



The Cactus Wren·dition



Volume LXV, No. 4

Winter - 2017



American Wigeon

Photo by Matt VanWallene

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.

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, favorite bird sightings, and learn how you can support conservation and biodiversity right here in Arizona.

Committees/Support

Arizona Audubon Council Rep Position Open

Bookstore

Mel Bramley
480 969-9893

Hospitality

David Chorlton
602 705-3227

Web Page

Michell Peppers
480 968-5141
burge@burgenv.com

Maricopa Audubon Website

<http://www.maricopaaudubon.org>

"In wilderness I sense the miracle of life, and behind it our scientific accomplishments fade to trivia."

Charles Lindbergh

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.



Craig Anderson

Craig Anderson has birded Arizona for over 45 years but discovered through his project additional and unique places to bird in Arizona.

January 2, 2018

Cindy Marple Pantanal

Everyone's heard of the Amazon, but did you know Brazil has another region rich in wildlife? Called the Pantanal, it's home to more than 650 species of birds and 80 species of mammals. Many people travel to the Pantanal in search of Jaguar, the third largest feline, which has become accustomed to the sport fishing and tour boats along the river. In motoring down the rivers or touring the land in safari-style trucks, the abundance and diversity of wildlife one can see is truly remarkable.

Cindy Marple is a nature photographer whose favorite subject is birds. Her interest in birds and birding has grown as she spends time observing and learning more about her subjects. She teaches an Intermediate Birding class through the City of Chandler Recreation Department, and presents slide shows at local camera clubs and Audubon societies.



Jabiru. Photo by Cindy Marple



On the Cover: Male (front) and female American Wigeon
Focal length 227 mm, 1/800 sec, f/10, ISO 400, Aperture Priority, Canon EOS 7D Mark II, by Matt VanWallene, west Phoenix, November 22, 2015.

Matt says: Urban ponds see an influx of wigeons each winter. Flocks of these ducks can have over 100 individuals grazing on winter grass. Look for the odd duck, as an occasional Eurasian Wigeon may be among them.

February 6, 2018

Jim Burns Birds of Costa Rica

In 2006, the only foreign countries Jim Burns had visited to look for birds were Canada and Texas. Since then he and his wife, Deva, have been to Costa Rica nine times, seen most of that country's more than 900 known bird species, and photographed two-thirds of them.



Keel-billed Toucan. Photo by Jim Burns

March 6, 2018

John Alcock Deer Creek, Mazatzal Mountains

Learn about John Alcock's 10 year-plus study of Deer Creek in the Mazatzal Mountains, where he has been recording the recovery of the south fork trail environs from the devastating Willow Fire. Alcock found that the chaparral zone along Deer Creek has made a remarkable rebound from the intense fire that swept through the Mazatzals in summer 2004. His talk uses material from his recent book, *After the Wildfire: Ten Years of Recovery from the Willow Fire* (University of Arizona Press, 2017).

John Alcock is a Regents' Professor Emeritus in the School of Life Sciences at Arizona State University, where he taught from 1973 until 2008. He is the author of several books, including Sonoran Desert Spring and Sonoran Desert Summer.



Deer Creek. Photo by John Alcock

President's Message



Mark W. Larson

First, let me extend a warm welcome back to our winter residents and members! We've missed you and we are happy to have you back.

There is a lot going on right now and there will be even more things happening as the winter season gets going. For example, we have a full slate of field trips beginning with six in November and December and that's not including the many Christmas Bird Counts in December and early January. All the MAS field trip leaders welcome beginners, so don't be shy about contacting them to make a reservation to go to a place you've never visited and to see birds or other wildlife that might be new to you! Speaking of Christmas Bird Counts, remember that you do not need to be an expert to help. There are many CBCs in the Phoenix area and many more around the state of Arizona, so choose one and participate this year!

In addition to our usual field trip listings, we are especially pleased to offer two new categories of field trips. One, led by Bobbe Taber, is called Tempe Town Lake Saturdays. The other, called Hotspot Saturdays, is a series of birding trips to sites around Maricopa County, led by Veronica Heron. Details about these trips can be found on the following page. If you are unsure about going on a field trip or have questions, feel free to email the Field Trip Chairman, Larry Langstaff, or the individual leading the trip you are interested in. We can't promise what you will see, but we can promise you a great field experience.

I hope that you have noticed the center section of *The Cactus Wren•dition* called Green Scene. Our Treasurer, Vicki Hire, compiles these pages with facts, photos, and games just for kids. Even if you don't have any children or grandchildren of this age group you may know someone who does and you can share this section with them. It is all about helping young people build their connections to nature, connections that will serve them well for the rest of their lives.

Going forward into the new year, I wish you a safe Holiday Season, enriched with many meaningful experiences with our natural world here in Arizona. 🦋

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

Letter from the Editor

by Gillian Rice



Gillian Rice

As we enter our cool season and look forward to getting outside more, what experiences with nature await us? Last winter I had a close encounter with a large flock of our cover species: American Wigeon. My husband and I enjoy an occasional early morning walk around Fountain Hills Lake. My husband pushes on ahead to get exercise. I stop for every bird – almost. In winter, that means I get left far behind. But he misses the fun. A large flock of wigeon startled me flying so close above my head I crouched down. I don't know how they avoided bumping into me, but I guess they are cleverer than that. The sound of their flapping wings subsided as they skidded onto an inlet. Their chatter continued as they greeted one another for a new morning. I felt they shared with me in celebrating the sunshine sparkling on the water. Captivated, I watched them take baths.

What special experiences might you enjoy this season? I always love to hear from you. Our section Tales from the Field is a way to share. This issue, travel to Shetland and East Africa. Our featured artist also hails from Africa, but exhibits regularly in the US. Poet David Chorlton recalls Costa Rica.

Gail Cochrane's article examines the stories behind popular local wetland habitats where you can see some of the waterfowl highlighted in Green Scene. Before you go exploring, follow the advice in Tom Gatz's article and research what might be common and what might be rare for the time of year.

Remember, MAS is more than about birds. Vicki Hire shares her close encounters with sphinx moths. Science Corner focuses on small mammals.

I'm grateful to all contributors. A special thank you to photographer extraordinaire Matt VanWallene for supplying several images at short notice.

Let's get out and welcome our feathered friends who visit for the comfortable weather – especially the waterfowl so easy to observe. Happy Winter! 🦋

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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!

Grocery shopping?

Support Maricopa Audubon when you shop at Fry's Food Stores.

MAS is part of Fry's Community Rewards Program. Register your Fry's VIP card and select Maricopa Audubon #89166 as your non-profit organization at no cost to you. Go to <https://www.frysfood.com/topic/new-community-rewards-program>

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>

HOT SPOT SATURDAYS

Leader: Veronica Heron, vheron@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.

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, mindfulbirding@protonmail.com

Saturday, December 16

Tempe Town Lake

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, February 10

Tempe Town Lake-East End

Enjoy walking around Tempe Town Lake, yet not sure of what birds you are seeing? Explore the far east side of the lake where a variety of ducks, herons, egrets, cormorants, hawks, and eagles is often seen, including Osprey and Bald Eagle. Plan to walk slowly for two hours mostly along a paved or gravel trail with one possible dirt path down a hill if everyone is up to it. We will adjust the walk to accommodate all members' mobility needs. Bring water, and if you have them, binoculars and bird book or birding app. Limit 8.

Saturday, March 10

Tempe Town Lake-West End

Join up for birding and biking on the west side of Tempe Town Lake to see Western, Eared, and Pied-billed Grebe, then bike down toward the east side of the lake for possible pelican, Osprey and an occasional Bald Eagle along with various other waterbirds and migrating ducks. Watch for nesting behaviors and see if the Cliff Swallows have returned once more to scoop mud off the banks and, as a community, build their mud nests beneath the bridges. Bring bike, helmet, water, binoculars, and bird book or birding app. Limit 6.

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 time will likely produce wintering species and desert birds. Future return visits to check our results planned. Exact date not yet confirmed.

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

Tuesday, January 9

Fountain Hills Lake and Botanical Garden

Start 7:45 am in Fountain Hills, wander the path around the lake to check water birds, then head to the little-known botanical garden to add desert species. The path around the lake is relatively flat and paved, but the walk in the botanical garden is on trails with a bit of up-and-down. End about 11:00 am in Fountain Hills. Limit 8. Difficulty 1-2.

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

Saturday, January 13

Scottsdale Ponds

Evening birdwatching! On bikes! Come to Scottsdale Ponds from 3:00 pm to about 5:30 pm. Find where cormorants roost, view waterfowl (possible Northern Shoveler, American Wigeon, Ring-necked Duck, Ruddy Duck, Northern Pintail) and Black-crowned Night-Heron. Trip suitable for beginners as well as long-time birders. Please be very comfortable with riding your bike, stopping and starting often. Bring bike, helmet, water, binoculars, and bird book or birding app. Limit 6.

Leader: Bobbe Taber, mindfulbirding@protonmail.com

Saturday, January 20

Pinal Mountain near Globe

Head to Pinal Mountain for Chihuahuan Raven, Fox Sparrow, and Williamson's Sapsucker. Diverse habitats can produce up to 85 species of birds! Leave Tempe at 6:15 am to be on the mountain at sunrise (7:30 am). Return around 3:00 pm. Bring water and a bag lunch. Short easy hikes along forest roads, but the majority of birding near the vehicles. Limit 11 (plus leader) in three vehicles.

