Fire and Water
Sweetwater Wetlands
Water-Energy Nexus

Big Storms, Big Birding... Big Days!
Great Plains in Southeastern Arizona
PLUS a special four-page Tucson Bird & Wildlife Festival pull-out
Don’t Pick up that Baby Bird!

Paul and Eng-Li Green

Tucson Audubon receives many calls from people concerned about baby birds that have fallen out of their nests. Most of us can’t help but feel that the defenseless creatures will die without our help, and our instinctive response is to “rescue” them. The standard advice we give is, unless the bird is obviously injured, the best thing to do is to leave it alone as the parents will most likely keep an eye on it and continue to feed it.

One recent morning, while checking on a brood of young Western Screech-Owls that roost under the canopy of a dense citrus tree during the day, we came upon a young male American Kestrel on the ground, unable to fly. We knew a pair of kestrels had taken over an old Gila Woodpecker nesthole about 50 feet up a dead palm tree close by, and surmised that the baby must have fallen out of the hole. As we approached, the young kestrel clambered away and wedged itself in some rocks. Here was a test: to rescue or follow the advice we had often given to others? We decided to leave the bird and keep an eye on it.

Left alone, the young kestrel scurried around, calling all the while. His vocalizations seemed to attract other birds: an Anna’s Hummingbird; a Curve-billed Thrasher, and a couple of Abert’s Towhees and Gambel’s Quails all came over to take a look. Reassuringly, the adult female kestrel appeared to be taking note of where the baby was from her perch atop the dead palm tree.

About an hour later, as soon as the baby kestrel hopped into a less exposed brushy patch, the parent swooped down and delivered a lizard to it. Two days later, we observed the young male kestrel being fed by the female adult about 20 feet up a juniper tree. Even as we watched, the young female was slowly “climbing” up the outer branches of the cedar towards the feeding perch. Once there, she received her share of rodent. A third young was also being fed in the nesthole.

It was good to confirm for ourselves the soundness of the advice not to pick up that baby bird!
COMMENTARY

PAUL GREEN | EXECUTIVE DIRECTOR

Making Sense of a Crazy World: Teaching Kids to Think for Themselves

As a trained biologist, I worry when those in positions of power, who have no biological training, make decisions that are detrimental to our natural environment, human health, and quality of life. That is why I feel it is so important that our children learn to explore, respect, and understand the natural world and biological processes—you never know from where the next leader will emerge.

Opposing cap and trade climate legislation, a recently declared presidential hopeful, in a statement on the House of Representative’s floor, asserted that carbon dioxide is “a natural byproduct of nature;” stating, “Carbon dioxide is not a harmful gas, it is a harmless gas. … We’re being told we have to reduce this natural substance to create an arbitrary reduction in something that is naturally occurring in the earth.”

We know that carbon dioxide is a requirement for life—it traps solar heat, increasing the average surface temperature of the Earth. Without this “greenhouse effect,” the average temperature at the Earth’s surface would be about zero degrees F (-18°C) instead of its present 57°F (14°C). Our concern is about having too much of a good thing!

Levels of atmospheric carbon dioxide have fluctuated between 180 and 300 parts per million (ppm) for the past half-million years (see James Hansen’s essay illustration at www.climateactioncentre.org). Today, as we burn coal, oil, and natural gas, we are reintroducing the fossil store of carbon back into the system, at a rate of around seven billion tons of carbon dioxide per year, or around 90 million tons of greenhouse gases a day. While natural processes absorb about half of the carbon dioxide emitted, there is a net increase of 3.5 billion tons of atmospheric carbon dioxide per year. The average level of carbon dioxide, as measured at the Mauna Loa Observatory in Hawai’i, has risen from 316 ppm in 1959, to 394 in May 2011, well above the 350 ppm considered our safe maximum by the Intergovernmental Panel on Climate Change. Over the period 1906–2005, the globally averaged temperature near the Earth’s surface rose by about 0.7 degrees C, more or less, with the rate of warming over the last half of that period almost double that for the period as a whole.

What can we do? We can teach people to think for themselves and to participate in the scientific process so that our society makes informed, science-based decisions.

Please join me as we welcome Bété Pfister as our new Environmental Education Program Coordinator (see p 9), who is spearheading the implementation of our new education plan. Bété, an experienced educator, begins her position as a part-time staffer as we raise the funds to support her training, to develop resources to help her in her job, and to eventually (we hope) bring her to full time.

The goal of our education program is to foster awareness, understanding, appreciation, and stewardship of habitat, birds, and other wildlife in the natural world. Our broad objective is to provide engaging and relevant education and outreach programs, materials, and opportunities that: develop participants’ birding skills and awareness; improve participants’ understanding of the workings of the natural world; encourage natural resource conservation; and promote advocacy actions that support the conservation of birds and their habitats.

Your contribution to our Summer Appeal will help us implement our educational education plan. The envelope is at your door and the appeal is on our website at www.tucsonaudubon.org/summer-appeal (see the back cover of this issue). Our need is real, and the benefits to our community immeasurable. Please donate today! Thank you!

For more on climate change and the greenhouse effect, see www.ncdc.noaa.gov/faqs/index.html.
Expand Your Birding Skills!  
Specialty Workshops  
August 31, 2011–February 17, 2012

Intended as stand-alone classes, these workshops are a great way to follow-up on Moving to Mastery techniques (though MTM isn’t required). Each class focuses on a specific group of birds, and goes into detail on similar species, ID techniques, and vocalizations. This is a great way to gain skills for identifying those difficult bird groups. Each class consists of a Wednesday evening class followed by a Saturday field trip. Pick and choose several! 
Instructor: Homer Hansen (Ducks and Geese by Larry Liese).

- **Warblers:** August 31 & September 3  
- **Flycatchers:** September 7 & 10  
- **Sparrows:** February 1 & 4, 2012  
- **Raptors:** February 8 & 11, 2012  
- **Ducks and Geese:** February 15 & 18, 2012

**Class session:** 6–9 PM  
**Field trip times:** TBA  
**Cost:** $110 per workshop ($145 for non-members)  
**Location:** TAS offices on University Ave.  
**Contact:** education@tucsonaudubon.org or 520-629-0510 x7012

Moving to Mastery  
October 12–November 9, 2011

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 the 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.

**Class sessions:** Wednesdays, October 12–November 9, 6–9 PM  
**Field trips:** Saturdays, October 15–November 5, 7 AM  
**Cost:** $250 for TAS members, $285 for non-members  
**Location:** TAS offices on University Ave.  
**Contact:** education@tucsonaudubon.org or 520-629-0510 x7012
Go Batty in September

September 10, 2011

Come watch nectar-eating bats gorge at hummingbird feeders as they prepare to migrate south. Using infrared imaging, watch bats literally attacking the feeders after dark. Dr. Ronnie Sidner will tell you a great deal about the bats to add to your enjoyment. Join us on Saturday, September 10 at 7 PM in Nogales at Linda Pfister’s house for this spectacular event.

Registration is $25 for Tucson Audubon members, $45 for nonmembers. Registration is free for one child (age 10–15) per adult. To sign up call 520-629-0510 x7012 or email education@tucsonaudubon.org. Only 12 slots are available, so set aside the date now.

Wild and Scenic Film Festival

Wednesday, August 17, 6:30 PM

The Loft Cinema • Hosted by and benefiting the Coalition for Sonoran Desert Protection

The Coalition is hosting its annual Wild and Scenic Film Festival to coincide with the beginning of the Tucson Bird and Wildlife Festival (see pullout). So, if you are not taking part in the Sky Islands Birding Cup on August 17, you can watch some movies instead! For more information about this traveling film festival, visit wildandscenicfilmfestival.org.

Visit tucsonaudubon.org for updates and more.

Backyard Birding & Beyond

Saturdays, January 14, 21, (no class January 28), February 4, 11, 18, 2012

Learn why southeastern Arizona is such a great place for birds and why birdwatching is so rewarding. Taught by Lynn Hassler, longtime birder, educator, and noted author, this course is designed for beginners. The focus will be on identifying local birds and discovering their interesting characteristics and charms. Lynn will address how to separate birds by habitat, seasonal occurrence, and behavior. Get the lowdown on binoculars and field guides, birding vocabulary, and etiquette in the field. Also covered will be some of the adaptations birds have developed in order to survive in our challenging environment. Course includes three two-hour classroom sessions and two field trips, up to 3 hours in length.

Classroom sessions: 9–11 AM
Field trip locations/times: TBA
Cost: $135 for TAS members, $170 for non-members
Location: TAS offices on University Ave.
Contact: education@tucsonaudubon.org or 520-629-0510 x7012

Learn with the Experts!

Institute of Desert Ecology

April 19–22, 2012

Continuing our 40+ year tradition of hosting this once-in-a-lifetime event, we’ve already scheduled dates for next year’s program. More information forthcoming in the next issue of the Flycatcher (or visit www.tucsonaudubon.org/ide). If you are interested in attending, please email or call Institute Director Matt Brooks at 520-629-0510 x7007 or mbrooks@tucsonaudubon.org.

Birding By Ear

May 2 & 5, 2012

Taking birding beyond the basics requires learning to use your ears as much as (if not more than) your eyes. This class will delve into the world of bird vocalizations and give you a framework for learning the voices of our master singers. The evening classroom session will introduce you to sonograms and vocalization types, as well as work on comparisons between similar sounding Arizona species. The field trip will give students a chance to use these skills in the field. Vocalizations will be recorded and brought back to the classroom to analyze. Limited to ten participants. Taught by Homer Hansen.

Class session: 6–9 PM
Field trip time: TBA
Cost: $110 ($145 for non-members)
Location: TAS offices on University Ave.
Contact: education@tucsonaudubon.org or 520-629-0510 x7012
Tucson Audubon’s Living with Nature Lecture Series

Thanks to this season’s brilliant Living with Nature lecturers, we explored amazing birding destinations near and far, discovered some of Arizona’s most fascinating creatures and ecological interactions, gained insight into the relationship between people and the wildlife whose environment we share, learned to advocate for conservation of our precious natural resources, and were inspired to get young people out birding!

Thanks for sharing your Monday evenings and Saturday mornings with Tucson Audubon! We look forward to another entertaining and educational series next season.

