

Vermilion

FLYCATCHER

October–December 2016 | Volume 61, Number 4



State of the Birds

Local Context within
the Larger Picture

The Many and Varied Threats
to Birds: An Update

Join a Christmas Bird Count



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

300 E. University Blvd. #120, Tucson, AZ 85705
520-629-0510 (voice) or 520-623-3476 (fax)
TUCSONAUDUBON.ORG

Board Officers & Directors

President—Les Corey Secretary—Claire Zucker
Vice President—Bob Hernbrode Treasurer—John Kennedy

Directors at Large

Matt Bailey, Ardeh Barnhart, Gavin Bieber, Richard Carlson, Edward Curley, Kimberlyn Drew, Dave Dunford, Debra Finch, Jesus Garcia, Laurens Halsey, Kathy Jacobs, Ruth Russell, Deb Vath, Mary Walker, Nancy Young Wright

Board Committees

Conservation Chair—Chris McVie
Finance—John Kennedy
Personnel—Debra Finch
Nominating & Governance—Dave Dunford
Resource Development Committee—Kimberlyn Drew

Programs & Activities

Field Trips—Luke Safford 520-209-1811
Library, Membership Meetings 520-629-0510 ext 0
Rare Bird Alert—Andrew Core | Report Rare Birds 520-629-0510 ext 3

Staff (unless otherwise stated, dial 629-0510 plus extension)

Executive Director—Karen Fogas ext 7001
Engagement Director—Jan Holder ext 7018
Resource Development Director—Keith Ashley ext 7009
Accountant—Juliette Connolly ext 7003
Finance Director—Mark Krietemeyer ext 7014
Membership & Development—Diana Rosenblum ext 7002
Volunteer Coordinator—Luke Safford ext 7011
Strategic Events Coordinator—Helen Kim ext 7012
Bird Conservation Biologist—Jennie MacFarland ext 7004
Bringing Birds Home Program Manager—Kendall Kroesen ext 7006
Conservation Director—Jonathan Horst 520-971-6238
Field Crew Supervisor—Rodd Lancaster 520-256-6909
Restoration Project Manager—Andy Bennett 520-262-1314
Field Crew—Dan Lehman
Digital Media & Bird Conservation—Matthew Griffiths 520-971-7924
Conservation Analyst—Matt Clark 520-307-0956
Marketing & Operations Director —Sara Pike ext 7008
Retail Coordinator—Debbie Honan ext 7007
Operations & Retail Assistant—Kimberly Matsushino ext 7017
Paton Center Coordinator—Open 520-394-2340

Tucson Audubon Nature Shops

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.

Coordinator—Matt Griffiths 520-971-7924

Proofreaders—Tucson Audubon staff and volunteers

Design / Layout—Melina Lew

© 2016 Tucson Audubon Society

CCL in photo credits = creativecommons.org/licenses/by/2.0

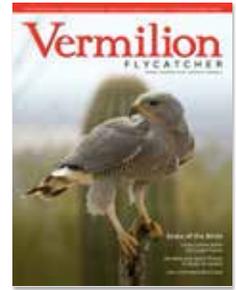
All photos © the photographer.

FEATURES

- 8 Restoration: A Bird's Eye View
- 11 Sky Island Cuckoos — Two years of Surveying on the Coronado National Forest
- 12 State of the Birds: Local Context Within the Larger Picture
- 14 The Many and Varied Threats to Birds: An Update
- 16 Sturnella Meadowlarks and Aphelocoma Jays
- 17 Birding Mexico's Mayaland
- 18 Come One Come All — Let's Do Some Christmas Bird Counts!

DEPARTMENTS

- 2 Events and Classes
- 5 Field Trips
- 7 Events Calendar
- 9 News Roundup
- 19 Conservation and Education News
- 21 Wildlife Garden Plant Profile
- 23 Birds & Business Alliance
- 24 Birding Travel from Our Business Partners
- 25 Holiday Catalog
- 29 Book Review



FRONT COVER:
Gray Hawk by Robert Withey. Robert is a retired religious education teacher living in South Yorkshire, England, who specializes in creative nature and wildlife photography. flickr.com/photos/92655181@NO7

Gray Hawk has been experiencing a range expansion in southeast Arizona and is not on the State of North American Birds 2016 Watch List.

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



The State of Arizona's Birds

Carol Beardmore, Science Coordinator,
Sonoran Joint Venture, U.S. FWS

The North American Bird Conservation Initiative (NABCI) is calling attention to the need for urgent conservation action for one-third (432) of North America's bird species at risk of extinction. ***The State of North America's Birds 2016 is the first conservation vulnerability assessment of all 1,154 native bird species in Canada, Mexico, and the continental United States (stateofthebirds.org).*** This is the result of a unique collaborative effort of scientists, other partners, and tens of thousands of citizen scientists in the three countries. The report is intended to be a call to action and a hand-off to organizations and agencies to take this information about priority birds and work on their conservation.

What does this mean for Arizona? Many species in our Grassland (27%) and Aridland (28%) habitats are steeply declining. Fifty-six percent of the species in Pine-Oak are at risk of extinction. Some species at Risk in Arizona and northwestern Mexico include:

Aridlands (desertscrub and thornscrub birds): Elegant Quail, Lilac-crowned Parrot, Bendire's Thrasher, Le Conte's Thrasher, Gilded Flicker, wintering Gray Vireo, Black-capped Vireo, Lucifer's Hummingbird, Black-capped Gnatcatcher, Black-chinned and Five-striped Sparrows, and Lawrence's Goldfinch.

Grasslands: McCown's Longspur, Chestnut-collared Longspur, Mountain Plover, Rufous-winged Sparrow, Sprague's Pipit, Bobolink, and Baird's Sparrow.

Western Temperate Forests: Arizona Woodpecker, Band-tailed Pigeon, Elegant Trogon, Flammulated Owl, Thick-billed Parrot, Mexican Whip-poor-will, Pinyon Jay, Mexican Chickadee, Rufous Hummingbird, Spotted Owl, Virginia's Warbler, and Whiskered Screech-Owl.

Despite the challenges that North American birds face, the report also notes that much progress has been made to conserve wetland and waterfowl habitats and the bird species that use these ecosystems. This is thanks to highly successful and long-term programs, such as the Duck Stamp and North American Waterfowl Management Plan. The Report authors urge continued investment in these and other programs that conserve vital bird habitats.



Let's Make America Birdy Again

Karen Fogas, Executive Director

It's hard to ignore that we are days away from choosing a president after what feels like the craziest lead-up to an election ever. Having watched as much of the antics as I can take, I have a better suggestion: Let's Make America Birdy Again.

Here's the platform. Let's get excited about birds because birds are good for people. At an individual level, birds create enjoyment and pleasure; they make us happy. They provide our most ready access to wildlife and nature, often right outside our front doors. Optimally, watching these intriguing creatures leads us to follow them outside into their own environments, which is even better for our health and wellbeing. As the original "Pokemon Go" (the new fad of finding imaginary characters in unexpected places), birding offers an incredible array of real creatures that keep us challenged, learning, and engaged as we seek the next new and exciting sighting.

At a macro level, we know that the things necessary for birds to thrive are the same things that cause us to thrive: clean and

plentiful water, natural spaces, and a healthy environment that supports the rich biodiversity essential to keeping delicate ecosystems in balance. Ensuring these values are respected for birds enables our own wellbeing and has the added benefit of ensuring security for future generations.



Birds also boost our economy, especially in southeast Arizona, where the rich diversity of species draws people from around the world to see and enjoy the birds of our region. Check out any list touting the attributes of southeast Arizona and you will see birding as one of the area's prime features.

Now to campaign specifics: Let's **ACT** to make America birdy again. **Plant a native plant** as a start in creating a garden that attracts and supports birds. We'll help you get started

when you sign up for Tucson Audubon's Habitat at Home program, which is all about creating a beautiful yard environment using native species. **Encourage your neighbors** to do the same. Together we can create a welcoming island of habitat where birds can find food, shelter and water. **Take a kid out for a morning** and introduce him or her to the ultimate "Pokemon Go" game, which requires no screen or power source but instead opens a world of lifelong discovery. We'll connect you with easy, accessible field trips for all skill levels. **Shop at businesses** that support birds and bird habitat, starting with Tucson Audubon's Birds Benefit Business Alliance members. **Tell all your friends** how easy it is to **become a member** of Tucson Audubon to support conservation, education, recreation, and restoration activities that protect both people and birds. Finally, **let's tell our leaders** that birds and birding matter in our lives and to vote accordingly.

Let's Make America Birdy Again... now that's a campaign I can get behind. 🇺🇸



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 3, 2017



Broad-billed Hummingbird, Joan Gellatly

TUCSON AUDUBON EVENTS AND CLASSES

UPCOMING CLASSES

ORNITHOLOGY 101

October 29, November 5 & 19

Green Valley Recreation's Desert Hills Social Center

Cost: \$250 (101 & 102) members, \$285 non-members

Do you sometimes wonder why some related species look so similar to each other, and some don't? Why scientists decide two species are really one species, or one species really two? Do you see different styles of bird behavior and wonder where those came from, and whether birds really evolved from dinosaurs and how long ago? Do you wonder about bird communication, navigation, reproduction? And do you wonder what will be the future of birds and birding? This class will make you a savvier birder and enhance your appreciation of birds while you are out there. Ornithology 101 and 102 are taught by Carol Vleck, Professor Emeritus of Ornithology at Iowa State University, now residing in the Tucson area.

ORNITHOLOGY 102

February, 2017

Tucson – location TBD

BACKYARD BIRDING AND BEYOND

Saturdays, February 4, 11, 18, 25; March 11, 2017 (no class March 4)

Classroom: 10:00 a.m.–12:00 p.m.; Field trip times TBD

Cost: \$150 members, \$185 non-members

Learn why southeastern Arizona is such a great place for birds and why bird watching is so much fun! Taught by Lynn Hassler, this course is designed for beginners and will address how to separate birds by habitat, seasonal occurrence, and behavior. Learn about field marks and vocalizations and get the lowdown on binoculars and field guides, birding vocabulary, and etiquette in the field. Participants will also learn how to identify local birds and discover some of their interesting characteristics and charms. Course includes two 2-hour classroom sessions and three field trips.

BIRDING BY HABITAT

Field trips: Saturday, April 8, 2017 – Catalina State Park, 7:00–11:00 a.m.

Saturday, April 15, 2017 – San Pedro River, 7:00 a.m.–3:00 p.m.

Saturday, April 22, 2017 – Mt. Lemmon, 7:00 a.m.–3:00 p.m.

Cost: \$175 members, \$210 non-members, Maximum 12

Southeastern Arizona offers such excellent birding opportunities in part because of its variety of habitats. Experience the fun of birding in three different natural environments—Sonoran desert, riparian, and sky island—with Lynn Hassler, long-time birder, educator, and noted author.



American Kestrels, David Kreidler



Pygmy Nuthatch, Bryan Smith



Pygmy Nuthatch habitat on Mt. Lemmon, Katie Moore

You're Invited to the Holiday Potluck!

MONDAY, DECEMBER 12TH AT 6 PM

**St. Philip's in the Hills Episcopal Church,
Murphey Gallery East Room**

Each year, the holiday potluck celebrates our members and all you do for Tucson Audubon. It's a great time to meet fellow nature enthusiasts, catch up with old friends, and learn something new from our guest speaker. This year join Executive Director Karen Fogas, for a Sneak Peek Announcement of what's to come in 2017.

Whether this is your first or fifteenth holiday potluck, we hope you will join the fun. Visit tucsonaudubon.org/calendar to RSVP online, or call 520-629-0510 x7002 so Diana can take your details. When you RSVP, please indicate whether you will be bringing a salad, appetizer, main dish (vegan, vegetarian, or meat), dessert, or punch. Please bring your own plates, cups, cutlery, and serving utensils. Simple recipe cards are also appreciated by those with dietary restrictions. This is sure to be a wonderful event and we look forward to seeing you there!



SATURDAY, NOVEMBER 12

Join Tucson Audubon and Paul Bannick

**WALKING FOR WOODPECKERS
& HUNTING OWL HABITAT**

7:30–10:00 am, Madera Canyon

- Paul Bannick, Karen Fogas, and Jennie MacFarland lead this exciting bird walk
- \$45/members, \$60/non-members; includes picnic breakfast
- Limit 15 participants

ONE YEAR, MANY OWLS

11:30 am–1:00 pm, Green Valley, Desert Hills Auditorium

- Join us for a lunchtime presentation by Paul Bannick
- Special focus on Arizona owls; Book signing opportunity
- \$20 min. donation/members, \$30 min. donation/non-members; includes catered, boxed lunch

**CAPTURING THE BEST OF BIRDS
WITH YOUR CAMERA**

2:30–4:30 pm, Tucson, Pima College, Northwest Campus

- How to master bird photography at the lowest cost using a digital camera
- Paul Bannick will discuss how to find and get close to birds as well as technical aspects of camera use
- No camera required for workshop. Great for beginning and advanced photographers!
- Book signing opportunity
- \$20/members, \$30/non-members

EXCLUSIVE EVENT, AN EVENING OF OWLS

**5:00–8:30pm, Tucson, home of Karen Fogas,
Executive Director**

- Paul Bannick presents on the making of *Owl*, eight years in the field
- Cocktail reception and catered dinner welcoming Paul Bannick to the Tucson Audubon family
- By invitation only

For more information and to RSVP, visit:

tucsonaudubon.org/bannick or call 520-209-1812

PAUL BANNICK

TOTALLY OWL-RAGEOUS!



