



The Cactus Wren·dition



Volume LXX, No. 4

Winter - 2015



Ruby-crowned Kinglet

Photo by Marceline VandeWater



**New Children's
Pages Inside!**

Programs

Meetings are held at: 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 either 64th Street, just north of Oak Street (if coming from the south you will have to make a "U" turn), or Oak Street just west of 64th Street, by the Elks Lodge. Turn right into the gravel parking lot. Come and join us and bring a friend!

December 1, 2015

Jim Walters Arizona's Native Fish: Fight for Survival

Arizona's native fish range from big river fish in the Colorado River to small fish in isolated springs. Most are threatened, endangered, or extinct. Jim Walters will provide an overview of Arizona's fish and the major threats to them. Focusing on the endangered humpback chub in the Little Colorado and Colorado Rivers, Jim will highlight population trends, how populations are estimated, and some of the work with translocation of



Humpback chub with hoop net

Committees/Support

Arizona Audubon Council Rep
Emerson Stiles
estiles2@hotmail.com

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>

Dostoyevsky wrote, "Beauty will save the world." But who will save beauty?

Yezgeny Yeztushenko

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.

fish to other areas and tributaries within the Grand Canyon drainage. He will also touch on the restoration of Fossil Creek to a native fish stream and Apache trout restoration in the White Mountains.

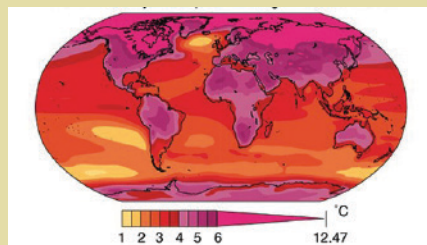
Jim Walters, US Fish & Wildlife Service Fisheries Biologist since 2007, works primarily in the Little Colorado River with humpback chubs. He has also worked with other native fish throughout the state.

January 5, 2016

Tice Supplee Shift Happens

Join Tice Supplee for a presentation of Audubon's seven-year study on how climate change is becoming the number one threat to North American birds and how it could affect the ranges of 588 species. Learn where potential habitat strongholds for birds are in our state and how you can make a difference for the future of our birds and for us.

Tice Supplee is Acting Executive Director and Director of Bird Conservation for Audubon Arizona. She administers the Arizona Important Bird Areas program and provides technical support for Audubon Arizona policy and conservation work. Before joining Audubon, Tice served as the Game Branch Chief for the Arizona Game & Fish Department. The Arizona Chapter of The Wildlife Society, the Arizona Game and Fish Commission, and the Arizona Wildlife Federation have recognized Tice for her contributions to conservation.

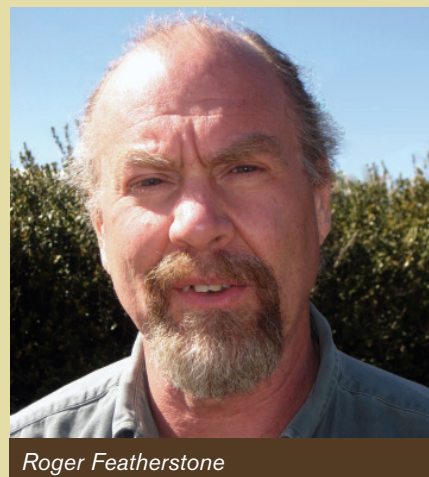


February 2, 2016

Roger Featherstone Past, Present, and Future: Saving Oak Flat.

Oak Flat, a sacred recreational and ecological haven, has been protected from mining by Presidential order since 1955. In December 2014, Senator John McCain and other Arizona Members of Congress added a land exchange to the National Defense spending bill that would trade Oak Flat to Rio Tinto upon completion of an environmental impact statement.

Roger Featherstone will discuss community efforts to protect Oak Flat from mining by Rio Tinto and BHP Billiton Ltd (two of the world's largest mining companies). His presentation will



Roger Featherstone



On the Cover: Ruby-crowned Kinglet

Focal Length 400mm, 1/2000 sec, f/8, ISO 800, Canon EOS 5D, Mark III. Seven Springs Campground, January 20, 2015 by Marceline VandeWater

Marceline says: Ruby-crowned Kinglets are hard to photograph. They never sit still. Even this picture taken at 1/2000 of a second still shows a slight blur of the wings. But it is one of my favorite winter photos of 2015, as I love the "truth" that this shot seems to capture.

cover the history, current situation, and prospects to protect Oak Flat and the surrounding landscape from these culturally and environmentally damaging mining plans.

Roger Featherstone has many years of experience founding and directing environmental protection organizations such as the Grassroots Environmental Effectiveness Network (GREEN) and the Mount Graham Coalition. He is Director of the Arizona Mining Reform Coalition, which works to reform national, state, and regional regulations governing hard rock mining and supports coalition members to stop inappropriate mines in Arizona.

March 1, 2016

Diane and David Reesor Madagascar and Mozambique

Perennial favorites, Diane and David Reesor, present the first flying safari in Madagascar during October 2013. Madagascar is a mini-continent larger than France, containing the world's most bizarre and diverse flora and fauna in otherworldly landscapes. Their program includes many of the endemic species: reptiles, beautiful birds, and enigmatic, endangered lemurs. To see David's extraordinary images of remarkable subjects from around the world, visit reesorphotography.com. If time allows, they will also present Mozambique images atypical of the African tour.



Schlegel's Asity. Photo by David Reesor

April 5, 2015

Cindy Marple Birds of Tanzania

Explore the rich diversity of birds found in the Serengeti plains and nearby Ngorongoro Crater. Familiar families such as eagles, shrikes, and storks have far more species than we see in North America. Other families are new and different. The plains are mostly grasslands, but the watering holes that attract wildlife also attract surprising numbers of shorebirds, waders, and waterfowl, especially during the winter migration of birds from Europe. To round out the safari experience, we'll enjoy some of the scenery and other wildlife along the way.



Lilac-breasted Roller. Photo by Cindy Marple

President's Message



Mark W. Larson

The shrikes frequented open, grassy fields with islands of limestone and thorny shrubs where they nested. On this trip, however, I didn't see any shrikes, but each morning before breakfast I hiked down the hill to the Potomac River, lined by its impressive gallery forest. It was a treat to see some of the birds I knew as a teenager, such as Carolina Wrens, Blue Jays, Ruby-throated Hummingbirds, and Eastern Wood Pewees.

The NAS Convention was a gathering of about 350 like-minded Audubon members from around the country. Informational sessions with expert lecturers covered topics as diverse as eco-tourism, effective media relations, bird-friendly buildings, and strategic planning for chapters. There were also vendor booths and time to meet and learn from other chapter leaders and the challenges they face.

Later in the summer, we were asked to develop a bird list for Shadow Rim Ranch, the Girl Scout camp located just below the Mogollon Rim north of Payson. Our first trip there was successful in finding about 45 species of birds, but we will need to make more trips in different seasons to gather enough data for the checklist. Next summer, the Girl Scout leaders are planning to hold classes for the scouts on bird identification and ecology. If you would like to help with this project, please let me know.

In closing, let me say that the Maricopa Audubon Society stands firm in our commitment to preserving and enhancing the precious riparian systems of our desert state. We will continue to fight threats to our free-flowing rivers and their abundant birds and wildlife whether those threats come from two-legged or even four-legged destroyers. 🐦

Mark W. Larson

President

MARICOPA AUDUBON SOCIETY

Phoenix, Scottsdale, and Tempe, Arizona



Gillian Rice

Letter from the Editor

by Gillian Rice

Do you like getting your hands dirty? I love to plant my garden. I feel little tingles of satisfaction as I place each seedling in the soil. And hope. Hope that in a few months I'll be enjoying heaps of crunchy greens.

Without soil we could not survive. Did you know 2015 is the International Year of Soil? Healthy soil nourishes the plants we eat. Today I planted broccoli, a good source of calcium. The calcium comes from the soil. Because healthy soils produce nutrient-rich food, I try to practice crop rotation and add compost to encourage "good" soil bacteria.

Soil nurtures not only my vegetable patch but also the natural environment. When we hike in forests we admire the trees. But it's the soil that keeps those trees healthy. If a forest is destroyed in a fire, the soil will bring back life.

In dry areas like the Sonoran Desert, the lack of moisture means that minerals are trapped inside soil particles and very few minerals can support plant growth. We know, however, that organisms such as microbes, lichens, ants, rodents, and reptiles thrive in desert soil.

For more information about the International Year of Soil, visit www.soils.org/IYS

The health of the soil underpins the ecosystem of Arizona's grasslands. In this issue, Matt VanWallene writes about helping with a scientific project on how vegetative changes affect grassland birds. A combination of soil and climatic conditions in the Alaskan tundra, from where Larry Langstaff reports, produces particular vegetation like willows that are just toe-high.

I am grateful to all this issue's contributors who share articles, poems, photographs, and art for our enjoyment and education. *The Cactus Wren•dition* would not be possible without you.

In this issue, we have a new feature: Green Scene, compiled by Vicki Hire for the younger members (or young at heart) in our community. Please share this with the youngsters in your family.

