

# Mountain Lines

MAGAZINE OF THE MCDOWELL SONORAN CONSERVANCY

Summer 2018



Birds Observed in  
Scottsdale's Preserve

Read how we protect our birds

The Hike to  
Balanced Rock

Enjoy the beauty along the way

Animal Tracks  
in the Desert

Learn to track our native fauna



McDowell Sonoran  
Conservancy



Justin Owen

Summer is here! And, I'm delighted to report that things are "heating up" at the McDowell Sonoran Conservancy. Over the past six months, I've had the pleasure of meeting many stewards, community leaders,

elected officials and donors. Thanks to their feedback, lots of new and improved programming is in the works.

- Our Arid Lands Symposium, Integrating Research into Action, in May was a huge success. This two-day event focused on sharing practical regional conservation approaches and research results with a goal to improve adaptive natural resource management in the Southwest.
- Our fundraising efforts are ramping up. Thanks to the generous donation from The Bob & Renee Parsons Foundation, we will

be able to elevate our brand, enrich our community awareness, and further our scientific priorities.

- I would like to invite you to consider becoming a McDowell Sonoran Conservancy steward. Call our office (480-998-7971) to express your interest!
- The 15th annual Tour de Scottsdale is Sunday, October 7. It's a grueling and rewarding one-day cycling and fundraising event limited to 2,000 cyclists. The 70-mile course circumnavigates Scottsdale's McDowell Sonoran Preserve, while the 30-mile ride traverses North Scottsdale and Cave Creek. The Tour de Scottsdale is owned, produced, and hosted by the DC Ranch Community Council. DC Ranch is proud to partner with the McDowell Sonoran Conservancy in providing a charity athletic event. Learn more at:

<http://www.tourdescottsdale.net>.

Stay cool this summer and thank you for your ongoing efforts to champion the sustainability of the largest urban preserve in North America! 🐦

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Cover photo: Along the way to Balanced Rock, you will see beautiful scenes like the one on the front cover. This view is from south of Granite Mountain. Photo Dennis Eckel.

## About Us

The McDowell Sonoran Conservancy champions the sustainability of the McDowell Sonoran Preserve for the benefit of this and future generations. As stewards, we connect the community to the Preserve through education, research, advocacy, partnerships and safe, respectful access.

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The male Costa's hummingbird uses the purple feathers on his throat to attract females. Photo by Marianne Skov Jensen.

## Bird Surveys: More Than Just a Hobby

By Mike Nolan,  
 McDowell Sonoran Conservancy steward

The song — distinctive, descending liquid notes, lasting a few seconds — rang out from the surrounding granite boulders. Auditory evidence of a canyon wren. It was up to the survey team to decide how close the bird was. Within 100 meters? Then it was officially on the transect, a dataset of one that would increase as the survey progressed.

The McDowell Sonoran Conservancy's Parsons Field Institute participates in a number of bird surveys in Scottsdale's McDowell Sonoran Preserve, such as steward bird walks, the Christmas Bird Count, and Global Big Day. In addition to these, the Parsons Field Institute conducts official surveys in order to track population trends over time and between sites within and outside of the Preserve, noting which species are increasing or declining in numbers or shifting their distributions. This information can help

managers take steps to protect sensitive species and their habitats, as well as to launch public education programs. To conduct these research surveys, small teams of citizen scientists head into the field four times a year to survey the bird populations.

## Survey Methods

The bird surveys are led by Research Partner Walter Thurber and are part of the Conservancy's efforts to inventory and understand the plants and animals found in the Preserve. Thurber, an avid birder for more than 60 years, has a lifetime of experience studying birds. He's conducted field surveys for the Pennsylvania, Maryland/DC, and Arizona breeding bird atlas projects, headed the effort to establish the Cave Creek Ecosystem Important Bird Area, twice served on the Maricopa Audubon Society board, and is currently a board member of the Arizona Field Ornithologists. He works with Parsons Field Institute Director Helen Rowe and Manager Tiffany Sprague as they review and refine the survey design.

The surveys unfold along designated line transects across the



Abert's towhee is really a large sparrow. It lives mainly in the Arizona Sonoran Desert. Photo by Marianne Skov Jensen.

Preserve. The line transect method is ideal for sampling the bird composition along a trail or wash through a mostly constant habitat type. A transect is simply a designated portion of a trail

or wash that can be walked in all seasons, year after year. The transects average about 1.0 km. long, and only birds found within 50 to 150 meters (the "truncation zone") on each side are counted as within the transect.

No more than two habitat types are present along any given transect. The transects collectively represent a range of habitat

types and elevations distributed across the Preserve. There are four diurnal transects and one nocturnal site in the Preserve's northern region,



Bell's vireo is likely to be found in the Preserve in mesquite brush, where it forages for insects. Photo by Marianne Skov Jensen.



The peregrine falcon dives on its prey from high above. It uses its speed and power to hunt medium-sized birds. Photo by Marianne Skov Jensen.



The western screech owl's call sounds like a bouncing ball. It nests in cavities in trees and saguaro. Photo by Dennis Eckel.

and five diurnal and one nocturnal transect in the southern region.

A typical survey involves two or three people — one or two expert birders and a recordkeeper. They record each individual bird observation (visual or auditory), indicate whether the bird is in or out of the truncation zone, identify the habitat, and note any breeding behavior. Surveys are conducted in late February/early March for wintering birds and early breeding species, late April/early May for spring migrants and later breeders, late May for nocturnal species, and late August/early September for fall migrants.

Data collected on species and numbers are entered into eBird, a global database of bird occurrences administered by the Cornell University

Lab of Ornithology (visit [eBird.org](http://eBird.org) for additional information). Each transect is represented separately. All the data are available to Conservancy scientists for downloading and analysis to help track population trends over time.

## Survey Results and Impact

Field surveys are an essential tool for scientists to assess and track the number and species of birds at a given location.



Bendire's thrasher uses its bill to toss debris around when it digs in the soil and pokes into plant litter, looking for insects. Photo by Marianne Skov Jensen.

## Priority Birds in the Preserve

The McDowell Sonoran Conservancy bird surveys in the Preserve have documented 11 of the 35 birds on the Audubon Arizona's priority birds list. The species on this list below could be threatened in the future, and the Preserve could provide vital habitat for them.

- Costa's hummingbird
- Bald eagle
- Elf owl
- Gilded flicker
- Peregrine falcon
- Bell's vireo
- Bendire's thrasher
- Abert's towhee
- Grasshopper sparrow
- Lucy's warbler
- Red-faced warbler

## Year of the Bird

One hundred years ago, Congress enacted the Migratory Bird Treaty Act of 1918, an environmental treaty between the United States and Canada for the protection of migratory birds. The statute makes it unlawful without a waiver to pursue, hunt, take, capture, kill, or sell birds listed under the Act. It even extends protection to dead birds and body parts including feathers, nests, and eggs. More than 800 species are currently on the protected list.

