

THE QUARTERLY NEWS MAGAZINE OF TUCSON AUDUBON SOCIETY | TUCSONAUDUBON.ORG

# Vermilion

FLYCATCHER

October–December 2013 | Volume 58, Number 4

## Threats To Birds

**Climate Change • Habitat Loss**

**Cats • Window Collisions**

**Lead Poisoning**

**Wind Factories**

**Tucson Meet Your Birds**

**What's in a Name:  
Loggerhead Shrike**

*Plus Nature Shop Winter Catalog Insert*



Tucson Audubon Society is dedicated to improving the quality of the environment by providing environmental leadership, information, and programs for education, conservation, and recreation. Tucson Audubon is a non-profit volunteer organization of people with a common interest in birding and natural history. Tucson Audubon maintains offices, a library, and nature shops in Tucson, the proceeds of which benefit all of its programs.

Tucson Audubon Society

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

All phone numbers are area code 520 unless otherwise stated.

[www.tucsonaudubon.org](http://www.tucsonaudubon.org)

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Hours: 10 AM–4 PM, Monday–Saturday

Agua Caliente Park, 12325 E Roger Rd 760-7881

Hours: NOVEMBER–APRIL Thursday 9 AM–1:30 PM,

Friday & Saturday, 10 AM–2:30 PM

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**FRONT COVER:** Peregrine Falcon by Will Sooter. Will is a field biologist who has been observing and documenting the behavior of a breeding pair of Peregrine Falcons for 8 years. You can see his work at [www.sharpeyonline.com](http://www.sharpeyonline.com).

To have your photograph considered for use in the *Vermilion Flycatcher*, please contact Matt Griffiths at [mgriffiths@tucsonaudubon.org](mailto:mgriffiths@tucsonaudubon.org).



## Beyond Habitat Loss: Other Man-made Threats to Birds Compound Traditional Driver of Mortality

Guest commentary by *Darin Schroeder, Vice President of Conservation Advocacy at American Bird Conservancy*

It may seem obvious to those of us in the conservation world that a bird species' population size and trend are determined by the balance between reproductive success and adult mortality. In other words, birds that die must be replaced by more birds than were lost if a species' population is to grow.

For many years, it was a given that the largest source of bird population declines was habitat loss through conversion for human use and habitat degradation from ecologically unsustainable land uses. There are increasingly fewer places for our native birds to live—especially large blocks of unbroken natural habitat—limiting bird population size. But now, to make matters worse, other man-made threats to birds are growing. The combined effect is devastating bird populations.

For example, of the 341 neotropical migratory species found in the United States, 127 are known to be in decline—60 of these in severe decline and suffering a population loss of more than 45 percent in just the past 40 years. This analysis was confirmed in the 2009 *State of the Birds* report assembled by the U.S. Fish and Wildlife Service and many partners, known to be the most

comprehensive assessment to date on the status of U.S. bird populations.

Threats such as free-roaming outdoor cats, inappropriately lighted communications towers, poorly placed wind turbines, unnecessary night lighting of tall buildings, lead poisoning, and even glass windows in our homes all play a contributing role to the decline of many bird populations (see page 14). By better understanding how our activities threaten birds, we can explore alternatives that will help to reduce the human impact.

American Bird Conservancy leads programs that are monitoring and working to reduce some of the most significant drivers of bird mortality, and these are beginning to achieve notable results. For example, our Collisions Program, working with partners, influenced decisions in San Francisco, Toronto, and across the state of Minnesota to require bird-saving building designs. Our Pesticides Program influenced a near-total ban on d-CON rat poisons that harm many raptors.

We are optimistic that—with concerted effort to understand and reverse these threats—we'll find ways to reduce human impacts, and ultimately avoid further extinctions. ■



# COMMENTARY

PAUL GREEN | EXECUTIVE DIRECTOR

## The Roots of Hope

What role does hope have in saving birds, other wildlife, and the future of the earth?

The passing of the Passenger Pigeon should remain a lesson to us all 100 years on. Our society allowed unfettered capitalism and commercial market hunting to drive the species from 3–5 billion birds to extinction in a little over 100 years. A few people attempted to curtail hunting in the late 1800s in Michigan, Ohio, and Pennsylvania, but without clear scientific evidence about the scale of the decline or popular support to save the birds, it was a hopeless cause.

At about the same time, plume hunters had nearly wiped out the Snowy Egret population of the United States. By 1886, the market created by the millinery trade was responsible for killing around five million birds a year, creating jobs and profits, but pushing several species close to extinction.

In the late 1800s, big-game hunter George Bird Grinnell campaigned against an “overwhelming tide of greed, folly, and indifference” to outlaw market hunting of wild bird populations, highlighting the plight of birds being killed for plumes to adorn ladies’ hats. Working through an often-antagonistic American Ornithologists Union and the grassroots National Association of Audubon Societies, he persuaded the Florida State Legislature to pass a model non-game bird protection law in 1901. A series of federal laws followed to protect birds, including the Migratory Bird Treaty Act of 1918.

While these early lessons taught us that we had to be continuously aware of commercial exploitation of species, and of the importance of scientifically valid monitoring of populations, it took us a while to get around to protecting habitats that support species.

We could have saved the Ivory-billed Woodpecker if we had had the courage to stop the logging of the land harboring the last population of the species. The landowners, Chicago Mill and Lumber, accelerated the cutting of the trees used to make tea chests for the British Army, as interest in conserving the Ivory-billed

increased and as Congress failed to act in 1940. Critical habitat designation for endangered species had to wait until 1973 with the Endangered Species Act.

There is incontrovertible evidence that DDE, the metabolite of DDT, is directly responsible for the thinning of eggshells in birds of prey and other effects on breeding. Bald Eagles had declined from around 400,000 in the mid-1800s to just 417 breeding pairs during the middle part of the last century. DDT was finally banned in the U.S. in 1972 as the result of grassroots pressure, even as DDT manufacturers campaigned vigorously against the ban.

Peregrine Falcons had declined from around 4000 to 324 pairs in 1975, recovering to around 3000 pairs throughout North America today. California Condors were reduced to 22 birds in 1987, all in captivity. While 435 California Condors are alive today, 237 in the wild, their survival is in jeopardy unless lead ammunition is banned (see page 18).

The list of non-habitat related causes of death to birds is daunting (see page 14), and we each know what we can do in our lives to reduce them. While maintaining habitats for birds can be partly addressed in southeast Arizona by directing development to land of lesser biological significance and by maintaining water courses, the big issue is human-induced climate change resulting from global warming caused by emissions of heat-trapping gases.

Climate change will impact many aspects of our natural world, with major consequences for habitats and food supply for birds (see page 15). The very survival of human civilization could be at stake as our food production systems become seriously disrupted.

It would be easy to fall into a paralysis of despair when we see powerful interests working to maintain the status quo for short-term economic gain. Mary Pipher, in her book *The Green Boat*, advises first ending any denial of the unpleasant and huge issues. Coming out of a trance of denial is painful, but it will wake us up to the real issues, bringing clarity to what



Snowy Egrets were nearly wiped out by plume hunters in the 1800s.

PARIJULA

we fear so we can see a way forward. Skillfully managed, the anger that can come out of realizing what is really going on can become the energy that we use to change the world. Action to change things is the natural and healthy result of acceptance of a new unpalatable truth.

And the most effective way we have of dealing with this emotional pain is to turn toward other people. Our inner mind seeks connection with others, and this can lead naturally to becoming part of urgent grassroots action for change.

This brings me back to the question posed at the outset. I believe that real change in the future will come not by *hoping* for change but through the *proactive work* of grassroots activists.

As grassroots activists, we have a duty to challenge the public or private right to: pollute the environment; systematically remove selected species; spread chemical pesticides indiscriminately; and meddle chemically with our food and water. When the *roots of hope* transform into the *grassroots of action*, we are on our way to changing the world for the better. A grassroots movement that demands the protection of our natural environment through state and federal regulation has to be the way forward. Being mindful that “we have the best government money can buy” (Mark Twain), we need to be aware of the influence of corporations and their funded lobbyists on the decisions of our elected representatives. We have to remind them constantly that we vote them in and out of office and that we are watching.

So we need to live by our convictions, be an example to others, and join together with others and organize to protect the natural environment that supports us. Margaret Mead said it best: “Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only thing that ever has.” ■

# TUCSON AUDUBON EVENTS AND CLASSES

## Let's Learn Together This Season!

Please visit our website for more details and to register:

[www.tucsonaudubon.org/education](http://www.tucsonaudubon.org/education)



RICHARD FRAY

### One-day Workshops Fall 2013

#### **Gardening to Attract Birds**

Learn how to provide food for birds—the natural way—using plants that offer seeds, fruit, and nectar, as well as cover and shelter. We can support birds and make up for lost habitat by creating these desert-friendly gardens. Explore the “rules of attraction” with naturalist/writer/gardener Lynn Hassler who has recorded over 130 species in her Tucson backyard.

*Date and Time:* October 19, 2013;  
10:00 AM–11:30 AM

*Location:* Tucson Audubon offices on University Blvd and 5th Ave.

*Cost:* \$25

#### **Eat Mesquite and Other Desert Treats**

Do you want to learn how to harvest mesquite pods and turn them into delicious soups, drinks, sauces, and more? Barbara Rose, Bean Tree Farmer and Desert Harvesters volunteer, will take you on a desert walk and have harvested mesquite beans and flours on hand to process into delicious morsels.

*Date and Time:* November 2, 2013;  
9:30 AM–12:30 PM  
*Location:* Bean Tree Farm  
*Cost:* \$50

#### **Beyond Birding—Explorations of the Land Ethic**

This workshop explores the concept of the land ethic as it applies to birding, conservation, and our own lives. Through compelling activities indoors and out, participants will hone observation skills, broaden their landscape vision, and reflect on their own personal land ethic. Whether as a bird watcher, a general nature enthusiast, an educator, or a field biologist, we can all benefit from deepening our understanding of the land ethic and examining how that contributes to conservation. Taught by Trica Oshant Hawkins.

*Date and Time:* November 23, 2013;  
9:00 AM–12:00 PM

**Register online today! Visit  
[tucsonaudubon.org/education](http://tucsonaudubon.org/education).**

Contact for all education  
activities: Bête Jones at  
[bjones@tucsonaudubon.org](mailto:bjones@tucsonaudubon.org),  
520-629-0510 x7012



RED-WINGED BLACKBIRD, LOIS MANKOWITZ

*Location:* Tucson Audubon's  
Mason Center, 3835 W. Hardy Rd.  
*Cost:* \$25

### Specialty Workshops 2014

Intended as stand-alone classes, these workshops are a great opportunity to focus on a specific group of birds and brush up on your identification skills. Instruction will focus on distinguishing among similar species, identification techniques, and vocalizations. Cost is \$110 for members, \$145 for non-members.

#### **Spring Programming**

See our website for more detailed descriptions of each workshop. All taught by Homer Hansen.

Sparrows: February 6 & 8, 2014  
Raptors: February 13 & 15, 2014  
Birding by Ear: April 17 & 19, 2014

### Education Courses Winter / Spring 2014

#### **For Beginners**

#### **Backyard Birding and Beyond**

Open yourself up to the natural world by gaining skills and knowledge about birding that you can take with you into your backyard or to any corner of the globe! Topics to be covered include: principles of identification, binoculars and field guides, birding vocabulary and etiquette, local bird I.D. and lore, seasonal occurrence, family characteristics, and gardening to attract birds. You will learn firsthand why southeastern Arizona is such a great place for birds and why bird

watching is so rewarding. Taught by Lynn Hassler, longtime birder, educator, and noted author.  
*Dates:* Saturdays, January 11–February 22 (No class January 25).  
*Cost:* \$150 for members, \$185 for non-members

#### **Birding by Habitat**

Southeastern Arizona offers such excellent birding opportunities in part because of its variety of habitats. Come experience the fun of birding in different natural environments with instructor Lynn Hassler. One classroom session is followed by three field trips to different habitats: Desert, Riparian, and Sky Island.  
*Dates:* Saturdays, April 5–26  
*Cost:* \$125 for members, \$160 for non-members

#### **For Birders with Experience**

#### **Moving to Mastery**

Take your birding to the next level. If you are ready to move your birding skills beyond the basics, our popular Moving to Mastery class is for you. Content will focus on structure and behavior to bring you to a better understanding of bird identification. You will learn how to identify some of the more difficult bird groups, use technical references, and understand bird topography. Taught by Homer Hansen.  
*Dates:* Thursdays and Saturdays, March 13–April 10  
*Cost:* \$250 for members; \$285 for non-members

#### **For Families**

#### **Riparian Family Institute**

This weekend program for the entire family incorporates children's activities into an atmosphere in which everyone can experience nature, explore, and learn together. The focus is on the rich plant and animal life found along the beautiful San Pedro River, one of the last free-flowing rivers joining Mexico and the United States.  
*Date:* April 5–6  
*Cost:* \$70 per person

FOR MORE INFORMATION ON OUR SUITE OF EDUCATION CLASSES AND TO REGISTER ONLINE, PLEASE VISIT  
[WWW.TUCSONAUDUBON.ORG/EDUCATION](http://WWW.TUCSONAUDUBON.ORG/EDUCATION)



# Celebrate the Bounties of the Sonoran Desert

## Harvest Festival and Mesquite Milling at Tucson Audubon's Mason Center

Saturday, November 9, 8 AM–2 PM



\*There will be a fee to mill your mesquite pods



This event gathers our community to celebrate sustainable living and the edible bounties of the Sonoran Desert. Through the choices we make about the food we eat and the way we live, we can leave a smaller ecological footprint on our land and create a healthier, more sustainable Tucson for birds, other wildlife, and people.

**Explore the Mason Center**, a demonstration of sustainable living in the Sonoran Desert. This year, the main building is being converted into a net-zero energy building—producing as much energy as it uses on an annual basis.

Tours of the Mason Center property throughout the day will include bird watching and phenology, net-zero energy building upgrades, and other sustainability features.

**Grab some snacks** from food trucks and vendors Prickly Pops, Isabella's Ice Cream Truck, and Planet of the Crepes.

Choose edible plants from a native plant sale.

Get your mesquite pods milled into delicious, gluten-free flour.\*

**Bring the kids** for face painting, bird feeder information, and more hands-on activities.

Celebrate the diversity of Sonoran Desert foods—both wild foods and desert-adapted heritage crops—and the diverse Sonoran Desert landscape that gave birth to this abundance!

For full Harvest Festival details, including information on preparing your mesquite pods for milling, visit [tucsonaudubon.org/harvestfestival](http://tucsonaudubon.org/harvestfestival) or contact [kkroesen@tucsonaudubon.org](mailto:kkroesen@tucsonaudubon.org) | 520-209-1806.