I welcome your feedback and submissions: editor.wrendition@yahoo.com 🐦

TABLE OF CONTENTS

Programs.....	2
On the Cover	2
President's Message.....	3
Letter from the Editor	3
Poetry by David Chorlton	3
Field Trips.....	4
Notes and Announcements	5
Tales from the Field.....	6
AZFO Annual Meeting Report by Walter Thurber.....	9
Conservation Update by Mark Horlings.....	10
<i>Salvia coccinea</i> – A Bird Magnet by Tom Gatz.....	11
Green Scene compiled by Vicki Hire	12
A Sea of Cotton by Sarah Shirota	14
Science Corner by Matt VanWallene	16
Forming a Partnership by Vicki Hire.....	18
A Grand Vision by Gail Cochrane.....	20
Christmas Bird Count Schedule	21
Nature Through the Artist's Eye:	
Margaret Saylor	22

River Weather

by David Chorlton

*White smoke rises from the shoulder
of a mountain embedded
in a rain-dark sky, below which
a freight train carries stormlight
across the open land.*

*With stars above the river,
mice in the grass
and toads on the stones,
a mantis glides
across a bed of insect sounds.*

*While the gods roll dice
behind the clouds,
dark water turns on its bed
and the surface shadows
become a heron's wing.*

*There's a feral sky
above the ghost town site
where Black-throated Sparrows
fly into and out of
the thundering grass.*

San Pedro River, August, 2015

Maricopa Audubon Society Field Trips

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>

Friday, December 14

Fountain Hills Lake and Rio Verde Ranch

A wide variety of winter waterfowl at the lake (usually including Eared Grebe, but perhaps Common Goldeneye, Hooded Merganser, and Western Grebe) before Rio Verde Ranch, an entirely different habitat with Ladder-backed Woodpecker, Bewick's Wren, and other desert and riparian species. Cedar Waxwings and American Robins are unusual there, but sparrows and Vermilion Flycatchers are not! Start at Fountain Hills about 7:00 am and end there about 11:00 am. Difficulty: 2. Limit 8. Leader: Kathe Anderson, kathe.coot@cox.net

Monday, January 4

Arlington

Agricultural fields reliable for Burrowing Owls, diurnal raptors, sparrows, common desert species, plus waterfowl at canals and farm ponds. Start at 6:30 am in Tempe and end at about 1:00 pm. Mostly car birding. Difficulty: 1. Limit 8. Leader: Kathe Anderson, kathe.coot@cox.net

Saturday, January 9

Oak Flat

Likely birds: Vermilion Flycatcher, Canyon Towhee, juncos, Black-throated and Black-chinned Sparrows. Start at 8:00 am and end by 10:30 am. Difficulty: 1. Limit 12. Leader: Myron Scott. For reservations contact Larry Langstaff, larrylangstaff1@gmail.com or text 480 710-0431

Saturday, January 30

Higley Road/Ocotillo Road Recharge Ponds

This site has flat gravel or dirt roads to walk along. Good migrants possible. Great views of wintering waterfowl through my spotting scope. Bring yours if you have one. Not many people visit this site, which is under Roosevelt Water Conservation District's control and has a signed parking lot. Difficulty: 1. Limit 12. Leader: Larry Langstaff, larrylangstaff1@gmail.com or text 480 710-0431

Tuesday, February 2

Pima Canyon, South Mountain Park, Phoenix

Hike up the road to the stone ramadas, then up a sandy wash to an area with Elephant Trees that may hold wintering Gray Vireos. Great Horned Owls often roost on a ledge. Includes hiking a steep hill. Bring a hiking staff. More information: http://www.maricopaaudubon.org/web-content/birding_locations/pima.htm. Difficulty: 2. Limit 12. Leader: Larry Langstaff, larrylangstaff1@gmail.com or text 480 710-0431

Thursday-Saturday, February 4-6

Sandia Crest and Bosque del Apache, New Mexico

Attempt to see at least one kind of rosy-finch atop Sandia Crest and enjoy the spectacles of Snow Geese and Sandhill Cranes at Bosque del Apache. Start 6:00 am from Scottsdale, via Payson for early morning birding. Go east on 260 and 60, birding along the way in Arizona. Arrive in Albuquerque to bird the Rio Grande Nature Center area at the end of the day. Stay at a moderate hotel, and visit Sandia Crest the next morning for a couple of hours to search for rosy-finches. Head to Socorro, maybe stopping at a preserve on the way. On to Bosque del Apache for birding at dusk, perhaps catching a fly-in of cranes and geese. Possibility of visiting Bosque the following morning. Before lunch, return west, stopping at a couple of birding areas on the way. Arrive in Scottsdale about 7:00 pm. High elevation winter birds such as Hairy Woodpeckers, Steller's Jays, nuthatches, and bluebirds, plus vast flocks of wintering waterfowl and raptors at Bosque del Apache. Difficulty 1-2. Limit 8. Leader: Kathe Anderson, kathe.coot@cox.net

Saturday, February 20

Pima Canyon, South Mountain Park, Phoenix

Likely birds include desert, desert riparian and desert upland species such as Canyon Towhee, Black-throated Sparrow, Phainopepla,

and Harris's Hawk. Also wildflowers. Start 7:30 am and end by 10:30 am. Difficulty: 1-2. Limit 12.

Leader: Myron Scott. For reservations contact Larry Langstaff, larrylangstaff1@gmail.com or text 480 710-0431

Sunday, March 6

Oak Flat and Devil's Canyon

A day exploring the secluded, underbirded, riparian habitat, desert uplands, and chaparral scrub of Devil's Canyon (Ga'an Canyon) south of Oak Flat Campground. This area, sacred to the San Carlos Apache, is threatened by what could be the largest copper mine in North America. If time allows, also visit Oak Flat Campground for resident species. Meet at 6:15 am in Mesa. Return by 5:00 pm. Difficulty: 3. A walking stick might be helpful. Bring lunch. Limit 8. Co-leaders: Laurie Nessel, laurienessel@gmail.com, 480 968-5614 and Matt VanWallene, zoutedrop@gmail.com

Friday, March 11

Florence Farmlands

Start about 5:45 am from Scottsdale, detour by Arizona Farms Road for possible Burrowing Owls and Ferruginous Hawks before going to Florence. Head east into farmlands behind the prisons. Possible sparrows, raptors, cardinals, meadowlarks, Yellow-headed Blackbirds, common desert birds, and more. Perhaps an early lunch at a Greek restaurant in Florence before returning to Scottsdale about 1:00 pm. Difficulty: 1. Limit 8. Leader: Kathe Anderson, kathe.coot@cox.net.

Saturday, March 15

Flagstaff Area Lakes

Meet at 8:00 am near the intersection of I-40 and I-17. Bring a lunch and warm clothing. Look for waterfowl on the lakes. Also possible species like Red Crossbill and Pinyon Jay. Minimum of 6 people required. Leader: Charles Babbitt, 602 840-1772 or cjbabbitt@cox.net

Sunday, March 20th

Rio Salado Restoration Area (Central Avenue, Phoenix)

Start at 8:00 am. End by 11:00 am. Likely birds include seasonally migrating passerines, Great and Snowy Egrets, herons such as Black-crowned Night-Heron, late wintering ducks with possible Mexican ducks, Harris's Hawk, and Accipiters. Also butterflies and dragonflies. Difficulty: 1. Limit 12. Leader: Myron Scott. For reservations contact Larry Langstaff, larrylangstaff1@gmail.com or text 480 710-0431

Evening with an Author

Join us on Tuesday November 10, 7:00 pm, at our meeting place, Papago Buttes Church of the Brethren, for a special evening with *Feeding Wild Birds* co-author, Paul Baicich. Enjoy refreshments followed by a presentation and discussion about the history of bird feeding in America. (See the book review in the Fall 2015 issue of the *Wren•dition*.) Follow the MAS Facebook page and check out the website and e-newsletter for further details. 🐦

David Chorlton in *Fires of Change* Exhibition

At each MAS monthly meeting and in each issue of *The Cactus Wren•dition*, we appreciate David Chorlton's way with words. He was one of eleven artists, and the only poet, selected for an exhibition at the Coconino Center for the Arts: *Fires of Change*, September 5-October 31, 2015. The University of Arizona Museum of Art hosts the exhibition November 21, 2015 – April 3, 2016.

Funded by the National Endowment for the Arts and the Joint Fire Science Program, the exhibition explores the increase in severity, size, and number of wildfires in the Southwest and their impact on the landscape.

The eleven artists in *Fires of Change* participated in a Fire Science Bootcamp and spent a week in Northern Arizona's forests in late 2014. A team of top-notch fire scientists and managers provided the eleven invited artists education and training on the impact of wildfire in Northern Arizona. The artists took the scientific facts they learned and using their senses and emotions, interpreted the science for different parts of the community. This helps the general public to understand the meaning of fire.

Colin Haffey, Fire Ecologist with the US Geological Survey, explained that the goal of the project was to try to push conservation into a more holistic place. According to Saskia Jordan, participating artist, seeing the beauty and regeneration of the landscape provided an element of hope. "The same force that creates the destruction is also the force that can save us," said David Chorlton. 🐦



Male House Finch
© Jeanette Tasey

The Great Backyard Bird Count

Mark your calendars for the next GBBC – February 12-15, 2016. Make plans to join birders in this global citizen science project. Go to <http://gbbc.birdcount.org> to register. Count birds for at least 15 minutes on one of the GBBC days and submit your observations online. The data provide a long-term record of bird sightings and help scientists who can't be everywhere. Researchers learn about migration patterns, year-to-year changes, and long-term trends. The GBBC is a great opportunity to introduce someone new to bird watching. You can count birds wherever you like, not just in your backyard. You can also enter the GBBC photo contest! 🐦

Waiting on the Marine Layer — A Rowing Update

Still with the mission of raising awareness and funds for bird conservation, Mary Rose once again went out on to the Pacific in June – only this year she left further south, from San Diego. Bound for Hawaii. An El Niño year meant warmer waters would necessitate a close watch on

weather, but in June all looked clear.