Paul Bannick, master bird photographer, author, and conservationist, launches his latest book right here in southeast Arizona. Eight years in the making, *Owl: A Year in the Lives of North American Owls* is an astonishing visual delight, filled with fascinating details about these secretive birds, their behaviors, adaptations, and the habitats that support them.

TUCSON MEET YOUR BIRDS

SATURDAY, OCTOBER 22, 2016 7 AM-1 PM

COME AND MEET YOUR BIRDS at Sweetwater Wetlands where 303 Bird Species have been seen!

2617 W Sweetwater Dr, Tucson, Arizona 85705

We'll make it easy for you! Stroll 20 acres of tree-lined paths and ponds with experts pointing out the birds for you. How many people can we get out to the wetlands this day? Come find out and learn what Tucson Audubon can do for you and the birds!

tucsonaudubon.org/TucsonMeetYourBirds

#TucsonMeetYourBirds #SweetwaterWetlands

Presented by



Win FREE Swarovski binoculars!*



- **No binoculars needed to participate!**
- Birding experts with binoculars and scopes on hand to show you wild birds!
- Kids and family birding activities
- Live hawks and owls on display
- Native plant sale, food trucks including Purple Tree Acai, Big Bad Wolf and Pin-Up Pastries, and partner vendors including REI and The Herpetological Society

Make it more fun!

- Bring a child, friend or neighbor who's new to birding
- Bring a birder who has just moved to Tucson
- Bring someone who has never been to Sweetwater Wetlands
- Bring someone who does not know about Tucson Audubon

*All new members who join at this event (and current members who recruit) will be entered to win a pair of Swarovski binoculars!



Great Egret, David Quanrud; Young birder, Mary Zalokar; Ducks, Lois Manowitz; Young Birders walk, Chrissy Kondrat-Smith; Red-winged Blackbird, David Quanrud; Left: Common Yellowthroat, David Quanrud

TUCSON AUDUBON FIELD TRIPS PUSH NEW BOUNDARIES

Luke Safford, Field Trip Coordinator

We have found a wide demand for birding trips in southeast Arizona in the fall, winter and spring. People want new birding experiences as well as the old favorites. The trips fill fast and, like a roller coaster, when one trip ends many people are ready to go again!



Sabino Canyon, Chris Dodson

This fall, some of the trips will have no limit to the number of people signing up—so go for it! And to level the playing field for the trips with limited enrollment, we will post a date and time for when registration will open for each trip. That way, if you only check the field trip list once a week, you will still have the same chance of registering as those who check more frequently.

To acknowledge Tucson Audubon members, periodically we will give registration priority to members on select trips. Membership is critically important to Tucson Audubon and is a small price to pay for fantastic field trips and all the other benefits that come with membership. That being said, most of our field trips will remain open to the general public in acknowledgement of the key role that field trips play in educating the public about the value of open space, habitat, and wildlife.

If you have questions about a field trip, please contact the leader of that trip. If you have questions about the field trip program as a whole, or have difficulty signing up for a trip, please contact Field Trip Coordinator Luke Safford at lsafford@tucsonaudubon.org or 520-209-1811.

FALL FIELD TRIP HIGHLIGHTS

(To see many more trips, visit tucsonaudubon.org/fieldtrips.)

Saturday October 1, 8 a.m., Sabino Canyon—These monthly trips in the canyon occur on the first Saturday of each month through April.

Tuesday October 18, 9 a.m., Birding at the Tucson Botanical Gardens—The Gardens make great models for your own backyard habitat. See the birds and learn about the plants that bring them here! (This trip is also offered the third Tuesday in November.)

Tuesday November 15, 10:30 a.m., Reid Park Ramble—John Higgins' famous easy stroll through the park is great for beginners.

Friday November 25, 7:30 a.m., Black Friday Birding—Cliff Cathers revisits this classic trip: while others shop till they drop, you go birding!

Wednesday December 7, 9 a.m., Kennedy Park Big Sit—Great for beginners and mobility-challenged people. Let the birds come to you!

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



Sam Lena Park & KERF walk, Kendall Kroesen

SAVE THE DATE
Tucson Audubon Society's 9th Annual GALA

FLY! An Avian and Arts Celebration featuring Tucson's finest artists and performers

David Fitzsimmons, Master of Ceremonies
Saturday, October 14, 2017 / Kiva Ballroom, Loews Ventana Canyon

Mexican Birds & Culture Beckon

Special birding field trip to southern Sonora

This extraordinary trip is timed to experience the Ash Wednesday ceremonies of the Mayo and Yaqui Indians in the Mayo village of Júpáre, near Navajoa. Witnessing these customs will take us back to rituals of the 17th century. While we are here in this coastal area, birding mangrove estuaries is a must. After visiting private collections of Yaqui and Mayo folk art, the tour will ascend the Sierra Madre, arriving in the historic and architecturally charming town of Alamos. Here we will spend time birding the tropical deciduous forest and immerse ourselves in rich Mexican culture.

In addition to birding opportunities and ancient rituals, this seven-day trip provides gourmet adventures, musical performances, visits with expats, hacienda tours, and much more. Top leaders include Jesús Garcia on culture and Lynn Hassler on birds, joined by host Stephen Bernier of South of the Border Tours and Alamos resident Stephanie Meyer.

The trip begins in Tucson and we travel via comfortable motor coach, leaving March 2, 2017 and returning March 8. Cost for the trip (all-inclusive) is \$2150 for Tucson Audubon members; \$2200 for non-members. Single supplement is \$500.

See tucsonaudubon.org/alamos for a complete itinerary of this unique and rich experience and to sign up.



Stephen Bernier

Living With Nature Monthly Program

Join us for another season of our free programs that seek to educate and entertain! Experts in their fields present on a variety of topics related to bird biology and ecology; global and regional birding hot spots; and conservation issues that affect birds, other wildlife and their habitats. We have three program locations: Tucson, Green Valley and Oro Valley. Go to tucsonaudubon.org/lwn for updated talk details and speaker bios.

TUCSON

Mondays at 6:00 pm October through May
Held in the Amethyst Room, Pima Community College Downtown, 1255 N. Stone Ave.

October 24

Thinking Beyond Borders: “Our” Birds and Where They Come From with *John Yerger*
Arizona is famous for its great variety of birds. We often speak fondly of “our” birds or talk about how many great birds “we have” in Arizona. In truth, many of the species that make up Arizona’s avifauna are only part-time residents. Even a year-round native like our official state bird, the Cactus Wren, occupies a range that is primarily outside the state’s boundaries. Join this virtual journey throughout the hemisphere as we explore the many places “our” birds live beyond our borders.



Purple Finch, Jim Burns

November 14

Polyglottal Passerines — Mimicry Is Not Just For Mockingbirds with *Rich Hoyer*
While birding at Oregon’s Finley National Wildlife Refuge in his teens, Rich Hoyer heard the most amazing thing—a Purple Finch incorporating sounds of a California Scrub-Jay in its jumbled song—and thought he had discovered something new, since such behavior wasn’t mentioned in any field guide. Since then he’s been fascinated and intrigued by mimicry in birds, collecting personal observations and recordings of the phenomenon. In this audio-visual presentation, Rich Hoyer will present examples of mimicry in songbirds throughout the Americas and share his enthusiasm for this curious and often entertaining behavior.

GREEN VALLEY

Saturdays at 10:00 am from November through April
Held at Desert Hills Social Center, 2980 S. Camino Del Sol

November 5

Hummingbirds: Flying Jewels of Arizona

with *Karen Krebs*

Conservation Biologist Karen Krebs will entertain you with hummingbird facts and fun! Karen has been studying hummingbirds for 30 years and will share her knowledge on hummingbird identification, entertaining behavior, nesting biology, and ways to attract these tiny jewels to your garden and home. Arizona is home to an exciting diversity of hummingbird species and these small energetic pollinators will make you smile and laugh!

December 3

The Nature of Change: Bluebirds, Fire, and Forest Succession

with *Renee Duckworth*

A major challenge to understanding how diversity is maintained in avian communities is linking behavior of individuals to interactions among species. In this talk, Renee will show how successional replacement of bluebird species emerges as an indirect consequence of nest cavity competition. Mothers transmit information about the competitive environment to their offspring by altering hormones in their eggs and produce a feedback loop between mother’s experience, offspring behavior and community change.

ORO VALLEY

Saturdays at 12:00 pm
Held at Western National Parks Association, 12880 N. Vistoso Village Dr.

January 21

Recent Seasonal Distribution and Status Arizona Birds

with *Troy Corman*

Topics will include recent range shifts of certain species of birds, shifts in timing of migration, timing of nesting, and species which now winter regularly that were historically rare during the winter in Arizona.

COWBOY BIRDING AT THE CIRCLE Z GUEST RANCH

**SUNDAY–THURSDAY, FEBRUARY 12–16, 2017
OR SUNDAY–THURSDAY, MAY 7–11, 2017**



Join us for four starry nights and three exciting days as we explore one of the best kept secrets in Arizona birding!

The historic **Circle Z Guest Ranch** near Patagonia is situated on 6,500 wooded acres at 4,000 feet elevation and has entertained guests since 1926—the oldest continuously operating dude ranch in Arizona.

We will visit grasslands and oak-covered foothills as well as the riparian forest along the ever-flowing Sonoita Creek for birds, plants, and other wildlife.

Three bountiful, home-cooked meals per day are included. One horseback ride (optional) is included in addition to an offsite cook out, a morning nature walk and evening astronomy program with naturalist Vince Pinto, and an evening campfire with a cowboy singer. A heated pool and tennis courts are also available. There will be ample time to relax and enjoy the halcyon environment.

Leaders are:

- Lynn Hassler, author and naturalist
- Keith Ashley, birder and Tucson Audubon's Resource Development Director

Trip Includes: 4 Nights lodging; 3 meals per day; guided tours on and off ranch (including winery!)

Not included: Transportation to and from Circle Z Ranch; personal expenses; alcoholic drinks

Space is limited. Don't miss this unique opportunity!

Members: \$1,595

Non-members \$1,630 (membership included!)

To learn more about this trip, please contact Keith Ashley at 520-209-1809 or kashley@tucsonaudubon.org



Ranch images courtesy of Circle Z; Summer Tanager, Lois Manowitz; Gray Hawk- Collins Cochran

EVENTS CALENDAR

October 7–9: Booth at Tucson Meet Yourself

October 8: Habitat at Home Workshop

October 8: Gardening to Attract Butterflies Workshop

October 18: OktoBIRDfest

October 22: Tucson Meet Your Birds

October 24: Living With Nature (Tucson)

October 29: Ornithology 101

November 5: Living With Nature (Green Valley)

November 12: A Day with Paul Bannick

November 14: Living With Nature (Tucson)

November 15: Birding in Tucson 101 (REI)

December 2: Volunteer Shindig

December 3: Living With Nature (Green Valley)

December 12: Holiday Potluck

January 7, 2017: Living With Nature (Green Valley)

Restoration: A Bird's Eye View

Nick Beauregard

One of Tucson Audubon's biggest ongoing projects at the Paton Center has been the transformation of an old horse pasture into what is now the Richard Grand Memorial Meadow. This area had been overgrown with invasive weeds and offered very little habitat for birds and wildlife. Over the past two years, our restoration crew and enthusiastic volunteers have been hard at work removing invasive plants and replacing them with native ones. We've also installed one of the area's largest Monarch Butterfly waystations and created a small pond that will soon support native fish.



John Hoffman's quad-copter drone flying above Paton Center.

On the ground, it's easy to see the success of this project: dozens of wild-flower species bloom throughout the summer, birds flock to the plants and pond alike, and visitors sit comfortably in the shade

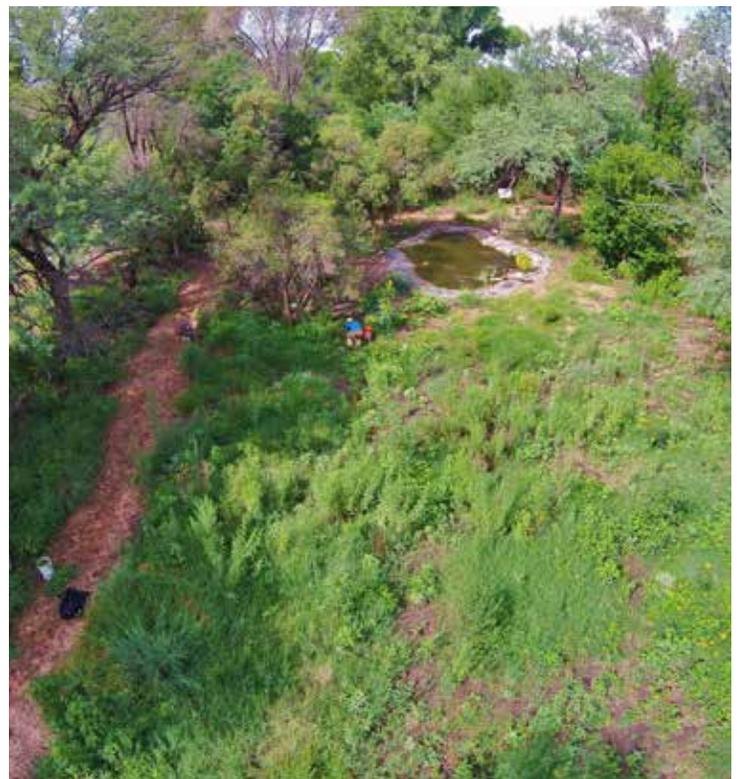
to watch the feeders placed throughout the area. But since we're an organization made up of bird-geeks, we were curious what it all looks like from a bird's perspective. Luckily, local volunteer John Hoffman was eager to offer use of his drone and we were able to capture before and after photos that show just how much of a difference two years of restoration efforts can make. 📸



Before: The pasture ground, mostly barren, prior to restoration work.



