

Sky Island Tours

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The Sky Island News

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October 2015

'You can observe a lot just by watching.'
Yogi Berra

October is arguably the best month of the year in southern Arizona. The days are still warm (occasionally hot), but the nights are deliciously cool. Bird migration is in full swing. Many of the summer residents are heading south, while wintering species are arriving. The insect season is still going strong, with many butterflies, moths, dragonflies, and countless others still on the wing.

A recent change on the Pima County side of things is that I have been handed the 'Night with the Stars' astronomy programs. I am very excited about this opportunity to learn more about the fantastic things to be seen in the night sky. We will continue to host monthly star-gazing programs at Pima County parks, mostly Agua Caliente and Tucson Mountain Parks. The expertise (and telescopes) for the night are provided by members of the Tucson Amateur Astronomy Association. I hope to see you at one of these star parties soon!

Enjoy this issue. I look forward to seeing you soon!

October Field Trips

I also do private field trips for birds, butterflies, dragonflies, and general natural history. Give me a call (520)-488-8551 or visit www.SkyIslandTours.com for rates and more information.

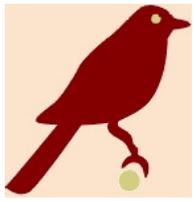
Fall Birding on Santa Gertrudis Lane. Mon., 10/26. 8:00AM-12:00PM. Cost is \$10/person. Call 488-8551 or email (jeff@skyislandtours.com) to register.

Santa Gertrudis Lane is a place that many of you have probably passed many times on I-19 and never knew it existed. This private road marks the southern boundary of Tumacacori National Historic Park, offering a variety of habitats, such as mesquite woodland, riparian forest, and pasture. With migration underway, there should be a lot of birds about, such as Gray Flycatcher, Cassin's Vireo, and several species of sparrows. Bring water, snacks, bug repellent, sunscreen. We will meet in the Safeway Shopping Center parking lot north of the McDonald's lot (but not in the McDonald's parking lot) and carpool to Santa Gertrudis.

Poling's Giant-Skipper Pursuit. Tues., 10/27. 8:30AM-12:00PM. Cost is \$10/person. Call 488-8551 or email (jeff@skyislandtours.com) to register.



One of the sought-after butterflies on the wing in October is Poling's Giant-Skipper, which is one of the last butterflies in the southern part of the state to make its first appearance of the year. On this trip, we will head to Molino Basin in the Santa Catalina Mountains, where large stands of shindagger agave, the larval foodplant of this species, makes this area a good bet for finding the butterflies. Bring water, hat, snacks, sunscreen, and a camera. We will meet at the McDonald's on the northeast corner of Tanque Verde and Catalina Highway and carpool to Molino Basin.



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October Classes

Amazing Arachnids. Mon., 10/19. 10AM-12PM. Las Campanas (565 W. Bell Tower Dr. in Green Valley). Call 648-7669 to register.



Arachnids are the eight-legged creatures that include spiders, scorpions, daddy-long-legs and many other animals. Did you know that arachnids are the second most diverse group of land-dwelling invertebrates, only behind the insects? Unfortunately, many people fear these remarkable animals. This class will introduce students to these fascinating animals. We will also try to dispel people's fears and misperceptions about them. So join us for a fun, interesting look at our arachnid neighbors.

North American Mammals: The Amazing World of Bats. Tues., 10/20. 6-8PM. Cochise College (901 N. Colombo Ave. in SierraVista). Call 515-5492 to register.

Bats are a much-maligned, much-misunderstood group of mammals. In reality, bats are fascinating, diverse, and highly beneficial. This class will dispel many of the misconceptions that humans have about bats by looking at the differences, importance, and ecology of these amazing animals. In this chapter of the North American Mammals series, we pay particular attention to bat species found in Arizona.

Bats: Myth, Folklore, and Truth. Fri., 10/30. 10AM-12PM. Las Campanas (565 W. Bell Tower Dr. in Green Valley). Call 648-7669 to register.

Bats are a much-maligned, much-misunderstood group of mammals. In reality, bats are fascinating, diverse and highly beneficial. This class will explore the diversity, importance and ecology of these amazing animals. We will also dispel many of the misconceptions that humans have about bats. We will pay particular attention to bat species found in Arizona.

Sonoran Desert Ecology. Thurs., 10/29. 6-8PM. Tucson Botanical Gardens (2150 N. Alvernon Way). Call 326-9686 X18 to register.



This class brings to life the rich ecology of the Sonoran Desert's flora and fauna by illuminating the sometimes surprising connections between organisms in nature. No plant or animal is an island unto itself—each depends on other organisms for its survival and underlying it all, are weather, soil, and other physical factors that comprise the landscape.