Although the weather held out in terms of there being no significant wind, Mary encountered an issue of a different kind – the marine layer. If you have ever been out boating and seen the marine layer you know that this means 100 percent cloud cover. Low altitude stratus (sheet-like) clouds form over the ocean next to California. Not such a bad thing, except when all your electronics and in particular, your water desalination equipment, run on solar panels. A 100 percent marine layer for seven days straight meant no power for anything, and a supply of water from Mary's support yacht.

By this time the weather was also changing and hurricane season had begun with full force. Four hurricanes lined up off the coast right in the path of one little rowboat. Unfortunately it was time to go home.

Ever determined, Mary will be heading back out to complete her mission. Maybe in 2016 the weather will cooperate. She will keep you posted. 🐦

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!

Alaskan Wilderness Notes

By Larry Langstaff

In June of this year, I completed two hikes in Denali National Park. The first was an organized hike with a ranger to the top of Thorofare Ridge, just north of Eielson Visitor Center. Since my last visit to Denali in 2001, I had dreamt of a hiking to that ridge. I hoped to pick up a life bird, a Rock Ptarmigan.

Before our trip, my wife, Kay, had a cortisone injection in a sore knee, so twelve days later, when she agreed to hike the steep switchback trail, I was really happy to hike it with her. At the Visitor Center, a ranger offered her a walking stick like a ski pole. That helped ease the pressure on her knee.

We began the hike at 11:00 am and reached the ridge two hours later, after walking almost a mile and gaining about 1000 feet in elevation (the top of the ridge is 4700 feet above sea level). During rest breaks, the ranger related the history of initial ascent attempts on Denali, the highest mountain in North America. Our view of the



Willow Ptarmigan. Photo by James Frank.



Sow grizzly with yearling cubs feeding on caribou remains. Photo by Larry Langstaff - taken with iPhone through spotting scope.

summit was shrouded that day by clouds, as it usually is, seven out of 10 days.

We stopped to watch a hunting Golden Eagle descend into some willows, but fly up without a catch. Further up the trail, using my binoculars, I observed it perched on a cliff in the distance, as it fed on prey clutched in its talons. Its head dropped as it tore away bites of its meal, then it would look up to scan the wilderness below.

I spotted what I believed to be a Northern Wheatear. My field notes reported it bobbing its tail while perched on boulders. I had seen a Northern Wheatear, in cloth-form, on a quilt hung on a wall of the Visitor Center. The quilt depicted typical birds seen in the nearby canyons and mountains.

Later, after checking *The Sibley Field Guide to Birds of Western North America*, I realized what I had seen was

the breeding-plumaged American Pipit. I have seen many pipits in Arizona, but always in more drab, non-breeding plumage. My success in seeing an uncommon tundra breeder that migrates through Asia to Africa for the winter, the Northern Wheatear, was denied. I am sure those of you who have vocally identified a bird, then discovered it was not the species you thought it was, can understand my dismay. I won't forget that American Pipit trying to be, for me, a Northern Wheatear.

From the top of the ridge, I sat down to gaze over expansive valleys. Some distance away through the clear Alaskan air, two bears foraged. The distinctive fawn-colored grizzly bears fed among willow plants on the slopes below.

Arctic ground squirrels approached us as soon as we sat. They had experienced previous humans on the ridge and I think they were hoping we too would give them



Although I saw three Mew Gulls sitting on their ground nests located on sandbars in the Savage River, gulls are often scavengers and occur in greater numbers near people who might drop food. Photo by Larry Langstaff.



a few crumbs from our granola bars.

After an hour on the ridge, we gingerly descended the steep trail back to the Visitor Center, where I recovered my spotting scope from behind the ranger's desk. For the next 45 minutes, I showed others through my optics the grizzlies I had found earlier. Also, far away, a sow and a cub ranged up and down a slope. Again, their fawn-colored coats and body shape identified them as grizzlies, even from such a distance.

To end the day, I discovered another lone bear, out of the willows, just in time to share with the next crowd of visitors disembarking from the last shuttle bus. No Rock Ptarmigan but plenty of other wildlife excitement.

My second hike followed a loop trail from the Savage River parking lot, along the west, then east side of the river, with a footbridge crossing about a mile from the trailhead. I passed by a few patches of head-tall willows, but the trail was bordered for its whole length by toe-high species of willows typical of the tundra.

As I approached the west side of the river, I caught sight of a Black-billed Magpie - one of the most memorable birds of my south-central Montana childhood. After following it with my binoculars from one tree to the next, I saw it pause silently. It flew into a shadowy crevice in a mass of rocks jutting out of the steep hillside. I could see sticks at the base of the hole, so when the bird did not come out, I realized I had found a magpie nest on the cliff face. Never had I heard of magpies not nesting in trees. This nest intrigued me. I was surprised that the parent bird entered the nest site while I was in view. In Montana I had learned magpies are smart and would never "show their cards" to any animal that could be a potential nest-raider.

White animals moved along an exposed ridge high above - a pair of Dall sheep. I crossed the footbridge. I met a few other hikers searching for wildlife, so I pointed out the Dall sheep. When I had walked almost half a mile from the bridge, I realized the sheep were descending and were probably going to end up near it. I considered



Tundra vegetation: Arctic willows and lichen. Photos by Larry Langstaff.

turning back to try and meet them. But I was eager to share what I had seen with Kay, so I continued.

Kay was excited about the chance to view the sheep up close. We returned to the footbridge. When we arrived, the hikers to whom I had shown the sheep said they had watched them cross the river just minutes prior - a ewe and her lamb. The ewe had bounded from one boulder to the next to cross the rock-strewn riverbed with ease. The lamb had hesitated, but then it too leapt, boulder to boulder, to join its mother. The two sheep scampered up a rocky slope. One of the hikers told me it made her whole trip worthwhile.

Denali National Park was established to protect the herds of Dall sheep. They are not hunted, and along with caribou, grizzlies, moose, and wolves, are often seen by visitors

traveling in the shuttle busses. The snow-white coats of the sheep make them easy to spot against the browns and greens of the surrounding slopes.

My walk along the Savage River yielded Wilson's Warblers. I had hoped to find an Arctic Warbler and a Rock Ptarmigan or two, but did not spend enough time to search both birds' favorite habitats to produce any sightings.

As we rode the bus from the park entrance to Eielson Visitor Center, the tops of willow clumps revealed patches of white. Willow Ptarmigans. These birds are all white in the winter. In spring, the male gains a rich rufous head and neck. I heard the ptarmigan's guttural trill and found a snow-white feather caught in the willow plants growing ankle-high along the trail.

Common Ravens raised a family on a ledge under a cement bridge on Denali Park Road. Gray Jay fledglings begged near a busy parent, who was trying to find food for them among the willows surrounding the Teklanika Rest Area.

American Tree Sparrows sat on roadside bushes where I stopped to look for moose. While the majority of moose we saw were cows, two mature bulls grazed lush growth near a beaver pond. Rangers warned us to be wary

Alaskan Wilderness Notes cont.

By Larry Langstaff



Looking towards Denali (20,310 feet). Photo by Kay Langstaff.

around cow moose. Calving season had started. With young to protect, cows are unpredictable. Lacking antlers, female moose wallop opponents with huge hooves. No doubt many a wolf has felt a cow's wrath.

We were lucky to see one of Denali's famous wolves from a park shuttle bus. The driver explained it was female, because it wore a radio-tracking collar as does the alpha female wolf in each of the park's wolf packs. This wolf was near an area where a pack of wolves had killed a caribou the day before.

We saw three grizzly bears feeding on the remains of this caribou carcass. The driver stopped and allowed us to safely watch and photograph the bears. They were below us, about 200 feet from the road. I set up my spotting scope to show fellow passengers close-up views. The bears were two cubs with their mother. Two were noticeably smaller than the other. Male bears do not

tolerate other bears nearby unless it is mating season.

Being a shuttle bus driver in Denali National Park is a job I would enjoy for a season or two; some drivers return year after year. Our favorite driver was an off-duty junior high science teacher (kind of like me). We appreciated the knowledge and insight he shared. For instance, as we passed a spruce forest growing in permafrost we noticed the trees were not all growing vertically. They tipped a bit, helter-skelter. Our driver said this was called "The Drunken Forest." The trees lean because their roots move when the ground shifts as the permafrost freezes and thaws. 🐻

Larry Langstaff is MAS Field Trips Chair and a retired science teacher. He reported his Alaskan bird sightings to eBird.

AZFO Celebrates 10th Anniversary at Annual Meeting

By Walter Thurber

Birders and ornithologists from across the state headed to Show Low on September 18-20 for the annual meeting of the Arizona Field Ornithologists. This was the 10th anniversary of AZFO, an organization dedicated to increasing the knowledge of the identification, status, and distribution of Arizona's birdlife.

