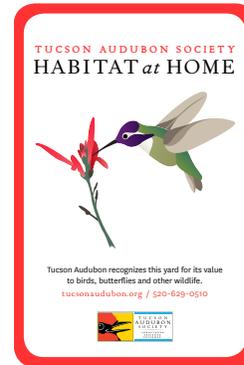
Abert's Towhee: This seed-eater is helped by bird feeders but, again, that is not enough to help it reproduce and expand its range into suburbs. Like the two species above, it needs places to nest. Abert's Towhee usually nests 4–7 feet off the ground in thick vegetation like wolfberry or other vegetation where the nest is well-hidden. ■



On Friday June 10 Tucson Audubon's recognized its first Habitat at Home. This yard, owned by Jennifer Patton and Ben Wilder, is a great example of safe, sustainable suburban bird habitat. Sara Pike



Sprays of desert globemallow flowers and many other native plants grace this central Tucson yard, Kendall Kroesen



Nice cluster of native vegetation, Kendall Kroesen

Changing Seasons Bring Changing Habitat to the Paton Center

Nick Beauregard, Paton Center Coordinator

As spring transitions to summer, the riparian wonderland of Patagonia is becoming more vibrant with colorful flowers and migratory birds every day. Our winter residents—the White-crowned Sparrows, Green-tailed Towhees, Pine Siskins, etc.—have all gone north or upslope into the neighboring Sky Island mountains, to be replaced by the colorful tanagers, grosbeaks, and warblers that make their summer home among the cottonwoods gallery and mesquite bosque of Sonoita Creek.



Colorful Broad-billed Hummingbirds compete for attention at the Paton Center's feeders, Nick Beauregard

At the Paton Center, the hummingbird activity has slowed down a bit now that migration is mostly over. The property is bursting into color as the native wildflowers planted by our ecological restoration team are going into full bloom. It's no surprise that the hummingbirds seem to be more attracted to these flowers than to the feeders, and we are certainly happy to offer more natural sources of nectar during the breeding season.

Planting native wildflowers has been a major component of Tucson Audubon's work at the Paton Center. When we acquired the property it was mostly over-run with invasive species that offered little benefit to birds or other wildlife. As stewards of the environment, we began restoring the land to native plants, especially those favored by hummingbirds and other pollinators. This spring we began two major projects, a Monarch butterfly waystation and a pond, which will not only benefit wildlife, but they will also benefit the wildlife viewing experience at the Paton Center.

Patagonia is famous for its birds, but it is also a famous place for butterfly viewing as it provides a critical migration route for monarchs. Thanks to a grant in partnership with the Arizona-Sonora Desert Museum and Borderlands Restoration, Tucson Audubon has been developing a monarch butterfly waystation at the Paton Center. With the amazing support of our Paton Center volunteers, we recently spent three days planting milkweeds and 100 native pollinator plants throughout the Richard Grand Memorial Meadow. Soon these

plants will mature and spread their seeds to create one of the biggest monarch waystations in the area.



Milkweed like this now fills the Richard Grand Memorial Meadow, Nick Beauregard

The Richard Grand Memorial Meadow has been the focus of another project as we completed work on our new pond. After months of preparation, we turned an unsightly hole in the ground into a beautiful oasis that is attracting birds and birders alike! This pond replaces the old backyard fountain that has been beyond repair for a number of years, and it will also benefit wildlife more effectively than a fountain. The pond is designed to overflow every morning to irrigate a lush patch of riparian plants. We will also soon be receiving native fish from Arizona Game and Fish Department to control mosquitoes and, if we're lucky, maybe even attract a Green Kingfisher!



The new pond is a great wildlife magnet for the meadow., Nick Beauregard

If you haven't been to the Paton Center lately, it's definitely a wonderful time to visit! These two new projects have transformed what was once a weedy horse pasture into a lush and inviting garden of native plants and happy wildlife. As the seasons continue to progress, so too will our projects. By fall we expect to have many more native plants throughout the property, enhanced bird viewing areas, and more hummingbirds than you can count! 🍷

ARIZONA'S IMPORTANT BIRD AREAS

The San Pedro River

by Jennie MacFarland, Bird Conservation Biologist

There are 46 Important Bird Areas (IBAs) within Arizona, representing a considerable variety of habitats. The Grand Canyon Global IBA, with its huge, sweeping majesty that is so important for migrating raptors, has Mexican Spotted Owls tucked away deep in the canyon and Bell's Vireos singing along the river. Southeast Arizona's beautiful Sky Islands include the Chiricahua Mountains Global IBA, Pinaleno Mountains IBA, and Santa Rita Mountains IBA containing the famous Madera Canyon. Our largest IBA is the Sonoran Desert Borderlands IBA that encompasses both Cabeza Prieta NWR and Organ Pipe NM, a productive Sonoran desert habitat whose stark beauty houses key bird species such as Gilded Flicker, Costa's Hummingbird, and the last foothold of Cactus Ferruginous Pygmy-Owl in the US. Of all the varied and vital areas identified by this international program, the most critical for bird diversity is riparian habitat. Riparian areas are crucial for nearly all bird species, and among the nearly half of all IBAs in Arizona that represent this habitat, the standout is the San Pedro River.



Lower San Pedro, Jennie MacFarland

The San Pedro is the best remaining example of a desert riparian ecosystem in the American west, a rare remnant of a habitat type that has all but disappeared. This river is a vital migratory pathway; the lush cottonwoods and willows that line its banks are the summer home of nesting Western Yellow-

billed Cuckoos, Southwestern Willow Flycatchers, and many other species. In certain stretches of the river, there are robust mesquite bosques adjacent to the riparian corridor that are filled with Lucy's Warblers and Vermilion Flycatchers. In the nearby upland slopes, desert-nesting Purple Martins will nest in saguaro holes and forage for insects above the nearby river. These rich and complex habitats along the river make it a unique and productive area full of life, so much so that there are two separate Global IBAs identified on this river: the Lower San Pedro River IBA and the San Pedro Riparian National Conservation Area IBA, both of which have Global status for Bell's Vireo.



Gray Hawk nestling, Ariana La Porte

The conservation status of the San Pedro River tells a story of its value, but its beauty can only be understood if one visits the river. Many Arizona IBA volunteers have had opportunities over the years to visit this river for citizen science bird surveys, and on each trip we witnessed amazing sights, sounds, and life dramas. We encountered a troop of coatis that included over a dozen small juveniles with their tails held high. We found a large stick nest high in a cottonwood and watched small, fuzzy Gray Hawk chicks peering down with fierce intensity, listening to both Tropical and Thick-billed Kingbirds singing from neighboring trees. There are tiny Northern Beardless-Tyrannulets building their



Southwestern Willow Flycatcher, Alan Schmieler

nests in clumps of tent caterpillar webbing while Southwestern Willow Flycatchers call "fitz-bew" and declare a small piece of the river as their own. We can know and understand how valuable the San Pedro River is to migrating birds and the ecology of the area through words and photos. However, to feel the delicate beauty and vigorous life of the river, you must visit yourself.

Some excellent places to visit the San Pedro River include:

The San Pedro House — east of Sierra Vista, along AZ90. This area offers a network of trails along the river and in the uplands as well as a nature shop and restrooms.

St. David's Holy Trinity Monastery — in the town of St. David, along AZ80. The grounds of this monastery are open to the public and feature a very nice birding trail.

7B Nature Trail — on Copper Creek Rd, just east of Mammoth (take Main Rd to the right when entering town from the south). This trail is open to the public and winds through a beautiful mesquite bosque along the San Pedro River. [v](#)



Yellow-billed Cuckoo, Seabrooke Leckie

WELCOME NEW MEMBERS

Renee & Andy Anderson, Jean Anderson, Catie Armstrong, Bettina & Bob Arrigoni, Kerry Baldwin, Jill Baumann, Kathy Ben & Scott Wilbor, Edward Bennett, Judi & Jeff Bergfield, Jane Bick & Richard Wagoner, Susan & Gary Bollinger, James Bozeman, Mary Bradley, Fran Brazzell, Kat Brown, Dave Brown, Howard Buchanan, Elizabeth Burt, Paul Calver, Tillman Cavert, Tom Chester, Rose & Bill Clarke, Sally & Mike Connelly, Juliette Connelly, Nancy Cook, Jim Cook, Karen & Alan Dahl, Kay & Glenn Darlington, Jodie Delamatre, Mary Dewald, Amy Dunmyre, Jake Elkins, Roberta Elliott, BrandE Faupell, Haines Fielding, Bob Filep, W. Guy Fiscus, Suzanne & Alan Frank, Dana S & Michael A Gable, Leslie & David Gardner, Elizabeth & James Goff, Jackie Goldman, Angela Gonzales, David Griffin, Lynn & Bill Haak, Margarite Hargrave, Stephanie & Larry Hawke, Barb & John Haymond, Rhonda Head, Karlene Hobbs, Joyce Holly, Joan Hood & David Davis, Patricia & Bob Houston, Lyn & Ed Hunter, Robert James, Jill Barrett Johnson & Alex Johnson, Arlyn Johnson, Frances & Harold Jones, Lillian Jones, Mike Judd, Rebecca & Patrick Keenan, Sharon & Merrill Kempfert, Lois Kilburn, Helen Kim, Mark Krietemeyer, Sammie Kyndberg, Linda Landry, Gus Lane, Ruth Lapp, Niels Larsen, Andrew Larson, Luise Levy, Linda & George Lippold, James Macadam, Regina Mangold, Steve Marlatt, Shelley Martin, Dolly Mathews, Susan Mawhinney, Chris & Brendan McCooey, Annie McGinnis, Nancy & Herb Meier, JoJene Mills, Lisa Mishler, Karen Mockler, Elaine Moisan, Mary Molinary, John Muller, Jackie & Craig Nelsen, Barbara Nelson, Elaine Nye, Lauren Orlosky, Jennifer Patton, Alice Peacock, Lisa Pearson, John Petter, David Potter, Denise Ravenwood, Rosemary Rawson, Phillip A. Reedy, Luke Reese, Sally Reid, Anthony Reiter, Vania Revell, Tom Richardson, Cindy Rubash, Jean Saliman, Barbara Schneidau, Dale Simonson, Jane & Tom Skinner, Cindy & David Soffrin, Kathy Stitt, John Stuhlmuller, Judy Ellyson & Don Swartzendruber, Toby Sydney, Michael Tomulty, Maria & A. E. Troutner, Clare Turner, Eugene Twaronite, Christian Varrios, Cynthia & Bill VerDuin, Jean Vickers, Gretchen Wagenseller, Susan & Rolland Waters, Jim Weishaupt, David Weiss, Michael Welch, Catherine & Ingrid Welty & Michael Dohm, Ashley & Fred Weymouth, LeslieAnn Williams, Cheryl & Joe Wolowsky, Bobbie & Charles Woodman, Theodore Wyshyvanuk, Jay Zeilenga

THANK YOU TO OUR FREQUENT FLYERS

Matt Bailey, Ardeth Barnhart, Melanie Builder, Shawn Burke, Karen Chandler, Janet Cohn, Mich Coker, Christine Curtis, Sandy Elers, Peggy Ford, Marlesa Gray, Dorothy Kimball, Bob King, Susan Kozacek, Suzanne Long, Marcia Obara, Erin Olmstead, Lorel Picciurro, Deb Vath, Frances Ann Walker, Nancy Young Wright, Claire Zucker

Monthly giving through automatic credit card or bank withdrawals is convenient, secure, and simply one of the best ways you can support Tucson Audubon's programs. For more information, visit tucsonaudubon.org/give.

