

Desert Rivers

Audubon

Magazine



*Birding in
Costa Rica*

SUMMER 2018

Plus A Varied History of Our Desert Doves • How Birders Know Birds

Presidents Message

By Kryz Hammers, President

Do you bird a local patch?

Your local patch is an area, maybe close to home, where you go birding often, where you almost know in advance what birds are going to be there and exactly where and when you're going to find them. I lead birdwalks at the Gilbert Riparian Preserve and Veterans Oasis Park. Those are my local patches, but I should include my backyard, too. Actually my whole neighborhood, even my community, qualifies.

For those of you who are just joining us in our membership drive, you'll notice our mission reflects our strong sense of community, which includes not just our East Valley territory, but also our state and beyond. Here it is:

"Educating and inspiring our community to protect and preserve birds, wildlife and their habitat"

Recently, a webinar series hosted by the National Audubon Society offered me an opportunity to think deeply about what we do and why. I learned that our vision is that which we see on the horizon, a future we want to make a reality. Our mission is what we do to get there. It hit me like a ton of bricks. As a group we had mapped out our path but had never articulated our ultimate goal.

And so, at this year's board retreat we spent some time talking about our shared vision. At the core is our passion for birds. We want to see a world where people care for birds, and that is the reason we offer so many educational programs.

But we also talked about the critical state of our local patch. Unfortunately, the environments we have created in our communities are not very sustainable for people or birds. People move here from the Midwest and want to make the desert look like home, so they plant grass and familiar shrubs and trees – nearly all of it non-native. Some home builders and homeowner's associations mandate that a percentage of the property is grass. The result is an unnaturally green suburban expanse that wastes our precious water and fails to support the insects our native and migrating birds need.

But native desert plants are beautiful, and if carefully selected, provide blooms every month of the year. A native landscape can satisfy our yearning for color while remaining authentic to the unique Sonoran Desert where we live. As we discussed this, we began to hone in on our vision. By the end of the morning we had it:

"An educated community that understands human destiny is intertwined with nature"

On November 3 we present our 7th Annual Tour de Bird, an event that showcases beautiful gardens full of plants that belong in our desert. At each home visitors find gardening and birding experts to answer their questions. And each participant takes home a trove of information to help them transform their unsustainable and inauthentic yards into desert oases. This is also our only fundraising event of the year, so please plan to buy a ticket and attend.

Changing the landscape is a daunting goal unless you break the task into manageable pieces. If all of us honor the desert in our own yards, pretty soon our corner of the world will start looking a lot more like home to the birds. You can help by encouraging your family, friends, neighbors and co-workers to spend November 3 with us on the tour. And, if you already have a native landscape in your yard, we would love to add it to the tour.

By the way, the local patch in my back yard is a lush desert landscape, where I have birds and blooms year-round. During this spring's migration I had a Common Yellowthroat and a Green-tailed Towhee, who foraged in my yard for about a month before they moved on north. I had a Wilson's Warbler; I had a Hooded Oriole and a Townsend's Warbler – both new yardbirds for me. Please come and see it for yourself. My home is one of the stops on the Tour de Bird. I hope that we will see you soon in our local patch.

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**Educating and inspiring our community
to protect and preserve birds, wildlife,**

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Photo : Arizona "Sky Islands"

Conservation Commentary

Mike Evans

killing bushes genetically adapted over millions of years to survive in our southwest deserts, maybe we should start paying serious attention to our water use.

Does it come as a surprise to you that the Arizona legislature adjourned this spring without taking any action on a critically needed Drought Contingency Plan (DCP) for the Colorado River basin? As the Arizona Republic said in an editorial this spring, we need a DCP because Arizona is first in line for cuts in our water supply should a water crisis occur. Without some seriously wet weather, the level of Lake Mead is expected to continue to fall and could trigger cutbacks to water allocations in 2020.

Yet in the face of this persistent drought, Gov. Doug Ducey, the Arizona legislature, the Arizona Department of Water Resources, the Central Arizona Water Conservation District (which runs the Central Arizona Project canal), the Arizona Municipal Water Users association, and the federal government can't come to an agreement on a plan that affects most of the residents in Arizona, specifically the Phoenix and Tucson metro regions. Remember that Old West dictum, "Whiskey is for drinking and water is for fighting"? Our policy leaders are living it.

So, what are we supposed to do? We can stay abreast of the challenges and weigh in on proposed policy changes. Join the Western Rivers Action Network (WRAN) to stay up to date. See az.audubon.org/conservation/western-rivers-action-network

June 11, 2018 -- As I sit down to write this article, there is an excessive heat watch in effect for the middle of the week. Summer doesn't technically begin for 10 more days, but the first thunderstorms of the monsoon are forecast for the end of the week. This early taste of summer humidity and afternoon thunderstorms is brought to us by Hurricane Bud, spinning off the coast of Baja California. Hope for rain in the desert springs eternal, even if it means a hurricane for our neighbors down on the Baja!

It hasn't rained in Phoenix in three months. Our winter and spring rains were a bust and it is dry, dry, dry. We are currently in the 21st year of persistent long-term drought. Depending on the watershed where you live, only seven or eight years have been wet since the drought began two decades ago. Most of Maricopa County is in extreme drought, as is almost three-quarters of the state. The north-eastern part of the county has been classified the worst: exceptional drought, a dire condition that covers 16 percent of the state. If you like to bird the Mt. Ord area, you know what exceptional drought looks like.

We are more than two inches below our average yearly rainfall for the Phoenix area: we've had just three-quarters of an inch of rain so far this year. Up north, Flagstaff received only half of its average snowfall this past winter. The run-off in Lake Powell from the Upper Basin states on the Colorado River is forecast to be the 6th driest since the dam was built 55 years ago. And, forecasters are predicting below average rainfall this monsoon season. It is so dry in Arizona that there are reports from La Paz County of creosote bushes dying for lack of water. The creosote bush is one of the mainstays of the Sonoran and Mohave Desert plant communities. If the drought is

For a more hands-on approach to the issue, stop by Desert Breeze Park in Chandler on the second Saturday of the month and help us keep the Hummingbird Garden ship-shape. You will see how desert landscaping can attract birds and butterflies and look gorgeous. To see some of the Southeast Valley's most outstanding low water use gardens, plan to attend our annual Tour de Bird on November 3rd. You will meet gardeners who are doing their part to combat the long-term drought.