To mark the centennial of the Act, the most powerful and important bird protection law ever passed, the National Geographic Society joined with National Audubon Society, Birdlife International, and Cornell Lab of Ornithology at Cornell University to create the Year of the Bird, a year-long celebration of birds.

Along with 180 participating groups, the four partner organizations are celebrating birds throughout the year with stories and news across all their media channels. They also invite nature lovers around the world to join them in committing to protecting birds today and for the next one hundred years.

You can help build a better world for birds by agreeing to take a simple but meaningful action each month. To learn more about actions you can take to help celebrate the Year of the Bird, visit [www.nationalgeographic.org/projects/year-of-the-bird](http://www.nationalgeographic.org/projects/year-of-the-bird).



The gilded flicker lives year-round in the deserts of Arizona and parts of Mexico. Photo by Steve Jones.



Lucy's warbler nests in cavities it finds. If the cavity is too deep, the bird will pile debris into hole until the bird can see out. Photo by Steve Jones.



Although people associate the northern cardinal with snow and the cold country, we are lucky to have the bird living in the Preserve as a year-round resident. Photo by Steve Jones.

The Conservancy's primary goal is to look for changes in the bird population within the Preserve, with a focus on species that appear to be declining, and particularly those already on the Audubon Arizona's priority birds list, species that are in peril or could be threatened in the future. There are 35 species on our state list, and 11 of them have been documented in the Preserve. The Preserve may be a critical habitat that helps keep these populations stable.

Database sites such as eBird allow the Conservancy to share findings with the larger scientific community across metropolitan Phoenix, as well as nationally. In that way, the surveys contribute to an overall understanding of trends in bird populations across the Valley and across the Southwest.

What does the Preserve survey data show? As of May 2018, 165 different bird species have been found with 39 species confirmed as breeding in the Preserve. Baseline bird surveys were conducted in 2012 and 2013. Over time, the Parsons Field Institute will be able to compare bird population data and begin identifying trends that can help inform management within the Preserve and beyond.

To hear the songs of the Preserve birds pictured in this article, visit <http://www.allaboutbirds.org> and search for your favorites. 🐦

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# Ecology Explorers

By Janice Holden,  
McDowell Sonoran Conservancy lead steward



Conservancy stewards act as guides for students visiting the Preserve. This steward points out items of interest along the trail. Photo by Dennis Eckel.

In a concerted effort to curb 'nature deficit disorder' that many children experience today and expose them to the wonders of the great outdoors, the McDowell Sonoran Conservancy's Parsons Field Institute partnered with Arizona State University's Ecology Explorers, thanks to generous financial support from Thunderbirds Charities, to bring science education opportunities into the classroom. The Ecology Explorers initiative is part of the K-12 Outreach of the Central Arizona-Phoenix Long-Term Ecological Research Program at Arizona State



Students visiting the Preserve learn about the adverse effects of Mylar balloons on animals and the environment. Stewards collected these fallen balloons throughout the Preserve. Photo by Debbie Langenfeld.

University's Global Institute of Sustainability.

The partnership provides educational opportunities in a two-phase approach. In the first phase via Junior Citizen Science Festivals or monthly Sonoran Field Trips, hundreds of students from Title 1 schools in the metro Phoenix and Scottsdale area visit Scottsdale's McDowell Sonoran Preserve to take part in educational field trips to explore the Sonoran Desert and learn STEM-based life science concepts. The second phase of the program continues the education indoors. ASU students and trained stewards visit classrooms to provide hands-on learning that bolsters what the children experienced in the Preserve. STEM (science, technology, engineering, and math) careers are vital for innovation and improved quality of life. However, underserved populations are poorly represented in STEM occupations. A key factor in improving these communities' access to STEM is experiential learning.

The lesson plan, "Our Successful Desert System," is designed to complement the experience at the Preserve.

The lesson focuses on food webs and ecosystems, using a combination of hands-on games and interactive discussions to help students understand natural processes that occur in our desert, including their part in that chain. It runs approximately 50 minutes and is designed for up to 36 students working collaboratively in small groups. By the end of the lesson, students understand why scientists study plant life in our Phoenix area desert, the important role plants play in an ecosystem, and some relationships among components of a desert ecosystem.

"It has been an amazing experience and I enjoyed every minute," said Alex



While visiting the Preserve, students have fun learning about various aspects of our desert ecosystem, including wildlife and the signs they leave behind. Photo by Lynne Russell.

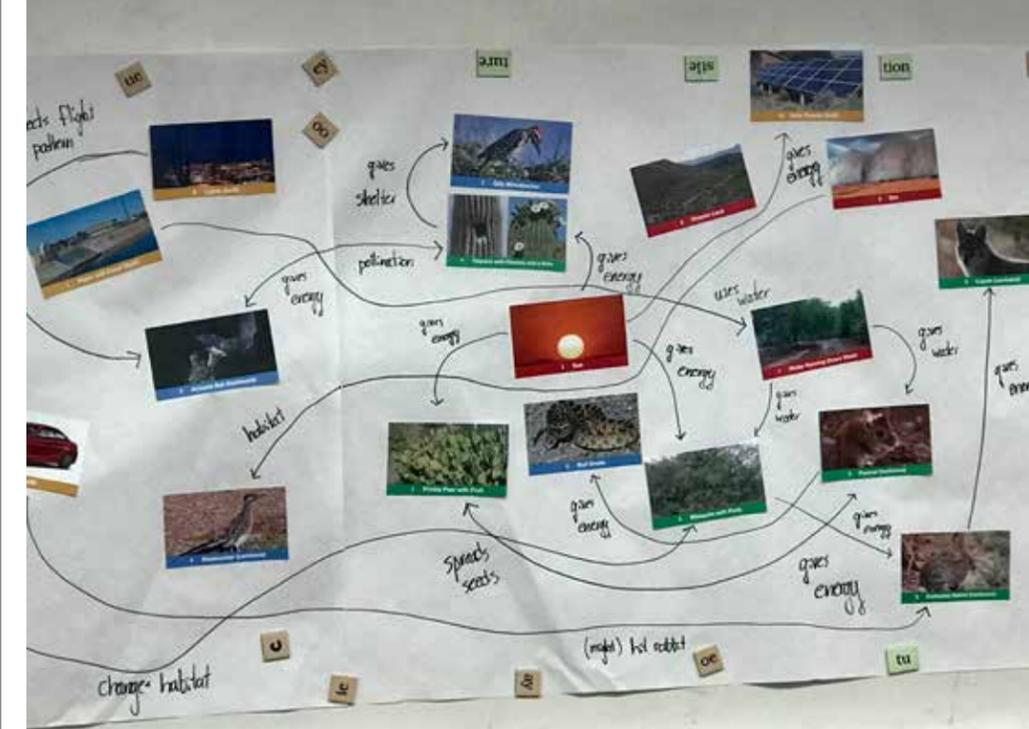
Votaw, the ASU student who led all in-classroom sessions throughout the Valley. "It's so rewarding to reach the students, help them learn, and watch their reaction when they make the connections."