SINCERE THANKS TO OUR 2010 / 2011 PRESENTERS:
- John Alcock
- Paul Bannick
- Jim Cornett
- Jennie Duberstein
- Paul Hamilton
- Homer Hansen
- Bob Hernbrode
- Kendall Kroesen
- David & Jen MacKay
- Anne Peyton
- Vincent Pinto
- Michael Smith
- Rick Taylor
- Taldi Walter

The Living with Nature Lecture Series will resume in October. Stay tuned for more details on the 2011/2012 lineup in the Oct/Nov/Dec issue. In the meantime, check out the Tucson Bird & Wildlife Festival for a great series of FREE natural history talks at the Riverpark Inn, August 19 and 20 (see pullout p IV).

The Living with Nature Lecture Series inspires thanks to this season’s brilliant Living with Nature lecturers, we explored amazing birding destinations near and far, discovered some of Arizona’s most fascinating creatures and ecological interactions, gained insight into the relationship between people and the wildlife whose environment we share, learned to advocate for conservation of our precious natural resources, and were inspired to get young people out birding!

Anne Peyton of Liberty Wildlife with Lady Liberty (a rescued Bald Eagle) and two Sunnyside-Audubon Student Urban Naturalists.

EXPERIENCE
Southeast Arizona’s Birding at its Best

AUGUST 17–21, 2011 • TUCSON, ARIZONA

Incorporating the Sky Islands Birding Cup

ARIZONA’S NEW WORLD-CLASS BIG DAY BIRDING COMPETITION

Check the pullout and visit tucsonaudubon.org/festival to register

FEATURING
- Keynote Banquet and Presentation by Kenn Kaufman: Southeast Arizona Through the Eyes of Migratory Birds
- Welcome Reception and Presentation by Rick Taylor: Specialties of Southeastern Arizona: The Elevational Staircase

Row 1, L to R: Montezuma Quail (Robert Shantz), White-eared Hummingbird (Lois Manowitz), Red-faced Warbler (John Hoffman), Flame-colored Tanager (James Prudente),

Row 2, L to R: Empress Leilah (Ned Harris), Five-striped Sparrow (Rich C. Hoyer / WINGS), Gray Hawk (James Prudente), Elegant Trogon (Dominic Sherony)
A Clearer View of the Future

Cynthia Pruett, Tucson Audubon President

Retrofitting Tucson’s older housing stock to make it less consumptive of fossil fuels and more comfortable to occupy is a huge need. This was brought home to us when Tucson Audubon relocated some staff to a 1950s house it owns on the northwest side, at the Mason Center, in order to save on our rental payments.

We have four immediate tasks at the Mason Center: replace the original windows, put the 32 solar panels from the basement onto the roof, add insulation to the roof space, and wrap the building in insulation.

Earlier this year we reached out to members to ask if they would sponsor the replacement windows. It did not take long for you to respond and before we reached the summer solstice our state-of-the-art windows had been purchased and installed.

Windows have been purchased by the following members of Tucson Audubon: Susie and Collins Cochran, Wanda Wynne and Craig Marken in memory of Gladys Marken and Mamie Wynne; Kathy Olmstead in memory of Jim Olmstead; Lorel Piccurio; In honor and memory of Cynthia Lindquist (see p 9); Edward Hacskaylo; Marilyn Johnson and Ralph Van Dusseldorp in memory of Dorothea Edwards; Dean and Sandra Taylor; Irene Ritch Flower; Linda Pfister on behalf of the Arizona Quail Alliance; Alice and Bill Roe in memory of Orpha Mason; Sandy and Karl Eiers; Marcee Sherrill in memory of Byron and Marian Sherrill; and David Fiore-McMahon.

We are planning a thank you celebration once the hot weather has passed.

Now, who would be interested in helping us get those solar panels out of the basement and on to the roof?

Happy Birthday!

Jan Hilton in April

Best wishes to our July birthday members: Michelle Bourgeois, James Lombardo, Fran Raffone, Amy Gaieen, Chris McCreedy, Judith Pirie, Marisa Rice, Terry Russi, Noreen Geyer Kordosky, Barrie Ryan, John Glaspey, Susan Rolfe, Lynda Smith, Herb Trossman, Jerry Cole, Susan McCollam, Henry Reed, Susan Fallon, Susanne Drury

Best wishes to our August birthday members: Ronald Pacelt, Rodd Lancaster, Patricia McConnell, Johnny Mulholland, Michael Bruwer, Marcella Perunko, Marsha Colbert, Carol Crews, Sheryl Kistler, Ashley Pedersen, L.F. “Swede” Warneke, Pam Rader, Mansie Habib, John Monahan, Joan Newman, Andy Bars, Margaret Pope, Carol Bryniarski, Corinne Bartell, Augusta Davis, Jennie Duberstein, Andrew Hogan, Frank Scianella, Colleen Meigs, Caroline Patrick, Candace Plumlee, Carolyn Bailey

Best wishes to our September birthday members: Chris McVie, Peggy Smith, Narca Moore-Craig, Scott Willbor, William Coggin, Carrie Dean, Alan Craig, Brad Paxton, Diana Imig, Nick Nissen, Lee Wilson, Susan Birky, Doug McVie, Micky Schap, Edward Montgomery, Dave Phillips, Neal Patronsny, Marion Weber, Bob Wenrick, Lori Bryant, George Binney, Elizabeth Fisch, Polly Smith, Mira Tomas, Robert Wornall, Patricia McCarthy, Eng-Li Green, Lorel Piccurro, Marcee Sherrill, Gerald Sweeney, Carol Tierney, Jane Wynne and Craig Marken in memory of Dorothea Edwards; Dean Johnson and Ralph Van Dusseldorp in memory of Orpha Mason; Sandy and Karl Eiers; Marcee Sherrill in memory of Byron and Marian Sherrill; and David Fiore-McMahon.

We wish to thank Brad Paxton, Patricia Orosz-Coghlan, Aaron Pie, and Jean Rios for their generous donations to the birthday fund.

We hope to thank Brad Paxton, Patricia Orosz-Coghlan, Aaron Pie, and Jean Rios for their generous donations to the birthday fund.

Have you remembered Tucson Audubon Society in your estate planning? Please let us know.

Visit tucsonaudubon.org for updates and more.

JULY–SEPTEMBER 2011 Vermilion Flycatcher Tucson Audubon
Remembering David West

David West, a long-time Tucson Audubon volunteer, passed away on May 12, 2011. For those of us who knew David and had the privilege to work with him, he will be greatly missed. David was 90 years old and still working in the Nature Shop this spring. A birder for over 70 years, he brought a genuine light to our Nature Shop and Offices.

David began his volunteer work with Tucson Audubon in February, 1992 and served for 19 years in our Nature Shop and library. He was an activist with both conservation and population matters and had a passion for plants, birds and other wildlife. He kept our library in excellent shape, and was never afraid to sell a pair of binoculars with knowledge and enthusiasm. Being a carpenter during his working days, David always offered to fix things up around the shop and library, and was known to make a heck of a cup of coffee, and sometimes leave a maple cookie or other special snack on the desks of the shop staff. His smile, sparkling blue eyes, and stories of his latest birding adventures brightened our Mondays and Saturdays.

Cynthia Lindquist: “A Wrenching Loss”

Those were the words of David Yetman as he remembered Cynthia Lindquist. Cynthia was born on June 27, 1947, in Tucson and passed away on March 16, 2011, after a sudden illness. She represented the best of our active volunteers.

As Carl Olson said of her: “energy, joy, awe and happiness. Life through you and around you was always the great adventure.” Cynthia certainly had that love and enthusiasm for the complexities of our natural world, and inspiring others to share in those. As an avid volunteer, she gave generously of her time and her talents.

Cynthia was a caring educator with a passion for outdoor environmental education and headed up Tucson Audubon’s Desert Institutes. She was Director of the Institute of Desert Ecology, and our other Institutes of the 1990s, and initiated the Tidal Ecology Family Institute at Rocky Point, Mexico. She was also an active member of our Board of Directors and Education Committee, and a great supporter of our Birdathon. She was always so concerned for others, and for the welfare of Tucson Audubon.

Cynthia graduated from Rincon High School and the University of Arizona, and completed her doctorate in Arid Lands Resource Sciences.

She was employed by the UA and oversaw agricultural economic development projects in Mexico. An expert in the study of semi-tropical Sonora, she made many contributions to her field. She led expeditions organized by the late Paul S. Martin to collect plants, and studied plants of the Río Mayo region in the state of Sonora, Mexico, in addition to writing her dissertation on the Río Mayo. Her interests included ethnobotany, human impacts on biodiversity, and the potential for sustainable development in Mexico. She also conducted research on packrat middens in Nevada, Mexico, Jordan, and Chile.

Tucson Audubon has dedicated the new window in our Habitat Restoration Office at her beloved Mason Center, and we are accepting donations in her honor. We are also discussing the most appropriate living memorial at the Mason Center. Please contact Paul Green for more information at pgreen@tucsonaudubon.org.

Liscum Diven: A Great Figure in Arizona Birding History

Liscum Diven amassed a huge collection of bird-related books from all over the world during his lifetime. The long-time resident of Scottsdale, AZ recently donated a large portion of this amazing library to Tucson Audubon (through Arizona Audubon) when he moved from his home of six decades.

Tucson Audubon had the chance to interview Liscum when we discovered that he had led a very interesting life. He was one of the founders of Maricopa Audubon and had seen over 5,000 bird species.

Unfortunately, Liscum died May 17, 2011, shortly after this conversation.

Thanks to Mich Coker for the questions and Linda Pizzuto for conducting the interview.

When did you first get interested in birding? When I was five years old I liked to visit all the subways in New York City. My mom thought that was unhealthy and wanted to get me interested in other things so she bought my first book about birds. It was just a standard bird book. I was fascinated and thus began my lifetime interest in birding.

Is there a particular bird, or birding experience, that you remember even more fondly than all others? If so, what? My trip to Australia was quite interesting. I saw over 500 species. We were with a famous tour leader named Orville Crowder who was a pioneer in birding trips. He and I had a game to see who could stay ahead in counting birds and I did. He didn’t like that. He was a real character.

Do you have a “nemesis bird” (a species you have sought many times but not yet seen)? In South America there was a night parrot I never saw. It may be extinct now.

Read the full interview at our blog, blog.tucsonaudubon.org

Cynthia Lindquist in Alamos, Mexico, on 3 November 1994 during Tucson Audubon’s third annual Institute of Tropical Ecology, with David Yetman (inset), and with Gela Martinez and Alberto Bourquez from the University in Hermosillo (top). A new window at Mason Center (bottom) will be dedicated to Cynthia Lindquist.

Visit tucsonaudubon.org for updates and more.
Volunteer News Roundup
Becky Aparicio, Volunteer Coordinator

New Volunteers
We welcome new volunteers Dennis and Bonnie Weeks, Karen Dunne, and Jenise Porter.