Leader: Dave Pearson.

Reservations: Larry Langstaff, larrylangstaff1@gmail.com

Saturdays, January 27 and March 10

Wickenburg-Hassayampa River/Secret Ponds

Begin birding along the Wickenburg pedestrian bridge and under-bridge path along the Hassayampa River. Then a short two-mile drive to Wickenburg's Secret Ponds. Expected birds include Red-shouldered Hawk, Vermilion Flycatcher, sparrows, and waterfowl (depending on pond water levels). Wickenburg is an old western town. After the trip, stay and enjoy lunch at a restaurant, explore the town's history at Desert Caballeros Western Museum, or visit Hassayampa River Preserve. Difficulty: 2 (walkway with inclines and stairs at the first stop and dirt trail for the second stop). Limit 8. One additional high clearance vehicle needed to access Secret Ponds. Please let leader know if you are willing to carpool some of the participants to this location.

Leader: Chrissy Kondrat-Smith, azdesertbird@gmail.com

Saturday, February 3

Santa Cruz Flats

A chance to see wintering raptors perched on roadside poles. Also search agricultural areas south of Casa Grande for location specialties: Crested Caracara, Mountain Plover, and Sprague's Pipit. Leave Tempe at 6:15 am, with sunrise occurring before we arrive on the flats around 7:25 am. Return in early afternoon. Bring binoculars (and a scope if you have one), water and

snacks, and wear subdued-colored clothing. Limit 11 plus leader (David Pearson).

Reservations: Larry Langstaff, larrylangstaff1@gmail.com

Thursday-Friday, February 8-9

Roosevelt Lake/Globe with overnight at Noftsgger Hill Inn B&B

Noftsgger Hill Inn B&B is one of the top 10 B&Bs in an old schoolhouse in the country. (Rooms \$90 and \$150 single/double occupancy, plus tax; some rooms easily accommodate additional guests at \$20 each). Make reservations as soon as you can and no later than December 31: 928 425-2260 or info@noftsggerhillinn.com. If carpooling, suggested donation to driver: \$12-15. Donations in my car go to CEDO, the bi-national conservation organization sponsored by MAS. Itinerary (subject to change depending on the weather and road conditions):

Thursday, February 8

- Bird Apache Trail and Roosevelt Lake.
- Arrive B&B at 4:00 pm, have light Happy Hour, go out to dinner locally (\$10-20).
- 7:30 pm, upon request, one-hour birding class on one of a variety of topics decided by participant vote.

Friday, February 9:

- 7:30 am, after light snack, leave to bird lower level of Ice House Canyon, Pinal Mountain.
- 10:00 am, return to B&B for sumptuous breakfast and review the bird list.
- 11:30 am, check out and bird another area of Pinal Mountain.
- 2:00 pm, leave Pinal Mountain and return to Phoenix area.

Expect varied waterfowl at Roosevelt Lake, as well as desert to chaparral birds, including raptors, wrens, titmice, and sparrows. Difficulty: 1-2. Limit 9.

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

Wednesday, February 28

ASU Hasbrouck Insect Collection Discovery

Curator, Nico Franz, leads a discovery tour of Hasbrouck Insect Collection at 3:30 pm. Observe specimens from southwest, including Mexico, mostly collected by past entomology students and ASU professors. Limit 15.

Reservations: Larry Langstaff, larrylangstaff1@gmail.com

Saturday, March 3

Southwest Desert Insects Revealed

Join Nico Franz, Curator of ASU's Hasbrouck Insect Collection, on a walk to find spring insects. Location: South Mountain Park, or the McDowell Mountains, or the desert above Granite Reef Dam on the Salt River. Start at 8:00 am. Limit 15.

Reservations: Larry Langstaff, larrylangstaff1@gmail.com

Monday, March 26 – Tuesday, March 27

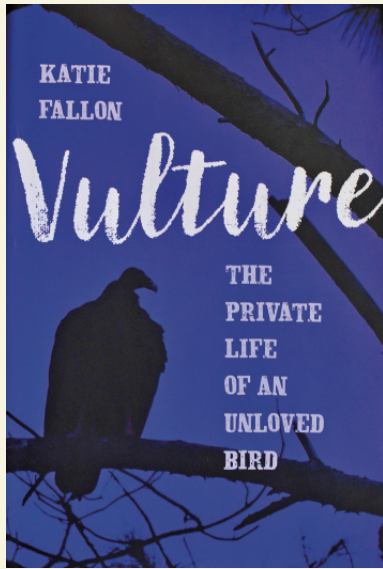
Rio Rico area, including Ruby Road and Peña Blanca Lake

Two days of birding around Rio Rico, with night at standard hotel. Target destinations include the De Anza Trail around Tubac and Peña Blanca Lake in the Atascosa Mountains; likely stops at Sweetwater Wetlands, and along Ruby Road. Expect sparrows, Red-naped Sapsucker, Bushtit, jays and nuthatches, plus early migrants, including warblers, vireos, and tanagers, and possible rare Montezuma Quail. Costs include hotel, two restaurant meals, gas donations to drivers, and small entrance fees. Difficulty 1-2. Limit 8.

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

In Praise of Vultures

by Mark Larson



Vulture: The Private Life of an Unloved Bird by Katie Fallon. University Press of New England, 2017. 248 pp., ISBN: 9781611689716, hardcover, \$27.95.

All of us have seen vultures and some of us have seen condors, but how many of us know much about these large, soaring birds? It turns out that comparatively little is known about vultures worldwide. Even bird scientists have seldom studied vultures in detail the way they have other, more appealing birds.

Author Katie Fallon is attempting to change that with

her new book, *Vulture: The Private Life of an Unloved Bird*. In it, she presents a wealth of information about vultures but her style is not dry scientific reading. Rather, it flows beautifully from beginning to end, tipping into other, related topics occasionally, something like the flight of the book's main character, the Turkey Vulture.

The author and her husband, a veterinarian, interact daily with vultures and other birds of prey in their avian research, education, and rehabilitation center in West Virginia, so much of her experience has been gathered first hand. She has also worked with leading vulture experts around the US, including in Arizona, and traveled to other sites around the world, such as India, to study vultures and their place in human cultures and communities.

Fallon does an effective job dispelling some enduring myths and misconceptions about vultures. They do not, for example, follow potential prey items awaiting their deaths, and they do not carry diseases. Instead, they serve a purpose by not only disposing of carcasses, but tamping down diseases such as anthrax. Our world, she contends, would be a dirtier, more diseased, and less attractive place to live without vultures.

I found a typographical error or two and one malapropism but, for the most part, this book is exceptionally well-written with artful, even poetic phrasing as when she is returning a nestling chick after banding:

And then the vulture and I slipped into the cave, into the damp, timeless darkness of sandstone, where the senses fail and prehistory is a whisper away.

The book delves into the causes for the decline of Old World Vultures which, while instructive, might have been held to fewer pages without sacrificing the message. Nevertheless, my criticisms are few when compared to my praise for this work. One example is Fallon's research into other, now extinct avian precursors of modern vultures in the New World that makes this a fascinating volume, and that is just one of the many illuminating chapters!

If you have ever wondered about vultures when you see them soaring over the desert landscape, if you have ever been curious about their migrations, or if you have ever marveled at their ubiquitous presence in our skies, then this book will captivate your interest and hold it through the last page. Then, you will find yourself asking, 'What is she going to write about next?' 🦅

Announcement

Olympic Birdfest April 13-15, 2018

Enjoy guided birding trips, boat tours, live auction, raffle, and gala banquet. Featured speaker Claudio Vidal will talk about "Patagonia & Chile: Birds & Mammals at the End of the Americas." Join the festival pre-trip: a three-day, two-night birding/sightseeing cruise of the San Juan Islands, April 10-12, 2018 or extend your festival with the Neah Bay post-trip on April 16-17, 2018: two days exploring northwest coastal Washington. To learn more, visit www.olympicbirdfest.org.

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. 🦅

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.

Bird Bath Beauties: Meet My Friends from Tanzania

by Skyler Russell



Superb Starling



Arrow-marked Babbler

Superb Starlings, the gangsters of the group, kick everyone out and make a watery mess. Arrow-marked Babbler also come in with gusto. Both these species are gregarious.

My wife and I recently returned from a two-week trip to Kenya and Tanzania to visit family. It had been two years since we'd been on African soil, the last time being our wedding in a lodge surrounded by miles of sugar cane fields. Mt Kilimanjaro and Mt Meru beckoned us back. While the purpose of this trip was to be with family, I couldn't help but steal away a few mornings and evenings, enjoying a reunion with my "old friends," as Dad always called the familiar birds of our area.

I grew up mostly barefoot in the red dirt of the Meto Hills, Kenya. At seven years old, I meticulously used a ruler to mark out the name, location, and date columns in my brand new shiny black notebook, and carefully stuck packing tape over the printed words: SKYLER'S LIFE

LIST. An ornithologist friend had introduced us to the wide wonderful world of birding and suddenly the thorny, semi-arid landscape we called home was teeming with life to be discovered. As we began to learn the birds of our area, they truly became "old friends." The rufous and

black tail darting into the undergrowth: White-browed Scrub Robin. The ensemble of bobbing heads atop the termite mound: D'arnaud's Barbets. The piercing call in the cool of the morning: Yellow-necked Spurfowl. Of all the strands that bind my heart to East Africa, it's hard

to find a thread so intimate and vigorously nostalgic as Africa's birds: their songs, colors, and peculiar personalities.

