



The Cactus Wren•dition

Volume LXV, No. 3

Fall - 2017



Painted Lady
Photo by Marceline VandeWater

Programs

programs

Meetings are held in Scottsdale:

Papago Buttes Church of the Brethren (northwest of 64th Street and Oak Street, which is between Thomas Road and McDowell Road). You may enter from 64th Street, just north of Oak Street. If coming from the south, turn left (west) at Oak Street and then right at the Elks Lodge. Continue north along the eastern edge of their parking lot and turn right into the church parking lot. Look for signs that say "Audubon." Come and join us and bring a friend! MAS holds a monthly meeting on the first Tuesday of the month from September through April.

September 5, 2017

Wendsler Nosie, Sr. From Oak Flat to DC

On July 5, 2015 Wendsler Nosie, Sr. took the San Carlos Apache Stronghold on a caravan from Tucson to Washington, DC to request the federal government support a bill introduced by Arizona congressman Raul Grijalva to save Oak Flat. But in December 2015, Sen. John McCain slipped the land grab bill through Congress by burying it in the must-pass



Wendsler Nosie, Sr.

National Defense Authorization Act (NDAA). Hear about the Apache Stronghold trip to our nation's capitol, the resistance at Oak Flat, and the fight to protect the land and water for future generations from two foreign mining companies.

October 2, 2017

Cathy Wise Plants for Birds

This fall planting season, don't forget your feathered friends! Attract more native birds to your yard by planting some easy care favorites and making other simple additions. Learn Phoenix-based tips and tricks and hear



Cathy Wise

success stories from National Audubon's Plants for Birds program nationwide. This interactive program will have you laughing and leave you inspired to plant.

Cathy Wise is Audubon Arizona's Education Director and works out of the Nina Mason Pulliam Rio Salado Audubon Center. Cathy has studied birds throughout the southwest with agencies including the US Forest Service and the Utah Division of Wildlife Resources. As a wildlife biologist for the Arizona Game and Fish Department, she co-authored the Arizona Breeding Bird Atlas and changed more than a lifetime's worth of flat tires doing field work. Cathy strongly believes that conservation begins with education and works daily to reconnect



On the Cover: Painted Lady
Focal length 100 mm, 1/200 sec, f/7.1, Canon EOS Digital Rebel XTi, by Marceline VandeWater, Double Cabin Springs, September 7, 2010.

Marceline says: "Most people know Monarch butterflies migrate. But the Painted Lady (*Vanessa cardui*), which can be seen year-round in Arizona, also has distinct migratory behavior. In *Butterflies of the Southwest*, Jim P. Brock explains that in some springs, particularly following wet winters, many thousands of Painted Lady butterflies from northern Mexico migrate north across southwest deserts. One reason is that winter rains affect the abundance of the butterfly's larval food plants. Painted Lady migration patterns are highly erratic, however, and the butterflies do not migrate every year."

people with nature through birds. She is an avid climber and backpacker. Cathy graduated from the University of California, Davis with a BS in Avian Sciences.

November 7, 2017

Erik Andersen Effects of Plant Invasions on Grassland Birds

For the past few years, Erik Andersen has studied how shrub encroachment and nonnative grasses affect density, nest



Erik Andersen

success, and community composition of birds in southeastern Arizona's arid grasslands, among the most threatened ecosystems in North America. Erik will present an overview of how plant invasions are changing grasslands throughout the world and discuss his research, field work, and preliminary results.

Erik Andersen is a PhD candidate in the Wildlife Conservation and Management program at the University of Arizona. Erik has conducted ecological and avian research throughout North America for multiple federal, academic, non-profit, and tribal entities. He enjoys travel and has spent over two years abroad chasing birds and exploring the world's natural areas.

December 5, 2017

Craig Anderson's Big Year

Arizona Audubon volunteer Craig Anderson invites you for an armchair experience of his Big Year. He'll explain why he dedicated 2016 to his own pursuit of bird species across a wide range of habitats in Arizona. Craig visited more than two dozen of our state's 46 Important Bird Areas to amass his own record and to focus attention on the Important Bird Area program. Hear anecdotes about the most memorable places he visited, his favorite bird sightings, and learn how you can support conservation and biodiversity in Arizona.

Craig Anderson has birded Arizona for over 45 years but during his Big Year discovered additional and unique places to bird in our state.

Committees/Support

Arizona Audubon Council Rep Position Open

Bookstore

Mel Bramley
480 969-9893

Hospitality

David Chorlton
602 253-5055

Web Page

Michell Peppers
480 968-5141
burge@burgenv.com

Maricopa Audubon Website <http://www.maricopaaudubon.org>

"Long live the weeds and the wilderness yet."

Gerard Manley Hopkins

An Investment in the Future

Bequests are an important source of support for the Maricopa Audubon Society. Your chapter has dedicated itself to the protection of the natural world through public education and advocacy for the wiser use and preservation of our land, water, air and other irreplaceable natural resources.

You can invest in the future of our natural world by making a bequest in your will to the Maricopa Audubon Society. Talk to your attorney for more information on how this can be accomplished.

President's Message



Mark W. Larson

local Federal Court hearings about key cases to which MAS is a party.

The MAS Conservation Committee, led by Chairman Mark Horlings, has been following cases such as our lawsuit to prevent the disposal of mine tailings over a vast acreage of our public land near Boyce Thompson Arboretum State Park. The proposed tailings site is some of the finest Upper Sonoran Desert that I have seen anywhere. It would be a tragedy to have it choked and buried under hundreds of feet of toxic mine waste.

With Maricopa Audubon's conservation commitment there are always letters to write and hearings to attend. You can play a role in our efforts to maintain a healthy environment for those who follow us by contacting Mark to serve on the committee. 🐦

Mark W. Larson
President
MARICOPA AUDUBON SOCIETY
Phoenix, Scottsdale, and Tempe, Arizona

Letter from the Editor

by Gillian Rice



Gillian Rice

Migration. A change of place. To feed, to breed, to find a way to survive. Our cover species, the Painted Lady, is a widespread butterfly. Photographer Marceline VandeWater notes its migration pattern in the American southwest (see "On the Cover," page 2). But the Painted Lady is an exceptional butterfly. It migrates the farthest of any insect species. Its phenomenal 9,000-mile round trip journey from tropical Africa to the Arctic Circle is almost double the length of the Monarch's migration. Each of up to six successive generations completes part of the journey before reproducing and dying. The whole population of Painted Lady butterflies keeps moving, breeding, and moving again, searching for plants for their caterpillars to eat. How do we know? Citizen scientist observations, high-altitude insect monitoring radar records, and satellite imagery.¹

The remote time-lapse camera is another tool that can reveal the secrets of many species; with this tool, Melissa Amarello and Jeffrey Smith discovered surprises about snakes that might make you think differently about them. See Science Corner to learn more. Scientists also use technology like ultralight aircraft to help birds by teaching them to migrate: see Neil Rizos' essay about finding inspiration from the Northern Bald Ibis.

Simple tools like bird bands have long been used to learn about migratory movements. In Green Scene, Vicki Hire shares a bird banding tale, as well as amazing facts about migration.

This issue takes us from the wonders of Costa Rica to species reintroduction in Austria. At home, Dano Grayson focuses on one of our signature desert species, the Greater Roadrunner. Artist Stephanie Peters interprets natural cataclysms like wildfire. Let David Chorlton bring a moment of calm to your day as you savor his poems and conjure up your own visions of nature's magic.

Contemplate, autumn is in the air. What does it mean for you? I am keen to plan new things, buy new notebooks, and start afresh. It's that "start of the academic year" feeling I can't get out of my soul. I'm a lifelong student. I've always loved learning, both as a student and as a professor. And now, as I smell fall approaching, it's time to do something new and learn something new. What are your plans? Hint: check out our Programs and Field Trips! You might be lucky and happen upon a rare visitor like the Flammulated Owl in Tom Gatz's story.

Much gratitude to all our writers and photographers. Dear reader, enjoy. 🐦

¹Stefanescu, C. et al. 2012. Multi-generational long-distance migration of insects: studying the painted lady butterfly in the Western Palaearctic. *Ecography*, 35: 001-114. Available online at <https://www.researchgate.net>



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Are you a Friend?

Do you enjoy reading *The Cactus Wren•dition*? Are you a "Friend of Maricopa Audubon?" Or have you renewed your membership this year? Please support Maricopa Audubon by becoming a Friend. Please see the back page of *The Cactus Wren•dition* for full details. Your contribution will help fund the publication of the *Wren•dition*. Thank you for your support!

11th Annual Arizona Field Ornithologists Meeting

October 20-22, 2017
Quality Inn, Cottonwood

- Mini-expeditions led by local experts
- Presentations/posters of ongoing research about Arizona birds (abstract deadline: September 1)
- Presentations on where to go birding in Arizona
- Bird identification quizzes
- Meet new friends, visit old friends

Youth scholarships

Maricopa Audubon Society sponsors scholarships for young people interested in field ornithology to attend AZFO's Annual Meeting. Application deadline: October 1.

Details at http://www.azfo.net/annual_meetings/annual_meetings.html

Maricopa Audubon Society Field Trips



Car Pooling: Please make every effort to organize your own car pool, consolidate vehicles at meeting places and/or contact leaders for car pooling assistance. Be courteous to the trip leaders and help cover their gas costs. We recommend that passengers reimburse drivers 10 cents per mile each.

Reminders:

- Avoid wearing bright colors. Wear neutral-colored clothing and sturdy walking shoes.
- Bring sunscreen, sunglasses, head protection, and water.
- Always bring your binoculars. Bring a scope if recommended.
- Submit trip and leader suggestions to the Field Trip Chair, Larry Langstaff.
- Unless stated otherwise, reservations are required.

Day Passes: Many locations in the National Forests require Day Use Passes. For details, see <http://www.fs.usda.gov/main/tonto/passes-permits>

HOT SPOT SATURDAYS

Leader: Veronica Heron, v.heron@yahoo.com

MAS will offer a series of trips in and around Maricopa County to discover our bird diversity and see what birds are where throughout the year. For full details, contact the trip leader. Limit 8.