GIFTS IN HONOR/MEMORY

- In honor of Alexia Bivings from Carol & Don Eagle
- In memory of Arnold Dahl from Terry Cox
- In honor of Barbara Schneidau from Barbara Schneidau
- In honor of Betsy Hall from Marie Linder
- In honor of Chris Rohrer from David Lewandowski
- In honor of Deborah Mayaan from Deborah Mayaan
- In memory of Ed Caldwell from Mary Caldwell
- In honor of Ellen Plane from Ellen Plane
- In memory of Joe Orenstein from Claire Stein, Ingrid & Mike Ketcham, Jill & Robert May, Joan & Martin Blumberg, and Susan & Charles Cremin
- In honor of Maia Stark from Bill Auberle and Sherry Stark
- In honor of Mindy Blaski from Paul & Mindy Blaski
- In memory of Molly Becker from Jean & Douglas McLain
- In memory of Noble Proctor from Phil Asprelli
- In honor/memory of Norman Glenn from Cristianne Smith
- In honor of Robin Kaminsky from Brad Beldon and Susan Kaminsky
- In honor of Sara Pike from Lori Roop

**RARE BIRD ALERT!
Pine Flycatcher (*Empidonax affinis*)**



Pine Flycatcher, Ken Murphy

This Pine Flycatcher was found and documented by Dave Stejskal on May 28 at Aliso Spring in the Santa Rita Mountains. The special bird represents the first documented record for the United States, and many birders have since made the arduous trek to view it.

Pine Flycatcher resembles Cordilleran/Pacific-slope Flycatcher in appearance and Dusky Flycatcher in its calls, making it a great challenge to identify. Congrats Dave!



Southeast Arizona
BIRDING FESTIVAL



August 11-14, 2016 Tucson, Arizona

**Expert-Led Field Trips, Workshops, Vendor Fair,
Evening Programs**

DETAILS & REGISTRATION: TUCSONAUDUBON.ORG/FESTIVAL

Gilded Flicker, Bruce Taubert; Vermilion Flycatcher, Jeremy Hayes

THE CITIZEN SCIENTISTS OF THE TUCSON BIRD COUNT

This is the 16th year that volunteers for the Tucson Bird Count have been leading a citizen-science driven effort to study how native birds use urban habitat. The information gained in this annual survey is helping us to better understand the habitat needs of species so we can help make urban Tucson more productive for birds. There are currently 90 volunteers for this count and over the whole count 236 people have donated their time and skill to this effort. None of this would be possible without you and we thank you, each and every one!



Tucson Bird Count volunteer surveyors on a recent appreciation bird walk at Sweetwater Wetlands.

Greetings from Your New Volunteer Coordinator, Josh Barron

I first came to Arizona in 2013 to attend graduate school at NAU after attending the University of Oklahoma and graduating with a bachelor's degree in Astrophysics. I wanted to study Applied Physics at NAU, yet it was there that I first began to appreciate and explore the natural world in a more direct way. Birds in particular led me in a new and unexpected direction.



It all began with a single hummingbird feeder. Fascinated by the Rufous and Broad-tailed hummingbirds that visited my Flagstaff apartment, I soon began to seek the company of birds beyond my front door. Birding rapidly became a full-blown hobby and a visit to Madera Canyon in March of 2015 piqued my interest in Tucson. I moved to the Tucson area in

search of jobs within the realm of astronomy and physics, but with each passing day I felt that I wanted a change. Tucson Audubon Society provided an opportunity for this change, one which seemed to make use of my somewhat eclectic skill set.

I hope to build upon the great relationships established between our volunteers and Tucson Audubon, which is the secret ingredient that makes our organization so strong. I look forward to working with you in the protection of birds and their habitats.

VOLUNTEER FOR THE 2016 SOUTHEAST ARIZONA BIRDING FESTIVAL!



Southeast Arizona BIRDING FESTIVAL

We are seeking volunteers for the 2016 Southeast Arizona Birding Festival, held August 11-14. To sign up, please contact our volunteer coordinator, Josh Barron, at: jbarron@tucsonaudubon.org or 520-209-1811. Please visit the festival website at tucsonaudubon.org/festival for more information.

Please email or call if you would like to volunteer for Tucson Audubon!

volunteer@tucsonaudubon.org
520-209-1811
tucsonaudubon.org/volunteer

THE TAS-ifieds—CLASSIFIED ADS

NATURE-LOVER'S CUSTOM HOME ON 2.5 ACRES OF LUSH NATURAL DESERT!

Insulated, concrete block construction with trussed metal roof. Open floorplan, 3 Bedrooms/2 Baths, tile throughout. Solar photovoltaic system. Great views of multiple mountain ranges!

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Near Ina/Silverbell, Tucson MLS#21614260

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Classified and display ads are accepted from individual members and members of our Birds & Business Alliance. Visit tucsonaudubon.org/vfly for rates or contact Matt Griffiths at mgriffiths@tucsonaudubon.org to book an ad.

Violet-crowned Hummingbird and Red-faced Warbler

Scott Olmstead

In this column we look at some of our southeast Arizona borderlands specialty bird species. Birders from all over the US travel to southeast Arizona to add birds to their life lists, and we are proud of the birds that make our region unique! But outside of the context of southeast Arizona, are these birds really a big deal? Here we take a broader look at some of our iconic species, and then poll a panel of international birding tour leaders to find out if these birds are really essential “ticks” from a world birding perspective. Remember, there are over 10,000 species of birds in the world!

Violet-crowned Hummingbird (*Amazilia violiceps*) Red-faced Warbler (*Cardellina rubrifrons*)

Hummingbirds charm nature enthusiasts everywhere and they’ve certainly been the gateway bird for many a fledgling birder. There are over 360 species in the hummingbird family (Trochilidae), all endemic to the New World. The northern Andes of South America are the epicenter of hummingbird diversity, and Ecuador, Colombia, and Peru each host over 100 species of *colibríes* (as they are commonly known in Spanish). The variety of hummingbirds found in the US is more modest, but southeast Arizona makes the cut as a hummingbird hotspot on a national level, with 13 species regularly found each year plus less predictable vagrant species. It’s hard to choose one hummingbird that represents our borderlands, but for me it’s Violet-crowned Hummingbird, high on the target list for visiting birders and quite unlike any other hummer found in the US.



Violet-crowned Hummingbird, Axel Elfner

Violet-crowned Hummingbird makes its home along riparian corridors in mountains and adjacent lowlands, from southeast Arizona south to Oaxaca, Mexico. Violet-crowned Hummingbird, along with another southeast Arizona rarity, the Berylline Hummingbird, belongs to the genus *Amazilia*, a well-developed genus of

hummers found throughout the tropical regions of Mexico, Central America, and South America. There are about 30 species of *Amazilia*, most having the same stocky shape and reddish bill of the Violet-crowned Hummingbird. To those who have traveled to Central America or northern South America, one of the most familiar *Amazilia* hummingbirds may be the Rufous-tailed Hummingbird (*Amazilia tzacatl*).

The Red-faced Warbler is one of the more striking members of the New World Warbler family (Parulidae): if you browse a gallery of the 110–120 species in the family, you’ll see lots of yellow, gray, and olive, but



Red-faced Warbler, Lois Manowitz

not a lot of bright crimson red! Its gaudy red face, set against a contrasting black aviator’s bonnet, seems to glow in the dark mountain pine forests where it is found. The New World Warblers are distributed from Alaska to Argentina, and over a third of the family is migratory to some degree. The Red-faced Warbler is no exception; it breeds in the mountains of Arizona and northwest Mexico and then travels south to spend the winter months in the southern half of Mexico, Guatemala, Honduras, and El Salvador.

The New World Warbler family tree has been revised in recent years, and the relationships between the species and genera have been shuffled and clarified. There are five other species now classified in the genus *Cardellina* with the Red-faced Warbler. According to DNA sequencing, the outrageous Pink-headed and Red Warblers of Mexico and Guatemala, sometimes classified in their own genus *Erigatus*, are the closest relatives of our Red-faced Warbler. The highly migratory Wilson’s and Canada Warblers, sometimes classified in the genus *Wilsonia*, branched off from a common ancestor in the more distant past.

Our tour leader panel this time is comprised of Brian Gibbons of Victor Emanuel Nature Tours, Rich Hoyer of Wings Birding Tours, and John Yerger of Borderland Tours. By a 2–1 vote they suggested Red-faced Warbler is not an essential “tick” here in southeast Arizona. This warbler is widespread in Mexico (and even farther north in Arizona), and common in mixed flocks in some popular birding destinations like Oaxaca. Violet-crowned Hummingbird was voted a can’t-miss species by a 2–1 vote; although it is also fairly widespread in western Mexico, there are very few reliable sites with feeders throughout the rest of its range. ■

Scott Olmstead is a high school teacher here in Tucson, as well as a part-time tour leader for Tropical Birding Tours (tropicalbirding.com). He leads trips to Ecuador, Costa Rica, and other destinations in Latin America.

Hassle-free Birding in Sonora's Free Zone Bob Bowers



Nest-building Sinaloa Wrens, Gordon Karre



Cocospera River, Bob and Prudy Bowers



Gray Hawk, Pete Baum

With hundreds of species never seen in the U.S. and its border just an hour from Tucson, Mexico is a natural magnet for Arizona birders. But birding by car in Mexico is a little more complicated than birding in Arizona. In addition to Mexican car insurance, in most cases you need a tourist permit as well as a car permit, documents that can take an hour or more to obtain at the permit station 21 kilometers south of Nogales. But there is a way to get a taste of birding Mexico without the time-consuming hassle to get permits: Mexico allows U.S. visitors 72 hours in Sonora without either a visa or car permit, as long as you don't venture out of the 'free zone.'