The Meadow lush with monsoon growth, Nick Beauregard



After: Tucson Audubon staff and volunteers regularly tend to the Meadow with weeding and additional plantings.

Sixth Annual Southeast Arizona Birding Festival Roundup

We wanted to send a special thank you to all the volunteers who dedicated your time and effort in making this year's Festival such a success. We could not have done it without you!

Together we: prepped and planned field trips, hotel and event accommodations, welcome packets, meals for field trip attendees and volunteers, outreach tables, vendor area setup, registration area, and more; welcomed about 300 attendees to the workshops, field trips, social hours, evening dinners, and vendor area; led 36 sold out field trips that found 201 total bird species; conducted over \$17,000 in sales at the on-site shop; and introduced attendees to our local and regional conservation efforts.

VOLUNTEERS

Jacob Acosta
Matt Bailey
Sharon Bale
Peter Bengtson
Chris Bittle
Jerry Brown
Eileen Buckel
Mike Byers
Barbara Cain
Yolanda Capriles
Laura Diaz
Joseph Eigner
Sandy Elers
Linda Elling
Constance Elson
Cynthia Elton
Dorothy Finch
Francie Galbraith
James Gessaman
Jim Hefner
Kathleen Heitzmann
Chris Honan
Barbara Johnson
Callie Jordan
Lynda Klasky
Kathy Kuyper
Lia Lavallee
Craig Marken
Lisa Marshall
Sherry Massie
Linda Matson
Harriet Meador
Shari Montgomery
John Munier
Marcia O'Bara
Kathy Olmstead
Susan Pearson
Lorel Picciurro
Jenise Porter
Cynthia Pruett

Icela Ricksecker
Jean Rios
Christine Schirmer
Rae Jean Schlinggen
Sonya Valentin
Mary Walker
Dan Weisz
Wanda Wynne

FIELD TRIP LEADERS

George Armistead
Jeff Babson
Chris Benesh
Andy Bennett
Gavin Bieber
Ken Blankenship
Chip Clouse
Brian Gibbons
Jeff Gordon
David Griffin
Matt Griffiths
Laurens Halsey
Homer Hansen
Tim Helentjaris
Stephen Ingraham
Karen Krebbs
Kendall Kroesen
Bryon Lichtenhan
Larry Liese
Jennie MacFarland
Jake Mohlmann
Brian Nicholas
Scott Olmstead
Vincent Pinto
Luke Safford
Rick Taylor
Christopher Vincent
Sheri Williamson
Tom Wood
Rick Wright
John Yerger



Attendees Checklist, Sara Pike; Festival field trip, Jennie MacFarland; John Yerger Field Trip Leader, Mary Walker; Scott Olmstead Field Trip Leader, Mary Walker; Registration with Luke Safford, Sara Pike

Welcome New Volunteer Coordinator Luke Safford!

Luke grew up in a family that loved the outdoors and quickly blossomed into a birder after his grandparents gave him his first bird book when he was seven. He was enamored with the idea of making bird species lists and keeping track of the day to day bird life in his suburban back yard near Tacoma, WA. After moving to Yakima, WA, Luke became involved in the Yakima Valley Audubon Society and served on the board, as field trip coordinator, CBC compiler, and field trip leader.

Shortly after moving to Tucson in 2014, Luke attended the Sweetwater Wetlands walk and began to help lead it on a weekly basis. Along with Sweetwater, Luke also helped to coordinate the Southeast Arizona Birding Festival, is our new field trip coordinator (!) and is involved with the Tucson Valley Christmas Bird Count. As the volunteer coordinator he is excited about the many opportunities he will have to motivate the people of Tucson to actively love their city, birds, and the surrounding environment by becoming involved with Tucson Audubon.



VOLUNTEER SHINDIG IS BACK!

SAVE THE DATE:

Friday, December 2, 5:30-8:00pm

The one event where we expect nothing from our wonderful volunteers except to show up and be showered with appreciation, food, and drink.

WELCOME NEW MEMBERS

Mark Amershek, Kathe Anderson, Peter & Sharon Anderson, Debby Anderson, Caitlin Andrews, Mary Backus, Kimberly Baeza, Becky Bailey, Victoria Beall, Dirk Beasley, Helen Belencan, Betty Jo Benson, Susan Beree, Alison Beringer & Rick Wright, Debra Berry, Conor Best, Lynn Bieber-Weir, Beko Binder, Joe Blanda, Gita Bodner, Lisa Breiterman, The Stark Family, Chris Brown, Paul Burch, Carol Buto, Laurel Campbell, Candlewood Suites Tucson, Chris Chappell, Marianne Checkovich, Shuming Chen, Carl C. Christensen, Connie Clapsadle, James Cloud, Chip Clouse, Robin Cohn, Lesley & Alan Collins, Clancy Cone, Zilla Copper, Kay & Bob Couch, Mary Cox, Courtney Crosson & Derek Lemoine, Arlene Danser, Diane D'Arcy, Pam Davis, Georgia Decker, Marina & Adrian Delpha, Adrian Delpha, Terry DeMont, Diana Diettrich, Laura DiMeo, Noreen Doyle, Bill Duston, Bob Ellis, Mary Kay & Robert Fanning, Edward Farley, Charlie Farley, Herb Fechter, Charles Feerick, Diana Fernandez, Thomas Ferranti, Grace Fimble, Nina Finley, Eric Fly, Terry Fortunato, Jaqueline Foxx, Michele Frisella, Brian Gibbons, Don Glasco, Eric Goode, Jinx Garza & Brand Gould, Davor Grgic, Rick Grove, Debra & Bradley Haber, Sheri & Keith Harris, Paula & Jeff Hartgraves, Nancy Jakse & James Hartman, Sarajeon Harwood, Peter Haskel, Susan & David Haug, Heartstone Ranch/La Cocina, Jim Hefner, Aubry Hemingway, Brandon Herman, Paul Hernandez, Jan, Will, and Clayton Holder, Debbie Honan, Bruce Hoover, Ron Huebner, Mischelle & Barry Hunt, Tish Hunter, William Hutchison, Judy Jacobs, Dorothy & Henry Johnson, Ronald Joost, Timothy Keete, Judy & Bob Kelly, Shirley & Michael Kelly, Marilyn Kenyon, Rosemary Konspedos, Sue Kraftschik, Frances Krueger, Sharon Kruppenbacher, Cindy Ladd Fiorini, Brad Lancaster, MaryEllen Landen & Christopher Vincent, Joyce Lee, Kathy Lepak, Denise Lesko, Linda & Edward Lessin, Ray Little, James Liu, Chris Loebner, Pauline Loftus, Micki Long, Pat Lumpkin & Bill Mitchell, Cynthia Luria, Kathy Mack, Joy Magnon, Angela & Ryan Maguire, Dawn & William Manier, Barry Marsh, Catherine Martin & Jeff Hoff, Anne Mcconnell, Kelly McGowan, Susan McNally, Cecilia McNicoll, Pat McSweeney, Carrie Merkle, Floramay & Steve Miller, Gail Miller, Susan Milliron, Carol Mills, Irene & Edward Moon, Charlotte Morris, Susan & Jim Murphy, Kanchan Nadkarny, Jill Newby, Terri Nickerson, Joanne Noonan, Anna Nordseth, Melissa O'Mara, Bruce Orr, Scott Page, Anna Panka, Feenix & Eugene PanRudkevich, Will Papp, Jan Parrott, Catherine Pauls, Edward Perry, John Pike, Vincent & Claudia Pinto, Jonathan Pope, Sharon & Mike Pratt, Craig Provost, Dale Provost, David Quadhamer, Deanne & Jerry Raley, John Rasmussen, Polina Vishkausan & Henry Raymundo, Margo Re, Pat Rech, James Reed, Barb & Thomas Reich, Nancy & David Reinhart, Connie Rubin, Wendy & Devin Russel, Robert Ruvolo, Dale Sakahara, Melissa Schwan, Diane Seyl, Herbert Sheathelm, Patt Sims, Gary Smith, Phyllis Smith, Geraldine Smith, Carol Soderberg & Tim Johnson, Brian Stack, Kevin Stack, Linda & Harry Stacy, David Stevenson, Mary Kirk Stofflet, Rosalie & John Stoner, Susan Strasevicz, Jay Sulzmann, Clayton Surratt, Michael Sweeney, Jyotsna Taggarse, Terri Tarango, Linda & Jim Taylor, Lynne & Rick Taylor, Baird Thompson, Darrell Thompson, Jane Titley, Bonnie Bradford & Steven Tripka, Nancy Turner, Deb & Patrick Turski, Bj Umstead, Linda & C.A. Vidal, Mitchell Von Rotz, Susan & Jeffrey Webster, Tama & Michael White, Mary White, Sheri Williamson, Lisa Willnow, Tom Wood, Tom Yanik, John Yerger & Morgan Jackson, Nancy Yuill, Alek Zelbo, Christine Zimmerman

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, Brandon Herman, John Kennedy, 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 Jane Reichart from Jan Bell
 In memory of Pearl Parnigoni from Tammy Bose
 In memory of Ed Caldwell from Jane & Don Powers
 In honor of Joyce Schumann from Ann Schumann-Ousley
 In honor of Laurens Halsey from Rick Skehen
 For Maria Elena from Lynn Squires

REMEMBERING ELIZABETH ROEMER



Elizabeth "Pat" Roemer, emerita professor of astronomy at the University of Arizona, passed away on April 8, 2016, in Tucson, Arizona.

Pat specialized in the study of "astrometry," precise measurements of the movements and positions of celestial bodies. Her observations led to numerous significant discoveries of comets and asteroids. Pat graduated from the

University of California, Berkeley in 1950 with a B.A. in astronomy as a Bertha Dolbeer Scholar. After earning her Ph.D. in 1955, she continued to work at UC Berkeley for a time as an assistant astronomer while also conducting research at the University of Chicago's Yerkes Observatory. In 1957, Pat became an astronomer at the U.S. Naval Observatory in Flagstaff, Arizona. By 1965, Pat was named acting

director of the observatory and had an asteroid named "1657 Roemera" (1961) in her honor. She was hired by the University of Arizona in Tucson as an associate professor in 1966 and was promoted to full professor in 1969. She retired in 1998, but continued her research on comets and asteroids. In addition to her leadership in the field, Pat received numerous awards for her groundbreaking work including the BA Gould Prize of the National Academy of Sciences, the NASA Special Award, and the Donohoe Lectureship of the Astronomical Society of the Pacific. Pat was also passionate about the environment and generously supported many conservation organizations. She was an intrepid hiker and camper and enjoyed bird watching. Pat graciously left a bequest to Tucson Audubon Society upon her passing; we are grateful for her thoughtfulness and generosity.

Sky Island Cuckoos — Two years of Surveying on the Coronado National Forest

Jennie MacFarland, Conservation Biologist

Yellow-billed Cuckoos have been getting a lot of attention lately—and for good reason. This charismatic species is both intelligent and adaptable, but it depends on high-quality riparian habitat for nesting. The range of the distinct western population of the Yellow-billed Cuckoo has been greatly reduced due to habitat loss: over the last century, their numbers have declined from 15,000 pairs in California to about 40 pairs currently. This dramatic decline resulted in the western population segment of this bird being officially listed as Threatened under the Endangered Species Act in October of 2014. Its designated Critical Habitat is still being revised. Arizona populations have declined up to 80% in the last 30 years with an estimated current population of 250 pairs (the highest concentration in the United States, making Arizona an important stronghold for this species). See Tucson Audubon's comments on the draft critical habitat designation at: bit.ly/2dx1vFg.

Tucson Audubon has now completed two years of surveys in the Sky Islands under contract with the Coronado National Forest. In 2015, our survey effort included 40 routes within eight mountain ranges. Yellow-billed Cuckoos were detected in 22 of these drainages and canyons. Once the data was mapped and detections were grouped, Tucson Audubon determined that the areas surveyed contained 19 breeding territories and 24 occupied territories for a total of 43 territories.