The student reactions were quite positive. Many of the third through fifth grade students had been studying the food chain, and they had a good understanding of how that works in the desert. Notably, the part of the lesson that gets the most reaction is about what animals leave behind in their digested food. "Poop is a favorite topic among this group," Votaw acknowledged.

The teachers were equally positive in their assessment of the lessons, and they graded the program a resounding



Back in the classroom, students participate in a lesson led by Arizona State University students and Parsons Field Institute citizen scientists. The lessons build on what students learned while on the Preserve field trip. Photo by Joy Gibson.



A systems exercise in the classroom teaches students about the relationships of some of the plants and animals in the desert ecosystem. Students create their own food web and describe the relationships between various desert components, including soil, plants, animals, and people. Photo by Joy Gibson.

A+! "My students benefit from hands-on learning. Everything was well organized and well presented," said

a fourth-grade teacher from Campo Bello Elementary School. "Loved this lesson! Very visual, interactive and interesting. We need more — kids love science!" wrote a third-grade teacher from Wilson Elementary School. "My students loved the field trip and the lesson was a great extension. They were excited and engaged!" noted a teacher from Yavapai Elementary School.

"Working with these students in the classroom has been a wonderful experience," according to Tiffany Sprague, Parsons Field Institute Manager. "It's exciting to see how much they remember about their visit to the Preserve, and I'm inspired by their ability to take what they learn during this lesson and apply it to what they remember from the Preserve. This partnership has helped solidify the Parsons Field Institute's education efforts. It's a win for the students, a win for the Conservancy, and a win for our natural places such as the Preserve."



A volunteer receives seeds for planting in an experimental plot. Later volunteers will periodically observe and report on the success of reseeded using varying planting techniques in plots around the Preserve and on the status of control plots where no reseeded occurred. The findings will be compared to determine if reseeded speeds recovery and which planting technique is best. Photo by Debbie Langenfeld.

## Partners in Preservation

By Barbara Montgomery-Ratcliff,  
McDowell Sonoran Conservancy lead steward

More than 30,500 acres of dramatic desert landscapes and hundreds of species of plants and animals delight visitors at Scottsdale's McDowell Sonoran Preserve. However, few of the visitors are aware of the ongoing science of sustainability that preserves these natural treasures for future generations. A new strategy for this sustainability effort is a project-based

research and maintenance contract between the City of Scottsdale and the McDowell Sonoran Conservancy to strengthen preservation efforts.

The first project in the contract is to identify rare or sensitive plant and animal habitats in proposed new trail corridors and trailhead areas. To date, staff and botanists in the Parsons Field Institute at the McDowell Sonoran

Conservancy have systematically walked prospective trail segments in the northeastern Phase 3 area and identified sensitive plant and wildlife habitats. This information will be used to adjust trail placements to reduce impacts on flora and fauna.

The second project is to map nonnative plants, determine the best method to control them, and prepare

a management plan. This work builds on previous Parsons Field Institute studies of buffelgrass and fountain grass, two prevalent plant species in the Preserve that force out native plants by competing for light and water. These nonnative plants also are highly flammable and, unlike native plants, reestablish themselves quickly after a fire. Under the contract, the Conservancy will use field experiments to determine superior methods for controlling and removing these grasses. The experiments will show which combinations of methods—pulling, cutting, or herbicide—are most effective, least costly, and least damaging to native plants. Going forward, the Conservancy will provide annual progress updates and management recommendations.

The third project involves assessing degraded land areas and proposing a restoration plan. As defined by Scottsdale's McDowell Sonoran Preserve Ecological Resource Plan (ERP) developed in 2016, degraded lands have at least three of the following characteristics compared



A steward removes nonnative fountain grass from Preserve land. This is one of the species of grasses threatening native desert species. Photo by Debbie Langenfeld.



Volunteers, Conservancy staff, and a crew from McDowell Mountain Regional Park remove tamarisk trees in the vicinity of Dixie Mine. These water-thirsty, nonnative trees endanger native species and changed the ecology in the area.

to surrounding areas: fewer plants, more compacted soil, more erosion, and absence of top soil. Many abandoned trails, old roads, and past burn areas qualify as degraded land. Under the contract, the Parsons Field Institute will continue experiments comparing different approaches to soil preparation and seeding to restore such areas. Citizen scientists also are using Google Earth to identify other degraded areas in the Preserve where restoration might be beneficial. In another project, staff and stewards will assess the effectiveness of the Preserve's past restoration efforts. Out of this work will come a restoration action plan.

This first contract between the City and the Conservancy is notable for a number of reasons.

- Three projects were selected from the ERP and represent the preservation priorities for both the City and the Conservancy. Other potential projects identified in the ERP and in the *McDowell Sonoran Preserve Cultural Resources Master Plan* could become the focus of future contracts.
- The City is paying the Conservancy a fee to cover the projects' costs for supplies, equipment, and professional personnel that the

Conservancy could not afford on its own. Tiffany Sprague, Parsons Field Institute manager, noted, "Some experiments have been on the table for a while, but now we can make them happen because of the agreement."

- The projects are likely to develop new management approaches specifically designed for the Sonoran Desert and the Preserve that are more efficient and cost effective, while also protecting our sensitive desert resources. According to Helen Rowe, Parsons Field Institute director, this could lead to the Conservancy becoming a more widely recognized regional expert and sought after partner in managing invasive plants and degraded areas.

In summary, a sizeable team of stewards, professional staff, City managers, and consultants are working shoulder to shoulder on these projects. The hope is that results can be successfully used beyond the Preserve. Justin Owen, Conservancy executive director, believes these and future projects will strengthen the Conservancy's credentials as a valuable partner in preservation efforts throughout the Sonoran Desert. 🦋

# A Team Building Day in the Preserve

By Paul Staker,  
McDowell Sonoran Conservancy master steward

On a Friday morning in March, 25 volunteers from Tito's Vodka, a large manufacturer of adult beverages based in Austin, Texas, joined several representatives from the McDowell Sonoran Conservancy's Construction & Maintenance program and the City of Scottsdale's Preserve staff in Scottsdale's McDowell Sonoran Preserve. The participants from Tito's were part of a larger group from the company who were visiting Arizona for its annual corporate leadership meeting and

several team building events.

The Conservancy is delighted to host corporate, civic and other organizations for team building events. It gives us an opportunity to educate groups about our organization, the Preserve, and all that we do. The Construction & Maintenance program also benefits from a group of eager volunteers who aren't afraid to get their hands dirty while working on a project in the Preserve.

For this particular project, Justin Owen, Conservancy executive director,



Volunteers from Tito's Vodka learned to identify and remove nonnative fountain grass from several locations within the Preserve. The grass threatens native Sonoran Desert flora. Photo by Lynne Russell.

explained a bit of Conservancy history to the volunteers. We also stopped along the hike to the work sites to discuss major trees and cactus in the Preserve, highlighting the Sonoran Desert's iconic saguaro.

Then, the Tito's volunteers split into two groups. One group helped repair a section of the Desert Park Trail where water flow had caused erosion. The other group learned about the problems we have with nonnative grasses in the Preserve and helped to remove several large infestations of fountain grass.