Just How Important Are Our Volunteers?
Very! According to a number of volunteer and statistical sources, overall effectiveness of non-profits is significantly greater when their volunteer infrastructure has a strong organizational model. Only 11% of nonprofit organizations have a strong service model. In a recent meeting with Volunteer Southern Arizona the status of volunteerism was discussed and among a number of telling points was that the dollar contribution of service is about $597 million. I, like many nonprofit volunteer coordinators, have multiple duties because of budgetary constraints, so, I have to work smarter, not necessarily harder, to keep up with Tucson Audubon’s growing volunteer needs. We will be utilizing more web-based volunteer-search strategies as well as sharing innovative community services to meet these needs. I’ll be utilizing our membership email format more and more to reach out to you for necessary communication as well as to broaden our search for community-based volunteers. It’s not all about finding new volunteers but making sure we retain, supervise, and acknowledge our volunteers. Thank you for all you do!

Volunteers Needed
Southwest Wings in Sierra Vista
August 3–6: We will have a membership table this year so will need volunteers for morning and afternoon shifts each day to give out literature about Tucson Audubon and sign up members. For those of you in the Sierra Vista area please help if you can. See www.swings.org for their program

Tucson Audubon’s Bird & Wildlife Festival
August 17 through 21: Centrally located at Tucson’s Riverpark Inn. Many volunteers will be needed for this inaugural event! You won’t want to miss this opportunity! See pullout.

Please contact Becky, baparicio@tucsonaudubon.org or 629-0510 X 7011 for volunteer information. Check online www.tucsonaudubon.org for more details

Welcome to Our New Environmental Education Program Coordinator
We welcome Bété Pfister to Tucson Audubon as our new staff lead in education.

Bété (pronounced BEH-teh) moved to Tucson three years ago after living for eight years in Kino Bay, Sonora, a small fishing village on the shores of the Gulf of California, Mexico. It was there she explored the interface of the desert and the sea and had amazing opportunities to follow resident and migrant landbirds, shorebirds, seabirds through the seasons, onshore and offshore into the Midriff Islands. Offshore, she participated in photo-identification projects with fin whales and sperm whales and conducted underwater surveys for commercially important species of fish and marine invertebrates within the San Pedro Martir Island Biosphere Reserve.

While she was in Kino, she began her career as an educator and mentor, teaching marine biology, ecology and conservation-based field courses to Prescott College students at the College’s Center for Cultural and Ecological Studies. For two years, she coordinated Prescott College’s environmental education program in the local Kino schools and since then the program has grown to reach 700 children a week.

A teacher and mentor at heart, Bété is excited about the opportunity to manage existing education activities, and to develop new ones for Tucson Audubon. She feels passionately about fostering a connection to the natural world for her children and for our greater community. She has seen the positive and powerful impact that local, community participation in conservation initiatives can have on the success of conservation programs and is looking forward to engaging in this important work.

Bété is originally from New England and has a bachelor’s degree in Biology from Skidmore College and a Masters degree in marine resource management and policy from the University of Washington’s School of Marine Affairs. She enjoys exploring outdoors with her family and dancing and playing music with Batucaxé, an Afro-Brazilian drum and dance ensemble based here in Tucson.

While Bété begins her career with Tucson Audubon in a part-time capacity, she comes at an opportune time for growth. Our Education Committee is finishing up our new Education Plan. We have received a pledge of three years partial support for Bété’s position and we shall be reaching out to members to match that gift. We look forward to the day when Bété is working for us full-time with a cadre of volunteers to support our goal of provide engaging and relevant education and outreach programs, materials, and opportunities for our community. For more information please see p 3.

Visit tucsonaudubon.org for updates and more.
Important Bird Areas
The Arizona IBA Program at Ten Years

Scott Wilbor, IBA Conservation Biologist and Jennie MacFarland, IBA Assistant–Biologist

Actually 10+ years! In January 2001, the Arizona Important Bird Areas (IBA) Program began with Tucson Audubon after our attendance at the first National IBA Conference at Everglades National Park. Since that time we have grown the program to operate full time for bird conservation in Arizona (Audubon Arizona joined in the IBA Program administration in 2005). We have generated funding for the program from a variety of sources, with our strongest partnership established with the Arizona Game and Fish Department (Arizona Bird Conservation Initiative program) since the beginning. Key private donors and foundations have also provided support throughout the years.

Our IBA Program is part of a global program overseen by BirdLife International with IBA Programs in 178 countries, and the National Audubon Society in the United States. There are nearly 11,000 IBAs identified across the world, and 2520 IBAs in the U.S. The goal of this program is to identify the most critical sites for birds across the globe, and to work for their conservation and protection.

The Arizona IBA Science Committee has approved 40 critical areas in Arizona as “State IBAs” from nominations compiled by biologists, birders, and our program. Five of these IBAs received further “Global IBA” status from the National Audubon IBA Technical Committee, as they met higher level global criteria. These Global IBAs in Arizona are: 1) Lower San Pedro River IBA, 2) Anderson Mesa IBA, 3) Marble Canyon IBA, 4) Bill Williams River National Wildlife Refuge IBA, and 5) Chiricahua Mountains IBA. These 40 IBAs (plus a few additional areas that may yet be approved from our list of potential IBAs) are our “core areas” of bird populations of conservation concern in Arizona and the focus of our conservation attention.

We have also developed an avian science program to inventory and monitor bird populations at IBAs. The IBA Program trains participants to conduct science-based bird surveys, both as part of regular IBA Teams at nearby IBAs, and to assist our broader monitoring needs at IBAs in diverse landscapes across the state. We usually lead 2-3 training workshops per year, and coordinate up to 25 IBA Teams composed of approximately 130 IBA volunteers, of which 15-20 are involved in special projects at more distant IBAs.

Key to our program is the pursuit of conservation/protection of priority IBAs. Threats to bird habitat, number of bird species of concern, and land protection opportunities interact to set our priorities. As such over these last 10 years we have actively led and/or advocated for protection of the Upper Santa Cruz River IBA (near Tubac), Sabino/Tanque Verde, Tuzigoot IBA (near Cottonwood), the Santa Rita Mountains IBA, the Patagonia Mountains and Sonoita Creek area, and for the Lower San Pedro River IBA (Cascabel to Dudleyville, with focus on San Manuel to Mammoth).

Indeed, we began with an early (2003) conservation success of protecting 125 acres on the lower San Pedro, facilitating a ½-year process of bringing together a conservation-minded landowner and an agency mandated to mitigate other projects, in a conservation purchase. This effort resulted in key occupied habitat being protected for the Southwestern Willow Flycatcher and Yellow-billed Cuckoo. Since then (2006 to 2011), we have continued to be deeply engaged in providing bird data and maps (through extensive surveys & reports) for our partners involved in lower San Pedro River land management and conservation (BHP Billiton and The Nature Conservancy). We also have advocated for a new wildlife refuge for the lower San Pedro River.

We also helped to protect habitat on the upper Santa Cruz River. This was achieved by successfully advocating for the expansion of Tumacacori National Historical Park (2003), speaking to the Santa Cruz County Board of Supervisors to protect the floodplain from housing developments (2007), and writing to the Arizona Corporation Commission to successfully re-route a power line away from sensitive mesquite bosque habitat (2009). At Sonoita Creek State Natural Area we contributed to trail management guidelines for sensitive bird nesting species (2006). For Santa Rita and Patagonia Mountains protection (2008–2011), we are advising the Forest Service about impacts to high-value bird habitat and species of concern from potential mining and the forest road network plan.

We are now using our website (www.aziba.org) to inform the public about the areas and bird groups (e.g., desert birds) we are monitoring, how individuals can help, either with on-the-ground habitat projects, by formally joining our program (training and monitoring at an IBA), or informally with their birding and reporting (to E-bird) at IBAs. To see the identified and potential IBAs in Arizona, check out our new interactive IBA Google map (click on the IBAs to see their status in the program, a list of species of concern and a summary species list from our surveys, and link to our bird survey database or recent E-bird data).

We have new challenges ahead with tightening budgets of our funders, but we have also established a diverse and strong network of partners, volunteers, and private support. So we still see a bright future for our special Important Bird Areas in Arizona!
Big Storms, Big Birding… Big Days!
A “How-To” Guide

JOHN YERGER

August, very simply, is the reason I live in southeast Arizona. Many of my friends from other parts of the country can’t fathom this. For them, August is a time of sweltering heat and humidity. For me, August is a very special time to be in Arizona.

By August, the “monsoon” is in full swing. This season’s short but spectacular daily thunderstorms are perfect for breaking the afternoon heat! Calls of frogs and toads fill the night air; birds begin to sing anew; plants that have been dry and brown all year become lush, turning vibrant shades of green: kelly, jade and lime. It’s Arizona’s “Second Spring!”

At the same time, southbound migrants are abundant. A well-planned Big Day in August can yield up to 14 species of hummingbirds, 16 warbler species, 17 Emberizids (towhees/sparrows), and up to 20 species of shorebirds! I’ve seen migrating flocks with hundreds of individuals of two dozen species—from Painted Redstarts and Red-faced Warblers to Warbling Vireos and Rufous Hummingbirds. This is also the time of year when radically rare birds often appear: Plain-capped Starthroat, Yellow-green Vireo and Aztec Thrush are a few such jaw-droppers.

Ok, so August is fantastic for birding; but the article is “Where to Go, Birds to See?” Well…go everywhere, and see all of them! It’s a great time to find as many species as possible in 24 hours with a group of your best birding pals.

I’m especially excited about the 1st Annual Sky Islands Birding Cup on August 17, 2011 (see pullout). The challenge is certainly tantalizing. Arizona currently holds the national record for highest August Big Day total: 199 species (per the American Birding Association). One unpublished total is over 200!

Whether your Big Day species goal is 75 or 175, the fun factor is the same. But how does one prepare a good route for the day? Simple: plan for an epic day of birding! First, the route should traverse as many habitats as possible. An outstanding array of habitats can be found in close proximity to Tucson: desertsrub, grassland, chaparral, evergreen woodland, conifer forest, riparian woodland, and even wetlands. Of course, non-traditional habitats like urban areas and cliffs need to be considered for species not tied to any particular plant community (e.g. Eurasian Collared-Doves in towns, or White-throated Swifts and Rock Wrens at cliff faces).

