



MCDOWELL  
SONORAN  
CONSERVANCY

# Mountain Lines

MAGAZINE OF THE MCDOWELL SONORAN CONSERVANCY    SPRING 2023





Justin Owen, CNAP

The chill and rain of winter are finally on their way out, and we have so much to look forward to this spring. Most notably, because of the incredible winter rain, we are expecting to have a beautiful wildflower season. There are many Steward-guided wildflower walks and hikes already scheduled, which you won't want to miss out on. You can find them here: <https://www.mcdowellsonoran.org/event>

The Conservancy is bringing back the Children's Learning and Play Festival at Westworld on June

24th, 2023. We are excited to host this fun, free family event with tons of opportunities for children to engage in hands-on learning, play, and exploration.

The Sonoran Desert in the spring reminds us of its beauty and how wrong the often echoed sentiment that "there is no green in the desert" is. Jane Barton, an artist and steward, shares her perspective with us on the vibrance and diversity of the colors found in the Sonoran Desert.

And, there are many great ways to share the beauty of the desert with everyone, as highlighted in our articles about our new partnership with Ability360, and the best way to get kids started mountain biking.

If you've ever had questions about the Conservancy, answers are sure to be found in this issue's FAQ article.

Please enjoy this edition of Mountain Lines. Stay safe, and I look forward to seeing you out on the trails. ▲▲

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*Mountain Lines* is published quarterly by the McDowell Sonoran Conservancy, a 501(c)(3) nonprofit organization

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Creative design donated by  
Dennis Eckel, McDowell Sonoran  
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People in wheelchairs can navigate the four accessible trails in the Preserve, although assistance may sometimes be necessary. Photo by Dennis Eckel

## About Us

The McDowell Sonoran Conservancy preserves and advances natural open space through science, education, and stewardship. We create a culture that ensures, preserves, and values natural open spaces for all to enjoy.

Connect with us:



Cover photo: Making a visit to the Preserve a family affair at the Gateway Trailhead. Photo by Dennis Eckel

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## Access for All

By Brian Whitehead, McDowell Sonoran Conservancy Senior Program Manager, and Kaitlyn Verfuerrth, Ability360 Outdoor Programs Coordinator

The McDowell Sonoran Preserve is for everyone, but how do you make sure everyone has a chance to enjoy it? City documents can make their declarations. Signs can be posted. It's even a part of the Conservancy vision: "A culture that ensures, preserves, and values natural open spaces for all to enjoy." However, the reality is far more complicated. Barriers to access can appear in many ways but the most difficult barriers

are the ones that are never examined. Too often, people with disabilities must adapt to barriers in a world that was not designed for all abilities. The McDowell Sonoran Conservancy recently began a project as part of its effort to get more people engaged with natural open space. To do this, the Conservancy needed a good partner to provide guidance.

The Conservancy reached out to Ability360, a local organization

that promotes programs to empower people with all disabilities. Currently, 61 million adults in the United States are living with a disability. That's one in four U.S. residents. At some point, almost everyone will experience disability, whether it be through aging or sustaining an injury due to an accident or illness. While some environments are not accessible to all, those with disabilities have the right to recreate outside. 360Outdoors,



The benefits of being out in natural open space were enjoyed by all on the pilot hike in October 2022. Photo by Dennis Eckel



Bernie Finkel (left) describes the desert environment for visitors during a guided exploration of the Jane Rau Trail. Photo by Dennis Eckel

a program within Ability360, helps provide outdoor opportunities for those with disabilities. With Ability360 as a partner, the Conservancy will increase services to those with disabilities.

Kaitlyn Verfueth, program coordinator for 360Outdoors and a person using a wheelchair daily, loves getting outdoors. When she lost the use of her legs in a motor vehicle accident at the age of 7, the BIGGEST thing she missed being able to do was to get lost in a forest. Before her accident, her family spent many weekends hiking and biking outside. After her accident, getting outside and out into nature became a massive challenge due to access and the environment.

The Conservancy has taken steps to make it easier for people to access the Preserve. We decided to offer nearly twice as many guided walk events this season. These events happen on the four accessible trails in the Preserve, which are the Bajada Trail (Gateway Trailhead), the Jane Rau Trail (Brown's Ranch Trailhead), the Kovach Family Nature Trail (Lost Dog Wash Trailhead), and the newest addition, the Camino Campana Trail (Fraesfield Trailhead). We also used the Birdability Site Review Checklist to characterize these accessible trails and list them on a crowdsourced map made available through the collaboration of the National Audubon Society and

Birdability. This set us up to take the next step with Ability360.