The Tito's team was enthusiastic about their Preserve experience, and we appreciated their efforts with the Construction and Maintenance projects. We would like to thank Tito Beveridge, founder of Tito's Vodka, for the generous financial donation to the Conservancy. 🦅



Tito's Vodka volunteers attend a brief training session before starting work on repairing eroded trails in the Preserve. Photo by Lynne Russell.



The Conservancy and the City of Scottsdale hosted a team building event for volunteers from Tito's Vodka in Austin, Texas. The volunteers learned about the Preserve and worked several maintenance tasks in the Preserve. Photo by Lynne Russell.

# 2018 Arid Lands Symposium: Integrating Research and Action

By Debbie Langenfeld,  
McDowell Sonoran Conservancy lead steward

In early May, the McDowell Sonoran Conservancy hosted a two-day Arid Lands Research Symposium at Scottsdale Community College in Scottsdale, Arizona. The theme was "integrating research and action." More than 120 land managers, researchers, students, community leaders, and Conservancy stewards attended to share practical implications from regional natural resource research.

The goal of the Symposium was to provide a collaborative environment for exploring and sharing information on the newest and most effective tools for enhancing regional conservation efforts in the Southwest. Participants reported on adaptive management techniques (making adjustments based on research results), long-term monitoring, and using citizen scientists to achieve research objectives.

At Friday's keynote, participants

received a fascinating glimpse of Arizona State University's Dr. Jan Schipper's global effort to improve habitat connectivity in areas where wildlife movement is fragmented by urbanization, deforestation, and roads. We think of road underpasses and overpasses designed to accommodate large four-legged animals. Schipper challenged us to look beyond that and consider the complications involved in getting sloths, crabs, and monkeys across the road safely. Schipper tied his worldwide work into his collaboration with the McDowell Sonoran Conservancy on connectivity projects here in Scottsdale's McDowell Sonoran Preserve.

Saturday's keynote speaker, Dr. Todd Esque, United States Geological Survey, discussed an approach to effective habitat restoration in the Mojave Desert. How can native vegetation be restored to areas invaded



Participants in the research symposium came from Arizona and two adjoining states. They represented federal, state, and county agencies; city governments; nonprofit organizations; universities; private companies; and the public. Photo by Lynne Russell.

by invasive plant species, burned by wildfires, and damaged by recreation? Although local seed is best because it is adapted to the site, how local is local? His team has conducted experiments throughout the Mojave Desert to better understand how far local adaptations extend. There are also other questions to answer. Which plants should be grown, how high should the fences be to keep out wildlife, and where do you get water?

"Given the long-term drought in southwestern United States, this event offered an opportunity to learn about novel tools for arid land restoration and management," explained Dr. Helen Rowe, McDowell Sonoran Conservancy's Parsons Field Institute director. Planning has already begun for the next Symposium in 2020. 🦅

THANK YOU TO OUR GENEROUS SPONSORS!



# Balanced Rock in the Northern Preserve

By Doug Jabour,  
McDowell Sonoran Conservancy master steward

In October 2012, the City of Scottsdale acquired 6,400 acres in the northeastern part of Scottsdale's McDowell Sonoran Preserve. The acquisition provided a connection to the Tonto National Forest, along with access to Cholla and Granite Mountains. The new land had areas of exposed bedrock, boulder outcrops, and lush upper Sonoran Desert vegetation that supports a habitat for wildlife. The Granite Mountain Trailhead opened in July 2013, giving hikers, bikers, and equestrians access to the unique features in this area, including Balanced Rock.

Balanced Rock is a large mushroom-shaped granite boulder seemingly precariously perched on a large rock outcropping. The hike to this landmark offers expansive views of the McDowell Mountains, along with some interesting geological formations.

The round-trip hike to Balanced Rock is 4.4 miles with several ups and downs but no significant elevation gain. This makes it accessible to all levels of hikers. Watch out for mountain bikers as the trail is a popular bike trail.

## Let's Go Hiking!

The Granite Mountain Trailhead is the starting point for this hike. The trailhead is on 136th Street, about two miles north of Rio Verde Drive. There is no water available at the trailhead, but there are two portable toilets. In 2019, a trailhead building will be opening and there will be the following amenities at the trailhead: paved parking, restrooms, shaded seating, interpretive and orientation signage, and equestrian parking with hitching rails and a small shade ramada. It is important to note that Granite Mountain Trailhead will not have drinking water for people, dogs, or horses.

After leaving the trailhead, take the Bootlegger Trail for 0.7 miles. This trail has some very interesting rock formations along the way. Most of the rock in the area is coarse-grained granite from about 1.4 billion years ago. The granite is characterized by large embedded crystals of pinkish feldspar, one of the major components of granite. The granite weathers easily into spheroidal boulders, which characterize the local mountains,



Many interesting boulder formations border the trails from Granite Mountain to Balanced Rock. This formation stands beside the Bootlegger Trail. Photo by Dennis Eckel.

Granite and Cholla. Loose material, called grus, falls off the boulders. It looks like coarse sand and covers much of the flat area. Grus makes trails that are great for hiking and biking.

Take the Saddlehorn Trail for 0.2 miles and turn left at the Granite Mountain Loop Trail junction. If you would like to do a longer hike, turn right for a 6.3 mile hike around Granite Mountain.

The area on the south side of Granite Mountain has many old and stately Saguaro cacti. If there has been sufficient rain during the fall and winter seasons, there will be an abundance of



Intriguing formations are everywhere. They weathered into improbable shapes by shedding granite over millennia. Photo by Dennis Eckel.

flowering brittlebush and wildflowers, such as poppies and lupines, during March and April.

At the Granite Mountain Loop Trail and Balanced Rock Trail junction, continue west on Balanced Rock Trail for 0.3 miles. Once you reach Balanced Rock outcropping, you will have the choice of taking one of two short side trails leading up to Balanced Rock. The first one is on the south side and the second is 0.1 miles further on the north side. The north side trail is a bit easier. You have now reached Balanced Rock. This is a great spot for a water or snack break while you ponder the forces that created the formation. Balanced Rock is a great photo opportunity. You will also see four juniper trees that are from a time when the area was much wetter. You may get a chance to see mountain bikers going up or down the steep rock outcropping.

On your way down from Balanced Rock, you can go down the rock outcropping or use the easier trail. Return to the trailhead using the same trails as an "up and back" route, or for a slightly longer hike, take the Black Hill Trail to the Turpentine Trail. 🐦

Photo left: Hiking along the south side of Granite Mountain on the way back to the trailhead gives magnificent views of the Mazatzal Mountains to the east. Photo by Dennis Eckel.

*Balanced Rock is a favorite destination in the Preserve and probably one of the most photographed. Having people nearby provides a sense of scale of just how large Balanced Rock is. Photo by Dennis Eckel.*



# Spreading Our Know-how

By Paul Staker,  
McDowell Sonoran Conservancy master steward



Adopting an identifying look helps members of the White Tank Mountains Conservancy advertise their organization. The mission of the Conservancy is to preserve and educate people about the White Tank Mountains, maintain and sustain the mountains, and to ensure that visitors have a rewarding experience. Photo courtesy of the White Tank Mountains Conservancy.