In the meantime, pray for a wet monsoon! For a reading list of articles about the drought, see desertriversaudubon.org/conservation



Cornfield drought

Desert Plants and Empty Containers: Work with Nature to Create Art

AUDUBON AT HOME

Lynnette Allison



All of us have at some point discovered long-forgotten caches of containers, various sizes, colors and materials. Exasperated, we say -- not again! But don't despair. Your odd-lot collection can become an asset in your garden.

With a little creativity, we can come up with ideas for those containers. By filling them with a proper soil mix and varied pebble stonework you can make a unique display of native and desert plants. I think you'll soon discover your patio and garden areas are being visited with colorful birds and butterflies fluttering among your patio plants and flowers.

Some helpful planting hints to keep in mind:

- Native plant varieties are generally easier to keep alive all year, even with our high summer heat. Perennials grow and create seeds year after year. Annuals offer bright colors but must be re-seeded for best results.
- Native plants are less sensitive to full sun and can be maintained on less water. Planted containers can be positioned or grouped to enjoy best sun or shade location for best growth.

It is important to create visual variety. Make an engaging display by varying plant colors and sizes, and by mixing large, medium and small containers of different colors.



Draw attention with something tall placed with something medium-sized, and one or two smaller, more delicate vines or flowers. Pair containers of different colors and sizes. Use drought-tolerant plants in proper soil, keep their roots healthy by providing for drainage with mounds of pebbles or stones. Or, simply place an upside can inside your planting container. Elevation allows extra water to drain away to the bottom.

Now, arrange your patio chairs and tables for ease of friendly chats with friends. Take time to admire your choices of colors and shapes, and enjoy those attention-grabbing birds and butterflies!



HOW BIRDERS KNOW BIRDS - BIRD KNOWLEDGE SURVEY

Kathe Anderson



Professor Shepard Krech III, an anthropologist, taught *What Do We Know about Birds* for several years at Brown University, in Rhode Island. As part of the course, he assigned students a research project: each student quizzed four other students about birds. The request was, "Please name all the birds you know," followed by a note of what the student associated with the bird, if anything. The results of the project, and Prof. Krech's analysis, appeared in the American Birding Association's June 2017 issue of *Birding*.

While the 60 students listed approximately 400 birds, some were extinct and others were fanciful (perhaps Big Bird?). One student listed only nine birds; one student listed 118 birds, the highest number list by a student. The average student listed about 30 birds. A few birds were named inaccurately (seagull); most were named generally (duck, sparrow and crow, for example). Some very common birds were almost overlooked: neither the European Starling nor the Common Grackle made the Top 60 species named.

Of the Top 30 most-mentioned birds, only three were specifically named—Blue Jay, Bald Eagle and Peregrine Falcon. Given the New England location of Brown University, where Blue Jays are common, vocal and visible, it's understandable why it topped the list as the most-named bird. Our national symbol, the Bald Eagle, did not make the Top 10—it was the 19th most-mentioned bird.

While some students associated some birds with their habitat or behavior, a number of them associated birds with literary reference, such as Harper Lee's *To Kill a Mockingbird* or Edgar Allan Poe's *The Raven*. What struck Prof. Krech was the number of students who associated birds with American cultural icons like Woody Woodpecker, Toucan Sam of Froot Loops' fame, flamingos as lawn art, and cardinals with the baseball team in St. Louis and football team in Phoenix.

Prof. Krech was interested in how modern college students compare in avian bird knowledge with indigenous people still living near the lands on which they depend for their livelihood. Unremarkably, the liberal arts students paled by comparison in their local avian knowledge. Prof. Krech considers his students impoverished in their knowledge of birds and their place in the natural world—what Richard Louv calls "nature-deficit disorder." Will students, rich in cultural knowledge, but meager in natural history information, be able to address and solve the huge issues facing birds, particularly the current ongoing wave of extinction? Or will they care?

Inspired by Prof. Krech's inquiries into general bird knowledge, I devised an unscientific survey quizzing birders who participated in some of my field trips from July through September 2017. Rather than ask participants to list all the birds they know (how long would that take?), the survey asked folks to list just five birds with whatever associations they made with the birds they named. There were 29 participants, three male and 26 female, mostly decades older than college students!

A few observations about the survey:

- The results were definitely skewed by whatever location we birded the day of the survey, but not entirely.
- The robin took the top honors, being mentioned 8 times; Verdin and cardinal shared second place, being mentioned 7 times. Curiously, no birder used the accepted common names of American Robin or Northern Cardinal.
- Several participants mentioned more than one association with the birds listed.
- One characteristic shared by both the students and the birders was the use of generic names. Almost half the birds named by birders were generic—hawks, sparrows, hummingbirds and gulls, for example.
- Slightly over half the birds were labelled with their official names, like Bald Eagle, Song Sparrow, Rufous Hummingbird and Black Phoebe.

Birders' associations with birds fall into several categories. At least in this limited survey, there were no literary connections and only a few cultural connections. The cultural associations included the comment that cardinals are on Christmas cards and the Rufous Hummingbird reminded one birder of Tony Soprano.

Many observations mentioned bird behavior (39), vocalizations—or lack thereof (36), appearance (24) and habitat (20). Examples are below.

Behavior: Birders noticed a variety of behaviors: Abert's Towhees dig in leaves, Turkey Vultures and Red-tailed Hawks soar, Gila Woodpeckers like to sit on hummingbird feeders, Northern Cardinals are found in pairs, and the Curve-billed Thrasher is a fast runner.

Vocalizations: Associations with vocalizations were quite varied: Anna's hummingbird makes "a kissing sound," a House Sparrow has a "chip-chip voice," a Gila Woodpecker sounds like a "squeaky toy," and a nuthatch says "yank yank yank!"

Appearance: In addition to general descriptions like "colorful" (bluebird) and "large" (pelican), birders noted specific colors and characteristics such as the quail's "hat," the Northern Mockingbird's long tail and the Snowy Egret's yellow feet.

Habitat: Birders definitely associate specific habitats with birds they know. Acorn woodpeckers like acorn trees at higher elevations, Baltimore Orioles are found in the Eastern and Midwestern forests, House Sparrows are where people are, and loons are on Minnesota's lakes.