This Sonoran 'free zone' encompasses mainland Mexico west of highway 15 from Nogales to Empalme and north of highway 2 from Imuris to Naco, Arizona. That territory includes birding hotspots in Rocky Point, Hermosillo, Kino Bay, San Carlos, and Guaymas. Car permits are not required for visits in this area regardless of length of stay, and staying 72 hours or fewer obviates the need for tourist permits. Three days isn't much time to bird these hotspots, but you can sample enough to decide where to spend more time on a longer trip. Even though a tourist permit is required for stays longer than 72 hours, it's free for seven days and only \$20 for up to 180 days. You still need to have Mexican car insurance, but that's easy to get by phone in Tucson.

We've talked about birding most of the hotspots listed above in prior columns, destinations from Tucson that range from Rocky Point 244 miles (four hours) away to San Carlos 331 miles (6+ hours) away. However, there are two 'free zone' birding hotspot destinations that are less than 130 miles (about two hours) from Tucson. One of them is Rio Magdalena-Terrenate in Imuris, an easy day trip from Tucson, and the other is Rancho El Aribabi, just 20 miles east of Imuris on highway 2.

Rio Magdalena is an under-birded eBird hotspot with just fifteen checklists, but 155 species have been reported here on visits dating back to 1980. The creek-like river flows year-round, attracting Black-bellied Whistling Duck, teals, mergansers, grebes, herons, and egrets. This hotspot has also reported Mexican specialties like Elegant Quail, Green Kingfisher, White-tipped Dove, Ferruginous

Pygmy-Owl, Crested Caracara, and Black-capped Gnatcatcher. To reach Rio Magdalena from Nogales, drive 43 miles south on highway 15 into Imuris, pass the intersection with highway 2, and cross a bridge over the river. Just past the bridge, turn left into an area of roadside shops and take the first paved road east until you reach a school, then turn left on an unpaved road down to the river. A dirt road parallels the river, offering multiple opportunities to park and bird, distracted only by friendly ranchers on horseback.

The second hotspot close to Tucson is Rancho El Aribabi, a 10,000-acre cattle ranch at 3,500 feet in the Sierra Azul Mountains, 19 miles east of Imuris. The ranch focuses on conservation and research and is periodically open to small group overnight visits. The ranch guest house sits above the Rio Cocospera, a small stream flowing through a heavily treed riparian area rich with birds. Birding the riverfront trails in early morning is like walking through nature's cathedral. In spring, Summer Tanagers are abundant and singing Sinaloa Wrens compete with Yellow-breasted Chats in a futile attempt to drown out the sound of the river. eBird shows 29 checklists and 157 species for this hotspot. During a two-night stay in May, our group recorded nearly 50 species including Gray Hawk, Sinaloa Wren, Green Kingfisher, Five-striped Sparrow, White-tipped Dove, Buff-collared Nightjar, and Rose-throated Becard. eBird reports of Sinaloa Wren in the U.S. have occurred in just three areas of Arizona (Tubac, Patagonia, and Ft. Huachuca) and never more than a single bird. Aribabi is just 35 miles south of Arizona, and on our May trip we watched two pairs of Sinaloa Wrens singing and nest-building. Visits to El Aribabi require reservations, which can be arranged through their web site: elaribabi.com.

Entering Mexico to bird these two hotspots is hassle-free and no more difficult than birding Santa Cruz County, although returning to the U.S. sometimes involves a delay at the Nogales border. You can avoid this by returning on highway 2 to Naco, a less popular border crossing. Unlike birding Santa Cruz County, though, you'll need a passport! 🇲🇽

Bob writes nature and travel articles. He writes a birding column for an Arizona newspaper, and he and his wife, Prudy, travel and bird extensively throughout Mexico. His email is bobandpru@aol.com

FEATURED SOUTHEAST ARIZONA TWO TAKES ON HOW BIRD

Tucson Audubon is proud to feature Jeff Gordon, American Birding Association (ABA) President, and Sheri Williamson, Director of the Southeastern Arizona Bird Observatory (SABO), as keynote speakers at its **Southeast Arizona Birding Festival**, August 11-14, 2016.

Sheri will deliver Friday evening's talk, *Small Wonders*, sharing the intriguing, mysterious and colorful world of hummingbirds. Sheri says her life got hijacked by hummingbirds when she and her husband, Tom Wood, moved to Arizona to manage The Nature Conservancy's Ramsey Canyon Preserve. There, she became obsessed with these rainbow-hued warriors, feeding them year-round, maintaining a hummingbird garden and writing about her observations.

Jeff Gordon's address, *How Birding Can Save Your Life and Maybe, Just Maybe, Save the World*, offers his thoughts on the power of birding to heal and transform, not only our own lives, but perhaps our world as well. He views birding as the passion and practice of a community—ideally a community that is strong and diverse—that directly influences our birds and our national natural heritage.

Jeff speaks from years of experience with birds and birders. In addition to leading birding trips full-time for 12 years from Antarctica to Africa, Jeff served as field editor for *Birdwatcher's Digest*, coordinator of the Delaware Birding Trail, and as an interpretive naturalist for the National Park Service at Yosemite and Acadia, and for the Santa Ana National Wildlife Refuge in Texas.

Even if you are not participating in the field trips this year, we encourage you to attend these entertaining keynote addresses. Jeff and Sheri, joined by fellow ABA staff member George Armistead and SABO Director/Naturalist Tom Wood, will also serve as trip leaders on several of our Festival field trips.

KEYNOTE TALK DETAILS

How Birding Can Save Your Life and Maybe, Just Maybe, Save the World

Jeff Gordon, President, American Birding Association

Date: Saturday, August 13, 2016
Time: 5:00 pm–8:00 pm
Cost: \$65



Jeff will address the power of birding to heal and transform, not only our own lives, but perhaps our world as well. He views birding as the passion and practice of a community whose time has come. Jeff will address the many benefits of a strong, diverse birding community both for birds and for our natural heritage. He will also address ways to conquer some of the special challenges that birding faces as it reaches a wider audience.

Hummingbirds: Small Wonders

Sheri Williamson, Director, Southeastern Arizona Bird Observatory

Date: Friday, August 12, 2016
Time: 5:00 pm–8:00 pm
Cost: \$65



Tiny they may be, but hummingbirds know how to live large. Dazzling colors, “singing” feathers, huge brains, voracious appetites, continent-spanning migrations, and sometimes-scandalous sex lives are just a few of the qualities that have earned these miniature marvels a devoted following far beyond the birding community. This presentation also includes a sneak peek at the forthcoming revised edition of the *Peterson Field Guide to Hummingbirds of North America*.

Tickets for both evenings include a drink for the social hour at 5:00 pm as well as a seat for the buffet dinner and presentations at 6:00 pm, all at the River Park Inn.

SOUTHEAST ARIZONA BIRDING FESTIVAL

Previously known as the Tucson Bird & Wildlife Festival, we've refreshed the name of our festival to more accurately reflect its offerings and to highlight the festival as Tucson Audubon's signature event for birding in the region. We invite you to join us and experience this year's Southeast Arizona Birding Festival!

See full Festival info at tucsonaudubon.org/festival



Southeast Arizona
BIRDING FESTIVAL



Paton streamside restoration area, Matt Griffiths

BIRDING FESTIVAL SPEAKERS: ING CAN SAVE YOUR LIFE

FIELD TRIP AND WORKSHOP OPPORTUNITIES

Hummingbird ID: Everything you ever wanted to know! with Sheri Williamson

Date: Thursday, August 11, 2016

Time: 3:30 pm–5:00 pm

Cost: \$35 per person

Join Sheri, author of the *Peterson Field Guide to Hummingbirds*, as she takes you through the spectrum of hummingbird identification, starting with the basics and working your way up to understanding more advanced ID issues.

Sweetwater Wetlands, Jennie MacFarland



Broad-billed Hummingbird, Rhett Herring

Sweetwater Wetlands Field Trip with Jeff Gordon and Kendall Kroesen

Date: Friday, August 12, 2016

Time: 6:00 am–9:00 am

Cost: \$30 per person

Sweetwater is a “must see” destination for any birder with a few hours to spend in Tucson and a great place to get started as a beginner birder. Representatives from optics companies will accompany our group, offering a great chance to try out a variety of binoculars.

ABA BIRDING RALLY

August 15–20, Sierra Vista
events.aba.org

The American Birding Association will be holding a fall birding rally in southeast Arizona the week following the Southeast Arizona Birding Festival. ABA’s rallies are a time for members to gather from around the country for focused birding field trips, shared dinners, and featured guest speakers. Field trips are limited to around 16 members and will be visiting the Huachucas, Las Cienegas, Patagonia, and the east side of the Chiricahuas. At this year’s rally, Tucson Audubon supporter Matt Fraker will present about Tucson Audubon’s restoration efforts at the Paton Center for Hummingbirds, especially the streamside and pecan grove restoration project with which Matt is actively engaged.

The American Birding Association

Much like Tucson Audubon, the ABA’s mission is to “inspire all people to enjoy and protect wild birds.” Two specific approaches stand out: the “Spark Bird Project” and the “Birders Exchange.” These initiatives ask us to think outside of our normal circles of influence to affect birding globally.



The “Spark Bird Project” is designed to inspire a love of the outdoors in underserved schoolchildren by donating binoculars to programs, schools, and organizations for the children’s use and enjoyment. Meanwhile, “Birders Exchange” tackles a problem facing many educators, researchers, and conservationists in the Caribbean and Latin America: they are insufficiently equipped to do their work. “Birders Exchange” provides new and donated binoculars and field guides to people educating their communities and protecting wildlife without this basic equipment. It is easy to take for granted the scopes, tripods, binoculars, books, and other resources we have at our fingertips, but the ABA helps us remember that our future enjoyment is interrelated with that of others who need our support. Information on these programs and more can be found at aba.org.

The Southeastern Arizona Bird Observatory

The Southeastern Arizona Bird Observatory (SABO) is a non-profit organization dedicated to the conservation of the birds of southeast Arizona, their habitats, and the diversity of species that share those habitats through research, monitoring, and public education.



SABO offers a variety of resources for the birding and naturalist communities as well as opportunities for residents and visitors to connect with the birds and other wildlife of southeast Arizona. It also serves as a regional advocate for science-based management of bird habitats and responsible, low-impact economic development. These activities are supported by members and donors: people like you who value wildlife and wild places. More information can be found at sabo.org.