In 2014, several organizations west of downtown Phoenix joined together to protect the White Tank Mountains by enhancing the economy of the West Valley while ensuring the sustainability of the natural and cultural resources of the area. Much like the citizens of Scottsdale in the 1990s, who had a vision that led to the establishment of Scottsdale's McDowell Sonoran Preserve and the McDowell Sonoran Conservancy, these groups were concerned about the potential impact of growth on the area's long-term future.



A Pathfinder (trail host) helps visitors plan their hike in the White Tank Mountains. Photo courtesy of White Tank Mountains Conservancy.

Two of the leaders in this drive were the City of Buckeye and DMB Associates, a major land and housing developer. Buckeye had begun to develop plans for a major regional park in the White Tank Mountains. DMB was beginning to develop Verrado in Buckeye, a master planned community, anticipated to eventually contain more than 14,000 dwelling units. The two groups shared an interest in developing amenities to attract newcomers to the area, and the mountains were identified as being key to this vision.

Maricopa County Parks and Recreation Department, the manager of the White Tank Mountains Regional Park, soon joined the effort. Although this park had existed for some time, their leaders saw a benefit in coordinating with the others to develop a more regional approach to land management in the White Tanks.

As the three organizations began to develop plans, representatives of DMB described their history when developing the DC Ranch community

in Scottsdale, and the valuable role played by the McDowell Sonoran Conservancy in the establishment of the Preserve in this area. They recommended the establishment of a similar nonprofit organization in the White Tanks to assist the governmental and private agencies in managing lands acquired for recreation and conservation. Today, the White Tank Mountains Conservancy is a major participant in the successful achievement of the goals established during these formative years.

These visionaries knew they needed external assistance to develop their new Conservancy. They approached Mike Nolan, then McDowell Sonoran Conservancy executive director, to learn about the history of our Conservancy and how we had been able to grow and succeed. They particularly wanted to understand the key factors in developing a successful volunteer organization that they recognized would play a critical role.



A White Tank Mountains Conservancy volunteer leads visitors on a hike. He stops along the way to educate the hikers about the plants in the area. Photo courtesy of the White Tank Mountains Conservancy.

In 2014, Nolan asked me to represent our Conservancy in discussions with colleagues from the White Tank Mountains Conservancy. Over the next year, I met at least monthly with a team from the new organization that was charged with developing the structure necessary to recruit, train and manage the volunteers.

In many ways, they faced the same challenges and issues that the early leaders in our Conservancy had faced. The group in the White Tanks was new in their community and needed to become known in order to attract volunteers. We stressed the importance of using the existing group involved in the Conservancy to become

highly visible by wearing conservancy shirts similar to the blue shirts by which our volunteers are well-known.

Over the year, I also assisted the group in developing a training program for new volunteers modeled after our New Steward Orientation and a volunteer program structure to include activities like Pathfinders (trailhead hosts) and Citizen Science. By the end of the year, they were developing a volunteer recognition program to thank volunteers for their efforts during each year.

Seeing the success that the White Tank Mountains Conservancy achieved in four years has been one of the most satisfying achievements

during my time as a steward. Anybody who knows our organization would immediately recognize many of the areas in which we had an influence in the White Tank Mountains Conservancy. We certainly hope that our Conservancy will continue to have similar opportunities to help other organizations in the future. 🦅



# Biocrusts—A Secret Garden in the Desert

By Corey Nelson, PhD Student; Julie Bethany, PhD Student; Ferran Garcia-Pichel, PhD  
Arizona State University School of Life Sciences

When looking out across the starkly rugged landscape of the Sonoran Desert, one would hardly suspect that slumbering on the surface of the soil is an ecosystem as green, vibrant, and full of diversity as any forest. Instead of trees, shrubs, and grasses, this ecosystem is composed mostly of microorganisms including bacteria, fungi, algae, and some of the oldest known life on Earth, cyanobacteria. In the most developed of these miniature ecosystems, tiny lichens and mosses dare to grow out of the dirt forming towering canopies an eighth of an inch high. These complex communities are called biological soil crusts, often shortened to biocrusts.

Biocrusts can be found in the large spaces between plants in all

arid environments across every continent, managing to thrive in harsh conditions thanks to their amazing ability to completely dry out without harm, going into a hibernation state that allows them to suspend their need for external resources during the desert's long, dry periods. Depending on rainfall patterns, environment, and age, they look very different. Some are so well hidden under a few sand grains just below the surface that you might not know they're there. Some display conspicuous bumpy structures, moss chaparrals, or pavements of lichens; and some can be spotted easily because of the tell-tale black sunscreens they produce for protection from the intense desert sun.

While rarely seen, cyanobacteria

are the foundation of most biocrust communities and the cornerstone of desert ecosystems. They readily reveal themselves during the sparse desert rains, turning the soil a vibrant green. Just like plants, they can photosynthesize, providing essential nutrients for the rest of the community. Some cyanobacteria form tiny ropelike structures that secrete a sugary substance—a glue—that weaves and binds soil particles together. This woven mat of soil and bacterial particles stabilizes desert surfaces against water and wind erosion. Once this stable, nourishing microbial skin has developed on the desert soil, plant establishment is facilitated, further promoting the production of food and habitats for animals. Through the ages, all components of the desert biome have evolved to interact with each other, and the microbes are no exception.

Although biocrusts are extremely resistant to intense radiation, heat, and lack of water, they pose no match for the destructive forces of careless human activity. In the Southwestern United States, agriculture, grazing, urban expansion, and even recreational activities such as hiking cause severe damage to biocrusts. Due to the inconsistency of desert rainfall, biocrusts are extremely slow growing and a single footstep or

tire track can leave a gaping hole that takes decades or centuries to heal. As more biocrusts are destroyed, the opportunity for water and wind erosion of the soil increases. Although tough, biocrust organisms are not immune to global climate change that is predicted to make our deserts even hotter and drier. Scientists also worry that those changes will strain even the hardest biocrusts.

Only in the past decade have researchers at Arizona State University and other institutions begun to understand the important roles these communities play in desert ecosystems and the extent of damage caused by human activity. They are now developing ways to assist in the recovery of disturbed biocrusts using “microbial nurseries” and microbial restoration. Research has shown, for example, that biocrust recovery from disturbances

can be significantly sped up through transplantation of greenhouse-grown propagules—a structure that can be detached from a plant to be planted for development into a new plant.

Biocrusts may not appear as cute as panda bears to most people (aside from these authors), but their conserva-

tion deserves all of our attention. So, next time you venture out for a hike to enjoy the beauty of the seemingly barren landscape among plants, remember the lush forest hidden beneath your feet. Watch where you step, stay on the trails, and don't bust the crust! 🐼



The easily seen biocrusts in the left photograph are mature biocrusts. Their bumpy structures and black sunscreens are tell-tale signs of their maturity. When dry, the light biocrusts on the right are nearly invisible. Photo courtesy of Ferran Garcia-Pichel Lab, Arizona State University School of Life Sciences Center for Fundamental and Applied Microbiomics.



