



DESERT RIVERS AUDUBON SOCIETY

VOLUME 3 - SUMMER 2010 NEWSLETTER



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PRESIDENT'S MESSAGE

Mike Rupp

AUDUBON AT HOME

Krys Hammers

Transitions

Over the first two years of Desert Rivers history, the chapter has done remarkably well on many fronts. With a growing membership and increased outreach and programming, Desert Rivers is now poised to experience a growth surge that will tremendously increase its effectiveness and public persona.

This new "phase" of development will be lead by a new President to be determined within the next few weeks, as I have stepped down from the President's post. All of the Desert Rivers board members are keen on growing the chapter and increasing our outreach and effectiveness, and will be working towards that end during the September 2010 - May 2011 "season". As members, you can take part in this growth by becoming a volunteer for various positions within the chapter, considering board membership, and bringing friends and associates into the Desert Rivers family.

I have enjoyed leading the chapter during its initial start up and growth, and will continue to assist by continuing on as newsletter Editor and occasional field trip leader. We can all look forward to changes in the near future that will take the chapter to the "next level". Thanks to all the board members and members who have worked to make Desert Rivers the great chapter it is.



This summer issue looks at the difficulties our breeding birds face here in the Sonoran Desert, includes a Jim Burns' article about summer birds, and a "close up" look at our Anna's Hummingbird, along with our "regular features". I encourage you to share this newsletter with friends, and let others know that it can be seen online at : www.desertriversaudubon.org/newsletters

In May, several Desert Rivers members volunteered to assist Liberty Wildlife on our "work day" project. The photo below shows some of the DRAS crew painting at Liberty's facility in Scottsdale. Thanks to all who shared in this worthy project assisting our fellow "enviros" at Liberty Wildlife Rehabilitators :

Marion Staffell, Krys Hammers, Maj Anderson, Linda Long , Jim Banyai, Joy Dingley, Curtis Burns, Sam Alcorn, Marilyn Reiling, Claudia Kirscher, Joe Miller



Nature is the art of God.

Thomas Browne, Religio Medici, 1635

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

Charles A. Lindbergh, Life, 22 Dec. 1967

Eat Local



One way to reduce your carbon footprint is to eat local. According to the website, www.eatlocal.net, the average distance that food travels in the US from the farmer to the final consumer is 1,518 miles. The fuel used and the pollutants generated from trucking your food can be greatly reduced if you buy local foods. Additionally, when you buy food directly from the source, the farmer gets \$.90 of every dollar you spend. The farmer only makes \$.21 on the dollar on food he sells to food distributors. The rest goes to transportation and distribution. In turn buying locally supports your local farmers and your local economy. Foods that don't go into the distribution chain are also less susceptible to contaminants from bio-terrorists.

The East Valley area hosts a number of Farmer's Markets. Most operate seasonally and the season ends in June. That's the case in Tempe and Chandler, but the Mesa Farmers Market, located at 263 N Center operates year-round.

They are only open on Fridays from 9am to noon. If you can't get to a Farmer's Market, you may want to consider participating in a co-op or CSA (Community Supported Agriculture.) You pay a fee and each week you receive a bag full of fresh local vegetables, sometimes with recipes or ideas for using



them. You can also preserve some fruits and vegetables for use when they are out of season. The ultimate in eating locally is growing your own food. We all know how harsh our desert can be. Yet some fruits, vegetables and herbs are well-adapted to our climate. The soils can be treated to be more productive. It gives you a use for that compost that you're creating. It doesn't take a lot of space. It's amazing how much you can get out of a 5 foot square raised bed. And if you plan well, you can have 2 growing seasons a year. I'm trying my hand at gardening for the first time in this climate. I expect to have all the cherry tomatoes and cucumbers that I can use this summer. And I'll have more basil, rosemary and oregano than I can use. Not to forget my feathered friends, I also planted a sunflower with a huge seed head, just for the birds. It is so much fun when cooking to go out to the garden for some

ingredients. It's fresher, and you know it's got to taste better. When you grow it yourself, you can know for certain if you have used pesticides or chemicals. I recommend the book, "Extreme Gardening" by Dave Owens to help you get started.



Not everyone may want to grow their own food, but we can all support markets and restaurants that use local foods. I challenge you all to become a locavore and go on a 100 mile diet. The next time you're tempted to buy that cantaloupe that was shipped all the way from Argentina, think twice about what it truly costs us.

Safe yield poses two challenges

By John Zambrano- Special to the Courier

What are the difficult water issues facing the Prescott region and why do they matter? In our first water series column, on May 8, we described the Citizens Water Advocacy Group's mission and a little about who we are and what we do.

In this column, we provide some basic information about our region's two most challenging water issues. We will lay a foundation for future in-depth discussions of the issues that will determine our region's water future.

The Prescott communities overlie two underground formations, or aquifers, that serve as their sole source of drinking water. The two aquifers are the Agua Fria and Little Chino sub-basins, which together form the Prescott Active Management Area (PAMA). Groundwater in the Agua Fria aquifer flows toward and exits in the Agua Fria River heading south. Groundwater in the Little Chino aquifer flows toward and exits in the direction of the upper Verde River to the north.

The first difficult issue facing those of us who depend on the water from these aquifers is that more water is leaving than is entering the PAMA from both natural and artificial sources. Thus, the overall groundwater level is declining. This "more out than in" condition is an overdraft. This can't go on indefinitely; eventually our wells will go dry.

We need to achieve a long-term balance of the natural and artificial withdrawals and recharges. This balance is "safe yield." Arizona law includes safe yield as a goal and not a requirement; there are no regulatory penalties. The PAMA has been out of safe yield for some unknown amount of time, but measurably and officially since 1999.

When the state declared the PAMA to be out of safe yield, restrictions known as the Assured Water Supply rules went into effect. These rules prohibit the platting of new subdivisions using groundwater from the PAMA. New subdivisions must have so-called "alternative" water, i.e. any water other than groundwater from the PAMA. Two well-known examples of alternative water include treated wastewater recharged to the aquifer and the proposed imported groundwater from the adjacent Big Chino aquifer.

In spite of these restrictions, a few exceptions allow users to withdraw additional groundwater from the PAMA. The most critical exception is for wells that use less than 35 gallons per minute, typically for individual homes. These wells are "exempt" from the above restrictions or even from reporting the amount of water use. As we try to reach safe yield, we will need to account for the potential expansion of "exempt wells."

The second difficult issue we face is the preservation of the upper Verde River. The Verde River is one of the last continuous flowing rivers in the state, flowing from the Paulden area east and then south to where it joins the Salt River near Phoenix. Approximately 80 percent to 86 percent of the base flow of the first 24 miles comes from the Big Chino Aquifer, and about 14 percent comes from the Little Chino Aquifer. Base flow is the steady flow contributed by groundwater. Without base flow, a river is a dry wash with only occasional flow from storms.

The threat to the upper Verde River comes from the potential for additional withdrawals of groundwater from the Big Chino and the Little Chino aquifers. Because virtually all the base flow of the upper Verde comes from these two aquifers, their depletion would turn the upper Verde into a dry wash.

Although some parties who want to withdraw groundwater claim they can do so without ever reducing the Verde's flow, the U.S. Geological Survey tells us it would not be a matter of "whether," but rather of "when." But "when" shouldn't matter if we care about preserving the River for future generations.

Our communities want to import groundwater from the Big Chino to continue their population growth and to reach safe yield. But growth within the Big Chino can deplete the aquifer and harm the Verde River.

The two challenges we face are how to achieve safe yield and maintain a flowing river, two broadly accepted goals, while we continue to grow.

You can learn more about these issues and revisit the columns in this series at www.cwagaz.org. Please submit your questions and comments to info@cwagaz.org.

John Zambrano is president of the Citizens Water Advocacy Group and is a retired Environmental Engineer.

VERDE RIVER WATER NEWS

Safe yield report goes to supervisors

By Joanna Dodder Nellans- The Daily Courier

PRESCOTT - A new report recommending ways the Prescott area can stop depleting its groundwater supplies will go to county, city and town boards for consideration and discussion. The Upper Verde River Watershed Coalition discussed the report Wednesday. The coalition created a subcommittee made up of various stakeholders and its own technical experts to work on the report, which took 1.5 years to complete.