My wife, on the other hand, is more of a people-person. (And let's be honest, we birders sometimes need some educating in this area). I've learned that for my people-watching wife, it's personalities that draw her in, both in people and in birds. For months, I tried to teach her what a Turkey Vulture was, but to no avail. Then one day I added a bit more personality to it: a wobbly skateboarder, lacking confidence, nervous,

and over-compensating miserably to maintain control. She now calls them Turkey Wobblers and often notices them before I even do. The name amuses me, and for fear of losing ground on a huge success, Turkey Wobbler it is. All of the birds my wife remembers are those to



Spectacled Weaver

Spectacled Weavers come in like commuters on a quick lunch break. Grab-and-go is the name of the game. Weavers are famous for their nests. A Spectacled Weaver's nest is suspended by knots to the tip of tree branch or creeper, and is bottle-shaped, consisting of a woven nest chamber with an unusually long entrance tunnel – looking like a bottle-spout at the bottom.

which we have assigned a particular personality. The rest, she couldn't care less about.

Whether birds are your "old friends," or you occasionally notice them and only sometimes remember their names, I'd like to take you on a tour of some of my favorite bird friends from Arusha, Tanzania. I invite you to pull up a safari chair and join me at the birdbath, marveling at a show only Africa can offer.

I'm long overdue for a leisurely chat with Mom. On the flagstone porch of the grass-roofed kibanda building, we orient our chairs towards the birdbath at the far end of the lawn, and sip on homemade rosella (hibiscus iced tea). A gentle breeze wafts up from the Maasai Steppe below; to the east we see a faint outline of Mt Kilimanjaro. It doesn't take long for the parade to start. What follows is a magical 45 minutes of heart-to-heart conversation, interspersed with moments of raising my lens to capture an image of the latest character on stage.

Though he didn't visit the birdbath this time, the Spotted Morning-thrush is indeed an "old friend" I enjoyed seeing on this trip. He is the village troubadour, ever singing in complex melodies both original and borrowed. He is East Africa's version of a Northern Mockingbird. He gets a bit jealous when another singer introduces some competition. I love mimicking bird songs, and this is one I particularly enjoy as it almost always elicits a memorable response. Sometimes, Spotted Morning-thrush and I will have entire conversations in the early morning hours. He will call



African Mourning Dove

Five species of dove frequent the bath. While Red-eyed and Ring-necked Doves sit cautiously on a nearby branch, Laughing Doves are eager. They come diving in flapping rapidly, which creates a "laughing" sound in their wings. African Mourning Doves and Emerald-spotted Wood Doves are the least common at the bath, but they paid us a brief visit. In spite of its name, the African Mourning Dove is not related to the North American Mourning Dove.

and I will mimic. Then he calls again and I mimic, quickly adding in at the end a trill of my own, to which he will in turn mimic. Sometimes he'll stay where he is, buried deep in a bush, too proud to admit defeat. Other times, his curiosity gets the best of him and I've even enjoyed bringing one in to a couple of feet away.

On this recent trip, Dad and I heard what sounded like a Red-chested Cuckoo, but I had my doubts. The "Rain Bird," as this cuckoo is nicknamed, has a distinct call of three descending notes:

the first two short and staccatoed, the last longer and descending in tone, as if saying, "It. Will. Raaaaiinnnn. It. Will. Raaaaiinnnn." So faithful is his prediction, that local farmers often rely on its call as an indicator that it is time



Speckled Mousebird

Typically, a long tail and a mohawk are tell-tale signs of an elegant bird; yet I can't say I know of a bird that carries a long tail and a mohawk with less elegance than a Speckled Mousebird. The mousebird gets its name from its soft fluffy greyish or brownish feathers that are more like fur than feathers and from its long thin tail twice the length of its body. These birds also behave like mice and scurry around in brush in search of food.

to plant their maize and bean crop. Zulus call this bird Uphezukomkhono, which means “on the arm.” Hearing the bird’s call means it is time to “put your hoe on your arm” and start preparing the fields. As the rains had already come and gone, Dad and I investigated further. Sure enough, deep in a bush we saw Mr. Spotted Morning-thrush, singing Rain Bird’s call, his tail dropping every time as he strained to do the call justice. Almost, buddy. Almost!

I saw 94 bird species on this trip. (Before you big-time birders judge, let me point out that this was from only a couple of bird walks in the grounds where we were staying, and the good old drive-by birding that we all know can add more than just a couple of birds to our list.) I observed 36 of these species in a 45-minute span at the birdbath. I can’t help but wonder how long it would take me avidly birding in Arizona to match these numbers. Africa is indeed the land of abundance.

But in the end, it isn’t about the numbers, is it? It’s about making old friends. I’ve introduced you to some of mine. I look forward to hearing about some of yours. 🐦

Skyler Russell is an adventurous world-traveler who has found in photography a means to capture the beauty of the wildlife, landscapes, and people he has spent time with. He desires to be a part of mending a broken world, and he believes that images of beauty can do more than inspire awe; they can communicate a message of hope, and fascinate people into action.



African Pied Wagtail

African Pied Wagtails could not have been better named: their incessant tail-bobbing is quite amusing. Scientists are unsure of the reasons for this behavior of these Old World insectivores and have suggested that tail-wagging may flush up prey, may signal submissiveness to other wagtails, or may be a signal of vigilance to deter potential predators.

White-browed Coucal



From a nearby lantana, a large head pokes out holding a chameleon in its beak. The victor is a White-browed Coucal. Later, he and his partner perform an act on the bath, offering me some great images of this shy and retiring bird.



**Be Social!
Find MAS on
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Summer in Shetland

by Daniela Siroky



Atlantic Puffin returns with sandeels

Last July, I had the fortune of spending some time in the Shetland Islands in the North Sea, at the same latitude as Anchorage, Alaska. Famous for spectacular scenery, bird watching, and ponies, Shetland is beautiful, bright, and cool in the summer, which is very nice for someone coming out of Arizona in July. During the “simmer dim,” a nightlong summer twilight, the sun disappears only for a few hours, giving Shetland 18-19 hours of sunshine a day.

Shetland is on the migration path of many seabirds, among them: Northern Gannet, Guillemot (*Uria aalge*, known as the Common Murre in North America), Northern Fulmar, European Shag, and Atlantic Puffin. I enjoyed them all, but I fell in love with the puffins.

Puffins spend winter at sea and fly from Iceland to Shetland in summer to breed. A puffin can dive to a depth of 200 feet to resurface in 30 seconds with a sandeel in its bill. It puts the sandeel crosswise in the back of the bill and then plunges back in the sea to get another sandeel. It repeats this behavior until its bill is full. Only then does it bring the food to its nest burrow (excavated by the puffin or by rabbits) to feed its

waiting puffling. When watching them, I wasn't wearing my glasses, and I could not understand what was hanging out of their bills. Maybe whiskers, or algae? I couldn't figure it out but when I saw my pictures, I finally understood that it was food.

Unfortunately, these attractive birds are declining in numbers due to hunting and habitat destruction. Today puffins are still hunted for their eggs and meat in Iceland and the Faroe Islands. Perhaps even more important is the depletion of the puffins' main source of food.

The Lesser Sandeel (*Ammodytes marinus*) population of the southern North Sea has shown dramatic declines, with deleterious effects on marine predators such as the Puffins. The impact of the sandeel population collapse is well documented. The warming of the North Sea has disrupted the relationship between plankton, sandeels, and seabirds, thus creating food shortages in the ecosystem.

Daniela Siroky is a software engineer, botanical illustrator, quilter, and birder wannabe. 🐦



Northern Fulmar. This long-lived seabird is related to albatrosses and flies low over the sea with stiff wings. In Scotland, several Northern Fulmars banded as adults in 1951 were still breeding in 1990, at ages likely greater than 50 years (allaboutbirds.org).



Atlantic Puffin



Northern Gannet. These birds, often in large flocks, feed by flying high and circling before plunging into the sea. They spend most of their time at sea and breed on cliffs in large colonies.

Bar Graphs Benefit Budding Birders

by Tom Gatz

Maricopa County birders are looking forward to Janet Witzeman's and Troy Corman's completely updated, third edition of *Birds of Phoenix and Maricopa County, Arizona* featuring pinpoint directions to prime birding areas as well as detailed bar graphs and species accounts indicating what species to expect month by month. This book, sponsored by Maricopa Audubon Society, will be invaluable for novice and expert birders alike. Janet hopes it will be available before Christmas.

The best bird-finding guides, such as this one, include bar graphs showing seasonal occurrence and local abundance. These graphs are helpful not only to new birders but also to experienced birders visiting a place for the first time or when checking on the status of a rarity when it shows up in their area. Before I visit a new locale or go out for a morning of birding here in town, I often consult the graphs in advance to get a quick idea of what to expect and what might be locally rare and require documentation.

As a young birder in Chicago, I referred to the bar graphs in my four by seven-inch copy of the booklet *Chicagoland Birds: Where and When to Find Them* published by the Chicago Field Museum of Natural History. In a roundabout way, those bar graphs helped me get my first temporary wildlife job that eventually led to a career as a wildlife biologist.