On-site to answer your sustainability questions, sell gifts, and give demonstrations and presentations will be:

- Arizona Native Plant Society
- Bean Tree Farm
- Borderlands Habitat Restoration Initiative
- GeoInnovations
- Edible Baja Arizona
- Friends of Ironwood Forest
- Jay & Carol Cole
- National Phenology Network
- Native Seeds/SEARCH
- Pima Association of Governments' Sustainable Environment Program
- Pima Department of Environmental Quality
- Tortilleria Arivalo
- Tortolita Middle School
- Tucson Audubon's Nature Shops



**October 5.** Grassland Bird Communities workshop. Contact [bjones@tucsonaudubon.org](mailto:bjones@tucsonaudubon.org)

**October 8.** Lower San Pedro IBA fall migrant bird survey. Contact [jmacfarland@tucsonaudubon.org](mailto:jmacfarland@tucsonaudubon.org)

**October 11–13.** Tucson Meet Yourself (see p 6)

**Oct 11–13.** AZFO Annual Meeting in Sierra Vista

**October 12.** Atturbury Wash Restoration Volunteer Day (see p 9)

**October 14.** Living with Nature lecture (Tucson): *Food Chain Restoration for Pollinators and People* with Gary Nabhan (see p 6)

**October 17.** Birds & Beer (see p 27)

**October 19.** Gardening to Attract Birds workshop (see p 4)

**October 19.** Dedication of Grand Canyon Global IBA

**October 26.** IBA Bluebird Blitz (see p 7)

**October 26.** National Make A Difference Day Volunteer Day at Mason Center (see p 9)

**November 2.** Eat Mesquite and Other Desert Treats workshop (see p 4)

**November 9.** Harvest and Mesquite Milling Festival (see left)

**November 9.** Living with Nature lecture (Green Valley): *Birds of Madera Canyon* with Doug Moore (see p 6)

**November 16.** Atturbury Wash Restoration Volunteer Day (see p 9)

**November 18.** Living with Nature lecture (Tucson): *Dance of the Continents: Fire and Climate in North and South America* with Profs Don Falk and Mauro González (see p 6)

**November 21.** Birds & Beer (see p 27)

**November 23.** Beyond Birding—Explorations of the Land Ethic workshop (see p 4)

**December 7.** Atturbury Wash Restoration Volunteer Day (see p 9)

**December 7.** Living with Nature lecture (Green Valley): *Pollinators, Plants, and People* with Caleb Weaver (see p 6)

**December 9.** Living with Nature lecture (Tucson): *Roots of Hope* with Paul Green and member holiday potluck at St Phillip's in the Hills Episcopal Church (see p 6 & 10)

**January 4.** Living with Nature lecture (Green Valley)

**January 11–February 22.** Backyard Birding and Beyond course (see p 4)

**January 13.** Living with Nature lecture (Tucson)

**February 1.** Living with Nature lecture (Green Valley)

**February 6 & 8.** Sparrows workshop (see p 4)

**February 10.** Living with Nature lecture (Tucson)

**February 13 & 15.** Raptors workshop (see p 4)

**February 20.** Tucson Audubon's 6th Annual Gala at Hilton El Conquistador. Save the date!

# Tucson Audubon's Living with Nature Lecture Series

## This Season's Schedule: Save the Dates

**TUCSON** Living with Nature Lecture Series and Member Meetings

**VENUE:** Pima Community College Downtown Campus, Amethyst Room. Located on campus at 1255 N. Stone Ave. The program begins at **7 PM, SECOND MONDAY** of each month **October through May.**

### October 14 • Tucson

FOOD CHAIN RESTORATION FOR POLLINATORS AND PEOPLE with Gary Nabhan, internationally celebrated nature writer

Gary will review the current status of native pollinator declines such as that of honey bees, how pollinator habitat can be restored on farms and in gardens, and what you can do to be a part of the solution. He will also discuss how restoring the food chain for pollinators can affect human food security in the face of climate change. There will be a book signing after the lecture, where we will highlight Gary's most recent book, *Growing Food in a Hotter, Drier Land*.

### November 18\* • Tucson

DANCE OF THE CONTINENTS: FIRE AND CLIMATE IN NORTH AND SOUTH AMERICA with Don Falk, Associate Professor in the University of Arizona School of Natural Resources and the Environment, and Mauro González, Associate Professor



APACHE SITGREAVES NATIONAL FOREST

at the Department of Forest Science and Natural Resources, Universidad Austral de Chile

**Note:** \*Third Monday. Forest fires are a common occurrence in our region of the world. These fires play a major role in ecosystem health in both North and South America. Despite their large geographic distance, the climate system ties these two regions together in many ways. Join two international experts on fire ecology, Don Falk and Mauro González, as they explore fire in temperate forests of North and South America through the lens of dendrochronology (tree-ring research) as well as observations of current fires.

### December 9 • Tucson

HOLIDAY POTLUCK\*: ROOTS OF HOPE with Paul Green, Executive Director, Tucson Audubon Society

**Note:** \*At St. Philips in the Hills Episcopal Church (see p 10). At our 2007 Pot Luck, Paul Green gave a presentation entitled *Small Fluorescent Bird* about our relationship with carbon. At this year's Pot Luck, Paul seeks to provide some

optimism for our future in his talk which begins with the *Roots of Hope*.

Look forward to spring talks on issues such as Land Ethics and Birding with Trica Oshant Hawkins. Christopher Cokinos will tell the story of Martha, the last known living Passenger Pigeon, as we mark the 100th year anniversary of her death.

**2014 Dates:** January 13, February 10, March 10, April 14, May 12

### GREEN VALLEY Living with Nature Lecture Series

**NEW VENUE!!** We have a new venue for next season. All lectures will be held at the Green Valley Recreation's Desert Hills Social Center, 2980 S. Camino Del Sol. Lectures will be scheduled on the **FIRST SATURDAY** of the month, at **10 AM** from **November to April.**

### November 9\* • Green Valley

BIRDS OF MADERA CANYON with Doug Moore, Education Director, Friends of Madera Canyon

**Note:** \*Second Saturday. Madera Canyon is one of the premier birding spots in southeastern Arizona and it is right in our backyard! Join Doug as he presents an overview of the birds of Madera Canyon and its surrounding area. Discover what birds you can see at different elevations and habitats, including residents, seasonal migrants and canyon rarities. Doug will also

highlight interesting canyon plants, flowers and animals as he takes you on a virtual tour of this unique region.

### December 7 • Green Valley

POLLINATORS, PLANTS AND PEOPLE: BUILDING COMMUNITY THROUGH RESTORATION with Caleb Weaver, Restoration Ecologist, Borderlands Habitat Restoration Initiative

The health of our natural surroundings contributes to the economic, social and physical health of our human communities.

By working at the watershed level—harvesting, growing, and planting pollinator-attracting plants—we can help to retain water, rebuild food chains and foster community relationships. Join Caleb as he discusses BHR's exciting projects that focus on the importance of pollinators to the natural ecosystem and human food system alike. Caleb will also give you tips on how to design a resource-conscious, native wildlife garden in your own backyard!

Spring talks will take us birding in Western Central Mexico with David MacKay and into the grasslands with John Millican as he introduces us to the Antelope Fencing Project and how large animals are managed in this unique ecosystem.

**2014 Dates:** January 4, February 1, March 1, April 5



MONARCH FEEDING ON THISTLE, CALEB WEAVER

## See You at Tucson Meet Yourself


On October 11, 12, and 13

Tucson Meet Yourself attendees will meet their birds! Stop by Tucson Audubon's booth and our stellar volunteers will show you how to get started, use binoculars, attract more birds to your yard, and where to go and watch birds. Tucson Meet Yourself is an annual celebration of the living traditional arts of Southern Arizona's and Northern Mexico's diverse ethnic and folk communities. Birdlife, like many other aspects

of life in the southeastern Arizona borderlands, is closely tied to Mexico and the tropics. Birds help us to understand not just our physical place, but our relationship with that place and the other living things with which we share our home. Join us during this event and share your love of this bird culture.



## FanTAStic Holiday Gift Ideas for Loved Ones Who Love Birds

A donation to Tucson Audubon in honor of someone special is a gift that keeps on giving—perfect for the holidays or other celebrations! Visit [tucsonaudubon.org/tribute](http://tucsonaudubon.org/tribute) or call Erin Olmstead, Development Manager, at 520-209-1809 for assistance. See insert for more "fan-favorite" gift ideas from our Nature Shops. 



VOILET-CROWNED HUMMINGBIRD, GEORGE WEST



# TUCSON AUDUBON NEWS ROUNDUP



## Third Annual Bird & Wildlife Festival Highlight Reel

Erin Olmstead, Development Manager

Thanks again to all who attended and supported the third annual Tucson Bird & Wildlife Festival at the Riverpark Inn! It's because of YOU that this event continues to grow and thrive. With so many special guests and memorable moments, it's impossible to capture all the excitement (and our gratitude) on just one page. Check

the blog for supporter shout-outs, a festival species list, Birding Cup Big Day recaps, and more photos. If you have any comments or ideas, send them our way. We hope you'll join us next year! Mark your calendars for August 13-17, 2014—the 4th annual festival will feature Steve N.G. Howell as keynoter.



DOUGLAS EVANS



MATT GRIFFITHS



JENNIE DUBERSTEIN



DEBRA FINCH

Do you "Like" the Tucson Bird & Wildlife Festival? Visit [www.facebook.com/tucsonbwf](http://www.facebook.com/tucsonbwf)



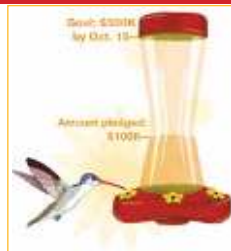
LAURA STAFFORD



LOUISE ZEIMATIS

**Row 1, L to R:** Enviro-educator/Bird paparazzo Doris Evans shared an intimate look at the nesting roadrunners in her Tucson yard; Vincent Pinto explains the "finer points" of a barrel cactus on the Naturalists' Saunter. **Row 2, L to R:** John Yerger (left) and Jake Mohlmann, 2/3 of team "Birding the Midnight Oil," nabbed the Sky Islands Birding Cup for the third year in a row; Richard Fray (left) and Chris Benesh (second from left) run through the checklist after a great day in the field. Lifers were had by many. **Row 3, L to R:** Betty and Ric Zarwell welcome Nature Expo-goers to Rockjumper's colorful booth; A Birds & Butterflies field trip to Brown Canyon at Buenos Aires NWR was a popular new offering this year.

## Help Fill the Feeder to Save Paton's Birder Haven • [abcbirds.org/paton](http://abcbirds.org/paton)



A few months ago, American Bird Conservancy (ABC) approached Tucson Audubon with a proposal to partner with ABC and Victor Emanuel Nature Tours to help raise funds to purchase the Paton property (in Patagonia, AZ), which would then be Visit [tucsonaudubon.org](http://tucsonaudubon.org) for updates and more.

gifted to Tucson Audubon by ABC. We agreed that, if we can collectively raise funds for the purchase (\$300K) and additional funds for needed repairs and renovations, we will take on the ownership and running of the property, with the goal of keeping it open for the

birding community and turning it into a volunteer-run outreach center. To this end we have reached out to the international birding community, with mixed success. Individuals, ABC Board Members, and Audubon chapters have been generous with their gifts to

match the \$120K ABC pledge, taking the total raised so far to nearly \$270K. Please consider making a donation online at [abcbirds.org/paton](http://abcbirds.org/paton) or by contacting Jean Barchman at [jbarchman@tucsonaudubon.org](mailto:jbarchman@tucsonaudubon.org) or 520-209-1802.



# Arizona IBA—Purple Martins, Yellow-billed Cuckoos, and Eastern Bluebirds Abound



Jennie MacFarland, IBA Conservation Biologist



The IBA summer survey season was characterized by many adventures and amazing encounters. Left: The soaking rains in Sierra Vista this summer caused the Lower San Pedro to flow very high, and many roads were impassable. Right: Evening driving surveys revealed that many more desert-nesting Purple Martins than we thought were using the ecotone between the desert uplands and San Pedro River. Insets: We also found lots of other wildlife along the river including a Box Turtle and a troop of White-nosed Coatis.

ALL PHOTOS JENNIE MACFARLAND

As this summer's heat fades into fragrant fall with migration just around the corner, there is a twinge of sadness that the Important Bird Area field season is winding down. It is also incredibly gratifying to look back over the last several months and review some of the amazing observations the Arizona IBA crew had this summer. Much of the summer survey work happened along the Lower San Pedro River north of Tucson near San Manuel. This portion of the San Pedro River is stunningly beautiful and ecologically rich with thick riparian vegetation and lots of birds and wildlife. This summer was the second year we conducted Yellow-billed Cuckoo surveys in this area, and we found even more breeding occurrences than last year. Our western subspecies of this bird is of very high conservation concern due to severe habitat loss. We were happy to find them on each of our three survey mornings along the Lower San Pedro. These birds are notoriously shy and often avoid detection during an all-bird survey. To get an accurate picture of how many cuckoos are using this habitat to nest we used a call-back protocol where we played the call of a

Yellow-billed Cuckoo over small speakers and waited for the territorial birds to respond. They are so good at hiding that sometimes we would hear them right over us, calling loudly, but couldn't see them—an amazing feat for a 10–12 inch long bird in a cottonwood! This season we found at least 10 separate breeding territories along 5 km of this excellent riparian habitat. This is an excellent result and further proof of the importance of the Lower San Pedro River Global IBA to native birds.

Our summertime season along the San Pedro was characterized by many amazing encounters including fresh Black Bear tracks, a troop of White-nosed Coatis, Box Turtle, and numerous rattlesnakes, both Mohave and Western Diamondback. There were also many adventures including a survey where the river was so high that most roads were impassable (one team did get their car stuck in the mud but managed to free themselves!) and two separate owl/nightjar surveys where an alarming and mysterious sound was heard. One team thought it was a Mountain Lion or Bobcat while the other team later in the season swore it sounded like a black bear snuffing very close

by. Both teams ended up finishing that nocturnal point count from inside the car with the windows open!

With all of the amazing sights and sounds our team encountered this summer, one of the most amazing was the Purple Martins. The Purple Martins here in SE Arizona are quite different from those that live in the Eastern U.S. with a different way of going about nesting. They don't live in large "bird hotels" put up by people; they prefer to nest in saguaro cavities that occur near riparian areas where they can hunt for insects. The Lower San Pedro River is perfect for these desert nesting Purple Martins as there are extensive saguaro uplands that come quite close to the lush riparian zone. We would occasionally see them on our other surveys soaring over the river emitting their strange static-like call, and this was the first year we tried to get a sense of how many are nesting in the area. The results were nothing short of staggering, especially during the June survey. We drove River Road north and east of the San Pedro in the evening, and within 5 miles of driving, counted well over one thousand Purple Martins sitting on telephone wires and soaring over the saguaro uplands. This road runs parallel to the

river right where the mesquite bosque ends and the desert uplands begin so it is ideal for counting these birds. To see this relatively rare subspecies in such large numbers was surprising. We will definitely be investigating this more closely next year.