August 26: Beeline Highway (north side)

September 23: Morgan City Wash

October 15: Base & Meridian Wildlife area

November 18: Santa Cruz Flats

January 20: Arlington Valley

February 24: A West Valley location (for thrashers and sparrows)

March 24: Jewel of the Creek

April 7: West Valley Buckeye area

May 19: Papago Park and Zoo Ponds

TEMPE TOWN LAKE SATURDAYS

Leader: Bobbe Taber taberbobbe@gmail.com

Saturday, September 23

Search for passage migrants. 7:00 to 9:00 am. Limit 10.

Saturday, October 28

Join the First Birding and Biking Trip around Tempe Town Lake and down Mesa Trail from McClintock Road to Dobson Road. Explore habitat newly accessible along Mesa Trail on the south side of the Salt River bed. Bring your own bike or rent one! Access rental bikes at grid.socialbicycles.com and register ahead for easy access: Hub #8 McClintock Drive/Rio Saldo Parkway. 7:00 to 9:30 am. Limit 8.

Saturday, November 18

Search for migrating and wintering waterfowl
Bring a friend who has never birded before. 8:00-10:30 am. Limit 10.

Saturday, December 16

Bring a small, homemade, hand-me-down, or very inexpensive gift that has something to do with birding to share with another. We will draw numbers, then, as we bird, talk about the many nonmaterialistic gifts of birding that we enjoy. 8:00 to 10:30 am Limit 10.

Saturday, September/October, date TBA

Stewart Mountain Desert Tortoise Quest
Have you ever seen a Sonoran Desert Tortoise in the wild? Increase your chances of stumbling

upon one of these iconic desert creatures by searching in their preferred habitat after a summer monsoon. We are not setting an exact date for this trip near Saguaro Lake until conditions are right. We will collect email addresses and phone numbers and contact you one day before or possibly the morning of the walk. It could be a weekend or weekday. Learn about the behavior, life cycle, and status of this keystone species. Difficulty: 4 (steep, rocky terrain, and hot, humid weather). Bring snacks, sun protection, hat, sturdy hiking shoes, and plenty of water. Start near daybreak and return by noon. Limit: 10. Leader: Laurie Nessel, laurienessel@gmail.com or 480 968-5614 to get on the call list.

Third Sundays: September 17, October 15

Beginning Butterflies and Dragonflies at Gilbert Riparian Preserve at Water Ranch

An outstanding area for beautiful butterflies, dragonflies, and damselflies. Learn to identify local butterflies including Painted Lady, Queen, and Fiery Skipper as well as common dragonflies and damselflies such as Western Pondhawk, Flame Skimmer, Blue-ringed Dancer, and Familiar Bluet. Suggested \$5.00 donation to support the Gilbert Riparian Preserve. Bring binoculars (close-focus preferred), water, and hat. *Common Dragonflies of the Southwest* by Kathy Biggs on sale for \$10.00, color checklists for \$1.00. All ages welcome. Easy. Meet 7:00 am September, 7:30 am October at Rattlesnake Ramada (south of the parking lot, west of the bathrooms). The preserve is east of Greenfield Rd., south of Guadalupe Rd., just east of Gilbert Public Library (park there if the GRP lot is full). Leaders: Janet Witzeman and Laurie Nessel

Saturday, October 7

Santa Cruz Flats

Look for surprises like late shorebirds (Pectoral and Baird's Sandpiper, Golden Plover) and perhaps flocks of Swainson's Hawks moving through. Late summer species and early wintering species all possible. Difficulty: 1. Limit 11 (plus leader) in three vehicles.

Leader: Dave Pearson.

Reservations, larrylangstaff1@gmail.com

Saturday, October 21

Oak Flat

Focus on the campground area and the ponds if they have water. Species include Vermilion Flycatcher, Canyon Towhee, Black-throated Sparrow and possible Black-chinned Sparrow. Spectacular rock formations. Proposed site of controversial copper mine. Difficulty: 3. Bring lunch if you wish to picnic at end of visit. Limit 8. Leader Myron Scott.

Reservations, larrylangstaff1@gmail.com

Wednesday, October 25

Prescott Lakes

Leave the Scottsdale area about 6:00 am, stop at Fain Park in Prescott Valley, head towards Watson Woods, and the Peavine Trail to Watson Lake. Afterwards, go to Goldwater Lake, at higher elevations. While wintering waterfowl are just beginning to arrive in larger numbers in late October, let's see if they arrive in Prescott earlier! See Acorn Woodpeckers, nuthatches, Bushtits, juncos, and possible wintering sparrows. End in Prescott about noon. Difficulty: 1-2 (lots of walking, some hiking). Limit 7.

Leader: Kathe Anderson, kathe.coot@cox.net

Sunday, October 29

Lower Salt River

Follow Bush Highway between north Mesa and Saguaro Lake, stopping at recreation areas along the Salt River. Drivers need a Tonto National Forest Day-Use Parking Pass. Common resident desert and early wintering birds include Great Blue Heron, Phainopepla, Vermilion Flycatcher, White-crowned Sparrow, Pied-billed Grebe, and Lesser Goldfinch. Sightings of Bald Eagles are reliable. Also possible are Belted Kingfisher, Rock Wren, Ladder-backed Woodpecker, and Osprey. Difficulty: 1. Limit 15.

Leader: Richard Kaiser, rkaiserinaz@aol.com, 602 276-3312.

Saturday, November 4

LoPiano Bosque Habitat and Tempe Marsh

Ducks, wading birds, and possible raptors at marsh. Desert birds, raptors, and possible migrants in bosque. Difficulty: 1. Limit 8.

Leader: Myron Scott.

Reservations, larrylangstaff1@gmail.com

Saturday, November 18

Pima Canyon, South Mountain Park

Desert species, including raptors and possible migrants. Rock Art. Difficulty: 3. Limit 8.

Leader: Myron Scott.

Reservations, larrylangstaff1@gmail.com

Wednesday/Thursday, November 29-30

Safford/Roper Lake/Mt. Graham

Start early and bird our way to Safford, probably stopping at Boyce Thompson Arboretum and Oak Flat, before heading to Cluff Ranch Wildlife Area and possibly Roper Lake. Explore Mt. Graham the next day. Return to Phoenix about 6:00 pm. Habitat variety should reveal woodpeckers, nuthatches, robins, bluebirds, wintering sparrows, and waterfowl. Expenses include one night at hotel in Safford, meals, entrance fees and gas donation. Difficulty: 1-2. Limit 7.

Leader: Kathe Anderson, kathe.coot@cox.net

Thursday, December 7

Apache Trail and Roosevelt Lake

A long, winding, lovely drive on the Apache Trail, pulling off wherever it looks birdy on the way to Roosevelt Lake. Picnic, stop at lake viewpoints to see waterfowl. Expect common desert species including Gila Woodpeckers, Cactus and Rock Wrens, wintering sparrows, and Greater Roadrunner, as well as Western and Eared Grebes, ducks and raptors. Return via Globe and arrive in the Phoenix area about 5:00 pm. Difficulty: 1-2. Limit 7.

Leader: Kathe Anderson, kathe.coot@cox.net

December or January

Plume Grass Removal project: either Pima Canyon (South Mountain Park), or Lost Dutchman State Park

To reduce the fire hazard produced by this exotic pest plant, come lend a hand as we dig or pull grass plants out of the washes in this habitat. We will bag the grass and haul it out. Birding for half the field time will likely produce wintering species and desert birds. Future return visits to check our results will be planned. Exact date not yet confirmed.

Please email your willingness to be contacted to help: larrylangstaff1@gmail.com

Announcements

Wolf Update

Shortly after publication of Melinda Louise's account, "The Wolves of Yellowstone," in the Summer 2017 issue of *The Cactus Wren•dition*, we received sad news. Hikers had discovered the alpha female of the Canyon pack, the famous "White Lady," mortally wounded by a gunshot. Had her death been from a natural cause, whether from disease, conflict with another animal, or old age, the word "sad" would not apply. However, an illegal shooting of a wolf within the Park's boundaries places the wolf's death in an entirely different context. For an excellent account of the challenges wolves face, read, "One wolf's journey from survivor to star, and what her death says about our appetite for the wild" by Alex Sakariassen in the *Missoula Independent* (<https://m.bigskypress.com/missoula/one-wolfs-journey-from-survivor-to-star-and-what-her-death-says-about-our-appetite-for-the-wild/Content?oid=4443953&storyPage=1>).

Big Sit!

On October 8, 2017, MAS friends will gather to count bird species seen from a 17-foot diameter circle at Granite Reef Recreation Area. The participant circle is limited but new circles can be started by those interested in growing the count. Proceeds from the 21st Annual Herbert S. Fibel Granite Reef Asterisks Big Sit! will benefit Apache Stronghold (www.apache-stronghold.com) and its efforts to save Oak Flat. To make a flat fee donation, mail a check payable to Maricopa Audubon Society (write Big Sit! in the memo line) to MAS treasurer Vicki Hire (see back page), or bring cash or check to any member meeting. Or, you can pledge per species seen. For more information, contact lauriinessel@gmail.com, 480 968-5614.

MAS Member David Pearson in Gila County Guide

David Pearson's photo of birding in the Pinal Mountains graces the cover of *The Great Outdoors: Your Guide to Southern Gila County*. He has led many birding trips to these mountains over the last 15 years. The *Guide* includes an article by David discussing the various habitats and what birds you might see: 209 species, some of which are challenging to spot elsewhere. As well as suggesting the roads to follow to find birds, David incorporates a checklist classifying each bird as a permanent, summer, or winter resident, a passage migrant, or an erratic wanderer. He details whether a bird can be seen commonly, uncommonly, rarely, or very occasionally (once or twice in 25 years). The 58-page *Guide* is packed with information on where to hike, climb, bike, fish, hunt, camp, and engage in water pursuits. Get your *Guide* from the Globe-Miami Chamber of Commerce, 800 804-5623, <http://globemiamichamber.com>

Bird Journaling Class & Workshops

Learn to draw birds, other animals, and plants from life. Neil Rizos will teach an eight-week Bird Journaling class at Mesa Arts Center, for ages 16+, on Fridays, (6:00 – 9:00 pm, \$171) October 20 - December 15. It includes demos, personal instruction, drawing time, and three hours free Open Studio weekly. Neil also offers one day Saturday workshops (9:00 am – 4:00 pm, \$101) teaching a proven method to observe and record the essential information to create accurate field studies, thereby enriching people's experience of the natural world. Offered October 28, November 18, and December 9. For more information, visit mesaartscenter.com, call 480 644-6529, or email Neil at neil@rizosart.com

Sign up for the e-newsletter!