It was a cold morning in late December 1970 when I noticed a dark object on the snow near the curb on the street in front of our house. A closer look revealed a recently deceased, robin-sized bird with a very long beak. I scooped it up, brought it into the house and identified it as a Virginia Rail, a bird more typically found in a marsh far from the Chicago winter that time of the year.

A quick check of the bar graph disclosed no previous winter records of this species in the area. I carefully wrapped it in tinfoil, placed it in the bottom of our freezer and sent a letter to William J. Beecher, the director at that time of the Chicago Academy of Sciences, notifying him

of my find. I was excited when he called me back and asked me to bring the specimen to the Academy. When a revised

version of the booklet was published, I was elated to see a tiny dash in late December on the bar graph for the Virginia Rail accompanied by my name in the acknowledgements section.

Four years later found me with a bachelor's degree, zero experience in wildlife work, numerous rejection letters from potential state and federal employers, and wondering if I would ever escape from my job at Western Chain Factory on Chicago's near north side. Then I got a call from the Denver Wildlife

Research Center in Lakewood, Colorado. They were looking for a biological technician with expertise in birds and they offered me my first wildlife job.

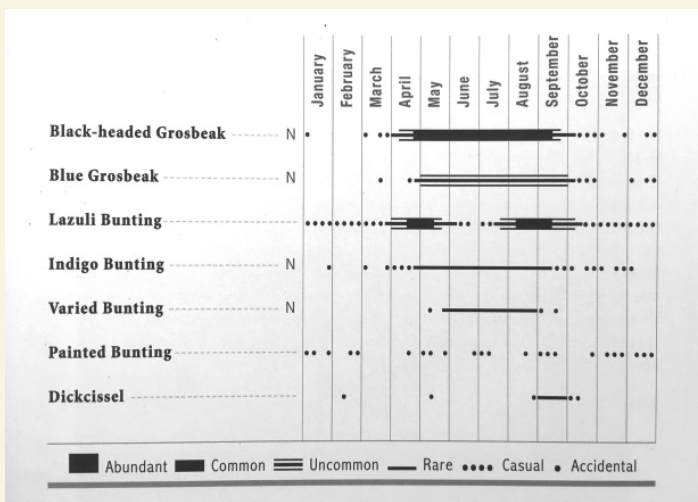
Why did they select a neophyte birder with no previous wildlife experience? Well, looking back at my thin resume, I guess I stretched that tiny dash in the rail's bar graph into something a bit more impressive. In the block on the application form that asked for "experience and publications" I had typed in "I have contributed ornithological data to a 1972 publication by the Chicago Field Museum of Natural History." Technically accurate perhaps, but somewhat of an exaggeration of my actual contribution to the publication.

The secretary at the Research Center later told me that it was probably the mandatory disclosure of my arrest for skinny-dipping at a Wisconsin State Park that kept my resume at the top of the pile (apparently it was getting passed around the office for laughs). However, I want to believe that it was that wayward Virginia Rail and resulting dash on a bar graph that gave me an edge in the job selection process. 🐦

Tom Gatz has been a MAS member since 1981.



The author with a Great Horned Owl in his first wildlife job, Sherburne National Wildlife Refuge, Minnesota, 1976. Photo by Paul Hegdal



A sneak peek at some of the bar graphs in the new, updated, soon-to-be-published *Birds of Phoenix and Maricopa County, Arizona*.

CONSERVATION UPDATE

by Mark Horlings



MAS AND ITS ALLIES LOSE RESOLUTION COPPER TAILINGS LAWSUIT

In 2016, Maricopa Audubon Society (MAS), the San Carlos Apache Tribe and others sued the Forest Service, seeking more scrutiny of Resolution Copper Company's (RCC) plans to dump tailings on Forest Service land. In order to advance that plan, RCC proposed to drill fifty-four test holes and dig thirty-two trenches near Superior to test geology and hydrology at the tailings site. The Forest Service approved the drilling using a simplified environmental assessment (EA); our lawsuit claimed the drilling required a more rigorous environmental impact statement (EIS).

MAS's suit was argued in Federal District Court on August 23, 2017 before Judge David Campbell. His ruling denying MAS's claims came shortly after. Judge Campbell noted that the Forest Service would use data from the drilling to prepare its EIS for the larger mine project, and that MAS and the other plaintiffs had often attended public hearings and offered their comments. To prevail, MAS would have had to convince the judge that the Forest Service acted arbitrarily, capriciously, or contrary to law. He concluded that they had not.

RCC has completed most of the drilling and digging for this project; the impact from future monitoring of the test holes and trenches will be small. An appeal is, therefore, unlikely.

CATTLE GRAZING IN THE TONTO NATIONAL FOREST

In 2013, the Forest Service issued a draft EIS addressing grazing and other issues on six allotments near the Salt River and Roosevelt Lake. An earlier EIS tallied the damage to wilderness, arid scrublands, and the Salt River caused by a long history of overgrazing these allotments. The Forest Service withdrew its 2013 draft EIS in 2015, after its plan to permit grazing in the Salt River riparian corridor drew objections.

Recently, plans for improvements which would allow increased grazing have resurfaced for two of the allotments, Poison Springs and Hicks-Pikes Peak. Proposals to accommodate more grazing on the other allotments may come soon.

The Poison Springs proposal would run a one-and-a-half-mile pipeline into dry pastures, providing water to four new troughs. The theory is that more water sources will cause herds to disperse, reducing crowding, reducing erosion, and reducing damage to the riparian areas along the Salt. Cattle dispersal may be the grazing equivalent of the slogan "The solution to

pollution is dilution" which, during the 1980s, led fertilizer companies to rebrand themselves as hazardous waste experts and blend hazardous waste into their agricultural fertilizers. Dilution offered a second source of income until regulators intervened.

Unfortunately, dispersing cattle may not work. A four-year study evaluating the effect of using fencing and water to disperse herds in arid scrubland concluded that the herds did disperse but damage to grasses and stream banks in previously-grazed areas continued. No improvement was noted. Meanwhile, the new areas grazed suffered erosion and loss of native grasses.

MAS and others commented on the Poison Springs plans in September. Comments on the Forest Service's environmental assessment describing plans for the Hicks-Pikes Peak allotment are due in October.



Desert Nesting Bald Eagle. Photo by Matt VanWallene

DESERT NESTING BALD EAGLE

On August 28, 2017, the Ninth Circuit Court of Appeals ruled in favor of the US Fish and Wildlife Service (USFWS), affirming a lower court's opinion that Desert Nesting Bald Eagles are a "discrete" but not a "significant population." Arizona's year-round resident eagles do not, therefore, qualify as a "distinct" population entitled to protection under the Endangered Species Act.

The Court's opinion basically deferred to the expertise of the USFWS. According to *Smithsonian* magazine, the USFWS has evaluated more than

6000 claims involving endangered species without ever recommending that a single project be scrapped. (In fairness, the USFWS has, on many occasions, recommended project revisions or mitigation.) The court's deference to the USFWS was, therefore, painful to MAS Vice President Robin Silver and the others who have fought so long for these eagles.

On a positive note, this and earlier lawsuits seeking protection for Desert Nesting Bald Eagles have led to increased understanding of their unique life histories and increased public concern. Nest watchers now monitor each known breeding pair. The nest watchers may provide the best hope for these birds. 🦅



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

Compiled by Vicki Hire

green scene



female Common Merganser



redhead pair



Greater White-fronted Geese

Wacky Waddling Waterfowl

Did you know ducks are found on every continent except for Antarctica? Ducks, geese, and swans are called “waterfowl” because they are found in places with water, like ponds, streams, lakes, and rivers. Ducks are smaller with shorter necks and smaller wings. Ducks have waterproof feathers; they have a special gland near their tails that produces oil. When a duck preens, it spreads the oil over its outer layer of feathers, making them waterproof. The underneath layer of feathers is fluffy and soft to keep the duck warm. As soon as a baby duckling’s feathers (“down”) are dry after hatching the duckling can swim.

Did you know a female duck is called a duck or “hen” and a female goose is called a “goose?” A male duck is called a “drake” and a male goose is called a “gander.” The saying “to take a gander” means to have a good look around, and is a reference to the long neck of a goose stretching to get a better look. A duck can turn its head completely backwards to put its beak into the feathers on its back and wings for preening.

Did you know ducks and geese “waddle” instead of walking because they have wide, webbed feet? Their webbed feet act as paddles in the water and make them strong efficient swimmers. Their feet have no nerves or blood vessels, so they do not feel cold even if they are swimming in icy cold water!

Did you know over 25 species of ducks live in North America? They belong to five different categories based on their behavior and habitat: (1) dabbling ducks, (2) diving ducks, (3) sea ducks, (4) swans and geese, and (5) whistling ducks.

Dabbling ducks tip their bodies into the water with their rear ends pointing upwards and their bills just under the water’s surface to eat plants and invertebrates. Examples are: Mallard, Northern Shoveler, Northern Pintail, Cinnamon Teal, Green-winged Teal, and Gadwall.

Diving ducks usually dive all the way into the water to get their food. They also need a running start on the water to get airborne, making it look as if they are running on water. Examples are Redhead, Common Merganser, Bufflehead, Canvasback, and Ring-necked Duck.

