

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

Vermilion

FLYCATCHER

October–December 2012 | Volume 57, Number 4

Sustainability

Net Zero Energy Mason Center

Permaculture Plan

Harvest Festival

What's in a Name?

Gambel's Quail

Madera Canyon Alternatives

PLUS special four-page
holiday gift ideas pull-out





Tucson Audubon Society is dedicated to improving the quality of the environment by providing education, conservation, and recreation programs, environmental leadership, and information. 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

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300 E University Blvd #120	ext 7015
623-3476 fax / 629-0510 Shop Manager	
Hours: 10 AM–4 PM, Monday–Saturday	
Agua Caliente Park, 12325 E Roger Rd	760-7881
Hours: October Thursday, 9 AM–1:30 PM; November & December Wednesday 10 AM–1 PM, Thursday 9 AM–2:30 PM, Friday–Saturday, 10 AM–2:30 PM	

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FRONT COVER: Greater Roadrunner by Alan Murphy. More than 20 years ago, Alan began photographing birds and poring over the prints with a field guide in hand to help him identify what he had seen and photographed. Alan's numerous photo credits include: *National Geographic*, *Birding*, *Birder's World*, *WildBird*, *Bird Watcher's Digest*, and *North American Birds*. To see more of Alan's work visit alanmurphyphotography.com/favorites.htm



Not Just Ecology But Society Too

A guest opinion by David Schaller, a Tucson Native, Board Member of the Southern Arizona Green Chamber of Commerce, and a former Sustainability Coordinator (USEPA 1995–2007)

Sustainability as an organizing concept has come to represent a way of approaching not only ecological but also those socio-economic challenges that result when we ignore the natural systems and processes upon which all human endeavors are based. Do we want sustainable businesses? Sure. I've not yet met a person who advocates for non-sustainable business. Do we want our societies, institutions, and settlement patterns to thrive indefinitely over time? Absolutely.

I once had to define sustainability for a lay audience and had five minutes to do it. I offered up three well-worn terms that I hoped could accurately reflect a hugely complex set of variables and relationships within and between natural, social, and economic systems. Sustainability, I said, was a set of behaviors and practices in our relationship to the natural world that embodied common sense, efficiency, and fairness. Common sense means we don't foul our own nest; efficiency is reflected in economic terms such as "all waste is lost profit." Fairness, as Lester Brown so bluntly put it, means we have to meet the basic needs of all, not just some. In other words, "you can't sink half a ship." These are concepts people can grasp.

When we think of nurturing these three precepts across Tucson and the desert Southwest, we come face to face with the uniqueness of our natural

world that then puts meaning into words like common sense and efficiency and fairness. The Southwest is our nest and we need to understand it a whole lot more before we can say we are not fouling it. Whatever social and economic fabric we aim to create for ourselves cannot violate the constraints that arid soils, water limits, fragile ecosystems, climate, and natural cycles present.

Efficiency means designing systems, products, and processes that eliminate the concept of waste. Waste needs to become a verb and not a noun. Our region hosts many non-sustainable businesses which often formed and once thrived under a set of ecological realities that are no longer valid. Cheap, nonrenewable energy, water scarcity, dependence on imported goods and materials, especially food, all conspire to challenge businesses to use new ways to solve problems. Smart money is building new business plans around alternative energy, water recapture, resource efficiency, ecological restoration, buying local, and strengthening the neighborhoods where they do business.

Fairness is perhaps the least far along in the sustainability triad of people, planet, and prosperity. We have struggling centers of disadvantaged people whose needs, basic needs, must be addressed before the region earns the right to claim itself to be sustainable. ■

COMMENTARY

PAUL GREEN | EXECUTIVE DIRECTOR

The Sustainability Issue

This issue of the *Vermilion Flycatcher* focuses on Sustainability. How can we live our lives in a way that meets our basic needs without compromising the ability of future generations to meet theirs?

Ideas change over time, and build on themselves as they help us better predict our interactions with the world. Galileo was imprisoned during the last years of his life for suggesting that the earth circled the sun, and we came to understand that the earth is a globe and not a disc; that our continents float on a mantle; and that life forms change over time in response to changing environments. History shows us that the teachings of science are resisted by those with an interest in the *status quo*.

Scientists calculate that without gases like ozone, nitrous oxide, carbon dioxide, water vapor, and methane in our atmosphere, our earth's temperature would be 59° F colder than it is today. That's because these gases trap the infrared heat that radiates from the earth's surface once the earth has absorbed the ultra-violet radiation from our sun.

As a result of increasingly intense global industrial activity over the last 150 years, we have been changing the composition of our atmosphere. We are adding greenhouse gases to the atmosphere, and so enhancing its ability to trap the sun's energy. A hotter world changes our climate and weather systems in ways that climate scientists are working to better predict.

Moves to reduce the production of these heat-trapping gases are opposed by those who believe they have the most to lose. Corporate interests, whose business it is to extract vast stores of carbon from the earth and release them into the atmosphere, spend billions of dollars to convince us that climate change is bogus. Some significant players do however take climate change seriously. The military is one, the insurance industry is another.

Meanwhile, in Arizona, our politicians are preparing to remove all incentives for low carbon energy production and to maximize incentives to exploit

the remaining fossil fuels at great environmental cost, through habitat destruction on the ground and changes in our atmosphere. Will you let them get away with that?

If you need a primer on global warming and concomitant climate change, a great place to start is southwestclimatechange.org. The fact is, global temperatures have increased steadily, with great short-term fluctuations around the trend line, by around 1° F since 1900. Last year, at least 42 states saw record daytime highs in the summer and 49 states saw record high nighttime temperatures, according to the National Oceanographic and Atmospheric Administration (NOAA).

When we allow our society to overburden the natural systems and processes on which all human endeavors are based, complex social and economic challenges result, in addition to the ecological ones on which biologists might focus, as David Schaller reminds us on page two.

Tucson will be disproportionately affected by increased temperatures, decreased rainfall, and increased severity of rainfall events. All these changes will affect birds and other wildlife. Tucson Audubon seeks to sustain bird populations by identifying and minimizing the threats to them. As we work with government agencies, stressing the importance of not destroying the last great places for birds in our state (see pages 18–19), human-caused climate change looms as a much bigger threat.

What's a person to do? First, believe in your convictions and live them (spend some time at www.storyofstuff.org and get some ideas). And VOTE! (see page 20). Support and get engaged with Tucson Audubon's work.

Since around 40 percent of our energy use is consumed by the buildings in which we live and work, Tucson Audubon is seeking to provide our community with a demonstration green retrofit building. Our Mason Center is a prime example of a 1950s house in need of upgrades. See page 12 for how you can help with this work.



KENDALL KROESEN

Food security is another issue that looms with a changing climate as agricultural systems become susceptible to disruption. We're advancing with the second phase of our Mason Center permaculture plan, integrating how our planted space works. Read more on page 17 about our project to encourage planting of native species and crop plants using rainwater harvesting. Join us on November 3 at the Mason Center to learn about native food, food security, rainwater harvesting, and more at our Fall Harvest Festival (page 15).

This season's Living with Nature lecture series will also cover issues of sustainability. Jesus Garcia of the Arizona-Sonora Desert Museum will ask us to taste history and plant for our future using heirloom European fruit varieties introduced from the late 17th century. Heirloom plants from this time period are being cultivated at the Mission Garden, a local reconstruction of the Spanish Colonial walled garden that was part of Tucson's historic San Agustín Mission. These plants are being integrated into our urban environment to create hot spots of food production for the benefit of both humans and wildlife. Read Kendall's aptly titled *Landscapes to Chew On* on p17 and consider integrating urban food production, wildlife habitats, and aesthetically pleasing designs in your backyard. You can also receive rebates on rainwater harvesting systems (p 22) as you do this.

Meanwhile, Guy McPherson will make each of us think about how we assume that we'll have an endless supply of cheap energy, and how this affects every aspect of our lives. Guy took the decision to opt-out of a life of conspicuous consumption, and that of a tenured University professor, committing instead to living sustainably and to telling others about it. He'll talk to us in November. We look forward to seeing you there. ■

TUCSON AUDUBON EVENTS AND CLASSES

Lifelong Learning Opportunities with Tucson Audubon

We have an exciting line-up of workshops and courses for the winter and spring of 2013! There is something for everyone—from beginner to intermediate level birders to kids!

Specialty Workshops 2012–2013

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 amongst similar species, identification techniques, and vocalizations. These workshops are for advanced beginner to intermediate birders.

All specialty workshops take place over the course of two days. In the workshop summaries below, the first date listed is the day of the classroom session and the second date listed is the field trip outing. The cost for all specialty workshops is \$110 for members and \$145 for non-members. All classroom sessions take place from 5:30 PM–8:30 PM in the conference room of the Historic Y building on University Blvd. and 5th Ave. Workshops are limited to 20 participants.

Spring Programming

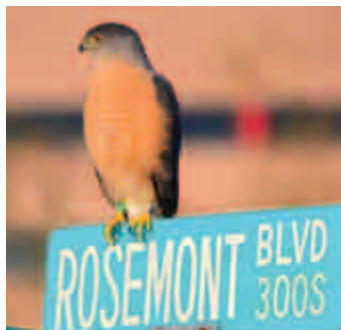
See our website for more detailed descriptions of each workshop.

All taught by Homer Hansen

Sparrows: February 7 & 9, 2013

Raptors: February 13 & 16, 2013

Birding by Ear: April 18 & 20, 2013



IBIKETUCSON

Education Courses for Winter and Spring: 2013

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. Course limited to 15 participants.

Classroom sessions: Saturdays, January 12, 19 (no class January 26), February 9, 16; 10 AM–12 NOON
Field trips: Saturdays, February 2, 23; 9:00 AM; Location to be announced
Cost: \$150 for members, \$185 for non-members
Location: TAS offices on University Blvd. and 5th Ave.
Register online today!

Birding by Habitat

Southeastern Arizona offers such excellent birding opportunities in part because of its variety of habitats. Elevation contrasts result in different temperature and moisture levels, which in turn make for different assemblages of plants and animals. Riparian areas

Moving to Mastery is now being offered in the spring! See the text for more details.

support their own cast of avian characters. 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. Course limited to 12 participants.

Classroom session: Saturday, April 6; 10 AM–12 NOON

Field trips: Saturdays, April 13 & 20, May 4; TBA; Carpooling encouraged

Cost: \$125 for members, \$160 for non-members

Location: TAS offices on University Blvd. and 5th Ave.

Register online today!

For Advanced Beginners/ Intermediates

Moving to Mastery

Take your birding to the next level with our popular Moving to Mastery class. If you feel like you are ready to move your birding skills beyond the basics, this is the class for you. Taught by Wings Over Willcox chairman Homer Hansen, this class will build upon knowledge that you've acquired through experience in the field, in a beginning birding class, or from private study. Homer's techniques focus on structure and behavior to bring you to a better understanding of bird identification. Over the course of five weeks, you'll learn how to identify some of the more difficult bird groups, how to use technical references, and how to understand bird topography. Course limited to 16 participants.

Classroom sessions:

Thursdays, March 14–April 11; 5:30 PM–8:00 PM

Field trips: Saturdays, March 16–April 6; 7:00 AM–5 PM

Cost: \$250 for TAS members; \$285 for non-members

Location: TAS offices on University Blvd. and 5th Ave.

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 and learn together. This program focuses 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, the San Pedro provides a green oasis in the desert, and is home to hundreds of species of plants, birds, insects, reptiles, amphibians and mammals.

Date: April 20–21

Cost: \$260 for a family of four (price varies with number of family members)

Location: The Nature Conservancy Lower San Pedro River Preserve

Register online today! Visit tucsonaudubon.org/education.

Contact for all education activities: Bété Pfister at bpfister@tucsonaudubon.org, 520-209-1812

All non-member prices include a year's membership with Friends of Tucson Audubon.

Visit our Nature Shops to discover a whole world of resources to support your learning experience.



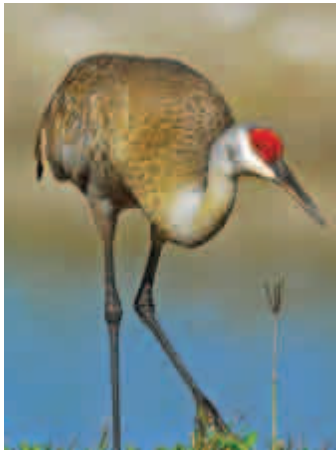
MATT GRIFFITHS

We are offering FREE lectures and two specialty workshops as part of our Harvest Festival on November 3rd. See page 15 for more details!

FOR MORE INFORMATION ON OUR SUITE OF EDUCATION CLASSES AND TO REGISTER ONLINE, PLEASE VISIT WWW.TUCSONAUDUBON.ORG/EDUCATION

Magnificent Cranes and a Gastronomical Event

Saturday, February 9, 2013 | Whitewater Draw



DONNA TOLBERT-ANDERSON

Enter a luxury coach and enjoy a scenic ride to Whitewater Draw. On the way you will hear about the vast number of Sandhill Cranes that visit Arizona in the winter. At the site you will hear and see them flying in formations and landing noisily. In this managed wetland area there are also snow geese and many varieties of wintering ducks. You might even see one or two Great Horned Owls roosting for the day. This all-day adventure will weave together recreation, education, and

conservation into a friendly social event.

In addition you will be treated to a gourmet meal at lunch, breakfast treats and coffee as you enter the bus, wine and other tempting tidbits on the way home. There will be guest speakers and tour leaders to take you around the site. Space is limited so make your reservation now for the Saturday, February 9, 2013 trip. Cost is \$75 all inclusive. Call Jean Barchman on 520-209-1802 to reserve your space.

Gala Returns: River of Birds

With Special Guest David Wilcove • January 30, 2013, 6:00 PM • Hilton El Conquistador Resort



Please join us as we celebrate our fifth Annual Gala on Wednesday January 30 at the beautiful Hilton El Conquistador Resort near Catalina State Park on Oracle Road.

A no-host cocktail hour, live music, and an exciting silent auction will precede a gourmet dinner in the Presidio Ballroom. Enjoy a live raptor free-flight, great company, and a thought-provoking keynote presentation on animal migration by David Wilcove, Professor of Ecology and Evolutionary Biology and Public

Affairs at Princeton University and the author of *No Way Home: The Decline of the World's Great Animal Migrations*. Yes, animal migration is still very evident here in our region and Professor Wilcove will inspire us to protect these magnificent journeys!

The annual gala is a fabulous opportunity to introduce Tucson Audubon, our goals, and our achievements to our community while raising important funds to support our program work. We hope you will

become a part of this special Tucson Audubon tradition.

Tickets are \$150 each and \$1500 tables for 10 are available only to Friends of Tucson Audubon. Corporate sponsorship packages are offered from \$2000. The resort is offering discounted room rates for gala guests wishing to spend the night.

To reserve your seats, please call Jean Barchman at 520-209-1802 or Erin Olmstead at 520-209-1809 today! Full details online at www.tucsonaudubon.org/gala

Members' Annual Holiday Potluck

We invite all members to attend Tucson Audubon's Annual Holiday Potluck on **Monday, December 10, 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 Ave 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 tea. (No alcoholic beverage due to church regulations.)

Our speaker will be Rick Taylor on *The Elegant Trogons* (see p 6). In addition to the wonderful presentation and awesome food you will have, we will also be holding a raffle of unique one-of-a-kind items and other collectables, so bring your checkbook! We look forward to seeing you there!