Biocrusts are found mostly in plant interspaces and are susceptible to compressional forces, like human foot traffic. The inset photograph shows biocrusts awakened and greened after sporadic rainfall. Photo courtesy of Ferran Garcia-Pichel Laboratory, Arizona State University School of Life Sciences Center for Fundamental and Applied Microbiomics.



Cyanobacterial ropes cling to soil particles, stabilizing soils against wind and water erosion. Photo courtesy of Ferran Garcia-Pichel Laboratory, Arizona State University School of Life Sciences Center for Fundamental and Applied Microbiomics.



Lichens, a cooperative relationship between microbes, can be an important nutrient supplier for biocrusts. Photo by Lynne Russell.

# The Rainy Day Romance of Toads

By Audrey Owens,  
Ranid Frogs Project Coordinator for Arizona Game and Fish Department

**T**he Sonoran Desert. Dry, dusty, hot. You might think it's no place for amphibians, but you'd be wrong. In fact, the Sonoran Desert is inhabited by 25 species of amphibians, including one of the largest amphibians in North America—the Sonoran Desert toad (*Incilius alvarius*). This tank of a toad, which can live more than a decade, can attain nearly eight inches in length and more than two pounds in weight! That's right, it's a dinner plate-sized toad found in a region that may get less than 10 inches of rain a year.

How does such a large toad live in the desert, given the arid conditions

and lack of predictable rain? Like all anurans (the taxonomic group that includes frogs and toads), it has a seat patch—a thin membrane of skin on its underside that is water permeable, so it can soak up water while it sits in a pool or even in a moist patch of ground. Also, it lives underground in burrows much of the year and emerges just before the monsoon season begins. Once the rains start, these toads congregate at temporary pools to breed. Desperate is a harsh word, but I don't know how else to describe a scene of (sometimes) hundreds of male toads clasping any frog within

arm's reach. A male accidentally clasped by another male gives off a low cluck that warns the offender he's got the wrong sex (or the wrong species, as the case may be). It's called scramble competition, and it probably helps speed up the breeding process. It's an



When the toads emerge from the burrows, they begin a mating frenzy, sometimes with inadvertent results. This Sonoran Desert toad mistakenly tries to mate with a Woodhouse's toad. Photo by Thomas R. Jones, Arizona Game and Fish Department.

important strategy when there may be just a few weeks for tadpoles to hatch and transform into metamorphs (frogs and toads that have recently metamorphosed from tadpoles) before the water dries.

The Sonoran Desert toad can be found in the southern half of Arizona below the Mogollon Rim and northern Mexico in low- to mid-elevation desert. In western Arizona, it requires more permanent water such as large rivers, perhaps because of the increased aridity in the low desert. Once common in the Colorado River drainage, it is also known as the Colorado River toad. Sadly, it disappeared from the Colorado River region of Arizona and California several decades ago, probably due to habitat modification and agricultural pollutants.

This species can travel more than two miles from water, and individual toads may appear at night in suburban backyards. This is where they can get into trouble. The Sonoran Desert toad has garnered a bad reputation because of the toxin glands behind its eyes and on its back legs, which secrete poison when pushed. The toxin is poisonous enough to cause sickness or death in dogs who pick one up or mouth it. If



This is a Sonoran Desert juvenile toad. Notice that its coloration is different from an adult. Photo by A. Hunter McCall, Arizona Game and Fish Department.



A congregation of mating toads appears after a major summer rainstorm. The breeding period lasts for one to three nights. Photo by Thomas R. Jones, Arizona Game and Fish Department.

your dog has been around a toad and is foaming or pawing at its mouth, you should immediately hose out its mouth and bring it to an emergency vet. You can lessen the chance of your dog getting poisoned by this toad by not allowing your dog in your backyard unsupervised at night, especially during the summer. This is a good practice anyway, given other dangers your dog could encounter. Also, do not leave dog food outside, as it can attract these toads. The Sonoran Desert toad is otherwise gentle and can be handled without harm, provided you wash your hands afterwards.

Next time one of these remarkable anurans crosses your path, take a moment to consider the challenges this species has overcome to survive life in our dry heat. To learn more about the Sonoran Desert toad and hear its call, which is sometimes likened to a contented chicken, go to:

[www.reptilesfaz.org](http://www.reptilesfaz.org) 🦎



A Sonoran Desert toad metamorph sits on the head of an adult. The metamorphosis from tadpole to toad takes only a few days. This metamorph, recently transformed, has a lot of growing to do. Photo by Thomas R. Jones, Arizona Game and Fish Department



This Sonoran Desert toad weighs more than two pounds. The species is the largest toad in Arizona. The bulbous sacs behind its eyes and on its hind legs contain a potent toxin that can kill an animal the size of a large dog. Photo by Randall D. Babb, Arizona Game and Fish Department.



The unusual and beautiful ocotillo occurs throughout Scottsdale's McDowell Sonoran Preserve. During its blooming season, visitors want to know its name. When it loses its leaves, visitors want to know if it's dead. But photosynthesis is still occurring in its green stems. Photo by Steve Jones.

## The Little Torch of the Desert

By Steve Jones,  
Botanist

Just as Benjamin Franklin is the only president who was never president, the ocotillo (*Fouquieria splendens*) is the only cactus that is not a cactus.

But it has spines, right? No. It has thorns. There is a difference. In cacti, a spine is a modified leaf. In the ocotillo, the thorn is formed from part of a leaf. When a branch adds new growth, the initial leaves appear with a very strong,

woody petiole (leaf stem). The blade of the leaf soon falls, leaving behind a thorn that will remain with the plant for its life.

At the point where the thorn contacts the branch, there is a small, permanent node from which a bundle of leaves appears opportunistically after sufficient rainfall. These leaves will remain on the plant until the soil dries

out, when the plant drops the leaves. This does not halt photosynthesis though. Like palo verde trees and cacti, there is green tissue in the stem that carries on making food after leaf drop.

The name ocotillo translates from Spanish as little torch, an allusion to the clusters of red orange flowers that appear at the ends of their wand-like stems in the spring. These tube-like

flowers are hummingbird magnets—not only is there a nectar reward for its pollination services, but the flowers are held high on the plant, so there is little risk of predators popping up. Migratory hummingbirds will follow the blooming ocotillos from lower elevations and latitudes upward and northward. Flowering begins as early as February in southern lowlands and as late as May at higher elevations in the north.

After flowering, jalapeño shaped fruit up to an inch long develop. Each of these holds several seeds. The seeds are winged and are dispersed by wind after the fruit splits at maturity. The seeds are highly viable and germinate readily after summer rains.

As with other desert perennials, its root system is shallow and widespread so as to take advantage of even the slightest rainfall. Unlike other desert perennials, it is a relatively short-lived plant, living on average for 60 years compared to up to 400 years for desert trees.