Last October, 360Outdoors collaborated with the Conservancy on a pilot hike at the Jane Rau Trail. The hike was a great success, affirming the value of the new relationship between the Conservancy and Ability360. In December, the two organizations collaborated again on another adaptive hike involving 20 participants and volunteers with varying disabilities. These hikes demonstrated it is possible to organize adaptive events in the Preserve and they identified areas for future improvements.

The Conservancy-Ability360 partnership benefits both parties and

continues to grow. Verfueth has provided Conservancy stewards with basic training on disability etiquette and person-first language. She has also gone, on multiple occasions, with stewards to scout hiking and biking trails in the Preserve, identifying those that offer access. The Conservancy will share this information with the public, recommending routes that are inclusive. The ultimate goal for this flourishing partnership is to integrate all abilities into not only hiking and biking activities, but all Conservancy programming.

The McDowell Sonoran Preserve is for everybody. With



Kaitlyn Verfueth, Program Coordinator at Ability360, enjoying the outdoors on the Jane Rau Trail. Photo by Dennis Eckel

assistance, accommodation, communication, and understanding, people with disabilities can enjoy the benefits of being in natural open space. The work we've been able to accomplish through this partnership shows that much is possible if you try. People with disabilities are good at adapting. Perhaps we all have something to learn from the adaptive community; the Conservancy certainly has. We are excited to continue our work bringing the Preserve to as many people as possible. ▲▲

Sources: [ADA.gov](https://www.ada.gov/) and [CDC.gov](https://www.cdc.gov/)

## About Ability360

Ability360 Sports and Fitness Center is a 45,000-square-foot state-of-the-art facility catering to those with disabilities. One need not have a disability to work out at the facility because Ability360 offers an all-inclusive workout environment. Ability360's mission is to provide exceptional adaptive sports, recreation, aquatic, and fitness programs that promote the independence, health, and overall well-being of people with disabilities and their family members. In 2022, Ability360 expanded its programs by absorbing another local non-profit, Daring Adventures, which provided programming outside. Thus, 360Outdoors was born. 360Outdoors provides outdoor programs such as adaptive hiking, adaptive mountain biking, white water rafting, kayaking and paddle boarding, rock climbing, and fishing. Their biggest adventure last year was a 12-day trip down the Colorado River through the Grand Canyon with 22 participants and volunteers with varying disabilities. Smaller adventures include hiking, biking, and rock-climbing activities in the McDowell Sonoran Preserve.