To receive updates and supplements to *The Cactus Wren•dition*, sign up for the monthly (September to May) e-newsletter. It includes meeting and field trip reminders, special events, and citizen science projects. To subscribe, contact lauriinessel@gmail.com
Note: We do not use the email list for anything other than the described purpose.

Mountain into Hawk

By: David Chorlton

*Between sky and earth
a desert mountain shines
as a wing peels away from it
with rock fanned into primaries
and wind ruffling the scapulars
draped from the peak.*

*Stones
and shards of light
tumble down
among creosote
as the tertials dislodge them
while coverts and axillaries
replace slopes so dry
igneous weight burns away
and a red tail spreads
across volcanic silence.*

*Look up
to where the sun
blinks for a moment
and high terrain is suddenly
a bird with a laser eye.*



Red-Tailed Hawk. Photo by Vicki Hire



**Be Social!
Find MAS on
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WONDERS OF NORTHWEST



Every person has the right to a healthy and ecologically balanced environment, being therefore entitled to denounce any acts that may infringe said right and claim redress for the damage caused. Costa Rica Constitution, Title V, Article 50 (2)

This small, progressive Central American country has had no standing army since its civil war of 1948. A quarter of its land has been preserved as national parks and reserves for future generations, making Costa Rica a pioneer in ecotourism, its leading source of foreign exchange. “Rich Coast” is no exaggeration. Formed by the convergence of two tectonic plates 50 million years ago, Costa Rica merged into a continuous land mass as recently as three million years ago. It is the nexus of flora and fauna migrating from both north and south, creating a rich biodiversity with 10,000 plant, 850 bird, 205 mammal, over 35,000 insect, 160 amphibian, 220 reptile, and over 1,000 fresh and saltwater fish species in 12 ecological zones.

In mid-May, three of us visited three provinces in northwestern Costa Rica. It was the beginning of the rainy season, the hot and humid off-season for winter visitors but prime birding time. We enjoyed low room rates and few other tourists; several nights we were the only guests. It only rained one afternoon, a veritable torrent, and a couple of times at night.

Our first night was in the second growth “dry” forest at Hacienda la Pacifica in

Guanacaste Province. The unfamiliar sights and sounds were almost overwhelming. An entire article could be devoted to the organization and industry of the leaf-cutter ants that transport leaf and flower components along four lane highways to underground fungus farms. Some fungus species no longer produce spores, being fully domesticated by the ants 15 million years ago.

Next, also in Guanacaste, we visited Albergue Heliconias Lodge higher in the mountains, an area the state had destined for deforestation to divide amongst the town folk for agriculture. Ten families pooled their



Keel-billed Toucan, Ramphastos sulfuratus, Cañas, Guanacaste. These monogamous, zygodactyl tropical species “play ball” by using their bills to throw and catch fruit to one another. They also use their bills to “fence” and have pushing matches. Photo by Laurie Nessel

COSTA RICA

by Laurie Nessel



*American Crocodile, *Crocodylus acutus*, Gulf of Nicoya, Puntarenas. This 9-foot long American Crocodile was basking on the dock upon our return from the mangrove boat tour. This most widespread crocodile species in the New World, ranges into southern Florida and south from Venezuela to Peru. Extirpated from much of its range by the 1960s because of exploitation and habitat loss, the American Crocodile has made a significant recovery and remains protected throughout Costa Rica. Photo by Mark Larson*



*White Ibis, *Eudocimus albus*, Gulf of Nicoya, Puntarenas. During our mangrove boat tour, a colony of White Ibis stood in sharp contrast to a dark cliff wall. Although they are wetland birds and forage in shallow water, they roost and nest in trees. An accidental visitor to Maricopa County, the first flock was found in May 1977 along the Verde River. Photo by Mark Larson*

resources to preserve the forest, becoming a model of cooperation and sustainable economics based on environmental stewardship. Local guides not only share their wealth of knowledge about the flora and fauna, but their fees help support the local green economy, and offer opportunities to learn about the "Ticos" as Costa Ricans affectionately call themselves. If you go, be sure to set aside time to visit the Rio Celeste Waterfall, whose mineral rich waters are reminiscent of Havasupai Falls.

At Caño Negro National Wildlife Refuge in Alajuela Province, near the border with Nicaragua, we toured grassy wetlands by boat. Caño Negro is one of 11 Ramsar sites in Costa Rica, designated by international treaty as wetlands important for the conservation of global biological diversity and for sustaining human life through

the maintenance of their ecosystem components, processes and benefits/services. Caño Negro, the first Ramsar site in the country, was chosen in 1991 because of its importance for migratory birds, endangered species, and species of commercial importance. Caño Negro attracts over 230 species of migratory birds.

We then spent two nights on a working ranch, La Ensenada Wildlife Refuge, on the Gulf of Nicoya in one of the last primary and (mostly) secondary forests of the northern Puntarenas province. We took a motorized boat trip into the mangrove forest where we saw many remarkable sights including a trio of Whimbrels yet to embark on their over 4,000-mile journey to their Arctic breeding grounds. Thousands of White Ibises, Cattle Egrets, Magnificent Frigatebirds, and Brown Pelicans soared and roosted on a steep and crammed rookery island in the Gulf of Nicoya.

Our last night was spent in the country's second biggest city, Liberia, at the Best Western that had several secluded ponds where



*Spectacled Caiman, *Caiman crocodylus*. Caño Negro, Alajuela. When this caiman's nest temperatures are 88°F or lower, hatchlings are male, at 89°F or higher, they are female. Young are raised in crèches run by one female minding her and several others' offspring for two to four months until the wet season floods subside. Photo by Laurie Nessel*



*Black-bellied Whiptail, *Aspidoscelis deppii*, found by a roadside restaurant in Limonal, Guanacaste. This colorful lizard feeds on insects, spiders, opilionids (harvestmen), pseudoscorpions, centipedes, crustaceans, mollusks, and plant seeds. Photo by Laurie Nessel*



*Red-mantled Dragonlet, *Erythrodiplax fervida*, Caño Negro, Alajuela. A member of the Libellulidae (Skimmer) family and one of many odes I saw ("odes" is the abbreviation for odonata, the order of carnivorous insects that comprises dragonflies and damselflies). This dragonlet ranges south to Argentina and its only North American occurrence is limited to the Lower Río Grande Valley, Texas. Photo by Laurie Nessel*



*The Mantled Howler Monkey, *Alouatta palliata*, La Ensenada Wildlife Refuge, Nicoya, Puntarenas, is crepuscularly vocal (calls during dawn and dusk twilight). Air passed through the hyoid bone in its throat creates a deep, menacing sounding call that travels for several miles, but they are harmless vegetarians, feeding on leaves, fruit, and flowers. Gestation is around six months. A young monkey ventures no further than six feet from its mother for the first four months of life, using its tail to grasp the base of its mother's tail while clinging to her as she traverses the canopy. Photo by Laurie Nessel*



*The Wild Olive Tortoise Beetle, *Physonota alutacea*, Ensenada Wildlife Refuge, Nicoya, Puntarenas, ranges from Colombia to southern Texas. The beetle's host plant is Cordia, a genus of flowering plants in the borage family. Adult *Physonota* can change color using a hygrochrome process that regulates the amount of fluid in the multiple layers of the shell. This is used as Batesian mimicry as well as signaling sexual maturity. Photo by Laurie Nessel*



*Brown violetear, *Colibri delphinae*, Heliconias Lodge, Guanacaste. Several male Brown Violetears gather in leks and continually sing sharp rough songs during the breeding season. Photo by Laurie Nessel*

we saw Black-bellied Whistling Ducks and a Bare-throated Tiger Heron. A variety of odes were about but a groundskeeper with a hand-pumped pesticide fogger abruptly cut short my photo session.

On this nine-day trip we recorded 144 species of birds (including four new for Mark on his 14th trip to the country), three species of monkeys, many reptiles and amphibians, and innumerable species of tropical arthropods and plants.

Costa Rica, a model of eco-tourism and environmental protection, grapples with balancing its green economy with growth, foreign loans, rural poverty, poaching, encroaching agriculture, and the Fossil Creek Syndrome – loving a place to death. The literacy rate is 95%, education is free and mandatory, and the country invests nearly 30% of its national budget in primary and secondary education. That is a hopeful sign that Costa Ricans will continue to invest in their biodiversity, for its benefits to the economy, mankind, and nature. 🐦

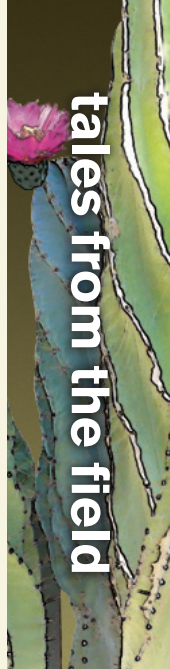
Laurie Nessel is Program Chair for Maricopa Audubon and teaches flameworking at the Mesa Arts Center and drowning prevention in private pools valleywide.