Ocotillo is found in two of the



The leaves on the ocotillo are drought-deciduous. They bunch together in a structure called a fascicle. When its leaves drop during a dry spell, its thorns are easily seen. Photo by Steve Jones.



The vivid flowers of the ocotillo are attention grabbing to humans and also to bees and hummingbirds. The plant is pollinated by bees and hummingbirds when they seek nectar in the tubular flowers. Photo by Steve Jones.

three warm deserts of North America, the Chihuahuan and Sonoran deserts, with some plants occurring in the eastern extreme of the Mojave Desert. Its range also stretches into nearby grassland and chaparral habitats. Where it occurs, it's one of the most recognizable plants—nothing else in its range looks quite like it.

A frequent question concerning ocotillos is, "Why do I never see a baby ocotillo?" It's because they hide. Not deliberately, but as with many young perennial plants, they need cover in the early years of their lives. A careful observer will see thorn covered stems arising out of small shrubs. Check especially in areas where ocotillos are common.

That's another feature—ocotillos generally occur in groups due to their soil preferences. They prefer rocky, well drained soils. Interestingly their preference changes with elevation. At lower elevations, they are usually

found with granitic soils that drain well but retain moisture due to the mulch-like gravelly upper layer, commonly in areas underlain by caliche. At higher elevations, they are associated with limestone soils, which in the winter retain heat during the day and release it at night, allowing the plant to extend its range.

There are 11 species in the genus *Fouquieria*, but ocotillo is the only one that occurs naturally north of the Mexican border. The others are all found only in Mexico. Another famous member of the genus is the boojum tree (*Fouquieria columnaris*). 🦋



The fruits of the ocotillo dry and break open, allowing the wind to scatter the winged seeds. These easily germinate where they land, providing us a landscape scattered with ocotillo. Photo by Steve Jones.



Thanks to generous financial support from The Bob & Renee Parsons Foundation, McDowell Sonoran Conservancy can continue its work to protect the beautiful scenery and the flora and fauna of Scottsdale's McDowell Sonoran Preserve. Photo by Dennis Eckel.

## The Bob & Renee Parsons Foundation Gift

By Amina D'Ambrozio, McDowell Sonoran Conservancy steward

Financial support for a nonprofit organization is vital to its existence and its ability to realize its mission. Justin Owen, McDowell Sonoran Conservancy executive director, announced a new three-year, \$600,000 gift from The Bob & Renee Parsons Foundation. This generous grant is double that of the foundation's previous three-year gift and will greatly help the Conservancy realize its mission.

The success of the Parsons Field Institute at the McDowell Sonoran

Conservancy is possible because of its staff, scientific research partners, citizen scientists, and generous supporters. Think of each group as representing one leg of a chair. Each leg has a unique position. Together, they support the Conservancy's mission.

The Parsons Field Institute serves as a model to natural resource organizations for its citizen scientist-led approach. Helen Rowe, Parsons Field Institute director, noted that continued financial support will allow the Institute

to expand its research and education programs to make a greater impact. The Parsons Field Institute will now be able to more fully implement its research agenda, initiate an important new international plant assessment, expand regional conservation efforts, and continue to build its mission-driven agenda to protect Scottsdale's McDowell Sonoran Preserve.

The Parsons Field Institute's leadership and staff create the vision and direction for the Institute while also



Support from The Bob & Renee Parsons Foundation helps the Parsons Field Institute fulfill its education mission for this and future generations. Photo by Dennis Eckel.

overseeing and directing programs and initiatives. Its scientific research partners work with the Parsons Field Institute staff to design the necessary research initiatives, as well as lend their expertise to analyze data and interpret the results. Citizen scientists are vital to the Parsons Field Institute. These volunteers are the ones who observe, document, and collect data for the numerous research projects.



By researching plants and animals, the Parsons Field Institute helps to scientifically manage the resources of the McDowell Sonoran Preserve. Photo by Dennis Eckel.

Bob and Renee Parsons' deep connections in the Valley and business investments close to the Preserve quite naturally cause their foundation to share some common interests with the Parsons Field Institute. One of these areas of shared interests is maintaining a balance between development and preservation. Owen explained that some of the grant funding will be used to expand wildlife monitoring research, including an examination of the effects of urban sounds. Parsons Field Institute research partner Garth Paine, Associate Professor of Digital Sound and Interactive Media at Arizona State University, will be able to bolster research efforts that focus on how surrounding acoustics affect Preserve resources. While there is evidence that urban noise negatively impacts wildlife, we now have the opportunity to measure sound on the Preserve and tie that to distribution of wildlife species on the Preserve.

As the area immediately surrounding the Preserve continues to develop, it's also important to monitor

the connectivity of undeveloped lands to ensure that movements are unimpeded for the wildlife inhabitants that make the Preserve their home and for those that move in and out of the Preserve.

Additionally, BIG YAM, The Parsons Agency — a full service advertising firm owned by Bob Parsons — is donating \$100,000 of pro-bono work to develop a comprehensive marketing strategy and brand assets for the Conservancy.

With the backing of The Bob & Renee Parsons Foundation, the Parsons Field Institute can focus on the work necessary for ensuring a promising future. With this important funding, the Parsons Field Institute will be able to continue with its numerous initiatives: studying and monitoring the effects of urbanization on wildlife, connectivity, and movement patterns; long-term ecological monitoring of the Preserve's fauna and flora; management of invasive species; ecological restoration research and regional conservation; and children's educational programs, including the Junior Citizen Science Festival.

This grant from the Parsons Foundation provides a strong leg for our robust chair. The Conservancy is grateful that this grant ensures the Parsons Field Institute can continue its critical mission-driven work to protect the Preserve and partner with the region's environmental, ecological, and natural resource management community. 🦋



# Tracking Wildlife

By Jessica A. Moreno,  
Biologist, Coalition for Sonoran  
Desert Protection

S cottsdale's McDowell Sonoran Preserve is home to many of the classic plants and animals of the Sonoran Desert. A visitor may be lucky enough to get a glimpse of a desert tortoise trundling across a trail or catch the wide-eyed stare of mule deer from a nearby hillside. But more often than not, wildlife easily avoid people, and many keep their activities to dawn, dusk, and night. Get out early, when the sun's first rays angle across the ground, and the tracks they leave behind light up.

Identifying wildlife tracks – and other sign such as scat, burrows, and chew marks – is an old, primitive skill. Some claim wildlife tracking to be the first science. It is a skill in observation and requires slowing down to take time to notice the small details. Reading the ground tells stories about the presence of animals, their interactions and behavior, where they've been, or where they are going.