The weekend kicked off with four field expeditions on Friday afternoon. The destinations were Alchesay National Fish Hatchery and the North Fork of the White River; Lyman Lake State Park and St. Johns; White Mountain Grasslands Wildlife Area and the South Fork of the Little Colorado River; and White Mountain Lake and

Park Service, and Kurt Licence of Arizona Game & Fish. Photo and audio bird identification quizzes rounded out the program. Used bird books and periodicals, AZFO shirts, and other logo items were on sale throughout the day.

A catered dinner followed at the hotel. The keynote speaker was Chris Benesh, a long time birding guide with Field Guides, Inc. and member of the Arizona Bird Committee. His topic was "Birding at the Speed of Light." Benesh described how birding has evolved over the past 20 years, and how the changes have affected our understanding of bird identification and distribution in Arizona and beyond. Some of the innovations we now enjoy include birder-friendly binoculars, versatile cameras, compact sound recording devices, smartphones, online bird identification and webcams, the eBird database, listservs, Facebook, Twitter, the Global Positioning System, and Google Earth.

Sunday morning's expeditions took place at Big Lake and Crescent Lake; East Fork of the White River; Greer reservoirs and creeks; Sheep Crossing and the West Baldy Trail; and Wenima Wildlife Area and Becker Lake. Future AZFO-sponsored field events will include a gull identification workshop at the Salton Sea, Christmas Bird Count workshops in Phoenix and Tucson, the Greater Phoenix Area Waterbird Survey, and a Bendire's Thrasher survey near Wikieup. AZFO plans additional trips. 🐦

Southeast Arizona, a decade's change in the Phoenix urban riparian bird community, using eBird data, and scientific collecting permits for birds and other wildlife in Arizona. A poster highlighted the findings of 10 years of the Santa Cruz Flats Raptor Count. AZFO also held a brief business meeting. Elected to the AZFO Board were Carol Beardmore of the US Fish & Wildlife Service, Andy Bridges of the National



People studying the photo quiz board at the meeting. Photo by Doug Jenness



Willow Flycatcher at Big Lake. Photo by Ryan P. O'Donnell

Bill's Lake. Perhaps the best find was a first year female Blackburnian Warbler at Alchesay. A social hour at the El Rancho Restaurant followed.

The Saturday sessions were held at the Hampton Inn. President Kurt Rademaker spoke about the Gale Monson Research Grants. Lauren Harter provided an update on the Youth Scholarships Program. Troy Corman described how volunteers contribute to the Arizona Coordinated Bird Monitoring Program. The morning presentations focused on raptor migration in the Bradshaw Mountains, Gray Hawk expansion on the San Pedro River, Yellow-billed Cuckoo nesting in the Coronado National Forest, Crested Caracara nesting in Saguaro National Park, and Red Crossbill and Evening Grosbeak call types.

The afternoon session addressed Elegant Trogons in



Blackburnian Warbler. Photo by Eric Hough

Walter Thurber has been a birder for over 50 years and has been the Carefree CBC compiler for 20 years. He serves on the AZFO Board and on the Science Advisory Committee for the McDowell Sonoran Preserve, Scottsdale.

Conservation Update

By Mark Horlings, MAS Conservation Chair

On July 31, 2015, the US Forest Service announced plans to remove horses from portions of the Tonto National Forest along the Salt River. A week later, after objections from horse lovers, Arizona's Congressional delegation, newspapers, and the public, the Forest Service caved, thanking the local community for its "feedback" and promising "another look at the proposed gathering of stray horses..." Given the intense criticism the Forest Service received, no one predicts this second look will occur any time soon.

Maricopa Audubon Society, the Sierra Club, and other environmental groups have encouraged the Forest Service to remove the Salt River horses for years. The horses eat small cottonwoods and willows, eliminating trees, which native birds need to nest, and shade, which native fish need to thrive. Critical riparian habitat is lost.

I spoke to Carrie Templin, Public Affairs Specialist with the Forest Service, during the controversy, and asked why the Forest Service justified its plan solely based on the risk of collisions between cars and horses. She explained that the Forest Service understood the environmental argument but lacked authoritative data showing that the horses damaged the riparian area along the Salt River. The Forest Service receives fees to allow cattle grazing, and those fees support studies to gauge cattle's impact. In the case of horses: no fees, so no studies.

In 2013, MAS approved a grant to research the horses' impact on Salt River habitat. However, the Forest Service denied permits to the research team, headed by a teacher from Scottsdale Community College, needed to conduct the study.

The Forest Service may also have avoided environmental arguments because Arizonans resist them. One letter to *The Arizona Republic* summed it up for environmentalists: "nobody likes you." *Harper's* reports that 43 percent of Americans over 40 identify themselves as environmentalists. Among Americans younger than 40, only 32 percent do. Considering these numbers, the Forest Service may have relied on the fact that no one opposes auto safety.

Many Valley residents have enjoyed rafting, canoeing, tubing, or picnicking while the horses quietly grazed or bathed nearby. The horses are beautiful when they appear around a bend in the river. Horses along the Salt River number about 100 and enjoy their own lobby of activists, the Salt River Wild Horse Management Group. The Group reacted quickly, using a lawsuit and press and political contacts to state their case that horses are iconic in the American West and that people damage the river far more than horses do.

The Forest Service cited evidence that this herd was unknown in 1971 and was, therefore, not protected by the Wild Free-Roaming Horse and Burro Protection Act. The Forest Service called the horses "unauthorized livestock," a phrase straight from federal regulations but which *The Arizona Republic* called "ham handed." Unfortunately, public discussion quickly soured into whether these horses were

direct descendants of Spanish herds, more recent but still wild, reservation escapees, feral, or some combination of the above. The only meaningful legal distinction results from the 1971 law, and these horses do not qualify. Environmental damage to habitat depends on the herd's size, not its ancestry.

After the Forest Service withdrew its plan, the media calmed down. *The Arizona Republic* quoted MAS President Mark Larson on the horses' fondness for cottonwood and willow shoots and their threat to Southwestern Willow Flycatchers and Bald Eagles. TV stations also featured Mark Larson explaining the environmental consequences. *The Arizona Republic* noted its own second thoughts, took one last swipe at the Forest Service, and then thanked its readers for offering a more persuasive argument against the horses - to protect river and desert ecology.

The Forest Service says it spent three years preparing the public rollout of its plan to remove the horses. Negative public reaction reversed that plan in a week. Most horse lovers probably thought they were advocating the correct environmental position. Public recognition of habitat damage arose only after Mark Larson, Sandy Bahr, and other conservation spokespersons weighed in. The episode shows how little trust Arizonans extend to public agencies, how quickly public opinion can mobilize, and the advantage big beautiful animals - even environmentally destructive ones - give to their advocates. 🐾



**Be Social!
Find MAS on
Facebook**

facebook.com/MaricopaAudubonSociety

**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 laurienessel@gmail.com

Note: We do not use the email list for anything other than the described purpose.

Salvia coccinea — A Bird Magnet

By Tom Gatz



The inch-long flowers of *Salvia coccinea* attract hummingbirds. Photo by Tom Gatz

I've had mixed luck growing salvias. Several species I've tried seem to last for a few seasons and then peter out. In her excellent book *Perennials for the Southwest*, Mary Irish cautions against becoming overly attached to any individual salvia, pointing out that in our hot climate, a lifespan of five to seven years is all that we should expect from them. When they begin to languish, she advises making cuttings or shopping for a replacement.

One species that I have had excellent success with year after year is *Salvia coccinea*, sometimes sold as scarlet sage or red salvia. It comes in a variety of flower colors but the one most commonly sold here is a dark red variety. It does need supplemental water to thrive and appreciates some protection from full afternoon sun in the summertime. Other than that it is practically bombproof. It will flower off and on almost all year long in a protected area in moderate shade as well as in sunny areas. It may freeze back in cold winters, but

quickly grows again. It can become rangy so it looks best in a mass planting or mixed with other plants.

I recommended it to a neighbor who was looking for a plant that would attract hummingbirds in an area just outside of her kitchen window that was mostly shaded by her house in the summer but was in full sun all winter. In addition to attracting hummingbirds, this

plant is a magnet for the seed-eating Lesser Goldfinch, an increasingly common bird in the Valley. Once flowering is finished and the goldfinches have polished off the seeds, I cut mine back to the ground and they quickly sprout new flowering stalks. It is not invasive here in our desert climate and, although short-lived, it reseeds just



A male Lesser Goldfinch (green-backed form) hangs upside down on a nyjer seed feeder while waiting for the *Salvia coccinea* seed to ripen. Photo by Tom Gatz

enough to make sure you will always have it in your landscape. In her handy guide, *The Arizona Low Desert Flower Garden*, Kirti Mathura advises that it will do best in organically rich, well-draining soil (it likes to colonize my potted plants) but will tolerate poor soils as well. It is usually available at the Desert Botanical Garden plant sales. 🐦

Tom Gatz has been a MAS member since 1981.

(This article is reprinted from *Gatherings*, the newsletter for volunteers at the Desert Botanical Garden)

If you would like to make an application to the MAS Education Committee for funding for a school natural history project or field trip, please contact Carol Langdon at clangdon2@cox.net

Pyrrhuloxia

By Jasper Robinson

*A desert home is its homestead
Bright feathers of orange, grey, and red
A dashing red crest upon its head
The parrot beak to keep well fed
Seeming similar to cardinals*

*Preening their wings meticulously
Eyeing movements vigilantly
Hiding in shadows sedulously
Glancing at observers knowingly
These variegated birds*

*Sociable when it makes sense to be
Gathering in bushes, shrubs, and tree
Calling to friends felicitously
Yet guarded when danger they perceive
Fierce and vocal songbirds*



Male *Pyrrhuloxia*, Patagonia, Arizona. Photo by Jasper Robinson

bird magnet

Connecting with nature makes Arizona a fun and better place to live! We hope you like this newest addition to *The Cactus Wren•dition* for both the young and the young-at-heart!