Jean Barchman
Membership Coordinator

October 8. Living with Nature lecture (Tucson): *Tasting History, Planting for Our Future* with Jesus Garcia (see p 6)

October 13. Atturbury Wash workday (see p 9)

October 27. Atturbury Wash workdays (see p 9)

November 3. Tucson Audubon Harvest Festival (see p 15)

November 3. Living with Nature lecture (Green Valley): *Hummingbirds Lost in Flight!* with Noreen Kordosky (see p 6)

November 5. Living with Nature lecture (Tucson): *Climate Change and Energy Decline* with Guy McPherson (see p 6)

November 17. AZ IBA 10-year anniversary and volunteer recognition party (see p 7)

November 17. Atturbury Wash workdays (see p 9)

November 19–24. Nature Shops Annual Holiday Sale (see p 27)

December 1. Living with Nature lecture (Green Valley): *Bird Diversity in the "A" States!* with David MacKay (see p 6)

December 10. Living with Nature lecture and Members' Annual Potluck (Tucson): *Trogons of the Arizona Borderlands* with Rick Taylor (see p 3 & 6)

December 15. Atturbury Wash workdays (see p 9)

January 5. Living with Nature lecture (Green Valley): TBA (see p 6)

January 12–February 23. Backyard Birding and Beyond course (p 4)

January 14. Living with Nature lecture (Tucson): *Vanished Birds and Shooting Stars* with Chris Cokinos (see p 6)

January 18 Willcox Playa/Cochise Lakes Global IBA recognition ceremony (see p 7)

January 19. Atturbury Wash workdays (see p 9)

January 24 & 25. IBA training workshop (see p 7)

January 26. Buffelgrass removal (see p 9)

January 30. Tucson Audubon's 5th Annual Gala (see left)

February 7 & 9. Sparrows workshop (see p 4)

February 9. Sandhill Crane tour to Whitewater Draw (see above left)

February 9. Buffelgrass removal (see p 9)

February 9. San Rafael Grasslands IBA survey (see p 7)

February 13 & 16. Raptors workshop (see p 4)

February 16. Atturbury Wash workdays (see p 9)

March 9. Buffelgrass removal (see p 9)

March 14–April 11. Moving to Mastery course (see p 4)

April 13. Buffelgrass removal (see p 9)

April 18 & 20. Birding by Ear course (see p 4)

April 6–May 4. Birding by Habitat workshop (see p 4)

April 20–21. Riparian Family Institute (see p 4)

Tucson Audubon's Living with Nature Lecture Series

TUCSON Living with Nature Lecture Series and Member Meetings

NOTE NEW VENUE! Pima Community College Downtown Campus, Amethyst Room. Located on campus at 1255 N. Stone Ave. See tucsonaudubon.org/lwn for map.

The program begins at **7 PM, SECOND MONDAY** of each month **October through May**. Please check our website for details on topics and speakers.

GREEN VALLEY Living with Nature Lecture Series Joyner-Green Valley Library, 601 N. La Canada Dr. 594-5295. The Green Valley talks will now be at **10 AM** on the **FIRST SATURDAY** of the month, **November through April**.

For more information, contact Bété Pfister, 520-209-1812 or bpfister@tucsonaudubon.org, or visit tucsonaudubon.org.

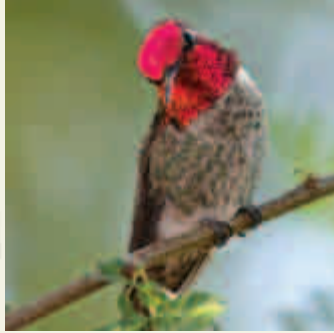
October 8 • Tucson

TASTING HISTORY, PLANTING FOR OUR FUTURE with *Jesus Garcia*

In the late 17th and early 18th centuries, the introduction of European fruit trees to this region catalyzed a watershed agricultural transformation for its people. Heirloom plants from this time period are now being cultivated at the Mission Garden, a local reconstruction of the Spanish Colonial walled garden that was part of Tucson's historic San Agustín Mission. These plants are being integrated into our urban environment to create hot spots of food production for the benefit of both humans and wildlife. Come learn how to transform your backyard!

Jesus Garcia is an Education Specialist at the Arizona-Sonora Desert Museum and he has been working on the Kino Heritage Fruit Trees Project for eight years.

November 3 • Green Valley



JOAN GELLATLY

HUMMINGBIRDS LOST IN FLIGHT! with *Noreen Kordosky*

The rehabilitation of hummingbirds is a very challenging, yet rewarding task. Learn about these delicate birds and the aspects of their life history that dictate the careful circumstances under which they should be rescued and rehabilitated. Each stage of the hummingbird's development can require different protocols for appropriate temperature, enclosure and food. Noreen will talk about what rehabilitation of hummingbirds involves and show examples of housing and equipment used in their care. She will also present an opportunity to engage in hummingbird rehabilitation, for those that are interested in volunteering for Wildlife Rehabilitation Northwest Tucson.

Noreen Geyer-Kordosky has been a volunteer agent with Wildlife Rehabilitation Northwest Tucson for the last 25 years, assisting in bird and small mammal care.

November 5 • Tucson

CLIMATE CHANGE AND ENERGY DECLINE: BUILDING RESILIENT COMMUNITIES IN THE SOUTHWESTERN UNITED STATES with *Guy McPherson*

Do this thought exercise: how will your life change when fossil fuels become scarce and expensive? When Guy McPherson did this, he changed his life completely to reduce his use of non-renewable resources.

Guy McPherson grew up in a small-town in northern Idaho. He worked on a helitack crew to pay for his undergraduate education. He earned a degree in forestry and became an authority on fire ecology,

co-authoring *Living with Fire: Fire Ecology and Policy for the Twenty-first Century* with Sara E. Jensen. More recently, he has focused on the social and economic effects of our changing climate (see pp2–3). After his talk, Guy will sign copies of his memoir, *Walking Away from Empire*. Find out more at guymperson.com. This talk is co-sponsored by Sustainable Tucson.

December 1 • Green Valley

BIRD DIVERSITY IN THE "A" STATES! with *David MacKay*

Alaska and Arizona are among the top five birding destinations in North America. Both locations boast unusually high bird diversity, largely in part because they are home to species that cross over into North America from Mexico and the Old World. Also, many breeding species from Alaska winter in Arizona, which is an important feeding ground for birds that migrate to Alaska for the summer. David will give you a guided tour of the western part of Alaska as he highlights birding destinations such as Adak Island (Aleutian Islands), St. Paul Island (Pribilof Islands), St. Lawrence Island, Nome, and Barrow.

David is co-owner of Solipaso, the largest and longest operating Mexico-based bird watching tour company and a member of Tucson Audubon Birds and Business Alliance.

December 10 • Tucson



CAROL H.

MEMBERS' ANNUAL POTLUCK For details about the Annual Potluck, see p 5.

TROGONS OF THE ARIZONA BORDERLANDS with *Rick Taylor*

There are only about 50 pairs of Elegant Trogons in southern Arizona in any one summer breeding season. Join Rick as he unveils the beauty and mystery life of these "confiding" birds that inhabit the remote canyons of our region. This year, Rick completed the 35th annual Elegant Trogon census in the Chiricahua and Huachuca Mountains and will discuss the effects of last year's fires on the trogon populations in these areas.

A lifelong resident of southeastern Arizona, Rick conducted an eight-year study of the Elegant Trogon that led to the publication of *Trogons of the Arizona Borderlands* in 1994. He has also authored *A Birder's Guide to Southeastern Arizona* and location checklists for both the Huachuca and Chiricahua Mountains and is founder of Borderland Tours, a birding travel company.

January 5 • Green Valley

To be announced. Check our website for updates.

January 14 • Tucson

VANISHED BIRDS AND SHOOTING STARS: LIFE AND DEATH FROM THE SKY with *Chris Cokinos*

From the stories of extinct North American birds to the seemingly unrelated subject of meteorites and their effects on the Earth, author Christopher Cokinos will explore themes of extinction, life, and deep time in a talk that takes listeners from flocks of Carolina parakeets to swarms of "killer" asteroids. He will discuss environmental responsibility toward the contemporary biosphere and how we, as keepers of our natural world, can act to conserve and protect what we value.

Christopher Cokinos is the author of *Hope Is the Thing with Feathers: A Personal Chronicle of Vanished Birds* and *The Fallen Sky: An Intimate History of Shooting Stars*. He has won several national writing awards and is currently an Associate Professor of English at the University of Arizona and Affiliated Faculty with the Institute of the Environment. ■



TUCSON AUDUBON NEWS ROUNDUP

Staff News

Kelly DiGiacomo is a Tucson native and graduate of the University of Arizona. She joined Tucson Audubon in the summer of 2012. Although she is new to birding, she has a background in retail and has worked in various positions in both Arizona and California.

Kelly is excited to learn about birds from her co-workers and Tucson Audubon Society's dedicated

volunteers. She credits the little she already knows to them!

In her free time, Kelly enjoys traveling and cooking with her husband.

Kelly fills the space left by **Matt Brooks** who has moved on to work for the Tucson-based birding tour company, WINGS, after six years



with Tucson Audubon. Matt was the much-respected birding authority in our Nature Shop and remains involved with several of our activities. We are grateful for that.

Ecology and rock climbing brought **Jonathan Horst** to Tucson. Though his first job here was only a four-month position, he has yet to successfully move away. Since then he has studied band-tailed pigeons and burrowing owls, climbed throughout the region, played lots of ultimate Frisbee, and gotten a Master's degree from the University of Arizona studying the ecology of winter plants on Tumamoc Hill. He also discovered a new exotic plant,

Matthiola parviflora, never before identified in the Americas.

In August 2012 Jonathan joined Tucson Audubon as a Restoration Biologist. He is currently working on designing experiments to optimize control of a number of invasive species on Tucson Audubon managed restoration properties, as well as strategizing revegetation work toward supporting a number of Sonoran Desert Conservation Plan "species of concern."



What's New with the Important Bird Areas Program?

Jennie MacFarland, IBA Conservation Biologist



LEFT: MATT GRIFFITHS



RIGHT: THREE PHOTOS: JENNIE MACFARLAND

L to R: Four different locations that were surveyed by IBA volunteers in 2012. Left to right: The view of the Lower San Pedro River from the adjacent uplands near San Manuel. Matt Brooks in Barfoot Park in the Chiricahua Mountains. A vista view from Jesus-Goudy Trail in the Pinaleno Mountains. Sunrise over the uplands north of the San Pedro River.

We have had a great season this year at the Arizona Important Bird Area (IBA) program. We surveyed for Yellow-billed Cuckoos in the San Pedro River, we measured the importance of the adjacent saguaro uplands and counted owls along the river. We had special camping surveys in the Patagonia Mountains, Mount Graham, and a special survey of the Chiricahua Mountains Global IBA to see the impacts of last year's devastating fire. Special thanks to the amazing volunteers who made these surveys possible!

The Arizona IBA program has some exciting new developments on the horizon. With our new eBird initiative it will be easier to participate in the IBA program than ever before. Your amazing skills as a birder can result in valuable data when you visit existing and possible future IBAs if you enter your sightings on eBird. Encouraging birders to take this extra

step when they go birding will be a major focus of IBA activities this next season including "eBird Blitzes," workshops, and special survey events. One such special event will be the official recognition of the **Willcox Playa/Cochise Lakes IBA on January 18, 2013**. This IBA was recently elevated to a Global level IBA for the astounding numbers of Sandhill Cranes that gather here each winter. This is a free event; all are invited and there will be a birding walk, a brief talk about the IBA, and refreshments. For more info, check out www.aziba.org.

The official IBA surveys will continue as well as several back-country group expeditions using our specific protocol. If you would like to be included on these outings or adopt a route, we will have a **free IBA training workshop on January 24 & 25, 2013**. The first morning will be a classroom session at the Tucson Audubon offices on University

Blvd. and the second morning will be a practice survey in the Tanque Verde Wash. Just a few weeks after the training is the group survey of the **San Rafael Grasslands IBA on February 9**. This is a driving survey where five teams drive a different section of the roads and record all the birds they encounter. This beautiful rolling grassland is famous for wintering sparrows, and our target bird is the Chestnut-collared Longspurs that gather here in large numbers. This bird's global population is declining at an alarming rate and this area is an important intact habitat where they can spend the winter months. This will be the third winter of these surveys and they have been a blast each time! To find out more information about or to sign up for any of these events, please email Jennie at jmacfarland@tucsonaudubon.org.

Arizona IBA 10-Year Anniversary and Volunteer Recognition Party!

You are invited to the state-wide 10-year celebration of the Arizona IBA program on November 17, 2012, at Boyce Thompson Arboretum IBA. The festivities will begin at 8:30 AM with a bird walk through this famous hot spot of rarities. At 11 AM there will be several brief talks about the Arizona IBA program at 10 years and then recognition of all IBA volunteers in attendance. Lunch will be served around noon. This is a totally free event and if you have ever helped with the IBA program you are especially invited. Please RSVP with Jennie at jmacfarland@tucsonaudubon.org by October 29, 2012 (sooner is appreciated). Special thanks to Boyce-Thompson Arboretum for sponsoring this event.

Second Annual Tucson Bird & Wildlife Festival

Erin Olmstead, Development Manager

We welcomed more than 750 attendees from 24 states, who joined us for field trips, nature talks, exhibits, vendor expo, workshops, socials, kids' activities, and dinner programs at the Riverpark Inn. Birders and naturalists enjoyed field trips to Mt. Lemmon, Patagonia, Las Cienegas, Madera Canyon, Catalina State Park, Cienega Creek, the Huachucas, and Sweetwater Wetlands. We hope you will join us next year. Mark your calendars for August 14–18, 2013.

The second annual Tucson Bird & Wildlife Festival was a success thanks to the collaborative efforts of many! Our tireless volunteers contributed more than 836 hours of work and an infinitely valuable infusion of energy and ideas.

Thanks to our Festival Sponsors and partners whose generous support helps make this event possible: The Riverpark Inn, Arizona Game & Fish Department, City of Tucson, Leica Sport Optics, Metropolitan Tucson Convention & Visitor's Bureau, Brooklyn Pizza Company, Tucson Lifestyle Magazine, Birdwatcher's Digest, U.S. Forest Service, Bureau of Land Management, Arizona State

Parks, and Pima County Natural Resources, Parks and Recreation.

Thanks to our great exhibitors: Tucson Audubon Nature Shop, Three Star Owl, Birdquest, Leica Sport Optics, Liberty Wildlife, Arizona Game & Fish Department, Marcy Gray Studios, Swarovski, Summit Hut, Focus Frog, Opticron, Untamed Confections, Nikon Sport Optics, Solipaso Tours, Insect Discovery, Wildlife Rehab of Northwest Tucson, and Pima County NRPR.

Thank you to our talented field-trip leaders and enthusiastic expert presenters who educated and entertained attendees: Moez Ali, Chris Benesh, Matt Brooks, Gavin Bieber, Kevin Bonine, Siria Cerda Navarro, Jack Childs, Cameron Cox, Richard Crossley, Doris Evans, Richard Fray, Brian Gibbons, Paul Green, Matt Griffiths, Homer Hansen, Lynn Hassler, Mark Hart, Lisa Haynes, Rich Hoyer, Kendall Kroesen, Jennie MacFarland, David MacKay, Pinau Merlin, Robert Mesta, Gail Morris, Jake Mohlmann, Scott Olmstead, Diane Phelps, Vincent Pinto, Bruce



SARA PIKE

MATT GRIFFITHS



MATT GRIFFITHS



CHRISSEY KONDRAT-SMITH

Top to bottom: Bonnie Bruce puts the finishing touches on the Tucson Audubon booth. Doris Evans introduces young naturalists to a tarantula. Birders enjoy good looks at Red Crossbill, a highlight on the Mt. Lemmon field trip. Richard Crossley and Deb Vath led a youth birders' outing to Sweetwater.

Prior, Meg Quinn, Ronnie Sidner, Heather Swanson, Rick Taylor, Deb Vath, Kathleen Walker, Sheri L. Williamson, and John Yerger.

Check the blog for a festival species list, Birding Cup highlights and Big Day itineraries, and more photos.

"Tweet Dreams" Quilt Raffle

All proceeds to benefit Tucson Audubon. Buy tickets online at tucsonaudubon.org or in our Nature Shops.