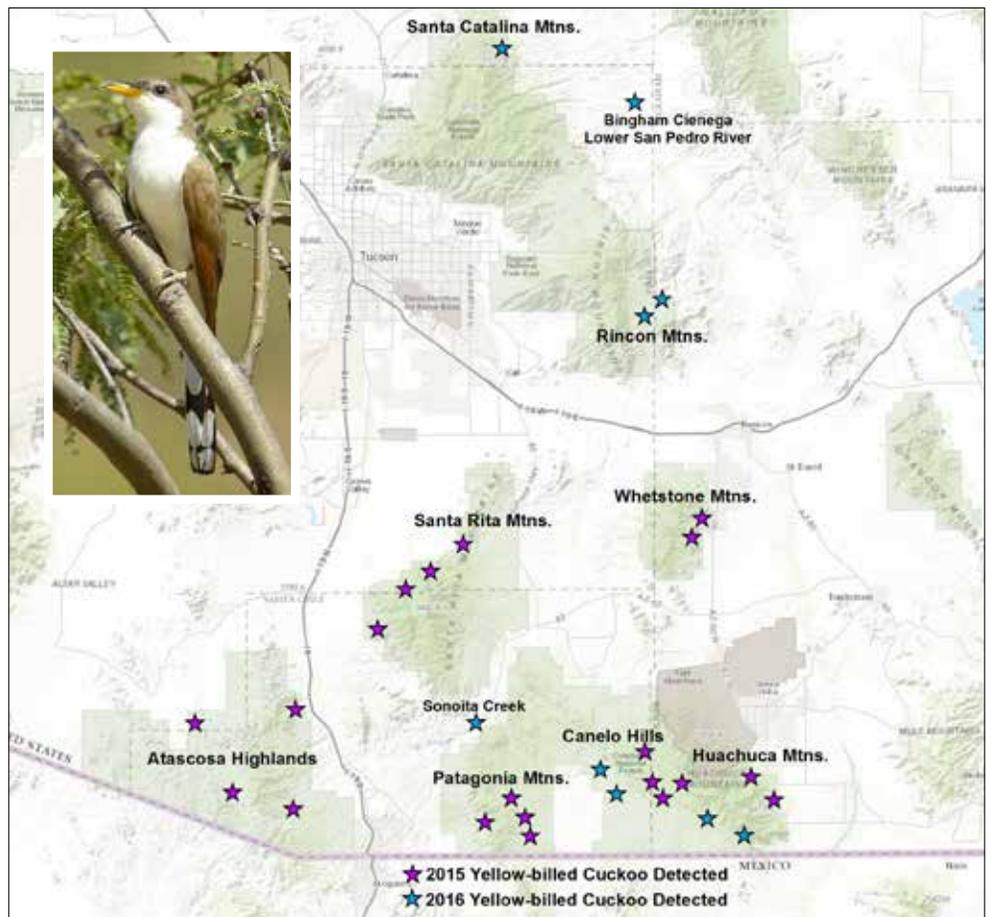
The 2016 survey effort was more limited but just as interesting. Within four mountain ranges, we surveyed 15 routes and found Yellow-billed Cuckoos in seven. Data analysis is ongoing at this time, but preliminary results show that 14 breeding territories and six occupied territories were documented for a total of 20 territories. Most of the 2016 surveys were in different locations from the 2015 surveys; only one area, Peppersauce Canyon in the Santa Catalinas, has a territory that was also likely captured in 2015.

One of the most intriguing elements of this study is the elevational zones at which Tucson

Audubon documented Yellow-billed Cuckoos. In 2015, positive detections ranged in elevation from 3564 ft. in Rock Corral Canyon in the Atascosa Highlands to 5480 ft. in Merritt Canyon in the Canelo Hills. Of the 120 total detections in 2015, 36 occurred between 3564 and 4000 ft., 50 occurred between 4000–5000 ft., and 34 occurred between 5000 and 5480 ft. In 2016 there were 50 total detections with 36 occurring between 4000–5000 ft and 14 between 5000–5684 ft. In the American West, Yellow-billed Cuckoo nesting sites were thought to be restricted to lower-elevation riparian habitat characterized by cottonwoods and willows. The sightings of cuckoos in the Sky Island drainages of southeast Arizona were therefore considered aberrations or birds

passing through. Now, thanks to Tucson Audubon's data, we see that these Threatened birds do nest in high elevation Sky Island drainages and that this habitat type should absolutely be included in the next draft of the Critical Habitat for these birds.

These two years of Yellow-billed Cuckoo surveys would have been impossible without the help of a tremendously dedicated and talented group of volunteers who assisted the seven Tucson Audubon staff members who conducted surveys. There were 48 volunteers who helped with the 2015 surveys, donating approximately 950 hours, and 25 volunteers that helped with the 2016 surveys with about 450 hours. Thank you so much for your help; we truly could not have done it without you. 🍷



This map shows the locations of all routes where Threatened western Yellow-billed Cuckoos were documented by the Tucson Audubon Society in 2015 (purple stars) and in 2016 (blue stars). Many of these routes contained multiple territories which are not indicated on the map. Two areas marked on the map were surveyed by Tucson Audubon but lie outside of the Coronado National Forest and so were not discussed in this article: Sonoita Creek in Patagonia, adjacent to the Paton's Center for Hummingbirds, and the Bingham Cienega Preserve along the Lower San Pedro River. In both areas, multiple breeding territories were documented.

STATE OF THE BIRDS: LOCAL CONTEXT WITHI

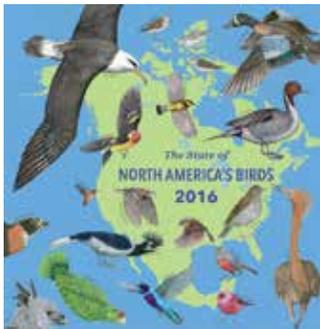
Jennie MacFarland, Conservation Biologist and Matt Clark, Conservation Analyst



San Rafael Grasslands, Alan Schmitter



Chestnut-collared Longspur, Bryan Smith



Many of us are familiar with the bird species in our neighborhoods and perhaps even individual birds in our yards. Their presence can feel so familiar and steady that it's hard to imagine a future without them. But the annual State of the Birds report (see stateofthebirds.org/2016) allows us to take several steps

back and view the status of bird species and their habitats in a larger context. This report, which is a collaboration of many agencies and nonprofits, utilizes data from citizen-science sources such as eBird and Christmas Bird Counts to take the pulse of North America's bird species. In the 2016 July–September issue of the *Vermilion Flycatcher*, we briefly summarized the findings of the 2016 State of the Birds report.

In our region, species that rely upon Mexican tropical forests, arid lands, and grasslands are at greatest risk. Grasslands may not be the first habitat type that comes to mind when one thinks of southeast Arizona, but it should be! The importance of our grasslands cannot be overstated. The San Rafael Grasslands, for example, is a Global Important Bird Area (IBA) and popular birding destination in the winter. IBA status 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.

Bird species that travel south after nesting in the Great Plains to winter in Chihuahuan grasslands have undergone steep population declines in recent years, nearly a 70% loss since 1970. Flocks of one such grassland species, the Chestnut-collared Longspur, spend the winter in the San Rafael Grasslands and are the primary reason this area has been recognized as a globally significant area for bird conservation. These birds rely on the remaining Chihuahuan desert

grasslands in southeast Arizona, southwest New Mexico, and northern Mexico to make it through winter strong enough for a successful spring migration northward. Degradation of wintering habitats is a driving force of the alarming decline of these bird species, caused by the conversion of grasslands to croplands, overgrazing of cattle, invasive grasses and woody plants, and changes in climate and land use that alter the structure and composition of the ecosystem. As suitable wintering habitat for Chestnut-collared Longspurs continues to be lost, the importance of maintaining intact grasslands like those found in the San Rafael Grasslands IBA increases. Each winter, Tucson Audubon volunteers survey the San Rafael Grasslands for Chestnut-collared Longspurs to track the trends of this species' populations over time. It is too early to say which direction populations of these wintering Chestnut-collared Longspurs are trending, but last winter we counted our lowest number since these surveys began in 2012.

The sky island mountain ranges of southeast Arizona are iconic birding destinations. Southeast Arizona's sky islands are home to a staggering diversity of birds and offer vital refuge for many migrating bird species. The vegetative diversity and ecological richness of the sky islands have earned many of them status as Important Bird Areas. The sky islands are a northern extension of a larger system of the North American tropical forests that mostly occur in Mexico. This pine-oak tropical forest ecosystem is facing serious conservation challenges. The 2016 State of the Birds report states that 56% of the bird species in pine-oak tropical forest are at high risk of extinction.

The Sky Islands have been a focal point for Tucson Audubon's citizen-science and conservation efforts, such as Tucson Audubon's yearly Elegant Trogon survey, a huge undertaking that involves more than a hundred volunteers. Our survey this year included a sixth mountain range, the Galiuros, where four trogons were observed engaging in breeding behavior. Our surveys this year documented a total of 137

IN THE LARGER PICTURE



San Rafael Grasslands Bird Survey Crew



Elegant Trogon, Jackie Bowman

Elegant Trogons. On the whole, this species seems to be increasing in southeast Arizona, and Tucson Audubon will continue to conduct surveys in future years to get a better idea of long-term trends. The pine-oak tropical habitat of our Sky Islands has also proven to be important nesting habitat for western Yellow-billed Cuckoos, which were listed as threatened under the Endangered Species Act in 2014. Tucson Audubon has surveyed for these birds in the Sky Islands for the past two years (see page 11 for further details).

Many bird species travel vast distances throughout the year in search of the best opportunities for nesting, and this requires us to view their life history requirements at a continental or even global scale. But the local scale is an equally important frame to think about birds and the habitats on which they depend, as this is where we are most able to act. With your support and help, Tucson Audubon is working to track population trends for key birds of conservation concern and to work together to improve the state of our birds in southeast Arizona. 

THE BIRDS IN BETWEEN Arizona's Azure Bluebirds

Jonathan Horst, Conservation Director

Come to southeast Arizona where you will see birds you won't find anywhere else in the US. Some of these birds look like what you'd expect to see in the east, and you may think the guidebook must have made a mistake (Eastern Meadow-lark, Eastern Bluebird). While it may resemble its eastern cousins, the Azure Bluebird is distinct and is the largest subspecies of the Eastern Bluebird. The Azure Bluebird is only found in SE Arizona's sky islands and intervening grasslands.

Azure Bluebird is as big as Western Bluebird, and like many desert species, its colors are washed out compared to the eastern variety. These birds are found only in southeast Arizona (at least north of Mexico), and their population has been steadily declining for three decades. Where they used to range

throughout the grasslands and oak woodlands both, now they primarily reside in a few of the larger oak-lined drainages where the oaks peter out and grasslands begin—a very narrow band where the two habitats overlap.

Tucson Audubon is working with ecologists at the University of Arizona to study these birds and help increase the populations in our area. The first attempt was a large nest-box program that placed 122 boxes this year, which hosted eight Azure Bluebird nests.

Nine of the Azure nestlings were banded by the researchers for future study. Happily, the boxes also served a number of other species, including Dusky-capped Flycatcher, House Wren, Bewick's Wren, 12 Ash-throated Flycatchers, and, as a complete surprise, a Bridled Titmouse!



Azure Bluebird, Lois Manowitz

Many thanks to the 25+ staff, volunteers, and UA folks who made this year's work possible. Next year is looking bright thanks to two small grants to expand the program, allowing us to get dedicated undergraduates involved and produce another 80 nestboxes.

THE MANY AND VARIOUS THREATS TO BIRDS: AN UPDATE

Kendall Kroesen, Bringing Birds Home Project Manager
and Matt Clark, Conservation Analyst

Three years ago in the October 2013 *Vermilion Flycatcher* (tucsonaudubon.org/vfly), we covered the top threats to birds with the aid of statistics from the American Bird Conservancy. Here we provide an update from a local and regional perspective on four of the leading threats to birds.

The Open Standards for the Practice of Conservation identifies the following general categories of direct threats: residential and commercial development, agriculture and aquaculture, energy production and mining, transportation and service corridors, biological resource use, invasive non-native species, pollution, geological events, climate change and severe weather.

All of these direct threats impact bird populations to varying degrees and are often interrelated. When these threats are severe enough, especially in combination, negative feedback loops result in population declines that, if left unaddressed, can quickly threaten a species with extinction. Perhaps the most famous example of this is the Passenger Pigeon (*Ectopistes migratorius*), which was once the most abundant bird in North America but was hunted to extinction in a matter of decades.

CLIMATE CHANGE

Climate change has emerged as the chief threat to birds in our region today. According to a report by 120 top climate researchers, the Southwest is one of the most “climate challenged” regions of the United States. *The Assessment of Climate Change for the Desert Southwest* (swcarr.arizona.edu/content/about-report) finds that:

- The Southwest is warming. Average daily temperatures for the 2001–2010 decade were the highest recorded in the Southwest of any period from 1901 through 2010.
- Recent drought has been unusually severe relative to droughts of the last century.
- Recent flows in the four major drainage basins of the Southwest have been lower than their twentieth century averages.



Lake Mead at low levels. Steve Boland

Since this assessment was released in 2013, we have witnessed the two hottest years in recorded history in Arizona. Lake Mead reservoir on the Colorado River is now at a historic low of 37%. These are indicators that the threat of climate

change continues to grow. Birds will be impacted by sea level rise, habitat conversion, dewatering of streams and rivers, more frequent and severe wildfires, invading species and diseases, changes in vegetation and phenology, prey abundance, and extreme weather events.

Tucson Audubon's modeling actions that may help in a variety of ways. For example, our Mason Center office space is 100% solar-powered and features a rainwater harvesting system and composting toilets. We are also participating in the Desert Landscape Conservation Cooperative (desertlcc.org), which provides scientific and technical support, coordination, and information to resource managers and the general public to address climate change and other stressors.

HABITAT LOSS & FRAGMENTATION

Oceans and coastlines continue to be threatened by climate-induced acidification and sea-level rise, while inland energy production, commercial and residential development and transportation corridors divide habitats into smaller, isolated tracts. A recent study in *Current Biology* found that the world's wilderness areas have been reduced by a tenth since the early 1990s, and that without dramatic action, much of the remaining wilderness will be lost by 2050.

In our region, Tucson Audubon is working in partnership to prevent habitat loss and fragmentation from ill-advised projects like the Villages at Vigneto mega-development, the SunZia Transmission Line, and several major mining proposals affecting key bird habitats. To counteract habitat loss, we support smart growth, open space protection, ecological restoration of degraded lands, and protection of our waterways and wildlife corridors. In addition, we co-administer the Arizona Important Bird Areas program to identify key bird habitats where conservation and careful management are encouraged (aziba.org).

CATS

One of the most alarming and pervasive threats to birds is direct mortality from outdoor cats. The American Bird Conservancy estimates that bird deaths in the U.S. from outdoor cats range from 1.3 to 4.0 billion annually. Approximately 69 percent of this bird mortality is from un-owned cats.