The tricky problem is how to squeeze so much amazing birding into 24 hours! I start by calculating driving times, dividing the remaining hours between each birding locale. The potential strategies are as varied as the birds themselves. One such route might start in the Madera Canyon area, cutting over to Empire Gulch via the scenic Box Canyon Road, and refueling in Sonoita. All of the Patagonia hotspots can be birded after lunch, finishing along the Santa Cruz River and I-19 corridor before dark.

Once you have a tentative idea of your route, go scouting! It’s really enjoyable to truly explore all of your favorite birding spots, and you’ll need as many stakeouts as possible to save time on the Big Day. Each team member might scout a different area. It can be useful to scout each site at about the time of day you intend to arrive. You might be amazed to discover how active the birds are at Patagonia Lake at 2:00 pm! Once you have the results of your scouting efforts, you can tweak the route as needed.

If this sounds like too much work, try a more relaxed version—what I call a “Little Circle Big Day.” For this event, simply select a birdy location and set up a 17-foot diameter circle. Then, see how many species you can detect from within that circle! (Barbecues, lawn chairs and stepladders are as important as binoculars.) Another option is a new gas-saving concept inspired by Kenn Kaufman, the “Little Circle Circuit.” This interesting twist allows up to four different circles in sequence, spending as much or as little time as desired in each. Finally, non-competing teams can just try out the Big Day concept, while still raising funds for Tucson Audubon. In any event, it’s fun to think about how many birds southeast Arizona has to offer at this incredible time of year!

For more information on how to get involved in the Sky Islands Birding Cup, visit www.tucsonaudubon.org/festival.

John Yerger is a co-owner and tour leader for the Adventure Birding Company (adventurebirding.com). He currently lives in Portal, AZ, where he manages the Qualway Cottage with his wife, Morgan Jackson.

Visit tucsonaudubon.org for updates and more.
Wrens are such a fun group of birds. I have a friend who loves wrens. She likes to watch birds and enjoys seeing a new species, but if the bird is a new wren you should see her smile! I used to wonder what attracted her to them until I realized that wrens always seem like such happy little birds. They may be plainly colored, but certainly are fun to enjoy.

In this issue we look at House Wrens. They can be found in southeast Arizona all year, though in different habitats at different seasons. These birds breed in riparian woodland and higher elevation forest, but keep away from the lowlands when hot weather comes. In migration they are found in almost any brushy habitat, and can be quite common in winter in densely vegetated lowland areas when many wintering birds arrive from breeding areas to the north.

The House Wren is named for its habit of frequenting areas around people’s houses, and it will readily use nest boxes. The scientific name *Troglodytes aedon* was given by Vieillot in 1809 from the Greek words *troglodytes* “cave-dweller” (from *troglo* “hole” and *dytes* “a diver”), for the bird’s habit of diving into cover, and *aedon* “a songstress,” for Aedon, one of the daughters of Pandareus in Greek mythology.

House Wrens are fun to watch as they flit about foraging for food, but what I enjoy most about them is their song. To me its bubbling cadence is a joy to hear as it sounds so alive, part of the forest visit experience that makes me feel privileged. Not easily described, I’ve always thought the typical song as having beginning, middle, and end sections with a definite “bubbly” character to it. Both sexes sing but in many populations the females song differs from the male’s.

House Wrens are cavity nesters and females are thought to choose mates mostly by the quality of potential nesting sites. The male sometimes starts building a nest before pair selection but the female finishes construction and does all the incubating. He provides food for the growing wren family but pair bonds are not kept past each breeding cycle.

House Wrens range from Canada all the way to southern South America, making it the most wide-ranging native passerine in the New World. House Wrens in most of the U.S. are from the “northern” House Wren group. There are two other main groups—the Brown-throated and Southern House Wrens. Here in SEAZ we have intergrades of northern and brown-throated, but pure versions of the latter are found south of the border in the mountains of Mexico. Besides the main three groups there are many island endemics that are increasingly being considered separate species. Of the thirty or so subspecies, most look quite similar but many have slightly different songs.

While most readers will have plenty of past sightings of House Wrens under their birding belts, you might want to pay attention to where you encounter them as the seasons change. Brushy areas along lowland riparian stretches such as the Anza Trail near Tubac would be best in migration and winter while higher elevations reached by the trails above the road end in Madera Canyon or the upper half of Mount Lemmon would be best in summer. Also, try to look for coloration detail when you find a cooperative bird. House Wrens just look brownish overall with no light eye line from a distance or in dim light but have nice detail if you get a good look so give that a try sometime. Good luck!
Field Identification of the Great Plains in Southeastern Arizona

Rick Taylor

Bird number 211 for the yard list at my home in the Chiricahua Mountains was a Grasshopper Sparrow that arrived for a one-day stay this April. Presumably displaced by this spring’s record-book drought, this smidgen of a sparrow somehow found the postage stamp of grassland surrounding my home in a mountain canyon, and set about ravently consuming millers hiding in the lawn. A few canyons over, a few weeks later, a Cassin’s Sparrow appeared in the little patch of meadow in Cave Creek Canyon in front of the Western Research Station.

Indicator Birds: Like the Burrowing Owl, the Grasshopper Sparrow is an example of a species that historically reached its greatest abundance in the vast reaches of turf that once carpeted North America from the steppes of the Rockies to the bottomlands of the Mississippi River. Cassin’s, however, is a classic example of a bird whose range is exclusive to the Great Plains. The male’s poignant song, often delivered in flight with head cocked and tail spread, is a sure giveaway of robust Great Plains grassland. Although Cassin’s occasionally sing in springs following a wet winter, typically Cassin’s reserves its skylarking display until after the midsummer monsoons have saturated the valleys and ignited the grass-stand.

But the majority of our Great Plains birds arrive in winter. Beginning in late July flocks of Lark Buntings with lead-colored bills and dingy white wing crescents sweep down the front range of Colorado and cross the flat and grassy Continental Divide in southern New Mexico. Other wintering Great Plains sparrows include the enigmatic Baird’s, and both Chestnut-collared and McCown’s Longspurs.

Locations: In the entirety of Southeastern Arizona, ecologist David E. Brown maps only two areas of remnant Great Plains grassland, both in Santa Cruz County. One is the rolling prairie south of the Canelo Hills. This is the famous San Rafael Valley. North of the Canelo Hills lie the wide grassy swales of the Sonota Grasslands.

Aside from harboring Baird’s Sparrows, these golden, grass-mantled hills constitute the most reliable sites in Southeastern Arizona for wintering Sprague’s Pipits. But both of these birds occur elsewhere along the ragged treeline where grasslands merge with oaks at the base of other border ranges. Noteworthy locales include the outlet of Price Canyon on the east side of the Chiricahuas, the southern piedmont of the Huachucas, and the upper Altar Valley east of the Baboquivaris.

Other predominantly Great Plains species have shifted from the grama grass prairies where they evolved, and adapted to agricultural fields in the broad valleys that separate the border ranges. Examples of these are Ferruginous Hawk and Mountain Plover. In recent years the sod farms and miles of fields in the Santa Cruz Flats northwest of Tucson have proven reliable for both species.

“Hawk Alley” is the local nickname for the Sulphur Springs Valley. Over 100-miles long and 25-miles wide, this immense mosaic of grassland, cropland, and pasture hosts more wintering Ferruginous Hawks than any other area of Southeastern Arizona. Ferruginous Hawks formerly bred in the Sulphur Springs Valley. The federal program to extirpate Black-tailed Prairie Dogs in the 1930s, however, apparently eliminated families of Ferruginous that relied on these and other rodents to rear their young.

Another pivotal event in our grassland history occurred in the 1930s. Farmers from the Great Plains fled the Dust Bowl and immigrated to the Sulphur Springs Valley. Here they began to convert the surrounding ranchland into a quiltwork of fields called Kansas Settlement. By 1970 over 25,000 acres were under plow. The transformation from native grass to grain benefitted a new arrival from the Great Plains. Primarily feeding in corn stubble, the first winter census in 1970 showed approximately 750 Sandhill Cranes in the Sulphur Springs Valley. By 2010 that figure had grown to over 40,000.

Few plant and animal communities in North America have undergone the immense changes of the Great Plains. Our isolated fragments of this system mirror those changes. Displaced sparrows—the Grasshopper in my yard or the Cassin’s in Cave Creek Canyon—are living reminders of the tremendous stress the Great Plains grasslands are facing today throughout Southeastern Arizona.

Rick Taylor is Managing Director of Borderland Tours www.borderland-tours.com. His new photographic field guide, Birds of Southeastern Arizona, is available at Tucson Audubon’s Nature Shops.
Where does the water come from that flows daily through the Sweetwater Wetlands? Every drop is recycled water, but a more complete answer requires both detail and history regarding the development of Tucson’s Reclaimed Water system. (To maintain the reader’s interest, the author has added subtle reminders of the Sweetwater Wetlands location.)

Those who visit or live in the Sonoran Desert of Southern Arizona are constantly reminded of the lack of natural surface water. Lakes, ponds and rivers common across the United States are noticeably lacking and the region’s natural drainage channels will likely produce buckets of sand rather than buckets of water. As recently as the beginning of the last century, naturally flowing surface water was more common than today. The loss of flowing surface water in the region is generally attributed to the gradual over-pumping of the aquifer to satisfy demand from agriculture, industry and municipal population growth.

Prior to 1984 in Tucson, areas of large turf irrigation, including all City parks, golf courses and school fields, were irrigated with water pumped from our underground aquifer. (There’s a Harris’s Hawk! This was the same groundwater that would otherwise be conveyed to Tucson Water customers as drinking water through the potable water distribution system. Since the mid-1940s, pumpage from the aquifer to meet demand lowered the water table of Tucson’s Central Well Field by up to five feet per year. By the early 1980s, water resource planners recognized that Tucson’s valuable underground water reservoir, which had accumulated over geologic time, was being depleted at an unsustainable rate. Simultaneously, the U.S. Geological Survey was documenting measurable land surface subsidence, a lowering of the land surface, which was also attributed to the de-watering of subsurface aquifer. City water planners recognized turf irrigation to be an unnecessary depletion of a finite, valuable resource and developed an alternative water supply appropriate for that end use. (Was that a Marsh Wren?)

In 1984, the City of Tucson built the Tucson Reclaimed Water Treatment Plant (RWTP) to produce reclaimed (reused) water using filtration and chlorination. Later that year, reclaimed water for turf irrigation was delivered to the first customer, La Paloma Golf Course. The source of the water treated at Tucson Water’s RWTP was Pima County’s Roger Road Wastewater Reclamation Plant. The filters at Tucson Water’s RWTP are capable of producing 10 million gallons a day (MGD), but they must be backwashed to maintain their efficiency.