WELCOME NEW MEMBERS

Associated Benefits Specialists, Inc., Gale Baker, Robin Baker, William and Mary Irene Barg, Sandy Barnard, Vicky Beaudry, Andreas and Edda Blume, Russ and Polly Boley Diane Bootes, Brooks Bradbury of Sunglow Ranch, Linda Brecci and Neil Jacobsen, Cheryl Brown, Lori Bryant, Judith Butler, Charles Candelaria, Robert Chapman, Norm Cocanour, Jordan and Stacie Cohen, Meaghan Conway, Monica Cropper, Terry Dammer, Maureen Daney, Mary Davis, Herbert Day, Kelly DiGiancoma, Charles and Joan Dixon, Brian M and Martha Donovan, Ruth Draper, Dan Falabella, Sandra Findley, Penelope Flom, Suzanne Forbes, Kathlyn Forsyth, Susan Gallegos, Rita and Gary Gay, Mel and Katie Geist, Robert Goodrich, Andrea Greco, Saul Gryzman, Allison Hall, Rebecca Hamilton,

Jerry and Susan Harris, Pam Haskell, Joy Hester, Sheila Hickman, Kevin Hockett and Tanya Renner, Jonathan Horst, Cosette Hutton, Michael Hyatt, Luisa Jauregui, Michael Jerrells, Claudia Kirscher, Miriam Kogan, Douglas Krystofiak, John Lakey and Marsha VanValen, Arlene Lancelot, Christa Lanik, Linda Leatherman, Peggy Leggett, Jane Liljegren, Christina Maddux, Tim Marquardt, Kenneth Marsh, Catherine Jane Martin and Jeff Hoff, Marilyn Martin, Paul Martin, Susan Martinez and Rachel Martinez, Emmanuel McCauley, Hugh McCrystal, Grace McIlvain, Andrew Meinig, Howard Milwich and Lisa Taiz, Don Morgan, Jo Musser-Krauss, Francisco Navarro, Lange Pamela Navarro, Earl and Sara O'Neil, Wendy Orduna, Irais Pacheco, Ivan Pacheco, Jody Parker, Meg Quinn, Edgar Rawl,

Sally Reeves, Rayma-Jean Richie and Georgia Froman, Barbara Robb, Brenda Robert, Sandra Romriell, Maria Rosati, Michael and Ruth Ross, Brett and Joan Rubin, Craig Russell, Joyce Sander, Deliah Shellhouse, Laurie Solgon, Sharon Stark, Mary Stout-Marshall and family, Tamela Swanson, C. Michael Thompson, Marc Tobalski, Linda Todhunter, Rowland and Judy Van Es, David VerMerris, Jerry and LeeAnn Wagner, Nancy Wall, Jessica Sue Wiles, William Willard, Johathan and Britney Williams Spross, Shari Withrow, Summer Zambrano, Victoria Lynn Zambrano, Caren Zimmerman

We welcome Associated Benefits Specialists, Inc. and Sunglow Ranch as a new Copper Level Birds & Business Alliance members.

Thank You to Our Donors

Birthday Fund: We thank Jean Rios, Barrie Ryan, and Martha Wiewel for their generous donations to the birthday fund.

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

- In honor of Kendall Kroesen from Darlene Smyth
- In memory of Stewart Lancaster from Bob and Janet Barker
- In honor of Julia Brown Gordon from The Windibrow Foundation
- In honor of Paul and Eng-Li Green from Rosemary Valentine
- In honor of Jennie MacFarland and the IBA program from Betty and Ric Zarwell
- In honor of Roger Wolf's birthday from David Yetman

Jean Barchman, Membership Coordinator

Volunteer News Roundup

Kara Kaczmarzyk, Volunteer & Development Coordinator

Welcome New Volunteers

Jan Ajemian, Chris Bittle, Monica Cropper, Joe Eigner, Sheila Hickman, Barbara Kahn-Sales, Justin McGrath, Abraham Moreno, Donna Ribka, Susan Swain, Niki Szivek, Carol Tepper, and Susan Waites.

Restoration Workdays

This Fall is an exciting time to be a Tucson Audubon volunteer. We have a full season of restoration workdays, many outreach opportunities, and plenty of projects and on-going roles. Please, share these dates with friends or family, or suggest who we can reach out to for help.

The Atturbury Wash workdays, also on Saturdays in the cool weather, will focus on an area named the Lyman-Atturbury Bird and Animal Sanctuary due to the thicket of trees and shrubs that harbor wildlife along the wash. Sadly, this vegetation has begun to decline due to drought and hydrogeological issues in the area. Tucson Audubon volunteers will fight this decline, reestablishing habitat and improving the wash's functioning so it remains well-watered (see p 18). We will do this by digging rainwater harvesting basins and planting 1,000 trees and shrubs over the season. Separately, natural channel design will be implemented. Learn techniques you can use in your own backyard! **Be a part of it on 10/13/12, 10/27/12, 11/17/12, 12/15/12, 1/19/13, 2/16/13.** The restoration workdays are partially funded by TogetherGreen, a program of National Audubon Society funded by Toyota. Thanks to QuikTrip for launching the season strong during United Way's Days of Caring.

Although funding is uncertain at this time, starting in early 2013 we hope to do some buffelgrass control that will create a buffer preventing grass-fed fires from entering the Coronado National Forest in the front range of the Catalina Mountains. This is an exceptional opportunity to make a significant impact. Specifically, we'll remove the invasive weed in the scenic area between Sabino and Ventana Canyons along the popular Esperero Trail. This role is for the active weed-puller, you must be able to hike half a mile uphill to the work site and remove buffelgrass on steep, rugged slopes. **Take part in the effort on 1/26/13, 2/9/13, 3/9/13, 4/13/13.**

Other Opportunities

There is not nearly enough room to print all the upcoming opportunities. Please visit our website for more. A new layout to tucsonaudubon.org/volunteer makes it easy to go online and find a role that you'll love to fill.

Harvest Festival, 11/3. Setup, shop sales, outreach, ticket-taking, mesquite pod sorting, and more. Celebrate the diversity of Sonoran Desert foods and the landscape that gave birth to this abundance.

Wings Over Willcox, 1/16–20. It's back! Shop and outreach booth. Fun with friends and visitors.

Tucson Audubon's 5th Annual Gala 1/30. Setup. Decorate. Pick up. Drop off. Socialize.

Living with Nature Publicity Assistant. Write brief lecture descriptions. Distribute flyers to cool sites. Once a month. Make your schedule.

The Important Bird Area Program is such a success because of its many excellent and dedicated volunteers. Two such volunteers are **Jean and Mark Hengesbaugh** who for years have diligently surveyed Sabino Canyon. Jean has volunteered over 300 hours and Mark almost 150 hours monitoring multiple survey routes in Sabino Canyon since 2007. The data that they gathered was crucial in the recent expansion of the Sabino-Bear Creeks IBA to include the Tanque Verde Wash. In particular Jean has been such as asset to the IBA program, not only does she lead the survey teams in Sabino Canyon, she enters her own data into the database and has stepped in to help with IBA trainings of new volunteers or other surveys, sometimes with very short notice. On a personal note, it was Jean that first gave Jennie the advice that led to her becoming an IBA volunteer in 2009, which then led to her current job at Tucson Audubon as IBA Conservation Biologist.

In addition, Jean and Mark are Sabino Canyon Volunteer Naturalists. Among other roles, they share their knowledge of and love for the Canyon area on the first Saturday of every month as free field trip leaders in partnership with Tucson Audubon Society. These trips are always well attended, so if you would like to spend some time birding the Sabino Canyon Recreation Area with this special couple, sign up with them far in advance to reserve your spot! Jean and Mark, in their capacity as Sabino Canyon Volunteer Naturalists, spearheaded a multi-year project at the canyon to eliminate giant reed—a fast-growing, invasive plant that starves native



Mark and Jean Hengesbaugh at last year's National Geographic BioBlitz, where they helped to conduct a 24-hour inventory of plants, insects, birds, and other living things that inhabit Saguaro National Park.

vegetation of groundwater. Tucson Audubon volunteers—along with many others—flocked to Sabino Canyon to help with the removal. Later, when Kendall Kroesen proposed removing giant reed on two private parcels downstream from Sabino Canyon, Jean and Mark were extremely helpful. They brought tools and helped teach volunteers and landowners how to remove giant reed—no easy task. The Hengesbaughs have been a huge asset to both Tucson Audubon's and Sabino Canyon's volunteer corps. Mark has a background in public relations and has donated his consultation time to help publicize Tucson Audubon's 60th anniversary and for a number of Institutes of Desert Ecology. The response for events in which Mark lends his expertise is always extraordinary. More recently they have been active in their homeowners association advocating for more native vegetation to support wildlife.

Thank you for all you do in so many areas, Jean and Mark!

Jennie MacFarland, Kendall Kroesen, and Kara Kaczmarzyk



DEBRA FINCH



KENDALL KROESEN

L to R: Thanks to all the volunteers who made the Tucson Bird & Wildlife Festival a wild success. This fall we return to Atturbury Wash.

Visit tucsonaudubon.org for updates and more.

Garden with the expert,

Lynn Hassler. One Wednesday a month with Backyard Birding and Beyond star instructor. Learn sustainable gardening. Maintain Tucson Audubon's Nature Shop yard.

Free Field Trip Coordinator.

Love our free field trips? Love our guides? Help arrange the seasons of

outstanding trips. This is a critical, but rewarding, role.

Restoration Workdays. Get outside and make a difference. Saturdays. Every month. Read more to the left.

For more details, contact Kara Kaczmarzyk volunteer@tucsonaudubon.org, 520-209-1811 ■

Interesting stories about birds with interesting names

Gambel's Quail

LARRY LIESE

If one had to pick a single bird that showcases the Southwest and the Tucson area in particular, it would be hard to make a better choice than Gambel's Quail (*Callipepla gambelii*). It's a species with truly beautiful plumage, interesting calls, outright fun behavior, and accessibility to the public. When talking to non-birder acquaintances, nothing puts them more at ease talking about birding than asking if they enjoy seeing these quail in their backyards. Their faces light right up — everyone's got a nature story or two to tell about these birds! I'll limit myself to one here: I'd give an eye tooth for a picture of a hen quail and her brood of about ten day-old chicks I surprised one day going out the back door. She fluffed out her wings and the youngsters all ran underneath. Then there she was, looking like a single adult bird — but with over twenty legs underneath her!

Gambel's Quail populations follow a "boom or bust" cycle, reproducing well in years with good fall and winter rains leading to plentiful green plant material the following spring. In dry years they may make no breeding attempt at all. Over ninety percent of their diet is plant matter — particularly the seeds, flowers and leaves of velvet mesquite and other legumes. Insects are taken in the spring and summer nesting season by both adults and chicks, (especially for the first week or so for the chicks) but otherwise constitute a small component of their diet.

Male Gambel's Quail are such pretty, showy birds that many

beginning birders assume females must choose their mates based on plumage characteristics — but not so. Studies have shown that males get chosen by their degree and frequency of "tidbitting," a ritualized foraging display where males point out choice food items at hand with their bills. This makes a bit of sense once one observes a quail pair with young foraging — the young all run quickly towards food items pointed out in this manner.

When ready to raise a brood, female quail lay about one egg per day for a period of three to four days, take a day off, then repeat until done laying a clutch of ten to twelve eggs. Incubation then starts and takes about three weeks. During their last day in the egg, the young start vocalizing. Hearing their siblings prompts the entire clutch to break out and hatch the same day. The young are highly precocial and can run about and feed themselves almost immediately. They become fully independent after two to three months. Average life expectancy is only about eighteen months and survival beyond four years is fairly rare.

Our subject bird was named after William Gambel, a naturalist from the Academy of Natural Sciences of Philadelphia. He was a naturalist protégé of Nuttall who crossed the continent first in 1841 and was the first to spend several years describing and collecting birds in California. Gambel died of typhoid fever while attempting to cross the Sierra in mid-winter. "Quail" comes from old French *quaille*, imitative of the call of a European species. *Callipepla* comes from the Greek words *kallos*, "a beauty" and *peplos* "a robe," hence



"beautifully dressed." I

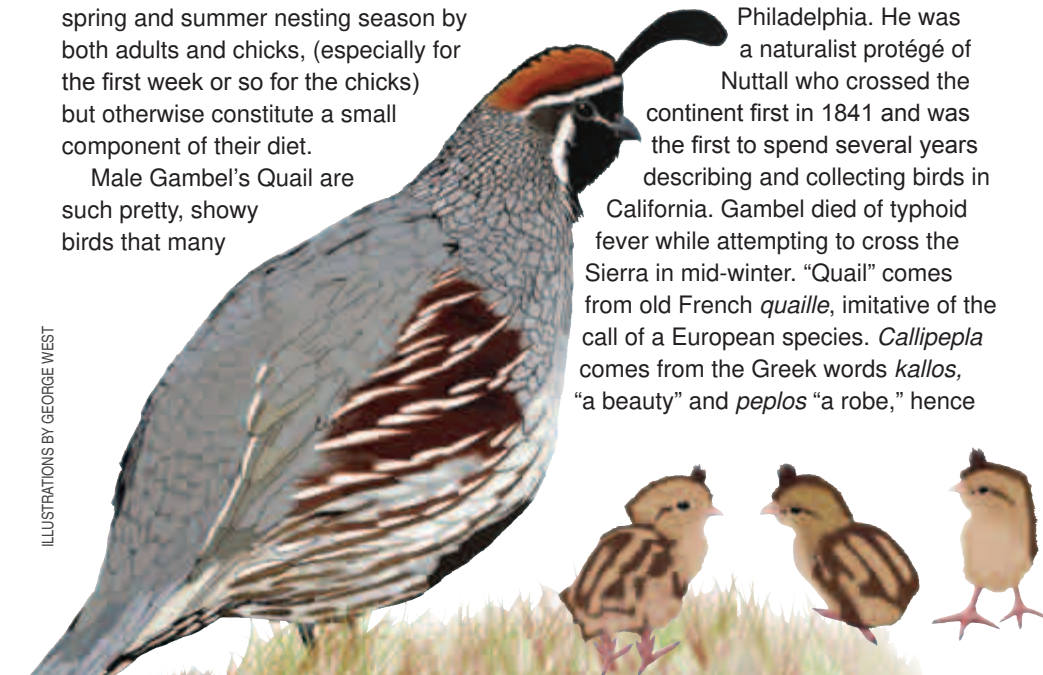
think most would agree!

Quail like to feed in early morning and mid to late afternoon, as many people note at their backyard feeders. I've noticed that pairs with very young chicks don't like to bring them out when I first fill the feeders in the morning or when other birds are around. If you want to see the youngsters keep a look out at other times of day.

Gambel's Quail give as many as ten different calls, but none of them are considered a song. The three or four syllable "*Chi-CA-go*" call is a contact call used very frequently by birds wishing to locate their mates or other covey members. Beginning as early as February and continuing through summer by unmated males is a loud, one-syllable call frequently given from a perch high in a bush. I sometimes feel sad hearing this call late in the summer as I know these males lost out in finding a mate. If you hear three sharp, quick chirps you might be felt to be a threat or at least something to take interest in as this is their call arousing suspicion.

So give these birds a closer look next time you have a chance — you might notice something interesting. Good luck!

ILLUSTRATIONS BY GEORGE WEST



Madera Canyon Alternatives

TIM HELENTJARIS

So, you love birding in Madera Canyon, but the crowds some days drive you crazy? Have you tried some of the other entrances to this birdy mountain range that don't have so many visitors? Here are some suggestions to get you into the Santa Rita's, where you won't have to wait for a parking spot.

Montosa Canyon

Where: West side just south of Green Valley.

Access: Great directions in FBSEAZ (*Finding Birds in Southeast Arizona*). Last two miles unpaved but great road easily accessible to any car.