A SURPRISING FIND

by Marceline VandeWater



Mexican Garter Snake. Photo by Marceline VandeWater



tales from the field

In April, I guided for the four-day Verde Valley Birding & Nature Festival. On the Friday, I took a group to the Lagoons Area via the Greenway Walk at Dead Horse State Park. We saw 47 species of birds, but the highlight for most of us was a snake! It was a good-sized snake, about three feet long, with a cream dorsal stripe, and one side stripe on each side. Most gartersnakes show these three stripes. Somehow, I felt it was different from all the other gartersnakes I had seen before, so I took some pictures with my cell phone, and when back at the events tent, I researched the snake using *A Field Guide to Amphibians and Reptiles in Arizona* by Thomas C. Brennan and Andrew T. Holycross. Lo and behold: it looked like a Mexican Gartersnake! The ID is somewhat complicated: you have to determine on what scale row the side stripe is. People from Arizona Game and Fish confirmed my suspicion and told me this snake species had never been found at Dead Horse State Park before. Over the years, the Mexican Gartersnake has been extirpated from many streams in Arizona. Now it is only found at Bubbling Ponds, Tuzigoot National Monument, and a few streams and ciénegas in southeastern Arizona. The species is listed as threatened under the Endangered Species Act of 1973. Needless to say, finding this snake made my day! 🐍

Help MAS with an Employer Matching Gift

Many Maricopa Audubon members aren't aware that their employers may include a matching gift program in their benefits package. Programs vary from business to business, but they generally offer a dollar-for-dollar match when an employee makes a personal gift to a nonprofit organization like Maricopa Audubon Society.

Please visit your human resources department or charitable giving department to see if this opportunity is available to you. You usually have to fill out and submit a form, which is sometimes done online. If you have already made a donation to MAS in the past year, you may be able to get a matching gift after the fact from your employer for up to 12 months later. 🐍

URBAN OASIS FOR MIGRATING BIRDS

by Tom Gatz

The Desert Botanical Garden is well known as a bird-watching hot spot in the Valley. The diverse habitat of desert, trees, flowers, and water attracts many species of migrating and wintering birds and several that stay to nest. Almost every year, someone spots something really unusual, perhaps a Long-eared Owl from up north, a Black-throated Blue Warbler from back east, or a Rufous-backed Robin coming north from Mexico.

One of the best things I like about volunteering at the Desert Botanical Garden is that you never know what you will experience each time you return. For instance, several years ago, in early October, and two days before the fall plant sale, I was sitting on the asphalt parking lot, gingerly attempting to label a tray of spiny, uncooperative *Euphorbia horrida*. Staff member



Flammulated Owl, the only North American species of small owl with dark eyes. Photo by Nigel Voaden

Angelica Elliot came up and asked me if I could respond to a call from a school guide reporting an owl being attacked by a roadrunner on the Wildflower Trail. As a birder and retired wildlife biologist, I jumped at the opportunity. Gratefully turning in my tray of partially labeled euphorbias, I grabbed my camera, binoculars, and gloves and headed into the Garden.

I located the school guide, Pamela Keller, who had reported the observation to the ranger. She directed me to Beverly, a visitor from New York. Beverly was in town for the National Hispanic Women's Conference. As many birders do when on business trips to the Valley, she packed her binoculars and bird book and made a point of visiting the Garden in search of interesting desert birds. Well, she discovered an interesting bird all right, but it wasn't one of our typical desert species. It was a tiny, adult Flammulated Owl, a rare visitor from the higher elevation ponderosa pine forest; perhaps from Flagstaff, perhaps from as far away as southern Canada. Later, a quick check of the DBG bird data base on our library computer revealed only two previous sightings of this six and a half inch-long owl at the Garden, over 20 years ago, also in the fall months of September and October. According to the National

Geographic Society's bird book, this species is "rarely detected during migration."

I'll let Beverly describe her amazing encounter in her own words.

I whirled around to see it [the roadrunner] dart into a low tree and come out with something dark in its beak. It suddenly spotted me and dropped its prey and backed off slightly, beak still agape. I looked down to see that the dark thing was...some sort of OWL! The little owl spread its wings and faced off with the roadrunner. The roadrunner circled to the left...to the right...back and forth pendulum fashion trying to get an opening. I was standing not two feet away watching. As the roadrunner would dart in, I would shuffle my feet in the stones to try and help the little owl. The owl turned toward me and I saw dark eyes beseeching me. I started to flap my arms and shuffle and stamp my feet—carefully staying on the path. The roadrunner pecked at the owl again and again. I knew the instant that I turned my back it would be all over. As luck and the owl gods would have it, a school group approached. As the kids came along, the roadrunner dashed off ahead of them...the owl fluttered off... The guide...immediately picked up her walkie talkie and called... 'come quick...we have an injured owl!'

The owl did not appear able to fly well, and Beverly was concerned it might be injured. When I arrived, I scanned the underbrush and eventually observed the owl on a branch in the back of a large creosote bush. This time it perched absolutely still and vertically upright in its concealing posture in an attempt to appear thinner and to blend in with the branches. As I slowly reached for my camera, it flew off, apparently only temporarily shaken up but none the worse for wear from its close encounter with a still-hungry roadrunner. The Flammulated Owl was first sighted in the same Ironwood tree in which an unusually late migrating Elf Owl was seen just the week before on the Garden bird walk (we keep an eye on that tree).

Beverly was attracted to the Garden knowing it is great bird habitat. Likewise, the insectivorous Flammulated Owl, migrating over this ever-expanding megalopolis, keyed in on the Garden for a place to rest and perhaps catch a meal of a moth, beetle, or caterpillar before continuing south to its wintering grounds in Central America. An analysis by William Cook of 18 years of bird observations by Garden birders revealed that, as the Garden's vegetation has grown and matured, and as new areas of habitat were added when the pond was constructed and more seed and insects became available along the new Plants and People and Wildflower trails, the diversity of bird species has increased as well. According to avid birder Diana Herron, the birders at the Garden have tallied an impressive total of approximately 170 different species residing, wintering or migrating through, with 35 of these species staying to nest.

After her visit, Beverly sent me this email: "On the way out, I became a member of the Garden... it serves as host to migrating Flammulated Owls! A sea of green in an otherwise sprawling city." There is a saying: "Build it, and they will come." At the Garden, it could be "plant it and they will come." The Desert Botanical Garden, an oasis for birds...and for people. So, don't forget your binoculars and join a Monday morning bird walk. 🐦

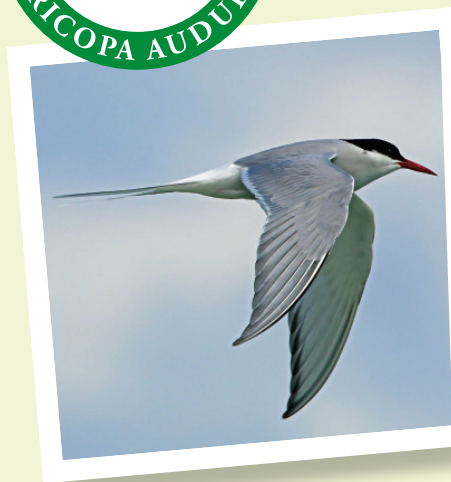
Tom Gatz has been a MAS member since 1981.

This article previously appeared in Gatherings, the newsletter for volunteers at the Desert Botanical Garden.



Connecting with nature makes Arizona a fun and better place to live!

Compiled by Vicki Hize



Arctic Tern. Photo by Nigel Voaden



Cliff Swallow. Photo by Vicki Hize



Rufous Hummingbird. Photo by Vicki Hize



green scene

Wings Up! Bird Migration is in the Air!

Did you know the word migration comes from the Latin *migratus* meaning “to depart” and migration refers to birds and animals that change their geographic location seasonally, usually in the spring and fall? Of the more than 650 species of birds that live in North America about half migrate to warmer climates to find food, reproduce, and raise their young. At least 4,000 species or 40% of birds migrate in the entire world!¹

Did you know migrating birds find their way by using stars at night, the sun, wind patterns, and landforms, mountains, and rivers? Since birds also fly on cloudy days and across the ocean where there are no landmarks, scientists believe the earth’s magnetic field also plays a part in bird navigation.² Flight paths used by birds to migrate are called flyways. The four major North American flyways are: the Atlantic, the Mississippi, the Central, and the Pacific flyways.

Did you know most birds fly at night so they can eat during the day? Also, birds enter a state called hyperphagia in the weeks preceding their migration. This means their appetite increases and they eat a lot of food to store fat, which they use later on their long journeys.

Did you know some birds fly in flocks in a V formation so there is less effect of friction on their wings? Each bird flies slightly above the bird in front, meeting less wind resistance. This allows them to conserve energy and fly farther. The lead bird and the last birds in the formation work the hardest, but they do take turns. The birds in the middle have it easier because they benefit from the flapping motion of the other birds.³

Did you know migrating birds can travel long distances? The Arctic Tern is a slender bird weighing less than an iPhone. But don’t let that fool you. It is famous for migrating the farthest of any other bird, traveling from the North Pole (Arctic) to the South Pole (Antarctic) and can fly more than 49,700 miles in one year.¹ Before their long journey in August or September, Arctic Terns spend about a month at sea to “fuel up” in the Atlantic Ocean on fish. Some will then fly south along the African coast. Others will cross the Atlantic Ocean and fly south along the eastern coast of South America to get to Antarctica where it is summer time. Surprisingly, they do not fly the same way home to the Arctic, but fly in a giant “S” patterned route north over the middle of the Atlantic Ocean.

Did you know the feisty, three-inch long Rufous Hummingbird has the longest migration of any hummingbird? In spring, they travel north along the Pacific coast, a one-way trip of 3,900 miles to breeding grounds in Alaska.⁴ This allows them to take advantage of flowering plants in spring for energy as coastal flowers bloom earlier. In the fall, the Rufous Hummingbird travels south through mountain ranges where the flowers bloom later and provide nectar for energy on their way to Mexico. And some Rufous Hummingbirds migrate through Arizona each spring and fall.