Habitat loss in Tucson, US National Archives

D THREATS TO BIRDS:

In 2015, despite opposition from Tucson Audubon and partner organizations, the Pima County Animal Care Center adopted a controversial policy to reduce euthanasia of stray cats via a “trap, neuter and release” program. This policy favors releasing neutered and inoculated cats back into neighborhoods rather than euthanizing them, but ignores the environmental impact of non-native, invasive predators that prey upon our urban birds. We encourage you to contact Pima County and the City of Tucson to support a more holistic, science-based approach.

The other 31 percent of cat-induced bird mortality comes from “owned” cats that people allow to roam freely outdoors. If you have an outdoor cat, reduce bird mortality today by keeping it indoors (abcbirds.org/threat/cats-and-other-invasives).



Left: Brandon O'Connor; Right: Window imprint

BUILDINGS / WINDOWS

Between 365 and 988 million birds are killed each year in the U.S. by colliding with buildings. While collisions do occur with high-rise buildings, the vast majority of collisions happen with low-rise buildings (4–11 stories) and residences. The solution to this problem is to implement building designs that incorporate anti-collision features. Tucson Audubon supports the passage of the Federal Bird-Safe Buildings Act (H.R. 2280), which would require bird-friendly design and materials on new or renovated federal buildings. Ideally, these same design standards should be widely adopted for all commercial buildings. There are also tested, effective solutions to reduce window strikes at home. See abcbirds.org/get-involved/bird-smart-glass to learn how to make the windows in your home and business more bird-friendly. ■

For more information about how you can address threats at home and on a local level, see our Challenge Checklist to the right, and Tucson Audubon’s Habitat at Home Program (tucsonaudubon.org/habitatathome).

TACKLE THE THREATS—TAKE ON THE CHALLENGE!

- Keep your own cats indoors
- Encourage family, friends & neighbors to keep their cats indoors
- Advocate for county & city management policy that reduces outdoor cats
- If you’re determined to give your cat outside time, build an outdoor enclosure
- Install window decals/devices at home and work to prevent bird strikes
- Advocate for national legislation to address the major sources of bird strikes
- Notify local businesses about bird strikes on windows
- Buy organic foods whenever possible, especially for the “dirty dozen”
- Shop at your local farmer’s market, which reduces energy used in transport
- Reduce or eliminate your consumption of meat products
- Advocate for the elimination of the use of toxic pesticides such as “neonics”
- Advocate for elimination of lead in ammunition and fishing tackle
- Cap any verticle “open pipes” on your property (fence posts, etc.)
- Encourage agencies to cap verticle “open pipes” on lands they manage
- Only buy products that you know you will use & not waste
- Maximize a product’s use; reuse and recycle whenever possible
- Plan ahead to consolidate trips and limit driving distances to reduce emissions
- Telecommute when possible to reduce emissions
- Ride your bike or take public transport to reduce emissions
- Drive an efficient vehicle to reduce emissions
- Bird, hike and vacation relatively close to home to reduce emissions
- Advocate for affordable renewable energy policies and incentives
- Advocate to decision makers for a quick transition to renewable energy
- Advocate for responsibly sited energy infrastructure (wind, solar, transmission)
- Install solar panels on your home or business to reduce fossil fuel reliance
- Turn off lights and turn off/down air conditioner when not in use
- Weatherize your home for increased energy efficiency
- Use faucet aerators, efficient showerheads, appliances and low-flow toilets
- Use refillable water bottles to reduce water and energy consumption
- Sweep your patio instead of spraying it down
- Install and implement water harvesting to reduce outdoor / overall water use
- Advocate for water policies that protect our rivers, streams and springs
- Make “smart growth” choices about where you live and work
- Advocate against harmful and unsustainable development proposals
- Join the Habitat at Home Program to create a bird-friendly home & yard
- Ask community leaders to implement Habitat at Home in our neighborhoods
- Become a Tucson Audubon “Ambassador” by recruiting 5 new members
- Become a Tucson Audubon “Super Supporter” by recruiting 10 new members

Sturnella Meadowlarks and *Aphelocoma* Jays

Chris Benesh

It is increasingly difficult to keep up with the sweeping changes taking place in bird taxonomy these days, with papers published at a steady pace proposing new splits of established species. Here we examine two recent proposals relevant to southern Arizona which have been put before the North American Checklist Committee (NACC) of the American Ornithologist Union (now American Ornithology.) The first examines the familiar yellow-breasted *Sturnella* meadowlarks, one of the species complexes that has undergone some scrutiny in recent years. This proposal raises the question of how many meadowlark species occur in the NACC's area of purview, and specifically, whether the Eastern Meadowlarks that occur in southeastern Arizona warrant consideration as a full species, namely Lilian's Meadowlark. The second proposal we'll consider here examines species limits in the *Aphelocoma* scrub jays and asks how many species are embedded in Western Scrub-Jay.

Traditional meadowlark taxonomy recognizes two yellow-breasted species, Eastern and Western. Western is comparatively a model of consistency, being relatively morphologically similar throughout its range. Eastern, on the other hand, is a complex mosaic of populations extending into northern South America. Here in



Lilian's Meadowlark, Bryan Smith

southeastern Arizona, we have a somewhat distinctive population known as Lilian's Meadowlark. This population differs from the typical Eastern in a few subtle ways: paler overall; a shorter, more extensively white tail; songs averaging 1kHz lower in pitch; etc. Underlying these physical and vocal

differences is supporting genetic data that has these yellow-breasted forms falling into three distinct groups (or clades). In other words, Lilian's seems to be as distinct from Eastern as is Western. It seems reasonable that this might result in the elevation of Lilian's to a full species. So what's the hold up? Well, it turns out that Eastern Meadowlark gets particularly messy as one heads further south into Central and South America. With as many as fifteen subspecies to take into consideration, it becomes more nightmarish to tease out species limits among the remaining taxa. At the moment, the NACC has opted to hold off on splitting Lilian's Meadowlark in the hope that further research will clarify what is happening in areas where Lilian's comes into contact with other Eastern populations (e.g. are the two reproductively isolated, or do they interbreed where they meet?). In addition, further examination of South American populations may give a clearer picture of how many meadowlark species are out there.

Turning to *Aphelocoma* Jays, the NACC also considered whether the Western Scrub-Jay should be further split into two or three species. Back in 2010, Scrub Jay was split into three species (Western Scrub-Jay, Island Scrub-Jay, and Florida Scrub-Jay). Within Western Scrub-Jay are three distinctive clades corresponding to populations in the Pacific states (California), interior US and northern Mexican populations (Woodhouse's), and populations in south-central Mexico (Sumichrast's). Recent genetic research reveals that Pacific states birds and interior birds are genetically isolated. Not surprisingly, there are expected differences in plumage, voice, and behavior. Recent research revealed another problem indicating that the California population appears more closely related to Island Scrub-Jay than to the interior Woodhouse's, meaning some taxonomic revision was in order. Researchers also examined the tiny area in western Nevada where Pacific birds and interior birds come in contact and found there to be little gene flow between these populations, offering further support for a split. But what of those south-central Mexican populations? These southern birds differ genetically from the other two clades as well as having distinct plumages and vocalizations, but it's currently unknown whether there is gene flow between the interior clade and the



Woodhouse's Scrub-Jay, Calvin Kunin

south-central Mexican clade where their populations meet in central Mexico. In this instance, the NACC went ahead and split Western Scrub-Jay into two full species, California Scrub-Jay and Woodhouse's Scrub-Jay, without considering whether Sumichrast's also warranted being split. So unlike the meadowlark example, we have a split that does not take into account all of the populations of the species under consideration. Perhaps Sumichrast's Scrub-Jay will be revisited in future, but for the moment it remains lumped with Woodhouse's.

The proposals and member comments can be found in their entirety here: checklist.aou.org/nacc/proposals/current_proposals.html. ■

Chris Benesh is a tour leader for Field Guides Incorporated (fieldguides.com) and a long time Tucson resident. An avid birder with a keen interest in bird taxonomy, identification, and education, Chris has served several terms on the Arizona Bird Committee and has taught numerous workshops focused improving identification skills.

Birding Mexico's Mayaland

Bob Bowers (Photos by Prudy and Bob Bowers)



The 5-inch Pygmy Kingfisher, Celestun



Yucatan's Endemic Ocellated Turkey



American Flamingos at Celestun

It may be hard to believe, but in January of 1970, the population of Cancun consisted of three residents. By 2010, the population had exploded to 628,306 residents, and today, Cancun is Mexico's primary tourist destination with more than three million visitors annually. If you're one of them, you'll swear the tourists never leave the city. Those that do roam seldom go farther than Tulum, a couple of hours along the coast to the south, or a similar distance west to the Mayan ruins at Chichen Itza. If you're a birder, though, the last thing you want to do is stick close to Cancun.

The Yucatan peninsula is a bird-rich paradise, and if you visit in winter, you'll find an abundance of eastern U.S. migrants as well as exotic residents. This mix can be a bit challenging for an Arizonan, though, since most of the migrants and all of the residents are rarely (if ever) seen in the west. When your vireo experience consists of Bell's, Plumbeous, Warbling, and Hutton's, common Yucatan winter vireos like White-eyed and Yellow-throated are as strange as Yucatan endemics. This melded winter population gives you a two-for-one opportunity to record both eastern U.S. and Yucatan birds with a single flight ticket. On our last January trip, Hooded Warblers were so common they almost became ordinary. Black-throated Green Warblers were as thick as bees at Oka'an, and we discovered a flock of 200 Eastern Meadowlarks near Palenque. Other U.S. migrants on our trip included Painted Bunting, American Redstart, Rose-breasted Grosbeak, Northern Parula, Gray Catbird, Baltimore Oriole, and Yellow-throated Warbler. The American Bird Conservancy estimates one and one-half billion birds of 200 species migrate through the Yucatan Peninsula each year, so this is clearly a good place for winter birding.

The icing on the cake for American birders is the abundance of Mexican residents, birds rarely, if ever, found anywhere in the U.S. These are often breathtakingly colorful birds with names to match, like Turquoise-browed Motmot, Melodious Blackbird,

Red-throated Ant-tanager, Gartered Trogon, Golden-fronted Woodpecker, Masked Tityra, Rose-throated Becard and Rufous-browed Peppershrike. The Yucatan peninsula is also home to eleven endemic birds found nowhere else, including Yucatan Jay, Orange Oriole, and Ocellated Turkey.



Turquoise-browed Motmot

You should plan your itinerary to include as many Mayan archeological sites as possible: not only are these incredible sites worth visiting on their own, they occupy partially cleared areas in the jungle, making it easier to find birds. Our favorites included Uxmal, Kohunlich, Calakmul, Palenque, Yaxchilan, Becan, Edzna and the Oka'an resort near Chichen Itza. And don't overlook Celestun, a small fishing village on the Gulf of Mexico just 60 miles west of Merida. Celestun is home to a 146,000-acre Biosphere Reserve

where you can find more than 300 species of birds, including thousands of wintering American Flamingos. An inexpensive boat tour will put you up close and personal with these beautiful neon-pink birds, as well as take you into mangrove channels where 5-inch Pigmy Kingfishers hang out. Our boat put us next to a feeding flock of 600 flamingos, and we could see nine other similarly-sized flocks. Adding in other groups of flamingos that couldn't be seen at the same time gave us an estimated winter gathering of 10,000 birds. Celestun is Mayan for 'painted stone'. We never found a painted stone, but I'll take ten thousand pink-painted flamingos over a rock any day. ■

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. This article ends Bob's two-year series on birding in Mexico. Email him at bobandpru@aol.com with questions or comments.

Come One Come All — Let's Do Some Christmas Bird Counts!

Rich Hoyer

While the stated goal of a Christmas Bird Count (CBC) is “to locate every species present in the count area in numbers proportional to those actually present,” most of us CBC junkies do it just because it’s fun. It’s predominantly a social event, and the best part is the species countdown where everyone gets together for dinner and talks about all the exciting birds that were found. The CBC is a great event for all walks of life, young and old, novice and long-time birder, mountain goat hiker and wheelchair-bound feeder watcher—everyone can contribute in some way.

Southeastern Arizona has as many as 14 Christmas Bird Counts each year, and you may be able to participate in several this season without traveling far from home. Just contact the compiler listed below and let him or her know about your birding experience, strengths and weaknesses, and any physical limitations. Then have fun with your assigned team and area!

The Tucson Valley CBC will be held on December 14. Last year’s count was beset by a cold front, which may have hurt the total number of birds, but the species total was the third highest ever at 153. Cooper’s Hawks setting a new all-time high of 152 was a high-light. Contact Rich Hoyer at birdernaturalist@me.com to sign up.

The Patagonia CBC will be held on December 15. Some notable finds last year were a Gray Hawk, a Five-striped Sparrow, and a high count of 10 Black-capped Gnatcatchers. Contact Abbie Zeltzer at amindajar@gmail.com.

The Nogales CBC will be held on December 17. Last year’s total of 142 species was very high, with Green Kingfisher, Clay-colored Sparrow, and nine Long-eared Owls as some of the highlights. Contact Michael Bissontz at seetrogon@comcast.net.

The Santa Catalina Mountains CBC will be held on December 17. Last year’s count had a near-record 143 species, with Rufous-capped Warbler new for the all-time list. Cassin’s Sparrow staged an invasion with an amazing eight seen, and near record numbers of Lawrence’s Goldfinch were great after several years of absence. Contact Brian Nicholas at weehawker2@yahoo.com.

The Buenos Aires National Wildlife Refuge CBC will be held on December 18. This circle has some of the best grassland in the state, and most years a roost of Long-eared Owls are found. Last year a record number of Rufous-winged Sparrows made the news. Contact Bonnie Swarbrick at bonnie.swarbrick@gmail.com.