The subcommittee presented the report to the coalition at its last meeting two months ago. The coalition agreed to send the report to the boards representing coalition members - Yavapai County Board of Supervisors, Prescott City Council, Prescott Valley Town Council, Chino Valley Town Council and Yavapai-Prescott Indian Tribe.

The subcommittee's new 25-page report concluded the Upper Verde Coalition should morph into a replenishment district to meet its goals of reaching safe yield while preserving the baseflow of the Upper Verde River. Safe yield means a balance between the amount of groundwater going into the aquifer and out.

"The existing coalition structure will not be able to provide adequate funding or decision making unity in order to reach safe yield," the report's conclusion states. A replenishment district "will be able to collect revenues necessary to implement a safe yield plan with its associated conservation, harvesting, recharge, and importation projects without stripping the relevant authorities of the current cities and towns," according to the report.

Prescott City Council Member and coalition member Mary Ann Suttles said she wanted direction from the council before commenting on the report's recommendations. She said she'll try to get a presentation about the report scheduled for the council within the next month. Yavapai County Supervisor and coalition member Carol Springer said while the report was "concise and well done," she flat-out opposes any kind of water district. That's because groups of elected officials would have to concede part of their authority, she said.

Subcommittee member Howard Mechanic countered that the water district itself could have an elected board. But its jurisdiction would overlap with other local governments and they all would have taxing authority on the same citizens, Springer said. "A district can be custom designed to meet your needs," said subcommittee member Gary Beverly, a Sierra Club member. "This district allows you local control. Right now, you have no control. It's the Arizona Department of Water Resources."

The Department of Water Resources goal is for the 485-square-mile Prescott Active Management Area (AMA) to reach safe yield by 2025. The subcommittee report estimates that the Prescott AMA is depleting its groundwater supplies by about 11,000 acre-feet annually, and that could increase to more than 15,000 af/year in the future.

Prescott Valley Town Council Member and coalition member Mike Flannery said it would be a "long and protracted legislative effort" to create a new regional water district. Mechanic said he tried to find another way to successfully reach safe yield without creating a water district, but to no avail. "There's no way to reach safe yield without being difficult," Mechanic said.

A water district can work on long-term groundwater conservation, recharge and transportation projects while city councils can't bind future councils past two years, Mechanic said. "It will cost more in the long run if we don't reach safe yield - that's something covered in the report," Mechanic said.

Without action to return to a more balanced aquifer use, the AMA faces the possibility of wells going dry, plummeting land values and tax revenues, damage to natural resources, geologic changes that could inhibit the aquifer's ability to hold groundwater, land subsidence and reduced attraction for future economic growth, the report concludes.

The Home Team

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Bewick's
Wren -
Cindy Marple

I've adjusted well, I think, to our new life as "reverse snowbirds," with summers in southeast Arizona and the rest of the cold, dank, rainy year in the Pacific Northwest. Vancouver is a lively and beautiful city, of course, and—more importantly—it is full of birds. Even the most urban of neighborhoods is rich with the allure of the novel, from Barrow's Goldeneyes bobbing on the waters of English Bay to Golden-crowned Sparrows and Varied Thrushes whistling and buzzing in the arrival of spring.

Not all of the birds that brighten our days are quite as exotic. British Columbia's lower mainland is home to a good number of species that are common and familiar in southern Arizona, too, and at the right season and in the right habitat, Bewick's Wrens, Song Sparrows, and Yellow Warblers are as prominent on the Vancouver birder's list as they are in a tally from Tucson. But they're not the same.

Ornithotourists hot on the trail of the Arizona specialties tend to ignore the more widespread species they encounter: why waste time on Spotted Towhees when trogons are honking from the creekside, why be distracted by White-crowned Sparrows when that mewling in the mesquites might belong to a Black-capped Gnatcatcher? The intense focus of visiting birders is understandable enough, but that single-mindedness can lead us to overlook the differences, sometimes subtle but always fascinating, between "our" Arizona birds and their relatives in other parts of a widespread range. The Sky Islands and the Sonoran Desert host not just the famous special species, but also an impressive range of distinctive subspecies, and getting to know even just a few of them can be as exciting and as satisfying as tracking down the state's more conventional avian targets.

Start, for example, with Bewick's Wren. Here in the Northwest, these nervous, secretive birds are decidedly brown, quite unlike the pale gray wrens of the Sonoran Desert, and their songs are so different from the simple tick-and-trill familiar from Arizona as to trick me still, half a year after I first set out to learn them. The Song Sparrow situation is even more striking: rich brown and black over much of their extensive range (and a somber sooty red in coastal British Columbia), the breeding Song Sparrows of southeast Arizona are notably pale and sparsely marked, often causing more than a moment's confusion for birders who "know" the species from the East or Midwest. Similarly, southern Arizona's nesting Yellow Warblers are strikingly pale in comparison with their conspecifics elsewhere, with only limited red streaking beneath and a definite tendency towards the gray, especially in females and non-adults; I have had clients simply refuse to believe the identification of bathing juveniles until the birds flashed a yellow tailspot.

Many other common breeding birds are represented in southeast Arizona by field-identifiable subspecies, from Mallards ("Mexican Duck") to Common ("Sonoran") Yellowthroats. Figuring out what to look for to distinguish these birds from their eastern or northern cousins was often, until recently, an exercise in frustration: less than fifty years ago, Roger Tory Peterson counseled the users of his Field Guide to Western Birds to "forget about subspecies ... too thorough treatment ... would lead to many errors in the field." Happily, the important modern field guides—the National Geographic Guide and the single-volume Sibley Guide—make a conscious effort to depict a range of geographic forms, identified in National Geographic to subspecies and in Sibley to regional "groups" (but see sibleyguides.com for more detail). The two volumes of Peter Pyle's magnificent Identification Guide list in detail

the characters differentiating all subspecies of North American birds in the hand, and careful reading of that work, coupled with close observation of your local breeding birds, might result in the discovery of new ways to distinguish subspecies in the field.

What does it matter? Beyond the simple satisfaction of adding challenge and depth to your summertime birding, paying attention to subspecies can also have important implications for conservation. Willow Flycatcher remains a common and successful species over most of its range, but the Southwestern subspecies is gravely endangered, threatened by loss of the riparian habitats it requires for breeding. Across the Colorado, the Least Bell's Vireo is nearly as imperiled. A particularly extreme example is offered by the Horned Larks of the Pacific Northwest. This species, familiar throughout Arizona, is among the most abundant birds in the northern hemisphere, but the "Streaked" subspecies once widely found around Puget Sound is now probably extirpated from its historic range in coastal British Columbia, and among the most badly endangered birds of Washington State.

More encouragingly, careful attention to geographic variation can also help us detect range expansions. The brilliantly red-headed "Mangrove" Yellow Warbler has in the past few years begun to breed on the Texas coast, and an individual was trapped and photographed in Arizona in 2005—surely just the first of a subspecies on the move.

In the preface to the 1961 edition of his *Western Birds*, Roger Peterson wrote that "subspecies have no definite entity, but merely represent subdivisions" of what he obviously thought of as the "real" unit of avian ontology, the species. We know now, though, that those "subdivisions," geographically and genetically discrete populations, are in fact the very stuff of evolution, that organisms develop and change not at the highly abstract level of the species but as flesh-and-feather local populations. Subspecies in this view are not the pedantic fantasies of the museum worker but rather, in many cases, incipient species, taxa in the very process of divergence. The exercise of watching our local breeding birds—the home team of the Arizona summer—and learning to compare them with others currently classified as "the same" is a crystal-clear window into the way that nature changes, constantly transforming the same into something delightfully different.



Song Sparrow -
Cindy Marple

Yellow Warbler - Cindy Marple

You already know about several birding related categories in which Arizona leads the rest of the country—number of breeding birds found in no other state, number of hummingbird species, number of owl species (tied with neighboring New Mexico)—but here's one you probably haven't thought about. Blue birds. That's blue birds, not bluebirds.