Did you know that Mission San Juan Capistrano in California used to boast of the return of Cliff Swallows on March 19 every year since the mission was built in the late 1700s? Using mud from nearby riverbeds, Cliff Swallows built nests in the eaves of the Mission and reclaimed them each year. And around October 23, the world-famous Cliff Swallows would swirl into the sky and head to their winter home in Argentina, almost 6,000 miles south. In recent years the swallows have not been returning. Researchers think this may be due to the mud nests being knocked down during renovation work done on the Mission in the 1990s. Renowned Cliff Swallow expert, Charles Brown, suggested the construction of a nesting wall with plaster nests to attract the swallows.⁵

References

- [1 http://www.audubon.org/news/9-awesome-facts-about-bird-migration](http://www.audubon.org/news/9-awesome-facts-about-bird-migration)
- [2 https://www.nationalgeographic.org/media/how-do-birds-navigate](https://www.nationalgeographic.org/media/how-do-birds-navigate)
- [3 http://idahoptv.org/sciencetrek/topics/bird_migration/facts.cfm](http://idahoptv.org/sciencetrek/topics/bird_migration/facts.cfm)
- [4 https://www.allaboutbirds.org/guide/Rufous_Hummingbird/lifeh](https://www.allaboutbirds.org/guide/Rufous_Hummingbird/lifeh)
- [5 https://www.missionsjc.com/events-venue/signature-events/saint-josephs-day-and-the-return-of-the-swallows-celebration](https://www.missionsjc.com/events-venue/signature-events/saint-josephs-day-and-the-return-of-the-swallows-celebration)

Green Scene Go Take a Hike

Head over to Desert Breeze Park at 660 N Desert Breeze Blvd., Chandler. You will find large shade trees, walking trails, a splash park, a fishing pond, and carousel and train rides. Don’t forget to take your binoculars, a fishing pole, and a picnic. The west end of the park has a hummingbird habitat that could use some volunteers!



green scene



All photos by Vicki Hire



Canada Goose

You've Just Seen A BANDED BIRD . . . Now What Should You Do?

By Vicki Hire

Bird banding is indispensable to scientists who study the lives, behavior, migration, and survival of birds. Since 1904, about 60 million birds of hundreds of species in North America have been banded. Of those, about four million birds with bands have been recovered or sighted. Data obtained when a banded bird is first released and when it is subsequently recovered are valuable in many different ways. The information can be used to monitor the effects of the environment on bird populations, to identify and restore endangered species, to determine life spans, to research bird diseases affecting people, to set hunting regulations for game birds, and even to examine how birds might be airport hazards.

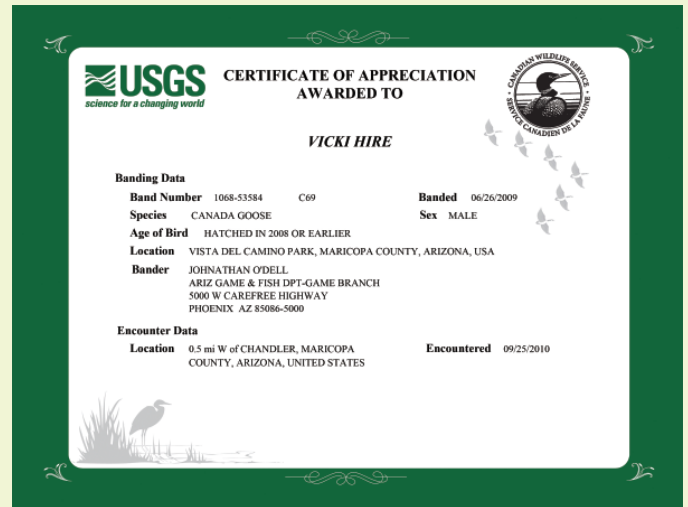
You might be lucky enough to see many types of bird bands and collars on wild birds. Bands come in different sizes and can be used on all birds from the largest raptor to the tiniest hummingbird. Each aluminum band is inscribed with a unique eight- or nine-digit number as well as the phone number and website to report a finding.¹ Canada Geese are often marked with neck collars such as the one in the photo, and can have either three or four digits and are made in several different colors to indicate the various migration flyways. Sometimes these collars can be used to mount radio transmitters on the birds.²

If you're fortunate enough to spot a banded bird, try to take a photo. Even if you don't think the band is very visible, scientists may be able to detect the unique number on the band. Report your finding at www.reportband.gov or call 1-800-327-BAND. You will be asked to provide where, when, and how you observed the banded bird, as well as your contact information. Your report will be provided to the researcher who originally applied the bird band, and will be also added to a database maintained by the USGS (United States Geological Survey) Bird Banding Laboratory together with the Canadian Wildlife Service Bird Banding Office.³

I observed the Canada Goose in the photo in Chandler, Arizona on September 25, 2010 and reported it to the USGS at www.reportband.gov. After reporting the sighting, I received a Certificate of Appreciation indicating the Canada Goose had been banded more than a year earlier on June 26, 2009 at Vista del Camino Park in Scottsdale, Arizona.

References:

- ¹<https://www.pwrc.usgs.gov/BBL/homepage/btypes.cfm>
- ²<https://www.pwrc.usgs.gov/bbl/homepage/cagoprot.cfm>
- ³<https://www.pwrc.usgs.gov/BBL/bblretrv/>



Green Scene True or False?

- T F 1. The Rufous Hummingbird migrates the farthest of any hummingbird.
- T F 2. Four thousand species of birds in the world migrate seasonally.
- T F 3. The Arctic Tern weighs less than an iPhone, yet migrates the farthest of any bird.
- T F 4. Cliff Swallows nest at the Mission San Juan Capistrano in California.
- T F 5. It takes more energy for birds to fly in a V formation.
- T F 6. Birds use only the sun to navigate during flight.
- T F 7. There are five flyways that birds use in North America.
- T F 8. Most birds fly at night during migration.
- T F 9. Hyperphagia is when birds have an increased appetite and eat a lot prior to migration.

Wings Up! Word Search

N	A	V	I	G	A	T	E	N	T	F	T	F	G	I	V
A	R	A	N	H	P	O	P	X	E	L	T	L	T	O	F
H	Y	P	E	R	P	H	A	G	I	A	L	Y	I	M	O
U	J	D	D	R	U	N	L	I	A	P	Y	W	F	M	R
M	I	G	R	A	T	I	O	N	P	P	E	A	T	I	M
M	S	C	I	R	N	J	N	V	B	I	N	Y	I	Z	A
I	O	R	Z	C	L	R	U	J	L	N	R	S	K	L	T
N	K	P	C	T	U	I	K	C	I	G	C	I	N	Y	I
G	N	L	M	I	S	S	I	O	N	J	R	J	C	U	O
B	J	V	D	C	U	Y	L	U	Y	S	E	A	S	O	N
I	V	L	P	T	R	A	V	E	L	U	J	Y	P	C	Y
R	N	J	P	E	N	Y	D	N	P	V	R	S	U	E	K
D	B	C	L	R	H	D	B	E	Y	C	K	W	L	A	N
P	I	L	A	N	D	M	A	R	K	S	Y	A	Y	N	P
F	R	C	K	H	L	J	K	G	C	O	R	L	C	D	V
I	R	J	O	U	R	N	E	Y	I	U	Y	L	I	Z	L
S	D	I	L	R	I	L	V	D	R	T	L	O	U	J	H
H	N	S	P	E	C	I	E	S	C	H	Y	W	C	D	P



See how many words you can find!

- Migration
- Arctic Tern
- Hummingbird
- Swallow
- Flyways
- Species
- Mission
- Travel
- Fish
- Journey
- V Formation
- Flapping
- Hyperphagia
- Energy
- Landmarks
- South
- Season
- Ocean
- Navigate

Guess this Bird



Clue: This colorful bird passes through Arizona during its migration from northwest Canada to central Mexico and Costa Rica. It migrates at night and flies at high altitudes usually alone or in pairs.

Green Scene Provide A Stopover Habitat And Help Migrating Birds!

1. Set out a bird bath or pan filled with water.
2. Hang bird feeders with seed, or set out fruit.
3. Plant native plants in your yard that have flowers or fruit throughout spring, summer, and fall.
4. Leave a dead tree or brush pile to provide shelter and food (insects).
5. Turn off lights in apartments and other high-rise offices to prevent migratory birds from colliding with buildings at night. As many as one billion birds are killed in building collisions every year in North America.
6. Become a citizen scientist. Join the Great Backyard Bird Count and track your sightings on eBird.
7. Limit use of pesticides, which can have long term, and potentially lethal effects on birds.
8. Limit use of plastic bags, which kill hundreds of thousands of seabirds, sea turtles, and marine mammals, which mistake the bags for jellyfish and squid.
9. Adopt a species of migrating bird from your flyway. Choose from a list in the Audubon Strategic Plan 2012-2015 at audm.ag/AudPlan. Learn about your species, then become an advocate and work to protect and restore its habitat in your community.

Inspired by Ibis

by Neil Rizos

It's a sun-splashed June morning. In the distance, the snow-capped peaks of the Austrian Alps shine brilliantly against the cerulean blue sky. As I set up my easel and arrange my paints, a profound peace arises within me, the self-conscious effort of striving and doing dissolves. The world and my spirit are cleansed through beauty, renewed in joy and wonder. This interior experience, though unexpected, is not unknown to me as an artist guided by my love of wild places and my fascination with birds. In front of me, and the focus of my attention, is a rather unusual looking bird – perhaps a cross between a turkey vulture and some wading bird species. In fact, it is one of the world's rarest birds - the Northern Bald Ibis, or Waldrapp.

At nearly eighteen inches tall and standing upon two stout, ruddy legs, my muse is both impressive and bizarre. The lush iridescence of her green and black feathers contrasts comically with her naked, boiled-red head, her long, curved bill, and war bonnet of ragged, erratic plumes. Undaunted by my presence, she boldly inspects my paint box, then cocks her head to fix a quizzical yellow eye upon her intruder. Her question is clear: "How did you get here?"

My journey to Austria began in October 2015, after a trip to the Salton Sea National Wildlife Refuge in southern California. Inspired by observing White-faced Ibises at the refuge, I searched the Internet for information about them and discovered videos of a different ibis species, unknown to me – the Northern Bald Ibis. Originally described in 1555, the Northern Bald Ibis is a migratory bird which was native to Central Europe until the 17th century, when it vanished due to human pressures from hunting and habitat loss. Apparently, Northern Bald Ibis was considered a delicacy and was appreciated for the tastiness of its flesh, especially that of chicks before fledging. A recipe for roasted ibis chicks can be found in a German cookbook compiled in the 16th century.