ENGAGE AND EXPLORE



Gallery forest of the San Pedro River corridor, Ariana La Porte

The San Pedro River is arguably one of the single most important biological features in the arid Southwest. It is one of four major north-south migratory flyways of the southwestern United States along with the Rio Grande, Santa Cruz, and Colorado Rivers. The San Pedro River serves as a migratory corridor for an estimated 4 million migrating birds each year.

Proposed new developments and a hotter and drier climate threaten to rob the river of its most crucial ingredient: water. Unlike the highly degraded Santa Cruz River, which has been dewatered and deforested by decades of unsustainable groundwater withdrawal, the San Pedro still has a remarkably intact riparian system that supports extensive stands of Fremont cottonwood, Goodding's willow and large mesquite bosques. These forests rely upon the maintenance of both surface and subsurface flows of water.

The San Pedro River has been intensively studied and recognized by scientists for its extraordinary ecological values. Duncan and Slagle (2004) describe the San Pedro River as one of the most significant perennial

undammed desert rivers in the United States. Boykin and Kepner (2012) found that the San Pedro River watershed demonstrates the highest levels of species richness and biodiversity in both the Southwest and Southeast regions of the nation. The San Pedro is home to 84 species of mammals (including beaver), 41 species of reptiles and amphibians, 100 species of butterflies, 20 species of bats, and 14 species of native fish. Thirty-six species of raptors soar the skies above this unique river valley.

Recognizing the river's hemispheric importance to avian life, two Global Important Bird Areas (IBAs) have been designated along the San Pedro River corridor: the San Pedro Riparian National Conservation Area (RNCA) Global IBA and the Lower San Pedro River Global IBA. IBAs undergo extensive bird surveys and a rigorous scientific review process. Important Bird Area designation is relevant to protecting key habitats utilized by birds during some part of their life cycle, as well as conserving the area's overall biodiversity.

The San Pedro Riparian National Conservation Area protects a 36-mile stretch of the river

north of the US-Mexico border—one of only two RNCAs designated in the nation. This special congressional designation is given to protect and enhance the desert riparian ecosystem, a rare remnant of what was once an extensive network of similar riparian systems throughout the American Southwest. According to the BLM, over 100 species of breeding birds and approximately 250 species of migrant and wintering birds occur here, representing roughly half the number of known breeding species in North America.

The Lower San Pedro River Global IBA is located in the reach between The Narrows and the river's confluence with the Gila River. Together, these two Global IBAs support some of the highest nesting densities of riparian-obligate birds in the western United States, including avian species of conservation concern such as the threatened Western Yellow-billed Cuckoo, the endangered Southwestern Willow Flycatcher, Bell's Vireo, Cassin's and Botteri's Sparrow, Northern Beardless-Tyrannulet, Lucy's Warbler, Abert's Towhee, and Brewer's Sparrow. Both IBAs are strongholds for migrating raptors such as Gray Hawk and Mississippi Kite.

The science is clear: the San Pedro River watershed is unique, diverse, and of the very highest conservation value. It is for this very reason that numerous conservation easements have been established along the river to offset impacts to imperiled species caused by past major developments across Arizona, and this conservation corridor represents a substantial public and private investment. However, the future of this national treasure is unclear with a growing list of serious threats, many of which relate to unsustainable water use. We must work together as a community to ensure the San Pedro River's value for birds, biodiversity, and human communities are protected for future generations. ■

Matt Clark, Conservation Analyst

THE SAN PEDRO RIVER

DIVERSITY, SURPRISES, AND TREASURES OF THE 7B RANCH *Celeste Andresen, The Nature Conservancy*

The 7B Ranch property lies along the San Pedro River outside of Mammoth, AZ and is part of the San Pedro River Important Bird Area (IBA). Covering over 3,000 acres, the habitats on the property include Sonoran Desert Uplands, mesquite bosque, ephemeral river bottom, and a wetland formed by an artesian well. This variety of habitats is reflected in the diversity of wildlife that I encounter during my patrols and surveys as the land manager.



Yellow-billed Cuckoo, Alan Schmierer

Crawling through the shadows of mesquite bosque last summer, I documented no less than 13 Yellow-billed Cuckoo territories. Gray Hawks soar in the clear skies throughout the year, seeming not to migrate further south. This spring, I glanced into a gnarly old mesquite to find a Long-eared Owl, likely on his way north.

One of my favorite moments was the discovery of a den of king snakes that were trapped in an abandoned well shaft. I rescued them by putting mesquite limbs into the shaft to watch them climb out to safety.

The wildlife cameras that are dispersed throughout the property reveal black bears, mountain lions, bobcats, kit and red foxes, coatimundi, and javelina. Reptiles and amphibians of all types are heard scratching and skittering in leaf litter. Owls and nightjars flit and buzz along the river bottom and abandoned agricultural fields. Desert tortoises, often seen crossing the road in the summer, are moved to the safety of upland washes.

Although the 7B Ranch is privately owned, there is a 1.2-mile nature trail loop that is open to the public. You too can experience some of the amazing wildlife of the 7B Ranch by hiking this shady trail. Come visit!

MY HOME

*Heather L. Swanson, Natural Resource Specialist,
San Pedro Riparian National Conservation Area*

Spending my life on the San Pedro River, so many images come to mind. As child I spent days making believe and building elaborate forts in the washes that led to the water. As a teenager, I admittedly had far too much fun, drinking beer and rip-roaring around the river in various off-road vehicles. Now, as an adult, I find myself working to conserve and protect the lovely river, memories of which will forever remain in my soul. These include the day I walked up a tributary to check a boundary fence and came across mountain lion prints in the sand, which upon investigation revealed a kill of white-tailed deer. Or the day I laid down on the bank after conducting Yellow-billed Cuckoo surveys to realize that some fifty feet overhead was a nest holding three Gray Hawk nestlings. I lay there for an hour, watching as the nestlings took turns peering over the edge. And of course, I will never forget the rainy morning I walked down the tributary that I now call Coati Wash when I heard a peculiar noise I had never heard before. After several minutes trying to focus through the mist, I was given the gift of watching a coati family play as if I was not there.

I am truly a blessed woman to have spent so many days identifying plants, counting birds, and recording various aspects of the river's health. The San Pedro has introduced me to some of the most wonderful people and animals that I will always call friends. The River has taught me life skills, such as patience and attention to detail. With her cool water, gentle breezes, and tenacity to survive, she has helped me heal deep wounds inflicted by the harsh reality of life, to keep flowing. The mighty San Pedro River has always been in my life and will always remain my home.

AMIGOS!

*Woody Hume, Naturalist and cattle herd
manager on the San Pedro near Cascabel*

Remember the expression “red-letter day”? I recently experienced such a momentous occasion in my Cascabel birding life, though I couldn't have expected it, out on the desert with a roasting heat that was heading towards 100 degrees. Pat, Roby, our neighbor Karen Ellis (who often joins our rides for cattle affairs), and I left out horseback in late morning. We found the prickly pear cactus in perfect bloom, like roses or water lilies or tulips, not wilting even if we were. The variety of flowers can be startlingly clear yellow with a glowing green pistil, or topaz, or orange-yellow with a red spot at the base of each petal, or bright yellow with a hot pink stripe up the centers.

As we rode, Roby called out “Hey, is that an eagle on the top of that saguaro?” The rest of us swiveled around as he volunteered to ride Yaqui, his horse, across the flat and up a ridge to get a closer look. “It looks like it has a white head...” His voice trailed off and he left us. Not much later, we could see Roby and Yaqui appear out of the mesquite and flowering palo verdes to climb the ridge below a strange and very large bird. It took off, rose up into the air as if it were being assumed into Heaven, but then put on a display of aerial grace and ability that took the breath away as though to declare: “I am lord of the ether.” Then it lowered, curved, and soared right over our heads. White head, a black cap, white band towards the ends of long eagle wings: a Crested Caracara! That day, we four on horseback were riding on air ourselves after the sight of a bird as splendid as it is rare. © Reprinted with permission.



Crested Caracara, Verino77



Ariana La Porte

THE MIDDLE SAN PEDRO: A VALLEY AND A RIVER BEYOND COMPARISON, A PLACE LIKE NO OTHER...

Ralph Walcott and Mick Meader, Cascabel Conservation Association

The largest block of wild, undeveloped land remaining in all of southern Arizona.

The last free-flowing river in the desert southwest.

A critical migratory flyway of continental importance to bird life.

Flanked by federal wilderness and a national park, the middle San Pedro Valley is an ecological jewel unrivaled in its size, richness, and diversity. Here, vast landscapes beckon one's gaze all the way to the horizon. This is one of the last places where the land is still a living reflection of the historic "wild west." The very rare gift of a desert river sparkles in the valley floor, providing a haven of unparalleled importance for wildlife. One of the most diverse bird populations found anywhere in America finds refuge here. More types of mammals call this region home than any other place in North America. The San Pedro Valley is the last great desert stronghold for many rare and vanishing creatures.

For those who live, work, and visit here, the valley's ecological richness and quiet solitude fill and enrich our spirits. Each time we walk out the door, we are reminded why we value being here—the abundant wildlife, the dense mesquite and cottonwood-willow forests, the flowers throughout the seasons, the innumerable species of birds, the incredible quiet and darkness. One can scarcely find a greater treasure than this—yet the San Pedro is constantly threatened by developments and infrastructure projects. We welcome those who understand and appreciate this richness to join us in helping keep it as it is.

SAN PEDRO

Ariana La Porte, MS Student, Wildlife Biology and Conservation
Arizona Gray Hawk Project, University of Arizona

I knew it couldn't be an orangutan. I re-focused my binoculars and stared at the messy bunch of leaves. I had hoped to find a Gray Hawk nest, but something furry was moving in the canopy. Several reddish-brown tails emerged below the cottonwood branch before noses poked out above. Coatis! Astonished, I watched them uncurl from their sleeping platform and promenade down the tree. It was the first summer of my Master's research and I was pleased with my field site.



Coatis in a cottonwood, Ariana La Porte

The San Pedro is a river of surprises. One day, my friend and I were in the dry riverbed, miles from the road, when I heard machinery behind me. Puzzled, I was about to ask if he heard bulldozers when he yelled, "Get to high ground!" We ran to the bank and watched a torrent of muddy water carry leaves, branches,

and trees over the spot where we had just stood. The sky was cloudless, but monsoon rain upstream had brought the year's first flood.