The Reclaimed Water System, which is operated on a 24/7 basis, has expanded to now convey over 30 MGD of reclaimed water in the summer to more than 900 customers. (That’s the biggest turtle I’ve seen here!) These customers include most of the large turf irrigators in Tucson and Pima County including municipal golf courses, over 70% of City park land, school districts, the University of Arizona, and Davis-Monthan Air Force Base. The Tucson Water Reclaimed Water Treatment Plant extends from the eastern Civano neighborhood near Houghton and Drexel to the northwestern Dove Mountain development north of Tangerine Road.

In addition to filtering water at the RWTP, Tucson Water uses the process of “recharge and recovery” to increase total water production capacity to over 30 MGD. (That Ruddy’s beak is so blue!) To achieve this, recycled water is pumped directly to 28 acres of recharge basins visible from the Sweetwater Wetlands. There water percolates through the soil where it is temporarily stored underground. Adjacent wells pump the water from storage to meet customer demand.

By this time, the reader is surely asking, “When is he ever going to answer the question?” Well, the beautiful habitat that is the Sweetwater Wetlands is also a 17-acre filter that removes suspended solids, Nitrate and other compounds from the water. The Sweetwater Wetlands receives 100% of the backwash water produced by the RWTP. Since the volume of backwash water produced is insufficient to maintain the Sweetwater Wetlands, flow to the Wetlands is supplemented with recycled water from Roger Road Wastewater Reclamation Plant. Today the water in the Sweetwater Wetlands is a blend of approximately 10% backwash water and 90% recycled water from the Roger Road plant. (Those Common Yellowthroats are everywhere!)

Lastly, all water that flows from the Sweetwater Wetlands drains into the nearby recharge basins. Eventually, it too soaks into the ground to later be extracted and used as turf irrigation water throughout the reclaimed water system. The quiet water of the Sweetwater Wetlands is truly “water reuse” in motion and visitors should remember that this constructed, urban wildlife habitat is an important facet of the City’s Reclaimed Water system.

Bruce Prior has worked in the Water Resources Management Section of Tucson Water Department for 23 years. He was fortunate to be brought into the Special Projects Unit in 1996 when the Sweetwater Wetlands was being designed.

Visit tucsonaudubon.org for updates and more.
Main photo: Pond in Sweetwater Wetlands (Matt Griffiths). Inset, clockwise from top left: Red-winged Blackbird, Harris’s Hawk, Common Yellowthroat, and Ruddy Duck (All bird photos taken by David Quanrud at Sweetwater Wetlands except Common Yellowthroat by Robert Shantz).

For a behind-the-scenes peek at how reused water is supplied to Sweetwater Wetlands and how the facility fits into the Tucson’s Reclaimed Water System, join hydrologist Bruce Prior on August 19 at the Tucson Bird & Wildlife Festival (see pullout p IV)
Pima County’s population increased fivefold between 1950 and 2000. We pulled more water out of our local aquifer than went back into it, resulting in the death of large numbers of plants and the animals they supported along the Santa Cruz and Rillito Rivers and the Pantano Wash as our water table dropped. A falling water table also threatens us with the potential for ground subsidence and land surface fissures.

Rainwater harvesting, low water use landscapes, and other water conservation actions have long been Tucson Audubon priorities as we raise awareness of the need to reduce water use. We have often mentioned the nexus between water use and energy, and you will also shortly be hearing a great deal about its effects on air quality, global climate change, and the cost of your water. As we learn in ecology, everything is connected.

To replace ground water use, the Central Arizona Project (CAP) was built between 1973 and 1993 to bring Colorado River water to Maricopa, Pinal, and Pima counties, at a cost to taxpayers of a total of $4 billion. Today, advocates for human health, environmental justice, and the natural world are alerting us to the pollution of our air, water, and soil from using CAP water. Next time you go to your faucet for water, stop and think a moment about the ecological consequences.

Perhaps more than 80 percent of Tucson’s water now comes from the CAP, water that is pumped up 2,400 feet in elevation over a distance of 336 miles in an open channel across the desert. As a result, the CAP is the biggest user of electricity in the state: last year, the CAP used 2.8 million megawatt hours (MWh) to deliver more than 500 billion gallons of Colorado River water. Most (95 percent) of the energy used by CAP is produced at the coal-burning Navajo Generating Station (NGS) near Page, Arizona, and most (74 percent) of the electricity produced by NGS is used by the CAP.

NGS as Polluter
The NGS is the state’s largest single source of carbon dioxide (CO₂), emitting nearly 20 million tons each year (about the same as 3.5 million cars). This is around one-fifth of all Arizona’s greenhouse gases. That translates to around 400 pounds of CO₂ for the amount of water you would consume in a year (you probably produce around six times that amount from driving your car).

The NGS releases around 273 pounds of mercury each year—a toxin linked to impaired neurological development in fetuses, infants, and children, mainly through ingestion of contaminated fish and shellfish.

The NGS is the second largest source of nitrogen oxides (NOₓ) in the United States, at 31,000 tons each year. NOₓ is made up primarily of two gases—nitric oxide (NO), nitrogen dioxide (NO₂). NO react with ammonia, moisture, and other compounds to form small particles. These small particles penetrate deeply into sensitive parts of the lungs and can cause or worsen respiratory disease, such as emphysema and bronchitis, and can aggravate existing heart disease, leading to increased hospital admissions and premature death. Particulates less than 2.5 microns in diameter can enter the bloodstream and be transported directly into vital organs.

Along with nearly 4000 tons of sulfur dioxide emitted annually by the NGS, NOₓ contribute to acid rain—causing damage to vegetation and buildings—and the acidification of lakes and streams, and have detrimental effects on health.

Sulfur dioxide and nitrogen dioxide are synergistic in their detrimental effects on plant life. Nitrogen dioxide also contributes to ground-level ozone, formed when oxygen, nitrogen dioxide and volatile organic compounds mix in the presence of sunlight. High concentrations of ozone can also damage crops and other plant life and damage materials such as rubber. Ozone contributes to asthma attacks, chronic lung disease and premature death.

The NGS uses around 28,000 acre-feet of water each year during energy production, mainly in the cooling towers.

Externalized Costs
Coal burning plants have many externalized costs, uncompensated harms inflicted upon the public at large and on Native American populations in particular. Studies suggest that each year the emissions from the NGS result in about 300 asthma attacks, 25 heart attacks, 16 deaths, 15 asthma ER visits, 12 other hospital admissions and 11 cases of chronic bronchitis.

Other externalized costs to which the CAP contributes along with extractions of water from the river for metropolitan areas and agriculture, include decreased biological productivity of the Colorado River delta, which stands at less than 0.5 percent of what it once was, as the water flowing through the delta has been reduced to just 5 percent of its original flow, severely diminishing riparian habitat along the Colorado River.

Regional Haze Rule
In 1999, the United States Environmental Protection Agency (EPA) announced a major effort to improve air quality in national parks and wilderness areas. The Regional Haze Rule calls

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You Pay for Clean Air?

for states, in coordination with the EPA, the National Park Service, U.S. Fish and Wildlife Service, the U.S. Forest Service, and other interested parties to work together to improve visibility in 156 national parks and wilderness areas, including Grand Canyon and ten others in Arizona. Controlling nitrogen oxides and particulates clearly have significant human health and environmental co-benefits: this discussion should not be focused entirely upon visibility issues in our national parks. Right now, the EPA is in the process of setting rules to control NOx emissions at coal-burning power plants like NGS to protect visibility and exposures to emissions in our state.

Determination of Best Available Retrofit Technology

The Best Available Retrofit Technology (BART) provisions of the Regional Haze Rule seek to reduce air pollution emissions by adding additional pollution control equipment to existing facilities. Two technologies are being considered as part of the BART process for the NGS, the cheaper and less effective low-NOx burners, and the more expensive and more effective Selective Catalytic Reduction (SCR).

Under pressure from regulators and the public, the plant installed scrubbers to remove sulfur dioxide in the 1990s and between 2008 and 2011 they installed special burners to reduce NOx emissions by 40 percent.

Effects on the Cost of Your Water

The rate that CAP currently charges municipalities with a CAP allocation of water is $122 per acre-foot, of which power costs represent $53 per acre-foot. CAP-derived estimates suggest that installation of SCR together with “bag-houses” for particulate removal would exceed $1.2 billion, increasing the energy component of water cost by one third, or by $17.50 per acre-foot. This would increase the total supply cost by 14.3 percent, from $122 per acre-foot to $139.5 per acre-foot. It is not clear how much this would add to your domestic water bill.

In a worst case scenario developed by CAP, if the power plant closed and the CAP faced a three-fold increase in its energy costs because of buying energy on the open market, it would increase the cost of water by $159 per acre-foot to $228 per acre-foot. This is around 52 cents per Ccf (100 cubic feet or 748 gallons—the measurement used on your water bill). By way of reference, a Tucson Water customer pays between $1.60 and $11.85 per Ccf (depending on use) when new rates become effective in July 2011.

CAP suggests that the owners of the NGS (U.S. Bureau of Reclamation 24.3 percent, the Salt River Project 21.7 percent, Los Angeles Department of Water and Power 21.2 percent, Arizona Public Service Company 14 percent, Nevada Energy 11 percent, and Tucson Electric Power 7.5 percent) might not be willing to pay more than $1.2 billion dollars to upgrade a plant with SCR technology if the plant faces other uncertainties, such as renewal of the site and coal leases with the Navajo and Hopi Nations and other upcoming Clean Air Act regulations. If they are willing, by CAP’s admission, the rate paid by customers—both municipal and agricultural users—would not rise dramatically. However, because farmers use so much more water than others, CAP is concerned that higher rates may cause them to switch back to pumping less expensive groundwater.

Power and Politics

Over the last couple of years, the CAP General Manager has been campaigning to have business interests and others lobby politicians to block pollution controls on the Navajo power plant. Arizona congressmen Trent Franks and Paul Gosar held a congressional hearing on May 24 to question EPA’s requirement that the NGS use state-of-the-art air scrubbers rather than cheaper alternatives that the plant owners and power users argue will do just as good a job. The EPA will not reach any conclusion for several months, and so has not yet recommended a particular technology.