During my Internet search, I came across a documentary about the Northern Bald Ibis Reintroduction Program in Europe. Its founders, Johannes and Angelika Fritz, began their project in 2002 with a few dozen birds from captive collections. Its purpose is to re-establish migratory Northern Bald Ibis colonies in Germany and Austria which will then winter in Italy, on the Tuscan coast. The documentary traces



Northern Bald Ibis: Stepping out in full regalia!
Photo by Stephanie Peters

the many setbacks and successes during the team's efforts that have resulted in what we see today – wild Northern Bald Ibises flying in the skies of Austria, Germany and Italy.

Although Northern Bald Ibises were new to me, I was familiar with the project's approach of imprinting birds on humans, hand-raising them and then using ultralight aircraft to guide the birds on historical migratory routes to re-establish wild populations. From 1997-2000, I was the Artist-in-Residence at Airlie Center, Virginia, near Washington, DC. Airlie Center was also the home of The Swan Research Program, led by William Sladen. While there, I witnessed the early days of the ultralight aircraft method pioneered by Sladen, Bill Lishman and their crew, to reintroduce Trumpeter Swans in the eastern US. That project was the basis for the Hollywood film, *Fly Away Home*.

In November 2015, I emailed Johannes and Angelika with a proposal to visit them. They responded enthusiastically and were eager for me to experience their project from the perspective of an artist. We set the dates and on a beautiful, clear morning in June, 2016, Stephanie (my partner) and I arrived at the project's aviary near Seekirchen, about ten miles outside Salzburg. I will always remember that moment, for through it ran the golden thread of my life, weaving love and joy and birds and sunlight into a shimmering tapestry of form and feeling, knowing and mystery.

In one sense, it would be easier to keep this essay a standard birdwatching travelogue, sticking to facts and figures and great bird photos. But ease has never been my primary concern in life. A more compelling concern is to live the great mystery of life, to be authentic, open, and creative. Why did I travel more than 12,000 miles and commit significant time and money to see these birds in Austria – and by most measures, not strikingly beautiful birds? I cannot answer directly with words, ideas or images but perhaps I can point to forces that move me.

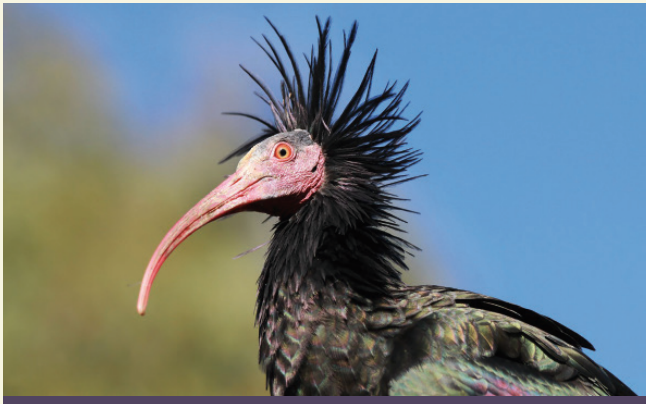
On May 29, 2017, my friend Bill Sladen died. He was 96 years old. He was also a patron and a great inspiration to me. He was friends with Roger Tory Peterson, Sir Edmund Hillary, Jane Goodall, Sir Peter Scott (a founder of World Wildlife Fund, exceptional bird artist, and the son of Antarctic explorer Robert F. Scott) and many other luminaries of conservation, science, and the arts of the late 20th Century. He was an elected member of The Explorers Club and had traveled every continent. In 1964, it was he who brought to light the global spread of DDT, finding it had entered the web of life in (then) remote Antarctica. Sladen had a tremendous curiosity about the natural world and an especially capable mind – with a PhD in zoology from Oxford and two medical



Preening Northern Bald Ibis, sketches by Neil Rizos



Various Poses – Northern Bald Ibis, sketches by Neil Rizos



Northern Bald Ibis: Exhibiting a personal sense of style!
Photo by Johannes Fritz, Waldrappteam

degrees. He served his humor dry and sharp. If one lives long enough and with such intensity, those qualities will surely win friends as well as detractors. Sladen won both, honestly.

This is from his obituary in *The New York Times*: “Some of my friends have puzzled over my giving up a medical career for studies in conservation and environmental health,” Dr. Sladen wrote in *National Geographic* in 1975. But he never second-guessed himself. His response, he said, was, “Wouldn’t they perhaps trade whatever they are doing to witness the spectacle of 300,000 Adélie Penguins in Antarctica, to round up thousands of Pink-footed Geese in Iceland, to sit among harems of fur seals on the Pribilof Islands in the Bering Sea, or to take inspiration from the Wandering Albatross as it soars majestically above the southern oceans?”¹

Sladen lived his life guided by his love of nature. I live mine guided by my life-long fascination with birds, approaching them as an artist and naturalist for more than three decades. They afford me the opportunity to explore this beautiful planet and they introduce me to extraordinary people along the way. All birds, whether in the wilds of Alaska or clustered around the backyard feeder, can lead to adventures filled with beauty and inspiration.

I couldn’t offer a satisfactory answer to the question posed by the bird in front of me that morning – “How did I get here?” It’s simply part of a larger mystery embracing us all, including the Northern Bald Ibis. Eventually, having satisfied her curiosity about my painting gear, she spread her glistening wings and flew away toward the distant mountains – off on her own personal encounter with the unknown. 🐦

Neil Rizos is a professional painter, printmaker, and sculptor, specializing in birds. He is currently Artist-in-Residence for printmaking at Mesa Arts Center. To learn more about the artist and his work visit www.rizosart.com and www.birdjournaling.com.

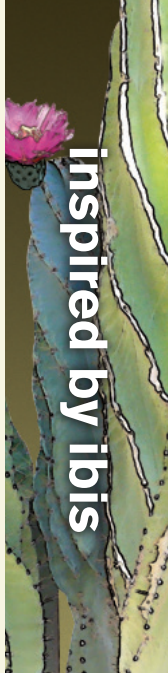
¹Roberts, Sam. “William J.L. Sladen, Expert on Penguin Libidos, Is Dead at 96.” *The New York Times*. June 17, 2017. Retrieved from <https://www.nytimes.com/2017/06/17/science/william-jl-sladen-expert-on-penguin-libidos-is-dead-at-96.html>



Soaring above the Austrian Alps - Northern Bald Ibises migrating to Italy. Photo by Pablo Prezesang, Waldrappteam



A Northern Bald Ibis explores my paint box. Photo by Stephanie Peters



Learn more...

At the beginning of the Northern Bald Ibis reintroduction efforts, scientists reared a group of the birds and let them roam free, only to discover that at the end of the summer, they flew off in different directions, to Holland, Germany, and even St. Petersburg. The birds showed a strong instinct to fly south in the fall, but they didn’t know which way was south. Learn how the scientists dealt with this challenge in the 50-minute film documentary, *The Flight of the Bald Ibis - The Secrets of Nature* at <https://www.youtube.com/watch?v=ghUD4ABTM3o>

Follow the annual migration of the Northern Bald Ibis with the Animal Tracker app. Download it at http://www.orn.mpg.de/animal_tracker

For a report about the Northern Bald Ibis project, which includes details of the scientific methods used, read “Back into European ecosystems: The LIFE+ Northern Bald Ibis reintroduction project in Eastern Europe” by Johannes Fritz, Wiebke Hoffmann and Markus Unsöld at https://www.researchgate.net/publication/312159311_Back_into_European_ecosystems_The_LIFE_Northern_Bald_Ibis_reintroduction_project_in_Central_Europe

The Northern Bald Ibis is listed by the IUCN as Critically Endangered. For additional information, go to <http://www.iucnredlist.org/details/22697488/0>

SYMBOL OF THE DESERT SOUTHWEST: GREATER ROADRUNNER

by Dano Grayson



Zygodactyl feet aid the roadrunner as it sprints.

The southwest, known for legends of fast guns, arid deserts, and... birds. Though many species migrate through the desert at different points during the year, one resident species stands out. An American ground cuckoo, the Chaparral Cock (*Geococcyx californianus*), most commonly known as the Greater Roadrunner, rises proud as a predator high up on the desert food chain. As an adult, this tenacious bird has no natural predators. Keen eyes, a small frame, and quick zygodactyl (x-shaped) feet have advantages in the desert shrubland. With a body length up to 24 inches (beak to tip of tail) and the ability to run at speeds of 26 mph, these birds are masters of the underbrush. Popularized in cartoons, western tales, and Native American folklore, this incredible cuckoo deserves its reputation as a symbol of the American southwest.

The Greater Roadrunner has an ever-widening range, however. The Cornell Lab of Ornithology (<https://www.allaboutbirds.org>) reports the roadrunner's range now includes Mississippi and Louisiana. Recognizable by its speckled tan plumage, blue-black iridescent crest, and zygodactyl feet (the same as woodpeckers), an encounter with a Greater Roadrunner is unmistakable.

Within the home range of the roadrunner, nests carrying three to six eggs can be found from late spring into summer. The nests are made of sticks lined with grasses and often placed in lower trees, like mesquite and even between the thorns of the Jumping Cholla cactus. After 20 days, the eggs hatch in the order in which they were laid. The youngest of the clutch often fails to survive the first few weeks due in part to older siblings outcompeting the young for food brought by the parents. The young grow quickly on a diet of insects and

start eating snakes after only a few days. Most observations of parental feeding involve a lizard as the food of choice. It takes 17 days from hatching for the young to leave the nest for the first time, although once they leave, the young stay with the parents as they go about learning the skills they will need to take on the challenges the desert will bring.



An adult roadrunner suns itself in the early morning.



Aside from gliding short distances from high perches, the roadrunner rarely flies.



A roadrunner just finishing a dust bath to help deal with pests like gnats and ticks.



A rattlesnake strikes and the roadrunner reacts in a southwest desert battle.



Nestling cries out for food. To hear sounds of roadrunner communication in the nest, see <https://youtu.be/QWi3Yv-49nc>

Life in the desert can be hard: extreme temperature swings, plants with thorns or spines, and many venomous snakes and insects. It takes a specialist to thrive in this habitat. The roadrunner, well adapted to life on the ground, has distinct behaviors to cope. In the morning, adult roadrunners press their feathers out and expose the dark skin on their backs to absorb the morning heat, welcoming in the day after the much cooler night. Nesting adults can create a channel using their brood patch to funnel air over the eggs, cooling them from the intense heat under the desert sun.