Think about it! There really aren't that many blue birds in North America. Flip through your field guide and do a quick count. I only get 20. No, I'm not giving you Great Blue Heron or any other bird that has blue in its common name but isn't actually blue, birds that have only blue iridescence (some blue in certain light like Bronzed Cowbird) don't count, and you can't have any hummingbirds (not even Blue-throated). However, I'll give you **Purple Gallinule**, and I'll throw in a couple mega rarities—**Blue Mockingbird** and **Blue Bunting**. Twenty isn't many considering the continent's birdlist is now up to about 900 give or take.

Everybody notices and loves blue birds because we treasure most what's rare or unusual. Blue may be beautiful in its own right, but blue is also rare and unusual in the animal world. Here, in non-scientific language from a non-scientist, are three paragraphs explaining why. First of all, there are only a few pigments that cause coloration in animals. Birders have all heard of carotenoids—reds, oranges, and some yellows; and melanins—earth tones, browns, and blacks. A third pigment group, the porphyrins, produce greens. Only one blue pigment, so rare it is as yet unnamed, has been found in animals—frogs, snakes, and amphibians, but it is not responsible for the blue in our blue birds.

Here come the second and third non-scientific paragraphs from this non-scientist. The blue in blue birds is not pigmentary coloration. It is structural coloration. The structural coloration which causes some birds' plumage to appear blue comes from something called the Tyndall Phenomenon, the same thing that produces our state's wonderful azure skies. How many times have you heard someone exclaim that the blue in a **Mountain Bluebird** reflects the blue skies of its high country habitat? How many times have you used the adjective "ethereal" to describe the plumage of a **Lazuli Bunting**?

Okay, a lot of birders are romantics. I get that. But here's what the Tyndall Phenomenon means. Particles in the upper atmosphere pick up and scatter light, reflecting only the shortest light waves, the blue ones. Something similar happens in blue birds. Tiny pockets of air in the feather barbs do the same thing. They reflect only the short, blue light waves. Next time you find a blue feather (good luck—a **Steller's Jay** feather would be perfect), look at it in good sunlight. Its blue seems to reflect the cloudless sky. Its blue is ethereal. Then take it home and look at it again, this time backlit by a flashlight in a dark room. Now it's just plain old drab brown!

Who was this Tyndall guy anyway? John Tyndall was a 19th century physicist who wrote books on stuff like diamagnetism, thermal radiation, and atmospheric processes. John Tyndall was for sure not a romantic, and I'm guessing he wasn't a birdwatcher either. He was British. Maybe he never saw many blue skies. I'm sure he never visited Arizona, exclaimed about a Mountain Bluebird's plumage, or laid eyes upon a Lazuli Bunting. More's the pity.

When you conducted the blue census through your field guide, did you keep a parallel count for those blues found in Arizona? Most of them are, and I'm betting you overlooked a few. No, Little Blue Heron is not actually blue, and neither is Belted Kingfisher.

Summertime Blues

Article & Photos : Jim Burns

Let's keep separate running totals for accidentals and breeding species.

Purple Gallinule? Yes, they don't breed here, but vagrants show up occasionally. There was one at the Gilbert Riparian Preserve last fall.

The jay family! Now we're getting into it. There are **Blue Jay** records and **Steller's, Western Scrub, Mexican, and Pinyon** are all blue, beautiful, and breed in Arizona. Which is your favorite among these Arizona blue jays? Alright, you have to overlook personality and reputation and pick one! Pinyon Jay is my choice. Remember rare and unusual? Pinyon Jays are ALL blue, the "Blue Crows," and they have a fascinating social structure.

We're at two accidentals and four nesters so far, and I'll bet you overlooked **Tree Swallow**. If you didn't realize Tree Swallows were blue, check out the accompanying image. Then we'll count the actual bluebird group. There's **Eastern Bluebird** (Yes, those bluebirds in southeastern Arizona with the rusty throats are the fulva subspecies of **Eastern Bluebird**, and some people hoping for a split refer to them as Azure Bluebirds. Welcome to Arizona birding!), **Western Bluebird**, and everyone's favorite, the forever ethereal **Mountain Bluebird**.

Did you count **Blue Mockingbird**? I've seen three of these spectacular accidental mimids in Arizona. And a **Black-throated Blue Warbler** spent the winter in Tucson only a few years ago. There are even records of **Cerulean Warbler** for the state, believe it or not. Which brings us to the grosbeaks and buntings: **Blue Grosbeak**, **Indigo Bunting** (Yes, Indigos are uncommon and local breeders throughout the state. Welcome to Arizona birding!), **Lazuli Bunting**, and **Varied Bunting**. If all your Varied Buntings have been males in the shadows, then you'll never understand why I think this is Arizona's most colorful bird, Elegant Trogon and Vermilion flycatcher notwithstanding. Wait until you see a male Varied Bunting in full sunlight. To paraphrase Lady GaGa, it left me speechless.

Check my math. I'm on seventeen Arizona blues out of twenty birds on the continent sporting blue. That's structural blue to be sure, but I'm not looking into lost and lifeless feathers backlit by artificial light. I'm looking at real blues, azure and ethereal blues reflecting the immense vault of our sunny state's clear skies. You're going to have to run the math for the other states yourself because it's summertime, it's breeding season, and I'm out with binoculars and camera doing blue birding in a state blessed with a lot of blue birds, including all three flavors from the actual bluebird family.



Blue Grosbeak



Varied Bunting



Tree Swallow



Mountain Bluebird



Male,
Denny Green

A flash of harmless lightning, a mist of rainbow dyes, the burnished sunbeams brightening from flower to flower he flies.

- John Banister Tabb



Female,
Brandon Grace

The beautiful quote above is one man's impression of hummingbird flight- something almost everyone has seen and enjoyed, for hummingbirds are with us year-round in prolific numbers and live conspicuous lives in close association with man. As with most birds, spring and summer are the seasons you'll find hummingbirds demonstrating mating behaviors, nest building, laying eggs, and raising their young. They are common around our homes, public parks and gardens, and local deserts. They could be considered the "cutest" of birds, hence we tend to anthropomorphize them more than other bird species, and perhaps rightly so, for what other bird possesses such incredible beauty, amazing flight characteristics, and astonishing anatomy?

Of the dozen or so hummingbird species present sometime during the year in Arizona, the most common and oft seen species is the Anna's Hummingbird (*Calypte anna*). Here in the valley, this species is prolific, and is usually the most common bird at feeders. Often under-appreciated, Anna's physiology and behaviors top the list of astonishing bird facts in several ways. Let's take a closer look at the life of our most ubiquitous hummingbird.

Who among us birders hasn't been amazed at the brilliant iridescent colors reflected off Annas when feeding or perched in sunlight? Actually, "refracted" is a better description of what we see, for ⁽¹⁾the bright red gorget, those elongated feathers projecting to the sides round the throat and head of the male Annas is the result of the refraction of incident light by the structures of certain feathers. Like any diffraction grating or prism, these structures split light into its component colors, and only certain frequencies are refracted back to your eyes. The apparent color of any particular part of a feather depends upon the distance between the microscopic ridges in its gridlike structure. The resulting colors are much more vivid and iridescent than those of birds with only pigmented feathers, and are thought to be the most intensely iridescent feathers of any bird species. Iridescent hummingbird colors actually result from a combination of refraction and pigmentation, since the diffraction structures themselves are made of melanin, a pigment. Hummingbirds have more feathers per square inch than any other bird, and no down feathers. The red gorget colors are used as displays by males to both defend their territories from other males, and gain attention of females, who find them attractive.

Male Anna's sing more conspicuously than any other North American hummingbird, and their songs are learned and complex. Once the male has captured the female's attention, mating behavior is truly spectacular, with a dive display in the form of a "J" that lasts maybe 10 seconds. The male typically hovers 6-13 feet in front of the female and then flies upward in a wavering flightpath to a height of around 130 feet where he hovers for an instant, then plummets in a near-vertical dive and ends with an explosive squeak within half a meter of the female. He then makes a circular arc back to the point where he began and repeats this maneuver. On sunny days the dives are oriented so that the sun is refracted from the iridescent throat and crown directly at the female. Although impressive, the forth-coming mating relationship is every woman's worst nightmare.