Compiled by Vicki Hire



Snowy Egret. Photo by Vicki Hire

Green Scene Go Take a Hike

Take your friends and family and a picnic to **THE RIPARIAN PRESERVE** at Water Ranch located at 2757 E. Guadalupe Rd., Gilbert, AZ. Best urban birding in the Phoenix area with lakes, ponds, and vegetation for all types of birds and wildlife! Send your photos to: editor.wrendition@yahoo.com

Green Scene Beginner Birding Tips

Focus on four features¹ of the bird for identification.

- Size & Shape
- Color & Pattern
- Behavior
- Habitat

Green Scene True or False?

- T F 1. All birds have feathers.
- T F 2. All birds lay eggs.
- T F 3. All birds are warm blooded.
- T F 4. All birds migrate to find food.

Guess this Bird!



Clue: This bird never migrates.

Green Scene Field Trips

8:30 am-10:00 am

Bring binoculars, hat, water, and comfortable shoes.

The leader will have a scope for close looks at cool birds. No reservations. All ages. Free.

Leaders: Laurie Nessel and Vicki Hire

Saturday, February 13

Veterans Oasis Park (Chandler Heights Blvd. and Lindsey Road). Meet 8:30 am at the Red-tailed Hawk Pavilion, just north of the parking lot.

Sunday, February 21

The Riparian Preserve at Water Ranch. Meet 8:30 am at the Dragonfly Ramada south of the parking lot, east of Greenfield Rd., off Guadalupe Rd., just east of the Gilbert Public Library in Gilbert.

Have your bird or nature photo published in Green Scene and on the Maricopa Audubon Society Facebook page! For readers under 18 years of age, submit your photos to editor.wrendition@yahoo.com, along with your name, address, and age. Include a brief description where and when the photo was taken. It's okay if you aren't sure what species the bird is – just say so and we will ask our readers to help!

Answers on page 15

¹ <http://www.allaboutbirds.org/building-skills-the-4-keys-to-bird-identification>



Gila Woodpecker
Photo by Jacklyn Anderson



Female Northern Flicker Red-shafted
Photo by Matt vanWallene



Acorn Woodpecker
Photo by Marceline Vandewater

Woodpeckers — the Hard-Nosed Facts

Did you know Woodpeckers are almost everywhere there are trees, except for in Australia? They help people by eating insects and termites. When a woodpecker hears an insect moving beneath the bark of a tree, it uses its chisel-shaped bill to peck under the tree bark. Woodpeckers have very long tongues with bristle tips to help them fish out the insects. Our forests are healthier because woodpeckers eat insects that are potentially harmful to trees. Although their diet is mostly insects, woodpeckers also eat fruit and nuts.

Did you know Woodpeckers have adapted to climbing trees with their zygodactyl feet, that have two toes pointing forward and two toes pointing backward? They also use their stiff tail feathers to brace themselves as they move up and down trees. Did you know woodpeckers communicate by displays, vocal calls, and “drumming” by using their powerful neck muscles to drive their bill into trees?

Did you know Arizona is home to many species of woodpeckers? Maybe you have seen, heard, or photographed one or more of them?

- Acorn Woodpecker
- Arizona Woodpecker
- Gila Woodpecker
- Gilded Flicker
- Hairy Woodpecker
- Ladder-backed Woodpecker
- Northern Flicker
- Three-toed Woodpecker
- Downy Woodpecker
- Lewis's Woodpecker

For more information on woodpeckers, check out this website!
<http://www.allaboutbirds.org/search/?q=woodpecker>

Woodpeckers of Arizona

Across

- Woodpecker with black and white barred upperparts, shoulders, wings and a red crown
- These help the bird fly and keep it warm
- This woodpecker's name sounds like a candle flame in the wind
- A term used for when a woodpecker uses its bill to drill into tree bark
- Woodpecker with black and white stripes on its face and a red crown
- The upper and lower mandibles or jaws of a bird

Down

- Woodpecker named after our state
- These are streamlined and help the bird move easily through the air
- These are hollow, lightweight, and very strong
- Visible signs on birds that help identify the species
- Woodpecker with a clown face



A Sea of Cotton

By Sarah Shiota



Sarah Shiota next to a cotton field

Most of the morning had been regular fieldwork. Exciting—much more so than the office work I had become accustomed to—but still routine work. Checking and changing out the delta traps, sorting the moths, releasing the moths, scribbling data, and so on quickly became second nature. But suddenly in one field I woke up to find myself in a surreal and thriving agricultural world. There I was in the center of a cotton field. Warm sun filtering down from the morning sky. Cool moisture rising up from the cotton plants below. Lacewings and flies buzzing around my head barely peeking out from rows of premature bolls, with Red-winged Blackbirds cackling, jumping, and flying all around me, immersed in this foreign yet familiar world. I was in a rolling sea of cotton.

The pink bollworm sterile release program over the years has been a successful program for the US Department of Agriculture. The program includes breeding massive quantities of pink bollworm moths, sterilizing them, and then releasing them into fields infested with “native” pinkies. This method, known as autocidal control, forces target pest individuals to mate with introduced sterilized individuals, but results in no offspring—a humane and successful way to control a pest species when juveniles are the offenders. In Arizona, and the southwest in general, pink bollworm control has been essential to our economic development as cotton is one of our largest products.

The pink bollworm moth originated in India, but over centuries of farming cotton, has managed to spread its way west across the cotton belt, reaching Arizona via Mexico in the early twentieth century. Small and harmless in appearance, this brown micromoth's larvae can devastate up to 80 percent of a cotton crop in a season.

Luckily, we have teams of scientists who have perfected a plan for eliminating pink bollworm safely and effectively without destroying other plants and animals, and the facility that produces these moths is right here in Arizona. Through working with this facility I found myself buried in the center of an ocean of cotton, hand-releasing sterilized adult pink bollworm moths.

I had expected fieldwork to be exciting that day, but I never realized just how much joy I would receive walking through cotton fields. Our target fields were scattered between three very different locations across the southern end of the Valley. The Maricopa field lay directly in front of a narrowing between mountain ranges and was in the direct pathway of every monsoon. Surrounded by flat desert, the Eloy field nestled behind Picacho Peak. The Coolidge field sat between a variety of other crop fields and dairies.

Each location differed in the height and density of the cotton as well as the variety and quantity of life in the field. The Eloy fields were my least favorite. While the towering Picacho Peak was impressive and beautiful to look at with the rising sun, the cotton plants were stunted and scattered and the wildlife in the

area far from plentiful. The only wildlife I recall spotting during my releases were robber flies. The Coolidge and Maricopa fields, on the other hand, were nothing short of amazing.

For example, in the Coolidge fields over the span of half an hour on any given day it was normal to see four families of Burrowing Owls, a covey of quail, a Killdeer scurrying, a huge flock of jabbering Red-winged Blackbirds, a dozen round-tailed ground squirrels, 10 Mourning Doves, a Red-tailed Hawk, roughly 50 common green darner and Mexican amberwing dragonflies, hundreds of lacewings, a few robber flies, and several different spiders. On one occasion I even spotted a small group of Black-necked Stilts, which I never guessed would enjoy poking through cotton fields in the middle of Arizona. The amount of life in those fields—the buzzing activity—was spectacular and by far one of the best aspects of fieldwork.

The other surprise I encountered while in the fields was the height and density of the plants in certain areas. Between the fields, the heights of the plants ranged from at most one foot tall to about six feet tall. The short cotton fields such as those in Eloy, along with a lack of biodiversity, tended to be scattered, open, and hot under the July sun. They were only ideal for looking at the surrounding mountains.

The best fields were definitely in Coolidge. When I walked into the first field cotton plants engulfed me as they peered down and entangled me in the branches they had linked across the row. Though I found myself stuck on more than one occasion, the experience of being swallowed by a field of lush green plants was well worth it. It is in these fields that I found myself in the most peaceful ocean I have witnessed while remaining on land.

The plants in that particular Coolidge field stood about neck-height on me and grabbed to ensnare me at every possible moment. Among neck-height plants, I had a unique perspective of the field. It distracted me. As the cotton plants rolled like waves with the wind, I could feel them swirl around me with rustling leaves. The Red-winged Blackbirds, perched delicately



Red-winged Blackbird Photo by Denny Green



Burrowing Owl. Photo by Sarah Shiota.

on top of the plants, would jump up, circle my head, and alight on other cotton plants like seagulls on waves, rising and falling with the wind.

When standing outside of the field, I heard a constant variety of sounds: birds calling, insects buzzing, wind blowing, cars whizzing by, and the like. But in the field no sounds existed other than the peaceful serenity of the wind blowing through the leaves and the whistles and songs of the blackbirds. The rest of the world had been drowned out and I was floating forever, with the purple mountains rising in the background and the hot morning sun traveling through the sky. Me and the spiders, submerged in an ocean of green. 🐜

Sarah Shiota is a bioscience technician and research librarian with the Arizona Cotton Council and USDA. An alumna of ASU's Animal Behavior program, Sarah looks forward to pursuing a doctoral degree and her dreams of field research in Animal Behavior.