Sea ducks are diving ducks that usually spend part of their life in marine or estuarine habitats. Some sea ducks like mergansers have a serrated beak which helps them to grasp prey when diving for food. Examples of sea ducks are Bufflehead, Hooded Merganser, and Common Goldeneye.

Swans and geese are the largest members of the duck family. Swans are some of the largest of all flying birds. They feed like dabbling ducks, tipping up and foraging for food underwater. Swans bond in pairs that usually stay together year-round and last for life. Examples are the Trumpeter Swan and Mute Swan. Geese spend more time grazing on grass and other plants on land than do swans. Geese mate for life and both parents tend the young. Examples are Canada Goose and Greater White-fronted Goose.

Whistling ducks feed on grain in agricultural fields, usually at night. They were once known as tree-ducks, but only a few perch, or nest in trees. Examples of whistling ducks are the Black-bellied Whistling-Duck and the Fulvous Whistling-Duck.



Ring-necked Duck

Green Scene Go Take a Hike

Check out the ponds near Phoenix Zoo in Papago Park! It’s a waterfowl hotspot, especially in winter, where you can see American Wigeon (this issue’s cover bird), Ring-necked Duck, and Northern Pintail. Don’t forget your binoculars and a picnic. Follow signs to the zoo and then take Ranger Office Loop Trail.

Guess this Bird

Green Scene True or False?

- T F 1. A female goose is called a gander.
 T F 2. A Mallard is a type of diving duck.
 T F 3. A Bufflehead is a type of sea duck.
 T F 4. Waterfowl is another name for ducks, geese, and swans.
 T F 5. A Redhead is a type of whistling duck.
 T F 6. Swans bond in pairs for a lifetime.



Clue: This duck species is often very tame and easily seen on city ponds.

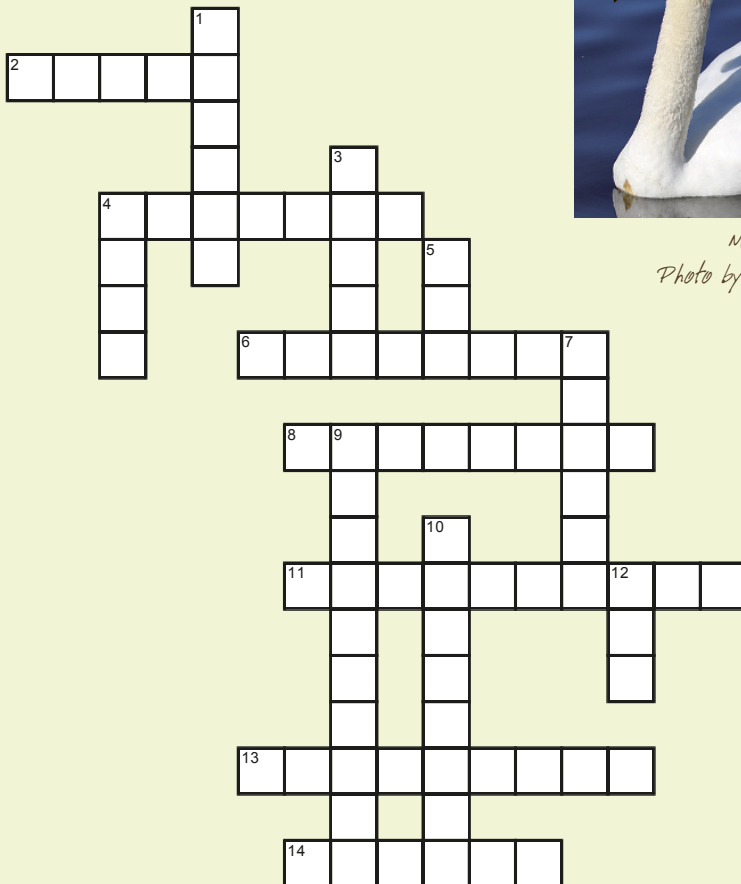
green scene

Wacky Waddling Waterfowl Crossword



Mute Swan

Photo by Matt vanWallene



Across

- 2 A male duck is called a _____
 4 At least 25 _____ of duck live in North America
 6 When a duck cleans and straightens its feathers, it is _____
 8 These ducks tip their rear ends upwards and their heads into the water to search for food
 11 A duck's outer feathers are _____ because they are covered with oil
 13 These ducks were once known as tree ducks
 14 What a duck does with its feet when swimming

Down

- 1 Ducks do not have _____ or blood vessels in their feet
 3 _____ mate for life and both parents take care of their offspring
 4 One of the largest flying birds of all is the _____
 5 A female duck is called a _____
 7 A male goose is called a _____
 9 Ducks are found on every continent except here
 10 Some sea ducks have a _____ beak to help them grasp food when diving
 12 Ducks have a special gland that produces _____

Answers on page 19

The Managed Wetland: Modern Necessity and Wildlife Haven

by Gail Cochrane



Long-tailed Duck, Glendale Recharge Ponds

Municipalities across the nation utilize reclaimed wetlands to treat effluent water, improving overall water quality and providing riparian habitats for wildlife, often in urban areas. In the face of growing populations, arid regions such as the Sonoran Desert require this multi-layered use of a precious resource. Several constructed wetlands projects clean water in the Phoenix area and more than thirty operate around the state.

Just west of Phoenix is a magical place where three rivers once converged, where cottonwoods and willows flourished, birds congregated, and migratory species dropped in for vital sustenance.

These rivers have drawn humans to the Phoenix area since ancient times, and always people managed the water resource. Ancients built canals, and more modern inhabitants added dams and diversions to enable wide-ranging agricultural practices, to harness floods, and to store water for times of drought.

Over time the human population in the Valley of the Sun swelled and water management practices became less sustainable. The three rivers – the Salt, the Gila, and the Agua Fria – that create the confluence west of Phoenix, dried up. The former oasis was ploughed and put to work raising cotton and the water required arrived via cement lined canals. Against all odds, this area is returning to life due to a most unlikely means. A rapidly multiplying population mandated the construction of a wastewater treatment plant that was built just upstream from the rivers' confluence.

Currently the treatment plant takes in more than 160 million gallons of wastewater from five Valley municipalities daily. The grey water produced is not potable, but is extremely valuable to desert cities. About half of the reclaimed water is piped to the massive Palo Verde Nuclear Generating Station to cool the reactors. Some is sold to golf courses, city parks and industry. The water that's left is pumped into the constructed wetlands called Tres Rios.

At Tres Rios seven hundred acres of wetlands function as a complete natural system. Water is purified in this riparian oasis, and the wildlife has come. More than 150 species of birds have been sighted

and mammals including muskrats, skunks, bobcats, beavers, and raccoons hunt and breed in the area. Migratory and wintering species of birds feed on fish, insects, and plants while lizards, snakes, and amphibians such as toads, find their place in the rich food chain.

The town of Gilbert recharges groundwater at Gilbert Water Ranch. These wetlands also create a vibrant riparian habitat. Gilbert made water a priority as early as the mid 1980s when the town decided to reuse 100% of the city effluent. Water resource development and the wild habitat created led to robust educational and recreation opportunities.

The city responded by opening the Riparian Preserve at Water Ranch in 1999. Ten-acre recharge basins are filled on a rotating basis with treated effluent that slowly percolates into the aquifer for storage.

An additional lake is filled with reclaimed water and stocked with rainbow trout, Largemouth Bass and sunfish. The boardwalk crossing the lake provides excellent viewing of an assortment of waterbirds as well as pollywogs and minnows darting in the shallows.

Nearly 300 species of birds have been identified at the Riparian Preserve, where four and a half miles of trails wind through vegetative zones that include marshlands, native riparian habitat, and upland vegetation. Interpretive signage and viewing blinds enrich the wildlife watching experience.

Back in Phoenix, south of downtown is the Rio Salado Restoration Area. Here, five miles of the Salt River has been restored with water from twenty-two city storm drains and water pumped from the underground aquifer. The 1999 Water Resources Development Act provided funding for the project. Since then, 76,000 trees and shrubs have been planted across 595 acres in the formerly barren river corridor. More than 250 species of birds, as well as a host of mammals, dragonflies, damselflies, reptiles, and amphibians now live near or migrate through this demonstration wetland.

In the heart of the Rio Salado Restoration Area, tall cottonwood trees shade peaceful waterways that support the rich diversity of life. A Monarch butterfly garden is maturing in the muted light and a

network of trails invites visitors to enjoy the solitude. Signage traces the progress made and the massive clean up involved. This includes 1187 tons of tires taken from the river bed at the outset of the project.

Now, City Ranger Brian Miller reports sightings of coyotes, foxes, raccoons, turtles, frogs and a wide range of birds along the river channel. He praises the Peace Trail that provides access as it winds through the area along the edge of the riverbed. Eventually, following the path the wild Salt River once carved, the paved trail will run from Mesa's Riverview Park all the way to Tres Rios. Beavers also make their homes in the Rio Salado Restoration Area and you might spot evidence of their tree-harvesting.

Tucson has a robust water reclamation project called Sweetwater Wetlands. Effluent is pumped into wetlands where green plants provide further purification before the water infiltrates into underground aquifers through recharge basins. When the city faces shortages, extraction wells draw on this water source for use on golf courses, parks, schools, and other turf irrigation areas.