Some of the river's surprises are small: the beaver-chewed log, the fresh cougar track, the Gila monster in the brush. Some are intangible: the watermelon sunset, the whine of cottonwoods, the tangy musk of a skunk tantrum. Some are hilarious: the careening Gray Hawk fledgling, the Neil Diamond cassette that came from upstream and back in time. The San Pedro is a river of wonder. I almost wouldn't be surprised if I did see an orangutan.

MEMOIRS FROM THE SAN PEDRO RIVER

Chrissy Kondrat-Smith, Biologist, Arizona Game & Fish Department

The birds called me to the San Pedro. My first thoughts of the seemingly tropical river are the sounds of Gray Hawks dominating the canopy, memories of juvenile cuckoos flying around me, flycatchers feeding their young, leopard frogs, and messages in the mud telling stories from the river's edge. From the border to the town of Winkelman, every accessible crevice has been explored.

Probably the most electrifying moment for me was a few years back during a survey for flycatchers on a remote part of the river near San Manuel. Wading through the shallow water under the canopy of Fremont Cottonwoods, I quietly approached my next survey point. In front of me, a posse of wild turkey strode through the river. As I was about to get started, a young mountain lion quietly walked in arm's length on my right side. He had no care of my presence; his focus was on the turkey. Slow and steady, the lion maneuvered two of the turkeys to the side, quickly grabbed one, and went on his way. The turkeys went about their business without a care—not even stirred by the excitement I just witnessed. A second lion at a short distance to my left also disappeared into the trees. And no need for the playback at this point, above me, in the fork of a young cottonwood, a flycatcher fed her young. These memories are indeed gifts from the San Pedro River.



Mountain lion and turkeys along the San Pedro, Chrissy Kondrat-Smith



Adult Gray Hawk, Ariana La Porte

THE WILD AND DEEPLY CHERISHED SAN PEDRO

Scott Wilbor, San Pedro conservationist

The San Pedro is the *wild* biological heart and riparian avian heartbeat of the Southwest. As a former Audubon IBA Conservation Biologist for Tucson Audubon, my deepest roots in Arizona tap this river system! The San Pedro supports millions of migratory birds, but it also supports people. The *communities* of Cascabel, Mammoth, and Aravaipa, are deeply connected to the watershed through their agriculture and natural resource stewardship. The San Pedro is wildlands and working wilderness both, often in close proximity.

The San Pedro also has special significance in my life; it is a place where I have worked (and pursued science) for its conservation over the last 15 years. I have fond memories over many years of leading Audubon IBA teams in early morning and late night bird surveys. The San Pedro Riparian National Conservation Area is of deep national pride to me and so many others. I am proud that Audubon, along with so many other great groups and agencies, has worked so long and hard to conserve the river's tremendous riparian ecosystem and flows, and especially its habitat-dependent bird communities, in so many ways!

The San Pedro River is *water in the desert*; the largest old-growth bosque in Arizona; coatis and black bears leaving tracks along the river all year long; beavers miraculously surviving through long droughts and brief but intense floods; Gray Hawks and cuckoos eerily "whoeeing" and "knocking" through the rustling, music-filled cottonwoods and willows; and all this bordered by astonishingly diverse uplands of saguaro-palo verde upland desert, lush plains grassland, and stunning mountain vistas. This river is a wonder and a fragile gift.



The San Pedro's ribbon of trees, LightHawk

TOP 10 THREATS TO THE SAN PEDRO RIVER

- 1 **Unsustainable over-pumping of groundwater** for existing agricultural, municipal and military uses, let alone proposed future uses. Groundwater mining lowers the water table and may result in reduced or eliminated surface flows leading to die-off of the river's riparian forests and aquatic habitats.
- 2 **Large new housing and commercial developments** such as the Tribute development at Sierra Vista (7,000 units, currently in litigation), the proposed Villages at Vigneto at Benson (28,000 units), and the approved BHP property near San Manuel (35,000 units).
- 3 **New major linear infrastructure:** 1) A proposal to build an "Interstate 10 bypass" through the San Pedro River Valley was roundly defeated, but this threat has been resurrected by the current effort of Pinal County to pave Reddington Road from San Manuel south to the Pima County line. 2) The approved SunZia Southwest Transmission Line and the co-location of additional future infrastructure and development parallel to SunZia's path.
- 4 **Mining.** Active mineral exploration is now taking place in Copper Creek, a tributary of the San Pedro River.
- 5 **Border infrastructure and operations** that result in habitat loss, fragmentation, hydrologic disruption, light pollution, traffic and other disturbances. Illegal immigration and drug smuggling often results in localized habitat degradation, pollution and disturbance.
- 6 **Invasive species** such as salt cedar, Sahara mustard, bur bristlegrass, buffelgrass, bullfrogs, and crayfish threaten native biodiversity.
- 7 **Historic and current overgrazing** in both riparian areas and adjacent uplands, which results in the loss of topsoil, increased sediment transport and deposition, changes in microclimate, water temperature and other impacts.
- 8 **Regional increasing light pollution**, which can cause dangerous disruptions to migrating birds and other wildlife.
- 9 **Illegal and irresponsible off road vehicle use** can contribute to habitat loss and fragmentation, erosion, and increased sedimentation of water bodies, adversely impacting water quality.
- 10 **The effects of climate change and the state-declared, long-term drought emergency.** Hotter and drier conditions are projected that could have dire consequences for the entire watershed.

CONSERVATION AND EDUCATION NEWS

Matt Clark, Conservation Policy Analyst, and Chris McVie, Conservation Committee Chair

2015-2016 Youth Engagement Wrap-up

Andy Bennett, Restoration Project Manager and K-12 Educator

It's been quite a varied and exciting year for the youth of Tucson Audubon this past season! We've trekked through riparian forests, birded deep stands of timber atop Sky Islands, monitored the ecology of a restoration project, and designed bird habitat at an elementary school. I'd like to highlight just a few of these projects for you below.

In late 2014, an exciting new program began to equip young adults with the skills and experience to find, identify, and enjoy birds. The All About Birds program is a partnership between the Sonoran Joint Venture, Ironwood Tree Experience, and Tucson Audubon with the ultimate goal of establishing a permanent "Tucson Young Birders' Club." The program's young birders have gained some impressive skills under the tutelage of former Tucson Audubon board member and Sonoran Joint Venture coordinator Jennie Duberstein. Duberstein has guided All About Birds trips since its inception to birding hotspots like Madera Canyon and Tumacacori.

But All About Birds youth don't just get out birding—they also take the reins and lead bird-focused activities. At Tucson Audubon's "Tucson Meet Your Birds Festival," for example, these teens guided novice birders around Sweetwater Wetlands. On Earth Day, All About Birders volunteered to work an interactive bird adaptations table at the 4H Ropes Course. Perhaps most notable of all, several program youth have volunteered their weekends to help lead refugees, many with limited English proficiency, on urban birding walks around Tucson. These experiences are all part of the All About Birds mission to not only inspire love and study of birds, but to also build participants' leadership skills.

Let's listen to several participants share their reflections on the program:

I enjoy being a member of a youth birding club because it gives me a chance to learn new skills alongside other peers who are just as excited as I am. The impact that the program has had on me has been incredible. My ability to recognize and identify birds has grown immensely over the course of the time I've spent in the program... I feel confident in teaching and leading others with what I've learned. —Hannah, age 17

On the first outing I went on, which took place in Pima Canyon in the Santa Catalina Mountains north of Tucson, my eyes opened to a new world. During the outing, previously unseen beauties of the Sonoran Desert began to unravel upon my eyes. The desert never seemed so alive before. Being exposed to species like the Verdin, the American Kestrel, and the Cactus Wren changed my perspective on the distinctiveness of this region of the world I live in... I now realize that being able to share information about birds to others has many benefits. For instance, birds are part of the complex food webs that occur in nature. By knowing the missing pieces of the jigsaw puzzles that connect food webs, a person can start making decisions to help conserve even the most unthought-of species, which are sometimes birds. Just as a smile can change someone's day, the spread of knowledge can determine the future of a species. —Alfredo, age 16

Another project, funded in memory of longtime supporter and board member Edmund Caldwell by his wife, Mary, is the Tucson Audubon *Trekking Rattlers Hiking and Birding Club*. The Rattlers has immersed hundreds of Lauffer Middle School students in the natural wonders of our region. Since the program's inception, they have visited some of Southeast Arizona's jewels like Ramsey Canyon and Sonoita Creek. The brainchild of star Tucson Audubon volunteer Deb Vath, Trekking Rattlers trips often provide a student's first brush with wild nature that many would not otherwise have the resources to access. Rattlers trips are quite varied but usually involve elements of learning, team building, and self-reflection. We wrapped up this Rattlers season with a two-day learning adventure atop Mt. Lemmon at the University of Arizona's Sky School.



All About Birders enjoying Sweetwater Wetlands, Ironwood Tree Experience



Veteran All About Birds member Eli teaches refugees how to identify birds via field guides on the University of Arizona campus, Ironwood Tree Experience



A few Trekking Rattlers enjoy a snake-free lunch spot near the summit of Mt. Lemmon, Deb Vath



All About Birds participants keep field journals each time they're out on an adventure, Ironwood Tree Experience



Mary and Edmund Caldwell at Madera Canyon; Edmund's memorial fund has supported Rattlers programs over the past two years (Mary Caldwell)

Oracle Road Wildlife Crossings Successful!

Millions of vertebrate animals, including birds, are killed every year at “hot spots” where roads and highways intersect with wildlife movement corridors, causing collisions that put drivers at risk of serious injury or death.

At one such “hot spot” located northwest of Tucson, two wildlife crossing structures have recently been completed as part of the Arizona Department of Transportation’s long-anticipated widening of Oracle Road/State Route 77 from four lanes to six lanes. This busy transportation corridor bisects a well-documented regional wildlife linkage that connects the Santa Catalina and Tortolita mountain ranges. Modeled on previously successful wildlife crossing efforts from around the world, the new structures will increase public safety, prevent roadkill, and help wildlife overcome habitat fragmentation caused by the highway and other development.

Years of studies, planning and coordination were validated by a monitoring video ([youtube.com/watch?v=Vsm84c5LYLU](https://www.youtube.com/watch?v=Vsm84c5LYLU)) released by the Arizona Game and Fish Department documenting deer, javelina, coyote, and bobcat using the structures to safely cross the roadway. Crossing structures are a clear win-win for public safety and conservation.

On May 10th, several Pima County Supervisors, the Arizona Game and Fish Department, and over 200 members of the public joined with the Coalition for Sonoran Desert Protection, Tucson Audubon, and Sky Island Alliance to celebrate the completion of the new structures. The public was invited to investigate the structures during this event before they were permanently closed to human use.