Anna's Hummingbird

Article: Michael Rupp

Female Anna's typically hang around males only long enough to copulate. The female then constructs the nest, incubates the eggs, and cares for nestlings, all timed according to the availability of food. It's a short-lived romance that results in the female doing all the work to insure breeding success. It's no small challenge for the female Anna's. Collecting a varied menu of small flies, "white flies" and tiny wasps, ants, tree sap, flower nectar, and "sugar water" from feeders, she is always on the wing. The insects provide protein and the nectar provides energy. The hummer has a remarkable metabolism that converts food to energy in just a few minutes- one of the fastest digestive rates known, and truly necessary because a hummingbird eats half their weight each day (0.1-0.2 oz) and drinks eight times their weight in water. A hovering bird uses 35 calories per minute. A small crop stores food immediately after it is taken in and empties into the rest of the digestive system. When full, the hummingbird will rest until the crop is about half empty, and then resume foraging. This goes on about every 15-20 minutes all day long to maintain their energy levels however at dawn and dusk there is heavier feeding to catch up from the nightly fast and prepare for the night ahead. When there is a supply of nectar, as from a feeder, they may not need to feed as often as when feeding from flowers, but when flowers are abundant and heavy with nectar, they will utilize them first, preferring them to feeders. If you wish to hang feeders of sugar water, mix 1 part regular table sugar to 4 parts water. Use no other type of sweetening- no honey, no juice or artificial sweetener. Here's something else you can do for hummingbirds- though they get the bulk of their energy needs from sipping nectar or sugar water, they need protein as well, which they usually acquire by eating small insects. One way you can help them get that protein is by placing overripe fruit near your hummingbird feeders to attract tiny, fruit-loving flies (putting the fruit in a hanging basket works nicely). Banana skins seem to be especially effective.

Okay, back to the nest. The typical hummingbird nest is an open cup placed on top of a small twig or branch and measures only a few inches across. It is constructed of materials like cottonwood fluff, leaf material, lichens, and moss, held together by intertwining and spider webs. If you have the opportunity to observe nest building, you may see "hummers" poking around in the corners of windows and under eaves to collect spider webs as the ultimate "glue" that holds the nest together so well. Eggs are pure white and are among the smallest in the bird kingdom. Hummers lay two clutches



Cindy Marple





Two eggs per nest is the norm for Anna's, with two clutches laid each year. Mortality rate is around 40% to 80% of eggs laid.

a year with two eggs per clutch-no more and no less. The brood hatches in about 15 to 22 days, a relatively long time compared to other birds. After the embryo has consumed all the food in the egg, it hatches with the help of two specialized features, an egg tooth on their bill, and a "hatching muscle" on the back of its head which gives greater force to the egg tooth while pecking out of the shell. Once hatched these features disappear. Broken shells are disposed of by the mother along with fecal waste.

Nestlings have no feathers, are blind and have only tiny bills, so they need constant care from birth. Whenever they hear their mom's wings or sense movement, they beg for food. That food consists of regurgitated nectar and insects, poked down their throats by mom. (see below) 8-12 days after hatching the babies can maintain their own body temperature. They will fledge and start flapping exercise to prepare for flight at about 21 days. Studies of fledgling success range from 17% to 59% of the number of eggs laid. Predation by hawks, crows, jays, chipmunks, snakes and even yellow jackets accounts for most of the nest mortality. Hummingbird mothers fearlessly attack in defense of the eggs and young. Accidents, high winds, cold, heavy rains, and heat, account for the remainder of fledgling deaths. According to banding studies, hummers can live for 5-10 years, though most are shorter lived.

After brilliance of color, perhaps the second most spectacular feature of hummers is their flight abilities. Hummers can perform extraordinary aerobatics because of their unique anatomy. Most hummingbird bones are porous, but some, like their wing and leg bones, are hollow. A keel shaped sternum allows greater area for the attachment of huge flight muscles. Extremely long "hand bones" support the large primary feathers and enable rapid wing strokes while preventing the wings from bending. The upper arm and forearm

bones are very short, and the elbow and wrist joints don't move. The shoulder joint to which the wing attaches can move in all directions and rotate about 180 degrees. The muscle fibers in hummingbird pectoral muscles are 100% of the red type (the opposite of the kind of muscle fibers in "white meat," in chicken and turkey pectoral muscle). This enables hummingbirds to keep a rich supply of blood and oxygen flowing into their muscles as they fly, so they don't tire even with their rapid wing beat rate. Hummingbirds don't flap their wings, they fly with their hands, flying with their bodies held upright, not flat like most birds. Wing beats are around 38-78 times a second! Hummingbirds have been clocked in a wind tunnel flying up to 27 mph. One kept up with an automobile going 45 mph. and another kept up with a car going 55 - 60 mph.

To support this kind of extraordinary flight requires an extraordinary physiology, and the hummingbird has a truly remarkable one. Here come some the records : The hummer has the largest brain, relative to size, of all birds, being 4.2% of total body weight. Hummingbirds have the largest hearts proportionally of any living animal- 1.75% to 2.5% of body weight. Their resting heart-beat is 480 beats per minute and can go as high as 1,260 per second when excited. Resting hummingbirds breathe around 250 times a minute with an efficient lung system which includes 9 internal air sacs connected to their lungs by tubes. These air sacs, along with panting help keep them cool (normal body temp=105F).

Have you ever observed a hummingbird moving about in an aerial dance among the flowers - a living prismatic gem.... it is a creature of such fairy-like loveliness as to mock all description.

-W.H. Hudson, Green Mansions

Anna's Hummingbirds are resident throughout most of Arizona and do not migrate, but other species like the Rufous Hummingbird is a long distance migrant that travels more than 5,000 miles a year from central Mexico to Alaska and back again. Hummingbirds that migrate do so not in flocks, but each one entirely alone. Males leave first followed by females several weeks later. On the south-bound journey the young leave last, flying alone on their first migration with no adult to guide them. In its migration to Mexico, the tiny Ruby-throated Hummingbird found in southern Arizona tackles the sea crossing directly. Its cruising speed is about 27 miles an hour, so if conditions are favorable, it can make the transit, non-stop, in around 18 hours. But the passage is a formidable one and it taxes the hummingbird to the limit of its endurance. A head wind, even a mild one, may hamper it so severely that it will never reach the far shore and perish at sea.

These little "jewels of the garden" are truly remarkable birds and rewarding to watch and learn about. Once nesting only on the Pacific slope of northern Baja California and California north to the San Francisco Bay area, Anna's Hummingbird expanded its range dramatically since the mid-1930s and is appreciated by birders and non-birders alike. I hope this brief review of our most common hummingbird increases your appreciation for the wondrous complexity of life.

Where to see hummingbirds (statewide) : Desert Botanical Gardens, Phoenix, Hassayampa River Preserve, Wickenburg, Gilbert Riparian Preserve, Gilbert, Boyce Thompson Arboretum, Superior, Paton's, Patagonia, Beatty's B&B, Ramsey Canyon, Nature Conservancy Facility, Ramsey Canyon

Citations : 1. Cornell "Birds of North America" online



Nest Photos : Denny Green

UNDERRATED! THE BEST SPRINGTIME BIRDING SITE IN ARIZONA

Article and Inset Photos : Jim Burns

Background Photo : Grasslands at mouth of
Madera Canyon, near Continental - Randy Prentice

Directions to Madera Canyon from Phoenix:

152 miles, about 2 hours 46 minutes - Leave Phoenix on the I-10 Freeway southbound towards Tucson. In Tucson, take the I-19 Freeway towards Nogales, AZ on the right, then take Exit 63 for Continental Rd. Make a left turn at W Continental Rd, and then the third right turn onto Madera Canyon Rd/White House Canyon Rd, following Madera Canyon Rd up into the canyon where you'll find parking areas and campgrounds.



You may be aware of the chant reverberating now through sports arenas across the country. "OVER RATED!" "OVER RATED!" It's home town fans trying to get under the skin of visiting teams and players by verbally disrespecting them. Something akin to this happens to what I feel is arguably the best birding site in Arizona, Madera Canyon. Our state's birding cognoscenti don't seem to bird there much or recommend it to visitors because it isn't quite close enough to our southern border to reliably host vagrants, wanderers and overshoots from Mexico.