In the meantime, there are a few IBA events and activities coming up this fall and winter. This fall we are trying to get an accurate count on the Eastern Bluebird situation in the Patagonia Mountains in our **Bluebird Blitz on October 26**. The **Dedication of the Grand Canyon Global IBA will be on October 26**. In January 2014 we will also have a dedication of the Whitewater Draw Global IBA in conjunction with the Wings Over Willcox festival. In February 2014 we will be surveying the San Rafael Grasslands Global IBA with a special emphasis on Chestnut-collared Longspurs, a bird of critical conservation concern.

This summer's Arizona IBA surveys were incredibly successful with great observations resulting in great data. These surveys would not be possible without generous help from our skilled and dedicated volunteers. Thanks so much for making this a great season for the birds!



# Your Volunteer Season: October–December 2013

Kara Kaczmarzyk, Volunteer & Development Coordinator

Welcome to Kim Baker, Sue Betanzos, Anna Chang, Dorothy Fitch, Judy Lillibridge, John Munier, Laurie Neidich, Marcia Obara, Rob Payne, Vicki Powers, Nancy Rivera, Julie Rogers, Laura Stafford, Barbara Thayer, Linda Vaught, Derek Wung, Ali Zihelr, and Bart Zihelr.

Whether you want to spend your time **teaching kids about science**, or giving someone their **first look at a new bird**, or introducing a new person to what Tucson Audubon is all about, or working behind the scenes to prepare for such activities, I hope volunteering with Tucson Audubon will be part of your fall agenda.

This month sees the culmination of our year-long series of “Tucson Meet Your Birds” features at **Tucson Meet Yourself**. Here, you can join the team of tabling volunteers who introduce people to birds. This is a perfect opportunity to **share your basic love of birds** and get people hooked!

As we move into November, you can **be a part of local food production and awareness** during our Harvest Festival & Mesquite Milling (see page 7). From sorting mesquite pods en route to the on-site mill, to selling *Eat Mesquite* books in the Nature Shop, to helping locals discover the special wonders of the 20-acre ironwood-saguaro Mason Center, will you donate your time to the locavore movement, Tucson Audubon-style, on November 9<sup>th</sup>?

It's finally cool enough to go outside and **wield a shovel for habitat restoration**. Our new

season of Restoration Workdays sees a return to the urban habitat of Atturbury Wash. Here, volunteers will plant native trees and shrubs, dig rainwater basins, and work together to reestablish habitat. Pick up where volunteers left off last year, after planting a staggering 280 trees and shrubs and spreading 25 pounds of seed over 30 acres!

In the fall is also when volunteers who **enjoy working behind the scenes** can be instrumental in planning for some of Tucson Audubon's most important public events, including our sixth annual Gala and the fourth annual Tucson Bird & Wildlife Festival. These planning positions offer flexibility to accommodate varying levels of past experience and current time requirements.

Lastly, **if you enjoy our downtown Nature Shop** and have a few hours to spare every other Saturday, please consider volunteering as a Nature Shop Attendant. This is one of our volunteer positions of greatest need, but it's also a lot of fun to **interact with visitors from all over** in this role.

## Contact Kara about volunteering!

[volunteer@tucsonaudubon.org](mailto:volunteer@tucsonaudubon.org)

520-209-1811

[tucsonaudubon.org/  
volunteer](http://tucsonaudubon.org/volunteer)

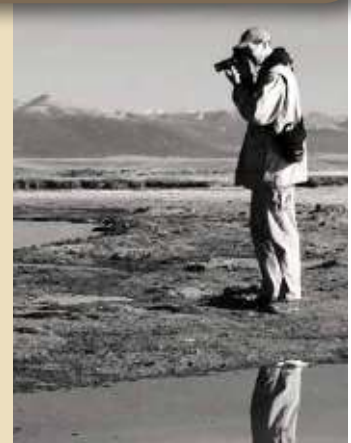
This volunteer spotlight provides a glimpse at the man behind the scenes of the Rare Bird Alert (RBA), **Andrew Core**.

For Andrew, this is an interesting time to be the RBA compiler now that technology plays a larger part in birdwatching. When Andrew compiles the RBA, he tries to incorporate place-marker maps, relevant websites, and other information to enhance the experience for people—features that would not have been possible ten years ago.

Andrew knows that the information he posts comes with a responsibility. A rare bird, like the Blue-footed Booby seen in Patagonia, can attract people from around the country; someone might buy a plane ticket based on the RBA posts. If a rare bird is spotted in a location that is not really open to the public, people may try to access the bird on private property when they should not. It can be a hard call.

Andrew first got involved with Tucson Audubon Society when he moved to town in the 1990s and attended the free field trips. At the time, John Yerger was the RBA compiler. About three years ago John asked if Andrew, who was a regular contributor to the birding listserv, would take it over. Although Andrew doesn't get out birding as much as he would like, he does visit Sweetwater Wetlands and a spot around his house pretty regularly. Once a month he'll do a longer trip, but with four kids and a job, much of his time is occupied.

Tucson Auduboners may not know that Andrew is a missionary for Athletes in Action. Athletes in



Action uses sports as a platform to help people answer questions of faith and to point them to Jesus. In this capacity, Andrew has been working on the University of Arizona campus, in the national campus, and now travels the Southwest. Athletes in Action spans over 90 countries; Andrew started on this path during college volleyball games in El Salvador and Central America.

When asked what it's like to volunteer at Tucson Audubon, Andrew replies that he's like most volunteers: he doesn't have time to, say, volunteer in the Nature Shop, but he does what he can remotely and appreciates the opportunity to serve in the manner he can. It is also a lot of fun to get the stats on the reports he publishes and see how many web hits they receive—it's astounding. 📖

The RBA is a weekly compilation of sightings of rare birds, reported by phone or email to Andrew and disseminated online and by a phone listing. To check out the Rare Bird Alert, visit [www.tucsonaudubon.org/rba](http://www.tucsonaudubon.org/rba) or call 520-629-0510 ext 3.



DEB FINCH



DEB FINCH



BRAD STEINAGEL



BRAD STEINAGEL

Thank you to the 72 volunteers who made the 2013 Tucson Bird & Wildlife Festival a smashing success! Shown here (left to right) are Joe Eigner, Rosie Bennett, Lange Navarro, and Greer Warren.

Visit [tucsonaudubon.org](http://tucsonaudubon.org) for updates and more.

## Wildlife Garden Plant Profile

Lynn Hassler, Garden Volunteer Captain

*This is the first in a series profiling the plants that grow in the Tucson Audubon Wildlife Garden at University Boulevard and 5th Avenue. We invite you to stop by to see specimens up close and personal.*

### Queen's Wreath

**Scientific name:**

*Antigonon leptopus*

**Family:** Polygonaceae (Buckwheat)

**Native range:**

Baja California and Sonora, Mexico, south to Oaxaca; from near sea level to 2000 feet elevation

**Wildlife value:**

Flowers visited by bees and nectaring butterflies such as Palmer's Metalmark, Blues, and Brushfoots.

Queen's wreath is a deciduous vine that grows quickly, thrives in sun and heat, and provides festive floral displays from mid-summer into fall. Use it to cover a chain-link fence, over an arbor or ramada for summer shade, or up the trunk of a tree for color and visual interest.

Be advised that this plant needs a wide berth; individual stems can grow

20–25 feet or more long, and have a tendency to ramble over neighboring plants.

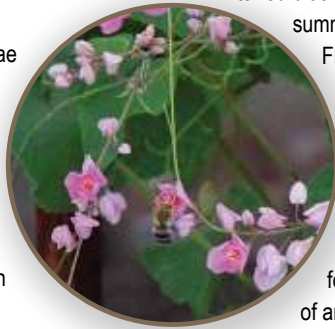
Each spring, new growth sprouts from underground tubers that can be quite large and weigh up to 15 pounds. Heart-shaped leaves climb by tendrils. Elegant sprays of coral-pink to red blooms appear as the summer heat intensifies.

Flower clusters resemble delicate chains, suggesting a possible source for the common name: they would certainly be suitable for adorning the head of any queen, particularly one who enjoys gardening.

In Tucson, vines die back to the ground in most winters, and it can be a chore, depending on size, to remove the dead leaves and stems. Plants are root hardy to about 20 degrees.

Although essentially drought tolerant, plants will grow faster if given regular supplemental water during the summer months.

See queen's wreath tumbling over the fence on the west side of the Audubon garden.



KEITHASHLEY

## Members' Annual Holiday Potluck

Jean Barchman, Membership Coordinator

We invite all members to attend Tucson Audubon's Annual Holiday Potluck on **Monday, December 9, at 6:00 PM** at St. Philip's in the Hills Episcopal Church, Murphey Gallery East Room, on the northeast corner of Campbell Avenue and River Road. There is plenty of parking at this location behind the church. You can access the lot from either Campbell Avenue or River Road.

Please call the Nature Shop at 520-629-0510 x7015 or Jean Barchman at 520-209-1802 to reserve your place as soon as possible or to volunteer for the event. When you RSVP, be prepared to designate the

potluck item you would like to bring—salad, main dish, vegetarian dish, or dessert. **Please bring plates, cutlery, and serving utensils from home.**

We will provide coffee, punch, and water. (No alcoholic beverages due to church regulations.)

Paul Green will speak on the *Roots of Hope*. In addition to the wonderful presentation and awesome food, we will also be holding a 50/50 raffle (you can win half of the funds) and a silent auction for binoculars, a two-night stay at the Hilton El Conquistador, a round of golf, and other wonderful items. So bring your checkbook. We look forward to seeing you there!

### Be Part of the Vermilion Society: Remember Us in Your Will or Trust

We are grateful for bequests of any size. Your legacy gift will help ensure that Tucson Audubon remains here to do its job: connecting people to birds and the places they live. For more information about including Tucson Audubon Society in your will, please call Erin Olmstead, Development Manager, at 520-209-1809.



BROAD-BILLED HUMMINGBIRD, ALAN D. WILSON, NATURESPICSONLINE.COM

### THANK YOU TO OUR DONORS

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**Gift in Honor/Memory:** We thank these donors for their special gifts:

*In memory of Ed Caldwell* from Mary Caldwell and friends, Barbara Cavett, Stephen A. Dolan and Lisa Sechler, Cheryl Houser and Gary Hunter, Teena Ligman, Eleanor Manire-Gatti, Kay Palmer, Linda Phelan and Mort Womack, Carl and Dale Sechler, Carol and Mark Sechler, Marion Sherman

*In memory of Jack Dougherty* from Hella Nordberg and Alicia Tonnies

*In memory of Olga O'Brien* from Alison A. Maricic

*In honor of Julia Gordon* from the Windibrow Foundation

*In honor of Paul and Eng-Li Green* from Rosemary Valentine

### WELCOME NEW MEMBERS

Marylyn Augur, Julie Bailey, Kris Benson & Mike Sherwood, Robert Billups, Dorothy Boone, Gail Brooks, Carianne Campbell, Carolyn Carson, Barbara Casimir, Gail & Steve Clendenen, Mark Cocker, Jean & Paul Conway, Laurel Cooper & John Gilkey, Steven Copple, Eric & Margie Craine, Judy Ann Miller & Paul D'Andrea, Cynthia Donald, Debra Lee Dupray, Patricia Eggleston, Donalee Ehrhard, LaWren Elliott Farber, Bernard Fierro, Marc Fink, Ken Fleshman, Lori Fraesdorf, Sharon Freeman-Dobson, C Dobson & M Dobson, Kim Guinasso, Laura Gutowski, Brien Harvey, Jeremy Hayes, Paul Hayes, Veronica Heron, Carol Hippenmeyer, Crystal Holcombe, Robert Hungate, Alvin

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We welcome new Birds & Business Alliance members at the *Copper Level*: Arizona Birder Casitas, The Casitas at Smokey Springs Ranch, Opticron USA, and WINGS Birding Tours Worldwide; and at the *Silver Level*: Swarovski Optik.

Jean Barchman, Membership Coordinator



# Loggerhead Shrike

LARRY LIESE

I'd been a birder for about a week, sitting in a city park out for lunch from work one day, when something grabbed my attention from above. I looked up in time to see a Loggerhead Shrike impale a male house finch through its neck into the top of a chain-link fence. Clang!!! "It's the butcher bird!" I exclaimed. Never having seen one but having read about them in my Golden Field Guide, I never expected my life bird sighting of this species to be so spectacular. What a treat!

Loggerhead Shrikes (*Lanius ludovicianus*) hold a unique position in the bird world by being a passerine yet top-level predator in their habitat. Lacking the strong feet and talons of raptors, they must defend themselves from both other predators and their prey, plus be able to hold, dispatch, and eat their prey, with perching feet not adapted to these tasks as in larger birds. They have evolved ways around this limitation, and do quite well at it. They attack from behind, aiding in killing their prey by having a strong neck and good killing power due to notches in their tomia (the cutting edges of the bill) for breaking the spinal column. They are

accomplished predators, able to dispatch prey up to their own weight. Common food items include arthropods, amphibians, small to medium-sized reptiles, small mammals and birds (up to Northern Mockingbird size, no less!)

Dispatched prey are usually deposited on sharp spines or thorns, or sometimes wedged into narrow forks in branches of vegetation. This latter characteristic of hanging food items in a "larder" gives the bird its nickname, and is thought to serve other functions than just making dining on them easier. A well-stocked larder is thought to perhaps play a role in attracting mates. Prey items that have distasteful or poisonous content are sometimes left in the larder for one to three days before eating, perhaps to lessen the potency of these substances. Portions of prey anatomy that contain these compounds are more easily discarded when eating them in this way (e.g., shrikes will eat the heads and abdomens of lubber grasshoppers but leave the thorax, which contains poison glands).

The word shrike was first used in English in 1544 by William Turner, a naturalist and ornithologist who published the first printed book entirely about birds. It derives from Anglo Saxon, Old English, and Swedish origins describing the bird's sound as "shrieklike." As one might expect, "loggerhead" describes the large size of this bird's head, again an adaptation to its predatory nature. Other animals whose names include it are Loggerhead Kingbird and loggerhead turtle (whose heads are enormous!). The genus name *Lanius* is Latin for butcher, while *ludovicianus*



FRED HOCHSTAEDTER

WHAT'S IN A NAME

refers to where the type specimen was acquired (Louisiana).

Sadly, this species is declining all across its range at the alarming rate of 3.5 to 5% per year, down 72 percent since 1967. It has been difficult for researchers to pinpoint exactly which factors are most involved as the suspected causes are interactive. Loss of habitat may affect both nesting success and prey availability. Pesticide use has been shown to accumulate quickly in the birds' tissues through prey ingestion, but it is not known how strong an effect this has on the birds' survival over time. Also, this species nests much earlier than other passerines, and inclement weather is known to kill both adults and nestlings as well as destroy nests and eggs. With weather becoming more severe for some regions in recent times, this may be another negative factor.