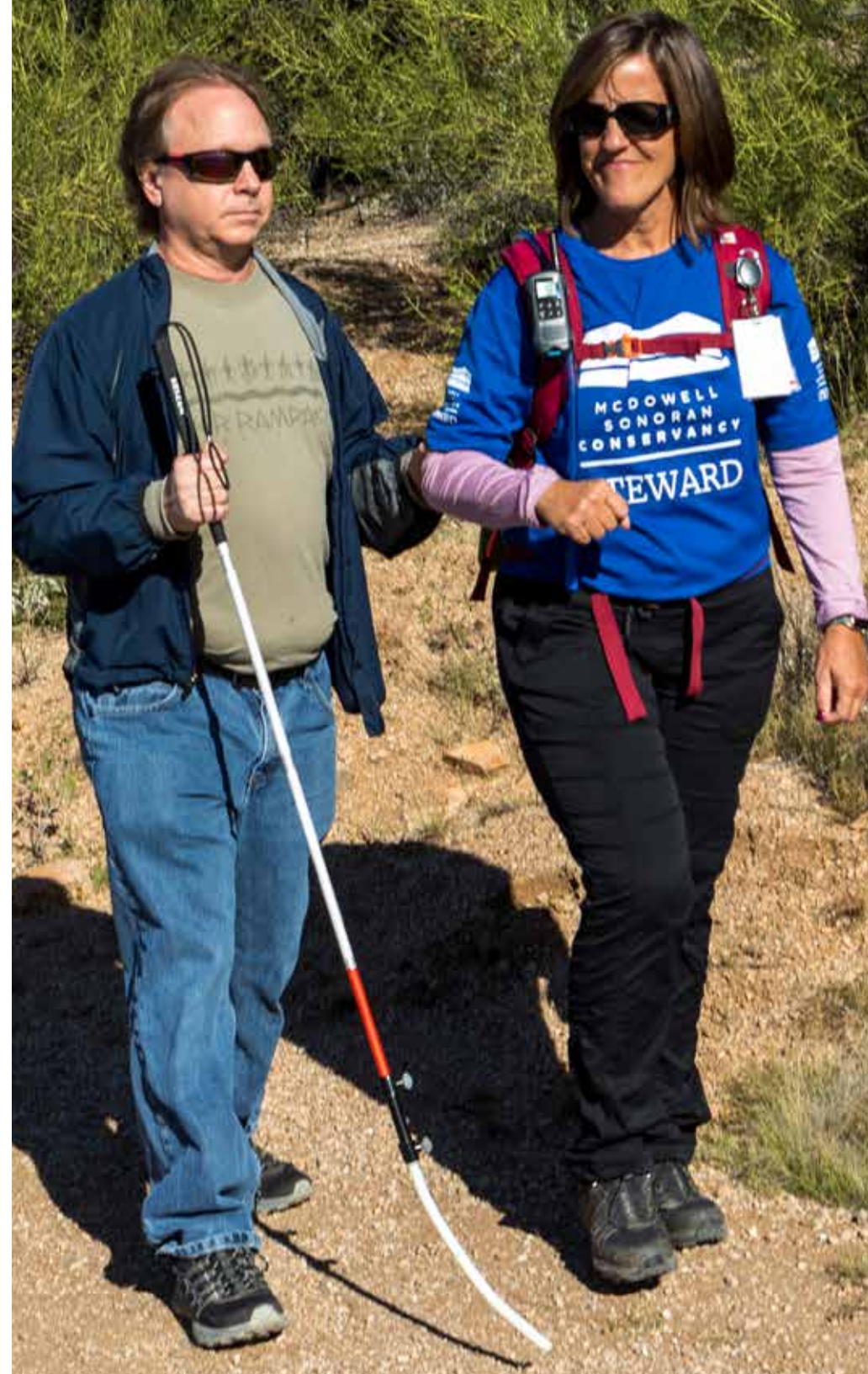


**Top:** Legacy Steward and guide Bernie Finkel shows Kaitlyn Verfuert the plants growing near Brown's Ranch Trailhead.

**Center:** Master Steward Franco Farina assists a visitor in a wheelchair on the Jane Rau Trail.

**Bottom:** The group from Ability360 brought a variety of mobility devices to use on the pilot hike in October 2022. Photos by Dennis Eckel

## Exploring the Preserve Using Multiple Senses



By Amy Gibson, McDowell Sonoran Conservancy Steward

**H**ave you ever wondered what it would be like to hike the McDowell Sonoran Preserve as a person who is blind? I'd never thought about it because, like many, I tend to take my five senses for granted. However, a recent event made me very aware of the ways we use our senses of touch, sight, smell, taste, and hearing to experience the world around us.

Last fall, the McDowell Sonoran Conservancy hosted a private hike in partnership with Ability360, an organization that provides services to empower and equip people with disabilities to live independent lives. After a career in healthcare, I was accustomed to assisting people with mobility challenges, so I volunteered to be an assistant for this event.

When our guests arrived at Brown's Ranch Trailhead, a gentleman who is blind exited the bus. I was not expecting this, and I immediately began thinking of ideas to make his experience with us safe and positive. I recalled that a Conservancy staff member once said: "Everyone experiences nature differently," which inspired me to look at the Preserve from the perspective of a person who

*Here, Amy guides Ken on the Jane Rau Trail. When leading a person with a visual impairment, ask permission before you touch them. Then ask if they would like to hold onto your elbow while you walk a little ahead of them. Photo by Dennis Eckel*



Ken uses his sense of smell to learn about desert lavender on the Jane Rau Trail. Photo by Dennis Eckel

is blind. I thought he may not be able to see the Preserve, but he can hear, smell, touch, and taste it.

As the group assembled, I introduced myself to Ken and asked how I could be of assistance. He asked to hold my elbow as we walked to the trailhead and then for the hike. On our way to the Jane Rau Trail, we stopped at the trail map. With his permission, I held his finger and traced the route we would walk. We also listened to and identified some birds, and then I pulled a small branch of creosote off and placed it in his hands. Ken rubbed his hands and smelled the scent of the Preserve. "It smells like rain," he said. Other stewards and I began pulling samples from the plants the presenter discussed.