Poll a dozen top Arizona birders on their favorite place to bird in their home state and you might get twelve different answers, but you won't hear "Madera Canyon." For sure you'll get South Fork and Rustler Park in the Chiricahuas, Miller and Carr Canyons and the fort in the Huachuclas, and San Pedro River and Sonoita Creek. Mt. Lemmon, California Gulch, and Patagonia Lake will probably get a mention. Maybe even South Fork in the White Mountains. Primarily because listers want a chance at megararities like Green Kingfisher and Sinaloa Wren, localized breeders like Mexican Chickadee and Spotted Owl, and perhaps hard to find northern mountain species, Madera Canyon, though certainly not underbirded, is underappreciated and underrated. Let's take a closer look.

Part of Coronado National Forest, Madera Creek originates near 9,453 foot Mt. Wrightson and tumbles through pine/oak woods and granite outcrops toward the high desert far below. Through the canyon that is the creek's handiwork and bears its name, a single road winds upward for six miles past a small campground, two picnic areas, two bed and breakfasts, and a lodge with rental cabins. That road and the high country trails it accesses convey birders through four(!) life zones from the hot, dry Lower Sonoran (Saguaro Cactus, Gila Woodpecker, Cactus Wren) to the cool, wet Canadian (Quaking Aspen, Douglas Fir, Mountain Chickadee, Steller's Jay). This striking change in elevation and habitat is the essence of what the term "Sky Island" means, and the Santa Ritas, where Madera Canyon is located, most assuredly are Sky Island, every bit the rival of the more celebrated mountain ranges

to the south and east. Its four life zones give Madera a wonderful diversity of bird species which includes most, but not quite all, of those considered "southeast Arizona specialties." By virtue of its more northerly location, Madera also benefits from a bit more overlap between species at the southern limit of their breeding range (Virginia's Warbler) and those at their northern limit (Whiskered Screech-Owl). Madera is also closer (an hour south of Tucson) and more accessible (paved road to the top) than any of the other Sky Islands.

Here is a typical Madera itinerary. Once you've turned the corner in the hamlet of Continental and start upslope toward the canyon, begin listening and looking in the grasslands for three of the elusive sparrows on your list--Cassin's, Botteri's, and Rufous-winged, easy to hear, if not see, as they adorn singing posts on fencelines and mesquites. Rufous-crowned and Black-chinned are present too.

The first stop upcanyon is the Proctor Road parking area. Sought after species here are Varied Bunting and Black-capped Gnatcatcher. Learn the latter's vocalizations before you go, as all three gnatcatchers (Blue-gray and Black-tailed too) are possible in spring. A walk along Proctor and up the first section of the paved

footpath may also produce Crissal Thrasher, Hooded Oriole, and a Bobcat. In June, 1996 I photographed a pair of Five-striped Sparrows coming to the George West Waterfall on Madera Creek just below Proctor Road. Farther up, at White House Picnic Area, check for Scott's Oriole and Montezuma Quail and, if you're there after dark, Common Poonwill, Elf Owl, and Whiskered Screech-Owl are certain to be heard, if not seen. Painted Redstart and Sulphur-Bellied Flycatcher habitat begins a little higher at the Madera Picnic Area, but don't drive there. Walk up the trail and then walk back down for your vehicle--you get twice the coverage for the warblers, grosbeaks, and tanagers you missed going up.

Next, check out the feeders at the Santa Rita Lodge for woodpeckers, towhees, and seedeaters. Here you may also encounter Madera's resident Wild Turkey flock. Then continue up to the Madera Kubo cabins where Arizona's only reliable Flame-colored Tanager usually arrives by early April, filling this section of the canyon with sunburst color and its rollicking song, easily heard over the burbling of the Madera creek. Over the years the hummingbird feeders here and at the Chuparosa Inn just up the road have hosted nearly all of Arizona's mountain gems including Berylline, Violet-crowned, and Plain-capped Starthroat.

The quintessential Madera Canyon experience lies on the unpaved trails above the upper parking area. This is where the search for the Holy Grail, Elegant Trogon, begins. The uninitiated assume trogons, because they are hard to find, are shy and reclusive. They are not. They're just hard to find. North of the border they are at the northern limit of their breeding range, and Madera may host only one or two pairs in a given year.

Listen for the odd, barking dog call, or just sit and wait. One may find you. Elegant Trogons are not ridge hoppers. They travel up and down their home canyon hunting caterpillars and fruit. Once discovered, they can be remarkably confiding as they hunt like a vireo on valium, sitting for minutes at a time on one limb, slowly turning their heads this way and that trying to get a visual on a food item. Once found, of course, a trogon's singular shape and radiant colors explode upon the senses, and the first time viewer always knows he has just experienced the ultimate North American bird. A slow springtime walk up any of these upper trails should also reward with good looks at resident Black-throated Gray, Grace's, Red-faced, and Olive Warbler in addition to more northerly migrants like Hermit and Townsend's Warblers. Twenty-one flavors of flycatcher have been recorded in the Canyon, Northern Goshawk and Northern Pygmy-Owl are present but elusive, and Mexican Jays are always conspicuous on their boisterous neighborhood patrols.

Granted if you want Mexican Chickadee in Arizona, you'll have to drive halfway to Texas, and you won't find Green Kingfishers in Madera either, but I have seen Spotted Owls there on several occasions in several locations. Despite its length and cathedral vistas out over the broad Santa Cruz River Valley, Madera's trails are small, intimate chapels filled with the song, shape, and color of nearly all of those south-of-the-border bird species that draw birders to Arizona from around the country.

Every bend in the trail or road may afford an avian surprise or at least a visual feast of falling water, weathered rock, and intricate tree back patterns. For me there is no better springtime birding venue in Arizona than Madera Canyon. It's close and it's cool in all the multiple meanings of that word. Can you say underrated?



Montezuma Quail



Varied Bunting



Berylline Hummingbird



Whiskered Screech Owl



Cassin's Sparrow



Flame-colored Tanager

Gulf Oil Spill Update

Michael Rupp



A Brown Pelican mired in oil

The Gulf oil spill from the Deep Horizon drilling platform has now surpassed the Exxon-Valdes oil spill as the largest US environmental disaster to date. Pictures like those above and below are now starting to stream in as the oil makes landfalls all along the Louisiana coast, with predictions that it may also contaminate shorelines in Mississippi, Alabama, and Florida.

The proportions of this disaster are difficult to assess, but surely this is going to go down as the worst oil spill ever, and a massive effort will be necessary to mitigate its consequences. British Petroleum has pledged to pay the costs of shoreline cleanup and rehabilitation of wildlife, so to date, few rehabilitator groups are asking for donations for this specific event. Most are stating that donations will go to their overall operating costs.

The largest need seems to be qualified volunteer help to assist in wildlife recovery and rehabilitation. Some groups are offering volunteer training to those interested in participating on site. There are several opportunities for volunteer service, with several websites available for detailed information.

The **National Audubon Society's** volunteer program can be contacted at: www.audubonaction.org/site/PageServer?pagename=aa_HowtoHelp
The State of Louisiana - www.volunteerlouisiana.gov
The International Bird Rescue Research Center - www.ibrrc.org/index.html
Main site for varied links and info:
www.deepwaterhorizonresponse.com/go/site/2931
A map of the oil spill that is updated daily can be seen at:
www.fws.gov/home/dhoilspill/pdfs/SCAT_Oil_Spill_Daily_Status_Map_060710_Map_ID_Houma64_letter.pdf

Desert Rivers has received some inquiries about how to help, and will be formulating a response shortly. Please watch our periodic emails for specific information on how you can help make a difference in this tragedy.



Unidentified gull covered in crude

LITTLE RAIN CONTINUED FROM PAGE 8

These are just a few of the fascinating bird species that have attuned themselves to the desert environment. Every bird that lives and breeds in the desert has evolved ways not just surviving but thriving in the hot, dry environment whether it be hollowing out nesting cavities in giant columnar cacti like Saguaro, Organ Pipe, or Cardon; developing physiological ways of maintaining body temperature; building protective nest structures; or exhibiting flexible feeding behaviors that enable them to exploit changing desert resources.