The Dudleyville CBC will be held on December 30. Last year this count had their largest numbers ever of Common Ground-Dove, Rufous-winged Sparrow, and Lark Bunting, while the most unexpected bird was a male Magnificent Hummingbird. Contact Doug Jenness at d_jenness@hotmail.com.

The Portal CBC will be held on December 31. An amazing six species of hummingbirds were seen on last year’s count, and as usual, they led the nation in Blue-throated Hummingbirds with 13 tallied. Contact Jackie Lewis at winjac12@vtc.net.

The Atascosa Highlands CBC will be held on January 2. This remote and rugged circle requires special effort, but it’s worth

it. Rufous-capped Warbler and Varied Thrush were unexpected rarities, and national high counts were seen for more species than on any other Arizona CBC, including Whiskered Screech-Owl, Arizona Woodpecker, and Five-striped Sparrow. Contact John Yerger at john@adventurebirding.com.

The Appleton-Whittell Research Ranch CBC will be held on January 3. Famous for its sparrow numbers and diversity, this CBC tallied four Baird’s Sparrows last year. The count also has some oak woodland habitat that yielded 38 Montezuma Quail and 93 Acorn Woodpeckers. Contact Suzanne Wilcox at swilcox@audubon.org.

The Green Valley-Madera Canyon CBC will be held on December 28. Last year’s species count of 172 set a new state record, thanks to lots of observers and a great variety of habitat. Rufous-capped Warbler, Five-striped Sparrow, and Black-capped Gnatcatchers were some of the rare species found. Contact Sally Johnsen at empidonax@netzero.net.

The Avra Valley CBC will be held on December 17. This area has great winter sparrow habitat, including Rufous-winged in the flats and Black-chinned in the Tucson Mountains—among sixteen species of sparrow tallied last year. It also has Bendire’s Thrasher in a few areas. Contact Claudia Johnson at claudialj@mac.com.

Elfrida CBC: This count wasn’t held in 2015-16, but this area remains a winter favorite with a great variety of raptors and huge numbers of Sandhill Cranes. Contact Tom Wood at tom@sabo.org.

St. David CBC: Last year’s count had an even 100 species, and good numbers of Common and Chihuahuan Raven makes this a great place to compare these very difficult species. Contact Heather Swanson at hswanson@blm.gov.

The Ramsey Canyon CBC, once very popular, has lacked a volunteer compiler for the past two years. Anyone interested in taking on the job should contact Robert Weissler at weissler@aves.org.

ARIZONA CBC SCHEDULE

Find the complete list of Arizona counts at tucsonaudubon.org/cbc. Join the fun! 📌

CONSERVATION AND EDUCATION NEWS

Matt Clark, Conservation Policy Analyst

Columbus Weedpatch Birding Site Lost to Flood Control Project

The Columbus Weed Patch birding site, located along the south side of the Rillito River just west of the north end of Columbus Blvd, was an unplanned mixture of native and non-native “weeds” densely covering part of the floodplain. The riotous growth was notorious for producing birding rarities such as Clay-colored Sparrow, Indigo Bunting, Cassin’s Sparrow, Sage Thrasher, and Dickcissel. Well-known herpetologist Dr. Phil Rosen recently informed us that this site also supported a very high diversity of lizards and snakes, including possibly the best side-blotched lizard population in Tucson Basin. Now, this popular birding site and reptilian hot spot has been reduced to a large pile of dirt.

As with many rivers and washes, development has encroached on the edges of the Rillito’s historic floodplain. To avoid flooding developed areas, the main wash channel must now convey all storm water flows. When flow velocities slow down, sediment in the water drops out of the water column, and over time it builds up in the river bottom. In recent years, a number of forest fires in the Catalina Mountains, combined with subsequent flooding events, resulted in large amounts of sediment being carried downstream and deposited into the channelized Rillito River. So much sediment built up that Pima County Flood Control District deemed it necessary to dredge out the river in order to avoid potential flooding of nearby homes and businesses along the Rillito.



Sediment pile in place of weed patch, taken along trail west of Columbus Blvd, Kendall Kroesen

Unfortunately, when the Flood Control District unexpectedly began dredging huge amounts of sediment from the Rillito this past summer, the Columbus Weedpatch birding site was de-vegetated and buried. Vast stretches of vegetation have been removed along this part of the Rillito as part of the flood control project. Apparently unaware it was a birding site, the Flood Control District opted to pile tons of the dredged sediment squarely atop the Columbus Weed Patch.

The Regional Flood Control District has agreed to consult us as they do restoration work at the Columbus Weed Patch site. This work will

include grading the pile to harvest some of the rain that falls on it, followed by two years of non-native weed control and finally replanting of native vegetation. However, the “patch,” now many feet higher in elevation, will likely never be as lush as it once was. We will have to wait and see how the site revegetates to determine how valuable it will be for birds and for birders. It is possible this loss could have been avoided through community outreach and engagement. While we understand the importance of such projects for public safety, Tucson Audubon has expressed a desire for the Flood Control District to reach out to neighbors and community stakeholders like Tucson Audubon for crucial input on similar flood control projects in the future.

Army Corps Suspends 404 Permit for Villages at Vigneto

In the July–September issue of the *Vermillion Flycatcher*, we reported that Tucson Audubon had joined partner organizations in a lawsuit 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. The suit challenges an outdated 2006 ACE Clean Water Act 404 Permit that approved impacts to numerous desert washes associated with the proposed Villages at Vigneto mega-development.

Since our last update, there have been two significant developments. First, on July 18th, the Benson City Council unanimously voted to approve the Community Master Plan (CMP) for Vigneto. Tucson Audubon pointed out to the Benson City Council that the Vigneto CMP was inconsistent with the City’s own General Development Plan, which puts an emphasis on protecting the San Pedro River, one of Benson’s “key amenities.” Unfortunately, Benson officials did not heed our concerns or those articulated by numerous community members and concerned citizens. Instead, the council rushed to approve the master plan as well as a controversial development agreement without ensuring the development will not further endanger listed species, the San Pedro River, or Benson’s own water security.

Two days later, in a July 20th letter, the U.S. Army Corps of Engineers informed Vigneto’s developer that their 2006 Federal Clean Water Act 404 permit was suspended. The letter states, “The Corps has determined that it is in the public interest to suspend the permit while consultation with the United States Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act and the Corps’ permit reevaluation are pending.” This is an important victory for the San Pedro River and the extraordinary biological diversity and wealth it supports. The suspension means bulldozers can’t begin to move ground until both the endangered species consultation and a re-evaluation of the outdated 404 permit have occurred and the permit is reinstated. The permit could also be modified or revoked altogether.

The permit suspension should not have been a surprise to Benson officials or the developer. Tucson Audubon was the first conservation organization to formally request that the Army Corps re-evaluate the

decade old, outdated 404 permit and consult on the development's impact to listed species and their critical habitats (bit.ly/2cmAvDa). We warned Benson's City Council and Planning & Zoning Commission that their approval of the community master plan would be premature until federal permitting processes and consultations occurred so that the results of those consultations could inform the scale, configuration, and design of the proposed development.

Thanks go out to our members and supporters who have voiced their concerns and desire to safeguard the San Pedro River from unsustainable, water-intensive developments such as Vigneto. Keep it up!



The Vigneto site with the Whetstone Mountains in the background, Jennie MacFarland

Army Corps' LA Office Recommends Denial of Rosemont Copper 404 Permit

In a long-awaited decision, the Los Angeles office of the Army Corps of Engineers has recommended denial of a Federal Clean Water Act 404 permit for the proposed Rosemont Copper Project in the Santa Rita Mountains located southeast of Tucson. Section 404 permits are only denied in instances where the Corps determines the issuance of the permit would significantly degrade jurisdictional waters. To be official, this recommendation must now be reviewed and affirmed by the South Pacific Division of the Corps in San Francisco.

If upheld, this permit denial could spell the beginning of the end for the controversial project, though proponent Hudbay could appeal the denial to a Corps review officer. If such an appeal were to be denied, Hudbay could then choose litigate in an attempt to overturn the denial—or, more optimistically, it could decide to abandon the project and sell the Rosemont property to recoup its losses.

The Tucson Audubon Society opposes the Rosemont Copper project because it would deleteriously and permanently impact the Santa Rita Mountains Important Bird Area (IBA) and could dewater and pollute downstream riparian areas like Cienega Creek, waste precious groundwater resources and impair our air quality. The Santa Rita Mountains IBA supports distinct forest, oak savannah, grassland, and riparian habitats that provide essential habitat for a long list of bird species of conservation concern, and halting the Rosemont Copper project is one step toward protecting this important bird area.



Rosemont Site, Matt Griffiths

Pima County Codifies Broadly-Supported Conservation Plan

Tucson Audubon is pleased to report that after almost two decades of intensive community planning, Pima County's Multi-Species Conservation Plan (MSCP, bit.ly/2cyVJTr) is finally becoming a reality! What began as a contentious, divisive issue when the Cactus Ferruginous Pygmy-Owl was first listed as endangered in 1997 has transformed into a visionary conservation plan with broad public support. This transformation has been possible through the strong leadership of Pima County and the active collaboration of many stakeholders, scientists, and concerned citizens. In response to the listing of the declining Pygmy-Owl, Tucson Audubon helped to found the Coalition for Sonoran Desert Protection, which today represents 40 environmental and community organizations. The Coalition formed to work proactively with local jurisdictions and the U.S. Fish and Wildlife Service to protect the Pygmy-Owl and to safeguard our region's rich biological wealth. Tucson Audubon has participated in numerous public forums and committees that have supported the development of the MSCP. We have also been a strong advocate for protecting the open space and wildlife linkages that are critical to realizing the broader community vision articulated by Pima County's Sonoran Desert Conservation Plan.

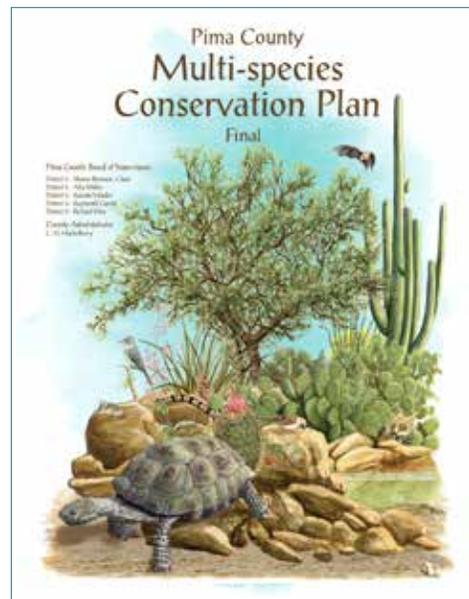
"While many Habitat Conservation Plans have been approved before, Pima County's MSCP is the first to truly embrace the intent of the Endangered Species Act," said Carolyn Campbell, Director of the Coalition for Sonoran Desert Protection, a lead advocate for the MSCP.

Pima County's MSCP is part of its application for an Incidental Take Permit (under Section 10 of the Endangered Species Act) to the U.S. Fish and Wildlife Service (FWS). The FWS granted the county its Section 10 permit last July. The permit allows the county to "harass, harm or kill" species covered by the permit, but only for specified activities associated with otherwise lawful development. On September 6, 2016, in a historic unanimous 5-0 vote, the Pima County Board of Supervisors gave their final stamp of approval by signing the "Implementation Agreement" for the plan, which codifies the respective responsibilities of both the county and FWS. The MSCP will protect 44 Sonoran Desert wildlife species while simultaneously streamlining development

approvals. Seven of the species covered under the permit are currently listed under the Endangered Species Act, while 37 of the species could potentially become listed during the 30-year life of the plan. The plan has garnered support from both conservationists and developers.

Steve Huffman, government affairs director for the Tucson Association of Realtors, spoke at the September 6th board of supervisors meeting. He touted the MSCP as a “win, win, win” and congratulated all involved for a well-orchestrated public process. Tucson Audubon’s Conservation Analyst Matt Clark echoed this sentiment, saying, “The MSCP is a demonstration of our community’s commitment to conservation-minded growth that will ensure both regulatory certainty and economic prosperity. We commend all of the hard work and community outreach conducted by the County staff during this long involved process. We look forward to continuing our work with the County and partner organizations to track the progress of the MSCP, and to further our collective, collaborative work to implement the visionary Sonoran Desert Conservation Plan (SDCP). The future of our most imperiled birds and wildlife will rely upon our ability to work together to connect, protect and restore their most vital habitats and migration corridors.”

The MSCP and the SDCP are distinct, but closely related. While the MSCP is purely regulatory in nature, the SDCP is the county’s long-term plan “for balancing the conservation and protection of our cultural



and natural resource heritage with our efforts to maintain an economically vigorous and fiscally responsible community.” The SDCP includes a substantial open space preserve system, which will serve as “mitigation lands” under the MSCP to offset unavoidable impacts to sensitive habitats. Since 1997, Pima County has protected over 200,000 acres

of open space, either through the lease of State Trust Lands or through outright purchases made with voter-approved bonds. Parcels purchased for mitigation are required to have conservation easements placed on them to protect them in perpetuity. The adoption of the MSCP is a major milestone and a key mechanism to realize the vision of the SDCP. ■

Wildlife Garden Plant Profile

Lynn Hassler, Garden Volunteer Captain; photos by Lynn Hassler

HOPBUSH

Scientific name: *Dodonaea viscosa*

Family: Sapindaceae (Soapberry)

Native range: In Arizona, this plant occurs along arroyos, in canyons, and on dry rocky slopes between 2000–5000'; also occurs throughout the warmer parts of the world, including the tropics of the Americas, Africa, and Australia.

Wildlife value: Cover and nest sites for birds; seeds devoured by quail, doves, and other grain feasters.