Description: If you have friends coming into town who need to add some Arizona specialties to their birding list, this is a great place to take them, just an hour from Tucson. Birding here really picked up a year or so ago with the discovery of **Black-capped Gnatcatchers** and **Five-striped Sparrows** without driving all the way to California Gulch. An exciting addition this summer was the continuing **Plain-capped Starthroat**. All of these have been visible from the road itself and great birding seems to be concentrated a few hundred yards before and after the paved stream crossing and nearby large culvert. Easy access and easy birding combined with rarities make this a great spot.

Florida Canyon

Where: North side just east of Madera Canyon.

Access: Great directions in FBSEAZ. Again, last few miles unpaved but great road easily accessible to any car.

Description: Like the previous spot, birding really picked up a few years ago with the discovery of a continuing rarity, **Rufous-capped Warbler**. Instead of destroying your car on the road to French

Joe Canyon and then coming up empty, here is a readily accessible spot with good birding. Park your car at the end of the road near the Florida Workcamp and begin walking the easy trail. **Black-capped Gnatcatchers** have been found near the start but birding is good all along here. To find the warblers, walk about one half mile up and around the old check dam, where a pair often works up and down this narrow canyon.

Cave Canyon Trail

Where: East side of the Santa Rita's.

Access: Driving south on SR83, 3.3 miles past the Border Patrol checkpoint, turn right/west on Gardner Canyon Road. Road is graded (some washboarding) and passable to most cars until the last 0.3 of a mile, which gets a little rough. If need be, you can park there and walk up to the trailhead (8.4 miles from turn-off, 12R 0519004 3508321). There are also excellent campsites in the last two miles along this road.

Description: This is one of the nicer hikes in the Santa Rita's, even if you weren't interested in birds (Take the dogs!). While you can hike it all the way to the ridge line, the trail climbs gently and less than 500ft. in the first two miles and follows a perennial stream with usually more water in it than Madera Canyon. It starts out in oaks with grasslands on the flanking hillsides and works up through different habitats to eventually end up in an upper basin of pines. The hike will remind you of the Nature Trail in Madera but without all of the people; I might usually see one other party on the trail. I've seen **Elegant Trogons** even before the trailhead, **Sulphur-bellied Flycatchers** in the first 100 yds, lots of **Hepatic Tanagers**, and all of the expected warblers. One spring we even saw a migrating, beautiful male **Prothonotary Warbler** along the stream. This is certainly the pick of all of these recommendations for a good birding day out; give it a try some time.

Big Casa Blanca Canyon

Where: Southeast side of the Santa Rita's, northwest of Sonoita



Above: Cave Canyon Trailhead. Below: Big Casa Blanca Canyon.

Access: From Sonoita, drive west on SR82 for 7.6 miles and turn right/west on Casa Blanca Canyon Road. After 3.1 miles on a very good graded road, passable to all cars, turn right and park anywhere in the next 100 yds. or so (12R 0523037 3499979).

Description: This level and very easy walk follows a grove of mature oaks and flanking grasslands, lush although without any surface water. **Gray Hawks** will scream at you as you walk along spotting migrating warblers in the spring (especially **Virginia's**). The trail also provides a great opportunity to study the multitude of flycatchers. Another bonus is the opportunity to see/hear **Montezuma Quail**, although I wisely make no guarantees in this regard. Walk about one mile to finish up at a large stock tank that can also have some interesting birds.

Temporal Gulch

Where: South side of the Santa Rita's, north of Patagonia

Access: Drive north out of Patagonia on 1st Avenue for ~2.5 miles where the road becomes SR72. Continue on the very rough road to the trailhead where you can start walking along a stream in great habitat, eventually all the way to the ridgeline. **WARNING!** This is an extremely rough road and absolutely requires a high clearance, 4WD (and not some Subaru).

Description: I have the least information here and will have to leave this to someone else to elaborate on the opportunities. So, one of you intrepid explorers, bird up this very scenic trail and let the rest of us know. ■

Tim Helentjaris: Now retired from his work in the public/private sectors as a geneticist, his interest in bird biology and behavior started over 30 years ago when friends took him along to see a vagrant Varied Thrush in Salt Lake City one winter.



ALL PHOTOS BY TIM HELENTJARIS

Visit tucsonaudubon.org for updates and more.

Tucson Audubon's Mason Center The Path to a Certified Net Zero

PAUL GREEN | EXECUTIVE DIRECTOR

We invite you to play a significant role in developing a state-of-the-art demonstration green retrofit building in Tucson.

Buildings in the United States account for around 40 percent of our energy use, and are significant producers of greenhouse gases responsible for global warming and climate change. In our bid to reduce carbon emissions, the buildings we use present easy targets.

Much of Tucson's housing stock is old, poorly insulated, and consumes significant amounts of fossil fuels for heating and cooling. Tucson Audubon's Mason Center is a prime example. Brick built in the 1950s, it is well-constructed, though it has no insulation in the roof space, is equipped with an old evaporative cooler, and it has a below-par 100 amp power supply that limits our ability to provide adequate heating and cooling.

Now that some Tucson Audubon staff work permanently at the Mason Center, its shortcomings are very apparent: it is too cold in the winter, too hot in the summer, and just right for about a month in each of the shoulder seasons.

Here then is an opportunity to create a demonstration retrofit 1950s dwelling that is a Net Zero Energy Building. This would be a building that keeps its occupants

comfortable in all seasons and produces no greenhouse gases in its operation since the building would produce at least as much energy as it consumes. Photo-voltaic panels would produce grid-tied electricity, while energy use would be dramatically reduced through roof insulation, wrapping the exterior walls with insulation, and installing a new efficient central heating and cooling unit.

What we have done

In the past few years the community of NW Tucson, and Tucson Audubon members, have committed significant funds and many thousands of hours to improving the Mason Center site. We have converted the garage to a well-equipped classroom and developed the trails and gardens. A permaculture plan for the site has been developed and updated, and now needs funding of more than \$50,000 for its implementation. Two years ago we constructed a solar-powered

double unit composting toilet, enclosed within a strawbale building, which eliminates water use and produces compost for growing plants.

The site itself requires much attention, and that will be the subject of another article. You can read more about the current permaculture plan on page 14.

Our focus now is specifically on the main house. We have replaced the old asphalt shingle roof with one made of metal (good for harvesting rainwater) that has been painted white to reflect some of the sun's energy. Two years ago volunteers and staff restored the interior of the building so that it could be used for office space when there was a need to reduce our rental costs at our downtown offices.

Last year Tucson Audubon members raised funds to replace the old windows with thermal units. This year our colleague Robert Bulechek is implementing a Home



Energy Building

Energy Rating System (HERS) analysis to advise us how best to use funds to achieve our goal. We are monitoring the energy use of our major energy consumers (portable cooling units in the offices).

What we plan to do

First we need to replace the 60-year-old electrical system with an electrical supply that can handle the addition of a heating and cooling system, plug-in electric car charger, and second photovoltaic system. Once the electrical system is in place, we can insulate the roof, walls, and basement, allowing us to install a much smaller, high efficiency heating and cooling system. Once we have done every efficiency project with a better return on investment than photovoltaics, we will know just how many photovoltaic panels to install on the roof

Below, left to right: Last year we were able to replace old leaky windows with energy-efficient ones through the generosity of members who responded to our window appeal; the windows in the office shared by Jean Barchman (Membership Coordinator), Erin Olmstead (Development Manager), and Kara Kaczmarzyk (Volunteer and Development Coordinator) offer great views of the wildlife-friendly area at the back of the building. There are well-developed trails around the buildings and garden areas, and photo-voltaic panels mounted on the roof of the classroom ramada produce grid-tied electricity. A strawbale building houses the double unit composting toilet; the DC LED lights and exhaust fan are powered by offgrid photovoltaic panels, and gutters were recently installed to direct rainwater into a cistern where it will be stored for use in the gardens. The buildings are served by a permeable, wheelchair-friendly, GravelPave walkway.

to make as much energy as we use. Our electrical bill will then average just the \$10 per month service charge for the next several decades.

Pima County's net-zero building certification program will help verify that we have achieved our goal.

The Desired Outcome

Our community will gain an accessible demonstration, green-retrofit, net-zero-energy, net-zero-carbon building. Tucson Audubon will have an energy efficient and comfortable workspace, housing approximately one-half of its staff, which we can also use for events.

You can contact Paul Green by phone at 520-209-1801, by email at pgreen@tucsonaudubon.org, or by mail at 300 E University Blvd, Ste 120, Tucson AZ 85705.



Our goal is to implement these upgrades in a coordinated manner, raising funds from grants and from donations in a way that will not pull from funding of our program activities. Do you have a particular interest in any or all of these elements? Can you provide *pro bono* services? If so, we would like to talk with you.

Elements include:

- architectural oversight and planning (optional).
- installation of a new electricity supply to the site and rewiring the house and the classroom
- design and installation of modern heating and cooling system
- insulation of roof space
- installation of external wall insulation
- acquisition and installation of new photovoltaic panels and attendant hardware

We know that some Tucson Audubon members have a great interest in bricks and mortar projects and we invite you to contact Executive Director Paul Green if you have an interest in providing the financial resources we need for this project. We are seeking funds that are separate and above those funds that members give for our program work. Thank you for your interest. 📧

Mason Center Permaculture Plan

KENDALL KROESEN | HABITATS PROGRAM MANAGER

In the autumn of 2000 the Sonoran Permaculture Guild and Tucson Audubon teamed up to hold the Guild's annual Permaculture Design Course at the Mason Center. Students learned about the role of the Mason Center in Tucson Audubon's mission and helped craft a plan for the center's ecological sustainability.

Permaculture is a design discipline developed in Australia by Bill Mollison and David Holmgren. The word was taken from "permanent agriculture" but later encompassed "permanent culture" due to the importance of social systems in sustainability. Mollison has described permaculture as "*a philosophy of working with, rather than against nature; of protracted and thoughtful observation rather than premature and thoughtless labor; and of looking at plants and animals in all their functions, rather than treating any area as a single project system.*"

There are several principles in permaculture, but a key one is that that no design element stands on its own but is part of a system. Design elements should have more than one function and a function should be supported by more than one element. The result is a design synergy sometimes called "integrated design."

For example, rainwater harvesting cisterns were included in the Mason Center's permaculture design. Their location was partly dictated by proximity to the building from which the rain was being harvested. But that still left some latitude in where they could be positioned. What else could be accomplished with them? In the end they were placed at the northwest corner of the building. In that location they cast shade on the house at the hottest time of day (late afternoon) in the hottest time of the year (June, July, August).

The function of environmental education at the Mason Center is supported by many design elements, including the garage converted to classroom space, the classroom ramada (which also functions to hold photovoltaic panels), and the new composting toilet



Improvements in the updated permaculture plan include sound walls along the new site boundary (after road work), additional habitat enhancement areas, upgrades to the wildlife water hole behind the house, additional cisterns and demonstration food production area with heritage fruit trees.

building, which also includes a ramada for outdoor education space. The bathroom building also functions as a rainwater-harvesting surface and we'll soon have a tank collecting and storing that water. What else should the tank do? We're thinking about it!

As time passed, some realities changed and some goals for the Mason Center were modified. We are now updating the Mason Permaculture Plan. A link to the original permaculture plan is found at the bottom of the page at www.tucsonaudubon.org/work/mason.html. A link to a drawing of the proposed update is also found there and accompanies this article.

The new design helps the center to adapt to the county's plan to widen Thornydale Road, which will take some land from the Mason Center. It suggests ways to handle some of the drought-induced tree die off, by leaving the trees standing and make them into sculptural elements on which birds can roost and vines can grow. And it proposes an edible garden—with Kino Heritage Fruit Trees—east of the main house that will be supported by the new rainwater tank on



DORIS EVANS

the bathroom building and a new cistern to be built on the east side of the house.

The permaculture plan will be on display at the November 3 Harvest Festival (see p 15) and we will actually be implementing some aspects of the plan that day. We need volunteers to help at the Harvest Festival and on an ongoing basis to maintain the Mason Center and help us realize our revised permaculture plan. Contact Kara Kaczmarzyk at 209-1811 or volunteer@tucsonaudubon.org.

Funding needs for the implementation of the permaculture plan are significant. Until we raise them work will be slow. Please help us put it on the fast track. 🍷

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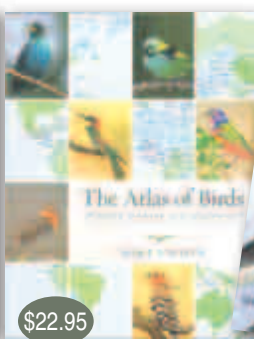
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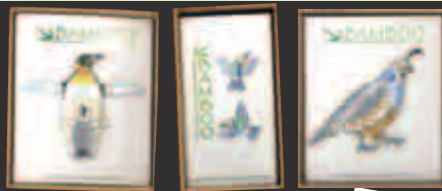


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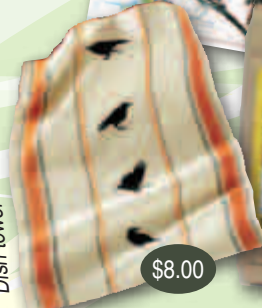
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2	Bushnell	Natureview PP	8X42	\$179.95	\$125.09
4	Eagle Optics	Ranger	8X42	\$399.95	\$299.99
5	Eagle Optics	Ranger	10X42	\$409.95	\$309.99
6	Eagle Optics	Ranger	8X32	\$389.95	\$289.99
7	Kowa/YF	YF	6X30	\$115.00	\$99.00
8	Leica	Ultravid HD	8X32	\$2,299.00	\$1,899.00
9	Leica	Ultravid HD	8X42	\$2,599.00	\$2,099.00
10	Leica	Ultravid HD	10X42	\$2,699.00	\$2,199.00
11	Nikon	Monarch 5	8X42	\$420.95	\$279.86
12	Nikon	Monarch 5	10X42	\$450.95	\$299.00
13	Nikon	Monarch 7	8X42		\$479.99
14	Swarovski	CL Companion	8X30	\$1,032.32	\$927.00
15	Swarovski	EL Swarovision	8.5X42	\$2,698.89	\$2,429.99
16	Swarovski	EL Swarovision	10X42	\$2,776.67	\$2,499.99
17	Vortex	Raptor	6.5X32	\$159.00	\$119.99
18	Vortex	Diamondback	8X42	\$269.00	\$219.99
19	Vortex	Diamondback	10X42	\$279.00	\$229.99
20	Vortex	Viper HD	8X32	\$659.00	\$559.79
21	Vortex	Viper HD	8X42	\$689.00	\$587.69
22	Vortex	Viper HD	10X42	\$699.00	\$599.99
23	Opticron	Aspheric LE WP	8X25	\$199.00	\$179.10
24	Opticron	Discovery	8X42	\$275.00	\$247.50
25	Opticron	Discovery	8X32	\$255.00	\$229.50
26	Vortex	Viper Scope	15-45x65	\$649.00	\$549.99
27	Nikon	Field Scope	15-30X50	\$1,198.95	\$829.95

*MSRP=manufacturers suggested retail price

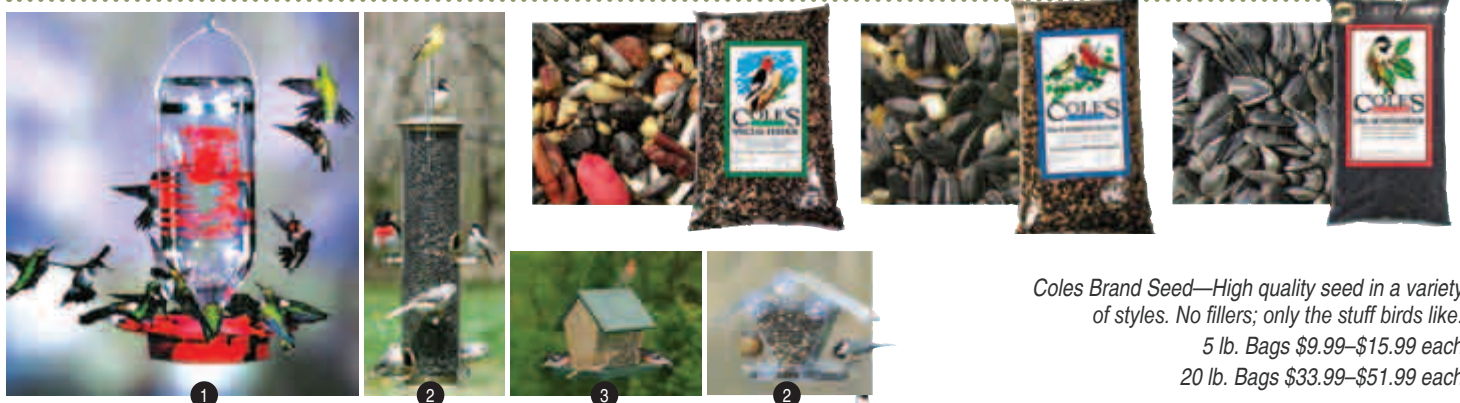


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Food Sustainability in a Changing World

November 3 Harvest Festival at Mason Center

KENDALL KROESEN | HABITATS PROGRAM MANAGER

Join us November 3 at Tucson Audubon's Mason Center for our Harvest Festival and Mesquite Milling. Festival entry is free though there is a fee to have your mesquite milled into flour.