The Sonoran desert is one of the most biologically diverse deserts on earth, and, although it appears very ecologically resilient, it is actually quite fragile. Threats to the desert's biodiversity include urbanization, habitat fragmentation, climate change, surface water diversion, inappropriate livestock grazing, aquifer mining, recreational impacts, farmland conversion, and exotic invasive plants such as buffelgrass and tamarisk.

All of us who enjoy the marvelous diversity of birdlife in the Sonoran desert should be concerned and become involved in the preservation of this ecological treasure.

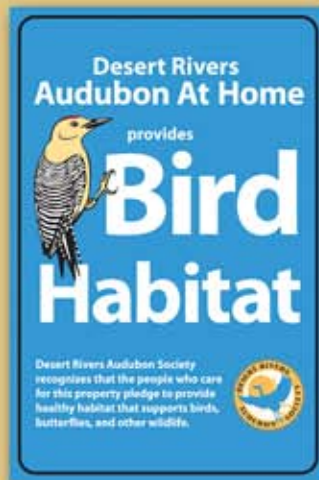
Audubon At Home Bird Habitat Program

Become part of a network of those who care about Arizona's native plants and wildlife.

If you provide water-efficient shelter, food and water for birds, we want you to be recognized for your efforts.

Visit the Desert Rivers website for details on how to qualify. You can only apply through the website. If you qualify, you may donate at least \$40 online to receive a certificate to pick up your sign at the Wild Birds Unlimited store, or any birdwalk or meeting of Desert Rivers Audubon. Then just sit back and enjoy the sounds and sights of birds and blooms in your habitat. And know that you are doing your part to preserve the wildlife in our beautiful deserts.

The yard sign measures 8" x 12" and is made of lightweight metal with durable color printing. This sign recognizes your efforts to provide habitat for local birds, and can encourage your friends and neighbors to consider doing likewise with their yards.



From the AZ Field Ornithologists. See complete details and many more reports on the AZFO website - www.azfo.org - "Documentation" pg.

NOTABLE ARIZONA STATE SIGHTINGS



Andrew Core

Yellow-shafted Northern Flicker (*Colaptes auratus auratus*), Agua Caliente Park, Pima County. This male Yellow-shafted Northern Flicker was found 3 December 2009 by Jean Scheibe Smith and was photographed by Andrew Core on 8 March 2010 at Agua Caliente Park in northeast Tucson. Most of the Northern Flickers seen in Arizona that have yellow shafts are intergrades between the Red-shafted and Yellow-shafted forms.

On this bird, however, the head pattern

looks like a pure Yellow-shafted. This form is very rare in Arizona. Note the gray crown, black malar, brown face, red nape patch and yellow shafts to the flight feathers that distinguish this form from the more common Red-Shafted form of Northern Flicker. Intergrades usually have an intermediate face patterns with gray in the cheek and brown in the crown.

Horned Grebe (*Podiceps auritus*) Saguaro Lake/Butcher Jones Recreation Site, Maricopa County. These Horned Grebes were photographed by Tommy DeBardeleben on 05 Feb. 2010

and by Brendon Grice on 06 February 2010. There were at

least four and possibly five birds present. Rare transient and winter visitor. Horned Grebe is most easily told from Eared Grebe in this plumage by the strikingly white face and neck which contrasts sharply with the dark cap. Note also that the peak of the crown is further back on the head. Another good field mark is the white tip on its bill.



Brendon Grice



Dominic Sherony

Orchard Oriole (*Icterus spurius*), Surprise, AZ, Maricopa County. This adult male Orchard Oriole was photographed by Dominic Sherony on 16 February 2010 in Sun City Grand in Surprise Arizona at a private residence not open to visitors. Orchard Oriole

is a casual transient in Arizona, mostly in late spring and summer with a few winter records. Adult males like this are the most distinctive North American oriole and are unmistakable. Note the grayish olive tips to the back feathers. These are typical of fresh basic (winter) plumaged males. These tips will wear away and by the end of the winter and the plumage will then resemble the alternate (breeding) plumage with black back.

Flame-colored Tanager (*Piranga bidentata*), Madera Kubo, Santa Cruz County.

This Flame-colored Tanager was first seen this year by Tom Thompson and reported by Melody Kehl on 27 March 2010. It was photographed by Laurens Halsey on 28 March 2010. This is presumably the same male returning to this location for the eighth year. Flame-colored Tanager is very rare in the Sky Islands but has been recorded in the Chiricahuas, Huachucas and Santa Ritas. It has bred several times and been observed to hybridize with Western Tanagers.



Lauren Halsey

Rusty Blackbird (*Euphagus carolinus*), South Fork, Cave Creek, Cochise County. This Rusty Blackbird was discovered and photographed by Matt Brown on 30 March 2010. Rusty Blackbird is a casual Fall migrant and Winter visitor to the state. Arizona averages only one sighting about every 2-3 years.



Matt Brown

Since this species has experienced a recent population crash over much of its range, it is expected to be much rarer from now into the foreseeable future. Matt writes: "It seemed like an interesting plumage of a rarely-reported species in an unusual location. As most sources I consulted indicate the use of ponds and wetland-type habitats, I wonder what the highest elevation the species has been known to occur in the state would be. Ours was at about 5,450 feet.



Shaun Putz

Mew Gull (*Larus canus*), Wahweap Boat Ramp, Lake Powell, Coconino County. This adult Mew Gull was found and photographed by Shaun Putz on 02 April 2010 at Wahweap Boat Ramp, Glen Canyon Recreation Area on Lake Powell. Prior to this year, there had only been 10

records of Mew Gull in Arizona and none since 1999. This however is the second one reported this year. The unmarked bill and large scapular crescents separate this bird from adult Ring-billed Gull.

Yellow-throated Warbler (*Dendroica dominica*), Sweetwater Wetlands, Pima County. This

Yellow-throated Warbler was discovered by Peter Taylor on 19 May 2010 and photographed the same day by Andrew Core. Yellow-throated Warbler is a casual

transient in Arizona with about 20 previous records. From 2000-2008 there had only been a couple of records but this is the fourth documented report since November 2008. Note the yellow throat, black auriculars with white spot behind them and the white eyeline. This bird is of the western *D. d. albilora* race. This race has a white or pale yellow supraloral stripe (the part of the white eyebrow near the bill) whereas the other races of *D. dominica* have bright yellow supraloral stripes.



Andrew Core



Gary Rosenberg

White-rumped Sandpiper (*Calidris fuscicollis*), Willcox Lake, Cochise County.

This White-rumped Sandpiper was discovered by Barry Zimmer on 19 May 2010 and photographed by Gary Rosenberg on 20 May 2010. Casual in Arizona with only 9 previous records, six of those from Willcox. Note the tapering bill, breast

pattern of fine streaks and wings extending beyond the tail.

TRES RIOS WETLANDS UPDATE

Article : Mike Rupp



Cindy Marple



Cindy Marple

Construction continues on the Tres Rios wetland demonstration project begun 10 years ago by a consortium of stakeholders and government agencies. The first phase of the huge project is showing substantial construction progress (see aerial photo below). Once completed, this site may well be the best birding destination in the valley, but don't hold your breath. A recent report from the site manager states that the statewide budget crisis has greatly affected progress at Tres Rios, so until funds come through to complete public facilities in the newest portion of the project, the opening date has not been scheduled. It may be some time before the restrooms, ramadas, trails, and fencing is financed and completed. Until then, we can only continue to anticipate the possibilities that will exist at the "new" Tres Rios. Anyone who has birded the old "Cobble Ponds" and "Hayfield" sites knows about the huge numbers of egrets, herons, and cormorants that roost along the effluent channel and the ponds. Often the site of large flocks of White-faced Ibis, Yellow-headed Blackbirds, and wintering ducks, the existing ponds are still a great birding destination. The old "Cobble Ponds" haven't been accessible for several years due to unabated vandalism that destroyed much of the infrastructure and riparian habitat, but the "Hayfield" site on the east side of 91st Avenue continues to provide wonderful birding opportunities.