Most interesting though, and unmentioned by Prof. Krech, were the very personal associations and emotional responses birders have. The cardinal was a childhood yard bird for one person, quail were delicious according to another, a meadowlark reminded one birder of her first home, and a kingfisher brought back memories of fishing with Dad.

Emotional responses were rich and varied: Several birders associated the word "happy" with birds. Does that mean they make the birder happy or they seem happy to the birder? Happy birds include the House Wren, Song Sparrow and Verdin. Birders also labelled birds "beautiful," including the Northern Cardinal, Great Blue Heron, Western Bluebird, Western Tanager and White-breasted Nuthatch.

Grackles are "annoying" and House Sparrows are "obnoxious" in some birders' minds. Our Bald Eagle was labelled "magnificent" and our Golden Eagle "spectacular." Birders considered an Ash-throated Flycatcher "focused," an ibis "cosmopolitan," a Spotted Towhee "eccentric," and a penguin "cute."

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Where can you find a good dinner around here?

Jerry Lang

Did you ever wonder what all those different wading birds, ducks, and other waterfowl were eating out there on the open waters and mud flats of our desert wetlands, and why there doesn't seem to be a lot of fighting over feeding territories? Many of the common shore and wading bird species eat up to one-third of their weight in prey every day. So, how does everyone get enough to survive and thrive as a species?

Ecologists refer to "resource partitioning" as the way in which different species divide up a common habitat into niches to avoid competition with each other. These divisions of resources can be dietary (feeding on different resources eg. phytoplankton, fish, molluscs, etc.) as well as spatial (same food from different locations in the habitat) and/or temporal (same food and same locations but at different times or seasons).

Looking out over a wetland like the Riparian Preserve at Gilbert Water Ranch, you will often see mixtures of wading birds including American Avocets, Black-necked Stilts, Least Sandpipers, and dowitchers along with an occasional Greater Yellowlegs, Wilson's Snipe or plover. Mallards, Northern Shovelers, Ruddy Ducks, scaups, teal, pintails, and other dabblers and divers search for morsels in open water and on mud flats. The egrets and herons stalk the shallows for fish or the nearby fields for insects and rodents while cormorants spread their wings along the shore between deeper water dives. Everyone is looking for dinner.

If you watch closely, you'll see that avocets swing their bills like a scythe stirring up insects and small crustaceans in mud just beneath the shallows. The Black-necked Stilts, often mixed in with avocets, will be probing six or more inches into the mud beneath shallow water looking for prey much deeper. Dowitchers will be using their sewing machine-like probing in very shallow water while sandpipers scurry along the algae-covered water's edge.

Many of the wading birds that probe in mud and sediment have Herbst corpuscles on the tips of their bills. These structures are pressure sensitive and detect differences in water currents. Waders such as dowitchers use these pressure differences to detect food resources like small invertebrates hidden in the mud. The process is somewhat similar to echolocation, used in air by bats, which enables birds to identify objects by returning sound waves.

Rhynchokinesis is another adaptation used by some of the waders with long bills, such as snipe, Dunlins, and avocets. Rhynchokinesis allows the birds to flex the distal part of the upper bill upward independently of the lower bill thus making it easier to open the mouth with the bill inserted deeply into mud and sediment. This ability

presumably improves foraging efficiency by requiring less energy during feeding and by facilitating faster ingestion of prey.

While many of the wading birds are skimming the water and mud surfaces or probing into the mud and sediment below, herons and egrets are grabbing and stabbing their prey. Snowy Egrets are active in their pursuit of fish. They may shake their yellow feet in the water to scare fish, or they may try chasing small fish toward shore where they stab repeatedly at the corralled prey.

Great Egrets and Great Blue Herons use the stealthy approach to catching fish. They may remain statuesque for minutes waiting for the right moment to strike. These birds don't strike nearly as often as Snowy Egrets, but their success rate is higher, and they often catch larger fish. Green Herons, being relatively short-legged, aren't that enthused about wading



around in water and getting their feet wet. Instead, they will often perch on emergent vegetation or overhanging branches along the shore to await their prey. These herons are also known for using "bait," ie. dropping bits of leaves, seed pods, etc. on the water surface enticing fish to investigate.

If it looks like a duck and walks like a duck, is it a duck? Actually, there's quite a bit of variation in the ways ducks look, and there's even more variation in how they get dinner.

Ducks are usually divided into two broad, distinct groups – dabblers and divers.

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Careening Down the Osa in Costa Rica

Jim Burns



We're six hours out of San Jose, Deva and I are crammed into a small 4x4 driven by an American guide we met six hours and sixty seconds ago, and we don't speak Spanish although we're told he does.

The little crystals in my inner ear are not happy. My motion sickness typically rears its head any time I'm not in the driver's seat. Still, there was no way I was going to drive in Costa Rica without Spanish on our first trip outside the U.S.

But maybe I should have. I passed the first stage of motion sickness (afraid I'm going to be sick) an hour ago when we left Highway 34 and turned off toward the Osa Peninsula. I'm now well into the second stage (afraid I'm going to die), but I'm still hoping to see some of the Osa, described as the world's most ecologically dense area, before I devolve into stage three (afraid I'm not going to die). Been there, done that, most recently on a twenty-four hour pelagic boat trip looking for ocean birds out of Santa Barbara, but most particularly on carnival tilt-a-whirls.

Highway 34, euphemistically wearing that "highway" label, reminds me of the roads in West Virginia—except for the three dimensional potholes, some a foot deep and extending across both lanes. But we left 34 half an hour ago and we're now negotiating a one lane road with no apparent number designation. And no apparent pavement. There are still potholes, but there are also large cobbles and the occasional small boulder so Stephen, who obviously has driven this road many times (how else to account for our 50 mph speed on what in the states would essentially pass for a jeep trail), is constantly turning the wheel left when the little crystals in my ear want to continue going right, right when they need to go left. Finally when I am one more mountain curve from my lunch going north, I ask him to stop.

I must have sounded plenty plaintive because he brakes much harder for this than he has for any pothole.