As George West's beautiful image shows, Loggerhead Shrikes are striking birds worth a good look when you run into them. They will perch in low bushes overlooking open areas with short grasses, and can still be readily found in southeast Arizona where these areas are adjacent to isolated bushes and hedgerows where they prefer to nest. Keep on the lookout for impaled prey when you're birding in areas like this. You may be treated to watching this bird hunt in its unique fashion. Good luck! ■



ILLUSTRATION BY GEORGE WEST

## AVAILABLE IN OUR NATURE SHOPS



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# TUCSON *meet* YOUR BIRDS



AMERICAN KESTREL, JOHN KENNEDY;  
VERDIN, LARRY SELMAN

## Getting Started with Birding

JENNIE DUBERSTEIN | EDUCATION CHAIR

So you're ready to Meet Your Birds? Whether you want to identify birds in your yard or you are interested in going on field trips with others, birding is a wonderful pastime. Below are a few tips and suggestions to help you get started.

**Start with the basics.** There are lots of fantastic resources focusing on what to look for when you are trying to identify a bird (size, shape, color/patterns, behavior, and habitat), and I encourage you to spend some time learning about what to look for. But when I say "start with the basics," I am speaking more generally. One of the things that make southeastern Arizona so special is the great diversity of birds. There are 552 species on the official state list, so figuring out where to start can be overwhelming. My advice to you: learn the common birds first, and build from there. Start by really studying the birds that you are most likely to see, or the ones that you see every day. Learn their behavior, listen to their calls and songs, and study their habitat. Each time you see a new bird, you'll have a frame of reference that will help you compare what you are seeing to what you already know. When you bird a new location, you'll be able to look at the habitat and get an idea of the sorts of birds that might be there. Before you know it, you'll be adding new species to your list, and feeling really solid about your ability to identify them.

**Get to know your "local patch."** There are many wonderful spots to go birding in SE Arizona, but there is a tremendous amount to be said for having your own local patch that you regularly bird. For me, this is Sweetwater Wetlands ([tucsonaudubon.org/sweetwater](http://tucsonaudubon.org/sweetwater)). When I am in town, I try to get there once a week for an hour or two before work. It's a wonderful way to see how things change

throughout the year, from the spring and fall migrants to the winter and summer residents. And you never know when something unexpected might show up. There is always something new to see, and by going back to the same spot regularly and becoming familiar with the usual species, you'll be more likely to notice something new or different when it does appear.

**You don't need fancy optics to be a birder.** Do you like to look at birds? You're a birder! High-quality binoculars and spotting scopes are expensive, but there are many entry and mid-level options that are very affordable. Shameless plug: the volunteers and staff at the Tucson Audubon Nature Shops will be more than happy to give you advice when you are ready to buy something. And you can enjoy birds even if you don't have any binoculars at all (in fact, Ted Eubanks coined the term "bare-naked birding" to refer to birding without optics).

**Get a good field guide.** One thing that I DO recommend spending money on from the start is a quality field guide. My personal favorite for beginning birders is the *Kaufman Field Guide to the Birds of North America*. It is intuitively organized for people who don't necessarily know a lot about birds, and chock-full of great information about behavior, habitat, and more. The *Sibley Guide* is another excellent option, and there are many others out there, each with their own pros and cons. Stop by the Tucson Audubon Nature Shops (see insert) to check out the selection and find one that works for you.



SCOTT OLMSTEAD



GILA WOODPECKER, JOAN GELLATLY

**Meet other birders.** One of the best ways to learn about birds is by going out and birding with other people. Tucson

Audubon offers all sorts of ways to do this, from free field trips and lectures to more in-depth classes and courses. Now get out there and Meet Your Birds. Visit [tucsonaudubon.org/tmyb](http://tucsonaudubon.org/tmyb) for more info.

### EVERGREEN CEMETERY *Imagine*

*you're a migrant songbird, perhaps a young Hermit Warbler, flying between your breeding grounds and your winter home under the cover of darkness. As dawn breaks, the first light reveals you are flying over a vast, developed area surrounded by desert. Not exactly great news, since you are looking for a comfortable place to spend the day resting. Then you notice there are some promising-looking patches of habitat that* *continued on p 13...*

GREAT BIRD PLACES NEAR TUCSON





DORIS EVANS

## Gambel's Quail

I brake for quail. I just can't resist stopping to watch the cartoonish meanderings of a troupe of Gambel's Quail, scurrying across the road or poking around in the desert scrub. There is safety in numbers, and these gregarious birds will often travel in a large group called a covey. Sprinting away from threats (at speeds around 20 feet per second) is the preferred method of escape, though they can fly short distances.

Gambel's Quail eat mostly seeds, and must drink water daily or get liquid from other foods like insects or succulent cactus fruits. Studies show that availability of fresh green foliage is the major limiting factor in quail reproductive success. The nest is a shallow bowl-shaped ground scrape bordered by small twigs, sparsely lined with leaves and feathers. The female usually lays ten to twelve eggs, which will hatch all on the same day after about three weeks. Prior to hatching, the chicks peep to each other from inside their eggs to synchronize!

While Gambel's Quail is one of many "boom-and-bust" species, with populations fluctuating from year to year based on rainfall, the main factor in attracting these birds is habitat quality. Dense shrubs or trees provide shade and cover, native plants provide food, and maintaining a simple water feature can provide entertainment for you, too!

*Erin Olmstead, Development Manager*



JOHN HOFFMAN

## House Finch

Compared to more brightly colored birds, House Finches may seem plain, but this streaky brown finch has an exciting history that began right here in the arid American West. Their natural range included all the Southwest and they favored undisturbed desert, especially areas with stands of cholla cactus. In 1939 a few captive individuals were sold in a pet store in New York City and escaped. These House Finches flourished and spread rapidly. Originally a bird of hot deserts and dry open habitats of the southwest, it now occurs in nearly all types of landscapes and climates in North America, from edges of northern taiga to ocean coasts to metropolitan areas. What a success story! The extent and intensity of the male's red plumage is related to the bird's health, vigor and ability to forage, as they acquire these red pigments from foods they eat that contain carotenoids, such as berries.

In the deserts near Tucson you can see "wild" groups of House Finches far from any house singing their cheery, bubbling song. It is also fun to see their city-dwelling cousins around town, and they are one of the few birds that sing all through winter. A cold morning can be made bright by a group of bright red male House Finches sitting in a pine tree singing and looking just like feathered Christmas ornaments.

*Jennie MacFarland, IBA Conservation Biologist*



JOAN GELLATLY

## Verdin

Verdins are the prettiest birds most Tucsonans have never seen. They are small and gray, with cute yellow faces.

Verdins are non-migratory, year-round residents throughout their distribution. They prefer thorny desert scrub, especially mesquite, palo verde and acacias. Providing thorny native vegetation in Tucson landscapes will assure their little yellow faces will adorn your yard.

Highly desert-adapted, Verdins can derive all the water they need from what they eat. They eat mostly insects and spiders, sometimes holding leaves with their feet while searching them for prey. One study calculated they ate up to 540 insects, spiders or larvae per day during winter. When available, they also eat fruits, pulp from seed pods, flower nectar, or sugar water from hummingbird feeders.

Believe it or not, Verdin was once a nemesis for me. Living in central Mexico in the early '90s—at the very south end of their range—I searched in vain. I found my first one in a mesquite thicket and almost immediately learned what they sound like, since they vocalize so frequently. From then on I saw (or at least heard) them quite often, and they have become one of my favorite avian friends. ■

*Kendall Kroesen, Urban Program Manager*

*...continued from p 12 might afford you the shelter and foraging resources you are looking for.*

Evergreen Cemetery is one of these places. ¶ As one of Tucson's largest non-golf course green spaces, it is no wonder Evergreen is a great spot to bird during migration. In late fall and early winter this green space tends to hold onto a few individuals of species like Hutton's Vireo and Black-throated Gray Warbler that winter in much larger numbers farther south, and it regularly collects far-out-of-range rarities like the Pine Warbler that stayed for over a month during the winter of 2012-13. Throughout the winter it's a great place to find flocks of sparrows and a variety of falcons that prey on the abundant doves and starlings. The cemetery is small enough that a birder can cover it fairly thoroughly in 2-3 hours but still large enough to provision adequate resources to a variety of tired migrants. ¶ Think it's creepy to bird in a cemetery? I've heard that from birders before. To me, quite to the contrary, I find it peaceful. A visit to Evergreen encourages me to reflect on the past. I almost always find myself looking at the dates on the headstones as I stroll, and wondering what it was like to be living in the 19th century! ¶ Located at Oracle and Fort Lowell, Evergreen Cemetery is privately owned and open during daylight hours. The birding community has a good relationship with Evergreen, please be respectful when visiting this location. *Scott Olmstead*



PINE WARBLER, LAURENS HALSEY

# Threats to Birds

## Introduction

KENDALL KROESEN AND PAUL GREEN

As Darin Schroeder explains on page 2, the balance between the rate at which birds die and the rate at which young are produced determines the number of individuals in any population of birds. Any factors that decrease reproduction or increase mortality can be viewed as “threats to birds,” the theme of this issue of the *Vermilion Flycatcher*.

The threats about which you will read on the following pages are real, and when we have not paid attention to them, species have gone extinct.

If we had confronted threats to Carolina Parakeets, they would not have gone extinct. If we had acted to lessen the dual threats of hunting and habitat loss, the Passenger Pigeon would still be with us. If we had protected southern swamps, we would still have Ivory-billed Woodpeckers. Bachman’s Warbler. Eskimo Curlew. Great Auk.

When we *did* act, other species that were close to extinction (or extirpation in North America) came back from the brink. We engaged with the millinery trade, DDT, and other threats and have thereby saved several species of herons and egrets, Bald Eagles, Peregrine Falcons, Brown Pelicans, Whooping Cranes and other species that were badly threatened.

When we ignore threats, birds go extinct. When we meet threats head-on and make changes, birds recover.

In this issue we describe many current threats. We need to meet these threats head-on. In the following pages, we describe current threats to birds in roughly the order of severity.

Loss of habitat, as briefly discussed by Carolyn Campbell, has long been viewed as the biggest threat to birds. Now climate change is arguably the single biggest threat because of the complexity of its actions on birds, including of course its effects on all aspects of water. We invited Linda Stitzer to write about the effects of our water use on habitats for wildlife.

After the Big Two of climate change and habitat loss is a long list of threats. We are fortunate to be able to feature



BALD EAGLE, WES GIBSON



BROWN PELICAN, LEN BLUMIN

When we acted and engaged with the millinery trade, DDT, and other threats, species that were close to extinction or extirpation in North America, such as Bald Eagle and Brown Pelican, came back from the brink.

## Leading Causes of Non-habitat-based Bird Mortality<sup>1</sup> in the U.S.

#	Cause	Best Current Annual Estimate
1	Outdoor cats	2,400,000,000
2	Collisions with buildings / glass	1,000,000,000
3	Collisions with automobiles	75,000,000
4	Hunting	70,000,000
5	Lead poisoning	21,000,000
6	Pesticides and toxics	16,000,000
7	Collisions with communication towers	6,500,000
8	Persecution / depredation control + research	4,000,000
9	Collisions with wind turbines	1,350,000 <sup>2</sup>
10	Mining claim markers	1,000,000
11	Oil and waste-water pits / oil sumps	750,000
12	Gas platforms	200,000
13	Collisions with power lines	150,000
14	Aircraft	25,000
15	Oil spills	10,000
16	Electrocutions	10,000
17	Fisheries bycatch	10,000
18	Banding casualties	1,000–2,000

<sup>1</sup> Compiled by American Bird Conservancy, 2013

<sup>2</sup> Current estimate will increase substantially as more wind development occurs

the American Bird Conservancy’s new estimates for each of these threats. We have invited authors to write about some of these. For each we describe direct actions you can take to help reverse the trends.

To learn more about some of the threats not covered in detail here, visit [abcbirds.org/conservationissues/threats](http://abcbirds.org/conservationissues/threats).

*Kendall Kroesen is Tucson Audubon’s Urban Program Manager. Paul Green is Tucson Audubon’s Executive Director.*



## Habitat-based Threats

### 1 Why Climate Change Is the Number One Threat to Birds

CONNIE MAHAN

Audubon scientists believe that climate change is the number one threat to birds, and point to examples of how a warming planet is already impacting birds, their prey, and their habitats. The *State of the Birds 2010 Report on Climate Change* ([www.stateofthebirds.org/2010](http://www.stateofthebirds.org/2010)) detailed some of these changes, including that bird ranges are shifting, in some cases many hundreds of miles.

While some climate fluctuation is normal, predicted changes over short time periods are not, and reducing carbon emissions in the short term is essential. Conservation and adaptive management, especially of larger areas with migratory corridors and buffer zones, are critical to stem the loss of bird and wildlife species.

Climate change arising from global warming threatens birds and wildlife in many ways. Birds and other wildlife will face habitat loss due to sea level rise, more frequent and severe wildfires, flooding and droughts, invading species, and changes in vegetation and precipitation, among others. Birds are generally adapted to particular habitat types and, with warming temperatures, the ranges of these habitats may move toward the poles or higher elevations when possible. The timing of birds' migration, reproduction, breeding, nesting, and hatching are all highly adapted to match specific local conditions. Since climate change will affect plants and animals in different ways, bird migration, breeding, and other behaviors may no longer be in sync with their food sources and other habitat needs. For example, American Robins in the Rocky Mountains arrive an average of two weeks earlier in spring than they did a few decades ago, and the food for their newly hatched offspring may not have reached its peak abundance at the time of need.

Audubon scientists have developed a new climate model that predicts the future ranges of North American birds under various future climate scenarios to the years 2020, 2050, and 2080. Using

Visit [tucsonaudubon.org](http://tucsonaudubon.org) for updates and more.



AMERICAN ROBIN, CHUCK ROBERTS

American Robins arriving in the Rocky Mountains two weeks earlier in spring than a few decades ago may find that food for their newly hatched young has not reached peak abundance.

100 years of Christmas Bird Count data, Audubon scientists have modeled the relationship between climate information and bird observations, and projected that relationship into the future under a range of carbon emission scenarios. The result is a picture of future bird ranges in an uncertain climate future.

The model contains 100,000 data layers and 3 terabytes of data, and covers more than 500 North American bird species. It shows which birds will be at high risk of extinction if emissions continue to increase, creating a new way for us to discuss and address climate change. It also shows areas of habitat that will likely be stable under future emissions scenarios, enabling the identification of "stronghold" habitats that birds will need to survive in the future. This creates a critical new way to help birds adapt to climate change.