At Redhead Marsh outside of Show Low, 200 acres are under a complex management system that channels wastewater between lakes, marshes, polishing ponds, and a riparian area. These varied habitats provide different types of microbes, vascular plants, reeds, and plant debris that slow the water and absorb or transform contaminants as the water trickles past. This intricate system of filtration employs water, soil, plants, and animals along the banks, as well as microbes, sunlight and air. The process mimics nature, and the end result is reclaimed water and a remarkably rich wildlife habitat.

Managed wetlands are outstanding places to see rarities. Why not join a Christmas Bird Count at a managed wetland? See page 18 for the CBC Schedule. Who knows what you might observe? 🦉

Gail Cochrane is Manager of the Roosevelt Center of Sustainability, a STEAM education venture of the Roosevelt School District.



Female Blue-winged Teal, Sweetwater Wetlands

Tres Rios Wetlands

S. 91st Avenue, Phoenix 85353

602 495-7477

Open daily, sunrise to sunset.

Wildlife watchers must obtain a free access permit, valid for three months.

Contact heather.finden@phoenix.gov and allow five days for processing.

Riparian Preserve at Water Ranch

2557 E. Guadalupe Rd., Gilbert 85234

480 503-6200

Open daily, sunrise to sunset

Rio Salado Restoration Area

Open daily, sunrise to sunset or 7:00 pm, whichever comes first.

Trailheads at 2801 S. 7th Ave,

2439 S. Central Ave,

2875 S. 7th St, 3212 S. 7th Ave,

3203 S. 16th St.

Also visit Nina Mason Pulliam Rio Salado Audubon Center at 3131 S. Central Ave where you can join a Saturday morning bird walk (8:00 am) with MAS member Joe Willy.

Sweetwater Wetlands

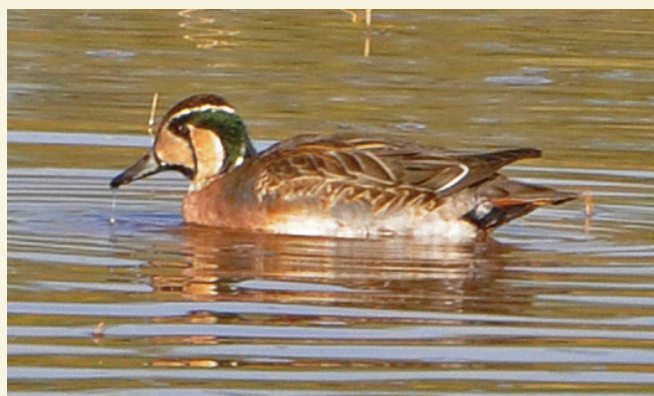
Directions and more information at www.tucsonaz.gov/water/about-sweetwater-wetlands-and-access. Open daily.

Redhead Marsh and Pintail Lake, Show Low

Contact Lakeside Ranger Station for more information, 520 368-5111



Sagebrush Sparrow, Tres Rios



Baikal Teal, Gilbert Water Ranch

A Different Kind of “Hummingbird”

by Vicki Hire



White-lined Sphinx Moth caterpillar. Photo by Vicki Hire

Early on the morning of August 3, I stepped outside my front door to a plethora of yellow caterpillars crawling everywhere. I'd never seen anything quite like it before. They were in the grass, on the front porch, in the dirt, on the rocks . . . absolutely everywhere I looked crept a caterpillar! I tiptoed around them to get in my car and head off to work. As I drove the length of the driveway, I noticed dozens more along the way and then I glanced down the road ahead of me. An unbelievable sight of yellow caterpillars slinking across the pavement for as far as I could see. At that moment, I decided I had to head back to the house to find a jar so that I could save a couple. I wanted to find out what these caterpillars were, why suddenly so many of them appeared, and why I had never seen them before.

After some research, I discovered the caterpillar would evolve into a White-lined Sphinx moth, also known as a “Hummingbird Moth.” I learned that this sphinx moth has a curled proboscis that can be up to 10 inches long, and a wing span up to about three and a half inches. The species is one of the largest

flying insects of the desert. They can be mistaken for hummingbirds at first glance because they are about the same size and behave like hummingbirds. The adult female moth can lay up to 1000 eggs on the underside of leaves, which then hatch into the larval state. The larva is a type of hornworm caterpillar, a species in the Order Lepidoptera (moths and butterflies) and the Family Sphingidae. They are not poisonous; some Native Americans in the Sonoran Desert harvested the larvae, dried them, and used them for food.

The caterpillar has a hook on the back end, similar to a tomato hornworm. My caterpillars were yellow with

black stripes and red spots, but they can also be bright green or completely black. I read that they would need to dig burrows so they could complete pupation, so I added several inches of soil to the aquarium in which I had placed my caterpillars. After gorging themselves on plants for seven days, by August 10, the caterpillars in my aquarium had burrowed into the soil.

A little more than two weeks later, on August 28, I came home from work to find a White-lined Sphinx moth in the aquarium. A very



White-lined Sphinx pupa. This is the stage before the moth emerges. Photo by Vicki Hire

exciting moment! I quickly took a few photos with my iPhone and then gently opened the lid to release her. I was amazed at how fast she flew to the porch light, and how she hovered and quickly moved her wings just like a hummingbird. The following day, August 29, a second moth appeared. He did not seem as eager to fly so I gently put my finger beneath him and lifted him up and out of the aquarium. He stayed on my finger for more than an hour as we sat together in the dark. He seemed not to want to go, as much as I didn't want him to fly away, but knew he must. I marveled at him and at what nature had just produced. I took a photo with my iPhone, gently waved my hand, then watched as he flew into the dark. 🦋

References

BugGuide hosted by Iowa State University. Accessed on October 1, 2017 at <http://bugguide.net/node/view/3071>

Olson, Carl A. 2002. *White-lined Sphinx in Arizona*. Accessed on October 1, 2017 at https://cals.arizona.edu/urbanipm/listserv/update/2008/white-lined_sphinx.pdf



White-lined Sphinx. Photo by Pete Moulton



My moth aquarium. Photo by Vicki Hire



White-lined Sphinx. Photo by Vicki Hire

Arizona Christmas Bird Count Schedule [2017-2018]

by Walter Thurber, Arizona Field Ornithologists

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	Th	Patagonia	Thomas Amy	520-394-0146	pvndnbr5 at gmail.com
12/14	Th	Sedona	Richard Armstrong	928-282-3675	richarmstrong at q.com
12/14	Th	Tucson Valley	Luke Safford	520-629-0510	saffordluke at gmail.com
12/16	Sa	Avra Valley	Claudia Johnson	509-264-9076	claudialj at mac.com
12/16	Sa	Buenos Aires NWR	Bonnie Swarbrick	520-240-3737	bonnie.swarbrick at gmail.com
12/16	Sa	Cabeza Prieta NWR	Christopher Riesberg	520-387-6483	christopher_riesberg at fws.gov
12/16	Sa	Hassayampa River	Vanessa Montgomery	623-465-0012	hassayampacbc at yahoo.com
12/16	Sa	Martinez Lake-Yuma	Lin Piest	928-341-4049	lpiest at azgfd.gov
12/16	Sa	Mormon Lake	Terence Blows	928-774-8028	terence.blows at nau.edu
12/16	Sa	Nogales	Michael Bissontz	520-577-8778	seetrogon at comcast.net
12/16	Sa	Santa Catalina Mountains	Kendall Kroesen	520-971-2385	kkroesen at cox.net
12/17	Su	Grand Canyon	Brian Gatlin	928-638-7723	brian_gatlin at nps.gov
12/17	Su	Jerome	Julie Wills	928-300-9775	jwills282 at hotmail.com
12/17	Su	Ramsey Canyon	Ken Blankenship	770-317-8486	kenhblankenship at comcast.net
12/18	Mo	Chino Valley	Russell Duerksen	928-925-5567	duerksen at msn.com
12/19	Tu	Atascosa Highlands	Jake Mohlmann	610-390-2424	mohlmann2 at yahoo.com
12/20	We	Phoenix-Tres Rios	Marceline VandeWater	602-689-4356	marceline at ermaroni.net
12/20	We	Prescott	Carl Tomoff	928-778-2626	tomoff at northlink.com
12/23	Sa	Superior	Cynthia Donald	480-283-4515	planres at earthlink.net
12/27	We	Gila River	Troy Corman	602-717-2928	aplomado at cox.net
12/28	Th	Bill Williams River NWR	Kathleen Blair	928-667-4144	kathleen_blair at fws.gov
12/29	Fr	Havas NWR	DeeDee DeLorenzo	928-758-2707	deedeedelorenzo at gmail.com
12/30	Sa	Carefree	Cathryn Wise	602-301-7530	cwise at audubon.org
12/30	Sa	Flagstaff-Mount Elden	Terence Blows	928-774-8028	terence.blows at nau.edu
12/30	Sa	Portal	[Open]	520-558-2287	winjac12 at vtc.net
01/01	Mo	Camp Verde	Holly Kleindienst	928-853-6887	hollykleindienst at gmail.com
01/02	Tu	Dudleyville	Doug Jenness	520-909-1529	d_jenness at hotmail.com
01/02	Tu	Payson	David Hallock	928-474-9475	eldoradh at rmi.net
01/03	We	Appleton-Whittell	Suzanne Wilcox	520-455-5522	swilcox at audubon.org
01/03	We	Glen Canyon	John Spence	928-608-6267	john_spence at nps.gov
01/05	Fr	Timber Mesa	Mary Ellen Bittorf	928-367-2462	mcbitt30 at cableone.net
Unknown		Green Valley-Madera Canyon	[Open]	520-399-4050	empidonax at netzero.net
Unknown		Lukeville	Emily Conant	520-387-6849	emily_conant at nps.gov
Unknown		Organ Pipe Cactus NM	Emily Conant	520-387-6849	emily_conant at nps.gov
Unknown		Saint David	Heather Swanson	520-439-6429	SPRNCABird at hotmail.com
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Issued 10/09/2017 * Change at to @ and delete spaces before sending