Two Extra Strength Excedrin, a bottle of water, and a slow walk around the car several times seem to calm everything down. Deva tells me I look white. Stephen regales us with the tale of a friend who has seen Harpy Eagles on the Osa. I know what he is thinking. Perhaps watching the rainforest for a glimpse of the world's most sought after daytime raptor will keep my eyes on the horizon and my lunch in my stomach. We climb back in and I close my eyes and try to sleep. The Osa is the northern edge of the Harpy's range. There may be only a handful of pairs in Costa Rica. Dreaming is undoubtedly the only way we'll see one on this trip.

Around the next curve a gasp from Deva intersects with Stephen's stomp on the brake pedal. My eyes fly open as I pitch forward against the seat belt. It's raining. I've felt no deep ruts or high cobbles but, adrenalin surging, I'm expecting to see another vehicle careening toward us head on as its driver and Stephen, both trying to avoid a 4x4 eating washout in the now mud slicked "road," both zig when one of them should have zagged. No. No, just a Tamandua—*Tamandua mexicana* or Collared Anteater—to be precise, crossing in front of us. I know this is no dream because of the sharp pain where my cheek bone smacked against the dashboard. This is Costa Rica! This is the Osa! The only anteater I've ever seen is the one in the comic strip B.C. Deva is screaming for me to grab the camera. Stephen is giving me his shit-eating "I told you so" grin. The anteater is now browsing through the waist high grasses along the shoulder of the road, paying us no mind, presumably looking for ants.

Funny how you see an exotic animal for the first time in the wild, and a slight twinge of disappointment precedes the elation of discovery, most likely because you've seen it so many times in your mind's eye that it doesn't quite seem new. This is a beautiful animal, rich buffy body with a black saddle, and the long snout of your imagination. You're glad you're not an ant, and you want to run to it and give it a big hug. It does, after all, look fluffy and furry. Then Stephen reminds us about the sharp claws for digging and Tammy (sure, we all anthropomorphize without apology, and we'll give wild animals human names) disappears into the jungle, not spooked, not really interested in us too much at all.

Around the next bend we top a rise and the Golfo Dulce opens up below us, Corcovado National Park, legendary and so tropical green, forming the exotic backdrop. This is the Osa! We stop for pictures, distance and early afternoon haze be damned. Turkey Vultures soar in the distance. Wait! What? One of them white! It's a King Vulture, a life bird! I ask Stephen how long we would have to stand in this spot to see a Harpy Eagle. He asks me how old I am. I conclude it wouldn't happen in my lifetime.

We drop around the head of the gulf and make a pit stop at the bus stop called Rincon. The jungle, the humidity, the dearth of traffic—we could be on a different planet until we see a small stuffed animal a child has forgotten on the bench where Stephen tells us a bus actually stops on schedule. A Roadside Hawk watches from a roadside tree, another life bird. The Roadside is the size and shape of our Red-tailed Hawk. It reaches the northern end of its range in Mexico with irregular vagrancy into south Texas where we have looked for it many times to no avail.

The fun is often in the common names. Where else would you see a Roadside Hawk, or most of our other hawks, except beside a road, but who knows the inner workings of the professional ornithologists who assign labels. We recognize it immediately by the rufous tones in its plumage and its light iris, field marks which distinguish it from our familiar Red-tails.

The only way out of Rincon is a rickety, one-lane suspension bridge over the Rio Rincon. Though metal, not wood, it reminds me of the bridge in *Sorcerer*, the 1977 thriller by William Friedkin which should be required viewing for anyone going to the rainforest for the first time. Or not. The bridge sways, creeks, rattles. Probably noisier than wood. Stephen points out the actual tree where the Harpy Eagle was allegedly seen. I figure for a Harpy sighting, I could stop worrying about the bridge. Stephen, sensing our disease, takes the second half faster. I glance at Deva. Her eyes are closed, her knuckles white.

Our destination on the Osa is Bosque del Rio Tigre, an ecolodge built by hand from local materials by owners Liz Jones, an American, and her husband Abraham Gallo, a Costa Rican who goes by Abram. Liz and Abram's lodge, unlike many Costa Rican tourist destinations, totally deserves the "eco" prefix because they are heavily involved in conservation education on the Osa. It all sounds well and good until Stephen mentions it is "comfortably nestled" on the opposite bank of the Rio Tigre, a sometimes raging mountain outflow that requires a small boat ride if the river is too high to ford in his vehicle.

As he relates this, I'm watching his face. This time he breaks into that now familiar grin before I remind him about my stomach and boats. It's been drier on the Osa this year, so he thinks we'll be fine. The jeep track we're on parallels Rio Tigre for the last quarter mile to the lodge. Rio Tigre doesn't look too fine to me, though I guess "raging" is all relative. As Stephen drops the 4x4 down onto the gravel bar and water swirls up around the tires, he recounts past difficulties feeling just where the drop offs and holes in the boulder strewn river bed are, unseen of course because of the fine gravel powder which turns the water a milky white, reminiscent of glacial rivers in our Pacific Northwest.

The crossing is over in about two hair raising but uneventful minutes, and we are greeted on dry land and shown around the grounds by Liz and Abram. The lodge is a two story, four corner rooms above open to the forest with mosquito netting around the beds, open air kitchen and dining room below, shared bathrooms, and an out building with showers. Although we are feeling the humidity in the mid-afternoon heat, it's somehow reassuring to hear that the showers are hot. The lodge runs on generators, electricity available only a few hours a day, and it has tankless gas water heaters. The Bosque Rio Tigre is green like the rain forest which comes right to the doorstep.

We will leave Bosque Rio Tigre with twenty-five life birds, most of them spectacular and right outside the dining room—the endemic Black-cheeked Ant-Tanager, Scarlet Macaw, Fiery-billed Aracari, Red-capped Manakin, and Blue-throated Goldentail—but the biggest surprise is the gourmet dinners presented by Abram—world class chef, chief naturalist, master carpenter, a true Renaissance Tico. Bosque Rio Tigre should appear next to "roughing it in luxury" in the Book of Phrases.

The lights go out before I head to the showers. Stephen has recommended a flashlight to avoid stepping on a Fer de Lance. He says if we step on a Fer de Lance it will negatively impact the remainder of our trip. Really Stephen, you think? Venomous, deadly. We saw a caged one near San Jose that was six feet long and thicker than my ankle. I take a flashlight.