Pima County Classes and Trips

These trips are offered by the Pima County Department of Natural Resources, Parks, and Recreation. Call (520)-615-7855 X3 for more information. For descriptions of these trips and other programs offered by the Environmental Education Division, visit <http://www.pima.gov/nrpr/eeduc/environ.htm>.

Starting in this month, online reservations and a \$5.00 fee will be required for all Pima County Natural Resources Programs unless indicated otherwise. Visit www.pima.gov/nrpr to create a profile, register, and pay program fees.

Wake Up With the Birds. Every Thurs. 8:00-9:30AM. Agua Caliente Park (12325 E. Roger Rd.).



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A Night with the Stars. Fri., 10/16. 6:30-8:30PM. Ironwood Picnic Area in Tucson Mountain Park (1548 S. Kinney Rd.). Free. Reservations not required.

Butterflies of Cienega Creek. Wed., 10/21. 8:00-10:00AM. Cienega Creek Natural Preserve (16000 E. Marsh Station Rd.).

Birding Sweetwater Wetlands. Fri., 10/23. 7:30-9:30AM. (2667 W. Sweetwater Dr.). No reservations or fee required for Sweetwater Wetlands programs.

Birding the Santa Cruz River. Wed., 10/28. 8:00-10:00AM. Meet at Wheeler Taft Abbett Library (7800 N. Schisler Dr.).

Monthly Meetings

This section highlights the month's meetings of local organizations that may be of interest.

Tucson Herpetological Society Monthly Meeting (10/14).

Jim Rorabaugh, retired from the Arizona Game and Fish Department, presents '*Herpetofauna at a Biodiversity Hotspot: Rancho El Aribabi, Northern Sonora, Mexico.*' Meetings are held at the Ward 3 Office (1510 E. Grant Rd.) begin at 7:15PM.

The Tucson Herpetological Society is a great local organization 'dedicated to the conservation, education, and research of the reptiles and amphibians of Arizona and Mexico.' THS also publishes the bimonthly newsletter, *The Sonoran Herpetologist*. Visit <http://tucsonherpsociety.org/> for more information.

Arizona Native Plant Society, Tucson Chapter Meeting (10/14).

Andrew Salywon, assistant Herbarium Curator and Research Botanist at the Desert Botanical Garden, gives a presentation '*Las Cienegas National Conservation Area*'. Meetings are held at the Ward 6 Office (3202 East 1st Street, south of Speedway Boulevard and east of Country Club Road.) and begin at 7:00PM.

The Arizona Native Plant Society is a non-profit organization dedicated to Arizona's native plants. AZNPS hosts monthly meetings, field trips, workshops, and other activities to promote awareness and conservation of the state's flora. AZNPS publishes a biannual newsletter, *The Plant Press*. Visit their website <http://www.aznps.com/> for more information.

Southeast Arizona Butterfly Association Meeting (10/20).

This month's meeting features 'Status of Monarch Butterflies (*Danaus plexippus*) in Arizona,' by Gail Morris. Gail is the Coordinator of Southwest Monarch Watch and Monarch Watch Conservation Specialist for Arizona and the West. Meetings are held in the Education Room of the Tucson Botanical Gardens (2150 N. Alvernon Way), with social time at 6:30 with the meeting starting at 7:00PM.

The local chapter of the North American Butterfly Association, SEABA advocates for butterflies and their habitats through conservation, education, and recreation through monthly meetings and frequent field trips.

Tucson Amateur Astronomy Association Meeting (10/2).

Dr. Mary Turner, TAAA's Chief Observer, begins the meeting with the Introductory Presentation 'Seasonal Objects with a Moderate-Sized Scope,' that will also include interesting stories from mythology. The Invited Lecture, by Dr. Kathryn Volk, a Postdoctoral Researcher at the University of Arizona's Lunar and Planetary Lab, entitled 'Consolidating and Crushing Exoplanets: The (possibly) violent pasts of Kepler's tightly-packed multi-planet systems and what it might mean for the history of the Solar System's terrestrial planets.' The Introductory Presentation begins at 6:30PM and the Invited Lecture follows at 7:30PM. TAAA meetings are held on the U of A campus at the Steward Observatory Lecture Hall.



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The recent full moon lunar eclipse. Photo by my son, Riley.

From the group's website, 'TAAA members enjoy exploring, observing, and learning about the objects in our solar system and beyond. We want to share our experience with you. From beginner to professional astronomer, with a telescope or without one, we invite you to join us in this exciting and rewarding endeavor.' Visit <http://tucsonastronomy.org/> for more information.