As we have seen, there are costs to the way we use water beyond the ones we pay for in our water bill—the hidden, externalized costs that include our personal environmental and economic health from the quality of the air that we breathe, the fish that we catch and eat, the health of our forests, the wildlife lost from riparian areas, and decreased ecotourism revenues as a result of lost habitats, lost vistas at our national parks, and damage to our buildings and cars. Isn’t our quality of life worth more than a few dollars each month? We pay for these costs and more anyway, through taxes, medical bills and lost quality of life. Tucson Audubon believes we should pay them upfront and have a cleaner natural environment as part of the bargain. More realistic water rates would remind us, with every water bill, of the true cost of water and the need to conserve.

The EPA had hoped to propose its BART determination for NGS this summer, but they need to formally consult with all the tribes in Arizona before they can do that. EPA expects that its proposed BART determination will be delayed by several months while it works through the tribal consultation process. There will eventually be a public comment period plus at least two public hearings where the public will have the opportunity to provide comments on our proposed action before EPA makes a decision. Tucson Audubon will keep you informed on the process.
CONSERVATION AND EDUCATION NEWS
CHRIS MCVIE, PAUL GREEN, KENDALL KROESEN, AND SCOTT WILBOR

Smart from the Start: New Solar Energy Facility Permitted in Avra Valley

Global Solar, another FRV project on seven acres in Tucson that began operations in 2008 and powers 98 homes.

Solar energy in Tucson took a step forward recently when the Pima County Board of Supervisors unanimously approved a 200-acre solar energy generation facility in the Avra Valley area, pending final agreement on mitigation details with the City of Tucson. This 25-MW(dc) photovoltaic panel system will deliver over 50,000 MWh annually, enough to power 3,500 homes. The company building the facility, FRV Tucson Solar, is leasing the land from Tucson Water and selling the electricity to Tucson Electric Power through a nearby transmission line.

By approving this cutting-edge facility and working through a series of negotiations with key stakeholders, Pima County confirmed its commitment to renewable energy. This project is a first step towards reducing our dependence on coal and establishing a template for smart renewable energy projects in our region.

The site itself is a retired agricultural field with particularly suitable habitat for the threatened Western burrowing owl. The entire parcel is located within the Biological Core of Pima County’s Conservation Lands System, with conservation guidelines of 80% on-site open space, 4:1 off-site mitigation, or a combination of both. Through negotiations with key stakeholders, including representatives of the Coalition for Sonoran Desert Protection, the final site plan identifies 100 acres for wildlife habitat restoration on-site and gives direction for appropriate off-site mitigation. The on-site acreage will include artificial burrows for burrowing owls and resting habitat for the threatened Western yellow bat. Monitoring and management will also be required throughout the length of the lease (up to 30 years).

Along with being an exciting win for renewable energy, this project also highlights the opportunities and benefits of multi-jurisdictional cooperation for the conservation of Sonoran Desert wildlife species.

Kathleen Kennedy, Coalition for Sonoran Desert Protection

Conservation Corner!

Dogs and Cats and Birds, Oh My!

Summertime is a risky time for pets. Heat stress and dehydration are real dangers for our furry household friends, especially if they go outside.

And predators are around outdoors too! Just this morning as I walked my dogs at 5:30 a.m., two young adult coyotes loped past us down a residential street in our midtown neighborhood! A few years back I saw another one early in the morning with a cat in its mouth.

Summer is a risky time for birds as well. In the hot, dry foiresummer (May–June) relatively little food is available. Food becomes more abundant for birds when the summer rains come (usually early July), because insects begin to flourish again and plants start to put on growth, flowers and fruits. But summer brings higher incidences of avian disease.

And of course, outdoor cats are always a danger to birds.

It is time for us to redouble our efforts to keep our pets safe and healthy, and to protect our wild avian friends. Here are the most important steps you can take:

- Keep bird feeders clean, especially hummingbird feeders
- Clean bird baths frequently since they can be a vector for avian diseases
- Try to protect birds against window strikes—young, inexperienced birds are especially susceptible (ask the Nature Shop staff how)
- Make sure pets have plenty of water and cool places to go
- Do not leave dogs outdoors very long, and never leave them unattended in cars
- Keep cats indoors at all times
- Studies suggest that outdoor cats kill hundreds of millions of birds every year, even well-fed cats with bells on their collars. Do the humane thing—for both birds and cats—and keep the cats indoors. If they must go outside, build them a screened enclosure that keeps them separate from birds... and coyotes!

Kendall Kroesen
Habitats Program Manager

Moving to Smart Water

Tucson Audubon board member Linda Stitzer has left the Arizona Department of Water Resources, where she worked for 25 years as a statewide water planner and held several positions in the Department’s Tucson Active Management Area, including Director, to take a position with Western Resource Advocates (WRA) as Arizona Senior Water Policy Advisor. WRA is a non-profit environmental law and policy organization with offices in seven western states and strategic programs in three areas: Water, Energy and Lands, with a mission to ensure a sustainable future for the West. She will be working with local and regional water providers, governments and policymakers to advance water planning, conservation and efficiency programs in Arizona including WRA’s Smart Water program that aims to meet human water needs while also protecting healthy aquatic ecosystems in western rivers and streams.
New Natural Protected Area in Northern Mexico
a Haven for Regional Wildlife

You may remember reading about Rancho El Aribabi in the July/August 2009 Vermilion Flycatcher (see "A Biological Bridge between the Tropical and Temperate Americas" by Sergio Avila and "Ecotourism, Habitat Protection, and Community-based Conservation in Northwestern Mexico" by Jennie Duberstein and Jim Rorabaugh). El Aribabi, a privately owned ranch in northern Sonora is located just 30 miles south of the international border. We are very happy to announce that in March 2011 the Mexican National Commission of Natural Protected Areas (CONANP) announced the designation of “Rancho El Aribabi” as a Natural Protected Area, under the category of Voluntary Land Conservation. The designation protects 10,000 acres of private property located in the Municipality of Imuris, Sonora, for ecosystem and biodiversity conservation, environmental education, and ecotourism.

After a long process initiated and led by landowner Carlos Robles Elias, and supported by scientists and conservation groups from Mexico and the United States, CONANP has certified that “Rancho El Aribabi” hosts a wide array of protected species of plants and animals and their habitats whose protection mitigates climate change effects in the region. Under this designation, El Aribabi remains privately owned by the Robles family, who will continue to manage the ranch to maintain the excellent conservation status of the property.

“Our family is proud to provide a preserve for the region’s plants and animals in perpetuity,” says Carlos Robles Elias, owner of Rancho El Aribabi. “For my family it means sharing our lives with all the wildlife that surrounds us. Whether we realize it or not, we all have a commitment to protect the natural world, since we rely on nature to eat and live.”

“Designating Rancho El Aribabi as a protected area gives the Robles family the recognition they deserve for their hard work in bringing attention to the incredible diversity of their land, as well as their efforts to protect and improve the area for wildlife in the region,” says Sonoran Joint Venture Coordinator Robert Mesta. “We have documented 170 species of birds there, including Thick-billed Kingbird, Green Kingfisher, Rose-throated Becard, Sinaloa Wren, Black-capped Gnaticatcher, Montezuma Quail, Five-striped Sparrow, Streak-backed Oriole, and Common Black Hawk. It is a birder’s paradise.”

“Carlos Robles’ successes expand beyond international borders, and his land ethic reaches people from all walks of life, making him a model for community-based conservation in the region,” says Sky Island Alliance (SIA) Executive Director, Melanie Emerson. SIA has documented jaguars, ocelots and many other common and protected species, and has provided training for over 100 volunteers and students from Mexico and the U.S. on the ranch.

Tucson Audubon members can visit Rancho El Aribabi as part of a number of upcoming tours this summer. To learn more visit http://www.conservventures.org/explore/ or http://www.aplomado.com/.

Sergio Avila, Sky Island Alliance and Jennie Duberstein, Sonoran Joint Venture

Sun Zia Transmission Line Update

Many community and environmental groups, including TAS, have offered constructive comments on the proposed SunZia transmission line being assessed by the BLM. Of the variety of routes considered in the BLM’s original scoping document, recent conversations with BLM indicate that the field has been narrowed to options along riparian corridors through Tucson, which are essentially unbuildable as they are not large enough, as well as Lower San Pedro River valley options on either side of the river and an option coming through Aravaip Creek from east to west. BLM’s Draft Environmental Impact Statement is expected to be released this fall.

Visit tucsonaudubon.org for updates and more.
Falling Water Table Threatens San Pedro River

A federal judge has rejected the latest plan by the U.S. Army and U.S. Fish and Wildlife Service (Service) aimed at preventing damage to the San Pedro River and its endangered species from groundwater pumping to serve Fort Huachuca and the Fort’s population in surrounding areas. In a ruling responding to a lawsuit by the Center for Biological Diversity and Maricopa Audubon Society, a federal judge said the Army and the Service relied on a “legally flawed” plan that didn’t protect the San Pedro River and failed to properly analyze groundwater pumping’s effect on imperiled species such as the Southwestern Willow Flycatcher and a plant called the Huachuca water umbel.

The Army and the Service will now have to produce a new plan to protect the river from the Fort’s deficit groundwater pumping.

The San Pedro is the Southwest’s last surviving undammed desert river, threatened by local groundwater pumping that intercepts water that would ordinarily move from the aquifer seeping through the riverbanks to provide surface flow to the river. The annual local groundwater deficit, or overdraft, of the aquifer is now approximately 6,000 acre-feet per year and growing.

“This is a great victory for San Pedro River protection,” said the Center’s Robin Silver. “It is time to acknowledge that the area is too fragile to support all of Fort Huachuca’s missions, most of which can be accomplished elsewhere with no loss of defense capabilities.”

The court’s most recent decision follows a study released by the Center in January showing that the adverse effects of groundwater pumping by the Fort and the city of Sierra Vista are moving close to the San Pedro, and water levels are declining near the river at the Fort’s eastern border.

“The San Pedro Riparian National Conservation Area is an important migration corridor for birds across the Western hemisphere, and has been identified as an Important Bird Area in Arizona,” said Scott Wilbur, Important Bird Areas Program Conservation Biologist with Tucson Audubon.

“To safeguard this critical ecosystem every partner involved in groundwater management will need to increase their efforts once again to ensure we conserve this river and almost 400 bird species and near 100 mammal species that depend on it. The moment has never been more critical with increasing drought conditions predicted by climate scientists.”

In 2003, the city of Sierra Vista and Fort Huachuca-led Upper San Pedro Partnership promised “to eliminate deficit groundwater pumping by 2011.” Based on this promise, Sen. John McCain (R-Ariz.) supported a congressional legislative rider by former Rep. Rick Renzi (R-Ariz.) to shield Fort Huachuca from full responsibility for its negative impacts on the San Pedro and to protect the Fort in the 2005 Base Realignment and Closure round. But even with this legislative shield, the Fort has not come up with a defensible plan to protect the San Pedro from the massive local groundwater pumping upon which the Fort depends.