Food in the desert can be difficult to find but hidden dangers like rattlesnakes offer a hearty meal for those willing to risk a bite. A large strong beak and lightning fast reflexes are weapons that allow the roadrunner to attempt such a meal. Baiting the snake to bite, the roadrunner gets its opponent to expose a weakness. In this high-stakes bout to survive, there is no room for error. A precise bite to the neck, just behind the head, and the roadrunner has it. The bird devours the entire snake, fangs and rattle included. People lucky enough to witness this incredible moment in nature appreciate the lore surrounding the roadrunner and why, for hundreds of years, this bird represents a symbol of strength, speed, and courage.

The Hopi and Pueblo cultures respect these great birds for their abilities and have legends illustrating admiration for the roadrunner. It would be considered an honor to be compared to the cuckoo whether for speed and endurance at running in the harsh desert, or for bravery, taking on tasks that require skill and agility much the same as battling fast-striking, venomous rattlesnakes. The name "roadrunner" was given to the bird by settlers to its habitat who described them as able and willing to run alongside horse-drawn carriages. More recently Warner Bros. Entertainment Inc. popularized the species in cartoons.

As the legends around this animal continue to grow, the technology to display the roadrunner's true abilities improves as well. In recent years, with advances in video and photography technology, more and more clips of how this animal lives its life are being released and more legends are confirmed. No matter how you associate with them, the Greater Roadrunner of North America is a charismatic character contributing to the beauty and biodiversity of a stunning desert. 🦶

Dano Grayson is a writer, photographer, business owner, and field researcher. In southern Arizona, he owns a ranch, The Pond at Elephant Head, devoted to migrating species of birds and bats, and also host to several other desert species. He offers educational as well as wildlife photography classes to help others better understand the animals of the desert southwest. www.DanoGrayson.com

Watch a short video illustrating roadrunner behavior:
<https://youtu.be/GDfM4HQce8E>

All photos by Dano Grayson

Conservation Update

by Mark Horlings

San Pedro River

On June 12, 2017, MAS Vice President Robin Silver and the Center for Biological Diversity sent the Bureau of Land Management (BLM) a Freedom of Information Act (FOIA) request based on reports that Cochise County and BLM were negotiating to reduce BLM's rights to San Pedro River water. The BLM holds rights to sufficient water to protect surface flow and riparian areas along the San Pedro. Cochise County development advocates have suggested their plans to treat and then recharge water into the aquifer will protect river flows and that the BLM should, therefore, cede some water rights.

MAS members who bird the San Pedro, or who have followed years of legal squabbling, know that groundwater pumping has left the river in perpetual shortage. The FOIA request should shine some light, "the best disinfectant," on the situation. Comment in the *Sierra Vista Herald* described the County's recharge proposal as "voodoo hydrology."

Resolution Copper Mine

Resolution Copper proposes to pile tailings 400 feet high on the Tonto National Forest, at a spot easily seen from Highway 60 and the Boyce Thompson Arboretum. MAS and other mine opponents sued to require an environmental impact statement, instead of a simpler environmental assessment, before Resolution Copper tested soil conditions and hydrology at the site where it proposes to dump its tailings. Trial before the federal judge is now scheduled for August 23, 2017.

Threat To The Southwestern Willow Flycatcher

In May 2017, Tamarisk Leaf Beetles and their larvae were found in central Arizona, along the Hassayampa River. The discovery poses a new threat to the remaining population of Southwestern Willow Flycatchers.

This wasn't supposed to happen. Tamarisk (saltcedars) are non-native and have choked Arizona waterways for decades, driving out the willows in which the flycatchers used to nest. Sometime during those decades, however, the flycatcher adapted and began to nest in tamarisk as well.

The US Department of Agriculture proposed to import the Tamarisk Leaf Beetle from Asia to kill the tamarisk. MAS Vice President Robin Silver and others opposed these plans, but the US Fish and Wildlife Service approved, arguing that the Tamarisk Leaf Beetle would stay north of Southwestern Willow Flycatcher habitat.

The beetle quickly proved USFWS wrong, munching tamarisk south into areas used by the flycatchers. In 2016, a Nevada federal court ordered the federal agencies to take steps to correct their mistake. The beetles found near Wickenburg, along the Hassayampa, threaten the heart of Southwestern Willow Flycatcher habitat.

Rosemont Mine Near Tucson

On June 7, 2017, the Forest Supervisor of the Coronado National Forest approved plans for the controversial Rosemont Mine near Tucson. The Forest Service favored plans for an open pit mine a mile across and half a mile deep, finding that this alternative involved the least damage to the environment. The Forest Service considered five alternatives but held that it could not rule for the "no action" alternative favored by mine opponents. This fight will continue: the mine needs a Clean Water Act permit from the Corps of Engineers, which will be contested.

Fiscal Year Ending May 31, 2017

by Vicki Hire, Treasurer

INCOME FY2017

Audubon Membership	6,238
MAS Friends Membership	5,399
Investments	1,962
Banquet	1,612
Books	583
Donations	496
Big Sit!	479
Auction	380
Interest	323
Raffle	173
Fry's Rewards Program	116
Total Income	17,761

EXPENSES

Conservation	22,671
<i>The Cactus Wren•dition</i>	11,585
<i>Birds of Phoenix</i>	3,080
Education	2,700
Books	1,938
Banquet	1,729
Administration	1,655
Insurance	1,553
Honoraria	1,510
Rent	1,300
Total Expenses	49,721



Green Scene Puzzle Answers

Answers to True or False

1. True. This tiny bird travels 3,900 miles one way to its breeding grounds in Alaska.
2. True. That's 40% of the world's birds!
3. True. The Arctic Tern can travel as many as 49,700 miles round trip.
4. True. However, their numbers have declined.
5. False. Birds fly in a V formation to save energy on their long journey.
6. False. Birds also use the stars at night, as well as rivers and landmarks to navigate.
7. False. There are four major flyways that birds use in North America.
8. True. Most birds fly at night during migration.
9. True. Birds are bulking up and storing food for energy during their long migration.

Answer to Guess this Bird

Western Tanager.

The red face of the Western Tanager is due to rhodoxanthin, a pigment rarely found in birds, which the tanager probably gets from its insect diet.

Answer to Wings Up! Word Search

N	A	V	I	G	A	T	E	N	T	F	T	F	G	I	V
A	R	A	N	H	P	O	P	X	E	L	T	L	T	O	F
H	Y	P	E	R	P	H	A	G	I	A	L	Y	I	M	O
U	J	D	D	R	U	N	L	I	A	P	Y	W	F	M	R
M	I	G	R	A	T	I	O	N	P	P	E	A	T	I	M
M	S	C	I	R	N	J	N	V	B	I	N	Y	I	Z	A
I	O	R	Z	C	L	R	U	J	L	N	R	S	K	L	T
N	K	P	C	T	U	I	K	C	I	G	C	I	N	Y	I
G	N	L	M	I	S	S	I	O	N	J	R	J	C	U	O
B	J	V	D	C	U	Y	L	U	Y	S	E	A	S	O	N
I	V	L	P	T	R	A	V	E	L	U	J	Y	P	C	Y
R	N	J	P	E	N	Y	D	N	P	V	R	S	U	E	K
D	B	C	L	R	H	D	B	E	Y	C	K	W	L	A	N
P	I	L	A	N	D	M	A	R	K	S	Y	A	Y	N	P
F	R	C	K	H	L	J	K	G	C	O	R	L	C	D	V
I	R	J	O	U	R	N	E	Y	I	U	Y	L	I	Z	L
S	D	I	L	R	I	L	V	D	R	T	L	O	U	J	H
H	N	S	P	E	C	I	E	S	C	H	Y	W	C	D	P

Migrations

By: David Chorlton

*The ice cracks on a pond in Alaska.
A violet-green swallow sheen glides
from the continent's waist
over forests and canyons
on the long way to a nesting site.
Grasses break out from under snow.
A kestrel alights
on a telephone wire that sags
as the last drops thaw
and fall to the roadside.
The pine-oak slopes in a canyon
warm above the desert
and a few hoarse trogon calls
land close to water, sycamores
and katydids, not far
from the secret trails
which people follow in a race
with the sun to find
a season more hospitable
than the one they left behind, while
Swainson's hawks flow high
across a border between
two summers, to the wide
grassy spaces
their appetites crave.*



Violet-green Swallow. Photo by Nigel Voaden

Green Scene School Projects

If you would like to apply to the MAS Education committee for funding for a school natural history project or field trip, please contact Jasper at yellowbirdphilosophe@gmail.com



Jeff smiling at Henry, an adult male Western Diamondback Rattlesnake. Photo by Melissa Amarello

SHEDDING OUR OLD VIEWS OF SNAKES

by Jeffrey J. Smith and Melissa Amarello

Moby Dick no longer terrifies readers as he once did. Herman Melville's infamous white whale was a villainous and vengeful brute, which may have seemed plausible in a time before we knew much about life in the sea. But we now know, thanks to careful scientific study, that whales are highly intelligent creatures that form close, long-term social bonds (and pose a negligible threat to humans). The discovery of these human-like behaviors endeared whales to us, and no doubt played a significant role in the push to protect whales and all but end the relentless slaughter of the whaling industry.

Humans often fear what they don't understand and to most, snakes are a mystery. Snakes rely on crypsis so even when traversing through their world, we rarely see them. This void of direct knowledge is filled by myth and media, which portray snakes as cold-blooded killers and focus on how deadly and dangerous they are. It's no surprise then that snakes provoke one of the most common phobias, even in the US where we lack truly deadly serpents.

Forever fascinated by snakes, we've studied wild snake behavior for 15 years. We have never found them to reflect their reputations as aggressive, nasty, mean, or even very dangerous (provided they are given time and space to move along). So, what if people knew what snakes were really like?

To see how snakes behave when not responding to us (who they perceive as threats), we set up remote, time-lapse cameras at sites where Arizona Black Rattlesnakes (*Crotalus cerberus*) congregate during the spring emergence and the late summer nesting season. We identify individuals by variations in their patterns (see Amarello and Smith 2012 for an example of how this works) and note who associates with whom.