As I finish my shower I hear someone fumbling with the door. We are the only guests here tonight, though a family of Americans is expected tomorrow. It could be Stephen, it could be a curious Howler Monkey, it could be . . . I make an educated guess and throw open the door. It is Deva, wondering how a warm shower feels in the

humidity of a rain forest and speculating on whether we'd be the first to make love in this shower. I answer these questions in sequence—jump in, it's about to feel a lot better and, probably not.

When we leave two days later, the river ford seems trivial—shallower, quicker, and much less daunting. Funny how that works. We lurch up out of the water and begin to parallel the Rio Tigre on the jeep trail. We see a raptor ahead on the gravel bar. As it flushes we see the dark helmet and the pointed falcon wings and recognize it is a Peregrine. Common enough now in the states after its successful and ongoing recovery from the DDT thing in the '60s and '70s, it seems exotic here in Costa Rica until we remember it is a world-wide species expected, especially in winter, as much in the tropics as on the tundra.

Peregrine means "wanderer" and it seems only fitting that we should encounter one in this far flung (for us) location. We have missed some much sought birds here on the Osa—White-tipped Sicklebill, the coquettes, the cotingas, the Harpy Eagle of course—but birders always just smile and say it gives a reason to return. We seldom return to places we've been because there are so many places we haven't, but another trip down the Osa to Bosque Rio Tigre is bound to happen. All I need is Deva, Stephen, and a bottle of Excedrin. And learning Spanish is my New Year's resolution.



"A birder all his adult life, Jim Burns has been photographing nature for thirty years and writes a birding column, "Bird is a Verb," which began on the Environmental Page of the Arizona Republic and subsequently migrated to his website, www.jimburnsphotos.com every other Thursday."



Doves of Our Desert: A Varied History

Rebecca Stephenson

When you think of desert birds, the iconic Greater Roadrunner and Cactus Wren probably spring to mind immediately, making it easy to overlook those ubiquitous birds head-bobbing around in all shapes and sizes. Yet the desert southwest is the most dove-diverse region in North America! Of the world's 310 species, you can easily observe at least five by walking outside right now.

Doves are large-bodied with relatively small heads, ranging in size from the extinct Dodo to the tiny sparrow-sized ground doves. Most have well-developed wings, making doves some of the strongest fliers in the bird world. Doves fall into two categories: fruit-eaters and grain-eaters. Frugivorous doves are brightly colored and forage in trees, while the granivorous doves, which include our native Arizona species, are earth-toned to match the ground while foraging for seeds.

In addition to camouflage, doves have evolved some pretty nifty adaptations for life low on the food chain. Most birds tilt their heads back and rely on gravity to swallow, but doves can drink by suction, imbibing large volumes of water quickly. They feed in a similar fashion, inhaling impressive quantities of seed and storing it in their large crops. This allows them to forage

briefly in the open, then retreat to safety to digest. If they are captured, they have one more trick up their sleeves. Dove body feathers attach very loosely to the skin, allowing them to slip out of a predator's grasp as a last resort.

But the most important survival tactic in the dove arsenal is its remarkable ability to breed. Some species become sexually mature at a mere six months old, when courtship behaviors begin. Male doves advertise by cooing at intervals throughout the day (and sometimes on bright desert nights). Males also circle a female on the ground, cooing and performing bows, or they may take to the air and perform dramatic species-specific flight displays that typically involve wing clapping and diving with wings held in a slight vee, sometimes adding an accompanying call. If she accepts, the pair becomes monogamous and creates a flimsy nest where they raise a clutch of one or two young. Dove chicks, less endearingly known as squabs, are fed a concoction called crop milk, which is produced in the upper esophagus of



White-winged Dove

both adults. This mixture contains shed cells from the crop lining and is high in protein and fats, which helps the young grow quickly. They often fledge in less than two weeks, giving the parents ample time to start their next clutch if climate allows. In fact, our native Mourning Dove has been known to raise six sets of chicks in one year, making it the most prolific bird species in North America.

Mourning Doves are named for their sorrowful song, issued at such a low pitch that they are often mistaken for owls. They are common throughout North America in nearly all habitats, but are especially abundant in the Sonoran Desert, where their coos and wing-whistles dominate the landscape year round. They avoid densely wooded areas, and early European settlement may have helped increase the population, even as their cousin, the Passenger Pigeon, simultaneously suffered annihilation by man.

Another species that benefitted from human intervention is the Eurasian Collared Dove. These large, pale birds with partial black rings on their necks have invaded urban areas with alarming efficiency. The first were introduced to Florida in 1974, and by 2012 they had reached the Pacific Ocean.

The tiny native Inca Dove has also capitalized on human development, and has become especially abundant in Arizona. In the winter, they keep warm by standing on each other's backs, forming pyramids of up to 12 birds, rotating positions as needed. In summer, listen for their melancholy two-note calls, which repeatedly proclaim "no hope."

Our native White-Winged Doves spend summers in the desert southwest, raising young and feeding on cactus nectar and fruit, then return to Mexico in September. They herald their arrival in March with their long, lilting songs, and "who cooks for you" is a sure sign of spring. They have adapted well to urbanization, which is fortunate as they are a key pollinator of the saguaro.

And of course, we cannot forget the planet's most widespread columbid: the Rock Dove. Now known commonly as City Pigeons, these birds were rare outside the seaside cliffs of Europe before people domesticated and distributed them worldwide in the 17th century. Most consider them a nuisance, but pure white Rock Doves are coveted as ceremony release birds. They also have a powerful homing ability, using the Earth's magnetic field, the sun's position,



Mourning Dove

Save The Date !



Tour de Bird - Saturday, November 3, 9am to 4pm

Learn to create a native, bird-friendly yard from East Valley homeowners

Tickets

\$20 at the door, \$15 in advance, at Desert Rivers Audubon meetings, online at desertiversaudubon.org, or at Wild Birds Unlimited - 2136 E. Baseline Road, Mesa.

Nominate your native landscape for the tour! Contact Krys Hammers at Krys.Hammers@gmail.com

Doves *Continued from page 9*



Inca Doves

and odors among other cues to return to their birthplace from great distances. Testing the Rock Dove's homing has not only led to significant discoveries about bird migration, but has saved lives in both World Wars when birds carrying messages flew through artillery fire to return home.

Love them or hate them, doves are part of our desert. As Kenn Kaufman writes: "The Sonoran Desert would have a very different sound if it were not for the doves."