Answers to Puzzles

Crossword

Across

- 1 Ladder-backed
- 5 Feathers
- 7 Flicker
- 8 Drumming
- 9 Hairy
- 10 Beak

Down

- 2 Arizona
- 3 Wings
- 4 Bones
- 5 Field marks
- 6 Acorn

True or False

1. True All birds have feathers.
2. True All birds lay eggs.
3. True All birds are warm blooded and can regulate their body temperature.
4. False Not all birds migrate, such as the Northern Cardinal, which stays in one area year round.

Guess this Bird!

Northern Cardinal

Fieldwork with a Scientist

By Matt VanWallene

What a fantastic learning experience when I volunteered to help a PhD student with his fieldwork in southern Arizona. The AZ/NM Birds listserv published researcher Erik Andersen's request:

"I'm seeking volunteers willing to assist with a study of breeding birds in the desert grasslands of southeastern AZ. This is a great chance to see and learn about the nesting biology of cryptic grassland specialists while contributing to ecological research. I need fit volunteers willing and able to drag a chain through harsh and uneven terrain in hot and humid conditions. The work takes place at Las Cienegas, the Appleton-Whittell Research Ranch, and Fort Huachuca."

A little background... by the 1930s, 75 percent of southwest grasslands were degraded. Overgrazing results in the formation of gullies, which accelerates water runoff, thus preventing recovery. The suppression of wildfires causes further deterioration. Invasive grass species reduce diversity, which used to mitigate the swings in weather cycles. Further problems such as water diversion, housing developments, and limited budgets affect what little land has been set aside.

Because of excessive livestock grazing, Botteri's Sparrow was absent from Arizona between the 1890s and the mid-20th century. Now it is locally common in its Arizona range where vegetation has recovered. As little as a 10 percent change in woody species density can affect where a grassland bird nests. More trees mean fewer nesting grassland birds.

Erik Andersen, researcher from the University of Arizona, is studying the impact of environmental factors on grassland birds. He wants to determine where the limited dollars available should be spent to save what little natural habitat remains. Grassland birds are ground-nesting, so their nests must be extremely well hidden. As a study volunteer, I participated in the following techniques.

Caning: A technique used to find nests in the proximity of where you are walking. The birds will sit on the nest unless they feel you will step on them. Swinging the cane from side to side, hitting the tall grass, triples the chance of finding a nest.

Roping: This essential technique, in our case with a chain, involves stretching it between two people. The chain, about 30 feet long, is held taut so that it rests on the grass 8-12 inches above the ground. Both people walk forward. One maintains the correct tension. The other follows the GPS coordinates to ensure a straight



Researcher Erik Andersen doing the roping technique

line. You must look at the chain as you are walking to see where the bird flushes. A sign you are doing your job is when you trip over or walk into something. My first impression was concern for the nest. I assure you it is impossible to harm a nest doing this. Nests are built into the ground within stands of grass that are more than three feet tall. At no point does the chain come close to the ground.

Locating: Unless you see it first hand, it is difficult to imagine how well a bird hides its nest. When flushed, you approximate a circle 10 feet in diameter where the nest would be. It took two people about five minutes to locate a nest.

GPS: When we found a nest, we recorded the GPS coordinates.

Flagging: GPS is not accurate enough to find the nest again. We augmented the location with flags, typically two per site, each seven paces from the nest. We took additional notes, such as the compass bearing and substrate of the nest site.

Candling: We recorded many attributes of the nest site, including species and number of eggs or chicks. We



Botteri's Sparrow



Grasshopper Sparrow

All photos by Matt VanWallene

candled the eggs, which are translucent if a bright light is placed behind them. You can determine the age of an egg based on what you see, a bit like a sonogram.

Chick data: We weighed chicks unless they were within a couple of days of fledging. We calculated the ages of chicks based on feather development.

Tracking Nesting Success: Each nest is revisited every four days. If the nest belongs to a Cassin's or Botteri's Sparrow, it is almost impossible to identify at time of flush. More often than not, the flushed parent lands in the tall grass. You cannot distinguish the eggs or chicks between the two species. As a result, when a nest is visited again, extra effort is needed to determine the species.

In a study of this type, the researcher also collects data about the "plot," a defined area around each nest. We recorded vegetation types and densities and measured grass height. We conducted three bird counts for each plot. This involved counting the birds of each species for ten minutes within three hours of sunrise. We used a range finder to measure the distance of each sighting from the plot center. We took insect samples different directions from the plot center for 60 paces and placed them in resealable plastic storage bags. These are frozen until analyzed.

Some of the birds we encountered:

Botteri's Sparrow. Found in southern Texas and southern Arizona. A typical clutch has four eggs. Chicks fledge after about 10 days. The nest being on the ground plays a role in the early exit of the fledglings.

Grasshopper Sparrow. Its range covers much of the US. Speckled eggs mean the well-hidden nest is easy to identify.

Canyon Towhee. A southwestern bird that inhabits open areas with patches of brush.

Cassin's Sparrow. Although nesting in the area, we were not able to identify any of its nests while I was with the study.

Eastern Meadowlark. The males typically have two mates, sometimes three. This bird increased in population as the US was deforested.

Mourning Dove. A nest typically has two occupants. Ground nests are atypical.

Northern Mockingbird. Its nest was just five feet off the ground and was quiet till we walked up. All four chicks, with strong yellow gapes, popped up simultaneously. My reaction was a bit like a kid seeing a jack-in-the-box pop up for the first time.

Would I volunteer again? You bet. I told Erik that if in need, he should contact me again. 🐦

Matt VanWallene is MAS Treasurer.



Grasshopper Sparrow nest showing distinctive speckled eggs



The Canyon Towhee chick is about a day old. Note the bump on top of the beak. This is the egg tooth used to break out of the shell.



The only reason you can see this nest is because the grass was moved aside to count the residents.



This empty nest shows the construction, on the ground, with the tall grass providing cover. What is not evident is how tall the surrounding grass is.

Forming a Partnership

By Vicki Hire

Maricopa Audubon Society and the Girl Scouts-Arizona Cactus-Pine Council join together to bring young girls closer to nature!

Wishes do come true! And a perfect example kicked off last August when members of the Maricopa Audubon Society, along with leaders from the Girl Scouts-Arizona Cactus-Pine Council came together for two days to begin the process of bringing young girls closer to nature.

For those of you unfamiliar with the Girl Scouts-Arizona Cactus-Pine Council (GSACPC), it is a non-profit organization serving more than 25,000 girls in grades K-12. The GSACPC serves two-thirds of Arizona, approximately 75,000 square miles in more than 90 communities, including reservations and military installations in central and northern Arizona. The GSACPC has more than 11,000 adult members acting as troop leaders, mentors, program assistants, consultants, and board members.

Their objective: Create a brochure that will allow troop leaders and their scouts to begin to identify the many bird species including migrating birds that can be seen through the year at a camp just north of Payson.

Shadow Rim Ranch is located on 40 acres, in the shadow of the Mogollon Rim in the Tonto National Forest. It is one of five Girl Scout camps in Arizona. During their camp stay, the girls can canoe, zipline, and experience wildlife along the banks of Chase Creek, including deer, elk, coyote, fox, turkey, and other small animals.

Four other Arizona camps operated by the Girl Scouts are: Camp Sombrero – a leadership camp for girls; Camp Maripai – an 80 acre camp just outside of Prescott with many nature trails throughout and horseback riding; Willow Springs Camp – with a zipline; and Camp Stephens



– east of Kingman with mountainous terrain and plenty of wildlife.

In addition to the more than 150 troop leaders in training that August weekend, also attending representing the Arizona Cactus-Pine Council were

Robin Haney, Volunteer Services Manager, Brenda Wardon, and Nancy Buell, who is also MAS Secretary. Representing MAS were President Mark Larson, Treasurer Matt VanWallene, Publicity Chair Vicki Hire, Mel Bramley, and Brian Ison.

The Arizona Cactus-Pine Council provided a cabin and meals during the MAS members' initial visit. This allowed the team to begin their hikes at dawn,

recording bird, animal, and plant sightings. On Saturday evening, around 11:00 pm the team tried unsuccessfully to locate owls in the area. No doubt the effort will continue at the next visit!

MAS members were, however, able to identify 46 species of birds. Topping the list were five species of warblers, four species of woodpeckers, four species of hummingbirds, three species of sparrows, two species of nuthatches, both Hepatic and Western Tanagers, Steller's Jay, Mexican Jay, Mountain Chickadee, Bridled Titmouse, Great Blue Heron, Turkey Vulture, Common Nighthawk, White-



ZipLine at Girl Scout Camp





This damselfly is probably a Canyon Rubyspot based on location and some field marks. Distinguishing it from American Rubyspot is difficult, however, as the two species are similar and their distribution partly overlaps. Photo by Vicki Hire.



Brian Ison studies a damselfly



Steller's Jay Photo by Vicki Hire

throated Swift, Plumbeous Vireo, Western Bluebird, American Robin, Pine Siskin, House Finch, Dark-eyed Junco, Lazuli Bunting, Black-headed Grosbeak, and Spotted Towhee.

In addition to logging their bird sightings, MAS members also noted various wildlife including dragonflies, damselflies, frogs, and lizards. A light hearted moment was spent picking and eating wild blackberries growing along the trails.