Green Scene Puzzle Answers

Answers to True or False

1. False. A female goose is called a goose. The male is the gander.
2. False. Mallards are dabbling ducks, which means they tip their rear end up and put their bills just under the water surface to forage for food.
3. True. A Bufflehead is a sea duck, which spends winters in bays, estuaries, reservoirs, and lakes, but it nests in forests, in old woodpecker holes.
4. True. Ducks, geese, and swans are often referred to as waterfowl and each species depends on wetland habitat during its life cycle.
5. False. A Redhead is a diving duck, although it usually dives in shallower water than other diving ducks, and may also dabble.
6. True. Swans usually mate for life, but might separate if their nest fails. If one swan partner dies, the remaining swan will find another mate.

Answer to Guess this Bird

Mallard. These ducks sometimes visit swimming pools. The Mallard is the ancestor of almost all domestic ducks. Notice that the handsome Mallard male has an iridescent green head and bold coloring. The female is mottled brown, which means that she is well-camouflaged when on her nest. Only she incubates the eggs and takes care of the ducklings. Many duck species exhibit sexual dimorphism or observable differences between males and females. Take another look at the American Wigeon pair on the cover of this issue of *The Cactus Wren* edition.

Answer to Wacky Waddling Waterfowl Crossword

Across

2. drake
4. species
6. preening
8. dabbling
11. waterproof
13. whistling
14. paddle

Down

1. nerves
3. geese
4. swan
5. hen
7. gander
9. Antarctica
10. serrated
12. oil

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

Raining

By: David Chorlton

*It's raining poison dart frogs, raining
leaves onto leaves, raining hours,
minutes, and seconds filling up
the years.*

*Each afternoon at two o'clock
it rains. It begins with a few drops feeling
their way back to colonial times
and continues until
the Quakers arrive and clear a space
for rain that turns to grass
when it touches the earth.*

*The bellbirds
have grown quiet
waiting for the rain to stop
and the strangler fig
tightens its grip.
Down one flank
of a volcano it rains ash,
down the other orchids, and rivers
leave their banks behind
as they race each other
to the sea.*

*The rain subverts
the roots by which trees grip
topsoil for as long as the water
has strength to hold them; it softens
the ground where a jaguar walks
and washes away its scent
when it has turned into steam.*

*It rains
nails for thunder
to hammer down, rains dance steps
on a tin roof, and beads
the strands a spider weaves between
one storm and the next.
here's an antshrike
rain, tanager rain, a rain
to guide leaf cutter ants,
rain that thickens into mist
and rain as green as the macaws
that streak across the canopy.*

*There's a
spectacled rain that looks down
with the owl from a branch
above the river
where a caiman's eye
is floating.*

*An iguana
gives the creases in his skin
up to the rain, a blue morpho folds
its wings around the only secret
it has to keep, and on the lagoon
reflections scatter beyond hope
of reassembling.*

*Lianas are draped
between showers, while the palms
that walk, step a little
left or right beneath
howler monkeys hanging
from the rain.*

*Rainwater flows like sleep
on high ground and the low
in a nightlong rush until
the forest is calmed
with rain sliding from the foliage,
and inside
every drop as it falls
is an insect singing.*

Small Mammals – Desert Survivors

by Hans Otto



*Banner-tailed Kangaroo Rat (*Dipodomys spectabilis*) burrow under yucca shrubs at Las Cienegas near Vail, Arizona. It almost looks like this little guy was on spring break at Coco Key's Resort. Photo by Brendan Larsen*

The Sonoran Desert is home to a plethora of organisms. Among them is a diverse group known as the “small mammals.” Though “small mammals” are not a specific taxonomic group, it’s a good general term to use when talking about them. Joseph Merritt (Editor in Chief of the *Journal of Mammalogy*) loosely defines a “small mammal” as any mammal weighing five kilograms (about 11 pounds) or less. In southern Arizona, these mammals inhabit environments characterized by extremes in temperature, precipitation, and altitude. Because we didn’t evolve here, it’s a struggle for us to live in the desert heat. These little mammals, however, are uniquely adapted to surviving the extreme ranges of temperature in the desert.

All vertebrates and invertebrates have a range of “comfortable” body temperatures where they do not need to gain body heat or lose it to the environment. When it gets too hot or too cold, some organisms can get pushed way out of these zones and their body temperatures (including their metabolism) will skyrocket and they will likely die. Fortunately for our little vertebrate cousins, there are a couple of strategies to deal with ever-changing environmental temperatures. For some organisms, the principal source of body heat is gained directly from the sun; these are called ectotherms. The opposite of an ectotherm is an endotherm, an organism whose principal source of body temperature is derived from metabolism. While there are *always* exceptions in biology, let’s stick with these two terms for the sake of simplicity.

Typically, we think of vertebrates such as lizards, snakes, and turtles as “cold-blooded”, and we think of vertebrates such as birds and mammals as “warm-blooded.” This is a relative term because it only relates to what is considered warm or cold to the human touch and does not explain how or why these organisms have the body temperatures they do. The average human body temp is 98.6°F,

so anything above this temperature feels hot to our fingertips and anything below feels cooler. It is more accurate to refer to animals as ectotherms or endotherms. A simple definition of endothermy is the maintenance of a relatively constant body temperature by heat produced inside the body (e.g., metabolism). Since all mammals are endothermic, and are the subject of this article, let’s focus on small mammals in Arizona’s hot environments.

The ability of mammals to colonize harsh desert environments is due largely to their ability to use endothermy. Being endothermic involves benefits and costs. Benefits include the ability to maintain activity at night and in the cold, because the mammals do not rely on the sun to warm up their bodies, and also the ability to maintain higher rates of activity (e.g., faster muscle “firing”). However, a major cost of being endothermic is high food requirements. The main reason for this is to maintain a stable metabolic rate to keep their bodies in the “comfy” body temperature zone.

Unfortunately, regions like the Sonoran Desert create a double problem for mammals. Not only do they gain an excess supply of heat from the environment but they are also exposed to a lack of water. Hot, arid environments quickly evaporate water in the environment (ponds, creeks), and also quickly evaporate water from the bodies of organisms. So, what do desert-dwelling small mammals do to deal with these environmental problems?

Mammals in hot desert environments reduce heat stress through morphological adaptations (relating to an animal’s form and structure), physiological adaptations, and behavior. Let’s take a look at Black-tailed Jackrabbits (*Lepus californicus*). These jackrabbits have extraordinarily large ears that they use as cooling systems. Their ears are thin and large, which creates an expansive surface area, and are packed full of blood vessels. When they hide in the shade on a hot day, warm blood from their



Mammalogy students checking live-traps for small mammals near Portal, Arizona. Photo by Hans Otto

body core can be pumped into the large ears and can be cooled. The reason this works as a cooling system is because the large surface area of their ears can dissipate heat. Hot blood from their bodies is pumped into their ears and the heat from that blood is then lost to the cooler surrounding air. Cooled blood in the ears will be pumped back into the body and will thus cool off the jackrabbit’s body core. Having large thin ears is one example of a morphological adaptation to reduce heat stress.



A Sherman live-trap next to a ground squirrel burrow (look just behind the trap and to the right). The device is used by mammalogists to capture and study live mammals. Photo by Hans Otto



Merriam's Kangaroo Rat (*Dipodomys merriami*) exploiting a nocturnal niche near Cienega Creek in southern Arizona. Photo by Hannah Hindley

If we think about small mammals that have physiologically mastered high heat environments, kangaroo rats (*Dipodomys* spp.) take the prize. They can conserve water through their highly-specialized urination and respiration. First, their kidneys are so well adapted they can concentrate urine to the point where it can take on a solidified crystalline form. Their kidneys create a concentration gradient so efficient that it allows for maximum water absorption and minimal water loss. Next, even when kangaroo rats (Merriam's Kangaroo Rat—*Dipodomys merriami*—for example) breathe, they can conserve water. How does this work? As air is inhaled, it passes over moist tissues of their nasal passage (kangaroo rats have lots of nasal wall tissue surface area for evaporation/condensation), these tissues are then cooled due to evaporation, and, in turn, cool the hot blood that is pumped from the animal's body. When they exhale, saturated air in their lungs condenses on the cool walls of the nasal passages which will conserve water in their bodies as a result. This is kind of like a tiny but very efficient water-saving "swamp cooler" that they have shoved up their noses.