Proctor Road Butterfly Blitz Trip Report

A beautiful September morning greeted us on the Proctor Road Butterfly Blitz trip. I was joined by an outstanding group of nature enthusiasts to seek out butterflies on the oak woodland and riparian habitat in the vicinity of Proctor Road at the base of Madera Canyon in the Santa Rita Mountains.

We started by strolling through the oaks and junipers on the trail to Whitehouse Picnic Area. One of the first signs of Lepidoptera that we saw was caterpillars of Bordered Patch and tiger moths. One of the first adult butterflies we observed was a Tawny Emperor, the largest and most distinctive of our emperors. Very shortly thereafter we were joined by another emperor, the Hackberry. When I say joined, it perched on a couple of the participants, drawn into the close encounter by our sweat!

Continuing on, we soon met up with Bordered Patch adults, Pipevine Swallowtail, Tailed Orange, Red-spotted Admiral (which do an excellent job of impersonating the toxic Pipevine Swallowtail), and Orange Skipperling. A very nice start!

We then headed toward Madera Creek to check out the activity there. We were not disappointed, as we added three species of blue, White-checked Skipper, Cloudless Sulphur, and many others. Among the notable sightings was a single Boisduval's Yellow, an infrequent stray from Mexico, and Empress Leilia, completing the emperor trifecta!

As our last stop, we headed up to the Carrie Nation trailhead for a couple butterflies of the cooler pine-oak woodland. Soon our eyes feasted on roughly a dozen stunning Arizona Sisters. A truly magical sight! While basking in the Sisters' glory we spied a Red-bordered Satyr, our main target for the trip to the trailhead. After seeing the first one nectaring on a sunflower (a rare behavior among satyrs), we soon saw two others hiding in the cool shade behind a large boulder. American Ladies were in evidence, as were a couple more Red-spotted Admirals.

All in all it was a fantastic morning. A big thank you to all who joined me!

Bats- Fascinating, Not Spooky



It seems that we all see a lot of bats this time of year. Not the furred type, but the sort that shows up everywhere in Halloween decorations, costumes, and late-night movies. While I truly enjoy Halloween, I think that the holiday does not do bats any favors.

Bats make up the order Chiroptera, which means 'hand wing,' in reference to the fact that their wings are made up primarily of the bones of the hand and fingers. They are the second largest order of mammals, behind only the rodents in number of species (about 1,000 and counting). They occur everywhere on Earth except the coldest polar regions and the remotest oceanic islands.

Bats have traditionally been divided into two suborders, the Megachiroptera and the Microchiroptera. Recent evidence suggests



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that this division does not accurately reflect bat taxonomy, but it is useful for our purposes. The Megachiroptera includes one family, the Pteropodidae, commonly known as flying foxes and Old World fruit bats. This group mostly uses vision and smell to locate their food, mainly nectar, pollen, and fruit. Echolocation is largely non-existent in this group. The largest bats in the world, with wingspans up to six feet, are megachiropterans. The range of the family includes Australia, Africa, Asia, and many islands in the Pacific and Indian Oceans.

The rest of the world's bats are microchiropterans (even though some are fairly large). There are 16 families and almost 900 species in this group. If you have seen a bat in North America, it is a microchiropteran. Much more varied than flying foxes, these bats feed primarily on insects, with some species feeding on nectar, pollen, fruit, fish, frogs, blood, and even other bats.

Echolocation is well-developed in this group. Echolocation is similar to sonar. Bats emit sounds, either through the mouth or the nose, and listen for the returning echoes to detect prey and to navigate around obstacles. Most echolocation calls are very high frequency and are beyond the range of human hearing.

In North America, there are four families and about 51 species, depending on one's taxonomic viewpoint. In the state of Arizona, 28 species occur. This makes the Grand Canyon State second in terms of bat diversity in North America, behind only Texas, which is much bigger and has 29 species (although one species has only been recorded once, see below).

Perhaps the most recognizable bat in Arizona is the Mexican Free-tailed Bat (*Tadarida brasiliensis*), because of its habit of roosting under bridges in Tucson and emerging each night from April to October. With long, narrow, pointed wings built for speed and distance, these bats can fly up to sixty miles from their roost to foraging areas at speeds up to 60 mph. They earn their name due to the fact that the tail extends well past the tail membrane and is thus 'free' of the tail.