The event celebrates the diversity of Sonoran Desert foods—both wild foods and heritage crops. And in a larger sense it celebrates the diverse Sonoran Desert landscape that gave birth to this abundance! It is also a practical opportunity to mill your mesquite pods into flour. Our shop, which will be present onsite, sells a book of recipes using mesquite flour.

The events, two bird walks, start at 7:00 and 7:30 AM, respectively. Bring your mesquite pods starting at 7:30 AM. Although we are streamlining the milling process, there can be a wait while your pods are being processed. So bring the family or just come alone and wander around the food trucks, vendors, exhibits, lectures and workshops that will be there from 8:00 AM to 3:30 PM. The last opportunity to bring your mesquite pods will be 3:30 PM. If demand is high, latecomers and those who bring large quantities (greater than three five-gallon buckets of pods) may have to pick up their flour on a later date.

Coffee, soft drinks and wonderful local foods will be on sale from a cross-section of our region's great diversity of food trucks.

The "harvest" in the Sonoran Desert is year-round: greens appear in the spring, cholla buds are available in the spring, saguaro fruits and mesquite pods are harvested in June, tepary beans in the summer, and so on. It is this annual cornucopia that we will be celebrating on November 3.



SARA PIKE

Visit tucsonaudubon.org for updates and more.

Schedule of events

7:00 & 7:30 AM	Birdwalks depart
7:30 AM	Mesquite pod processing starts (mill starts at 8)
8:00 AM	Exhibits, vendors, food trucks open
8:30 AM	Lectures begin
9:30 AM	Workshops / other activities begin
3:30 PM	Exhibits and vendors close
5:00 PM	Festival closes

Activities

- Nature and edible plant walks
- Landscaping for wildlife and sustainability workshops
- Cistern building workshop

Planned lecture topics

- Landscaping for wildlife, sustainability and food production
- Cultivating Schoolyard Sustainability: Manzo Elementary School
- Tucson Phenology Trail: Tracking Changes through the Seasons
- Food security in a changing world
- Plants for Sonoran Desert pollinators

Workshops

Backyard Grazing: Edible Plants for Wildlife and Humans: Join Kendall Kroesen for a hands-on experience in mixing backyard food production with landscaping for wildlife. We will combine rainwater harvesting, Kino heritage fruit trees, heritage vegetable crops and wild plants into a landscape that birds go crazy for and that gives you food. Our goal will be low use of potable water and high plant diversity that's good for both birds and people. Participants will carve out a rainwater harvesting basin, prep the planting area, dig planting holes, and plant Kino Heritage fruit trees plus native plants that produce food and attract pollinators.

Date and Time: Saturday November 3, 8:30 AM lecture and 9:45 AM workshop | Cost: \$25
Registration limited to 10 participants.

It's Raining, It's Pouring!: Commence Water Storing! Learn to build a water harvesting cistern! Imagine how much water we could conserve if every yard in Tucson had its own cistern to harvest rainwater? On the first Saturday, get hands-on experience laying the foundation and plumbing—including first flush device—and setting the cistern in the concrete foundation. On the



BOTH PHOTOS MATT GRIFFITHS

second Saturday, the day of the festival, you'll seal the cistern, finish the plumbing and install the lid. Each day lasts approximately 4 hours. The knowledge and skills you will obtain are directly transferrable to your own backyard or business!
Date and Time: Saturdays, October 27, and November 3, 2012, 8:00 AM–noon | Cost: \$45
Registration limited to 10 participants.

Mesquite Milling Details

Mesquite pods must be:

- So dry they snap rather than bend
- Clean—no dirt, gravel, twigs, etc.
- Free of dark mold spots or other growths

Bringing pods in five-gallon buckets may expedite processing. You may want to bring clean receptacles for the flour like large ziplock bags or large Tupperware containers. On average milled flour weighs 60 to 75% of the pod weight.

We have a tiered price structure that encourages newcomers to try milling pods and discourages people from bringing huge amounts that slow the operation of the mills.

Gallons of pods	Total milling price	Gallons of pods	Total milling price
1	\$2.00	9	\$22.00
2	\$4.00	10	\$25.00
3	\$6.00	11	\$30.00
4	\$8.00	12	\$35.00
5	\$10.00	13	\$40.00
6	\$13.00	14	\$45.00
7	\$16.00	15	\$50.00
8	\$19.00		

If milling more than three five-gallon buckets, flour will have to be picked up on a later date.

For more information see desertharvesters.org.

CONSERVATION AND EDUCATION NEWS

CHRIS MCVIE, PAUL GREEN, KENDALL KROESEN, AND BÉTÉ PFISTER

Tucson Audubon Gets Tough on Invasives

Here is a review of Tucson Audubon's work on other exotic invasive plants. ("Exotic" refers to plants that have come, accidentally or on purpose, from other parts of the world.

"Invasive" means they reproduce in the wild and out-compete native vegetation under certain conditions.)

At the North Simpson and Martin Farm sites, we have been working for over 10 years to reduce tumbleweed, or Russian thistle (*Salsola tragus*). Typically, we first do a controlled burn of any concentrations of old, dried tumbleweed. Then we control regrowth for two growing seasons while we plant and seed native vegetation. Usually after that the ground has stabilized and tumbleweed regrowth is not a problem, or can be spot treated.

At the same sites we are also gradually converting areas with Athel tamarisk (*Tamarix aphylla*), Johnsongrass (*Sorghum halepense*), giant reed (*Arundo donax*) and buffelgrass into native vegetation. Bermudagrass (*Cynodon dactylon*) is another pervasive exotic at these sites and while some of our new vegetation eventually shades it out, our Restoration Biologist Jonathan Horst is designing experimental trials to see which methods will bring it under control more quickly.

Giant reed is not particularly common at Tucson Audubon restoration sites (e.g., Simpson Farm, Martin Farm, Esperanza Ranch) but it has been a terrible threat to the Tanque Verde Wash/Sabino Canyon Important Bird Area. Looking something like bamboo, giant reed grows in large stands that remove significant amounts of water from the ground, depriving native trees and shrubs.

In 2008, with the help of National Audubon's TogetherGreen program (funded by Toyota), we partnered with the Sabino Canyon Volunteer Naturalists and several other groups to eradicate giant reed in Sabino Canyon.

By 2011 this unprecedented volunteer effort controlled most of the huge infestation in the Sabino Creek Recreation Area. The work is now moving downstream through the lower park of the creek. In many places stressed trees such as Arizona ash are recovering. However, giant reed inhabits many other drainages, so there is more work ahead.

Tucson Audubon has removed fountain grass (*Pennisetum setaceum*) in our small preserve in Esperero Canyon, located between Sabino and Ventana canyons in the Front Range of the Catalina Mountains. This is a close relative of buffelgrass, but grows in wetter areas. It grew thickly along the intermittent stream in Esperero Canyon and was edging out native grasses, annual wildflowers and perennials.

With the help of TogetherGreen volunteers Tucson Audubon has done a first pass through most of the 1,500 linear feet of canyon bottom. Only a small amount of regrowth has occurred, which we should be able to control in the future.

We also removed some buffelgrass (*Pennisetum ciliare*) in Esperero Canyon, although it is rare on our preserve. However, there are many places both in and outside of the city where it has created major infestations.

As you may know, buffelgrass may be the single biggest threat to Sonoran Desert ecosystems. It can fill empty spaces between native desert plants, increasing the fuel load and allowing fires to burn. Buffelgrass survives and resprouts more readily than most native plants. This could convert large areas of our iconic Sonoran Desert into something more akin to African savannah. (For more background, see www.buffelgrass.org.)

This is why in the last couple years we have begun to field volunteers in January on regional Beat Back Buffelgrass Day. On this day hundreds of volunteers come together

Right, top to bottom

Buffelgrass is found in open desert, south facing slopes, along roads and in Tucson neighborhoods. Remove with digging bars, picks or shovels, or poison with glyphosate (*Roundup*).

Fountain grass was planted as an ornamental plant in many Tucson yards and spreads easily along roads and in washes. Remove like buffelgrass.

Puncture vine, or "goat head" (*Tribulus terrestris*), is an Old World plant that has horrible, spiky seeds that harden like bone. Normally it can be pulled out by hand. Don't confuse with summer poppy (*Kallstroemia grandiflora*), a closely related native wildflower that is more erect and has larger flowers.

Tumbleweed readily spreads on disturbed soils in cities, agricultural areas and along roads. In most cases you can slice the taproot just below the soil with a shovel to remove them

Bermuda grass takes root anywhere there is sufficient moisture. A thick mat of underground stems (rhizomes) makes it difficult to remove. Sometimes it can be dug out if not too thick. It can also be killed over time with solarization or Roundup.

Giant reed was planted in Tucson yards to produce an "Oriental" landscaping effect. Large stands are almost impossible to remove by hand due to deep, tenacious rhizomes. Control is usually by cutting down reeds and treating regrowth with glyphosate. Small stands in sandy soil can be dug out.

from scores of organizations and municipalities to remove the grass in key locations.

On the next Beat Back Buffelgrass Day, January 26, Tucson Audubon will send volunteers to a buffelgrass removal site, probably in the front range of the Catalina Mountains along the Esperero Trail. This is a key area for controlling buffelgrass that could carry wildfire into the mountains from below.

Besides volunteering with Tucson Audubon's project, you can help by removing these plants from your neighborhood.

Kendall Kroesen
Habitats Program Manager



ALL PHOTOS KENDALL KROESEN

Landscapes to Chew On

Until recently homes and commercial buildings were often designed using a balance of aesthetics, cost and functionality; but ecology played a scant role. Now more and more buildings are built with ecological sustainability in mind. They follow LEED building standards, are better insulated, produce energy, and so on.

Similarly, landscape and garden design has too often kept its distance from ecology. Designs strive for aesthetic effect or to improve property value or to reduce maintenance costs. But they are often not rich ecological environments.

A good example are many of the “xeriscapes” we see in Tucson. The *principle* of xeriscaping is sound: create landscapes that use less water. We have conserved a lot of water by not watering lawns and water-loving ornamentals. But the *implementation* of xeriscaping is often ecologically flawed. We see large hot beds of sun-bleached rock with few plants, no resources for pollinators, no cover for birds, and no place to nest.

Another big part of this critique is that *there isn't anything to eat!* Nothing for birds to eat, and nothing for people. People have to go to the supermarket and birds have to rely on them to buy bird seed.

For years Tucson Audubon has been advocating the restoration of landscapes that are ecologically fertile. Yards that:

- harvest rainwater to cut use of expensive potable water

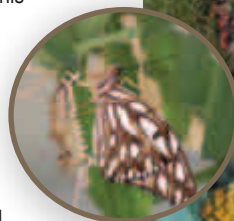
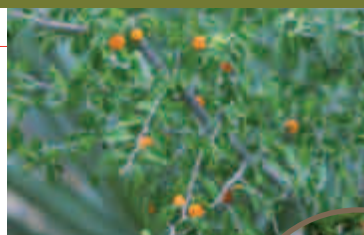
- have lots of plants
- contain lots of species of native plants that provide food for birds
- contain layers of vegetation and different vegetative structures
- create shade and places for birds to hide from predators

Now Tucson Audubon embraces the concept of urban food production for people, too, as well as for birds.

What if some of those ornamental trees in public parks were fruit trees? What if those pretty shrubs planted in our yards were edible, or medicinal, or drinkable as tea? We will be partnering with a variety of organizations such as the Community Food Bank of Southern Arizona, Native Seeds/SEARCH, the Arizona-Sonora Desert Museum, and the Kino Heritage Fruit Tree Project to find ways of incorporating garden and orchard plants into biologically rich landscapes.

In *The Desert Smells Like Rain*, Gary Nabhan recounts finding more bird diversity at a settlement around a spring-fed wetland south of the border, with orchards and gardens, than at an equivalent spring in a wildlife sanctuary where nobody lives. Well-designed human settlements can be helpful to birds and other wildlife if we design wisely, with regard to principles that create rich ecosystems. Professor Michael Rosenzweig of the University of Arizona has dubbed this Reconciliation Ecology.

Often we think of biologically rich landscapes as looking “rustic.” But we



believe there is plenty of room for aesthetics in their design. We look forward to working with landscape designers to offer homeowners and communities beautiful designs.

In coming months Tucson Audubon will be leading the way forward to biologically meaningful landscapes in Tucson. We will demonstrate some of the principles of this new landscape model at demonstration sites such as our Mason Center and at Las Milpitas de Cottonwood, a Food Bank garden.

At our Harvest Festival on November 3 (see p 15) there will be lectures on food security, garden pollinators and a variety of topics related to biologically rich designs. There will be a planting workshop to acquaint people with locally appropriate plants, how to plant them and how to provide them with rainwater. After the festival we will go on to run workshops through the spring.

This work is funded by a TogetherGreen Innovation Grant. TogetherGreen is a program of the National Audubon Society, and funded by Toyota.

Kendall Kroesen
Habitats Program Manager

From top left to bottom: Desert hackberry has a fruit edible for people and wildlife and this large shrub creates great cover for birds. Kino Heritage Fruit Trees planted at the Community Food Bank of Southern Arizona. Pomegranates in a Tucson back yard—leave some of them for the birds! Dense native landscaping at The Nature Conservancy in Tucson. Landscaping on the right of way in front of Brad and Rodd Lancaster's house—from barren to birdy in a matter of a few years. Butterflies are among the more beautiful and useful pollinators you can host in your garden!



Urban Water Sustainability and Leadership Conference

Tucson Audubon will be part of team presenting at the national Urban Water Sustainability and Leadership Conference in Cincinnati, Ohio, on October 16, 2012. Executive Director Paul Green and Board Member Claire Zucker (Sustainable Environment Program director, Pima Association of Governments) will join with Pima County's Regional Wastewater Reclamation Department (RWRD) team members Jackson Jenkins,

RWRD director, and Ed Curley, RWRD senior program manager, Alan Forrester, director, Tucson Water; and Shane Snyder, professor, UA Chemical and Environmental Engineering and codirector, Arizona Laboratory for Emerging Contaminants.

The team will discuss the Regional Optimization Master Plan (ROMP), the largest public works project in Pima County history, a \$660 million program to upgrade and expand the

Ina Road Wastewater Reclamation Facility (WRF) and to replace the Roger Road WRF with a new state-of-the-art facility following compliance issues with the EPA and ADEQ. These projects will improve the quality of the community's reclaimed water for recharge and reuse. Tucson Audubon Society has long worked with Pima County to develop watchable wildlife sites at various treatment plants. Ben Grumbles,

president of Clean Water America Alliance and former director of the Arizona Department of Environmental Quality, who invited Pima County and Tucson to participate in the Cincinnati conference, commented that “...the conference tackles the leadership questions, engages the regulators, and opens minds by presenting innovative approaches...”