Black-tailed Jackrabbit (*Lepus californicus*). Notice the large thin cooling systems atop its head. Photo by Curtis Hart

Small mammals can also avoid the desert heat by their behavior. For example, many are nocturnal and avoid the hottest part of the day, seek shade, minimally orient their bodies to the sun, aestivate¹, or use burrows or nests during hot afternoons. Underground burrows are one of the most effective ways to avoid hot surface temperatures. Burrows act as insulators and are dug to a depth that reduces environmental temperature fluctuations. They provide a cooler stable microclimate and optimize survival when the mammal stays below ground during the heat of the day. Antelope ground squirrels (*Ammospermophilus* spp.) are diurnal (daytime active animals) and avoid extreme temperatures in desert ecosystems by adhering to specific periods of activity. These ground squirrels have a bimodal activity period that corresponds to the mornings and evenings. If they come out of their burrows early in the morning, remain active until about 10:00 am, go back into hiding during hot midday temperatures, and finally come back out again in the late afternoon, they can forage and scamper about during the coolest portions of the day. Harris's and White-tailed Antelope Ground Squirrels can also flip their tails over their back and use them as mini-umbrellas to shade their bodies from the hot desert sun. These are all great adaptations, but what will these animals do if their local climate dramatically changes because of global climate change?

The answer is that we simply do not know. We can frame questions and make testable predictions about how these animals may deal with environmental changes; we can experiment and come up with a logical interpretation of our observations. Will some of these mammals expand their ranges to more northerly latitudes or higher elevations where the climate is more stable? Can they adjust their metabolism in a manner that will allow them to deal with harsher environments? Perhaps they will change their behavior patterns in ways that reduce heat stress even more efficiently. These are all oversimplified predictions and are too general to describe what will happen in reality. However, even well-thought-out experimentation takes time; time that we may not have at the rate at which environmental conditions are changing. It is our responsibility to do what we can as individuals to 1) minimize our actions that contribute to changing climate, 2) protect wildlife, and 3) create more ecologically viable spaces in our desert for the small mammal friends living beneath our feet. 🐾

¹ Aestivation is a state of animal dormancy similar to hibernation, characterized by inactivity and a lowered metabolic rate, that is entered in response to high temperatures and arid conditions.

Hans Otto teaches ecology and evolutionary biology at The University of Arizona.

Nature through the Artist's Eye: Jenny Hyde-Johnson

Jenny Hyde-Johnson's South African home is in a spectacular World Heritage Site, "The Cradle of Humankind," with many subjects to inspire her painting. She trained in graphic design and co-owned and ran a studio for over 25 years before moving to this beautiful area, just a stone's throw from where she was born in Johannesburg.

Since 2005, she has painted full time. For nine years, her bird paintings have exhibited and toured in the prestigious Leigh Yawkey Woodson Art Museum's Birds in Art exhibitions in the USA. Her animal paintings hung in London with the David Shepherd Foundation's Wildlife Artist Exhibitions from 2009 to 2014 where she received a "highly commended" designation in 2010. Her botanical work has graced calendars, garden guides, and other publications including *Flowering Plants of Africa*. She received Gold Medals in the 2006, 2008, and 2013 Kirstenbosch Botanical Art Biennale as well as the 21st World Orchid Congress. Her artwork is in the public collections of the South African National Biodiversity Institute (SANBI), the Leigh Yawkey Woodson Art Museum (LYWAM), and the Hunt Institute of Botanical Documentation (USA), and the Shirley Sherwood Collection housed at Royal Botanic Gardens Kew (UK) as well as many private collections worldwide.

To learn more about Hyde-Johnson and to see more of her work, visit www.jennyhyde-johnson.com 🐦



Diamonds and Rust

Acrylic on canvas, 9"x32.5", 2015

Diamonds and Rust was inspired by my American friend Marysue; she visited Namaqualand, South Africa where my grandparents grew up. It's a poor, arid area yet rich in plants, reptiles, insects, and minerals. The setting sun highlights a diamond-prospecting boat still working near the mouth of the harbor. The vacuum hose, manipulated by a diver, floats on the surface and conveys seabed gravel back to the boat for sorting. A history of great wealth from copper and diamond rushes followed by abandonment, rusty piers, rickety docks, and the odd ghost made me think of the title of a favorite Joan Baez song, which is best played as the day draws to an end and a nostalgic mood creeps into one's heart. The two gulls are Hartlaub's Gulls, common to the southern and western coastal areas of South Africa.



Brunsvigia Celebration

Acrylic on canvas, 24"x18", 2016

Over 3,500 wildflower species are found in the South African Highveld. While most blooms are small and insignificant due to the harsh climate, some, such as the *Brunsvigia radulosa* or tumbleweed, put on a spectacular show. Bursting like a firework display against the golden veld, its flowering celebrates life. This burst of energy costs the plant dearly; it flowers only every second or third year but can live a century or more. Sadly, the average age for the Common Waxbill is only three to four years. These little jewels light up the understory of the grasslands. When flushed, they fly up and settle on grass tops, teetering in the breeze, trying to identify what disturbed their world. I often hide a couple of creatures in my paintings and the butterfly depicted here is an *Iolais bowkeri* (Bowker's Sapphire).

(This painting is currently on the LYWAM's year-long tour and can be viewed at Fullerton Arboretum, Fullerton, California. (December 8 - January 25, 2018).



Geese and the Golden Eggs

Acrylic on canvas 14.5"x21.5", 2013

Four inches of rain pelted down over two days in January; by the third day it waned to a fine drizzle as we explored the Roodeplaat Dam for possible fishing spots for my aging father and came across this floating barrier. Bright yellow buoys enlivened the gray day and the waterbirds that seemed weary of being wet. Frumpish Egyptian Geese preened and shook out their petticoats of under feathers, while others took a nap. I love painting lines of birds in different poses and the buoy line presented just such a platform. To give a feeling of limited space and rhythm, I placed the geese close together, half-balancing one on the buoy to add a comical aspect.



Grassland Tails

Acrylic on canvas, 24"x18", 2016

The *Xerophyta retinervis* (Baboon-tail) is a wonderfully showy plant and flowers every alternate year in this dry climate. It has a fibrous "stem" which grows taller each year, moving the growing part farther away from the ground. It is a little like an orchid not needing to draw nutrients from the soil, hence its name *Xerophyta* (Greek: dry plant). The stem has fire-retardant properties which enable it to survive the prevalent veld fires. Early white settlers dipped these stems into fat and used them as torches. I included a Spotted Thick-knee which was taken and raised by a young girl in our area after its mother had been eaten by a genet (a small catlike creature). It was a challenge for her family to catch enough insects for the insectivorous young bird. It was such a loving little creature snuggling close and running wildly in circles, they called it "Dizzy." One morning the family were devastated to discover that it too had been eaten by a genet. I hid an African Red Toad in the picture as they are one of the more common species in the area; sadly, worldwide, many frogs and toads are threatened with extinction.

Here is a poem I wrote about this painting:

There are many tales about the veld some of which we should heed.
Ask the Baboon-tail what it has endured since it first grew from seed.
It can describe the raging veld-fires it has had to bare
And of the beasts passing by who are no longer there.
It can tell of the Ice Age and the birth of early ape-man
But to survive Global Warming it will need a better plan.
Then there is the tale of an orphaned Thick-knee named Dizzy
The catching of insect meals kept young Erin, and mum, very busy
The bird with its antics and snuggling brought great joy and delight
Sadly Dizzy, being nocturnal, made a meal for a genet one night.
So scary are the tales told by frogs like this African Red Toad
Of how amphibians the world over will soon croak their last ode.
Will humans who live in a Virtual World ever care or take heed?
Before our world goes extinct and nothing remains from their greed.



Cabbage Tree Emperor

Gouache, 10"x14", 2016

In the summer months, *Cussonia paniculata* (Highveld Cabbage Tree) leaves are reduced to bare stalks by the very large and strikingly marked black larvae of an emperor moth. *Bunaea alcinoe* or Cabbage Tree Emperor is an attractive moth of the Saturniidae family and can attain a wingspan of nearly seven inches. These moths have large orange hind-wing spots which they flash when threatened. I have long wanted to paint this stunning creature and had both a pupa case and a few large dead adult moths in my fridge. One morning, when opening the back door, I discovered a large male moth with his feathery antennae clinging to the wooden surface. I quickly photographed him in this unusual position, and on turning to go to my studio, I caught sight of a Southern Boubou Shrike making off with this male in its beak. It was battling to fly with such a large flapping creature, but nevertheless, lugged it away and turned it into a breakfast fit for a king.



Wild Dog Pup III

Acrylic on Masonite board, 15" x 14.5", 2011

I love the rare, threatened Painted Wolves of Africa. "Devil dogs," or the name by which they are best known, Wild Dogs, require large territories and have been persecuted in southern Africa over the past hundred years such that numbers have dwindled to almost unsustainable populations. A couple of breeding centers in southern Africa help sustain a variable gene pool. A Cheetah and Wild Dog breeding sanctuary (both threatened species in Africa) is located not too far from where I live. I have obtained some art reference material from the animals there, but because the sanctuary staff want to return as many to the wild as possible, depending on space, human access is very limited, especially to the pups. I have been fortunate to have had wonderful encounters with these most special creatures in wild game areas and reserves which have provided super reference material for my paintings, portraits and drawings through the years.

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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 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

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<http://maricopaaudubon.org>

For specific questions please contact our Membership Chair.

Submissions

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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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