As we walked, I described the terrain, the sky, the colors, the plants, the rocks, the condition of the pathway, its width, and the turns and hills. This gave Ken a mental picture of where we were and helped him feel safe,

in control, and independent. Ken asked lots of questions about the shapes, colors, sounds, and smells of things and, at one point, said he felt a temperature change and asked if he was in shade. Indeed, he was in the shade of a giant saguaro.

When we passed a decaying saguaro with exposed ribs, I guided Ken over to feel the shape and texture of the ribs as I described the color. Someone passed us a saguaro boot and Ken was able to feel that. We touched the granite along the path and talked about the color and age. We smelled the desert lavender and talked about its many uses. Finally, we came to a saguaro with arms that curved down to eye level, and Ken was able to gently touch the top of an arm.



People with visual impairments rely on other senses to experience their surroundings. Ken, on the right with Amy, is using touch to understand what a saguaro boot looks and feels like. Photo by Dennis Eckel

After we talked about the flowers of the saguaro, it was time to head back to their bus and see them off. As we returned, Ken asked if he could walk other trails in the Preserve. I assured him that there were many he could do with a guide. Ken took my number and I'm sure we will see him again in the Preserve, experiencing it in his own way.

This was easily the most impactful moment I've had as a steward. I hope to dedicate my tenure as a volunteer to making the Preserve accessible for everyone, including those who can't see.



# FUN FOR THE WHOLE FAMILY!

Saturday, June 24th, 2023, 9am - 4pm | Westworld of Scottsdale | 16601 N. Pima Rd, Scottsdale, AZ 85260

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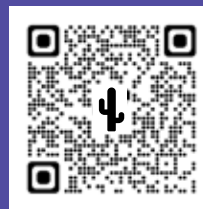
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## Introducing Kids to Mountain Biking

By Larry Emmott, REI Mountain Bike Instructor and Guide

**D**o you want to get your kids outdoors, teach them about the desert, get some exercise, learn new skills, and build confidence? Then take them mountain biking in the McDowell Sonoran Preserve.

The Preserve offers some of the best mountain biking in the state, especially the Brown's Ranch area. However, your trip to the Preserve should not be the first time you or your child go out biking. The parent or grandparent should be an experienced mountain biker and the child should be a competent bike rider on pavement or dirt roads.

In theory, you can use any bike to get started. In reality, even the easy trails at Brown's Ranch have hills and sand that are best ridden with a geared bike. If you are not sure which bike to get your child, rent one first to see how it goes and determine what size is best. An online search using Yelp, for example, of where to rent kid's mountain bikes will yield a number of potential places along with their reviews. It is important to work with an experienced technician to help you choose a bike properly sized for your child. Two additional essentials for mountain biking are a bike helmet and water. At a minimum, bring a full bottle for each person. Better yet, get



*Making sure that your child is equipped with a good-fitting helmet, sunglasses, closed-toe shoes, and water will increase his or her safety on the trails. Photo by Dennis Eckel*

a kid-size camelback-style hydration pack for your child.

There are two basic types of trails - old roads, and single-track trails. Roads are the easiest to ride as they are wide, have no tight turns, and have fewer hard climbs. The best beginner ride is Brown's Ranch Road at Brown's Ranch Trailhead. A second easy starter trail is Latigo from the Pima Dynamite Trailhead out to the crested saguaro and back.

Once your child is comfortable on the dirt and knows when to brake and to shift gears, you can move up to some easy-single track options, like Axel Grease at Pima Dynamite, 136th Express at Fraesfield, and Chuckwagon at Brown's Ranch. It is best to avoid having kids of different ages and abilities on the same ride. It is also a good idea to scout the trails beforehand to be sure you know the route and will not encounter something beyond their ability. Additionally, teach your child proper trail etiquette, including being polite, riding single file, slowing down, letting people know when you are approaching them from behind, and stopping when you encounter horses. Until your child is a skilled rider, avoid trails named after poisonous

animals such as Snake Eyes, Tarantula, and Scorpion. These are advanced technical trails.

If you have a problem, another biker or a steward will likely come by and offer help. Nevertheless, it is a good idea to know the basics of bike repair, especially how to fix a flat tire. For serious emergencies call 911. All official trails are named and have markers such as CW9 (Chuckwagon 9) that you can use to direct emergency personnel to your location.