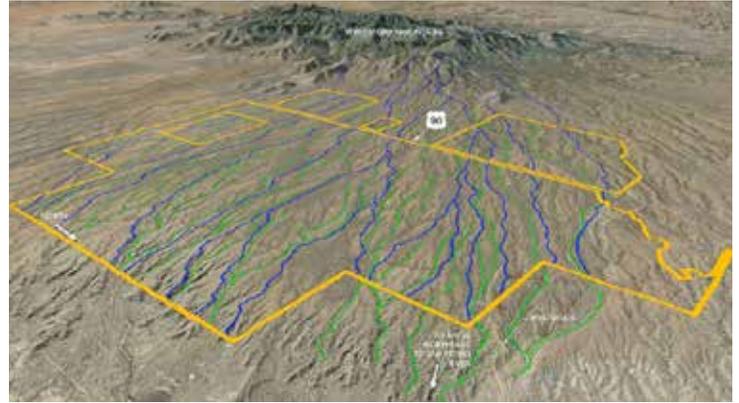
In 2006, Pima County voters approved a ½ cent sales tax to fund the Regional Transportation Authority’s 20-year plan; \$45 million, or less than 3 percent of the \$1.675 billion plan, is dedicated for wildlife linkage projects. Tucson Audubon has a seat on the multi-jurisdictional RTA Wildlife Linkages Working Group which recommended monies be allocated to construct the wildlife crossings and associated wildlife funneling fencing on SR 77. Tucson Audubon served on the Arizona Department of Transportation’s SR 77 Technical Advisory Committee and our Restoration Department has helped to restore vegetation along this wildlife corridor.



Arizona Game and Fish monitoring photo shows a deer safely crossing SR77 on the newly constructed overpass

Lawsuit Filed to Protect Wildlife and San Pedro River from Sprawling Development

Earthjustice has filed a lawsuit on behalf of Tucson Audubon Society, Center for Biological Diversity, Sierra Club, Maricopa Audubon Society,



Visualization from the Community Master Plan for the proposed Villages at Vigneto development illustrates the massive size of the proposal.

Lower San Pedro Watershed Alliance, and Cascabel Conservation Association against the U.S. Army Corps of Engineers (ACE) to protect the San Pedro River and the millions of migratory birds and other wildlife species that depend on it (see document at bit.ly/1UdCCZx). The San Pedro is the last major free-flowing river in the arid Southwest and provides vital habitat to nearly 45 percent of the 900 species of migratory birds in North America.

The suit challenges an outdated 2006 ACE Clean Water Act 404 Permit that approved impacts to numerous desert washes associated with development of the Villages at Vigneto, a 12,324-acre Tuscan-themed residential and commercial community planned in the desert grasslands southwest of Benson along the San Pedro River. It calls upon the ACOE to consult with USFWS regarding potentially affected species, as it is required to do as part of the permitting process. The washes, protected by the Clean Water Act, feed directly into the river. Since 2006, plans have been altered to make the development 50 percent larger than the original proposal, with the possibility of another 20 percent increase in size in the future, and new information has surfaced on the impacts to endangered and threatened species that inhabit the watershed.

The Vigneto developer, El Dorado Benson, LLC, aims to break ground this year. The massive development would include 28,000 homes, golf courses, vineyards, lakes, resorts, and commercial buildings, increasing Benson’s population from 5,000 to approximately 75,000 or more. It is forecast to increase groundwater pumping from approximately 800 acre-feet to as high as 13,000 acre-feet per year, pulling water from the aquifer that maintains the San Pedro’s streamflow. It could also potentially increase episodic downstream flooding, stormwater runoff, and sediment accumulation in the river.

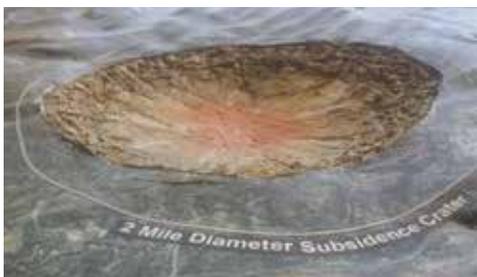
Numerous conservation easements—including mitigation land for the proposed development—are located downstream and could be adversely affected by over-pumping the aquifer and depleting in-stream flows. Many of the conservation easements were specifically established to offset impacts to threatened and endangered species from other developments affecting riparian resources elsewhere in Arizona.

The lawsuit alleges that the ACE failed to consider the impacts of Vigneto’s development and groundwater pumping on the threatened and endangered wildlife that rely on the San Pedro watershed to survive, specifically citing threats to the Western Yellow-billed Cuckoo, northern Mexican gartersnake, and Southwestern Willow Flycatcher. Other listed species potentially impacted include the wide-ranging jaguar, ocelot,

and lesser long-nosed bat. Under the Endangered Species Act, new scientific information mandates that the ACE must initiate and complete formal consultation with the U.S. Fish and Wildlife Service (FWS) before any development can proceed.

Take action! Share your concerns at the **final public meetings** for the Vigneto Community Master Plan (CMP) at Benson City Hall: Planning & Zoning hearing at **7:00 PM, July 5th; City Council work session at 9:00 AM, July 9th; City Council hearing at 7:00 PM, July 18th**. Can't attend? Send your letter to the Benson's City Council and Planning & Zoning Commission: 120 W. 6th St., Benson, AZ, 85602.

Tonto Forest Seeks Public Comments on Resolution Copper Mine/Oak Flat Land Exchange



Resolution Copper Mine crater model, commissioned by Concerned Citizens and Retired Miners Coalition

Resolution Copper's block cave mining proposal would create a subsidence crater two miles wide and a thousand feet deep at Oak Flat. Over 125 bird species have been documented at Oak Flat, including

state-level species of conservation concern such as Black-chinned Sparrow, Costa's Hummingbird, Gray Vireo and Lewis's Woodpecker. The mine's extensive water use could dewater riparian habitats in the adjacent Gaan and Queen Creek Canyons, which support riparian habitat for the federally threatened Western Yellow-billed Cuckoo. As currently proposed, the mine's massive 1.5 billion-ton toxic tailings pile would result in the loss of high-quality desert upland habitat and drainages that support neotropical migrants. These public lands provide sustainable birding, tourism, world-class rock climbing, hiking, camping, wildlife watching, photography, and more. Last March, the National Park Service designated Oak Flat the Chi'chil Bildagoteel Historic District, recognizing its status as a Traditional Cultural Property. Traditional and public uses of the Oak Flat landscape will be forever lost if the mine is developed.

Send written comments regarding the scope of environmental analysis for this proposed mine and land exchange by **July 18** to: Resolution EIS Comments, P.O. Box 34468, Phoenix, AZ 85067-4468, or via the Arizona Mining Reform Coalition's online action alert: bit.ly/28lvuhw.

Pima County Conservation Plan Seeks Balance between Growth & Natural Heritage Protection

Tucson Audubon is proud to have been involved in developing Pima County's Multi-species Habitat Conservation Plan (MSCP) since its inception. After nearly two decades of community effort, the MSCP was published in the Federal Register in May, demonstrating our community's commitment to conservation-minded growth that will ensure both

regulatory certainty and economic prosperity. Final approval by the Pima County Board of Supervisors will result in a 30-year federal "Section 10" Incidental Take Permit that will streamline endangered species compliance for new development authorized by the county and further formalize conservation commitments set forth in Pima County's landmark Sonoran Desert Conservation Plan. The permit also enables developments on private lands to voluntarily opt-in.

The Endangered Species Act requires assured funding to implement conservation plans. Currently, funding for Pima County's MSCP-related monitoring and management will come from the county's general fund, which is subject to changes in Board of Supervisor composition and shifting political winds. We encourage the County to seek dedicated funding for required long-term monitoring and adaptive management as well as for acquisition of mitigation lands and critical wildlife linkage connections. This will enable the County to protect the full spectrum of plants and animals that are indigenous to Pima County while maintaining or improving the ecosystem structures and functions necessary for their long-term survival. Download MSCP-related documents at: pima.gov/mscp.

Governor Ducey Vetoes 3 Bills in Support of Good Governance & Groundwater Management

Criticized by water managers, water experts, conservationists, and others, two recent special interest bills from the Arizona state legislature attacked Arizona's 1980 Groundwater Management Act and posed a threat to our rivers. Despite a 17-year state-declared drought emergency, record-breaking temperatures, and members of the public sending well over 2,500 letters in opposition, these bills passed both houses—leaving the governor's veto as our last hope. In his veto letter, Governor Ducey said: "...I'm concerned S.B. 1268 and S.B. 1400 would encourage a patchwork of water ordinances throughout our cities and leave our water supply securities in peril. Ensuring the certainty and sustainability of Arizona water is a top priority. I will not sign legislation that threatens Arizona's water future."

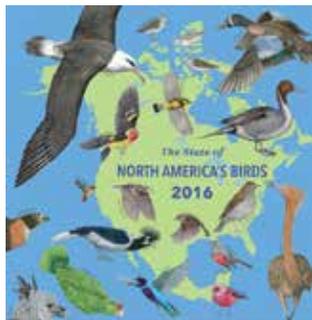
The third vetoed bill, HR 2568, would have tipped the balance of power away from local municipalities toward development special interests regarding the establishment and management of Community Facilities Districts, designed to bond for, and manage, the major infrastructure required for new developments. This bill would have had negative implications for the sustainability of Arizona's future growth and water use.

Thank Governor Ducey. Call: 602-542-4331.

Over One-third of North American Birds Require Urgent Conservation Action

The State of North America's Birds report (stateofthebirds.org/2016), released by the North American Bird Conservation Initiative, lists 432 species on the report's Watch List, citing threats such as range reduction, decreased population, and habitat loss. The report summarizes

conservation vulnerability assessments for 1,154 native bird species throughout Mexico, the continental United States, and Canada, cataloguing concerning trends as well as examples of constructive actions that have assisted avian conservation. Among the report's primary findings:



- More than one-third (37%) of North American bird species are of high conservation concern and at risk of extinction without significant conservation action.
- Seabirds and species that live in Mexican tropical forest habitats, arid lands, and grasslands (all environments found in southeast Arizona) are most at risk.
- Nearly 20% of wetland birds are on the Watch List. According to the FWS, wetland loss has accelerated by 140% since 2004. This may be partly due to a decrease in state and federal funding support for wetlands conservation in the past 12 years.
- Waterfowl are faring well overall, in part due to the North American Wetlands Conservation Act investing more than \$4 billion over the

past two decades in projects on 30 million acres of wetlands in North America. However, the report stresses that gains in waterfowl populations can only be sustained if wetlands conservation efforts can keep pace with wetlands losses.