Hopbushes are fast-growing up to 12-15' high and 10-12' wide and are useful for providing informal barriers. Their natural form is quite attractive, but they also may be clipped into formal hedges for a more manicured look or shaped into small trees. Prune to eliminate dead wood, to spark new growth, or to control height/width. Plant singly or in masses to cover an unsightly wall or fence, utility box, or to block a neighbor's view. Once established, hopbush is a low water user.

The leaves are a refreshing bright green that lends a cooling feel to the landscape. Flowers are small, yellowish-green, and scarcely noticeable. More ornamental are the ½" papery, three-winged fruits which start out green, then turn to tan or sometimes to a lovely rose color.

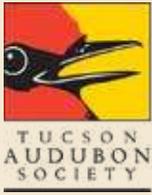
Plant in full sun to partial shade. I have a very happy specimen (currently 12' high and 10' wide) growing on a north side where it receives limited winter sun. Look for the hopbush in the Tucson Audubon Wildlife Garden on the east side, where it's shaded by the giant mesquite.

Note that good soil drainage is important in order to avoid chlorosis, a condition that causes leaves to become pale or yellowish.

The common name for this plant refers to the fruits, which purportedly resemble the hops used in making beer.



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



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 information, including links to member websites.

LEADING

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

SUSTAINING

Celestron
Leica Sport Optics
Rockjumper BirdingTours
Swarovski Optik

SUPPORTING

Heartstone Ranch / La Cocina
Kimberlyn Drew, Realtor

CONTRIBUTING

Affinity Wealth Management
Arizona Birder Casitas
Candlewood Suites
Chuparosa Inn
Diet of Hope Institute
Financial Architects
Visit Tucson
Opticron USA
Originate Natural Building
Materials Showroom
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: CANDLEWOOD SUITES



Tucson's newest hotel, Candlewood Suites is located close to Interstate 10 and many of the area's unique attractions. Each suite has free high speed wired and wireless internet connectivity and is equipped with a full kitchen, including a stove, dishwasher, refrigerator and microwave. The kitchen is stocked with what you need to prepare meals in your suite, on your schedule. Check out the hotel's Lending Locker for additional small kitchen appliances, games and movie for your in-room DVD Player. We offer an outdoor, heated pool and hot tub, complimentary guest laundry, exercise facility and business center with free access and printing. Our 24 hour convenience store offers food items and sundries, when you need them.

candlewoodsuites.com/Tucson

BIRDING TRAVEL FROM OUR BUSINESS PARTNERS

ROCKJUMPER—WORLDWIDE BIRDING ADVENTURES

rockjumperbirding.com

COMPREHENSIVE NEW ZEALAND 2017

Tour Dates: February 5–21, 2017

Tour Price (Per Person): \$6,190

Single Supplement: \$710

Designed to seek almost every endemic bird, taking advantage of the oceanic diversity. Targets include Great Spotted and North Island Brown Kiwi, New Zealand Storm Petrel, prehistoric Takahe, strange North Island Kokako, Stichbird, bizarre Wrybill, noisy New Zealand Kaka, as well as visits to a Northern Royal Albatross colony and a Yellow-eyed Penguin breeding site.

EASTERN SOUTH AFRICA 2016

Tour Dates: November 25–December 9, 2016

Tour Price (Per Person): \$3,420

Single Supplement: \$270



Pink-throated Twinspot, Alan Manson

Great birds and animals of Kruger National Park, Zululand game reserves, the Natal Midlands and the Drakensberg mountains. Targets include Southern Bald Ibis, Bearded Vulture, Blue and Wattled Crane, Blue Korhaan, Rudd's and Botha's Lark, Drakensberg Rockjumper, Gurney's Sugarbird and Pink-throated Twinspot. Excellent chances for 'Big Five' (Lion, Leopard, Elephant, Buffalo and Rhino).

SOLIPASO TOURS solipaso.com

VERACRUZ OAXACA

Tour Dates: March 8–19, 2017

Tour Price: \$3900

Leader: David MacKay

This one way birding adventure explores cloud forest in the Sierra Madre Oriental, dry forests of the central volcanic belt, coastal and fresh water areas, coastal grasslands, scrubby forests of the Oaxaca valley. There are nearly 400 species possible on this itinerary including Sumichrast's Wren, Dwarf Jay, Striped Sparrow, Red Warbler, Oaxaca Sparrow, Ocelated Thrasher, Mexican Sheartail, Tuxtla Quail Dove, Azure-crowned Hummingbird, Mexican Antthrush, Black-throated Shrike-tanager, Keel-billed Toucan, Tody Motmot and many more!

DURANGO HIGHWAY AND SAN BLAS

Tour Dates: February 10–19, 2017

Tour Price: \$3000

Leader: David MacKay

By combining the northern Sierra Madre/Durango Highway and the tropical lowlands surrounding San Blas, it is possible to see more than 25 percent of Mexico's birds, including nearly half of its 100 endemics! Starting in Mazatlan, we travel up the Durango Highway looking for Tufted Jay, Military Macaw, Red-breasted Chat, Red-headed Tanager and Red and Golden-browed Warbler. In San Blas, we stay at the wonderful Hotel Garza Canela and bird the many hot spots of this famous tropical birding destination.

BIRDS BENEFIT BUSINESS ALLIANCE MEMBER PROFILE

Heartstone Retreat and La Cocina Restaurant

The Birdhouse at **Heartstone Mountain Retreat** is a two-bedroom, two-bath vacation getaway on stilts with a wrap-around porch upstairs that peeks into the treetops. More than 110 species of bird have been identified on the 9 ½ acre ranch, which is located near Elgin on the way to Parker Canyon Lake. Owner Jo Schneider would love to see more birders visiting, keeping the properties' birding legacy alive and increasing that species list! (Folks are also welcomed to kick back on the porch and let the birds come to them.)

Together with a group of women friends, Jo Schneider purchased the grassy, woody property after former owner and avid birder Dr. Bev Allen passed away. Jo is now delighted to offer the home and its mountain views as a special place for bird lovers to escape the city and do what they do best—enjoy birds to their hearts' content, just 90

minutes from Tucson. And who could say “no” to sleeping in a birdhouse?

Jo is better known in Tucson as the owner of **Bentley's House of Coffee and Tea** and **La Cocina Restaurant**, but to her the retreat and the restaurants have essentially the same mission: to offer the community a comfortable haven from our often hectic city lives. Anyone who has spent time in the tree-covered courtyard of twinkling lights at La Cocina knows all about that: where else can you listen to live, local music while watching the antics of turtles in a tiny pond?

The Dusty Monk Pub at La Cocina, one of two indoor bars at the outdoor restaurant, has been the cozy location for Tucson Audubon's Birdathon Celebration the last two years. This year, La Cocina will also host **Tucson Audubon's OktoBIRDfest** while



Courtyard at La Cocina

offering 10% of the evening's proceeds as a donation to our efforts. La Cocina's generous arrangement is part of their **Tuesdays for Tucson** program, which supports local non-profits by offering 10% of the evening's income to a different non-profit organization each week.

Tucson Audubon would like to welcome Jo, Heartstone Retreat, and La Cocina Restaurant as members of the **Birds Benefit Business Alliance**.



Heartstone Retreat is offering a special rate to birders. Visit their website (hearstoneranch.com) to view the list of 110 species identified at the ranch. Contact Heartstone Retreat to learn more about their rates for bird lovers.



Front of Heartstone Mountain Retreat



Patio at Heartstone Mountain Retreat



Join us this fall for: **OktoBIRDfest**

OKTOBER 18, 5:30–7:30 PM, LA COCINA

German and autumn-themed bird fun for all. Follow our weekly emails for more info, or go to tucsonaudubon.org/calendar to RSVP

Turn Your Taxes into Treasure for the Trekking Rattlers

WHAT THE HECK ARE CHARITABLE TAX CREDIT DOLLARS?

If you owe Arizona state tax, you can designate \$200 (\$400 for couples filing jointly) to go directly to the charitable organization—or school—of your choice instead of to the IRS, at no extra cost to you. It's about as close to free money as anyone will ever get—and in this case, your tax credit dollars can directly support the Trekking Rattlers of Billy Lane Lauffer Middle School.

WHAT THE HECK IS A TREKKING RATTLER?

Trekking Rattlers are middle school students from **Billy Lane Lauffer Middle School** in the Sunnyside School District who venture out into the wilds of Arizona monthly in search of birds, bugs, trees, creeks, clouds and a good time for all. The crew is headed up by Tucson Audubon volunteer and board member Deb Vath. Any student can tag along and the transportation is paid for by your tax credit dollars.

WHY THE HECK DIDN'T YOU SAY IT WAS THAT SIMPLE?

Follow these 4 simple steps:

1. Send your charitable tax credit to the Trekking Rattlers. For a Sunnyside school district tax credit designation form go to: public.susd12.org/taxdonation.aspx Select Billy Lane Lauffer Middle School, Athletics, then write in **Trekking Rattlers under specific Activities**.
2. The link to the paper form is: susd12.org/sites/default/files/District_Pdfs/taxcredit_form_2016_eng.pdf If you use the paper form, you **must** write in "Trekking Rattlers Hiking and Birding Club" next to the name of the school (Billy Lane Lauffer Middle School) directly on the paper.
3. Also send a quick note to Tucson Audubon (dvath@hotmail.com) to let us know that you have designated your funds.
4. You will receive an official tax credit voucher to submit with your taxes instead of paying money.

Urban Tucson kids will get a chance to step outside and explore the natural wonders of Arizona, some for the very first time. **You will have found a way to turn taxes into treasure.**



Learning in the field, Deb Vath

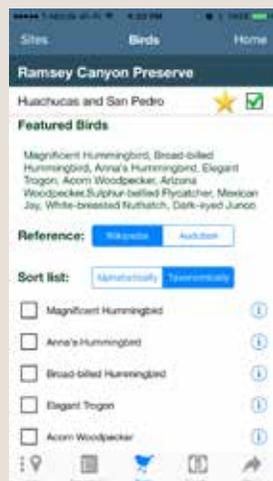


Trekking Rattlers at Mount Lemmon, Deb Vath

DO YOU LOVE HIKING AND HELPING KIDS DISCOVER NATURE?

Trekking Rattlers is looking for YOU to help lead educational hikes for middle school students in some wonderful places in Southeast Arizona. For more information, contact Luke Safford at lsafford@tucsonaudubon.org.

THERE'S AN APP FOR THAT! New birding app has southeast Arizona covered



Developed in partnership with Southeastern Arizona Bird Observatory and the Tucson Audubon Society, "Birding Southeast Arizona" brings you the details of over 130 birding sites in Tucson and beyond. This is a great interactive companion to our *Finding Birds in Southeast Arizona* book!

- Search all sites for a "target bird," and find the nearest location
- Automatically find birding "sites near me" and get map directions
- View details and a list of commonly seen species at each site
- Plan your next trip by searching for sites near a city or ZIP code
- Access Audubon's online bird guide for quick reference in the field
- Tag your favorite spots and share bird-finding maps with your friends
- Track and log your sightings and share custom sighting maps with your friends

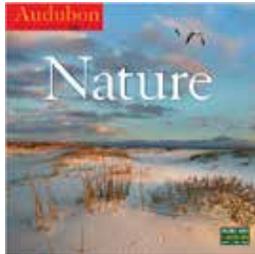
Just download "Birding Southeast Arizona" for \$9.99, grab your binoculars and car keys, and go! **Keep in touch with Tucson Audubon to find out when the app is released.**

TUCSON AUDUBON NATURE SHOP

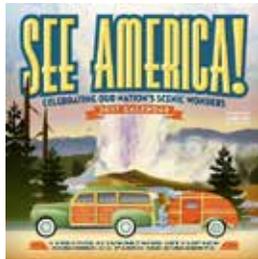
WINTER 2016 CATALOG

SHOP LOCAL!