Rides are more fun if you have a destination such as the crested saguaro off Latigo, the old corrals at the Brown's Ranch site, or one of

the amazing boulder formations like Balanced Rock. Take time to rest along the way and talk about the desert. The Conservancy's new Field Guide is a wonderful resource for you and your child.

Finally, stay on the trails. There are three reasons for this: 1. You are riding in a preserve, and you will not damage the plants and terrain if you stay on the trail. 2. Most every desert plant has nasty thorns you do not want to mess with. 3. You never know what might be coiled under that bush.

The most important thing is to have fun! ▲▲



*Mountain biking is a wonderful way for families to explore together open spaces like the Preserve. Photo by Dennis Eckel*

*Mountain biking engages kids in a healthy activity that strengthens the body and is fun to do. Photo by Dennis Eckel*

# Making a Visit to the Preserve a Family Affair



Photos by Dennis Eckel

Spending family time in the Preserve is fun. It encourages children to explore the wonders

of nature while being physically active. This exposure at a young age will often carry over into adult years, encouraging

a lifelong love of the outdoors and exercise.



Two families can make the Preserve twice as fun! "We love it here. It's a great way for the kids to burn off their energy, learn how to act with nature, and explore how it all works together," said Chad Rainey. Photo by Dennis Eckel





"Late Afternoon Light in the Desert," (Gouache on paper). Painting and photo by Jane Barton

## Desert Colors: An Artist's View of the McDowell Sonoran Preserve

By Jane Barton, McDowell Sonoran Conservancy Steward

As an artist and a new steward, I'm always observing color and light, but now I'm even more aware of the bold blue color of

the steward uniform. It stands out in the more muted natural colors of the desert landscape, but instead of being jarring, it's an indication of

someone trained to welcome and guide visitors through the Preserve.

Artists are trained to see the subtleties of different

shapes and hues of color, but you don't have to be an artist to appreciate the variety of colors in the desert. You do have to open your mind to the idea that not all greens are the "forest green" in a 64-crayon Crayola box. I think that expectation might be why some visitors come to Arizona and say, "there's no green here, it's so dull."

There may not be "forest green," but there is the bright green of the Palo Verde tree trunks, the lime-green of lichen on the rocks along the trail at Marcus Landslide, the grey-green of the brittlebush leaves, and many more. Even prickly pear pads appear to have different shades of green, depending on whether they are in sunlight or shadow. As a painter, I've learned that if you want to make a color really "pop," one good way is to surround it with grayed colors. This is especially true in the desert: the yellow flowers of the brittlebush are small but highly visible against its gray-green leaves. Note how vibrant the bright green and orange lichen is on the grey granite rocks. Maybe it's time for a Sonoran Desert box of crayons with colors like "Four Peaks Mountain Blue," "Fairy Duster



The colors of lichen really "pop" because it is surrounded by grey rock. Photo by Jane Barton



A simple color chart shows that there is a huge variety of colors in the desert landscape. I use a "grey viewer" to help isolate and identify them. Photo by Jane Barton

Pink," "Goldeneye Yellow," and "Barrel Cactus Spine Red."

I can't really talk about color in the desert without considering the light. The time of day can change the desert colors dramatically. If you're an early morning hiker, you'll see that the colors are different from those in the midday light or the intense light of late afternoon when the backlit saguaros glow with orange rims. If you hike on a cloudy day, you'll notice that the colors

change again and are not as washed out by the sun. I could imagine different sets of crayon colors: the Sunset Set, the Sunrise Set, the Hot, Dry Summer Heat Set, and the Monsoon Set.

When I'm out sketching, I like to create an informal color chart of simple color stripes that help me remember the colors for use in larger paintings back in my studio. When you see the colors painted this way, the variety is stunning and far from dull.

Next time you're on the trail I hope this artist's point of view will add to your enjoyment of the Preserve's beauty and also add another topic to discuss with visitors and stewards. If you'd like to try mixing some desert colors or learn more about my approach to painting a desert plant or scene, please visit my website at [www.janebartonstudio.com](http://www.janebartonstudio.com) to read about my blog, and workshops, and to see more of my work. ▲▲



There are so many variations of green in the desert. Photo by Jane Barton



Students use the field guide to discuss which animal lives in each burrow. Photo by Hannah Rosen

## Adding the A into STEM Education

By Claire Musser, McDowell Sonoran Conservancy Education Manager

Students have been learning through STEM education (science, technology, engineering, and mathematics) since the early 2000s. The concept was introduced to increase learning by incorporating problem-solving skills and critical thinking. While STEM has been a primary focus in 21st-century education, it is not the only focus. The arts (visual arts, media, design, literature, language, music, dance, and theater) are also core academic subjects and are part of a complete and balanced education.