Local efforts have been made to reduce the effects of Fort Huachuca on the San Pedro River. On the base, steps have been taken to reduce water use. The Army has done plumbing retrofit and replacement, installed waterless urinals, most irrigation uses effluent and any excess is recharged in the recharge ponds at the eastern part of the base. The Fort has also taken on responsibility for some water use off base. In addition, the city and county have plumbing rebate programs, water conservation ordinances, and education programs, and Sierra Vista recharges effluent to create a mound of water between the river and the regional pumping center, which has made a big impact.

“Most of the easy ways—inefficient, uncontroverial—to reduce the annual deficit have been enacted,” said Bruce Gunge of the U.S. Geological Survey. “To reduce the deficit further will probably require politically difficult decisions and/or a lot of money.”

Wildfires Update

This year’s fire season has been a difficult one for many in southeastern Arizona. Mediocre monsoons last year combined with minimal winter rains created “tinder dry” conditions coming into early summer. An oft-repeated statistic is that the humidity levels in much of our southeast Arizona woodlands and grasslands stood at three percent throughout much of May and June, whereas kiln-dried lumber’s moisture content is around seven percent. While rather general, these figures illustrate the dryness here since the beginning of the year.

The fires that have burned through our national forests and surrounding areas struck a chord with birders, as many of our favorite areas were affected. Many of us knew people who were forced to evacuate their homes as fire approached their properties. In May, the news out of the Chiricahua Mountains was disheartening as high winds pushed the fires past the burn-out lines that firefighters had created. Then a fire started in the White Mountains and quickly flared into the largest fire in Arizona history, and another in Coronado National Monument on the south end of the Huachuca Mountains. It was fed by strong winds into a blaze that burned across the entire southeastern flank of the mountains and caused the loss of many homes and structures.

Now that many fires have been at least partly contained by firefighters’ efforts (as well as burning through available fuel), we can see that the result is not a bad as we may have feared. Many birding locations have survived, including Portal and Cave Creek Canyon, the George Walker House, Ash Canyon B&B, the Battiste’s B&B, Beatty’s Guest Ranch, Ramsey Canyon, and Sycamore Canyon. And areas that did burn, such as Rustler Park and Barfoot Lookout, did so in patchy distribution. Some sections were heavily burnt, while others had understory burns that will leave the forest healthier in the long run. Birds that are burnt-area specialists, such as Buff-bellied Flycatcher and some woodpeckers, will undoubtedly quickly move in to take advantage of this new habitat.

As of press time the monsoons are still some way off, and many of us continue to worry about the dry lighting storms that usually precede them. Once the rains arrive, we’ll also have to think about erosion and flood issues in the burned areas. Post-burn habitat succession will begin, and nature will exploit the new opportunities.

Our special thanks go to the firefighters and emergency teams who sought to protect property, and who even went out of their way to protect known nesting trees for trogons, goshawks, and others. They saved the homes of a good many friends, both feathered and unfeathered. For up-to-date information on fire status in the state, visit: www.inciweb.org/state/3/.

Matt Brooks
Deputy Nature Shop Manager
July

July 2—Saturday 7:30 PM–9:30 PM
Night Nature Walk at Sweetwater Wetlands
Experience the magic of the night as we search for night birds, mammals, reptiles and amphibians and aquatic critters. Bring water, binocs, flashlight with red light, and bug repellent (possible mosquitoes). Limited to 15 people. Call/email Pinau at 520-546-9409 or pinaumerlin@hotmail.com to sign up.

July 10—Sunday 6 AM
Huachuca Hummingbirds
The Huachuca Mountains are famous for being one of the best places in the US to watch hummingbirds, and July is one of the best times. With forest closures and other restrictions still likely, we’ll have to decide at the time where we go, depending on which sites are open. These could include Beatty’s Guest Ranch, Ramsey Canyon, Ash Canyon and maybe even a return to Tucson via Paton’s in Patagonia. Bring a hat, sunscreen, rain gear (if monsoon has arrived), plenty of water and something for lunch. This trip is limited to 10 participants. Please contact leader Richard Fray to book your place: richard@funbirdingtours.com or 520-323-4234.

July 16—Saturday 6:30 AM
Catalina Mountains
Let’s spend the morning perusing the mountain and trying to get out of the heat for a few hours. We will make stops at Middle Bear and Marshall Gulch. Bring a hat, sunscreen, plenty of water. Home after lunch. Meet at Tanque Verde and Catalina Mountains Road at the McDonald’s at 6:30 AM. 50 miles roundtrip. Leader: Melody Kehl (outdoor1@cox.net 520-245-4085)

August

August 13—Saturday
Las Cienegas
A short trip to Las Cienegas. We’ll start early and finish by 10 AM or so before it gets too warm. This is a major riparian area that often times yields special treats. Meet at Houghton and 1-10 on the Northwest corner at 5 AM. Round trip: 75 miles. Leader: Melody Kehl (outdoor1@cox.net 520-245-4085)
August 27—Saturday 6 AM
Pima Canyon
We’ll hike up beautiful Pima Canyon in northwest Tucson as far as the lush cottonwood gallery and check the area for migrants. Be prepared for a 4-mile roundtrip hike on a rocky trail. Bring hiking footwear, plenty of water, sunscreen, and trail snacks. We will return before the late morning heat. Limited to 10 participants; please contact leader to sign up. Leader: Scott Olmstead (520-840-9567 sparverius81@hotmail.com)

September
September 10—Saturday
Avra Valley: Shorebirds for Beginners
Persons new to birding or to identifying shorebirds are especially invited. We will see what waders are migrating south. Easy pace, short walk on flat dirt. A scope will be provided. Leave Mission Library (NW corner of Mission and Ajo) at 8 AM. Back by 10:30 AM. Mileage 30 miles. Limited to ten birders. Sign up by phone or email on August 21 at 8 AM. Leader: John Higgins (520-578-1830, jghiggins@comcast.net)

September 17—Saturday 6:30 AM
Empire Gulch
Empire Gulch is a riparian oasis amid the surrounding grasslands of Las Cienegas National Conservation Area. Whenever birds are on the move this strip of cottonwoods exerts a strong pull. Meet at Houghton Road north of I-10 before 6:30 to carpool. Bring good footwear, water, sunscreen, and a snack. Back by around noon. Leader: Scott Olmstead (520-840-9567 sparverius81@hotmail.com)

September 20—Tuesday
Cienega Creek Preserve
Join me for a walk in this little known desert perennial stream near Tucson. We’ll look for fall migrants in the cottonwood gallery forest and in marshy cienegas along the way. Bring good footwear, water, and a snack. Meet on the north parking lot at the Houghton Road exit off I-10 at 6 AM. Back by 1 pm. To sign up, contact Matt after September 1. Leader: Matt Brooks (520-209-1807 mbrooks@tucsonaudubon.org)

September 24—Saturday 6 AM
Peppersauce Canyon
Among the sycamores, oaks, ash, and junipers, this is a great location for fall migrants. We’ll be looking for tanagers, flycatchers, warblers, vireos, etc. We’ve had an American Redstart, an Olive-sided Flycatcher, and a Broad-tailed Hawk here on previous September field trips. There’ll be some walking so wear sturdy shoes. We will finish around noon. Meet the leader at Bashas’ parking lot in Catalina, on the northeast corner of Oracle Rd. and Gold Ranch Rd. Trip limited to first 15 who contact leader beginning September 1. Leader: Doug Jenness (d_jenness@hotmail.com 520-909-1529)

September 27—Tuesday 7 AM
Paton’s and Blue Haven Road, Patagonia
We’ll begin at the famous Paton’s house in Patagonia, watching the feeders for hummingbirds, including Violet-crowned, as well as a host of other birds. Later we’ll walk along Blue Haven Road, alongside the Patagonia-Sonoita Creek Preserve, looking for migrants. Anything could appear at this busy time of year for our birds. Bring a hat, sunscreen, plenty of water and something for lunch if you’d like to stay until afternoon. Please contact leader Richard Fray for meeting place: richard@funbirdingtours.com or 520-323-4234.

October
October 1—Saturday 6 AM
St. David, Willcox and Benson
Keep your fingers crossed for plenty of birds and pleasant surprises. We will check out the riparian habitat at the St. David Monastery in the relative cool of the morning. Then we will head to the Willcox Twin Ponds and look for late shorebirds and whatever else drops in. We’ll stop off at the Benson ponds on our return to Tucson (by 4 PM). Bring plenty of water, snacks and lunch. We will be walking a mile or two over mostly level ground. Check the weather ahead of time and dress appropriately. Meet at Houghton Road just north of I-10. (about 180 miles roundtrip from Tucson). Leader: Dave Dunford (520-909-1809 ddunford@dakotacom.net)

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.

Visit tucsonaudubon.org/fieldtrips for updates and more
Darlene Smyth: An Appreciation

Rick Wright

It's hard to think of anyone more deserving, and anyone less desirous, of tribute than Darlene Smyth, whose service to Tucson Audubon and to the North American birding community at large over the past nearly twenty years has been so generous and so effective. As tour leader and Field Trip Coordinator for Tucson Audubon, Darlene has introduced scores of us to the delights of a birding style that leaves plenty of room for all those ooh-aah moments while at the same time emphasizing the importance—and the pleasure—of learning about the feathered objects of our attentions.

We met Darlene just days after we moved to Tucson. It was a cold Friday morning bird walk at a local park, and one figure stood out among our congenial companions not just for her skill as a birder but for the obvious joy with which she shared her knowledge, her excitement, and her scope with a group whose experience and interest levels ranged from tyro to tag-along. Here, it was obvious, was someone who knew what she was doing, who combined the passion of an enthusiast with the patience of a teacher.

And, we soon found out, with the unfailing generosity of a good friend. Need a ride, need a co-leader, need a tough identification? Never any need to ask: Darlene is there. The same giving spirit that marks her personal relationships has always been characteristic of her dealings with the birding community as a whole. She has devoted untold volunteer hours to Tucson Audubon, to the American Birding Association, and to numerous other local and national groups as she strives to present the best birding opportunities to those who would not possibly have them without her urging; senior citizens, schoolchildren, snowbirds, and Sunday morning strollers all continue to benefit from the eagerness, and the modesty, with which she passes on her experience and her knowledge. Tucson, Tucson Audubon, and all who have had the privilege of birding with her are the richer for it.