While we are not the first to document parental care in rattlesnakes, our photos, videos, and stories bring this behavior to life for many. Although mothers do not feed their young, we have observed many other forms of care. Mothers keep newborns from straying too far during the first few days of their lives, gradually letting them explore farther as they approach their first ecdysis (shedding of their skin) and leave the nest at 10-14 days old. Mothers defend their young from threats such as squirrels, who harass and may even kill newborns, and we've had mothers approach us in a threatening posture when we got too close to their babies. Perhaps most surprising is that mothers aren't the only ones caring for newborn rattlesnakes -- still-pregnant females sharing the communal nest and even visiting males and juveniles assist with parental duties.

Others' research hints that communal dens play a larger role in some species than merely providing an escape from freezing temperatures (Clark et al. 2012). We use two techniques novel to the study of snake behavior. To analyze observations at an over-wintering site in central Arizona we use association indices and social network analysis. Association indices estimate the proportion of time each pair of rattlesnakes spends together, permitting comparison of relationship strength among pairs within a population and allowing us to distinguish between random and non-random associations. Additionally, association indices can be used to construct weighted social networks.

Rattlesnakes in our study population do not associate randomly; they have friends (pairs of rattlesnakes observed together more often than expected by chance) and individuals they appear to avoid. Adult females are more likely to be friends with each other than with juveniles or males. Juveniles are friends with other juveniles and adult males, but no adult males are friends with other males (despite the fact that nearly a third of all pairs had associated at least once).

So now when we talk about snakes, in our presentations or on social media, we can say that they share many behaviors



Melissa photographing Alice and her new family of Arizona Black Rattlesnakes. Photo by Jeffrey J. Smith



Eve, a new, young mother, guards her and her nestmates' newborn Arizona Black Rattlesnakes. Photo by Jeffrey J. Smith



Adrian, a pregnant Arizona Black Rattlesnake guards one of her nestmates' newborns. Photo by Melissa Amarello



Roger, an adult male Arizona Black Rattlesnake, rests with a newborn Arizona Black Rattlesnake. Photo by Melissa Amarello



Yellowtail (adult female) and Freckle (adult male) were acquaintances, but not friends. Photo by Melissa Amarello

ABOUT ADVOCATES FOR SNAKE PRESERVATION

Advocates for Snake Preservation (ASP) promotes compassionate conservation and coexistence with snakes through science, education, and advocacy. ASP identifies and addresses threats to snakes, conducts research, and dispels myths and misinformation about snakes. Snakes are threatened by many of the same issues that affect all wildlife, including habitat loss, climate change, and disease, but negative attitudes toward snakes may be the biggest barrier to their conservation because it often impedes efforts to address other threats. For more information visit www.snakes.ngo.

LIVING WITH SNAKES

Everyone wants to know how to make their yard attractive and open to birds, bunnies, and other wildlife while excluding snakes. But the truth is... you can't. And moving or killing snakes is not a permanent solution. You can learn to live safely with snakes. Here are some tips:

- Use lights when walking at night
- Create clear, wide paths for safe walking
- Watch where you put your hands and feet
- Use a long stick to disturb vegetation and any animals hiding within it

Learn how to make your yard less attractive to snakes (and other wildlife) and how to fence them out at www.LivingWithSnakes.org.

with us, behaviors we value. They have friends. They take care of their kids and their friends' kids too. We use stories of individual snakes, illustrated with photos and videos, to show they too can be caring parents with rich social lives. Many people tell us these stories change how they think about snakes and that they won't take a shovel to the next one who shows up in their yard -- who wants to kill a mom or someone's friend?

Who knows? Maybe someday we'll look back at *Snakes on a Plane* with the same bewilderment as we do at *Moby Dick*. 🐍

Jeffrey J. Smith and Melissa Amarello worked for over a decade as conservation biologists in the southwest before founding the nonprofit Advocates for Snake Preservation in 2014.

References and resources:

Amarello M. 2014. Squamate sociality: surprisingly like birds and mammals. *Social Snakes Blog*. Available online:

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Nature through the Artist's Eye: Stephanie Peters



Stephanie Peters

Mixed media artist Stephanie Peters has found inspiration in the natural world since childhood. Growing up on a horse farm outside Baltimore, Maryland gave her the perfect foundation to become a full-time artist inspired by animals. She's still working on that - somewhere along the way she got distracted by the majestic beauty and destructive forces of natural cataclysms. In her studio in Arizona, she creates mixed media paintings and drawings inspired by recent natural catastrophic events and their role in the ecosystem.

Her relationship with natural disasters began in 2004 after the powerful earthquake and tsunami hit Indonesia. After hearing the news, she wondered how she could help heal those directly affected by the devastation. Over the next ten years, she would witness and experience natural disasters personally, giving her the inspiration to seek answers to her question in a series of abstract paintings that symbolized healing.

Her original series deliberately did not discuss the science of natural disasters; however, she couldn't ignore the positive and negative impacts disasters have on their environment. Focusing on wildfire, a natural event that is part of the backdrop of her life in Arizona, Peters examined the important role of forest fires in the life cycle of plants and animals. This generated a new series of paintings and drawings that look at the forest both during and after a fire.

Peters acknowledges that disasters, besides being brutal and surreal, can also be breathtaking and astonishing. "When an avalanche falls, or a meteor shoots through the sky, it's hard not to see beauty," she says. For that reason, her work reflects the aesthetic dimension of these complex events. Recently, in addition to wildfires, she has also begun to explore the impact of severe weather and volcanoes on the environment.

When she is not chasing a natural disaster, she travels to interesting places seeking experiences that inspire her, like hiking among Desert Bighorn sheep in Zion National Park, or watching flamingos in the Camargue region of France. These experiences inspire her to create intimate portraits of animals in soft pastel, abstract interpretations in her paintings, or illustrations for digital art – on her journey as a wildlife artist.

Peters displays her work in galleries and restaurants around Arizona. She has participated in a variety of art projects, including Verde Valley Land Preservation's, *A River Runs Thru Us*. Her work has been featured in various publications including the 2013 F issue of *Brand*, *Natural Hazards Observer* (2015), and *MISC A Journal of Strategic Insight and Foresight* (2015). She has participated in national juried exhibitions and her work is in private collections internationally. To learn more about Peters and to see more of her work, visit www.stephartist.com.

Stephanie says: "Earth is the only known planet where fire can burn; there is not enough oxygen on other known planets. While it is true that fire can be enormously destructive, fire is a natural occurrence. It is nature's way of renewing habitat and regenerating life in our forests. Fire is neither good nor bad; it is both damaging and creative. This is the cycle of life. The work featured here celebrates the role wild fires have in our ecosystems, from flames to ashes." 🐦



Roaring Flame

Mixed media on canvas, 20"x16"

An abstract painting that brings you inside the flames of a burning forest. This painting uses charcoal pulled from recent burned forests.



Kirtland's Warbler

Soft pastel on paper, 8"x12"

This drawing of a Kirtland's Warbler reflects the life that exists because of wildfires. Also known as Jack Pine Warblers, these little birds are dependent on wildfires to provide the small trees and open areas that meet their rigid habitat requirements for nesting. They were almost forced to extinction when forest fires were suppressed, but now they are on their way to recovery as scientists and wildfire mitigation experts find ways to control burns and live with natural occurring wildfires.



Burned Scape

Mixed media on canvas, 16"x20"

Burned Scape is inspired by the regrowth of a burned forest, that occurs right after a forest fire. The landscape and trees in this painting were inspired by, and created using charcoal collected from a recent burned forest near Tucson.



Mount Graham Red Squirrel

Soft pastel and charcoal on paper, 9"x12"

The Mount Graham Red Squirrel is native to and only found in higher elevations of southern Arizona's Pinaleno mountains. Forest fires threaten its habitat, and along with drought and insect infestation, have helped push this squirrel to the edge of extinction.



Black-backed Woodpecker

Soft pastel and charcoal on paper, 16"x12"

Black-backed Woodpeckers typically live off beetles that feed on burned trees after a wildfire. The woodpecker, the beetle, and the burned tree are all elements of a perfectly balanced ecosystem that thrives off forest fires.



Slide Fire Sky (Smoke)

Acrylic on canvas, 20"x24"

This illustrates the majestic beauty of a smoky sunset near a forest fire. Although wildfires are dangerous and feared, it is hard to ignore their beauty, and not appreciate how they can transform the evening sky. This painting was inspired by the sunsets I saw in Sedona over Coffee Pot Rock, during the 2014 Slide Fire. That fire ended up burning over 20,000 acres in and near Oak Creek Canyon.

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Monthly Meeting

First Tuesday of the month, unless otherwise announced, September through April, 7:30 p.m. Our meeting place is Papago Buttes Church of the Brethren, 2450 N 64th Street, Scottsdale, AZ (northwest of 64th Street and Oak Street, which is between Thomas Road and McDowell).

Please contact a board member if you have any questions, or check out our web site at www.maricopaaudubon.org. Pre-meeting dinners (September through April) are held at Rolling Hills 19th Tee Restaurant, 1405 N. Mill Avenue, starting at 6:00 p.m.

Membership Information and How to Receive *The Cactus Wren*•dition

Two distinct memberships exist: membership of the National Audubon Society (NAS) and membership of the Friends of Maricopa Audubon Society (MAS).

To become a member of the NAS please go to:
www.audubon.org/audubon-near-you

We send *The Cactus Wren*•dition to all current members of NAS if you are assigned to or choose MAS as your local chapter. NAS provides MAS \$3.00 per year for each member assigned to us.

To become a Friend of MAS, please pick up a form at the book sales table at our monthly meeting or download the form from our website,
<http://maricopaaudubon.org>

For specific questions please contact our Membership Chair.

Submissions

Copy for *The Cactus Wren*•dition must be received by the editor by e-mail, by January 15, April 1, July 1, and October 1. Articles not received by the deadlines may not appear in the upcoming issue. Email to: *The Cactus Wren*•dition Editor, Gillian Rice: editor.wrendition@yahoo.com

Opinions

The opinions expressed by authors in this newsletter do not necessarily reflect the policy of the National Audubon Society or the Maricopa Audubon Society.

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