By adding the arts to STEM, we create STEAM and build on critical thinking and problem-solving skills by incorporating opportunities for communication, collaboration, creativity, and innovation.

As an educator, artist, and scientist, I have been creating STEAM programs for over 15 years. STEAM blurs the lines between subjects and takes a holistic approach to learning. By creating hands-on, fun interactive learning experiences we can more easily keep students fully engaged. But incorporating the arts is much more than simply

allowing opportunities to create a poster or write a poem at the end of a project. For a program to be considered STEAM, the arts need to be fully embedded into the learning that is taking place. Some educators are hesitant to include the arts, fearing that it will take away from the importance of STEM. Our programs at the McDowell Sonoran Conservancy are proof that STEAM enhances learning and invokes a greater sense of creativity.

We have created learning experiences that are both creative and



A student attempts to save the ecosystem during a game of Ecosystem Jenga. Photo by Hannah Rosen

underpinned by the scientific research that is taking place in the McDowell Sonoran Preserve. For example, we discuss biodiversity and human-wildlife coexistence by sharing the photographs and reasoning behind our camera trap research currently taking place in the preserve. This then leads to activities where students print tracks, measure

allow for personal expression, and foster empathy for others, including nonhuman animals. All our students are encouraged to ask questions and think critically about real actions they can take to better support wildlife and the Sonoran Desert. The students leave our programs empowered, and they are the ones who tell us to, “keep dogs on a leash,” “pick up

animal burrows, and identify animal scat by playing a game we call ‘scat bingo.’ We encourage students to be solutionist thinkers and reflect on the learning that has taken place. Our programs have meaning, give the students purpose,

trash,” “leave animals alone,” and “stay on the trail.”

STEAM recognizes the need for flexibility, and we can seamlessly adapt our teaching to the needs of our students. By fully embracing STEAM, we can just as easily introduce new concepts as reinforce prior knowledge. Allowing creativity and collaboration can also remove some barriers to learning. By carefully designing our programs, we meet the needs of our visual, auditory, and kinesthetic students, giving all students the opportunity to be successful. Our 3rd-grade students play a game we call ‘Ecosystem Jenga,’ which uses Jenga blocks to model the Sonoran Desert ecosystem and combines learning about the trophic levels and ecosystems with a hands-on activity. During one such game, a student turned and asked “how do you make learning so fun!?” The answer is simple: we added the A to STEM.

We also need to prepare students for the future. We’ve found that STEAM can engage students who have not previously considered STEM careers. STEAM opens new pathways where students don’t have to be either analytical or creative – they can be both. As we expand our programs across the grade levels, we will have the opportunity to introduce students to more complex social and environmental issues. Climate change, habitat fragmentation, and biodiversity loss are just some of the issues impacting the Sonoran Desert, and to solve these problems, we will need the innovation and creativity found in STEAM. ▲▲



Students explore the role of trash in human history by learning to identify and sort items. Photo by Hannah Rosen

# Pollinator Pathways Connect Us with Nature

By Danielle Carlock, Library Faculty Member, South Mountain Community College, and Natalie Case, Education Program Developer, Center for Native and Urban Wildlife, Scottsdale Community College

As you leave the trails of the Preserve and make your way back into the city, you might notice how the landscape changes. Concrete replaces dirt, plant variety diminishes, and blotches of green herbicide pepper the spaces between tightly manicured bushes. This landscape is convenient for people, but for pollinators, it verges on hostile.

While having fewer bees around is appealing to some, we are beginning to recognize how crucial pollinators are for our survival. Most plants require a pollinator to move pollen grains from one flower to another in order to form viable seeds. This

applies to one-third of our food crops. Scientists are becoming increasingly concerned about declines in pollinator populations, and the ripple effects it may have.

Habitat degradation and pesticide use are two of the greatest stressors for pollinators. Fortunately, these are also things that we, at the individual level, can change. Preserves are crucial for maintaining habitat but, by themselves, are only isolated islands. We can help connect preserves to our urban spaces with pollinator pathways. These pathways are corridors of pollinator-friendly, native habitats that allow butterflies, bees, flower flies, and

other wildlife to move freely.