Atturbury Wash: A Project with a Future

KENDALL KROESEN

After delays for redesign and permitting, our riparian restoration and stewardship project at Atturbury Wash is taking wing!

This project is the legacy of David West, who told me about the wash one day at the Tucson Audubon office and showed me the bird list he had assembled. He went on to describe how vegetation was beginning to die along the wash. I will always think of David during my visits there.

I investigated and met Michael Lyman from the local neighborhood association. Michael spearheaded an effort to keep the wash floodplain in Lincoln Regional Park from being developed. He worked ceaselessly with volunteers and youth to clean up trash and protect the wash from hunting, woodcutting, and off-road vehicles.

Although there is still good riparian vegetation along the lower part of the Atturbury floodplain at Lincoln Regional Park, experts determined that incision—or deepening—of the upper part of the wash was starving the floodplain there of stormwater flows. Since the water table was always deep here, it was periodic flooding across the floodplain that historically kept the wash vegetation healthy. Mesquites, palo verdes, acacias, netleaf hackberries and even western soapberries were found along the wash.

This fall and winter we will be planting 1,000 trees and shrubs to replace some of the vegetation that's been lost. In the fall a subcontractor will install a variety of rock structures in the wash using the principles of "natural channel design." This should

address the channel erosion by moving part of stormwater flows back onto the floodplain, allowing water to infiltrate around plants. It will also reduce the energy of water in the main channel; gradually this should allow some sediment to move back into the incised section of the wash.

Some of the work will actually be on Fred Enke golf course. Tucson Parks and Recreation Dept., and its golf program, have been extraordinarily helpful in facilitating this work. This has led to other collaborations between Parks and Rec and Tucson Audubon at places like Ft. Lowell Park.

The work is funded by a nearly \$400,000 grant from the Arizona Water Protection Fund Commission (AWPFC), which awards grants designed to repair floodplain function, improve riparian habitat and to educate the public about the importance of riparian systems.

There will be several opportunities to see the project and participate. [See a list of volunteer days \(we'll be planting trees and shrubs, and other tasks\) on page 9](#) and on our online events calendar at tucsonaudubon.org. Watch for opportunities to tour the site and learn more.

There will be a birding field trip to Atturbury Wash on Tuesday morning November 27 (see page 25). If you use eBird, you can see a list of 102 species that have been reported at "Lincoln Park—Atturbury Wash!"

*Kendall Kroesen
Habitats Program Manager*

Upper San Pedro Issues: Tombstone's Water Supply

Following the June 2011 fires, and the July 2011 record monsoon rainfall in the Huachuca Mountains, the subsequent floodwaters took out trees, trails, and the twenty-five springs which supply Tombstone with its water. The pipeline that carries water to a reservoir above the town, built in 1881, was damaged and springs were buried to a depth of up to 12 feet beneath boulders and debris.

The springs are located in the Miller Peak Wilderness Area. Under the Wilderness Act of 1964, "motorized" and "mechanized" equipment are prohibited in such a designated area. In August 2011, without consultation with the US Forest Service (USFS), Tombstone Water took an excavator into the wilderness without requisite permits and the Forest Service threatened to take action. Tombstone has since sued the federal government. The Goldwater Institute is representing the town. Tombstone maintains there is nothing in the canyon that bulldozer and backhoe activity would harm. The lawsuit by Tombstone against the USFS has continued with no action for many months now.

Meanwhile, residents of Carr, Ramsey and Miller Canyons have asked for help from Cochise County as the battle for water rights begins to adversely impact private property owners. For example, Miller Canyon residents Thomas and Edith Beatty received a letter from the City of Tombstone, asking them to sign off on a five-acre, quit claim deed for the sum of \$5 so that Tombstone can have unrestricted access to its claimed water rights, property, easements and rights of way at the McCoy Reservoir site.

The lawsuit is still pending in Cochise County Superior Court. See a video on the issue at <http://www.youtube.com/watch?v=ttsKNGJ4ZLw>

Meanwhile, Arizona Department of Water Resources' (ADWR) approval of an adequate water supply for Pueblo del Sol Water Company is being appealed. Developers in Sierra Vista have proposed building a subdivision, called Tribute, which

would support almost 7,000 homes within 20 years. The homes would be supplied with water by pumping more than 3,000 acre-feet of groundwater per year. A court hearing on the appeal will be held starting October 16, with appellants being the Bureau of Land Management (BLM), and individuals Robin Silver and Tricia Gerrodette. Wells in the upper San Pedro Valley already suck up an estimated 6,000 acre-feet per year more than is naturally recharged from rainfall and snowmelt. To avert further losses, Audubon Arizona, the Grand Canyon Chapter of the Sierra Club, and the BLM have lodged formal objections to the proposed project with the ADWR, which has the authority to rule on whether or not there is adequate water to supply the proposed houses for the next century. The BLM is concerned about surface water because it manages the nation's first Riparian National Conservation Area along the upper San Pedro River, but the state agency may well take only underlying groundwater into account, because state law doesn't recognize any legal connection between surface and subsurface waters. The ADWR might rule that the developer can pump groundwater at will without considering the existing water rights that govern the river's flow, ignoring the critical connection between the river and the watershed that recharges it.

"You're looking at [an annual] 3,000-acre-foot deficit in a groundwater basin that's already accruing substantial deficits," says BLM hydrologist Bill Wells. "We're just trying to say we believe there is a connection between the river and the groundwater."

Along the upper San Pedro River, the project could jeopardize years of drop-by-drop conservation efforts, including nearby Army Fort Huachuca's strict landscaping limits, water recycling, and low-flow plumbing fixtures.

Thanks to Tricia Gerrodette, Jim Burns, and *Audubon* magazine.

SunZia Transmission Project Update

The Lower San Pedro River valley, an Important Bird Area of Global Significance, is without parallel in the American Southwest. Within the span of a few miles, the Chihuahuan Desert scrub reaches its westernmost limit and folds into the saguaro-dotted hills of the Sonoran Desert. The valley's high biodiversity, including more than 400 bird species, comes from the Rocky Mountains to the north and the Sierra Madre Mountains to the south.

The proposed SunZia Southwest Transmission Project, designed to carry power over two 500-kilovolt (kV) lines from central New Mexico to Phoenix and southern California, now threatens this unique area. The Bureau of Land Management (BLM) is evaluating alternative routes, some of which pass through the Lower San Pedro valley. If constructed, up to 300 sixteen-story towers would run the length of the valley, with an access easement up to 1000 feet wide and access roads to every tower. Vegetation beneath the lines would be cleared. In addition to the initial access corridor, SunZia's planners have requested that a one-mile wide corridor be approved by the BLM for future expansion. It is difficult to conceive of a mile-wide utility corridor along the narrow San Pedro Valley.

The comment period for the SunZia Draft Environmental Impact Statement (DEIS) ended on August 22, 2012, and the next step will be for the BLM to issue a revised or final environmental impact statement for public review. The BLM's preferred alternative follows the west side of the San Pedro Valley for approximately 45 miles, opening an entirely new corridor for much of this distance. This has raised strong objections from southern Arizona's environmental community, Pima County, residents of the San Pedro Valley, and others.

A host of local and state environmental organizations and community members provided extensive comments on the DEIS, including the Tucson Audubon Society. A partial posting of submitted comments is available at <http://nmeader.com/sunzia/route/deis.html>. The BLM, or rather, its contractor Environmental Planning Group (EPG), must now categorize and respond to all of these, incorporating them into the EIS or providing explanations for dismissing them. Many groups called for the "No Action" alternative, asking that this project not be built, and some provided clear alternatives for addressing energy transmission needs in the region.

The BLM's timeline for the project calls for releasing the final environmental impact statement for comment toward the end of 2012. The public will have a thirty-day period to challenge the EIS at this time. This protest period will be an extremely important opportunity for conservationists to make it clear that they will actively oppose an arbitrary decision. This may be especially necessary given the BLM's past reluctance to effectively address challenges to the alleged purpose of the project and to seriously consider alternatives to approving a new industrial-scale infrastructure project within the San Pedro conservation corridor. The proposed Southline Transmission Project is a sound example of such an alternative.

Following this protest period, the BLM will then issue a Record of Decision for the project, declaring a final route, and then SunZia must apply for a Certificate of Environmental Compatibility with the Arizona Corporation Commission (ACC), hence the importance of taking note of elections to the ACC this November. Public interest groups will then have the opportunity to challenge the project in hearings held by the ACC's Power Plant and Line Siting

Committee. It is unlikely, however, that the public can substantially influence the ACC's decision on the project. SunZia must obtain a host of lesser permits as well.

SunZia itself strongly objects to the San Pedro Valley route, in part because of its added length and greater legal complications, and is vigorously advocating for a route that would cross both the Galiuro Mountains and the San Pedro River Valley south of the Aravaipa Canyon Wilderness. SunZia is working to obtain resolutions from the various county boards of supervisors to sway the Arizona Corporation Commission to override the BLM's choice, which the Commission has the legal authority to do.

If SunZia obtains all necessary permits for the proposed transmission corridor, SunZia can sell all or portions of the approved route. Coincidentally, SunZia's majority owner has a long-standing interest in providing transmission capacity for its large planned and permitted natural gas-powered plant in Bowie, Arizona.

Norm "Mick" Meader and Peter Else.



JIM HAYS



Obituary: Wanda Britten

Remembering Wanda Britten Shattuck, who died September 5, I think of her smile and great sense of humor which enabled her to fight a long fight against powerful interests who wanted a cross town freeway. The Rillito-Pantano Parkway would run along the north bank of the Rillito, to the Pantano to I-10 southeast of Tucson. Wanda and others put together a grassroots coalition, raised funds for a big campaign and referred the funding authorization to the voters, who voted it down. She wanted Tucson to be different from Phoenix which was building one freeway after another. Tucson was growing fast in the 1970s and 1980s, and streets were widened without any

consideration for the neighborhoods affected. The Rillito-Pantano Coalition included many neighborhood groups. RESULT: residents now have a vote and meetings to discuss mitigation before the bulldozers arrive to widen their streets. Also, there is a linear park along much of the Rillito, used by many bikers, walkers, and joggers.

The Rillito-Pantano Coalition became "Buffers" in the 1980s and worked to elect environmentally sensitive Supervisors Iris Dewhirst, Sharon Bronson, and Gregg Lunn and got the Buffer Overlay Zone Ordinance (BOZO) adopted by the Board of Supervisors. The BOZO required setbacks and low density zoning near the boundaries of Saguaro National Park, Tucson

Mountain Park, the Coronado National Forest and any future open space parks. The developers cried "foul" but the ordinance became part of the eventual open space plan. Many, many people helped Wanda in these efforts, but her political sense and keen desire to maintain the Sonoran Desert beauty of Tucson led us to where we are today. We crafted a huge land swap involving Federal, State, and County agencies to trade land for Rancho Vistoso so that development would be on the west side of Oracle Road. Catalina State Park came into being. "Buffers" also successfully fought against a shopping center development at Oracle and Tangerine Roads. We had to go to court to get that zoning referendum on the ballot, and the voters won again... no development. Recently, another

developer with a new plan, Desert Springs, is attempting to put high density development next to Catalina State Park on that same land.

Wanda leaves her husband Lemuel, daughter Pamela Thyret, and a grandson Lemuel Thyret. We remember her efforts to shape this community without additional freeways and apartment buildings on the Parks' boundaries, and with many environmentally significant areas now part of the Sonoran Desert Protection Plan. Most recently, Wanda served on Pima County's Conservation Acquisition Commission. Wanda was a Tucson High and Wellesley College graduate, and a long time community volunteer before her politically active years. She will be missed.

Julia Perry Gordon

ADEQ: “You Have A Voice In Air Pollution Control In Arizona.” Oh really? More Shenanigans with the Proposed Rosemont Copper Mine

Rosemont Copper is not about to receive their operating permit for their proposed mine. Because they have modified their original mining proposal substantially, we think the Coronado National Forest needs to initiate a new Environmental Impact Process that takes these changes into account. Congressman Barber and Congressman Grijalva support an extended review.

In addition to receiving a permit from the Coronado National Forest, Rosemont also needs to comply with the requirements of the Federal Clean Water Act. To do so, they will need to receive a 404 Permit from the Army Corps of Engineers. The Corps is reviewing Rosemont’s request, but has not indicated when it might respond. The Environmental Protection Agency (EPA) called the Draft EIS “one of the worst they had ever seen.” We think that the Corps will take those EPA concerns very seriously. In addition, Save the Scenic Santa Ritas (SSSR) has appealed the granting of an Aquifer Protection Permit to Rosemont by the Arizona Department of Environmental Quality (ADEQ). We are in the midst of court hearings in Phoenix right now.

So the mine is not about to happen; and we encourage you to submit comments on the Air Quality Permit.

Air Quality Permit:

The Rosemont Copper Company did not want to deal with the Pima County Department of Environmental Quality when it came to applying for an Air Quality Permit, even though Pima County is the jurisdiction that normally handles such permits. Instead they went to the State and were able to get the ADEQ to take over the air quality permitting for Rosemont. ADEQ has already stated that they propose to issue an air quality permit to the mine. SSSR remains convinced that they have overlooked serious deficiencies in the proposal.

A public informational meeting is scheduled for Monday, October 1, at 6.00 pm at Sycamore Elementary School, 16701 S. Houghton Rd., Corona de Tucson. (Note that is NOT the date some of you may have seen; we were able to get the originally scheduled date [Tuesday, 25 October] changed since it is the beginning of Yom Kippur.) A public hearing is scheduled for Tuesday, Oct. 9, at 6.00 pm at the same location. The comment period has been extended until October 31. Below are a few issues you might want to raise if you attend the public hearing on Oct. 9 or if you send comments. E-mail comments may be sent to: rosemontairpermit@azdeq.gov. **We encourage you to comment!**

*** This public process is a sham.**
The State of Arizona Department of

Environmental Quality has stated that it “proposes to issue an Air Quality Control Permit” BEFORE hearing from the public. This statement is particularly ironic as the headline on their Public Notice says, “You Have A Voice In Air Pollution Control In Arizona.”

* The permit is a bait and switch.

The proposed permit is based on a facility configuration plan that is no longer relevant. The public is, in fact, being asked to review and comment on an air quality permit for a facility proposal that has been changed significantly. As recently as 28 August 2012 Rosemont’s parent company, Augusta Resource, filed documents with Canadian and U.S. securities regulators that outlined significant changes in the proposed Rosemont Mine. These changes will affect the potential air quality impacts of this facility. Thus, this permit request should be withdrawn and modified to address the proposed facility changes proposed by Rosemont.

*** The draft permit does not sufficiently address the fugitive dust from the immense dry-stacked tailings piles.** The permit does not address emissions from the tailings piles during mine operations (it addresses tailings emissions only during construction.) This state permit does not require a tailings management plan as is required by Pima County of other mining

operations. We believe such a plan should be a part of this permit.

We know from experience at other mines in southern Arizona (which have WET tailings) that when tailings become dry, blowing dust is a serious problem. Last spring Pima County issued health alerts in Green Valley as a result of dust blowing off the nearby mines. The Rosemont tailings would be enormous -- up to 800 feet [80 stories in height] and covering thousands of acres. Controlling dust on dry tailings of this size is completely untested.

*** The proposed Rosemont Mine will significantly impact regional air quality.** According to the Forest Service Draft EIS, the proposed Rosemont Mine will violate National Ambient Air Quality Standards for particulate matter of 10 microns or less, particulate matter of 2.5 microns or less, nitrogen dioxide, and ozone. The Draft EIS also made it clear that we could expect serious deterioration of air quality over Saguaro National Park East and eastern Tucson for four months per year.