"Rebecca Stephenson holds a Bachelor of Science in Ecology & Evolutionary Biology and a minor in Plant Sciences. She travels for birds, music, and celestial events."



Desert Rivers Field Trips

Aug 22 – 24, 2018 White Mountains with Kathe Anderson

We'll leave early on Wednesday morning, bird on the way to the White Mountains, check out the multiple areas highlighted in AZ's Wildlife Viewing Guide, and head back to arrive by dinner on Friday. Key sites are likely to include Tonto Creek Hatchery, Christopher Creek, Woodland Lake, Luna Lake, Nelson Reservoir, Greer area and Sipe White Mountain Wildlife Area. Difficulty: 1-2. The elevations can top 9,000'. Expenses include the hotel, meals and gas. Limit 8 participants. Contact Kathe.coot@cox.net

September 7, Glendale Recharge Ponds with Kathe Anderson

Expect to be hot—and hot on the trail of returning shorebirds. We'll start from Scottsdale about 5am to arrive in Glendale before the sun comes up. We'll prowl the wetlands hoping for the usual variety of birds—mostly ducks, raptors and other water-loving species like black phoebes, pipits and swallows, but we'll hope for an abundance of shorebirds returning from points north. We'll find a cool indoor spot to go over the list. Return to Scottsdale by 10am. Difficulty: 1-2. Limit 8 participants. Please register at kathe.coot@cox.net.

September 19, 2018 Oak Flats and Timber Camp with Cindy Marple

We'll head to some higher elevation to look for lingering summer residents and migrants. We'll leave the East Valley early, heading to Oak Flat first, then on to Timber Camp for the late morning and picnic lunch. Return to town mid-afternoon. Difficulty 2, walking on uneven terrain. Limit: 7 Contact Cindy Marple clmarple@cox.net

Continued on page 13

Where can you find a good dinner around here?

Continued from page 6



Dabbling ducks (the ones you often see with their butts sticking up in the air while feeding!) have legs positioned more under the center of their bodies, larger wings for their body weight, and smaller feet than do diving ducks. Dabbler anatomy allows them to walk better on land and to land and take off in bodies of water too small for divers.

Common dabblers include: teal, Mallards, Northern Pintails, Northern Shovelers, and Gadwalls. These birds spend most of their time in shallow water feeding on aquatic vegetation and on invertebrates suspended in the water column. Most dabblers have 50 to 70 lamellae, which are comb-like structures along the inner edges of the bill. The ducks take water into the bill and force it out through the lamellae that strain out small invertebrates and other food items. Northern Shovelers with their oversized flat bills are the "lamellae champions" with approximately 180 upper and 220 lower lamellae. Mallards, rather general feeders, have relatively few lamellae. The edges of dabblers' bills are soft since they often find food by touch, and the end of the bill has a small hardened and hooked structure used in prying and moving items around.

Diving ducks such as Ruddy Ducks, Mergansers, scaup, Ring-necked Ducks, Redheaded Ducks, and Canvasbacks have legs situated far back on their bodies, which makes walking on land difficult. They have smaller wings compared to body weight, which reduce drag when diving. They can also use their wings to compress underlying feathers, thus squeezing air out before a dive. Because of their smaller wings and heavier bodies, divers need open water to build up speed for takeoff, whereas dabblers can land and take off almost vertically. This difference in landing and takeoff technique doesn't play much of a role in separating the two groups of ducks in larger bodies of water, but it makes a significant difference in their ability to utilize prairie pothole habitat during migration/and or breeding.

A Ducks Unlimited study showed diving ducks sharing a

common body of water, exploiting food resources non-competitively. The study included Canvasbacks, Redheads, and Lesser Scaup. Canvasbacks fed on snails and immature aquatic insects near the bottom of open and deeper water.



The Redheads, more generalist feeders, foraged in shallow open water areas close to shore. Lesser Scaups, with their ability to strain small crustacean from the water, fed in the deeper water column above the Canvasbacks.

There are almost as many ways of finding dinner in and around wetlands as there are wetland-associated birds. We've discussed a few but haven't even touched on grazing Canada Geese and Wigeons, omnivorous land-feeding Sandhill Cranes, acorn-eating Wood Ducks, or root and tuber eating Lesser Snow Geese. The diversity in food preferences and in the adapted methods of obtaining food with minimal direct competition is truly a testament to fine-tuned evolutionary behavior.



Jerry Lang is a native Ohioan with a PhD in entomology from The Ohio State University. Served in USAF as a medical entomologist for 21 years before working as an environmental scientist for an architectural, engineering and planning firm in Dayton, OH for 16 years. Now retired and living in Muskegon, MI near family and have done freelance writing over the past 10 years.



How Birders Know Birds

Continued from page 5

These personal associations and emotional reactions may be what it takes for a child or a student or anyone to care about birds. Maybe we're the ones, not college students, who hold the future of birds in our hands.

What can we do? Our membership in the Desert Rivers Audubon Society indicates that we indeed care about birds. But each of us can do more. There are calls to action in most of the Desert Rivers Audubon newsletters—to write, call and email your political representatives about conservation issues. It's important to make our voices heard! We could also introduce a child or a friend to birds and birding. Each of us could do better to conserve fuel, water and resources. Reduce, reuse and recycle are still good goals. Can we each find a bit of time, even just a few hours in a year, to volunteer for Desert Rivers Audubon or other conservation agencies or causes? The more volunteers who are active, the more these important organizations can reach others. And of course, we can donate to conservation organizations! Our support helps fund vital research, outreach and programming.

Birders know birds—intimately and passionately! Let's use that connection to help birds—and the planet.

Kathe is an avid birder, having led hundreds of field trips and taught dozens of hands-on birding-related classes for individuals, conservation organizations, festivals, private groups, and life-long learning programs. She loves sharing her passion with others.



Arizona Sightings

More detailed information can be found on the Documentation page of the Arizona Field Ornithologists at : azfo.org



Little Blue Heron (*Egretta caerulea*), Gilbert Water Ranch Riparian Preserve, Maricopa County. This Little Blue Heron was found and photographed by Tracy Sutter on 10 May 2018 and photographed by Chris Rohrer on 12 May 2018. Casual late spring and summer visitor, this is apparently the first one in the state since 2013. The only other all dark heron is the larger Reddish Egret. Adult Reddish Egrets thicker, redder, shaggier neck and a pink and black bill. Immature Reddish Egret is more

concolor and lacks the strongly bicolored, gray and black bill.