The model should be released this fall, contingent on receiving scientific validation through a peer-reviewed process. Audubon chapters can expect to receive information in advance of the rollout, providing an overview of the report and examples of birds in each state that are threatened by climate change—and how this information can be used to start a conversation about climate change in our communities.

Over the coming months, Audubon's national staff will be launching a grassroots campaign based on the model's findings to bring about policy changes that reduce emissions to safer levels and protect critical stronghold habitats. Part of that campaign will look to support the ongoing efforts by the EPA to curb carbon emissions, push for properly sited renewable energy, and increase energy efficiency. These much-needed federal efforts will complement

the work already being done in states and municipalities across the country to reduce carbon pollution, and address the threat of climate change.

*Connie Mahan is National Audubon's Director of Grassroots Outreach and is based at the Audubon Policy Office in Washington, DC.*

### 2 Threat to Biodiversity from Urban Development

CAROLYN CAMPBELL

As habitat is fragmented into smaller patches, those patches support fewer species of plants and animals. Research by the Arizona Game and Fish Department (AZGFD) revealed that the more specialized a species in its requirements, the greater the negative effect of urban development. Native bird species are positively correlated with native vegetation, and non-native bird species richness and total abundance are positively correlated to house density. Only native bird species with high dispersal capabilities can move between the islands of native habitat. Thus, non-native birds come to dominate as residential urbanization increases.

A 2012 study by Point Reyes Bird Observatory Conservation Science suggests that the effects of future housing development may be at least as great as those of climate change for many bird species. Some species that are projected to expand their distributions with climate change may lose ground when future development is brought into the picture. While results varied among species and across habitats, "climate changes will cause species to shift distributions, but where a species will be able to persist



PAUL & ENGLIGREEN

Habitats fragmented by urban development support fewer species of plants and animals.

into the future is also determined by the availability of good habitat,” said lead author Dennis Jongsomjit.

With urbanization as a leading cause of habitat fragmentation locally, the conservation community and allies must help guide land use decisions by our counties, cities, and towns. The Coalition for Sonoran Desert Protection plays a lead role in this. Pima County’s Comprehensive Land Use Plan includes a biologically-important lands map (Conservation Lands System), guiding us on where development should occur, how to avoid habitat fragmentation in environmentally sensitive areas, and how to configure development to best protect native vegetation. As the housing market picks up, it is important that we are even more engaged in land use policies and decisions. Development plans have recently been submitted in areas of important habitat, such as the Tortolita Fan, Tucson Mountains, and the Tanque Verde area.

Pima County is also in the process of updating their Comprehensive Land Use Plan, as per state law. Public involvement is key in keeping the conservation vision of the Sonoran Desert Conservation Plan intact in this updated, land use plan.

<sup>1</sup>S. Germaine. 1995. Relationships of Birds, Lizards, and Nocturnal Rodents to Their Habitat in the Greater Tucson Area, Arizona

<sup>2</sup>D. Jongsomjit, D. Stralberg, T. Gardali, L. Salas, J.A. Wiens. 2012. Between a rock and a hard place: The impacts of climate change and housing development on breeding birds in California.

*Carolyn Campbell is Executive Director of the Coalition for Sonoran Desert Protection.*

### 3 Threats to Habitats from Water Diversions and Pumping

LINDA STITZER

There is a long history of human impacts to river flows in southeastern Arizona, from direct diversions from streams and, more significantly, from pumping groundwater from wells. Pumping more water from the aquifer than is replenished from precipitation lowers water levels, intercepting water that would otherwise flow underground to the streambed and emerge as streamflow.

GENE SPESARD



Groves of cottonwood, mesquite, and sycamore once existed along the Santa Cruz riverbank near downtown Tucson but died long ago as the water level dropped due to groundwater depletion.

Historical accounts of the Santa Cruz River refer to a series of cienegas near Tubac and perennial reaches near downtown Tucson that dried up long ago due to groundwater pumping. Flows in the San Pedro River, still perennial in some reaches, have declined from near stream pumping and diversions, and near Sierra Vista, wells in the deeper, regional aquifer threaten the San Pedro River and the rich riparian habitat it supports.

Declining groundwater levels must be addressed to maintain and potentially restore streams and springs, requiring a suite of water management efforts, including perhaps some difficult trade-offs. For example, while expensive, energy intensive, and not without environmental consequences, importation of Central Arizona Project (CAP) water has reduced the need to pump groundwater from the Tucson aquifer, allowing groundwater levels to rise in some areas. Strategic recharge of CAP water, effluent, and stormwater to maximize environmental and aquifer benefits could be promoted through regulatory changes or local resource management decisions such as that by the City of Sierra Vista to recharge effluent at a location where it creates a buffer between large municipal wells and the San Pedro River.

Individual water conservation efforts, changes in the design of new development, and lifestyle shifts (e.g. fewer pools) have successfully reduced residential demand in southern Arizona. Expanding commercial and industrial conservation, adopting more stringent

codes for new development and maximizing captured rainwater to replace potable (pumped) water are also needed. The challenge is dedicating this saved water to the environment, such as through an environmental restoration project, or targeting conservation programs to those uses in areas most likely to have a direct impact to streams.

Groundwater pumping strategies, such as water utility well management regimes that maintain water levels in wells near streams to ensure sufficient water is available to maintain flows and habitat, could be implemented relatively easily. Though controversial, regulations that limit the volume of pumping or drilling new wells in environmentally sensitive areas could be pursued. Establishing conservation easements or other arrangements with willing landowners that reduce or remove pumping near streams are also possible and have been successful strategies along the San Pedro River.

Finally, it’s important to protect the few legal mechanisms available for Arizona’s rivers, such as the Instream Flow Water Rights program that allocates water to rivers to maintain flow and wildlife needs. Clearly, we face significant challenges, but maximizing our existing resources through conservation and localized water management can help mitigate the impacts of increasing groundwater demand.

As groundwater levels drop and streams dry, riparian and other water-dependent species suffer and can no longer survive. The first to be impacted are shallow-rooted plants including young cottonwood and willow trees while deeper-rooted trees like mature mesquite and tamarisk can survive until water levels drop further. Groves of cottonwood, mesquite, and sycamore once existed along the Santa Cruz riverbank near downtown Tucson but died long ago as the water level dropped due to groundwater depletion. The significant consequences of such losses were covered by R. Roy Johnson and Robert H. Webb in their article about the Great Mesquite Forest along the Santa Cruz River, in the April–June 2013 issue of *Vermilion Flycatcher*.

*Linda Stitzer is a Tucson Audubon board member and the Senior Water Advisor with Western Resource Advocates.*



## Non-habitat-based Threats

### 1 Cats and Birds

GRANT SIZEMORE

Every year in the United States, domestic cats kill approximately 2 billion birds and 12 billion small mammals. Although the domestic cat can make an excellent companion, it is an invasive predator with the capacity to overwhelm local ecosystems when permitted to roam outdoors. Like other non-native, invasive species, domestic cats fundamentally alter the functioning of natural systems, and there may be as many as 188 million cats in the United States and growing. In fact, the number of cats in the U.S. has tripled in just the past 40 years.

Cats outdoors may be free-ranging or feral. A free-ranging cat has outdoor access during all or a portion of the day. A feral cat is one that is always outdoors and generally not habituated to people. Both feral and free-ranging cats prey on native wildlife.

In a recent study by scientists from the Smithsonian Conservation Biology Institute (SCBI) and the U.S. Fish and Wildlife Service (FWS), unowned outdoor cats were estimated to account for ~69% of bird mortality in the continental U.S. Owned outdoor cats were estimated to be responsible for over 700 million bird deaths each year.

Cat owners may have little knowledge of their cat's penchant for predation because not all kills are visible. A study by researchers from the University of Georgia identified that nearly 80% of cat kills were not returned to the home. Even well-fed cats hunt and kill. Hunting and hunger are not directly associated for a cat; they are controlled by separate parts of the brain, so cats can have an impact far beyond that of most predators, which generally only kill to eat. Native species are at a disproportional risk to cat predation.

Domestic cats have been implicated in the extinction of 33 species worldwide (e.g., the Stephen's Island wren) and may be a major factor in many declining populations. Scientists from the University of Hawai'i, National Park Service, and United States Geological Survey recently captured video evidence of feral cats killing endangered Hawaiian petrels.

In addition to directly preying upon billions of animals each year, cats also



RICHELLE GRAHAM

Cat owners may have little knowledge of their cat's predatory activities: University of Georgia researchers estimated that nearly 80% of cat kills were not returned to the home.

exert sub-lethal impacts (e.g., competition with native predators). Researchers have found that the mere presence of domestic cats can lead to dramatically reduced nest success. Not only did adult birds feed their young less, the likelihood of nest predation following exposure to cats increased by an order of magnitude. By allowing cats to roam outdoors, even if those cats miraculously do not directly kill individual birds, pet owners are contributing to the decline of local bird populations.

#### **What can be done to stop the needless slaughter of native birds?**

Keep cats indoors. This simple but highly effective approach has been promoted by American Bird Conservancy (ABC) for over 15 years and led to the creation of the Cats Indoors program, which educates and advocates for common sense solutions.

In addition to protecting wildlife, keeping cats indoors is also better for cats and people. Indoor cats live 3–5 times longer and are not at constant risk of traumatic injury, death, or disease. By keeping cats safe indoors, we also reduce the risk of disease transmission to people and respect our neighbors' rights to yards

free of these invasive predators and their feces. It is time to keep cats indoors.

*Grant Sizemore is Program Officer at American Bird Conservancy.*

### 2 Bird–Window Collisions and How to Prevent Them

PROF. DANIEL KLEM, JR.

After decades of study, ornithologists evaluating evidence estimate that a billion or more birds annually kill themselves by striking clear and reflective windows in the U.S. alone. Birds simply behave as if clear and reflective panes are invisible to them, and given the invisible nature of the hazard, the best predictor of who gets killed in what numbers is best explained by the density of birds in the immediate vicinity of an offending window. Large multistory glass-covered urban buildings attract attention when nocturnal migrants are killed, discovered, and reported to the media during the fall and spring migratory periods. However, far more kills of the common, rare, and endangered species occur and go unnoticed throughout the year at individual homes located in urban, suburban, and rural settings. Preventing these unintended and unwanted deaths is prudent conservation practice, a moral and ethical imperative to ensure we are responsible stewards of the environment, and also the law of the land.

#### **How to prevent the carnage:**

A summary of current methods to protect birds from residential windows.

*Cover windows* with garden netting or insect screening; commercial screening for protecting birds from windows is available at [www.birdscreen.com](http://www.birdscreen.com).



METRO CENTRIC

According to American Bird Conservancy, an estimated 300 million to 1 billion birds die each year from collisions with glass on buildings, from skyscrapers to homes. Birds simply cannot tell reflection from reality.

**Place decals** of any shape and size such that they uniformly cover the entire window and are separated by four inches or less in vertical columns or two inches or less in horizontal rows. This helps eliminate bird strikes in corridors or other locations with a see-through view and on the outside facing surface of all reflective windows. Wider spacing of a less dense pattern increases the risk of fatal encounters. Several commercially available decals of various designs are available for purchase from bird stores or catalog vendors, and do-it-yourself construction instructions or for sale effective hanging strings are available from [www.birdsavers.com](http://www.birdsavers.com).

**External tape applied in strips** to the outside window surface is described and available for purchase from the American Bird Conservancy (ABC) at [collisions.abcbirds.org](http://collisions.abcbirds.org).

**One-way films** that can be prepared with unique designs and applied to the outside window surface are an effective bird strike deterrent; a commercial brand is called CollidEscape and is described and available for sale from Fatal Light Awareness Program (FLAP) at [www.flap.org](http://www.flap.org) and [www.collidescape.org](http://www.collidescape.org).

Although not currently available for commercial sale, arguably an **external window film that uses ultraviolet (UV) signals in the form of patterns** to transform windows into barriers that birds will see and avoid is the most elegant and most likely the most acceptable solution to most humans because birds see it and we do not. Using this proven-effective UV film will render windows harmless to birds and permit humans the unobstructed view we enjoy through sheet glass and plastic that is such a ubiquitous product in man-made construction.



Far more kills of common, rare, and endangered species occur year-round at individual homes. Sometimes, a window strike is evidenced by a window imprint (inset) or a dead bird (above) on the ground near a window. Sometimes, a bird flies away after a strike and dies elsewhere as a result of the collision.

Additional information is available from ABC at [collisions.abcbirds.org](http://collisions.abcbirds.org), the Chicago Ornithological Society at [chicagobirder.org/conservation/birds-building-collisions](http://chicagobirder.org/conservation/birds-building-collisions), and FLAP at [flap.org](http://flap.org).

*Daniel Klem, Jr. is Professor of Ornithology & Conservation Biology at the Acopian Center for Ornithology, Department of Biology, Muhlenberg College, Allentown, PA 18104; ACO. [muhlenberg.edu](mailto:muhlenberg.edu); [klem@muhlenberg.edu](mailto:klem@muhlenberg.edu).*

## 5 Get the Lead OUT!

CHRIS MCVIE

Lead is a poison and is thought to have contributed to the decline of the Roman Empire. We have already banned it from paint and gasoline due to our nation's serious regard for public health and safety. Though perhaps somewhat less pervasive, lead ammunition and fishing tackle poisons our food chain and waters. In particular, lead ammunition is and will remain a very costly and serious problem for endangered California Condor (*Gymnogyps californianus*) reintroduction and survival.

The condor is the largest flying land bird in North America, weighing up to 26 pounds, with a wingspan of up to 9.5 feet. Condors were taken into captivity for breeding in 1987 and reintroduced in California in 1992 and Arizona in 1996, where they now number 67 in the state. Lead poisoning has been identified as the leading cause of death for endangered condors, including in the Arizona reintroduction program, and the main obstacle to a self-sustaining population in both Arizona and southern Utah.

At least fifteen condors have died of lead poisoning since 2000. Condors are trapped twice a year to have their blood tested for lead. Though the Arizona Game and Fish Department (AzGFD) started offering free non-lead ammunition in 2005 to hunters drawn for hunts in the condor's core range, biologists have documented over 300 instances of lead exposure in condors since testing began in 1999, with 45 to 95 percent of the condor population testing positive for lead exposure each year.

Chelation treatment is often required to reverse dangerously high blood lead levels, though it is expensive and very disruptive to their normal life cycle. Surgery has also been needed in the worst cases. Without these treatments more condors likely would have died.



GEORGE & KATHY KLINICH

Lead ammunition is and will remain a very costly and serious problem for endangered California Condor reintroduction and survival.

Although there may be other sources of lead, a scientific study funded by AzGFD has identified lead from spent ammunition as the major source of lead in condors. An additional study has determined that condor lead exposure rates are highest during the fall hunting season in northern Arizona. This study also concluded that during this same time, condors forage heavily on the Kaibab Plateau.