Many residents of southern Arizona have health issues that are worsened when air quality diminishes. Thus, it is critical that this permit be granted ONLY if the mine will not impact the clean air and the human health of our region.

*Gayle Hartmann, President,
Save the Scenic Santa Ritas*

Proposed Desert Springs Development Threatens Catalina State Park

The area, previously known as the historic Kelly Ranch, was previously identified for acquisition with Pima County Open Space Bond funds as part of Oro Valley’s designated wish list but a sales price could never be agreed upon nor are there currently any bond monies left with which to buy the property. The property lies within Pima County’s Conservation Land System and contains Important Riparian Areas as well as Biological Core Management Areas, the southern aspect being located in

the Canada del Oro floodplain. Currently zoned for low density development in Pima County, the owners are proposing annexation, major upzoning and development in Oro Valley. The previous county plan included a golf course to buffer Catalina State Park, owned by the US Forest Service and managed by AZ State Parks. The newly proposed plan has no buffer and places high density residences adjacent to the park and commercial development along Oracle Road, across from

Tangerine Road. Beginning at the Park entrance road and continuing throughout the various campgrounds and the equestrian center, the close proximity of development to the Park will be painfully obvious. In addition to adverse impacts to the Park’s entire viewshed, light and sound pollution will threaten dark skies

and opportunities for solitude and immersion in nature for both humans and wildlife.

Tucson Audubon has held its Institute of Desert Ecology at Catalina State Park for over 30 years. Let Oro Valley, the Forest Service and State Parks know your thoughts and copy us when you do.



Get out and Vote! Your Vote is Important!

Election Day is Tuesday November 6, 2012. Are you registered to vote? Remember you must be registered 29 days before an election to vote. Go here to register in Arizona <https://servicearizona.com/webapp/evoter/selectLanguage>

The Arizona League of Conservation Voters (ACLV) Education Fund has a great variety of election-related resources here http://azlcvedfund.org/voter_resources.php

Make sure that your vote on November 6 counts toward the conservation of birds and their habitats. How will each candidate work to support our natural environment? Addressing the causes of climate change is a defining issue, not just for the conservation of wildlife habitat, but for our and our children's continued health and survival. Do you know your candidates' positions on reducing atmospheric carbon emissions? What is their voting record on recent energy and environment bills?

Good resources abound on the internet: in addition to the ACLV, www.votesmart.org is a site to research the records of our candidates, and a way to research principal funding sources of the candidates.

Ballotpedia.org is also a good source of information, including elections to the Arizona Corporation Commission where renewable energy, such as distributed solar, is a major concern.

Make sure you Vote! YES on Prop 119 and NO on Prop 120

Prop 119: Vote Yes. For years our state has struggled to find a way to conserve the most culturally and biologically significant state lands for future generations. Proposition 119 is nearly identical to the 2010 Proposition 110 which lost by less than one percent of the vote.

Now we have chance to get it right and reform the way we do business so that we, the taxpayers, can participate in an open and transparent public process. Under Proposition



119, lands subject to exchange must either improve the management of state lands for the purposes of sale or lease or conversion to public use OR protect military facilities, such as National Guard installations, Davis Monthan or Luke Air Force Bases, or Fort Huachuca. All lands to be exchanged will be identified up front; will require two land appraisals; will include an analysis of the impacts; and will require two public meetings. And ALL of this must happen prior to any exchange moving forward. Finally, and most importantly, any exchange must go before the voters for approval. The Tucson Audubon Society supports transparency and accountability in government and the conservation of State Trust Lands in order to best benefit the 13 trust beneficiaries, including public schools, supported by the State Lands Trust, both now and in the future. By supporting Proposition 119 you will support education, jobs and a vibrant economy, and create a better future for all the citizens of Arizona. We encourage you to VOTE YES on PROP 119!

Proposition 120 — Just say NO!

Proposition 120, a Constitutional Amendment, seeks to give Arizona's State Legislature exclusive control over all air, land and water. This includes control, management and disposition of federal public lands and waters and superseding federal laws that protect public health and safety, such as the Clean Air and Water Acts. We oppose Proposition 120 and encourage all Arizonans to VOTE NO!

Clean air and water are of national importance. Before passage of the Clean Water Act, little had been achieved by relying on states to keep our water safe. Proposition 120 could expose our wetlands and river systems to polluters and developers. Do we really want to return to the days of the Love Canal, when our rivers were on fire? The Clean Air Act, through regulating smokestack emissions, protects us and our wildlife from acid rain, and mercury in our fish and fish-eating birds, and numerous respiratory illnesses. Proposition 120 would endanger the air we breathe, the water we drink, and the wildlife and lands we all cherish. All Americans have an interest in the National Parks, Forests, and Monuments within Arizona. The Arizona State Legislature has repeatedly demonstrated it is unable to manage the resources currently under its jurisdiction in a fiscally responsible manner for the public benefit. Do you trust the future care and management of our birds, wildlife, and natural resources to the Arizona State Legislature? We do not and we urge you to Vote No on Proposition 120.



In Brief

Lower San Pedro River Collaborative Conservation and National Wildlife Refuge Proposal Update

The public comment period is now closed and we await publication of the US Fish & Wildlife Service's findings. One issue of interest is the recently released report on the Santa Catalina – Rincon – Galiuro Mountain Wildlife Linkage available at http://www.azgfd.gov/w_c/documents/SantaCatalinaRinconGaliuro_LinkageDesign_lowres.pdf

Catalina Regional Park Update

Neighbors are currently working with Pima County Natural Resources, Parks, and Recreation personnel to provide some landscape upkeep and safety while maintaining the essential natural quality of the park and focusing on sustaining riparian wildlife habitat, especially around the pond. For more information, go to ourcatalina.com

Sign up for Tucson Audubon's eNews

Tucson Audubon sends out a weekly email of news updates to a list of around 2,500 people. In addition, we send our supplemental emails to this list, for example for urgent conservation action or special invitations.

You can sign up for this list in a number of ways. The easiest is to go to tucsonaudubon.org and click on the link that says *Sign-Up E-newsletter*. Otherwise send an email to pgreen@tucsonaudubon.org with your first and last name, or call Jean Barchman at 520-209-1802 and she will take your details.



Flying Over Boundaries: Binational Education, Conservation and Long-lasting Friendships.

Rancho La Esmeralda, a private ranch located southwest of Nogales, Sonora and only five miles south of the US-Mexico border, hosted a group of people from Sonora, Arizona, and New Mexico who came together to enjoy a weekend exploring and learning in the creeks and natural landscapes of the Sierra La Esmeralda range. Organized and led by Sky Island Alliance (skyislandalliance.org) and Tucson Audubon, over 40 people from different walks of life traveled to the rancho over Mexico's Independence Day weekend (Sept 14-16), to participate in a bird monitoring training and a habitat restoration workshop.

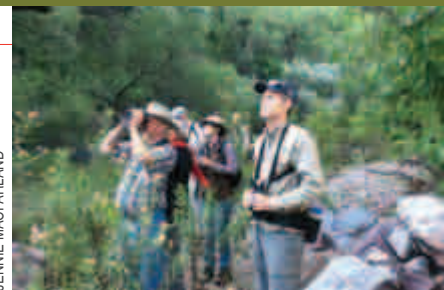
Rancho La Esmeralda is an 8,000-acre property where Sky Island Alliance has conducted wildlife monitoring, habitat restoration and trainings since 2007. The Hacienda-style bunk house can comfortably host 40 people; there is common space

for indoor and outdoor meetings, a swimming pool, a large ramada for group meals and extensive camping grounds. The whole facility is solar-powered, adding to the value of this place as a sustainable, eco-friendly ranch. Not only is this a perfect location for a bird survey training, it's also an excellent place for birding.

Adjacent to the house is the Planchas de Plata canyon, a beautiful and inviting canyon that beckoned to us with the promise of great birding. The first morning we led a bird walk into the canyon which resulted in over 50 species in less than three hours including Thick-billed Kingbird and Buff-breasted Flycatcher. That afternoon the workshop on the methodology of the Coordinated Bird Monitoring surveys occurred, and participants also learned how to use a handheld GPS and measure vegetation, vital skills in surveys of

this type. The last morning of the weekend training was reserved for a mock survey. All the kinks were smoothed out for participants in this tricky protocol and new birds including Elegant Trogon and Black-capped Gnatcatcher were added to the trip list. Rancho La Esmeralda was the perfect place to hold this bird survey training with beautiful scenery, lively creeks and great birding. In total we identified over 70 species of birds, in addition to other wildlife species like Sonoran Desert tortoise, Black-necked garter snake, Night snake, Sonoran mud turtle, Lowland leopard frog, Couch's spade foot toad and Red-spotted toad.

Participants during this weekend included two Tucson Audubon Society staff, three U.S. Forest Service biologists, one Arizona Game and Fish Department staff, several University of Arizona researchers,



JENNIE MACFARLAND



ROD MOND

Top to bottom: Tucson Audubon's Matt Griffiths leads a bird walk; Bird monitoring workshop.

a restoration consultant from New Mexico, over a dozen professors and students from the Universidad de Sonora and Tecnológico de Cananea, an oncologist from Hermosillo and Sky Island Alliance staff. ■

Jennie McFarland, Tucson Audubon and Sergio Avila, Sky Island Alliance.



Conservation Corner!

Ready to harvest water? Tucson Water now offers a rebate to make it more affordable. It will pay half the cost, up to \$2,000!

Here's the logic. Potable water is expensive and has an enormous ecological footprint.

Currently about 40 percent of the potable water used by homeowners is for irrigation. But irrigation doesn't

require potable water! For a desert, our area gets a surprising amount of rain—close to 12 inches per year. We can replace a lot of that potable irrigation water with free rain from the sky.

The problem is that while the water is free, the harvesting is not. You either have to build "earthworks" (basins, swales, berms) or erect a cistern or tank. Cost is a barrier for many people.

Tucson Water's new rebate pays for either "earthworks" or tanks or both. It pays for materials and labor (if

you hire labor to do the work—not if you do it yourself).

There are two "levels" to the rebate. Level 1 covers the cost of eligible materials and labor up to \$300. It's less money but easier to qualify for.

Level 2 covers half the cost of eligible materials and labor up to \$2,000. However, your system has to create enough storage (basin and/or cistern) to hold the runoff from a 1-inch rainfall (from your selected collection area—usually a portion of your roof).

How much water is that? They've simplified the math: the storage

capacity has to be 60% (measured in gallons) of the collection area (measured in square feet). So, for example, if you collect from a 10x100-foot roof area, that's 1,000 square feet. So your capacity must be at least 600 gallons.

Your home must be in the Tucson Water service area. You must attend a 3-hour workshop and get a certificate. You must submit a drawn plan, your certificate and receipts to Tucson Water. Other rebate details are found at <http://cms3.tucsonaz.gov/water/rwh-rebate>. ■

Kendall Kroesen, Habitats Program Manager

KENDALL KROESEN



PAUL & ENGLI GREEN

TUCSON AUDUBON FIELD TRIPS

KATE REYNOLDS | FIELD TRIP COORDINATOR

BARRY RIORDAN (EVERGREEN IMAGES)



Arivaca Cienega

October

October 2—Tuesday 6:30 AM

Arivaca Cienega/Buenos Aires National Wildlife Refuge



We'll look for late migrants, residents and possibly a few early winter arrivals in the riparian and wetlands at the Arivaca Cienega and riparian trail on the Buenos Aires wildlife refuge west of Arivaca. We'll also well make a few opportunistic stops in the desert grasslands on the way to Arivaca. Meet at McDonald's in Green Valley at 6:30 AM. Use the Continental Rd. exit off of I-19 and turn right to the McDonald's. Trip limited to 15. Sign up early with leader, Sharon Goldwasser azfiddle@mindspring.com.

October 4—Thursday 8:00 AM

St. David Monastery & Benson

Take an easy walk on mostly level ground (approximately 1 mile) through the monastery at St. David during this transition period where it may be possible to find a combination of lingering summer residents, fall migrants and newly-arrived winter residents. There may be some tall grass to walk through on the trail to the river. For those interested, we will then head to the Benson Sewage Ponds and San Pedro Golf Course ponds to view waterfowl and other surprises. Bring water, snacks and insect repellent. Meet the leader at 8 AM at the Holy Trinity Monastery, Hwy 80 just east of St. David at 8 am. Leader: Arlene Ripley 520-419-7804

October 6—Saturday 7:15 AM

Oracle State Park

This wonderful location, closed several years ago, is now open only sometimes on Saturdays. Amidst the oaks and junipers and the gardens around the Kannally Ranch we should be able to find some fall migrants as well as year-round regulars. Wear sturdy shoes and bring water and a snack. We will finish before noon. If you are coming from Tucson and want to carpool meet the leader at Bashas' parking lot in Catalina, on the northeast corner of Oracle Rd. and Golder Ranch Rd. at 7:15 AM. You can also meet at the Kannally Ranch House at 8:15 AM. Leader: Doug Jenness d_jenness@hotmail.com 520-909-1529

October 9—Tuesday 7:30 AM

Sweetwater Wetlands

We'll roam these in-town wetlands looking for shorebirds, migrants, and local birds on this cool fall morning. We'll walk approximately 1.5 miles on wide and flat gravel trails. Beginning birders and part-time residents are encouraged to sign up! Meet in the parking lot at 7:30. Sign up with leader at dvath@hotmail.com. Trip limited to 12 participants.

October 13—Saturday 10:30 AM

Tucson Wildlife Center

The Tucson Wildlife Center is dedicated to the rescue, rehabilitation, and release of injured and orphaned wild animals throughout Southern Arizona. Join us in a special behind-the-scenes tour of this remarkable wildlife emergency treatment center. Trip limited to 12. Wear long pants and close-toed shoes. Cameras ok. Done

WEEKLY BIRD WALKS

Thursdays—October & November: 8 AM;
December 8:30 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—8–9:30 AM (from October 13)

Tucson Audubon's Mason Center.

Families and birders of all skill levels are welcome. Visit tucsonaudubon.org/masoncenter for details.

MORE FIELD TRIPS ARE AVAILABLE ONLINE.

Visit tucsonaudubon.org/fieldtrips for more trips and the latest or expanded field trip information or call us at 520-629-0510.

General Information

Tucson Audubon field trips are free. For general information call 520-629-0510. 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 your binoculars, field guide, and for most trips a scope can be useful. Bring money to cover your share of the carpooling and any required entry fees (e.g. for state parks).

Arrival Times

Please 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

Don't forget to stop in our Nature Shop for your field and ID Guides, and other birding supplies.

JENNIE MACFARLAND



San Rafael Grasslands

by about 12:30 PM. Contact Kate Reynolds to sign up and for directions to the meeting place: TASKateReynolds@gmail.com

October 16—Tuesday 5:00 AM

San Rafael Grasslands



This trip provides an opportunity to see raptors and grassland sparrows. The number of bird species we will see is not large, but we hope to see some birds not easily seen elsewhere. Mostly birding from cars, but some walking through tall grass and over rocky slopes. If you don't have a high clearance vehicle, plan to carpool with someone who does. Bring lunch. Scope will be useful. Meet at Houghton Road north of I-10 before 5:00 AM. (150 miles round trip). Leader: Jim Hays jhays@iname.com

October 18—Thursday 6:30 AM

Tanque Verde Wash IBA Walk



Tour a birding gem right here in Tucson with the Important Bird Area Conservation Biologist. This wash is lined with healthy riparian cottonwoods and willows and we will be looking especially for fall migrants. We will meet at Agua Caliente Park at 6:30 AM. Limited to 15; email leader Jennie MacFarland jmacfarland@tucsonaudubon.org.