- More than 350 migratory bird species rely upon habitats located within the three countries of North America, traveling great distances and utilizing many sites throughout the year. The report encourages all three countries to expand international conservation collaboration.
- The report encourages governments and conservation groups to replicate the conservation models used for North American wetlands and waterfowl for landbirds, seabirds, and shorebirds. A promising new funding source would annually dedicate \$1.3 billion of federal energy and minerals development revenue to the Wildlife Conservation Restoration Program.
- The report calls on corporations and citizens to step up efforts to reduce and mitigate deforestation, development, pollution, and climate change.
- The report highlights citizen science programs that gathered and shared observational data which played an important role in the assessment and contributed significantly to our understanding of the state of North America's birds.

Wildlife Garden Plant Profile

Lynn Hassler, Garden Volunteer Captain; photos by Lynn Hassler

MEXICAN SUNFLOWER (TREE SUNFLOWER)

Scientific name: *Tithonia fruticosa*

Family: Asteraceae (Composite)

Native range: Water courses/shaded canyons in Sonora, Chihuahua, Sinaloa, and Durango

Wildlife value: Blooms attract many insects, including butterflies; larval host plant for Bordered Patch; prolific seed producer for birds

Looking for a fast-growing shrub with beautiful blooms to attract birds and butterflies? Try Mexican sunflower, *Tithonia fruticosa*. Plants have upright velvety stems and sage green leaves, but it's the flashy flowers that catch our fancy. Large (2 3/4- 3 3/4") daisy-like flowers, rich yellow in color, grow profusely throughout the warm season on this tree-like shrub.

Although smashing while in bloom, the comely flowers are just a passing phase in the life of the plant. As the flowers dry up, the petals fall and round, golden-brown seed heads form. Each of these heads contains a bounty

of narrow brownish-black seeds. Like other members of the Asteraceae family, this plant is notable for producing abundant seeds—a real draw for many birds. When the seeds ripen, the feasting begins.

Mexican sunflower offers an additional bonus for the wildlife garden: it's a larval food plant for the Bordered Patch butterfly (*Chlosyne lacinia*). The caterpillars of this species are little eating machines that munch away on the stems and leaves as they move towards the next stage of their short lives. Other insects and adult butterflies visit the blooms as well, ferrying pollen from flower to flower. Learn how to landscape for butterflies at Lynn's class in October (see page 2)!

Be sure to give this dense shrub a wide berth when planting, because it can get as large as a small tree (earning its other moniker of "tree sunflower"), reaching a height of 9-12 feet with an equal spread. Mexican sunflower is a moderate water user and appreciates full sun and soil that drains well. Hardy to about 32 degrees, cold-damaged plants may be



Lynn Hassler

pruned at the end of winter. I prefer to cut back this shrub at least halfway every year or two, frost-damaged or not, in order to stimulate new growth; it regains height and width rapidly.

The genus name is after a figure in Greek mythology named Tithonus. A handsome Trojan, he became the lover of Eos, the goddess of dawn. Because Eos was so smitten with Tithonus, she asked the great god Zeus to grant lasting immortality to her lover. But alas, Tithonus continued to physically age as he lived on and on, becoming weak and frail. Because Eos could not bear to watch her lover deteriorate, she used her own magical powers to transform him into a cicada (other versions indicate a grasshopper, but either way not exactly the ideal outcome).

This series profiles plants that grow in the Tucson Audubon Wildlife Garden at University Boulevard and 5th Avenue.

Become a guardian of southeast Arizona's wealth of birds and nature
by joining the Tucson Audubon Society's

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Free advertising to our 2,500+ members, including your business logo and tagline:

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Your Business will also receive:

- A subscription to the *Vermilion Flycatcher* (and additional copies as needed)
- A complimentary copy of Tucson Audubon's *Finding Birds in Southeast Arizona*
- A copy of our logo to advertise your affiliation with Tucson Audubon
- A commemorative plaque for your showroom or offices
- Public recognition at annual events
- Reduced rates on classified and display advertisements in our weekly member email and our quarterly news magazine



Gilded Flicker, WP Lynn

Levels of Membership:

CONTRIBUTING	SUPPORTING	SUSTAINING	LEADING
<p>Minimum annual donation of \$500</p> <p>Contributing Members receive all benefits listed above</p>	<p>For businesses in the birding travel industry with a minimum annual donation of \$750</p> <p>In addition to benefits above, Supporting Members receive:</p> <ul style="list-style-type: none"> • free listings of two tours in each issue of the <i>Vermilion Flycatcher</i> and on Tucson Audubon's website 	<p>Minimum annual donation of \$1,000</p> <p>In addition to benefits above, Sustaining Members receive:</p> <ul style="list-style-type: none"> • a free 50-word listing of an event/promotion in each issue of the <i>Vermilion Flycatcher</i> • a free guided bird walk for up to 15 employees at an outdoor venue near your location. (Great for morale!) 	<p>Minimum annual donation of \$2500</p> <p>In addition to benefits above, Leading Members receive:</p> <ul style="list-style-type: none"> • two free 100-word listings of an event/promotion in each issue of the <i>Vermilion Flycatcher</i> • a free guided bird walk for up to 15 employees at an outdoor venue near your offices • promotion of your business at Tucson Audubon donor events

Alan Schimierer

WHY SUPPORT TUCSON AUDUBON?

Affiliate with a respected and established organization that serves our community through recreation, education, and conservation programs. We work in a collaborative way with a diverse cross-section of our community—individuals, organizations, and governments—focusing on what people can do to improve our environment.



Youth Nature Exploration, Andy Bennett

Show that you support a range of conservation issues, from sustainable development to enhancing the quality of life for people, birds, and other wildlife throughout southern Arizona.

Improve your company's standing with your employees by providing them with opportunities to volunteer, take part in education programs, and enjoy our recreation offerings.



Bird Population Surveys, Rodd Lancaster

For more information, visit us online at: tucsonaudubon.org/alliance



BIRDS BENEFIT BUSINESS *Alliance*

Tucson Audubon thanks our **Birds Benefit Business Alliance** Members, who have shown their support for bird conservation through annual contributions and in-kind donations. **Please show you appreciate their support for us by supporting them.** Visit tucsonaudubon.org/alliance for more info, including links to member websites.

LEADING

Carl Zeiss Sports Optics
Circle Z Ranch
Crown Community Development—Arizona
Farmers Investment Co (FICO)
Freeport-McMoRan Copper & Gold
GeoInnovation LLC
Riverpark Inn
Tucson Electric Power
Western National Parks Association

SUSTAINING

Celestron
Leica Sport Optics
Lori Pascarella, Merrill Lynch
Rockjumper BirdingTours
Swarovski Optik

SUPPORTING

Kimberlyn Drew, Realtor

CONTRIBUTING

Affinity Wealth Management
Arizona Birder Casitas
Chuparosa Inn
Desert Trails Bed & Breakfast
Diet of Hope Institute
Financial Architects
Hughes Federal Credit Union
Visit Tucson
Opticron USA
Originate Natural Building
Materials Showroom
Quailway Cottage
Santa Fe Ranch Foundation
Solipaso Tours
Sundance Press
Tucson/Lazydays KOA
Victor Emanuel Nature Tours
WINGS Birding Tours Worldwide

Thank you to our new **Birds Benefit Business Alliance** member!

CONTRIBUTING LEVEL

SANTA FE RANCH FOUNDATION



santaferanchfoundation.org

Here at the Santa Fe Ranch we inspire people and create opportunity in our community by providing hands-on experiences in nature via high quality outdoor education and agriculture programs.

The Paula and Cabot Sedgwick Family Foundation, dba The Santa Fe Ranch, is a 501(c)(3) dedicated to environmental conservation, preservation, education, and agriculture to promote healthy, active, conscious living in Santa Cruz County, Arizona. The Santa Fe Ranch consists of 3,300 acres of valleys, mesas, mountains and river bottom alongside approximately one mile of the Santa Cruz River.

BIRDING TRAVEL FROM OUR BUSINESS PARTNERS

ROCKJUMPER—WORLDWIDE BIRDING ADVENTURES

rockjumperbirding.com

ABA NEW ZEALAND—SUBANTARCTIC ISLAND CRUISE

Tour Dates: January 4–11, 2017

Tour Price: From \$3,870 to \$5,940

With the American Birding Association, cruise to three remarkable island groups, the ‘forgotten islands.’ You won’t find them mentioned in a travel agent’s brochure, or in most guidebooks, and they don’t even appear on some maps of the South Pacific. Despite their low profile, they are among the most remarkable wildlife reserves, designated UNESCO World Heritage sites and afforded the highest protection of any nature reserves in New Zealand.

BRAZIL’S ATLANTIC COASTAL FOREST II 2016

Tour Dates: November 13–20, 2016

Tour Price: \$2040

This tour captures the best of Brazil’s Atlantic Rainforest, and after a week of birding you can expect to have seen up to 250 bird species, including 70 endemics! Some of the avian gems that will be sought include Three-toed Jacamar, spectacular Swallow-tailed Cotinga, Saffron Toucanet, Plovercrest, Saw-billed Hermit, Black-billed Scythebill, Giant & White-bearded Antshrike, Blond-crested Woodpecker, Shrike-like and Black-and-gold Cotinga, and the beautiful Brazilian Tanager. Birds are confiding and photographic opportunities are excellent.

SOLIPASO TOURS solipaso.com

BAJA BIRDS AND WINE

Tour Dates: October 7–14, 2016

Tour Price: \$2850

Leader: David MacKay

This fun trip is a winning combination of birds, fine Mexican wines, gourmet food and the rugged beauty of northern Baja and the Valle de Guadalupe wine country! Birds of interest are Gray and California Thrasher, Clark’s Nutcracker and Black Oystercatcher. We visit the wine region, Ensenada, the valley of San Quintin, Bahia de San Quintin and San Pedro Martir.



Yucatan Jay, Kyia

YUCATAN

Tour Dates: January 12–23, 2017

Tour Price: \$3950

Leader: David MacKay

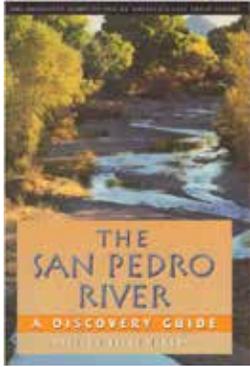
Our itinerary takes us to many different habitats to see most of the regional endemics, visit archeological ruins and biosphere reserves, and explore Mayan culture and regional cuisine. Bird highlights include the Cozumel endemics, Yucatan Flycatcher, Vireo, Woodpecker, Bobwhite, Jay, White-bellied Wren, Orange Oriole, Ruddy Crane, Rose-throated Tanager, Mexican Sheartail and Gray-throated Chat. Starts in Cozumel and ends in Merida.