Condors incidentally ingest lead bullet fragments and shot remaining in game carcasses and gut piles. Fragments from lead bullets or lead shot have been found within the digestive tracts of condors 22 times in Arizona. Lead bullets fragment into hundreds of pieces before they exit game such as a deer or coyote. Since condors are group feeders, and only one or two lead fragments or pellets can cause lead toxicity, one animal carcass or gut pile containing lead fragments or lead shot has the potential to poison several condors.

Recently, AzGFD participated in a summit hosted by Senator John McCain (R-Az) aimed at bringing a diverse group of stakeholders together to discuss the role of non-lead ammunition in recovering endangered California condors. Now AzGFD is in the process of reviewing a petition filed August 3 with the U.S. Environmental Protection Agency (EPA) by the American Bird Conservancy and four other groups seeking to ban the use of lead in ammunition and fishing tackle. The petition requests a national ban under the federal Toxic Substances Control Act of 1976 (TSCA). The EPA is required to respond to the petition within 90 days.

Despite all the information posted on the AzGFD website (used in preparation of



this article), which illustrates the extremely costly, ongoing nature of the problem, AzGFD is advocating for “further research”, stating “voluntary, state-level approaches, where the science shows them to be necessary, are the best approaches to address lead-wildlife concerns.” Tucson Audubon disagrees and supports the efforts of American Bird Conservancy and other conservation groups who seek an end to these costly and ineffective measures in favor of measures that preserve not just condors, but the health and safety of our watersheds.

azgfd.gov/w\_c/california\_condor\_lead.shtml;  
 azgfd.net/artman/publish/NewsMedia/Arizona-Game-and-Fish-s-voluntary-non-lead-ammo-program-recognized-at-Senator-McCain-s-condor-summit.shtml;  
 azgfd.net/artman/publish/NewsMedia/Arizona-Game-and-Fish-Department-urges-caution-in-the-rush-to-judgment-in-the-proposal-to-ban-lead-ammunition-and-fishing-tackle-nationally.shtml;  
 peregrinefund.org/condor;  
 stochasticscientist.blogspot.com/2012/06/lead-bullets-stunt-california-condor.html

*Chris McVie is Chair of Tucson Audubon's Conservation Committee.*

## 7 Collisions with Communications Towers

KENDALL KROESEN

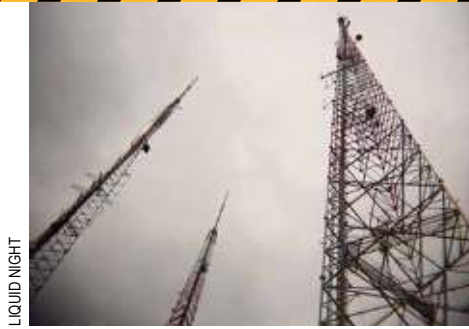
About 6.5 million birds from 230 species are killed annually by communications towers. Neotropical migrants are most gravely affected.

Migrating birds navigating at night by starlight are confused by the towers' aviation warning lights and may circle for hours until they collide with other birds or guy wires, or until they are exhausted.

A number of findings suggest ways of reducing mortality, including putting new communications equipment on existing towers, keeping new towers below 200 feet in height, locating new towers near old ones, not using lighting if not required, if required using flashing white lights with the maximum delay allowed between flashes, using construction techniques that do not require guy wires, etc.

**YOU CAN** write to the Federal Communications Commission and ask them to implement regulations that protect birds, following the recommendations found in the links at [abcbirds.org/abcprograms/policy/collisions/towers.html](http://abcbirds.org/abcprograms/policy/collisions/towers.html).

Visit [tucsonaudubon.org](http://tucsonaudubon.org) for updates and more.



LIQUID NIGHT

Migrating birds navigating at night by starlight are confused by the towers' aviation warning lights.

## 9 Industrial Scale Wind Factories, Birds, and Bats: Science vs. Politics

CHRIS MCVIE

Thanks to pressure from the White House for “green energy” at any cost, industrial scale wind and solar factory permitting in the United States is in the process of being loosened. Permits to allow the killing, or “taking,” of Bald and Golden Eagles, Whooping Cranes, Piping Plovers and California Condors by wind turbines are under review or already being granted in some states. Whooping Cranes, Piping Plovers and California Condors are all listed species under the Endangered Species Act. The Bald Eagle was considered endangered for decades but was removed from the list in 2007 because the species had rebounded. The Bald and Golden Eagle Protection Act protects the birds, which have naturally low reproduction rates, regardless of whether they are endangered.

President Obama's administration has long sought to bolster investments in renewable energy sources, including proposing new rules to make it easier to permit, build, and operate massive industrial wind factories. Existing permits already allow “green energy” companies to put up industrial scale wind factories as long as the U.S. Fish & Wildlife Service (USFWS) declares they use “advanced conservation practices” to protect birds. Yet, in 2009, the Government Accountability Office concluded that the USFWS's tracking of the harm it allows to endangered species “lacks a systematic method for tracking cumulative take of most listed species.” It noted that the agency only had such a system for *three out of 497* federal protected species in

the western states. Nonetheless, the administration is now advocating to extend wind permits from 5 to 30 years and to scale back the requirement that federal agencies fully track the harms inflicted on endangered species when large-scale plans are developed and carried out on federal public lands.

While many fatality estimates have been made across North America, they have varied greatly in field and analytical methods, monitoring duration, and in the size and height of the wind turbines monitored for fatalities, and few have benefited from scientific peer review.

Most recently, K. Shawn Smallwood estimated that around 573,000 birds were killed at 51,630 megawatt (MW) of installed wind-energy capacity in the United States in 2012 (including 83,000 birds of prey), an increase of 30 percent on a previous estimate by the USFWS in 2009. Bats are even worse hit and probably top 888,000 killed per year, in addition to deaths from the devastating spread of white-nose syndrome.

Smallwood believes his figures are underestimated, owing to the incompleteness of reports of bird and bat deaths from different states. This has serious implications for the renewable energy industry, which bases much of its investment and publicity on the safety and environmental sustainability of its



K. ALI



MATTHEW PAULSON

USFWS

Permits are under review or already being granted in some states to allow the killing (or “taking”) by wind turbines of Bald and Golden Eagles and three species listed under the Endangered Species Act—Whooping Cranes (above), Piping Plovers (inset), and California Condors.

massive industrial installations. The increase in deaths suggested by the more rigorous statistical methods are worrying and should provide justifiable concern for both conservationists and the renewable energy industry alike.

Smallwood suggests that there is urgent need to improve fatality monitoring methods, especially in the implementation of detection trials, which should be more realistically incorporated into routine monitoring. He also recommends greater transparency in reporting the deaths of flying animals in the United States, as well as a cross-state standard method of measuring and comparing figures. Currently, wind turbine pre- and post-construction wildlife data, including fatality data, are not required to be shared with the public and most often are not.

Wildlife advocacy groups say a 30-year permit is far too long, even if the deaths are unintentional. They argue the administration should require a more comprehensive review of the effects massive wind farms have on the environment, including birds and other wildlife. We agree. This is not the time to emasculate, if not gut, the Endangered Species Act. We need a balanced approach where we, **above all, do no harm.**

Smallwood, K Shawn. 2013. Comparing bird and bat fatality-rate estimates among North American wind-energy projects. *Wildlife Society Bulletin* 37: 19–33.

## 10 Mine Claim Markers and Other “Death Pipes”

KENDALL KROESEN

Mining claims in the West are traditionally marked by vertical PVC pipes set into the ground. Pipes are four to six inches in diameter and open at the top. Birds enter the opening to explore what they think is a possible nest cavity. In migration they may enter to look for a warm place to spend the night—sometimes with more than one huddling together.

Unlike natural cavities that have rough surfaces, pipes are smooth and make it impossible to get a foothold to scramble out. The small diameter makes it impossible for birds to spread their wings enough to fly out.

Around 1 million birds are killed this way every year. Besides claim markers



NEVADA DEPARTMENT OF WILDLIFE



KENDALL KROESEN

Around 1 million birds are killed in pipes used as mine claim markers. Volunteers help cap open pipes at Tucson Audubon's restoration sites.

there are many other kinds of open pipes that kill birds, including exhaust fan pipes on buildings, ventilation pipes on vault toilets, unprotected chimneys, and others. In the July–September 2012 issue of the *Vermilion Flycatcher*, we described vertical pipes used to anchor barbed wire fences at the North Simpson Farm habitat restoration site. Our habitat restoration crew found dead birds at the bottom of some and we began to permanently cap the pipes.

**YOU CAN** look for uncapped pipes and fix them. Cap or remove any vertical pipes to which you have access. Ask legislators to take action like Nevada did, requiring all new claim markers to be capped, invalidating any claims still marked with open-ended pipe, and allowing anyone to pull up uncapped markers and lay them on the ground nearby.

## 16 Electrocutions

KENDALL KROESEN

Electric poles used to distribute electricity throughout the city have insulators that prevent electricity from being a danger to those below. But what about birds landing on wires and poles? Perching on a wire is not dangerous. But with wings spread for landing on a pole, birds with large wingspans can simultaneously touch both live wire and ground wire, completing the circuit. This results in an electrocution, usually fatal. In southern Arizona, ravens, Great Horned



NED HARRIS

Tucson Electric Power and Trico Electric have programs to retrofit electric poles with shields to prevent electrocution of large birds that regularly perch on wires and poles.

Owls, Harris's Hawks and other large hawks are regularly electrocuted.

Tucson Electric Power and Trico Electric have programs to retrofit poles with shields that prevent electrocutions. But the task is enormous and progress slow—there are tens of thousands of poles.

A University of Arizona study found electrocutions were more likely to happen in areas near raptor nests. Retrofitting poles in the nest area cut electrocutions.

**YOU CAN** call in raptor nest locations and information about any dead raptors you see at the base of power poles. Contact Tucson Electric Power at [nestsentry@yahoo.com](mailto:nestsentry@yahoo.com) or 520-623-7711; contact Trico Electric at 520-744-2944 x2; or report to Arizona Game and Fish Department at 520-628-5276 x4446.

## Coda

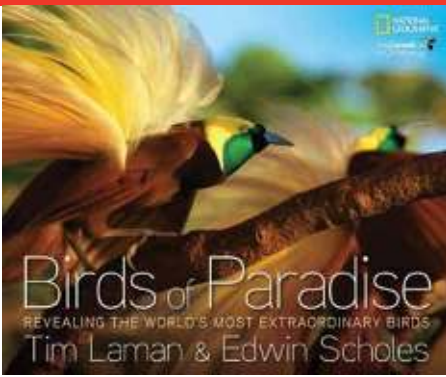
PAUL GREEN

Our coverage of threats to birds barely scrapes the surface. For follow-up reading, we recommend *The American Bird Conservancy Guide to Bird Conservation* by Daniel Lebbin, Mike Parr, and George Fenwick (2010).

Their chapter on *Threats* covers seven classes and 28 subclasses of threats and is more comprehensive than the introductory accounts here. Tucson Audubon encourages everyone to take some actions in our daily lives to reduce threats to birds. This book includes detailed suggestions of how to address conservation threats with actions. Please join together with others as part of local grassroots networks to more effectively address these threats to our birds, and to the natural world that supports us all. ■







**Birds of Paradise: Revealing the World's Most Extraordinary Birds.**

**Tim Laman and Edwin Scholes.** Washington DC: National Geographic Society. Pp. 227. ISBN 978-1-4262-0958-1. \$50.

As the product of 18 expeditions over eight years, *Birds of Paradise* is a gorgeously illustrated, deeply detailed and remarkably useful guide to these beautiful animals and their habitats. The authors, biologist/photographer Tim Laman and ornithologist/videographer Edwin Scholes, have produced this book in cooperation with *National Geographic* and the Cornell Lab of Ornithology.

*Birds of Paradise* derives from Laman and Scholes' project to document all 39 species in that classification. They are found throughout the South Pacific, ranging from the Moluccas (the Spice Islands) in Indonesia, across New Guinea, and south to the rain forests of eastern Australia. They live in a variety of altitudes and habitats, along coasts, up in mountains, high in the jungle canopy and down on the forest floor. This was a genuinely extraordinary undertaking that Laman and Scholes have presented in clear, engaging text and amazing imagery.

It is impossible to go through this book without imagining oneself alongside Laman and Scholes in boats, helicopters, huts and blinds. Readers with an inclination to follow even slightly in their wake have the authors' encouragement. They provide recommendations on photography, travel and ecotourism, honest discussions of the perils of the more remote locations, descriptions and photos taken along the length of the journey, reproductions of log entries, blind blueprints, and the local guides' advice on actually finding the birds.

Most helpfully, both for general reference and for readers who find themselves in, say, Brisbane—the book concludes with a 20-page field guide to all 39 species, with range (and altitude) maps, conservation status, photos and written descriptions.

The book is filled with enormous two-page spreads of text and large sidebars, making it ideal for both display and casual leafing. But this is no simple coffee table book. *Birds of Paradise* provided Darwin's contemporary Alfred

Russel Wallace with his own ideas about evolution. The authors follow through with lucid explanations of our current knowledge of the behavior, ecology, and evolution of these birds, including the discoveries their years of observation yielded.

For anyone who loves travel, beautiful photography, extraordinary natural history or the science of birds—this book will make a very welcome addition to your collection.

*Review by Eric L M Shuman*

**Imperial Dreams: Tracking the Imperial Woodpecker through the Wild Sierra Madre.**

**Tim Gallagher.** New York: Atria Books. Pp. 304. ISBN 978-1-4391-9152-1. \$26.

Like many folks, I was enthralled by the re-discovery of the Ivory-billed Woodpecker. I read the books and hung on every news release. I am always stunned to see even the Pileated Woodpecker back East—knowing it has a larger cousin out there is one of those stories that we carry out to the field with us, hoping someday we might see something special like that.

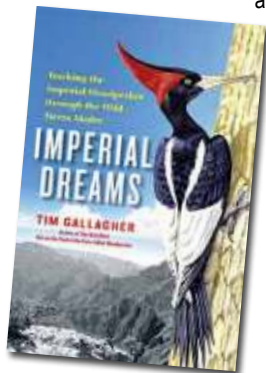
This book is about their cousin, the Imperial Woodpecker, that may still live high in the mountains of central Mexico. If you want to feel that same excitement again, all you need to do is look at the book's first color plate, showing skins of the large Pileated alongside the even larger Ivory-billed and finally the Imperial Woodpecker, dwarfing both of them. If nothing else makes you want to read this book, it may be time to look elsewhere!