For the beginner tracker, knowing the difference between cat (feline) and dog (canine) tracks is a great place to start. All cat tracks have similar characteristics, as do all dog tracks. Both have four toes. Cat tracks are rounder and asymmetrical with no claw marks showing. Their tracks have



The parallel tracks of the desert tortoise show its passage through a sandy wash. Photo by Jessica Moreno.

proportionally larger plantar pads, or palms, with three lobes on the bottom and a “leading toe” that is higher than the others. A bobcat's tracks are about the size of a golf ball, a mountain lion's the size of a baseball. The gray fox and the coyote have tracks that show all the characteristics of canines: longer than they are wide, symmetrical, with faint claw marks, and a smaller, triangular plantar pad. Their symmetry creates two identifying markers: you can trace an X through the center of the track, giving the two outer toes the appearance of angel wings.

One of the more common signs in the desert is that of the desert cottontail. Their scat appears as little groupings of tiny pea-sized balls, full of plant material. Each foot makes a divot-like impression, with the front feet often so close together they appear as one track. What you commonly see is a triangle of three or four round impressions, one or two up front and two hind feet behind. In a bound, a rabbit brings its hind feet forward of the front feet, so the point of the triangle of feet shows where the rabbit traveled from.

The dinosaur of the desert, the greater roadrunner, is in the cuckoo family and has zygodactyl feet, meaning two toes point forwards and two point backwards. A trail of elongated Xs, like a scattered line of chromosomes, mark the path of a roadrunner. Petroglyphs of roadrunner tracks are said to symbolize “confusing the enemy” because of the difficulty in determining which direction a roadrunner's tracks are going.

It is much easier to see where javelina are headed. Javelina move



Bobcats tend to walk on the edges of washes and trails, hugging their sides. Photo by Jessica Moreno.

in large groups, their tracks like two blunt, parallel thumbprints. You also may come across javelina wallows, depressions in moist or wet areas where they lay down to cool off. Unlike javelina, mule deer tracks come to a point, the two “toes” creating heart shaped hoof prints.

Wildlife tracking takes patience and practice but is a rewarding skill for any naturalist. The best way to learn is to spend time outside tracking with other knowledgeable people, be willing to make mistakes, and to keep asking questions. Go for a hike and discover the stories waiting for you. 🦋



The undulating body and tail combined with sharp depressions from clawed feet make the tracks of the Gila monster unmistakable. Notice that this sandy soil even picked up the impressions of its beads. Photo by Jessica Moreno.



Hikers climb up the east side of Balanced Rock. Photo by Dennis Eckel.

## Make Your Life Simple with a Recurring Monthly Donation and Support an Organization You Love

If you ever attended a McDowell Sonoran Conservancy talk, event, or activity or interacted with one of our nearly 700 dedicated stewards, you know the value we bring to the community. Show your appreciation with a one-time gift or an online monthly recurring donation. Your monthly gift allows you to spread the financial impact of giving across the entire year, which makes your commitment more manageable. You get to decide how much to give with no need for reminders to make a contribution. Visit [www.mcdowellsonoran.org](http://www.mcdowellsonoran.org), click on "Donate" and choose the monthly donation option.

You can donate monthly at any level or contribute monthly toward one of the following membership categories:

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As the demand for Scottsdale's McDowell Sonoran Preserve and Conservancy continues to grow, we count on the support of individuals like you to help us educate our community on the wonders of the McDowell Sonoran Preserve.

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To make a gift online, please visit us at [www.mcdowellsonoran.org](http://www.mcdowellsonoran.org) and click on "Donate."

Or call 480-998-7971 to learn more about giving level benefits and discuss your gift by phone.

**Mail form to: McDowell Sonoran Conservancy • 7729 E Greenway Road, Suite 100 • Scottsdale Arizona 85260**

**Thank you for supporting the McDowell Sonoran Conservancy!**

## Think Ahead for Best Giving Option under New Tax Reform Act

The Tax Cuts and Jobs Act (TCJA) of 2017 passed by Congress and signed into law in late 2017 changes many things starting in tax year 2018. Some of these changes may affect how you approach charitable giving.

The TCJA effectively doubles the standard deduction for most taxpayers potentially reducing the tax benefits of charitable giving. The standard deduction will go from \$6,350 in 2017 to \$12,000 in 2018 for single filers, and from \$12,700 in 2017 to \$24,000 in 2018 for married couples. If the standard deduction is greater than your itemized deductions for allowable medical expenses (over 7.5% of your income), state and local taxes, mortgage interest, charitable donations, and a few other items, there will be no reason to itemize. Estimates are that the number of taxpayers who itemize will fall by 30 million.

Research has shown that tax benefits are secondary to charitable intent when it comes to individual giving. However, we'd like to discuss a few ways to maintain tax benefits for your gifts going forward.

- Group together your gifts every other year or every few years (bunching), so that you have a larger gift that will make it worthwhile to itemize and deduct your charitable giving.
- Plan your gifts for years when you expect to have more deductible expenses.
- Give appreciated investments, such as stocks. Donors can take a deduction for the current market value (with some limits) while not having to pay capital gains taxes on the appreciation.
- Donors age 70 ½ and older can contribute directly from IRAs. This donation will count towards your required minimum distribution and remove that taxable income from your tax return.
- More advanced giving techniques, such as donor-advised funds and charitable trusts, can be used in concert with bunching and/or appreciated stocks gifts.

For more detail on these strategies, please consult your tax adviser for specific advice, or contact McDowell Sonoran Conservancy Board Member and professional wealth manager, Dan Welker, at 602-821-0262 for more information.

Thank you for considering the McDowell Sonoran Conservancy in your charitable giving!

The information presented here is offered to be helpful and for general use only. Please consult a tax adviser or financial professional for your personal situation.



Photo by Dennis Eckel.



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Make your online purchases through the **AmazonSmile** website, and share the love with the McDowell Sonoran Conservancy. When you shop on **AmazonSmile**, the AmazonSmile Foundation donates 0.5 percent of the purchase price of eligible Amazon products to the charitable organization of your choice.

On your first visit to **AmazonSmile** ([www.smile.amazon.com](http://www.smile.amazon.com)), select **MCDOWELL SONORAN LAND CONSERVANCY** from their list of eligible charities. Now you're set for your first and future purchases!

Thank you for supporting the McDowell Sonoran Conservancy!



McDowell Sonoran  
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# 2018 Tour de Scottsdale

Calling all bicyclists! Register now for the 15th Annual Tour de Scottsdale on October 7, 2018. Log on to <http://www.tourdscottsdale.net> and learn about the event's 30- and 70-mile rides through beautiful Scottsdale, Arizona. Ride as an individual or as part of a group.

The McDowell Sonoran Conservancy is once again organizing a Conservancy team for the event. Stewards interested in participating in the race, or in just the training rides, should contact Gary

Zollner, team captain, at [stewardbiketraining@gmail.com](mailto:stewardbiketraining@gmail.com). The team holds training rides beginning 60 days prior to the event. Team members encourage each other, wear Conservancy bike jerseys during the race, and share a camaraderie and sense of accomplishment at the conclusion. 🍂



*Tandem and trail-a-bikes are allowed in the Tour de Scottsdale, and there are no age restrictions for male and female participants. Some cyclists join the Tour for fun and fundraising, others for the competition. Photos by Dennis Eckel.*

## TOUR DE SCOTTSDALE