The project is improving and enhancing a 7-mile long, 1500 acre section of the Salt and Gila Rivers in southwestern Phoenix. The project consists of a flood protection levee, effluent pump station, emergent wetlands, riparian corridors and open water marsh areas to replace existing non-native salt cedar in the river. (see map below) Construction on the levee is complete, with construction of the pump station, emergent wetlands, and river features to follow. The Tres Rios Full Scale Project is being 65% funded by the Corps, with 35% coming from the local sponsor, SROG, a consortium of cities and agencies. The emergent wetlands portion of the project will be approximately 480 acres in size. These wetlands will help further clean the highly-treated effluent from the 91st Avenue Wastewater Treatment Plant, provide wildlife habitat, and create a public amenity unique to this area which will include multi-use trails, picnic areas, and an environmental education center for visitors to experience the spirit of the historic river. The current Demonstration Project is a small-scale model of what to expect in the

future. As with the Hayfield Site, the full scale wetlands will be built on the bank, protecting it from river flows.

How do I get to the Hayfield Site? Take I-10 West (Pagago Freeway) to exit 134, turn left (south) onto 91st Avenue. Travel about five miles south till you see the yellow pedestrian gate on the east side of the road just south of the wastewater treatment plant but north of the river bottom. Drive east down the dirt road to the next set of yellow gates. Park, walk through the gates and follow the dirt path down to the wetland and riparian trail areas.

The Hours of the Hayfield Site are 6 a.m. to 5 p.m. Monday - Friday, and 6 a.m. to 11 a.m. Saturday and Sunday. Closed on City holidays. For your safety and the safety of others, all pets must remain on a leash at all times.



ANNOUNCEMENTS

Volunteers Needed for Hummingbird Research

The non-profit Hummingbird Monitoring Network has volunteer opportunities to participate in scientific research on all species of hummingbirds inside and outside Arizona. Monitoring stations are located across the state and southwest, with the closest sites being in Cottonwood and at the Boyce Thompson Arboretum. Training is available in order to comply with data protocols. This consortium of scientists relies upon professional and "citizen scientists" to acquire data over a large geographic area, and publishes findings and analysis for use by the scientific community in order to better understand hummingbird population trends for conservation work. Professor Susan Wethington, one of the three founders resides in southeastern Arizona and is working with Tice Supplee of Audubon Arizona. DRAS will be hosting a presentation by Susan sometime in 2011. For more information, see the HMN website at : www.hummonnet.org where you can find information on HMN's history, science-based programs, current research, biographical info, and objectives.

AZGF Seeking Homes for Desert Tortoises

The current economic crisis hasn't only taken a toll on people, but on wildlife too. The number of relinquished desert tortoises has grown, and now the Arizona Game and Fish Department is looking for good, approved homes for these fun family pets. Cristina Jones, Arizona Game and Fish turtle biologist



says "The Department and its partners are running out of room to house all of these animals, as they cannot be returned to the wild once they've been in captivity." Those interested in adopting a tortoise will need to have an enclosed area in their yard free from potential hazards, such as a dog or pool. The enclosed area must include a burrow for the tortoise to escape

Arizona's extreme temperatures. Tortoises are only available for adoption to residents living within the species' native range, which includes the Phoenix, Bullhead City, Kingman, Lake Havasu, Tucson, and Yuma areas. A desert tortoise adoption packet, which includes the adoption application, can be downloaded at www.azgfd.gov/tortoise. This web site also offers information on feeding, care, and creating a habitat for a tortoise, as well as frequently asked questions.

AZFO Field Expeditions – NOT your typical birding field trip

So what is the difference between a birding field trip and an AZFO Field Expedition? Field Expeditions are organized with a specific purpose and data-gathering goal in mind. Typically, they will be located in little-known or under-birded areas where the seasonal status of birds is incomplete. Also different from typical birding field trips, most expeditions will be two or more days long and all participants do not remain together. Instead, participants are divided into several teams, each with a qualified leader, which conduct surveys in different areas during the day. Normally, all participants will reconvene during lunch or dinner at a base camp or at other designated locations to review what was discovered.

July 23-25 - Return to Winn Falls: Black Swift search. An ambitious mission to explore a remote wilderness area in an attempt to document breeding evidence for this species (which may or may not be there). Winn Falls is located in the Chiricahua Mountains in extreme SE AZ. Backcountry hiking and camping experience mandatory. Leader: John Yerger.

28 August - Valley of the Sun Shorebird Identification: Shorebird ID workshop. Details forthcoming.

Fall (TBA) - Southern AZ grasslands: Sparrow ID workshop. Details forthcoming.

It's a Baby Bird Shower!

*Small gaping beaks
And Pin feathered wings,
These are the things
A baby bird brings!*



Please join us
for a virtual
baby shower for
Liberty Wildlife's
new spring orphans!

Gift Registry at
www.libertywildlife.net

Liberty Wildlife invites each of you to a Virtual Baby Shower. Back by popular demand we are launching our shower to help feather the nests of our hundreds of orphaned babies. For various reasons these babies are parentless and now depend on the kind souls in the orphan care group to tend to their needs. By participating in our virtual shower you can help the OC volunteers do their jobs. Go to www.libertywildlife.net and click on "It's A Baby Shower." Then the fun begins. You don't have to play games or guess babies names, but you can select from some of the following unusual items guaranteed not to be on any baby shower registry that you have seen before. These babies need **Box o Mealworms, Bundles of Crumbles, Cropful o Crickets, Monkey Chow (no we don't have monkeys), Scoops o Seeds, and MICE!** You would be amazed at how much of these items we go through in a season and this season is starting up to be a humdinger. So, go to the store, participate in our virtual shower...many peeps, clacks, and tweets will be quieted and your generosity will be appreciated. Remember also, that you can help by volunteering your time. During this time of year the pressure is on the Hotline, the Rescue and Transport team, and the Daily Care volunteers. Call the Hotline, 480-998-5550 to see how you can get involved, that is, right after you attend the Virtual Baby Shower at www.libertywildlife.net. See you there?

Megan Mosley, Director
Liberty Wildlife Rehabilitators

Newly arrived Bald Eagle being
examined by Liberty staff



Feeding baby Ravens takes
place every hour!

The Family Album

Family : Doves and Pigeons (Columbidae)

Article and Photos: Cindy Marple

Dull grey or brown birds, abundant to the point that they sort of blend in to the background, Doves and Pigeons are easy to overlook. *Columbidae* is a large family, with over 300 different species found worldwide in all but the Polar Regions. Generally speaking the smaller species are called Doves and larger ones are called Pigeons but there isn't a hard and fast rule about which term to use. We have a number of regional specialty species in this family, and more diversity than most other places in North America. In recent years the Eurasian Collared Dove has moved in, as it expands its range across the country much the way it spread across Europe from its Asian origin. Some species have been popular cage birds, and where they've escaped or been set loose can establish feral populations that thrive.



Mourning Dove

considering their tendency to forage in open areas, and then go off to a safer roost for digesting the meal. Doves and Pigeons require a surprisingly large amount of water, up to 15% of their body weight daily. Unlike most birds, they are able to suction water and don't have to tip their heads back

The members of this family are typically stocky, with short legs, short neck, and a small head. Primary foods are seeds and fruit, although some insects may also be taken. The food item is swallowed whole and may be stored in the crop for later digestion. This way they can eat quickly, a benefit



White-tipped Dove



White-winged Dove



Inca Dove



Ruddy Ground Dove

to drink- another adaptation that allows them to be quick about getting what they need.

Doves and Pigeons build one of the flimsiest nests you will see. They're a loose assemblage of a few twigs, with no lining. (I've seen a few lost around here after a good wind storm blows them down.) It may be on a ledge or in a tree or cactus. They have only one or two young at a time, but make up for it by having as many as half dozen clutches a year! They have a unique way of feeding a protein-rich diet to their young. While other vegetarian birds will bring bugs to their nestlings, Doves and Pigeons secrete "crop milk", a protein-rich slurry, to feed for the first couple of weeks.

The photos here show some of the species found in our area, and one, the White-tipped Dove, that is a South Texas specialty.

ANNOUNCEMENTS

Desert Rivers has a Facebook Page!