Tim Gallagher, part of the recent team to search for the Ivory-billed, here describes our best understanding of the biology of the Imperial, the history of its decline, and his struggles to look for surviving birds in central Mexico. There are many parts of this book that are really enjoyable, especially details of the bird's habits in the wild. Others are a bit more difficult, particularly stories of active persecution of the bird that played a large role in its decline. Like the Passenger Pigeon

and other extinct birds, it's hard enough when habitat loss contributes to losing a species; it's that much harder when human ignorance and indifference cause damage.

Part of the book that many folks might find most painful is that the range of the bird is so nearby—yet it would be easier to travel to far-off parts of Siberia or Africa than to these highlands of the Sierra

Madre. As the author finds time and again, he simply cannot search in many regions, because of the extraordinary levels of crime and violence



of the controlling drug cartels in these regions. He tries, again and again, and has to withdraw due to confrontations, any of which could have ended badly. Perhaps this exclusion might even work to the surviving birds' advantage. It's so trying to read and know that the birds might be there, but we cannot find out for sure.

I highly recommend this book to those interested in birds. It's good biology and good story-telling. Every time the author runs into another local who recognizes the photo and can mimic the call or relate some behavior, like the Ivory-billed, we can believe the Imperial Woodpecker might still be out there. **★**

*Review by Tim Helentjaris*

**AVAILABLE IN OUR NATURE SHOPS**  
WindowAlert™ products that help prevent bird–window collisions (read about this threat to birds on pages 17–18).

**\$20.00** **\$5.95**

*Pack of 4 decals with special coating that reflects UV light.*

**9/11-11/17 AT THE NATURE SHOPS**

**Call or come into the Nature Shops for more details and prices**

\*Participating Nikon authorized dealers and resellers only. Instant Savings amount deducted from dealer or reseller's selling price. Offer valid for new eligible products only that are sold between September 11, 2013 and November 17, 2013 to retail customers by a Nikon authorized dealer or reseller within the 50 United States, the District of Columbia, Puerto Rico or the U.S. Virgin Islands. Void where prohibited by law. All products are subject to availability. For eligible products and further details, please visit [www.nikonpromo.com](http://www.nikonpromo.com). † Actual selling price determined by dealer or reseller at time of sale. • All Nikon trademarks are the property of Nikon Corporation.

# CONSERVATION AND EDUCATION NEWS

CHRIS MCVIE, PAUL GREEN, KENDALL KROESEN, BÉTÉ JONES, AND JENNIE MACFARLAND

## Obituary: Edmund Ray Caldwell

February 13, 1933–June 23, 2013

I met Mary and Ed Caldwell, members of Tucson Audubon's Vermilion Society (see p 10), shortly after my arrival in Tucson in 2007. During that first visit and in subsequent conversations, I learned about their involvement as officers with Tucson Audubon in the 1960s, and about what they would like to see in the future as the organization grows. So, it was with great sadness that I heard about the passing of Ed on June 23, 2013, at age 80.

Ed developed an early passion for art and nature that was to continue throughout his life. He earned a Bachelor of Arts Degree, majoring in Architecture and Advertising Art and Design. After moving to Tucson in 1964, Ed furthered his experience by working freelance in architectural and electrical engineering drafting. He married Mary Alice Sherman in Tucson in 1966. Ed served as Director of the University of Arizona's Bureau of Audiovisual Services 1968–1980, and then worked for Hughes Aircraft 1980–1990 until retirement. More recently, he enjoyed the free expression of art in wood carving, sculpture, ceramics,



MARY CALDWELL

drawing, and watercolor painting, reflecting his love of nature. He volunteered in many ways with Tucson Audubon, including designing our previous logo in the 1960s.

To further Ed's desire to help people learn to appreciate the natural areas that we fight so hard to maintain, and to honor Ed's life-long appreciation of nature and art, Tucson Audubon has now established the Edmund R. Caldwell Memorial Scholarship Fund. Donations so designated can be mailed to: Tucson Audubon Society, 300 E. University Blvd., #120, Tucson, AZ 85705. Visit [tucsonaudubon.org](http://tucsonaudubon.org) for more details.

*Paul Green, Executive Director*

## Tax Credit Donations Needed to Fund Middle School Education Program



DEB VATH

Put your tax credits to good use! Our education program at Lauffer Middle School could benefit tremendously. Tucson Audubon is partnering with Inner City Outings and the Sunnyside School District to offer one hiking/birding outing a month. Your tax credits will be directly dedicated to the student club and fund transportation for their outings, entrance fees to their destinations, and materials. Pick up your forms today in our Nature Shop or contact Bété Jones at 520-209-1812 or [bjones@tucsonaudubon.org](mailto:bjones@tucsonaudubon.org).

*Bété Jones, Environmental Education Coordinator*

## Fall Raptor Migration Monitoring at Yaki Point, Grand Canyon

Yaki Point is one of several observation posts run by HawkWatch International (HWI) along the primary migration route used by Intermountain Flyway birds of prey. With a steady wind, eagles, hawks, and falcons migrating south tend to fly along the canyon in sight of the observation point. The flight through this region is one of the largest concentrations of migrating raptors known in the western U.S. and Canada.

Pending weather changes, the fall raptor migration monitoring season at Yaki Point runs August 27 through November 5 each year. Raptor migration peaks around the end of September and beginning of October.

Birders, hikers, and nature lovers are welcome at the observation station where seasonal volunteers count raptors during their annual southern migration. The data collected at the Grand Canyon sites help scientists understand raptor migration and population trends, and detect changes in the environment. Raptors are good indicators of environmental health because they feed at the top of the food chain.

There are shuttle buses between parking areas and the migration point, and free education programs on raptor and migration ecology for visitors. For further information, downloadable site brochures, or driving directions, visit [www.hawkwatch.org](http://www.hawkwatch.org).



RED-TAILED HAWK. BOB WENRICK

## New Trail to the Birds at Sweetwater Wetlands



KENDALL KROESEN

A new bicycle and pedestrian trail has been built along the east bank of the Santa Cruz River south from Sweetwater Drive. It connects with the existing trail segment coming north from Grant Road. You can access the trail from the cul-de-sac at the end of Sweetwater Drive near the wetlands.

This opens up new birding options for those who cycle or walk along the Santa Cruz River.

First, the trail wraps around the west and south sides of Sweetwater's recharge basins. The trail affords better views of basins than you can get from most parts of the wetlands themselves. Be cautious, however. The trail is narrow and bicycle traffic will increase as people discover this segment of the trail.

Second, there is a new gate into the wetlands along the trail south of Sweetwater Drive. Bikers and walkers can enter the wetlands directly from the trail, but lock up bikes at the bike racks since no riding is allowed in the wetlands! There is also a nice bench there in the shade of a mesquite.

The river trail does not yet go north of Sweetwater Drive along the east side of the river, but a trail segment will eventually connect from there to Camino del Cerro. This trail is part of The Loop (see [http://webcms.pima.gov/government/the\\_loop/](http://webcms.pima.gov/government/the_loop/)).

For access to Sweetwater Wetlands by car, note that the work at Prince Road and I-10 is progressing and access and egress continue to evolve. Check our website [tucsonaudubon.org/sweetwater](http://tucsonaudubon.org/sweetwater) for construction updates.

*Kendall Kroesen,  
Habitats Program Manager*



# White Sands Impediment to SunZia

The Department of Defense has at the last minute demanded a change in the New Mexican portion of the preferred route for SunZia north of the White Sands Missile Range, delaying the BLM's Record of Decision for the project. SunZia proposes to build two 500-kV transmission lines from central New Mexico to east Phoenix, following the San Pedro River Valley for 45 miles. Public comments on the SunZia Final Environmental Impact Statement (FEIS) closed this past summer and BLM planned to finish the NEPA process by mid-September.

White Sands Missile Range is asking SunZia to follow a previously recommended route that the BLM dismissed without evaluation in the EIS. The route would be entirely new for more than 100 miles and would require an environmental review that could take 18 months or longer to complete, delaying the project further. SunZia has threatened that it will abandon the project if this is done,

after spending nearly \$40 million on the EIS.

New Mexico's politicians have entered the fray, taking opposite sides of the issue. Republican Governor Susana Martinez is supporting the White Sands Missile Range, asking that the lines be moved, as is New Mexico Republican Representative Steve Pearce. On the other side, Democratic Senator Martin Heinrich has written a staunchly pro-SunZia letter to Secretary of Interior Jewel asking that the Department of Defense be overridden and that the lines be routed as proposed. New Mexico Democratic Senator Tom Udall has taken a middle-of-the-road approach, requesting that President Obama help decide the issue and expedite the project.

In the midst of this, SunZia has obtained a letter of intent from First Wind to use up to 1,500 MW of capacity as an anchor tenant, though there is no binding power purchase

agreement from First Wind or any other utility at this time.

Meanwhile, Arizona's congressional delegation and media have been silent. Peter Else of the Friends of the Aravaipa Region and the Cascabel Working Group have urged Representatives Barber, Grijalva, and Kirkpatrick to inform Secretary Jewel and New Mexico's congressional delegation of Arizona's concerns, which they have yet to do. Senator Heinrich, often considered environmentally astute, appears entirely unaware of the conflicts in Arizona and has championed SunZia without regard for our state's interests. SunZia's greatest environmental impact occurs west of the San Pedro River in Congressman Barber's district, where Pima County has acquired three ranches and much of the private land in Buehman Canyon as a part of its Sonoran Desert Conservation Plan. SunZia would bisect these ranches and cross the



SAN PEDRO RIVER VALLEY, LON & QUIETA

canyon, significantly damaging the county's investment.

Any legal action must wait until the SunZia-White Sands conflict is resolved and the BLM issues its Record of Decision. If the Department of Defense prevails, that will be a much longer time in coming.

*Mick Meader, Co-Chair,  
Cascabel Working Group*

# A New Process for Rosemont Review



AJ MONJES

A final decision by the Coronado National Forest on the proposed Rosemont Mine will likely be delayed until March 2014. Supervisor Jim Upchurch said the release of a final environmental impact statement for the proposed mine has been pushed back from September 27 to November because of "ongoing resolution of issues."

Once the Forest Service has published the final environmental impact statement, the 45-day objection period will begin, followed by 45-day review period, which can be extended an additional 30 days.

Concerns about the serious negative impacts on air quality, water resources and wildlife are likely to require all or most of the 120-day period for resolution.

An article by Tony Davis, *Rosemont's plans to restore waterways to make up for damage its mine causes* (Arizona Daily Star September 8, 2013), addressed issues around Rosemont's habitat mitigation plans. The goal of mitigation is to replace the functions and values of the habitats that the mine will degrade. The federal In Lieu Fee Mitigation program would require Rosemont to provide resources to a third party to restore or improve an area of degraded riparian habitat as close to the site of the damage as possible.

Sometimes the sheer scale of the damage to sensitive and important riparian areas is so huge that you have to scratch your head and ask, "Is it even possible to mitigate for this damage?"

Rosemont's proposed open-pit would stack 2.6 billion tons of mine waste above the Davidson Canyon and Cienega Creek drainages. This watershed provides one fifth of the groundwater recharged to the Tucson basin. Davidson Canyon and Cienega Creek are designated Outstanding Arizona Waters. There are only 22 such sites in our state. This designation comes with a "no degradation" standard. Many of



CIENEGA CREEK IN LAS CIENEGAS NCA, BLM

us question whether the proposed Rosemont Copper Mine project can meet this very strict standard.

We question if there is any mitigation that can come close to compensating our community for the anticipated permanent losses to our natural environment. Ultimately the question for us all becomes: Will this foreign-owned mine, which will likely export the ore it extracts and profits that it makes, bring benefits to our community that outweigh the devastation to our natural environment?

If state and federal agencies permit Rosemont's proposal, they need to be very certain that the mitigation will fully offset the mine's short- and long-term negative impacts. Tucson will have to live with the financial and quality of life consequences of their decision for countless generations after the mine is closed and its owners have moved on.

*Paul Green, Executive Director*

## Bullfrog Eradication at KERP Ponds

Pima County Regional Flood Control District is removing non-native bullfrogs from the Kino Environmental Restoration Project (KERP). KERP is a constructed environmental and stormwater harvesting project at Ajo Way and Country Club Road, and a popular area for birds and birders.

Bullfrogs are voracious predators that will eat almost anything. On wildlife refuges in Arizona, bullfrogs have nearly eliminated the Mexican garter snake and the Chiricahua leopard frog. Bullfrogs and other non-native aquatic species invaded KERP during the past five years. From there, bullfrogs have repeatedly dispersed downstream to threaten the best remaining ephemeral toad-breeding ponds in central Tucson, where six species of native frogs and toads breed.

But bullfrogs require perennial water, so KERP ponds were temporarily drained to remove them. The draining was timed for late May through June to have minimal impact on nesting or migrating birds, and to take advantage of the monsoon inflows to replenish the ponds.

To date, contracted University of Arizona herpetologist Dr. Phil Rosen and his team have removed 1,443 adult bullfrogs, 1,288 juveniles, and over 50,000 tadpoles. All adult bullfrogs and tadpoles have now been eradicated. His team is still regularly inspecting KERP to remove remaining juveniles.

After the KERP basins were refilled in July by monsoon season storm water inflows, the team was pleasantly surprised to document successful breeding of native frogs and toad species, including Great Plains toads, Couch's spadefoots and the rare narrow-mouthed toads. These and other native species are now expected to thrive at KERP.

Since bullfrogs were not found in a pond located upstream at Davis-Monthan Air Force Base, it is suspected the KERP population may have resulted from intentional release. Release of non-native wildlife is a Class 2 misdemeanor subject to fines and possible imprisonment. One

night the team encountered a small group with frog hunting gear who admitted to hunting bullfrogs for food. Unfortunately, hunting is insufficient for reducing bullfrogs' environmental damage.

The U.S. Fish and Wildlife Service, Bureau of Land Management, and Tucson Audubon Society all expressed support for these efforts. Eradication is being completed in compliance with an Arizona Game and Fish Department permit. If bullfrogs are found to persist in KERP in the following years, the eradication efforts will be repeated.

*Jennifer Becker, Pima County Regional Flood Control District*

## Tucson Audubon's eNews Delivered to Your Inbox

Stay informed with weekly email updates from Tucson Audubon. Get advance notice of upcoming events, special invitations, urgent conservation updates, action alerts, and more. You can sign up for this list in a number of ways. The easiest is to go to [tucsonaudubon.org](http://tucsonaudubon.org) and click on the link that says Sign-Up E-newsletter. Otherwise send an email to [pgreen@tucsonaudubon.org](mailto:pgreen@tucsonaudubon.org) with your first and last name, or call Jean Barchman at 520-209-1802 and she will take your details.



COMMON BLACK-HAWK, RICHARD FRAY



BULLFROG, PHIL ROSEN

## Beware of Up Zoning

Pima County is in the process of updating its Comprehensive Land Use Plan. If keeping the conservation vision of the Sonoran Desert Conservation Plan intact for the updated land use plan is important to you, it is critical that you become involved in the spirit of the proactive grassroots network envisioned on page 3.