Baltimore Oriole (*Icterus galbula*), Meteor Crater, Coconino County. This Baltimore Oriole was found and photographed by Jason Wilder on 06 May 2018. A rare migrant in the state but possibly increasing, and removed from the review list in 2015. Though very similar to a Bullock's Oriole, note that the brightest orange is on the chest and the face is cast with a brownish color.



Elegant Tern (*Thalasseus elegans*), Amado Wastewater Treatment Pond, Pima County. This Elegant Tern was found by Karen Kluge and Terry Rosenmeier on 01 May 2018 and photographed by Terry on the same date. Casual in Arizona, with 14 accepted state records and a few additional records pending. Most records are from the Tucson area.

Elegant Tern is distinguished from Royal Tern by the long, drooping bill, usually orangish at the tip, and by the longer more extensive shaggy crest. It differs from Caspian Tern in the long crest, thin bill and white undersides to the wingtips. Larger than Forster's or Common Tern with a shaggy crest and different bare parts color and shape.

Long-tailed Duck (*Clangula hyemalis*), Solar Power and Water Ponds, Yuma County. This Long-tailed Duck was found and photographed by Brian Johnson on 04 April 2018. Rare to casual in Arizona, possible first county record for Yuma County. Appears to be a female; mid-sized duck with dark back, broad white sides, short pintail-like tail, dark bill, mostly white face with dark cheeks.



Slate-throated Redstart (*Myioborus miniatus*), Pinery Canyon, Chiricahuas, Cochise County. This Slate-throated Redstart was found by Kyle Lima, Christopher Gilbert, James Heuschkel, and Zachary Loman on 13 April 2018 and photographed by Kyle on the same date. First 2018 sighting of this species at the site where at least one bird was present in 2016 and 2017.

Semipalmated Sandpiper (*Calidris pusilla*), Gilbert Water Ranch, Maricopa County. This Semipalmated Sandpiper was found and photographed by Pierre Deviche on 10 April 2018 and photographed by Sean Fitzgerald on 11 April 2018. Only the second record for the heavily birded Gilbert Water Ranch (based on eBird reports).



Fan-tailed Warbler (*Basileuterus lachrymosa*), Whitetail Canyon, Chiricahua Mountains, Cochise County. This Fan-tailed Warbler was found and photographed by Rick Taylor on 13 April 2018 and photographed by Narca Moore-Craig on 13 April 2018, by Chris Rohrer on 14 April 2018, by Chris McCreedy on 15 April 2018, and by Stuart Healy on 16 April 2018. There are ten prior accepted records for Arizona.



Rufous-capped Warbler (*Basileuterus rufifrons*), Hunter Canyon, Cochise County.

This Rufous-capped Warbler was photographed by Barry McKenzie on 07 April 2018. There are ~30 accepted records of Rufous-capped Warbler for Arizona, including observations of multiple birds and nesting attempts, and numerous pending reports. Some sites

such as this one have hosted long staying multiple individuals.



Red Warbler (*Cardellina rubra*), Rose Canyon Campground, Santa Catalina Mts., Pima County. This Red Warbler was found by Janet Stein and Janet Moore on 09 April 2018 and photographed by Dave Stejskal and Andy Boyce on the same day. Red Warbler is a Mexican endemic species that occurs in the mountains of both eastern and western Mexico. The gray (black) cheeked subspecies

occurs north to at least n.e. Sinaloa and s.w. Chihuahua while the white-cheeked subspecies group occurs in central and southern Mexico. If accepted by the ABC, this would constitute the **first record** of this species in Arizona and the U.S.

Tufted Flycatcher (*Mitrephanes phaeocercus*), Madera Picnic Area, Pima County. This Tufted Flycatcher was found and photographed by Richard Fray on 26 March 2018 **First record** for Pima County and the Santa Rita Mountains. Elsewhere in the state there are three accepted records of Tufted Flycatcher scattered across the state.



Tufted Flycatcher (*Mitrephanes phaeocercus*), Carr Canyon, Cochise County. This Tufted Flycatcher was found by Stuart Healy and Brad Sulentic on 08 March 2018 and photographed by Donald Sutherland and Barry McKenzie on 09 March 2018. Two reported together in the Reef Township Campground, likely returning birds. There are three accepted records of Tufted Flycatcher in Arizona scattered across the state.

Carolina Wren (*Thryothorus ludovicianus*), Patagonia Lake State Park, Santa Cruz County. This Carolina Wren was found by Matt Brown on 07 March 2018 and photographed by Mary Lambright on 07 March 2018, by Andrew Core on 08 March 2018 and by Mark A. Brogie on 09 March 2018. Arizona has four accepted records (and another submitted), if accepted this is a **potential first** for Santa Cruz County.



ANNOUNCEMENTS

See DRAS website calendar for **more comprehensive information**. Register for field trips by emailing our Field Trip Director Gwen Grace at gwen@gwengellen@gmail.com, or the trip leader.

Monthly Speaker Series

Monthly Speaker Series programs are held at the Southeast Regional Library at the southeast corner of Greenfield and Guadalupe Roads in Gilbert. Browse our book table for the latest birding guides and more! Doors open at 6:30 p.m. and the program starts at 7 p.m. Watch the DRAS calendar on our website for announcements of future speakers

September 11: Cormorants -Larisa Hardin

Bird surveys in Arizona show a significant increase in the number of cormorants over the past decade, but little is known about how they are distributed across the landscape or how they impact native and sport fish populations. Biologist Larisa Hardin has led the cormorant studies in her position as the Terrestrial Research Program Manager at the Arizona Fish and Game Department.

October 9: Landscaping for Wildlife - Jack Gilchrist

Residential landscapes can be home for both humans and wildlife and help mitigate the loss of wildlife habitat as lands transition from natural to urban. Landscape architect Jack Gilchrist will cover the basic principles of landscape design and maintenance with an emphasis on enhancing wildlife habitat in the Sonoran Desert. A list of recommended plants for Phoenix Metro landscapes will be provided. Jack has over 45 years' experience as a landscape architect. He holds a Bachelor of Science degree in Landscape Architecture and a Master of Science degree in Environmental Resources and is a registered landscape architect in the States of Arizona and California.