You can become a "fan" and stay on top of DRAS events and activities by searching "Desert Rivers Audubon" at www.facebook.com

International Cooperation is the Key to Protecting Migratory Birds

The Cornell Lab of Ornithology announced that National leaders from Canada, Mexico, and the United States released a landmark tri-national conservation assessment for birds. To view *Saving Our Shared Birds: Partners in Flight Tri-National Vision for Landbird Conservation* and see a complete list of contributors to the report, visit www.savingoursharedbirds.org.

Arizona Field Ornithologists State Meeting

Our fourth annual state meeting will be held October 8-10, 2010 at Prescott College in Prescott this year, and we invite both members and nonmembers to attend this enjoyable and educational event. Saturday's program will feature several expert presentations on Arizona's birdlife and field research in the state, plus reports and future plans for the many AZFO activities. An evening dinner will highlight Carl Tomoff, Professor at Prescott College, as keynote speaker. Tomoff, who has four decades of field experience in Arizona, teaches classes in Environmental Studies. On Friday afternoon and Sunday morning you can participate in workshops or mini-field expeditions to lesser known birding areas in and around Prescott. For more information on the programs, locations, directions and preregistering online or by mail go to: www.azfo.org

DONORS AND GIFTS

Our appreciation goes to the following donors who have given to support a program or overall operating costs of the Desert Rivers Audubon Society from April to June, 2010.



Bass Pro Shops for use of their meeting room for Desert Rivers' Board meetings each month in the Mesa/Phoenix store.

Bashas Supermarkets support of the Chandler Family Birdwalks has enabled us to continue to increase participants and develop this wonderful event.



Wild Birds Unlimited - Dave Covey and Marianne for their donations of great raffle items at our monthly meetings. Please visit their store for your birding/nature needs at : NE Corner of Baseline and Gilbert Roads in Mesa.

Corporate Members : Salt River Project, Arizona Cactus Sales Bashas (www.arizonacactusales.com), Bass Pro Shops, Wild Birds Unlimited

New Members

Stanley & Doris Ann Smith
Todd & Stephanie Haughton
William & Carolyn Hughes

Ann Koch
Jenny Winkler
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NAME THE BIRD!

All birds have names and some of them are very helpful, like Yellow-headed Blackbird or Black-necked Stilt. Sometimes, however, the bird gets named after a famous person or the place it was first seen and that doesn't help you identify it at all! So birders often have nicknames for birds to help remember which is which. Try to see if you can match the nickname to the pictures of the birds below. You may have to read about the bird in a field guide as some of the nicknames are about how the bird behaves.

1) Black Cardinal – named because the bird looks like the red Northern Cardinal but the male is black instead of red. A good bird watcher would notice that the beaks are very different and the birds are not related but the outline is very similar.

2) Bandit Bird – this bird is named after a famous naturalist but his nickname helps identify him. He has patches around his eye that look just like a bandit's mask in a cartoon. This bird is found all around the valley and you've probably got one in your back yard but he isn't common elsewhere in the United States.

3) Butter Butt – this bird has a real name that exactly describes part of the plumage but bird watchers have a sense of humor so the bird got a funny nickname as well.

4) The Butcher Bird! This bird got a nickname from how it behaves! This is a bit gruesome – the bird eats insects and small mammals and birds. If he isn't hungry he will hang the food from a thorn on a tree, just like butchers used to do with their meat in the days before supermarkets. The male will also do this to impress females.

You can make up your own nicknames to help you remember a bird. I always think that the Northern Flicker sounds as if he is calling Kia, Kia, so I think of it as the car advertising bird! If you have some good bird nicknames we'd love to hear about them!



Answers :

A = 1

B = 4

C = 2

D = 3

Photos :

Cindy Marple

KIDS PAGE



The summer heat is upon us and most of us will be thinking longingly of high mountains, breezy sea shores or at least a swimming pool and cool drinks. Summer in Phoenix can be brutal.

Yet our birds seem to cope, even when we have no rain for months at a time. Some are supremely adapted to living in a dry climate. The Black-throated Sparrow, for instance, will cope without out drinking for some time, relying on the moisture in the food they eat to get by. Most birds though appreciate a drink and here's a cheap way to attract them to your yard- just add water.

If you can find a shallow dish, not more than 3 inches deep at the most, and fill it with water you have an instant bird bath. Any container will do, the birds aren't fussy. You can use a clay pot, a pie dish, an old serving dish or an upturned garbage can lid. Now find a good spot in your yard, somewhere out in the open so the birds can see approaching predators like cats but near enough to some shrubs they can fly into for safety, say about 3 to 6 foot away. That's it – now leave the water and see what happens.

If you want you can raise the water onto a table or onto some upturned flower pots. If you have some overhanging branches you could try this as well. Get an old plastic milk carton make two very small holes, one at the bottom and one at the top of the carton. The holes should be very small so get a grown up to make them for you with a needle or pin. Hang it up by the handle and a piece of string so that the water slowly drips out of your carton onto the water bowl. If the water flows too quickly try partially covering the top hole with some adhesive putty like blu tack. Lots of birds respond to the sound of dripping water.

Birds that keep clean without water will appreciate you leaving a dusty area in your yard free of plants so that they can have a "sand bath". They wriggle around in the sand getting the grains into their feathers and this helps them get rid of parasites. Maybe you have little depressions somewhere in your yard where the birds already do this.

However you decide to give water to the birds **YOU MUST KEEP IT CLEAN**. You will need to replace the water regularly (and this may mean each day at the height of summer) and you must scrub out the bowl regularly too. If you are going away it is better to take the bowl in than to leave water to stagnate.

Good luck with "watering the birds" – we'd love to hear from you about what you attract.

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MONTHLY MEETINGS

Meetings are held at the Page Park Community Center in Gilbert, at 132 W. Bruce Ave, on second Tuesdays at 7 to 9PM, September through May. Doors open at 6:30PM, and everyone is welcome. Page Park is one block north of Elliot Rd and one block west of Gilbert Rd, near "downtown" Gilbert. See the DRAS website under "Events" heading for listing of topics and speakers. Refreshments provided

GILBERT / CHANDLER BIRDWALKS

The Gilbert Family Birdwalks are held every **third** Saturday, September through April, at the Gilbert Riparian Preserve on the southeast corner of Greenfield and Guadalupe Rds, Gilbert, at 8AM. The Chandler Family Birdwalks are on the **first** Saturdays, same months, at 4050 E. Chandler Heights Rd in Chandler. Binoculars provided, walks are free. See DRAS website for complete details.

BIRD LISTSERV - RARE BIRD ALERT

Bird alert information for rare Arizona and New Mexico birds can be obtained by subscribing to the bird listserv at the Univ. of AZ. This is the most popular method in the valley to know what rarities are in the area, and find out lots of other birding information. In your web browser, go to : <http://listserv.arizona.edu/cgi-bin/wa?SUBED1=birdwg05&A=1>

Follow the instructions to subscribe and receive daily emails

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MEMBERSHIP INFORMATION

We welcome your interest in becoming a member and participant of Desert Rivers Audubon. Your membership dues help support our outreach activities. You can join National Audubon and Desert Rivers Audubon by downloading a form from our website, and receive the bi-monthly Audubon magazine. Most Audubon chapters also have a "Friends" membership which entitles you to our quarterly newsletter, event priorities, and discounts on products and services.

<i>Students / Seniors (65+) Membership</i>	<i>\$20.</i>
<i>Individual Membership.....</i>	<i>\$25.</i>
<i>Family Membership.....</i>	<i>\$40.</i>
<i>Corporate Membership.....</i>	<i>\$300+</i>

What is the difference between a Desert Rivers "Friends" membership, and National Audubon membership? National Audubon and chapters are separate entities. All dues and gifts to Desert Rivers are used for local programs. You can be a member of Desert Rivers and also be a member of National Audubon simultaneously, or become a Desert Rivers member without joining National Audubon. You can even be a member of more than one Audubon chapter at the same time, regardless of your home address. If you are a National member, you can help this chapter by designating Desert Rivers as your "assigned chapter" by contacting : knullis@audubon.org

Desert Rivers Audubon Society is a 501(c)3 non-profit organization incorporated in Arizona, formed to provide environmental education and conservation opportunities to valley residents and advocate for our environment. For information on planned giving or bequests to the chapter, please contact Krys Hammers at krys.hammers@cox.net

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Road to Fossil Creek