The Maricopa Pollinator Pathway is just such an effort to create intentional pathways through the Valley. It offers a free certification program with three levels of participation. The Contributing Level is for those new to pollinator gardening, in the Valley, or those with limited time or space – even potted plants on a balcony can qualify. The Core and Comprehensive levels introduce additional practices and plants.

The Pathway’s guidelines are based on the best available evidence for our region from experts in the field. Native pollinator plants are emphasized to best support and conserve local ecosystems. A plant list <<https://tinyurl.com/pathwaylist>> is available to help select nectar plants for year-round blooms and to support larval butterflies and moths.

The effort to create intentional pathways began with a habitat corridor linking Scottsdale Community College, several Scottsdale Unified School District schools, the Scottsdale Community Garden Club, and the Salt



Native plant propagation facilities at Scottsdale Community College. Photo by Danielle Carlock

River Pima Maricopa Indian Community. We would like to find additional participants to join in developing a network of connected pollinator corridors throughout the Valley.

One of the biggest challenges to increasing pollinator habitat is a dearth of native plant sources. We are

addressing this through the Maricopa Native Seed Library, which offers free seeds with an emphasis on pollinator plants. In addition, the Center for Native and Urban Wildlife at Scottsdale Community College <<https://cnuw.scottsdaleecc.edu>> is working to expand its plant-growing capacity to meet

increasing demand for native pollinator plants. A group of students and volunteers meets weekly to work on the production of about 50 pollinator species, which are available at their Spring and Fall plant sales.

You can help pollinators by

certifying your habitat, spreading the word about the importance of pollinators, and encouraging others to engage in pollinator-friendly practices. We have a variety of materials to assist you, including workshop recordings, FAQs, and plant lists. Watch our webpage and social media for upcoming presentations and other resources. If you live in an HOA, consider sharing these resources with your Board or invite us to do a workshop.

If you build it, they will come! Acting within your sphere of influence is one of the most impactful things you as an individual can do to help nature, and building pollinator habitat is likely one of the most impactful of all. In doing so, you will reap the rewards that come from enjoying nature at home.



## CONTRIBUTING LEVEL GARDEN/HABITAT GUIDELINES

COMPONENT	GUIDELINES/PRACTICES
Physical conditions in your landscape (abiotic factors)	<ol style="list-style-type: none"> <li>Provides at least 4-6 hours of sunlight per day</li> <li>Only disturb soil if you are planting</li> </ol>
Plantings (what plants are represented in your landscape)	<ol style="list-style-type: none"> <li>Have continuous availability of nectar within your immediate surroundings, whenever possible utilizing plants from the plant list (at least 1 species blooming per season)</li> <li>Have at least 1 desert/rush milkweed as a larval host plant</li> </ol>
Gardening practices you engage in (cultural practices)	<ol style="list-style-type: none"> <li>Use non-pesticide means for controlling the pests in your garden</li> <li>Be accepting of plant damage by the target pollinators (caterpillars become butterflies and moths)</li> <li>Remove invasive species in your landscape</li> </ol>

Guidelines for entry-level habitat certification with Maricopa Pollinator Pathway. Guide courtesy of Maricopa Pollinator Pathway.



Planting day at Navajo Elementary School, Fall 2002. Photo by Danielle Carlock



## Wildflower Season

By Steve Jones, Botanist

Poppies and lupine turn a Preserve hillside into a kaleidoscope of color. Photo by Dennis Eckel

The old maxim “April showers bring May flowers” does not apply to the Sonoran Desert. In fact, April marks the beginning of our dry season, and by May, most of our wildflowers have already flowered and set seed. A more accurate version of the maxim for the Sonoran Desert would read, “October showers bring March flowers.”

There is no hard and fast definition for the term “wildflower” beyond a non-cultivated plant that produces conspicuous flowers. Wildflowers can be ephemeral, with lifespans lasting only a few weeks, or perennial, flowering season after season.

Unsurprisingly, rain is primarily responsible for the spring wildflower show. Without autumn rains to germinate the seeds of ephemeral wildflowers, no amount of winter rain will bring about a good season. Without winter rain, those that germinated in autumn will not thrive. A single good, soaking rain of about an inch is needed in the autumn to induce germination, while winter rain amounting to an inch per month is required to carry the season to fruition.