At this time of year, it is not uncommon to wake up in the morning to find that your hummingbird feeders are completely empty. This is the work of southern Arizona's two nectar-feeding bats, the Mexican Long-tongued (*Choeronycteris mexicana*) and Lesser Long-nosed Bat (*Leptonycteris yerbabuena*). Most sugar-water draining is done by the first species, as the second is endangered. Both of these species are members of the Phyllostomidae, the leaf-nosed bats, named for the triangular flap of skin on the tip of the snout. Phyllostomids are sometimes referred to as 'whispering' bats because their echolocation calls are of low amplitude and are even hard to pick up with bat detectors.

Also in the Phyllostomidae are the three species of vampire bat. Despite what Hollywood and popular fiction might lead one to believe, these bats are not the monsters. One species feeds only on the blood of mammals, mostly cattle and horses these days. One species feeds only on the blood of birds. The third species takes the blood of birds and mammals. There is only one record of a vampire in the U.S. in historic times. This record of a single Hairy-legged Vampire (*Diphylla ecaudata*) is from Val Verde County in Texas in 1967, roughly 500 hundred miles north of the nearest colony. It is this record that allows Texas to claim the title of battiest state. Interestingly, numerous fossils of an extinct species of vampire, *Desmodus stocki*, have been found in Arizona, including in Colossal Cave.

Another noteworthy southern Arizona bat is the Pallid Bat (*Antrozous pallidus*), a member of the Vespertilionidae. This family is known as the vesper, evening, or mouse-eared bats, none of which are particularly appropriate for all members of this largest (well over 300 species) family of bats. Pallid Bats are common in the arid southwest. Many of the colonies of Mexican Free-tailed Bats contain at least a handful of this species. What makes the Pallid Bat really cool is that it often feeds on large, potentially dangerous, prey, such as scorpions and centipedes. Although fully capable of echolocating, Pallid Bats often find their prey by passively listening for the rustling sounds of their prey as they crawl over the ground.

There are many other fascinating bats in southern Arizona. Indeed, they are all fascinating in their own right. If you would like to learn more about bats, I will hopefully see you at one of the bat classes this month (see the schedule above for details).

Butterfly Profile: Monarch

This month, one of the world's iconic butterflies, the Monarch (*Danaus plexippus*), is in the spotlight. Practically everyone in North America is familiar with this species. The large size, bright orange and black coloration, dependence on milkweeds as their sole caterpillar food plants, and incredible migrations are all well-known aspects of this butterfly's story.



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Monarchs are not common in southeastern Arizona, but October is the best month to find them in our area. They can be found nectaring at milkweeds, sunflowers, and numerous other flowers, using the sugars thus obtained to fuel their migration to the wintering grounds. It is also possible to find Monarch caterpillars on milkweeds at this time of year.



Monarch migration is one of the true wonders of Nature. In fall, shortening days trigger the insect's impulse to head south. A single generation of adults makes the long flight to the wintering grounds in Mexico or California. Once there, these adults enter a period of dormancy that will carry them through the cool winter. As days begin to lengthen in spring, the butterflies that successfully overwintered begin to head north. Breeding where they encounter their milkweed food plants, these adults then die. Their progeny will continue the northbound journey after metamorphosis. This continues until Monarchs reach the northern U.S. and Canada. Come autumn, the cycle begins anew.

Recent research, based on tagging individual butterflies, has provided some interesting insights into the extraordinary migrations that these butterflies undertake. Within the past few years, lepidopterists finally determined that at least some of the Monarchs seen in southern Arizona in fall migrate west to the coast of California instead of south to Michoacan in Mexico. Scientists had suspected that this

occurred but had never had those suspicions confirmed. Another interesting finding is that in winters without a hard freeze, Monarchs overwinter in low desert regions of Arizona, from Lake Havasu to Yuma, and Phoenix to Tucson.

Furthermore, recoveries of tagged individuals have shown that, in cases where multiple individuals were tagged on the same date, they were later recovered together on the same wintering grounds, either in Mexico or in California. Clearly, there remains much to be learned about this familiar butterfly. Thanks to the hard work of citizen scientists and researchers, new information is being gleaned about Monarchs. Who knows what wonders await in the future?

If you are interested in Monarchs, Gail Morris, one of the authors of the study cited above, is the speaker at this month's meeting of the Southeast Arizona Butterfly Association (see above for details).

Did you know?

... that the world's smallest bat is the Hog-nosed Bat (*Craseonycteris thonglongyai*), which measures a whopping 25 millimeters in total length (about one inch) and two grams in weight under 1/10 of an ounce). That's small! It is the only member of its family and was not discovered until the 1970s. A good indicator of its size is the alternative name given to the diminutive creature, the Bumblebee Bat! Found only at a few sites in Thailand, the bat was named after Kitti Thonglongya, a Thai bat biologist.