November 13: The Crested Caracara in Arizona - Rich Glinski

The Crested Caracara is readily visible in the agricultural fields of the Santa Cruz Flats south of Casa Grande during the winter months. With over 100 birds commonly observed daily in December and January, Rich Glinski has studied raptors in Arizona and the West for the past 50 years, publishing several books and numerous scientific and popular articles on raptors and their environs.

December 11: A Love Affair with Vultures - Dave Manning

Dave Manning, a birder for over 50 years, fell in love with vultures at age 65 when he stumbled upon a small Turkey Vulture chick peeking from its nest cave. He will talk about the three vultures of North America, and his Turkey Vulture book will be available for signing. A native of British Columbia, Canada, Dave says he has been "Mother Nature's Son" for all his life and a naturalist for 50 years.

Field Trips

Please check out all field trips on the DRAS Calendar page on the DRAS website: desertdriversaudubon.org/calendar

Additional field trips are listed on page 10



October 25, 2018 Payson and area with Kathe Anderson

We'll leave Fountain Hills about 6 am to arrive in Payson about 7. We'll explore ponds and parks that have been fruitful in the past for ducks, meadowlarks, bluebirds, woodpeckers, nuthatches, and more. Wrap up about 1:30pm, to return to Fountain Hills about 2:30. No entrance fees at this time. Bring a sack lunch. Limit 8. Difficulty 1. Please register with Kathe Anderson at kathe.coot@cox.net.

November 16, 2018 Neely Ranch/Freestone Park. Neely Ranch, a once-reliable site for all sorts of waterfowl, waders, desert birds and occasional rarity. We'll meet in the Gilbert area about 7:30am, check out the Ranch, then wander over to nearby Freestone Park to see if the lovebirds and winter waterfowl show up. Wrap up about 10ish. Limit 8. Difficulty 1. Please register with Kathe Anderson at kathe.coot@cox.net.

November 28, 2018 Fountain Hills Lake and Botanical Garden with Kathe Anderson. We'll meet about 7:45am in Fountain Hills, to bird at the Botanical Garden, with the hope of catching the common desert birds there before moving onto the lake, where we should get a variety of waterfowl, plus possible waders, shorebirds and surprises. We'll wrap up about 10:30am in Fountain Hills. Limit 8. Difficulty 1-2 (uneven surfaces at the Garden). Please register with Kathe Anderson at kathe.coot@cox.net.

December 6/7 Wilcox/Whitewater Draw/Slaughter Ranch with Kathe Anderson. This trip is designed to take in a few productive spots on the way to Douglas (probably Sweetwater Wetlands, St. David Monastery and Whitewater Draw), overnight in Douglas, then head out early to enjoy the drive into Slaughter Ranch and the various habitats there for a morning of birding. Emphasis on waterfowl and wintering birds, including hawks and sparrows, and desert species. Return to Phoenix 6ish. Limit 8. Difficulty 1-2 (long days!). Please register with Kathe Anderson at kathe.coot@cox.net.

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DECODING LOOK ALIKE BIRDS

Young Birders'

Anne Leight

One of the challenges facing all birders is learning the key differences between two species which appear very similar and are found in the same habitat. Some species, such as Loggerhead and Northern Shrikes, are not likely to appear in the same area. But for other "twins," if you can remember just a few identification tips, you will soon be able to figure out which is which. With practice, your identifications will become virtually subconscious! Here are some species which are commonly mistaken for one another, all found at the Riparian Preserve at Gilbert Water Ranch. The hawks will allow you to practice discerning two look-alikes when perched.

The Young Birders Club meets on the third Saturday of the month, October through April, at the Riparian Preserve, 2757 E. Guadalupe Road, Gilbert. Children receive a notebook and may borrow binoculars. Parents are welcome. For start times and other information, see deserttriversaudubon.org/kids-club or contact Anne Leight at birdannabelle@hotmail.com.

<p>Ash-throated Flycatcher (ATFL)</p> 	<p>Brown-crested Flycatcher (BCFL)</p> 	<p>Bill/Beak ATFL: rounded, conical</p> <p>BCFL: Wider at base, longer, triangular.</p>	<p>Posture ATFL: Horizontal</p> <p>BCFL: most often vertical</p>
<p>(perched) Zone-tailed Hawk</p> 	<p>(perched) Common Black Hawk</p> 	<p>Tail ZTHA: 2-3 white bands in tail</p> <p>CBHA: 1 broad white stripe</p>	
<p>Greater Yellowlegs</p> 	<p>Lesser Yellowlegs</p> 	<p>Bill/Beak Greater: Beak is almost 2x the width of its head</p> <p>Lesser: Beak is less than 1.5x width of its head</p>	
<p>Least Sandpiper (LESA)</p> 	<p>Western Sandpiper (WESA)</p> 	<p>Bill/Beak Least: Short bill</p> <p>Western: Broad at base, long</p>	
<p>Dusky Flycatcher (DUFL)</p> 	<p>Hammond's Flycatcher (HAFL)</p> 	<p>Bill/Beak DUFL: Long, narrow, Yellow</p> <p>HAFL: Short, narrow, dark underneath</p>	
		<p>Primary Projection length of longest wing feather)</p> <p>DUFL: Short</p> <p>HAFL: Long</p>	

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AN EDUCATED COMMUNITY THAT UNDERSTANDS
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JOIN ... and become a member making our vision a reality

RENEW ... your commitment to birds by extending your membership

ACT... by getting hands-on to help us execute our mission

*Educating and inspiring our community to protect
and preserve birds, wildlife and their habitat*



How to Join Desert Rivers

Membership in Desert Rivers Audubon Society helps support our chapter's outreach activities and operating costs. Annual membership entitles you to our quarterly magazine, priority status for field trips and events, and discounts on products and services. See desertiversaudubon.org/membership.

Students/Senior (65+)	\$25	Individual	\$30
Senior Couples	\$40	Family	\$50
Corporate	\$300+		

The National Audubon Society and local Audubon chapters are separate entities. All Desert Rivers Audubon dues are dedicated to local programs. You may hold concurrent memberships in National Audubon and any number of local chapters. If you are a National Audubon member, you may assist this chapter by designating Desert Rivers (Chapter B08) as your assigned chapter by emailing

audubon@emailcustomerservice.com

Background Photo: Lake Powell