October 20—Saturday 6:30 AM

Catalina Mountains

Fall birding is still interesting in the Santa Catalina Mtns. with potential for Williamson's and Red-naped Sapsuckers, Golden-crowned Kinglet, many sparrows, Red Crossbill, and possibly lingering migrants. Planned stops include Molino Basin, Prison Camp, Rose Canyon Lake, and Marshall Gulch, but plan to be flexible in response to stake-out birds and unpredictable weather. Meet at 6:30 at the McDonald's on the corner of Tanque Verde and Catalina Highway. Back by 3 PM. Rose Canyon Lake \$8/vehicle. Bring lunch, water, and layered clothing! Limited to 20 participants. Sign up with leader Carl Lundblad carl.lundblad@gmail.com.

October 23—Tuesday 6:00 AM

Two Hours at Sweetwater

Join us for a birding stroll at Sweetwater Wetlands. We'll check out the paths through the wetlands, and maybe pop over to the trail along the river easement. Easy walking, good birds, and pleasant company. Bring water and sun protection. Limit

MATT GRIFFITHS



Mt Lemmon Rose Canyon

of 20. Meet at Sweetwater, bring water and sun protection. Leaders: Matt Brooks & Sara Pike 520-668-7631 glacierbirder@yahoo.com

October 27—Saturday 6:30 AM

Peña Blanca Lake

Let's take a casual stroll lakeside to search for lingering migrants and early winterers. Meet at the Green Valley McDonalds on Continental Road at 6:30 AM. We'll return about noonish or so. Please call the trip leader, Cliff Cathers, to register at 520-647-3273 or email at AZCliffy@Q.com.

October 30—Tuesday Time TBD

Rock Corral Canyon

Come explore a little-known canyon draining to the northeast out of the Tumacacori Mountains and incorporating the Wild Chile Botanical Area. Lower areas of the entrance road have Rufous-winged and Black-throated Sparrows, while the upper parts of the canyon have patches of oak with Bridled Titmouse, Hutton's Vireo, Ash-throated Flycatcher, Northern Beardless-Tyrannulet, and perhaps some migrants. Maybe we'll get lucky and discover Black-capped Gnatcatcher, so be prepared for a lesson on how to identify this difficult group of birds. If there are flowers, be prepared to do some butterfly watching as well. Walking on rough, rocky road and trails, steep in places requires good physical ability. Limited to 15 participants, at least 4 of whom are willing to drive their high clearance vehicles the 2.5-mile entrance road; carpooling to rendezvous recommended. Contact leader to sign up and to receive further details: Rich Hoyer birdernaturalist@me.com 520-325-5310.

November

November 3—Saturday 8 AM

Sabino Canyon

We'll bird Sabino Canyon Recreation Area walking a 4-mile loop that includes both Sonoran desert uplands and the riparian area of Sabino Creek along rocky uneven trails. Meet at the ramada by the Visitor's Center. \$5 parking fee or a pass required for Sabino Canyon Recreation Area. Return by 11 AM. Sunhat, water and walking shoes recommended. Leaders are Sabino Canyon Volunteer Naturalists. Group size limited to 20, email to reserve a spot. Leaders: Jean & Mark Hengesbaugh jhhenge@yahoo.com



CHRISSE KONDRAT-SMITH



Sweetwater Wetlands

November 6—Tuesday 6:30 AM

Two Hours at Sweetwater

Join us for a birding stroll at Sweetwater Wetlands. We'll check out the paths through the wetlands, and maybe pop over to the trail along the river easement. Easy walking, good birds, and pleasant company. Bring water and sun protection. Limit of 20. Meet at Sweetwater, bring water and sun protection. Leaders: Matt Brooks & Sara Pike 520-668-7631 glacierbirder@yahoo.com

November 10—Saturday 7:30 AM

Sweetwater Wetlands

We'll roam these in-town wetlands looking for shorebirds, migrants, and local birds on this cool fall morning. We'll walk approximately 1.5 miles on wide and flat gravel trails. Beginning birders and part-time residents are encouraged to sign up! Meet in the parking lot at 7:30. Sign up with leader at dvath@hotmail.com. Trip limited to 12 participants.

November 13—Tuesday 10:30 AM

Reid Park Ramble

We will wander around the park for two hours looking for winter visitors like waterfowl, raptors, warblers, woodpeckers and bluebirds. Easy pace on sidewalk and lawn. Bring scope if you want. Follow directions to the Reid Park Zoo parking lot. But meet at the bus stop kiosk in front of the Edith Ball Adaptive Pool (looks like a big white tent.) Do not meet at the zoo entrance. No need to sign up prior, just show up. But if you have a question contact leader John Higgins 520-578-1830, jghiggins@comcast.net.

November 17—Saturday 6:00 AM

Whitewater, Willcox & Wine



Winter residents have returned to SE AZ and the '12 vintage has arrived. We will look for Sandhill Cranes and wintering raptors and then experience



Sandhill Crane

DAVID QUANRUD

a new dimension of the "Willcox Bench," the burgeoning wine industry. Kansas Settlement Rd and historic Willcox now have more to offer than just the Bonita Bean Co., fallow fields and Rex Allen. Dress for the weather. Bring scopes, snack and lunch. Wine tastings typically cost \$7—we'll do 2. Please preregister 10 days ahead (Wednesday 11–7) so I can give a heads up to the vintners. Meet- 6:00 AM. Houghton Rd. and I-10. Designated drivers appreciated. Cheers! Leader: Michael Bissontz 520-577-8778 seetragon@comcast.net

November 19—Monday 7:30 AM

Sweetwater Wetlands

Great for new birders—join us for a walk through Sweetwater Wetlands where we will look for late migrants, wintering and resident birds. We will also enjoy other fauna we may encounter. Please remember sun protection (dress for the weather) and water. We will meet in the parking lot. Access to Sweetwater may be limited due to the ongoing construction on the access road. Please sign up in advance with trip leader via email. Leader: Michael "Wolfie" Skinner 520-743-2403 wolfwtch@msn.com

November 24—Saturday 8:15 AM

Oracle State Park

Work off a little turkey and pie by birding in beautiful Oracle State Park with its oak woodlands and boulder outcroppings. Park is at 4500 foot elevation so be prepared for cooler weather. Will be walking on uneven terrain with minor elevation changes. \$7 per car entrance fee or use your AZ state park pass. Meet at the Kannally Ranch parking area inside the park at 8:15 am. For directions, carpooling info and other details, please contact the leader after November 3. Leader: M.E. Flynn 520-797-1743 or me.flynn@comcast.net

November 27—Tuesday 8:00 AM

Lyman Atturbury Wash Animal and Bird Sanctuary

Join us to find resident and wintering birds at Atturbury Wash and Lincoln Regional Park, on Tucson's east side. This is one of Tucson's premier washes and the site of a Tucson Audubon project to improve habitat. The location is lower Lincoln Park off Escalante east of Pantano Road (not upper Lincoln Park off Pantano south of Escalante). Meet at lower Lincoln Park at 8:00 AM. Bring water and sunscreen; finished before lunch. Call leader for exact directions: Kendall Kroesen kkroesen@tucsonaudubon.org or 520-971-2385.

December

December 1—Saturday 8 AM

Sabino Canyon

We'll bird Sabino Canyon Recreation Area walking a 4-mile loop that includes both Sonoran desert uplands and the riparian area of Sabino Creek along rocky uneven trails. Meet at the ramada



LARS HAMMAR



Oracle State Park

by the Visitor's Center. \$5 parking fee or a pass required for Sabino Canyon Recreation Area. Return by 11 AM. Sunhat, water and walking shoes recommended. Leaders are Sabino Canyon Volunteer Naturalists. Group size limited to 20, email to reserve a spot. Leaders: Jean & Mark Hengesbaugh jhenge@yahoo.com

December 4—Tuesday 7:00 AM

Urban Birding across from Catalina State Park

This will be a slightly different trip! Across from the Catalina State Park is a large shopping center with a surprising gem of habitat hidden inside. This time of year this is an excellent place for wintering sparrows, bluebirds and other surprises in this urban habitat. We will meet at the In-N-Out Burger on Oracle south of Tangerine at 7:00 AM. Limited to 15; email leader Jennie MacFarland jmacfarland@tucsonaudubon.org.

December 8—Saturday 8:00 AM

Sweetwater Wetlands

Meet at the parking lot on Sweetwater Drive at 8 am. Almost all the regular winter birds of the Tucson area should be found and maybe an uncommon visitor or two. We do easy walking for two to three hours on level paths. Bring water; wear hats. All ages and birding abilities are encouraged to participate. Check to see if the Prince Rd. exit is currently open. Otherwise use the temporary I-10 exit at Camino del Cerro. Leaders: Bev and Andy Robertson 520-615-2285 bdprentice@msn.com.

December 10—Monday 7:00 AM

Two Hours at Sweetwater

Join us for a birding stroll at Sweetwater Wetlands. We'll check out the paths through the wetlands, and maybe pop over to the trail along the river easement. Easy walking, good birds, and pleasant company. Bring water and sun protection. Limit of 20. Meet at Sweetwater, bring water and sun protection. Leaders: Matt Brooks & Sara Pike 520-668-7631 glacierbirder@yahoo.com

December 24—Monday 7:30 AM

Christmas Eve Urban Birding

It's the time of year when Tucson's urban areas can yield excellent over-wintering species and we'll celebrate the impending holiday with a short distance trip in town to Tanque Verde Wash, Agua Caliente Park and Woodland Road. Meet

at the McDonalds at Tanque Verde Road and the Catalina Highway at 7:30 AM. Please call the trip leader, Cliff Cathers, to register at 520-647-3273 or email at AZCliffy@Q.com.

ARIZONA CHRISTMAS BIRD COUNT SCHEDULE 2012–2013

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. See tucsonaudubon.org/cbc for the full list of counts in Arizona.

Register now for Sixth Annual AZFO Meeting



The sixth annual state meeting of Arizona Field Ornithologists will be held at Hampton Inn at 245 London Bridge Rd. in Lake Havasu City on Arizona's "West Coast" October 26–28. The meeting is open to all and will focus on observing, surveying, and research on Arizona's birds, and on the contributions of late Gale Monson to ornithology in Arizona. Saturday evening's dinner features keynote speaker Ken Rosenberg, of the Cornell Laboratory of Ornithology who will talk on "A Half Century of Avifaunal Change on the Lower Colorado River." The weekend includes field expeditions on Friday, talks on Saturday talks. For full information go to azfo.org. Advance registration is encouraged. Visit www.azfo.org for details and to register online.

ADDITIONAL BIRD WALKS IN TUCSON AND SOUTHEAST ARIZONA

For information on weekly regional bird walks from Agua Caliente Park to Ramsey Canyon Preserve, please see our website, www.tucsonaudubon.org/what-we-do/birding/128.html.

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Big Bend Nat'l Park, Texas: Colima Warbler short tour May 1–5, 2013, \$1095.

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 Golden-fronted Woodpecker are just a few others we'll seek on this fun-filled adventure!

South Texas: Rarities and Specialties short tour Feb 27–Mar 3, 2013, \$1195. 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 Brown Jay 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 extended alternative to this tour.

ROCKJUMPER—WORLDWIDE BIRDING ADVENTURES

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(USA & Canada toll-free): 1-888-990-5552

Myanmar—Endemics of Remote Asia:

5 to 17 January 2013 (13 days). Tour Price (per person): **US\$4,450** (Single supplement US\$195, approx cost of flights US\$300). *Please note: these prices are subject to foreign exchange fluctuations.* Myanmar, nestled between Thailand and India, remains a poorly known birding destination, and our Myanmar—Endemics of Remote Asia tour explores some seldom-visited birding hotspots. Key sites here hold important populations of declining waterbirds and support a wealth of endemic and range-restricted birds, including four species endemic to the countries' unique dry zone habitat. This tour offers a thorough coverage of the core birds of this fascinating country, as well as taking time to marvel at the 2000+ temples and pagodas around Bagan.

Guatemala—Central American

Specialties: 11 to 19 January 2013 (9 days).

Tour price (per person): **US\$2,250** (Single supplement US\$300). *Please note: these prices are subject to foreign exchange fluctuations.* Our Guatemala—Central American Specialties tour takes us in search of one of the world's most prized birds, the Horned Guan, and other specialties including Pink-headed Warbler, Blue-

throated Motmot, Blue-and-white Mockingbird, Rufous-collared Thrush and Azure-rumped Tanager. Our optional post-tour Tikal Extension then explores the region's remarkable Mayan ruins while targeting such sought-after species as the regal Ocellated Turkey, Great Curassow, Grey-throated Chat and Rose-throated Tanager. This fabulous Central American adventure is set amongst spectacular volcanoes and fabulous highland lakes and comes highly recommended!

SOLIPASO TOURS

www.solipaso.com

Colima Jalisco: February 26–March 5, 2013.

\$2300. Leader: David MacKay. The melding of western Mexico with the volcanic belt is impressive and makes this area rich with a large number of interesting Mexican endemic birds. Views of the twin volcanoes, Volcan de Colima and snow-mantled Nevado de Colima, (12,500 and 14,235 feet respectively) provide a picturesque backdrop for nearly the entire trip. Species include Long-tailed Wood-Partridge, Banded Quail, Balsas Screech-Owl, Bumblebee Hummingbird, Slaty Vireo, Red-breasted Chat, Orange-breasted Bunting, and Black-chested Sparrow. There are

also many groups of birds typical of latitudes far to the south, including parrots, trogons, motmots, attilas, tityras, shrike-vireos, flowerpiercers, euphonias, caciques, and brush-finches.

Oaxaca Valley: March 22–28, 2013. \$2400.

Leader: David MacKay. The valley and city of Oaxaca are at 6000' and the surrounding mountains reach 10,000', an elevation gradient that holds a great array of habitats! Birds like Oaxaca and Bridled Sparrow, Ocellated Thrasher, Pileated Flycatcher, Dwarf and Slaty Vireo, White-throated Towhee, and Boucard's Wren. Most of these birds can be found at such significant archeological sites like Monte Alban and Yagul, where we bird and explore the ruins. In the mountains, we bird areas of exceptional pine-oak forests, where we may see Dwarf Jay, Chestnut-sided Shrike Vireo, Red Warbler, Long-tailed Wood-partridge and Bumblebee Hummingbird! Beyond birding, we take time to visit the markets and other sites of interest for the amazing crafts of the region... and the food is some of the best in Mexico!

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BIRDS & BUSINESS ALLIANCE Join today and connect with the Tucson Audubon community. Contact Erin Olmstead at eolmstead@tucsonaudubon.org or 520.629.1809

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As a Tucson Audubon Frequent Flyer, you can convert your annual donation to a monthly contribution. Your donation is automatically deducted from your credit card on a monthly basis. In addition, your fully tax deductible contributions will be listed on your monthly credit card statement, and we will send you a summary receipt of your annual gifts in January, making tax time that much easier. An additional benefit is that you will receive a Tucson Audubon membership for a year. We thank these Frequent Flyer Donors for their contributions: Myrna Beards, Melanie Builder, Mich Coker and Kate Galloway, Christine Curtis, Karl and Sandy Elers, Peggy Ford, Robert King, Susan Kozacek, Nora Miller, and Deborah Vath. For more information, contact Jean Barchman at 520-209-1802 or jbarchman@tucsonaudubon.org.

TUCSON AUDUBON NATURE SHOPS

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

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AGUA CALIENTE PARK SHOP

October Thursday, 9 AM–1:30 PM;
November, December Wednesday 10 AM–1 PM,
Thursday 9 AM–2:30 PM,
Friday–Saturday, 10 AM–2:30 PM
Phone: 760-7881

From Tanque Verde Rd and Houghton, continue east on Tanque Verde 2 miles. Turn left (north) onto Soldier Trail, continue north for 2 miles. Turn right (east) onto Roger Rd, continue ¼ mile to the park entrance on the left (north).

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Check the special pullout for holiday gift ideas!



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Change Service Requested

Vermilion Flycatcher

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