Darlene stepped down as Tucson Audubon’s volunteer Field Trip Coordinator in February, 2011.

This Fan-tailed Warbler, photographed by Laurens Halsey, was discovered in Madera Canyon on Monday May 23rd by Gary Rosenberg. There have been seven previous records of this rare Mexican species in SE Arizona, with just a few elsewhere in the USA. Many birders from around the country got to see it over the next few days but it unfortunately departed on Friday evening, disappointing the weekend crowds. Amazingly, Matt Brown discovered another one at the Patagonia Roadside Rest on May 27th but, as is more typical for this species, it didn’t hang around for anyone else.

Richard Fray

Coming Soon—A Sneak Peak for Members

Tucson Audubon is continuing the now 32-year tradition of offering the best bird finding book for the Southeast Arizona region. With input from local experts, Tucson Audubon’s Finding Birds in Southeast Arizona, Eighth Edition, 2011, offers the most updated information on where to find birds in the area. With new and updated location information, updated bar graphs and checklists incorporating the most recent taxonomic changes, updated maps and directions to help you get to locations, and our same, reliable spiral binding and easy-to-read text, this book is a must have for all birding levels. It makes a great gift, too!
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San Blas: Mangrove Estuaries, Coffee Fincas, Palm Forests and More. December 10–18, 2011, $2,195. Leader: Keith Kamper and John Yerger. The coastal fishing village of San Blas is one of the premier birding destinations in Mexico. We’ll visit mangrove estuaries, coffee fincas, beaches and coastal lagoons. 25 Mexican endemics possible including San Blas Jay, Rufous-necked Woodrail, Cinnamon Hummingbird and Golden Vireo. Jungle boat tour with oddities like Boat-billed Heron and Northern Potoo, even iguanas and crocodiles! We’ll be based at one motel throughout so we can unpack, unwind and enjoy the region’s natural and cultural history, fresh mariscos and green flash sunsets.

Colima and Jalisco: West Mexican Endemics from Beaches to Volcanoes. March 10–18, 2012, $2295. Leader: Keith Kamper and John Yerger. The states of Colima and Jalisco comprise perhaps the most biologically diverse region in Mexico, where the mountains of the Sierra Madre Occidental meet with the central volcanic belt. This volcanic belt bisects Mexico on an east-west axis, straddling a boundary along the northernmost or southernmost edge of many species’ ranges. Through traversing this region from its unspoiled coastlines up to volcanoes with cloud-shrouded montane forest, we should see upwards of 40 endemics and specialties, including Balsas Screech Owl, Red-breasted Chat, Chestnut-sided Shrike-Vireo, and Cinnamon-bellied Flowerpiercer.

SOLIPASO TOURS
www.solipaso.com

Copper Canyon: September 16–24, 2011. $2390. Leader: David MacKay. The world famous Copper Canyon is a great destination for birding at this time of year, when the summer monsoon brings great rains! Starting in Los Mochis, we’ll explore the city’s botanical garden and take a trip out into the sea of Cortez. From the colonial town of El Fuerte we hop on the train as we climb from the coastal lowlands and into the tropical deciduous forest and eventually into the pine-oak of the Sierra Madre. This is also a great trip for seeing a number of endemic birds, including Eared Quetzal, White-striped Woodcreeper, Mountain Trogon, Striped and Rusty Sparrows, White-throated Robin, Spotted Wren and large array of Hummingbirds.

Yucatan Endemics: October 12–18, 2011. $1995. Leader: David MacKay. The Yucatan is home to nearly a dozen regional endemics and other interesting tropical species and water birds generally found much further south. Some of the must-see birds on the tour are Yucatan Woodpecker, Orange Oriole, Ruddy Crane, Rose-throated Tanager, Yucatan Jay, Yucatan Wren, Yucatan Bobwhite, Gray-throated Chat, Rufous-necked Woodrail, American Pygmy Kingfisher, and Black Catbird. On a typical trip, we can see somewhere in the neighborhood of 200 species. This trip starts in the colonial city of Merida. From there we visit the Biosphere Reserves of Celestun and Ria Lagartos, the ruins of Uxmal, and the Mayan Riviera town of Puerto Morelos. The trip ends on the island of Cozumel.

ROCKJUMPER—WORLDWIDE BIRDING ADVENTURES
info@rockjumperbirding.com
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Namibia, Okavango & Victoria Falls Overland IV. 18 October–4 November 2011. Price: $6,575 (Single Supplement: $500). Our popular Namibia, Okavango & Victoria Falls overland tour visits some of the major highlights of three of Africa’s most remarkable countries, offering vast areas of pristine wilderness. From the ochre-colored dunes of the Namib Desert to the lily-choked backwaters of the Okavango Delta, to the game-filled waterholes of Etosha National Park and the breath-taking Victoria Falls. Top birds include: Slaty Egret, Wattled and Blue Crane, Ludwig’s and Kori Bustard, Pel’s Fishing Owl (one of ten possible owls!), Hartlaub’s Francolin, Rüppell’s Parrot, Rockrunner, Cinnamon Hummingbird and Long-billed Thrush, Little Forktail, Painted Sandgrouse, Black Bittern, Dalmation Pelican, Indian Skimmer, Chensnut-headed Tesla.

SOUTHWESTERN RESEARCH STATION
research.amnh.org/swrs
swrs@amnh.org • 520-558-2396

The Southwestern Research Station (SWRS) is a non-profit biological field station owned by the American Museum of Natural History, in New York, NY. Nestled within the great “sky island” mountain wilderness of the Chiricahua Mountains of S.E. Arizona, the SWRS is situated in the midst of extraordinary biodiversity. The Chiricahua Mountains are a prime destination for nature enthusiasts, with some 265 bird species recorded in the area, including nesting Elegant Trogons, Montezuma Quail, and over 13 species of hummingbirds; a wide diversity of mammals and more than 75 reptile species. Call 520-558-2396 or visit http://research.amnh.org/swrs/ for information on birding and nature tours!

TROPICAL BIRDING
www.tropicalbirding.com
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Ecuador Photo Safari. November 27–December 6, 2011. $2,100. Unlike a standard birding tour, this trip is designed to get you photographs of as many of the amazing birds of the Ecuadorian Andes as possible. The tour is based in two lodges, Tandayapa Bird Lodge on the west slope of the Andes, and Guango Lodge on the east slope. They offer some of the best hummingbird photography in the world at their feeders, but we’ll also do day trips to many other sites near these lodges, such as the antpitta feeders at Paz de las Aves and the amazing scenic Antisana Volcano with its Curunculated Caracaras and Andean Condors.

Eastern Ecuador: High Andes to Vast Amazon. December 2–16, 2011. $3790. Prepare to be blown away by the sheer number and variety of birds, many of them spectacularly colorful. This tour visits some of the best lodges in South America, from Guango, San Isidro, and WildSumaco in the Andes to Sacha Lodge and Napo Wildlife Center in the Amazonian jungle. Sunrise on a snow-clad volcano at 13,000 feet, vistas of endless stretches of primeval forest from the top of a 120 foot canopy walkway, and 40+ hummingbird species are just a few reasons to come. We should see at least 500 bird species on this tour as well as a variety of monkeys and other wildlife.

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BIRDS & BEER
Third Thursdays at Sky Bar: July 14 & September 15. Bring your bird photos to share. The August 18 event will be at Riverpark Inn as part of the Tucson Bird & Wildlife Festival (see pullout or visit tucsonaudubon.org/festival).

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VOLUNTEER FIELD TRIP COORDINATOR NEEDED! We are looking for someone to organize one of Tucson Audubon’s most important assets to the community, our volunteer-led free field trips. You’d need to be self-directed and interested in bringing birds and people together, familiar with southeastern Arizona and its birding community, very appreciative of the generosity of leaders, and organized enough to keep track of trips needed and bold enough to ask leaders to do even more. If you are interested please send an email to Becky, babaricio@tucsonaudubon.org.

Visit tucsonaudubon.org for updates and more.

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Kenn Kaufman will be the keynote speaker at the Tucson Bird & Wildlife Festival. He will also be presenting a workshop and leading a field trip for young birders. See the pullout for full details.

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Dry River: Stories of Life, Death, and Redemption on the Santa Cruz
by Ken Lamberton

The Santa Cruz River is one of the most significant geographic features of southern Arizona. It flows from oaks to creosotes, it carries clean water and dirty, and it crosses from the U.S. to Mexico and back again. Along its course it ranges from shady haven to biologically dead ditch.

So it is surprising there have not been more significant publications about the river. For a quick but telling primer, read the relevant chapter in Water Follies: Groundwater Pumping and the Fate of America’s Fresh Waters, by Robert Glennon. A dry but useful book-length effort is The Lessening Stream: An Environmental History of the Santa Cruz River by Michael Logan.

This latest major work is completely different. Dry River: Stories of Life, Death, and Redemption on the Santa Cruz, by Ken Lamberton, is as wet with significance as the river is dry. The river is not so much the subject of the book but a setting for the exploration of hope.

There are many journeys in this book. Most obvious is the journey of the river itself from an ambiguous beginning in the Canelo Hills to its entropic death in the flats of Pinal County. A second journey is the author’s eventful reconnaissance of the river, much of it on foot. It’s worth the purchase price just for the encounters with apple orchards, ruins, and surprisingly good Greek food.

For Lamberton, the book is an exploration of family and self discovery during the emergence from a painful period. The author’s life joins with stories of others—from historical accounts—that have experienced life, death, and redemption as their lives intersected the river.

As a disclaimer, this book makes favorable mention of Tucson Audubon Society’s habitat restoration work, and even describes my role in that work. So I was predisposed to like it. In fact, I was ready for this book even before it was written; from the time Ken told me that his volunteer work at the North Simpson Farm had inspired a book about redemption, and the river and people in need of it.

If there is a critique of this book, it might be that its maps of different reaches of the river are not equal to the desire the text generates to pour over the terrain being described. The publisher could remedy this by publishing a Google Maps overlay showing the places and events portrayed in the book.

Ken Lamberton’s other books include the award-winning Wilderness and Razor Wire: A Naturalist’s Observations from Prison; Beyond Desert Walls: Essays from Prison, Time of Grace: Thoughts on Nature, Family, and the Politics of Crime and Punishment; and Chiricahua Mountains: Bridging the Borders of Wilderness.

Kendall Kroesen
Habitats Program Manager

Kaufman Field Guide to Advanced Birding
by Kenn Kaufman

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Kendall Kroesen
Habitats Program Manager

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