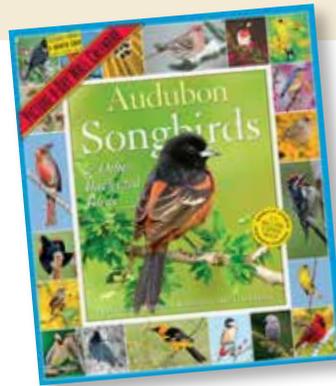
2017 CALENDARS



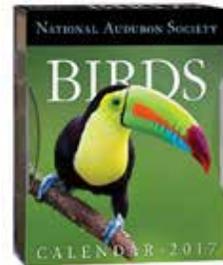
\$14.99



\$14.99

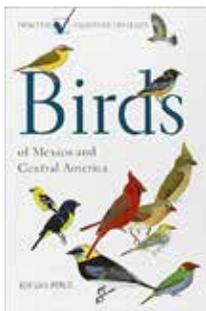


\$14.99

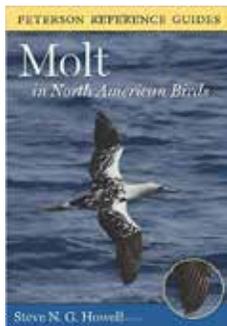


\$16.99

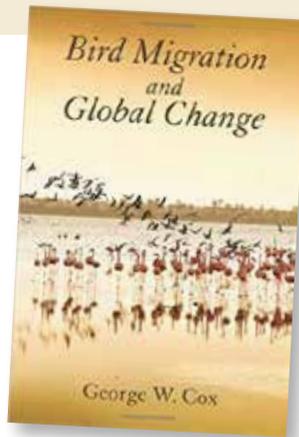
BOOKS FOR BIRDERS



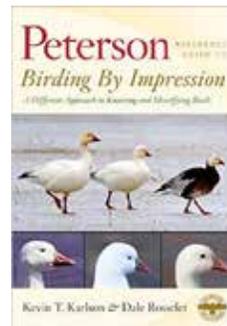
\$29.95



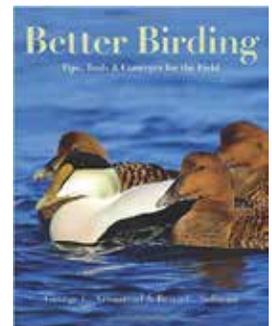
\$35.00



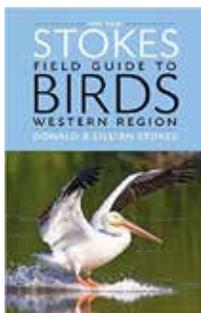
\$45.00



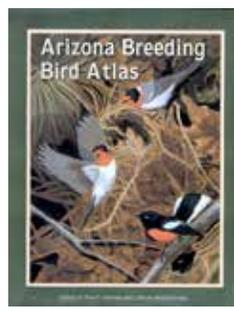
\$30.00



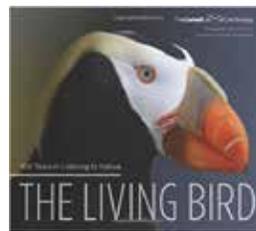
\$29.95



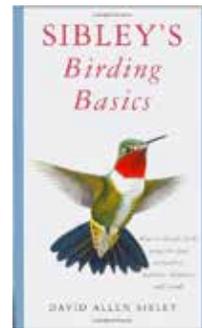
\$19.99



\$75.00



\$29.95

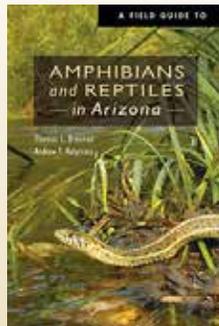


\$15.95

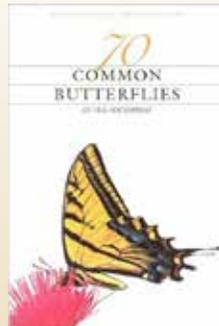
LOCAL AND REGIONAL



\$34.95



\$12.00



\$9.95

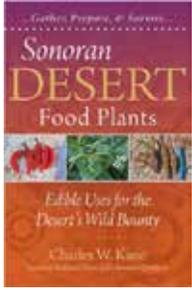


\$25.95

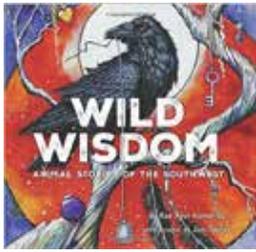


Native Bee Habitats and BioArt
\$58.00-\$78.00

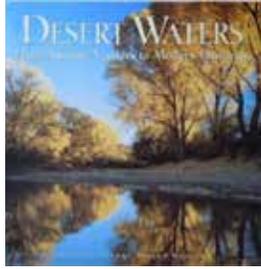
GENERAL BOOKS



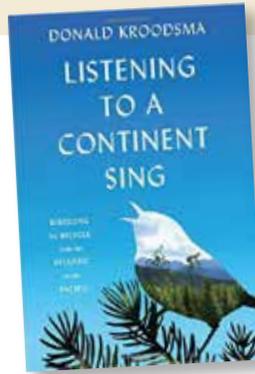
\$8.95



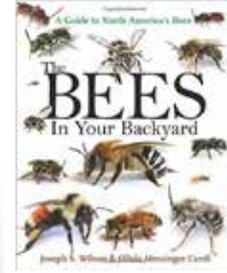
\$14.95



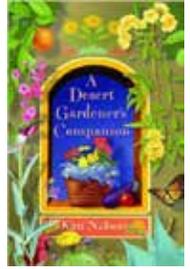
\$4.95



\$29.95

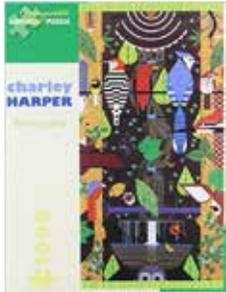


\$29.95

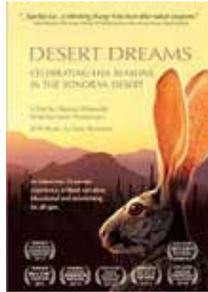


\$19.95

GAMES AND ENTERTAINMENT



Charley Harper Puzzles
\$16.99



Desert Dreams DVD
\$20.00



Raven Door Mat \$29.00

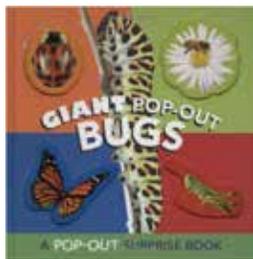


National Parks Playing Cards
\$9.99

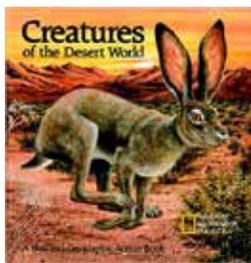


Thanksgiving Coffee
\$12.00-\$15.00

KIDS CORNER



\$10.95



\$19.00



\$19.95



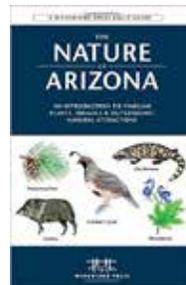
\$24.95



\$28.00



Root Viewer \$10.50



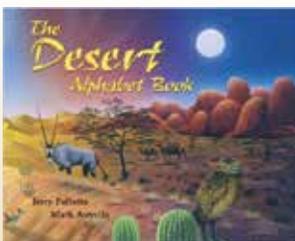
\$14.95



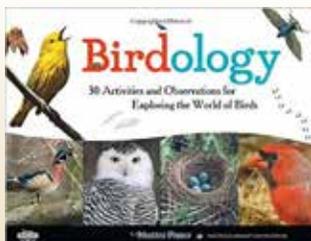
\$24.95



\$35.99



\$7.95



\$15.95



Rite in the Rain Birder's Journal
\$9.95



\$29.95

GIFTS AND JEWELRY



Audubon Singing Clock
\$34.99



Ben's Bells
\$20.00



Bird Soap Project
\$28.00-\$34.00



Crawsister Jewelry
\$35.00-\$55.00



Bird Rain Gauge
\$18.95

HOLIDAY



Tea Light Holder \$5.00



Holiday Cards \$10.00-\$12.00



Fall Dishtowels \$12.00



Gift Bag \$5.00

FEEDERS & SEED



Cole's Black Oil
Sunflower Seed 25 Lb
\$40.00



Quail Block
\$16.50



Eco Suet
Ball Feeder
\$20.00



Bugs Nuts & Fruit
Cylinders
\$12.00-\$24.00



Best 1 Hummingbird
Feeder
\$16.50

APPAREL



\$52.00



\$39.99



\$39.00



\$9.50



\$25.00



\$72.00



\$84.00

OPTICS

	BRAND / STYLE / POWER	MSRP	MEMBER
1	Eagle Optics Ranger ED 8x32	\$358.88	\$322.99
2	Nikon Monarch 5 10x42	\$331.95	\$298.76
3	Nikon Monarch 7 8x42	\$479.95	\$431.96
4	Opticron Discovery 8x32	\$252.00	\$229.00
5	Opticron Oregon 8x32	\$165.57	\$149.00
6	Swarovski 85mm Scope	\$1,910.00	\$1,719.00
7	Swarovski CL Companion 8x30	\$1,143.00	\$1,029.00
8	Swarovski EL 8x32	\$2,443.00	\$2,199.00

	BRAND / STYLE / POWER	MSRP	MEMBER
9	Swarovski EL 10x42	\$2,888.00	\$2,599.00
10	Swarovski EL 12x50	\$3,188.00	\$2,869.00
11	Vortex Diamondback 8x42	\$269.00	\$219.99
12	Vortex Raptor 6.5x32	\$119.00	\$94.99
13	Vortex Viper HD 10x42	\$699.00	\$599.99
14	Zeiss Conquest HD 8x32	\$999.99	\$899.99
15	Zeiss Terra ED 8x42	\$444.43	\$399.99
16	Zeiss Victory SF 10x42	\$3,222.21	\$2,899.99



1



2



3



4



5



6



7



8



9



10



11



12



13



14



15



16

GIVE THE GIFT OF MEMBERSHIP!
 membership@tucsonaudubon.org / 520-629-0510

VISIT US!
 Main Nature Shop · 300 E University Blvd #120 · 520-629-0510 · Mon-Sat, 10 am-4 pm
 Agua Caliente Park · 12325 E Roger Rd · 520-760-7881 · Thu-Sat, 10 am-1:30 pm*
 *Please call to confirm hours. The shop opens earlier and closes later during certain months.

For more shop items, visit TUCSONAUDUBON.ORG

New Field Guide to Arizona's Birds

A review by Doug Jenness

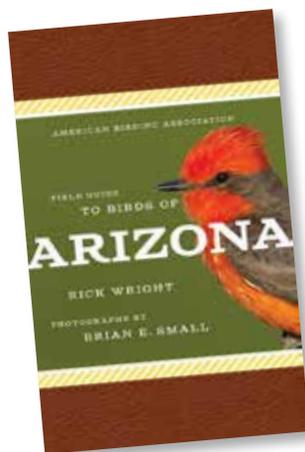
Although there are several bird guides to specific regions of Arizona, it has been more than a decade since a field guide for the entire state has been published. This new photographic guide, ninth in the American Birding Association's series of state bird guides, is the most comprehensive guide to the Grand Canyon state's birds and is a welcome addition to our birding toolbox. It will be particularly appreciated by birders new to the diversity of Arizona's rich bird life. The 562 outstanding color photographs by Brian Small and others were carefully selected by the author to illustrate the key field marks for identifying birds. Where needed, separate photos show the distinction between the sexes, as well as the differences between alternate and basic plumages. Unlike many other guides, these clear, crisp photos generally occupy about half the space on each page, aiding the users' ability to study them. The length and wingspan of each species is included as well as its scientific name. The brief text for each species offers details about identification as well as a sense of the habitat and seasons where they can be found.

Although the author was only able to detail 323 of the state's more than 555 species, the book includes an up-to-date Checklist of the Birds of Arizona, prepared by the Arizona Field Ornithologists. For the most part, the excluded species are those that are accidental or not likely to be seen by birders visiting the state such as Northern

Jacana, Fan-tailed Warbler, Black Turnstone, etc. However, there are several that are now reasonably regular, even if very local, for which space should have been found. Among them are Ruddy Ground-Dove, Buff-collared Nightjar, Rufous-capped Warbler, and Plain-capped Starthroat.

Readers will appreciate the inclusion of an Arizona map that shows national forests and parks, Native American lands, and the state's 15 counties. A description of the state's many and varied habitats is included as part of the book's introductory section. Another particularly useful part of the introduction is a section on "avian topography," which utilizes superb photos to show the anatomical features of birds and the different kinds of feathers and plumages.

Rick Wright is eminently qualified to author this field guide. He is highly knowledgeable about Arizona's birds as a long-time tour leader and well-known writer and lecturer on birds and birding. His love of Arizona and its natural life, as well as his meticulous attention to detail, are all reflected in this new book. ■



American Birding Association Field Guide to Birds of Arizona
 Rick Wright
 Scott & Nix, Inc., 2016
 360 pages, \$24.95—paper

IN MEMORIAM: GEORGE WEST



It is with great sadness we report the passing of George West, Ph.D, respected ornithologist and artist, on August 31, 2016.

George started drawing and painting birds in the fourth grade in Massachusetts, and made birds both his lifetime vocation and avocation. After helping found the Institute of Arctic Biology at the University of Alaska Fairbanks and 21 years of research and publication of over 80 articles on arctic and subarctic ornithology and ecology, he retired to Homer, Alaska in 1984 and then moved to Green Valley in 1996.

George is co-founder of the non-profit organization the Hummingbird Monitoring Network. He and his wife Ellen processed over 14,500 hummingbirds in southeast Arizona, gathering data to help protect hummingbirds and their habitats. He was also heavily involved the Friends of Madera Canyon and Tucson Audubon. He provided countless drawings and paintings for Tucson Audubon publications over the past 15 years. The *Dastardly Duos* and *What's In a Name* columns in the *Vermilion Flycatcher* were showcases for his work

while providing key field marks to aid readers in identification. More recently, his Violet-crowned Hummingbird painting was featured on signage at the Paton Center for Hummingbirds.

George's invaluable books include the *American Birding Association's Birders' Guide to Alaska* (2002), *Do Hummingbirds Hum?* (2010), and *North American Hummingbirds: An Identification Guide* (2015).

George had a tremendous impact on the southeast Arizona birding community, and he will be greatly missed. Ellen has indicated that his greatest wish would be that a donation in his name be sent to the Friends of Madera Canyon Scholarship Fund, PO Box 1203, Green Valley, AZ 85622.

Long-term members will remember the "Dastardly Duos" column I wrote for the Vermilion Flycatcher newsletter. After the first or second article, George volunteered his bird drawings to shore up my writing, most often drawing new images highlighting the field mark differences I pointed out in the text. These images improved the column immensely and increased its popularity many-fold. The column ran for 44 issues and was requested by three other Audubon newsletters to reprint it in theirs. Hats off to George, a great guy!

—Larry Liese



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

300 E University Blvd, #120
Tucson, AZ 85705

Address Service Requested

Vermilion Flycatcher

Volume 61, Number 4, October–December 2016

© 2016 Tucson Audubon Society

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.



Gray Hawk, Dan Wiesz

**What in the all of the Southwest is as unique as the Gray Hawk?
Watch your mailbox for answers in November.**