If you live close to some undeveloped land for which

a developer is seeking a Comprehensive Plan Amendment that would open the door to up zoning we'd like to hear from you. We and our friends at the Coalition for Sonoran Desert Protection can discuss with you appropriate conservation goals for these land parcels.

Contact Paul Green at [pgreen@tucsonaudubon.org](mailto:pgreen@tucsonaudubon.org) or Carolyn Campbell at [carolyn.campbell@sonorandesign.org](mailto:carolyn.campbell@sonorandesign.org)

## Conservation Corner!

Did you come to Tucson from a state where people put up bluebird boxes? Swallow boxes? Martin boxes?

Have you wondered why there hasn't been a campaign to put up bird boxes in Tucson? Well, Tucson Audubon wonders too!

This fall we are investigating boxes that could work for several species in the Tucson area. High on our list are cavity-nesting species like Ash-throated Flycatcher, American Kestrel, Gilded Flicker, and Bewick's Wren. There are several others, like Lucy's Warbler, for which we may find an innovative box design that works.

We are looking for people to help us build boxes and people who are willing to have a box in their yard. We welcome feedback from people who have had success with nest boxes for any species in our region.

We will get the boxes out by early in the spring of 2014 and then we will monitor them. Based on the data we collect, we will start a campaign to get people to set up nest boxes for declining hole-nesting species for which nest boxes are most effective.

I consulted with Kenn Kaufman, about this. Kenn is an internationally known author, artist, naturalist, and conservationist who formerly resided

in Tucson. He said, "Glad to hear that Tucson Audubon is going to be working with nest boxes. There has been far less experimentation with boxes for southwestern birds than for other parts of the country, so anything you discover will be exceptionally helpful."

If you participate, Tucson Audubon will help you decide on a target species and a nest box design for your yard. We will want to hear from you periodically about what species, if any, is using the box.

Contact Kendall Kroesen for more information at 520-209-1806 or [kkroesen@tucsonaudubon.org](mailto:kkroesen@tucsonaudubon.org).

*Kendall Kroesen  
Habitats Program Manager*



JAMIE BROWN



# TUCSON AUDUBON FIELD TRIPS

MATT GRIFFITHS | INTERIM FIELD TRIP COORDINATOR

*For a full listing of Tucson Audubon field trips, call 520-629-0510 x4 or visit [tucsonaudubon.org/fieldtrips](http://tucsonaudubon.org/fieldtrips)*

*There, you will find new destinations, full trip descriptions, leader and RSVP information, and more.*

*On this page we list basic information of all those upcoming field trips that leaders have confirmed as we go to press. For a comprehensive list of Tucson Audubon field trips, please visit [tucsonaudubon.org/fieldtrips](http://tucsonaudubon.org/fieldtrips). If you do not use the internet, you can call 520-629-0510 x4. Planning field trips four or five months in advance in order to publish a full list in this magazine would impose an unfair burden on field trip leaders. We therefore only list the basics of confirmed field trips below. Our website not only includes all trips planned by field trip leaders, but more comprehensive information about the trips listed here.*



MATT GRIFFITHS

San Pedro River



KATE REYNOLDS

San Rafael

## Some Upcoming Field Trips

Visit [tucsonaudubon.org/fieldtrips](http://tucsonaudubon.org/fieldtrips) for the latest, most comprehensive listings.

### October

October 3—Thursday 6 AM

#### Lower San Pedro at San Manuel

Leader: Jennie MacFarland [jmacfarland@tucsonaudubon.org](mailto:jmacfarland@tucsonaudubon.org)



October 5—Saturday 8 AM

#### Sabino Canyon

Leaders: Jean & Mark Hengesbaugh  
[jhhenge@yahoo.com](mailto:jhhenge@yahoo.com)



Oct 19—Saturday 7 AM

#### Urban Birding by Bike

Leader: Michael Bissontz 520-577-8778  
[seetrogon@comcast.net](mailto:seetrogon@comcast.net)

October 24 Thursday 7 AM

#### Tanque Verde Wash

Leader: Jennie MacFarland [jmacfarland@tucsonaudubon.org](mailto:jmacfarland@tucsonaudubon.org)



### November

November 2—Saturday 8 AM

#### Sabino Canyon

Leaders: Jean & Mark Hengesbaugh  
[jhhenge@yahoo.com](mailto:jhhenge@yahoo.com)



November 12—Tuesday 5 AM

#### San Rafael Grasslands

Leader: Jim Hays [jhays@iname.com](mailto:jhays@iname.com)



November 17—Sunday 7:30 AM

#### Tanque Verde Wash

Leader: Brian Nicholas [weehawker2@yahoo.com](mailto:weehawker2@yahoo.com) 520-760-3583



November 19—Tuesday 10:30 AM

#### Reid Park Ramble

Leader: John Higgins 520-578-1830  
[jhhiggins@comcast.net](mailto:jhhiggins@comcast.net)

November 23—Saturday 8:15 AM

#### Oracle State Park

Leader: M.E. Flynn 520-797-1743 or [me.flynn@comcast.net](mailto:me.flynn@comcast.net) (contact after November 15)

November 29—Friday 7:30 AM

#### Patagonia Sonoita Creek and the Patons

Leader: Cliff Cathers, [AZCliffy@Q.com](mailto:AZCliffy@Q.com) or 520-982-3272



### December

December 5—Thursday 8 AM

#### Urban Birding Across from Catalina State Park

Leader: Jennie MacFarland [jmacfarland@tucsonaudubon.org](mailto:jmacfarland@tucsonaudubon.org)

**Wednesdays, 6 AM during the hottest months. Sweetwater Wetlands.** Join Mike Sadatmousavi for an easy walk to see waterfowl in the hundreds, regular and visiting warblers, and several exciting species hiding in the reeds. Birders of all experience levels welcome! Email [mike.sadat@gmail.com](mailto:mike.sadat@gmail.com) to sign up. Check website for switch to later start time

**Thursdays, October & November: 8–9:30 AM. Wake Up With the Birds at Agua Caliente Park.** A stroll through the bosque and along the ponds. Loaner binocs available, meet in front of the ranch house. For more info call Pima County Parks and Rec., 520-615-7855.

**Saturdays, October–May, 8–9:30 AM. Tucson Audubon's Mason Center.** Families and birders of all skill levels are welcome. Visit [tucsonaudubon.org/masoncenter](http://tucsonaudubon.org/masoncenter) for details.

Find complete field trip information (including weekly regional trips) at [tucsonaudubon.org/fieldtrips](http://tucsonaudubon.org/fieldtrips) Call 520-629-0510 x4 for a recording of upcoming Tucson Audubon trips.

**General Information** Tucson Audubon field trips are offered at no charge and are led by expert volunteers. Bring money to cover your share of the 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 for your field trip. Always wear sturdy shoes, a hat, and use sun protection. Bring plenty of snacks and water for yourself. Always bring binoculars and a field guide, and for most trips a scope can be useful.

**Arrival Times** Arrive *before* listed departure times. Trips will 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 ext. 3. Report rare birds at 520-629-0510 or [rarebirdalert@tucsonaudubon.org](mailto:rarebirdalert@tucsonaudubon.org)

**Don't forget to stop in our Nature Shop for your birding supplies.**

December 7—Saturday 8 AM

**Sabino Canyon**Leaders: Jean & Mark Hengesbaugh  
jhenge@yahoo.com

December 14—Saturday 8 AM

**Atturbury-Lyman Animal and Bird Sanctuary at Lincoln Park**

Leader: Kendall Kroesen k kroesen@tucsonaudubon.org or 520-971-2385.

December 21—Saturday 8:30 AM

**Sweetwater Wetlands**

Leader: Deb Vath at dvath@hotmail.com

December 29—Sunday 7:30 AM

**Tanque Verde Wash, Agua Caliente Park, and Woodland Road**

Leader: Cliff Cathers AZCliffy@Q.com or 520-982-3272

**January**

January 1, 2014 : New Year Big Day

**New Year Big Day**

(location revealed upon registration)

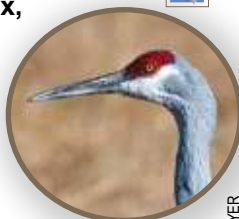
Leader: Clifford Cathers AZCliffy@Q.com or 520-982-3272

January 11—Saturday 8 AM

**Atturbury-Lyman Animal and Bird Sanctuary at Lincoln Park**

Leader: Kendall Kroesen k kroesen@tucsonaudubon.org or 520-971-2385.

January 25—Saturday 6 AM

**Whitewater, Willcox, and Wine**Leader: Michael Bissontz 520-577-8778  
seetregon@comcast.net

SANDHILL CRANE, MURIEL NEDDERMEYER

**Arizona Christmas Bird Count Schedule 2013–2014**

The National Audubon Society has conducted Christmas bird counts since 1900. Volunteers from across North America and beyond take to the field during one calendar day in December and January to record every bird species and individual bird encountered within a designated 15-mile-diameter circle. These records now comprise an extensive ornithological database that enables monitoring of winter bird populations and the overall health of the environment. Help is needed on most of these counts, so find one or more and contact the compiler for info. The counts are now free. See [tucsonaudubon.org/cbc](http://tucsonaudubon.org/cbc) for the full list of counts in Arizona.

**BIRDING TRAVEL FROM OUR BUSINESS PARTNERS****ADVENTURE BIRDING COMPANY**www.adventurebirding.com  
info@adventurebirding.com • 520-495-0229**Big Bend Nat'l Park, Texas: Colima Warbler Short Tour: April 30–May 4, 2014, \$1195.**

Leader: John Yerger. Big Bend is one of the most remote birding hotspots in the U.S., and home to some of its most spectacular scenery! It's the only place in the country to find Colima Warbler, the focus of one long day hike. A surprising number of habitats and oases are found within Park boundaries. Ideal for anyone desiring lots of birding and sightseeing on limited vacation time. Lucifer Hummingbird, Painted Bunting and Common Black-Hawk are just a few others we'll seek on this fun-filled adventure!

**South Texas: Rarities and Specialties Short Tour: February 26–March 2, 2014, \$1295.**

Leader: John Yerger. Limited vacation time? This "short tour" will target some of the rarest birds in the ABA region! Our main focus: find mega-rarities in the Lower Rio Grande Valley. In recent years, species included Crimson-collared Grosbeak, Golden-crowned Warbler and Black-vented Oriole. In addition, we'll seek rare residents like Clay-colored Thrush and Red-billed Pigeon. And of course, spectacular South Texas specialties like Green Jay, Altamira Oriole and Buff-bellied Hummingbird will round out the trip! See website for details and on this and other tours.

**ROCKJUMPER—WORLDWIDE BIRDING ADVENTURES**info@rockjumperbirding.com  
www.rockjumperbirding.com  
(USA & Canada toll-free): 1-888-990-5552**Comprehensive South Africa 2014:**

**Tour Dates: departures run almost every month of the year.** Tour Price (per person) Eastern South Africa approx US\$3,650, Western Cape Extension approx US\$1,650 (rate fixed in ZAR). Eastern South Africa offers the classic African savannas of the world-renowned Kruger National Park and Zululand game reserves, endemic-rich mist-belt forests and the mighty Drakensberg. Our Cape Extension explores the breathtaking Cape Peninsula and its offshore pelagic waters, the succulent Tanqua-Karoo and flower-laden West Coast. Target birds include both Rockjumper and Sugarbirds, Blue Crane, Southern Bald Ibis, African Penguin. These tours can produce up to 500 bird and 50 mammal species (including the Big 5).

**Guatemala—Central American**

**Specialties I 2014: Tour dates 11–19 Jan 2014 (9 days).** Tour price (per person) US\$2,625. Our Guatemala birding tour not only targets some really special Central American birds, but also samples spectacular volcanoes and highland lakes, fascinating culture and historic Spanish and Aztec cities. Our trip targets some of the world's most sought-after birds including Horned Guan, Ocellated Turkey, the gorgeous Pink-headed

Warbler, fabulous Resplendent Quetzal, Blue-throated Motmot and Azure-rumped Tanager.

**SOLIPASO TOURS**

www.solipaso.com

**Durango Highway and San Blas:**

**January 17–26, 2014, \$2900.** Leader: David Mackay. By combining a visit to the northern Sierra Madre with time in the tropical lowlands surrounding San Blas, it is possible to see more than 25 percent of the bird species that exist in the entire country of Mexico, including nearly half of Mexico's 100 endemic birds! Starting in Mazatlan, we travel up the Durango Highway and into the Sierra Madre looking for Tufted Jay, Military Macaw, Red-breasted Chat, Red-headed Tanager to mention a few. Great guides, great birds, lots of fun and delicious food throughout!

**Oaxaca: February 8–15, 2014, \$2695.** Leader: David MacKay. A 4000' elevation gradient holds a great array of habitats which have allowed the evolution of 12 birds endemic to southern Mexico and the valley of Oaxaca itself, including Dwarf Jay, Ocellated Thrasher, Pileated Flycatcher, Long-tailed Wood Partridge, Bridled and Oaxaca Sparrow! Many of these birds can be found at such significant archeological sites as Monte Alban and Yagul which allows us the opportunity to combine cultural activities and some of the best food in Mexico with our birding!

**TROPICAL BIRDING**www.tropicalbirding.com  
info@tropicalbirding.com • 1-800-348-5941**Southern Ecuador: Highland Rarities and Tumbesian Endemics July 9–25, 2014, \$4690, Single Supplement \$480.**

Expect a spectacular variety of habitat, scenery, and birds on this tour led by Tucson's Scott Olmstead. The trip takes in both sides of the Andes, visiting desert scrub and deciduous forests, montane cloudforests, high altitude elfin forests, and páramo. We target outrageous bucket-list megas like Jocotoco Antpitta, Orange-throated Tanager, Long-wattled Umbrellabird, and Rainbow Starfrontlet, while staying in comfortable lodges. Plan to see a large percentage of the birds endemic to the Tumbesian Region of SW Ecuador & NW Peru. ■



ARTHUR CHAPMAN

Blue Crane

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**SOLAR INVERTER** wanted for the Mason Center. Call Paul Green 520-235-1796 if you can help.

**BIRDS & BEER.** Third Thursdays at Sky Bar: October 17 and November 21, 5-7 PM. Free slice of pizza, beer at happy hour prices, share your bird photos.

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TUCSON AUDUBON'S SIXTH ANNUAL GALA

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Tucson Audubon member and birder Kathy Jacobs has spent the last four years working for the Office of Science and Technology Policy in Washington DC as the Assistant Director for Climate Assessment and Adaptation.

Please contact Erin Olmstead at [eolmstead@tucsonaudubon.org](mailto:eolmstead@tucsonaudubon.org) or 520-209-1809 for sponsorship information or to reserve your place.

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