MAS members are planning visits to Shadow Rim Ranch during each of the four seasons to document as many species as possible. Their next trip is scheduled for October 2015. A complete checklist is scheduled to come out next year.

MAS members enjoyed this experience and look forward to developing a close partnership with GSACPC. This initiative coincides with the addition of the Green Scene youth pages to our quarterly publication, *The Cactus Wren•dition*.

For additional information about Girl Scouts-Arizona Cactus-Pine Council or to volunteer, reconnect, donate and join, call 602.452.7000 or visit: www.girlscoutsaz.org or <https://www.facebook.com/gscacpc?fref=ts> 🐦

Vicki Hire is MAS Publicity Chair.



MAS members at Shadow Rim Ranch Photo by Jeryse Kelly

A Grand Vision

By Gail Cochrane

From Phantom Ranch at the bottom of the Grand Canyon, we hiked up Clear Creek Trail to overlooks far above the Colorado River. We wondered about a lone figure, standing on a promontory over the abyss, appearing tiny in the distance. He slowly waved a shiny device back and forth through empty air, like a shaman casting an ancient spell.

The trail awed us with purple prickly pear and peach colored cliffs and led us across the rocky bones of Earth herself. The majestic spire and amphitheater of Zoroaster Temple beckoned and receded. We stopped for lunch, perching on a ledge and gazing across Granite Gorge to the sandstone, shale and limestone faces of the Tonto Plateau.

A gigantic bird, a California Condor, drifted past like a mirage spirited from the dinosaur era. His pink bald head twisted as he scanned the outcrops below. A mere shift of feathers sent the giant speeding away on the thermals, around a bend and out of sight.

Back at Phantom Ranch I sat in the sun warming spent muscles. Along came a park ranger with a silver antenna sticking out of his backpack. The ranger shared that he monitors California Condors for The Peregrine Fund. His telemetry device picks up signals from radio transmitters attached patagially to the birds along with large identification numbers. Shortly after we had seen the condor, the ranger had picked up its signal. "I'm glad you got to see him," the ranger said. "That male was most likely was checking on his year old chick."

I asked about the chick's mother. The ranger said the female might still be helping to raise the chick, but she has either lost her transmitter or it has ceased to function. Condors only produce one egg every other year. They nest on bare rock, on a sheltered ledge or cave high on a cliff. He described the calamity that is often the youngster's first flight, as it tumbles from the ledge to a rocky landing below. As the fledgling works to regain the nest cave, it begins to discover how its big wings work.

California Condors wear radio transmitters because they are among the most endangered birds in the world.

The International Union for Conservation of Nature classifies them as Critically Endangered. In 1987 only twenty-two birds remained. All were captured and put into breeding programs. The Peregrine Fund manages today's reintroduced population of condors. Breeding programs continue with 6-10 birds released every year.

The Peregrine Fund also monitors the movements

and behavior of 70 condors daily in the wilds of northern Arizona and southern Utah. Successful breeders produce one egg, usually between February and March. If that egg fails, they may try for a replacement. In 2014, three pairs were tending young from the previous year, and four pairs produced eggs. Four females produced a total of six eggs (two females recycled), and three chicks were confirmed. One chick later died. A total of 25 condor chicks have been confirmed since 2003.

Arizona's condors favor the remote high reaches of the Vermilion Cliffs and the Grand Canyon. These carrion eaters feed on anything from dead



Critically ill from lead toxins: male #287 in rehabilitation

squirrels to elk and domestic stock. They are premier cleaner uppers.

Lead toxicity is the leading cause of death for these magnificent animals. According to Arizona Game & Fish, all Arizona's condors are trapped annually and tested for lead poisoning; 45-95 percent test positive. Sick birds must be injected with chelating medications twice a day to help them metabolize the toxins. Some require surgery.

The toxic lead comes from spent gunshot. Carrion eaters like condors consume gut piles laced with lead shot, as well as animals that were shot and not taken out of the backcountry. Arizona Game & Fish offers free all-copper ammunition to hunters in condor territories. Every hunter must make the switch from lead to copper in order for condors to become a stable population.

To read more about Arizona's condors see

www.peregrinefund.org/condor and

www.azgfd.gov/w_c/california_condor_lead.shtml

In one hour Gail Cochrane tallied six species in her backyard during last year's Great Backyard Bird Count.

Arizona Christmas Bird Count Schedule [2015-2016]

By Walter Thurber

The National Audubon Society has conducted Christmas bird counts since the year 1900. Volunteers from throughout the Western Hemisphere go afield during one calendar day between December 14 and January 5 to record every bird species and individual bird encountered within a designated 15-mile diameter circle. These records now comprise an extensive ornithological database that enables monitoring of winter bird populations and the overall health of the environment.

Participants are typically assigned to teams based on their bird identification skills and endurance. Many counts hold a compilation dinner at the end of the day where results are tabulated and stories shared. There is no longer a participation fee. Help is needed on most of these counts, so find one or more of interest to you and contact the compiler for information.

Date	Day	Count Name	Compiler	Phone	Email*
12/14	Mo	Salt-Verde Rivers	Kurt Radamaker	480-585-1606	kurtrad@mexicobirding.com
12/14	Mo	Tucson Valley	Rich Hoyer	520-325-5310	birdernaturalist@me.com
12/16	We	Green Valley-Madera Canyon	Clark Blake	520-625-1015	mcblake@greatgrayowl.com
12/16	We	Prescott	Carl Tomoff	928-778-2626	tomoff@northlink.com
12/17	Th	Patagonia	Thomas Arny	520-394-0146	tarny@theriver.com
12/18	Fr	Sedona	Rich Armstrong	928-282-3675	richarmstrong@q.com
12/19	Sa	Avra Valley	Claudia Johnson	509-264-9076	claudialj@mac.com
12/19	Sa	Cabeza Prieta NWR	Kim Veverka	520-387-4987	kim_everka@fws.gov
12/19	Sa	Grand Canyon	Brian Gatlin	928-638-7968	brian_gatlin@nps.gov
12/19	Sa	Martinez Lake-Yuma	Lin Piest	928-341-4049	lpiest@azgfd.gov
12/19	Sa	Mormon Lake	Terry Blows	928-774-8028	terence.blows@nau.edu
12/19	Sa	Nogales	Michael Bissontz	520-577-8778	seetrogon@comcast.net
12/19	Sa	Ramsey Canyon	[Open]	N/A	has_admin@huachuca-audubon.org
12/19	Sa	Santa Catalina Mountains	Brian Nicholas	520-289-3409	weehawker2@yahoo.com
12/20	Su	Hassayampa River	Vanessa Montgomery	623-465-0012	hassayampacbc@yahoo.com
12/20	Su	Jerome	Julie Wills	928-300-9775	jwills282@hotmail.com
12/21	Mo	Chino Valley	Russell Duerksen	928-925-5567	duerksen@msn.com
12/22	Tu	Phoenix-Tres Rios	Marceline VandeWater	602-689-4356	marceline@ermaroni.net
12/26	Sa	Flagstaff-Mount Elden	Terry Blows	928-774-8028	terence.blows@nau.edu
12/26	Sa	Superior	Mike Evans	480-330-0655	maskatce@cox.net
12/28	Mo	Bill Williams Delta	Kathleen Blair	928-667-4144	kathleen_blair@fws.gov
12/29	Tu	Gila River	Troy Corman	602-717-2928	aplomado@cox.net
12/29	Tu	Havasu NWR	DeeDee DeLorenzo	928-758-2707	poncho@citlink.net
12/30	We	Willow Beach	Andrew Flaten	928-767-3456	andrew_flaten@fws.gov
01/02	Sa	Appleton-Whittell	Robert Weissler	520-234-1792	weissler@aves.org
01/02	Sa	Atascosa Highlands	Jake Mohlmann	610-390-2424	mohlmann2@yahoo.com
01/02	Sa	Camp Verde	Holly Kleindienst	928-853-6887	hollykleindienst@gmail.com
01/02	Sa	Dudleyville	Doug Jenness	520-909-1529	d_jenness@hotmail.com
01/02	Sa	Portal	Jackie Lewis	520-558-2287	winjac12@vtc.net
01/03	Su	Buenos Aires NWR	Bonnie Swarbrick	520-240-3737	bonnie.swarbrick@gmail.com
01/04	Mo	Carefree	Cathy Wise	602-301-7530	cwise@audubon.org
01/04	Mo	Glen Canyon	John Spence	928-608-6267	john_spence@nps.gov
01/04	Mo	Payson	Dave Hallock	928-474-9475	eldoradh@rmi.net
01/05	Tu	Timber Mesa	Mary Ellen Bittorf	928-367-2462	mcbitt30@cableone.net

Nearby New Mexico Count

01/03	Su	Peloncillo Mountains	Nicholas Pederson	505-417-8665	ndpederson83@gmail.com
-------	----	----------------------	-------------------	--------------	------------------------

Issued 10/11/2015

Nature Through the Artist's Eye: Margaret Saylor



Margaret Saylor is the editor/designer of the American Society of Botanical Artists' quarterly journal, *The Botanical Artist*. She loves to draw and paint fungi: the stranger, the better. Margaret earned a BFA from Kutztown University and a Certificate in Botanical Art & Illustration, with distinction, from The New York Botanical Garden. Her painting, *Dryad's Saddle*, was accepted into the 17th Annual International at The Horticultural Society of New York.