TUCSON AUDUBON NATURE SHOPS

Tucson Audubon's Nature Shops provide for your needs in natural history books and guides, birding optics and accessories, and gifts right here in Tucson. We offer a great selection, the best prices, and member discounts. Remember to shop locally.

The San Pedro River: A Discovery Guide

by Roseann Beggy Hanson, \$17.95



Any weary traveler embarking on a long journey hopes to find rest along their way: a café for a bite to eat, a quaint hostel to rest their eyes, maybe a meadow to sit in while thoughts float away with the breeze. For migrating birds, this need is no different. In Arizona, the place for birds to rest is the San Pedro River, a migratory bird's paradise tucked away in the mountainous region of southeast Arizona. This cottonwood-willow-shaded corridor offers a critical stopover habitat for millions of migratory birds, providing shelter, food, and a much-needed water source. Close to 350 species of birds call the San Pedro River home at some point in their life cycle, even if it is only as they pass through. One of two major rivers

flowing north from Mexico to the US, the San Pedro also provides home and resting space to a wide variety of mammals, reptiles, amphibians, and fish.

Local author and lover of the San Pedro Roseann Beggy Hanson wants you to be one of those travelers seeking an experience along one of the most significant migratory flyaway remaining in the region. In her book *The San Pedro River: A Discovery Guide*, Hanson celebrates the San Pedro and guides those new to the region on where to go, what to do, and what you'll see. With detailed maps, annotated species lists, and invaluable references to camp sites, lodging, parking, and more, this guide is all you need to explore the riparian area you will soon fall in love with.

Available now at the Tucson Audubon Nature Shop!

Also available: **River of Life: Four Seasons Along Arizona's Rio San Pedro** by R.J. Luce, \$41.50

Celebrate the San Pedro River from your home through this photo essay book depicting the river throughout the seasons of the year.

TUCSON AUDUBON NATURE SHOPS

When you support your local Tucson Audubon Society you are supporting birds and bird habitat conservation.

Thank you!

SHOP HOURS

MAIN SHOP

Monday–Saturday, 10 AM–4 PM
520-629-0510 ext. 7015
300 E University Blvd #120, Tucson 85705
(corner of University & 5th Ave.)

AGUA CALIENTE PARK SHOP

May–Sept., Thursdays only, 9AM–1:30PM
520-760-7881
12325 E Roger Road, Tucson 85749

**Please call to confirm hours. The shop opens earlier and closes later during certain months. Nature Shop space generously provided by Pima County Natural Resources, Parks & Recreation*

When you need a book, think of Tucson Audubon's Nature Shops first! Support your local book store.

Great Optics for Youth

Having the right equipment can make or break a birding experience. When young adults show an interest in birding, we want them equipped with what they need to nurture their passion without breaking the bank. Tucson Audubon Nature Shop recommends the Celestron Nature DX, which is available in both 8x32 and 8x42 configurations, to gear up young adults to enjoy birds and their habitats. The Nature DX series is light weight, affordable, ergonomic for smaller hands, and offers great light gathering.



Nature DX 8x32

MSRP \$110.00, Member Price \$99.00

Nature DX 8x42

MSRP \$132.22, Member Price \$119.00

Summer Gear You NEED

Tucson Audubon Nature Shop is proud to carry Sunday Afternoon Hats! We've all been sunburned and agree that it's no fun; your souvenir from an outside adventure shouldn't include blisters. Here at the Tucson Audubon Nature Shop, we've got you covered. Come in and browse our wide selection of Sunday Afternoons Sun Hats to stay in the shade wherever you go. Every product created at Sunday Afternoons is designed with sun protection and comfort in mind. They all carry a minimum sun protective rating of UPF 40+. These hats are a fantastic way to stay shaded and look great!

\$22.00–\$39.00



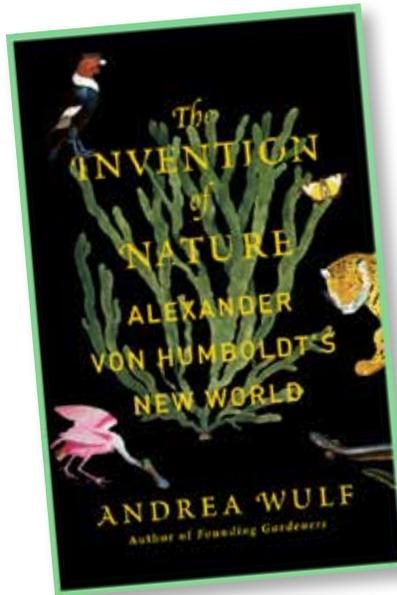
An Unforgettable—and Forgotten—Explorer

A review by Rick Wright

At the name Humboldt, birders may think of the penguin, travelers of the ocean current, academics of the great university in Berlin. But to most Americans of the twenty-first century, the man who gave his name to these and so many other animals, phenomena, and institutions means nothing. It wasn't always that way. As Andrea Wulf reminds us in her splendidly written new biography, Alexander von Humboldt (1769-1859) was a global superstar for most of his long life, linked by friendship and collegial respect to scientists, politicians, writers, and thinkers on both sides of the Atlantic. The centennial of his birth in 1869 was celebrated by tens of thousands in all of the major cities of the United States. President Grant attended the commemoration in Pittsburgh, while New Yorkers gathered 25,000 strong to see a bust of Humboldt unveiled in Central Park. Recalling the celebrations in Boston, which featured addresses by Agassiz and Emerson, R.C. Waterston would write that “seldom has there been an occasion in the history of New England, which has brought together so brilliant an assemblage of able scholars and prominent men.”

Wulf, in prose as clear as it is captivating, seeks to restore some of that lost luster to Humboldt's reputation. In the course of that effort, she produces an adventure story that would be unbelievable if it weren't true. In their five years exploring South America, Humboldt, his botanist colleague Aimé Bonpland, and a shifting cast of assistants and companions hiked—and crawled—to altitudes never before attained by humans. They dined on “smoked ants crushed up in cassava flour” and survived encounters with jaguars, poison arrows, and electric eels. All the while, Humboldt and his colleagues were collecting plants and animals, taking measurements, making notes and sketches, and observing phenomena from erosion to eruptions. These data and observations provided Humboldt with the raw material for an astounding number of publications—and, Wulf claims, for a new organicist view of nature as a web of subtle but inextricable connections.

That thesis, stated clearly on the book's title page, is not implausible. Wulf tends to defend it more by assertion than by argument, however, adducing only the occasional phrase from Humboldt's writings in support. The decision not to offer more extensive or cogent quotations from the primary sources was probably the right one in a book intended for a more popular audience. Happily, the notes provide citations to the material that is quoted, and the curious (or the skeptical) will find many of Humboldt's works available online (visit, for example, biodiversitylibrary.org/creator/529).



One of the most impressive revelations in *Invention of Nature* is the range and number of Humboldt's famous contemporaries with whom he was well acquainted. In Jena and Weimar, he consorted with the greatest thinkers in Germany. Schiller, it seems, was not all that fond of Humboldt, but Goethe and the young scientist struck up an absorbing and abiding friendship, reflected in the works of both about the development and relationships of nature. In an especially informative two pages, Wulf describes the influence of Schelling's philosophy of nature on Humboldt, ideas that helped him break free from the idea of a static, mechanistic cosmos to instead appreciate the dynamism and organic unity of the world.

In an age when intellectuals ranged more broadly than they do today, Humboldt also knew many of the great politicians of his time.

Napoleon, Wulf tells us, virtually despised him—though Humboldt's *Cosmos* is said to have been the emperor's final reading selection before Waterloo. By contrast, Humboldt found a kindred spirit in Thomas Jefferson, a polymath whose views of nature and man's place in it resembled his own; the two parted ways only on the question of slavery, an institution that Humboldt found absolutely immoral. But the greatest eye-opener Wulf offers is her account of the personal and philosophical relationship between Humboldt and Simón Bolívar, the liberator of South America. The two met in Paris on Humboldt's return from the New World in 1804; Bolívar's love of his homeland and yearning for its freedom were deepened, says Wulf, by Humboldt's evocative descriptions. Bolívar's rejection of slavery may also have been inspired in part by Humboldt.

Wulf devotes the last half of her book to Humboldt's influence on younger thinkers, including Darwin, Thoreau, George Perkins Marsh, Haeckel, and Muir. Even today, she argues, environmentalists and naturalists are steeped in ideas formulated by Humboldt two centuries ago, chief among them the notion of a living system encompassing nature and humanity alike. “Maybe now,” she writes, “is the moment... to reclaim Alexander von Humboldt as our hero.” Readers of this fine book are sure to agree. ■

Rick Wright leads birding and birds and art tours for Victor Emanuel Nature Tours. Among his recent publications is the American Birding Association Guide to Birds of Arizona.

The Invention of Nature: Alexander von Humboldt's New World
 Andrea Wulf
 Knopf, 2015
 496 pages, \$30—hardcover



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Vermilion Flycatcher

Volume 61, Number 3, July–September 2016

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The *Vermilion Flycatcher* is the newsletter of the Tucson Audubon Society, a chapter of the National Audubon Society. National Audubon Society members and members of other chapters may receive the *Flycatcher* by joining the Friends of Tucson Audubon. See membership at tucsonaudubon.org.



**Come
Birding
With Us!**



Southeast Arizona BIRDING FESTIVAL

August 11–14, 2016
Tucson, Arizona

FOR DETAILS AND REGISTRATION, VISIT
TUCSONAUDUBON.ORG/FESTIVAL
(Formerly the Tucson Bird & Wildlife Festival)



Extend Your Birding Fun Around the Festival!

Solipaso Tours and Borderland Tours are offering pre- and post-Festival field trips to locations in Arizona and Mexico. Spaces are still available, sign up now at tucsonaudubon.org/festextensions and see even more birds this August.

SOLIPASO PRE TRIP August 7–10

Madera: A short trip for Sierra Madre endemics

SOLIPASO POST TRIP August 15–22

Northwest Mexico: Madera, Basaseachic Falls & Yecora

BORDERLAND TOURS PRE TRIP August 7–9

Bird Communities of the Chiricahuas/Sky Islands

BORDERLAND TOURS POST TRIP August 15–19

Alpine Arizona: White Mountains