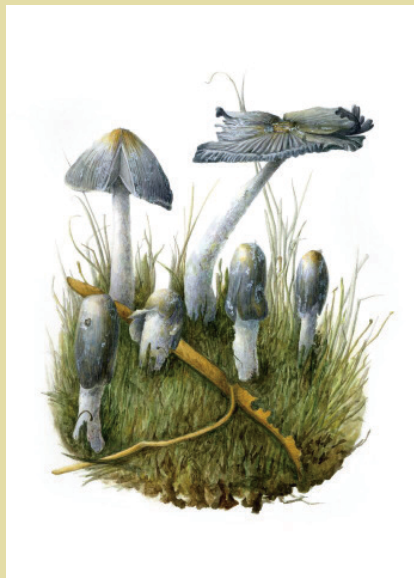
Margaret says: "My studies at The New York Botanical Garden opened up avenues of botanical art that I never knew existed. The course catalog overflowed with intriguing-sounding classes but one stood out: Drawing Wild Mushrooms. Why not, I thought, let's give it a try! I became enamored of these little marvels. They were available, the structure and morphology fascinating, and people responded to the subject matter. Something about these little fungi brings people

back to their childhood. The mystical lore of tiny gnomes tucked under a bright red mushroom with white spots is a powerful image.

"Exploring fungi through drawing continues to challenge and excite me. A dry summer here in Berks County, PA has not been conducive to a big mushroom harvest. But fall is here, and rain will come, and mushrooms will grow like, well, mushrooms!"

Contact Margaret at: studio@margaretsaylor.com

Website: www.margaretsaylor.com



Chicken Mushroom, *Laetiporus sulphureus*; Gray Shag Mushroom, *Coprinosia cinerea*; Velvety Psathyrella, *Psathyrella velutina* - all 14"x11", watercolor and graphite, 2012

These three paintings are from a series of six, *Mushrooms and Fungi of Antietam Lake Park*. A 600+ acre tract of primarily deciduous forest in my native southeastern Pennsylvania, this park is alive with walking and riding trails. Mushrooms and fungi are abundant. Most of my foraging took place in late summer/early autumn. A quick sketch in the wild, a few photos, and a quick flick of the mushroom knife gave me what I needed to work up a finished drawing back in the studio. I make color notes and take samples of nearby flora. All of these little details - tiny acorns, a dried birch leaf, a clump of grass - help to tell the story of the mushroom's environment.

When harvesting mushrooms to take back to my studio, I take several things on my hike: a flat bottomed basket, wax paper bags, a Sharpie marker, a small ruler, a mushroom knife (I usually carry this in my purse, just in case...doesn't everyone?), a sketchbook, pencils, and an empty egg carton for the tinier samples. My identification skills are suspect at best and I don't trust myself to do anything other than draw my found mushrooms. I do take a spore print from the cap to aid in mushroom identification: take a clean piece of white paper, break off a mushroom cap and place it gill side down the paper, cover with a drinking glass for a few hours and observe the spore deposit on the paper. A mushroom guide lists the spore color as an identifying trait.

But back to the artwork. When I find a subject, such as in these three from the series, I arrange them in little vignettes that contain the mushrooms in their little worlds, however briefly, before they lose their vigor and collapse.



Honey Mushroom, *Armillaria mellea*

My family was invited to a cousin's lake house in the Pocono Mountains of Pennsylvania. Dry, rocky, and typically trodden-on terrain, I didn't have much hope that I'd find any subjects. Lo and behold, I spied a few Honey Mushrooms that had escaped the mower in the grassy area just by the lakeshore. I was able to capture the essence of this one lone mushroom in a sketch, and then the specimen itself - in a container, clearly labeled DO NOT EAT with a crudely drawn skull and crossbones as I always err on the side of caution. Anything in a refrigerator could be fair game to a hungry person.

A huge treat to work on, I made the splurge and ordered a full calfskin vellum. I like being able to choose exactly the size, shape, and area of texture out of a full skin, and can place my subject on the vellum using the natural marks and veining of the skin to my advantage. This technique works well for my style of painting: I put down a wash of water tinted with a grainy pigment first, letting it dry thoroughly. Then I work a combination of graphite pencils sharpened to within an inch of their life, and the driest of dry brush techniques to create a textural, detailed painting.



Dryad's Saddle, *Polyporus squamosus*

The word is out among friends and neighbors: if you see a cool mushroom or fascinating fungi, call me. I've come home to bags of mushrooms on my porch. A friend texted me early one morning to say he was driving his father-in-law to a diner for breakfast and saw a huge fungus on a tree. I raced over. It turned out to be *Polyporus squamosus*, called Dryad's Saddle. It was quite huge, and surprisingly heavy as it was mostly water. I've always painted my mushroom compositions straight on and was looking for a different angle. I decided to draw this from the viewpoint of the tree. What you see is the smaller section where it was attached to the bark of the tree base. The grouping fans out and I wanted to be sure to capture the sense of depth that I saw. A few people have described it as "ethereal" and I quite like that description.

I managed the layering of colors and tone the same way I handled the smaller honey mushroom piece. I found a gorgeous section of my whole vellum skin, and moved my tracing paper sketch around until I found a particularly grainy section. The subject was heavy, dirty, and kind of wooly, and I wanted the substrate to reflect that. Again, I laid down a wash of a tinted base, and worked with both graphite and watercolor to achieve the mysterious and haunting look. Caran d'Ache graphite pencils have a silvery quality to them which is very evident in the original.



Mushroom Foraging Equipment



Spore Print

Maricopa Audubon Society

P.O. Box 15451

Phoenix, AZ 85060-5451



Non-Profit Organization
U.S. Postage
PAID
Phoenix, AZ
Permit No. 419

Time-dated material; do not delay!

miscellaneous

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

There are two ways to become a Maricopa Audubon member and to receive *The Cactus Wren•dition* by mail:

1. By joining the National Audubon Society. If you live in the Phoenix metro area generally east of 43rd Avenue, or in the East Valley other than in Gilbert, Chandler or most of Mesa, when National Audubon Society receives your check made payable to National Audubon Society and your membership application, you will be assigned to Maricopa Audubon Society, or you can send your check payable to National Audubon Society and your National Audubon Society membership application to Scott Burge, membership chair, and he will send it on in to National Audubon for you, or

2. By becoming a "Friend of Maricopa Audubon". In this case you will become a member of Maricopa Audubon Society only, and you will not receive the Audubon magazine or any of the other "benefits" of National Audubon membership, but you will receive a one-year subscription to *The Cactus Wren•dition*. "Friends" contribution categories are: Anna's Hummingbird-\$20; Verdin-\$35-\$99; LeConte's Thrasher-\$100-\$249; Cactus Wren-\$250-\$999; Harris's Hawk-\$1,000-\$9,999 and California Condor-\$10,000+. Mail your Friends membership application and your check made payable to Maricopa Audubon to Scott Burge, membership chair. All "Friends" members receive certain designated discounts. (If you reside outside the above-indicated geographical area, the only way to receive a subscription to *The Cactus Wren•dition* is to become a "Friend".) For National Audubon membership address changes or other questions call (800) 274-4201 or email chadd@audubon.org. For all other membership questions call or email Scott Burge.

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.

Reprinting of material

Unless stated explicitly in the article, material in *The Cactus Wren•dition* may be reprinted on other newsletters as long as the material is credited to the original author and to *The Cactus Wren•dition*.

This publication is printed on recycled paper.

Layout and design by Ben Franklin Press Inc., Tempe, AZ



Maricopa Audubon Board

PRESIDENT

Mark Larson

13585 N. 92nd Pl.
Scottsdale, AZ 85260-4333
Home: 480 474-4439
Cell: 480 310-3261
larsonwarren@gmail.com

VICE PRESIDENT

Robin Silver, MD

P O Box 1178
Flagstaff, AZ 86002-1178
Phone: 602 799-3275
FAX: 928 222-0077
rsilver@biologicaldiversity.org

SECRETARY

Nancy E Buell

1325 E Broadmor Dr.
Tempe, AZ 85282
Home: 480 829-0537
Cell: 480 313-9303
nebuell@gmail.com

TREASURER

Matt VanWallene, CPA

11004 E Villa Park St
Chandler, AZ 85248
Cell: 480 204-1104
zoutedrop@gmail.com

FIELD TRIPS

Larry Langstaff

416 W. McNair St.
Chandler, AZ 85225
480 710-0431
Larrylangstaff1@gmail.com

PUBLICITY

Vicki Hire

PO Box 603
Chandler, AZ 85244
Cell (602) 463-9219
vicki.hire@gmail.com

CONSERVATION

Mark Horlings

334 W. Palm Lane
Phoenix, AZ 85003
Phone: 602 279-2238
mhorlings@cox.net

PROGRAMS

Laurie Nessel

1632 E. Cedar St.
Tempe, AZ 85281
480 968-5614
laurienessel@gmail.com

MEMBERSHIP

Scott Burge

8869 S. Myrtle Ave.
Tempe, AZ 85284
Work: 480 968-5141
Home: 480 897-8608
Cell: 480 227-3965
FAX: 480 345-7633
burge@burgenv.com

EDUCATION

Carol Langdon

2002 E. Ocotillo Rd.
Phoenix, AZ 85016
Home: 602 234-2006
Cell: 602 359-2951
clangdon2@cox.net

EDITOR

Gillian Rice

602 375-8831
editor.wrendition@yahoo.com

Audubon Online

see us on the Web at:

www.maricopaaudubon.org