The winter rain rule applies to perennial wildflowers, too; flowers usually occur on new growth produced over the winter months.

For ephemerals and perennials, both the increasing average temperatures and the longer daylight of spring are instrumental in stimulating flower production.

The most common and showy ephemeral species are the Mexican poppy (*Eschscholzia californica* ssp. *mexicana*) and Coulter’s lupine (*Lupinus sparsiflorus*). Distant phacelia (*Phacelia distans*) and goldfields (*Lasthenia gracilis*) flowers are smaller but common and showy, the latter especially sometimes covering large areas.

The perennial flowering shrubs include brittlebush (*Encelia farinosa*),



Ephemeral species like Mexican poppy and Coulter’s lupine bloom for a very short time. Look for them between late February and mid-April. Photos by Steve Jones

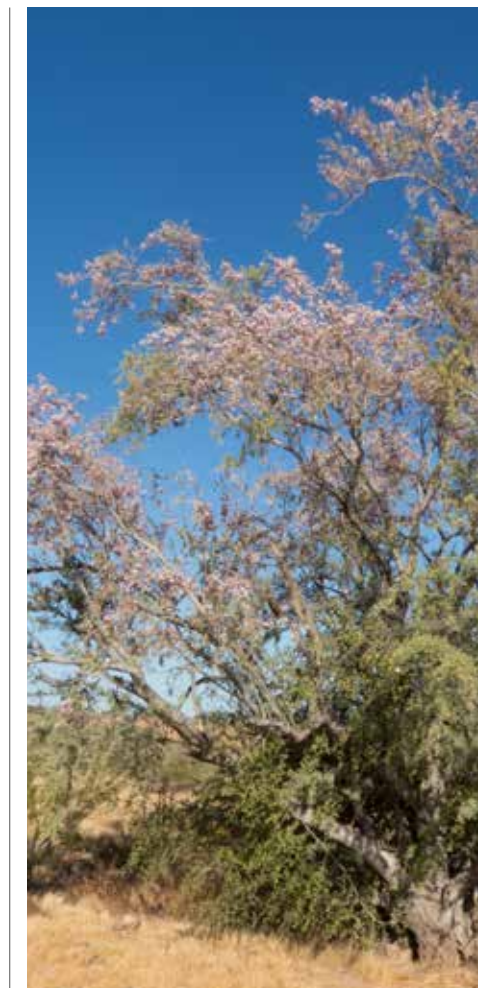


The hedgehog cactus, identified by its cylindrical stems, is a native of the Sonoran desert and produces large magenta blooms. Photo by Steve Jones

globe mallow (*Sphaeralcea ambigua*), and goldeneye (*Bahiopsis parishii*). Early flowering chuparosa (*Justicia californica*) begins blooming in late winter to the delight of hummingbirds that thrive on the nectar from its tubular red flowers.

Other perennials only emerge above ground in the spring from perennial roots or bulbs. The rarest and showiest of these is the mariposa lily (*Calochortus kennedyi*) with large, bright orange flowers and is only found at higher locations in the McDowell Mountain range. However, the very common desert hyacinth (*Dipterostemon capitatus* ssp. *pauciflorus*) is an early-flowering plant with long, dark green linear leaves preceding a tall flower stalk topped by a spray of lavender flowers.

Most cacti flower in the spring as well, hedgehog cactus (*Echinocereus engelmannii* var. *engelmannii*) being the earliest to flower and the most impressive. Its large magenta flowers open in March. The common Engelmann’s prickly pear (*Opuntia engelmannii*) has yellow flowers



The Sonoran Desert is the only place ironwood trees occur. They are most likely to be seen in washes and drainage areas near the desert floor. They can live hundreds of years and their dense canopy shelters many plants and animals from the desert sun. Photo by Steve Jones

(occasionally peach-colored), while its smaller cousin, brown-spined prickly pear (*Opuntia phaeacantha*), has a yellow flower with a red center. Where both occur, they occasionally intergrade, producing yellow flowers with pink centers.

Several trees contribute to the wildflower show as well. Blue palo verde (*Parkinsonia florida*) flowers in April with lemon yellow flowers, while its cousin, foothill palo verde (*P. microphylla*), follows a few weeks later with a buttery yellow display. Desert ironwood (*Olneya tesota*) is another late-flowering tree species, with varicolored purple-white flowers. Ocotillos (*Fouquieria splendens*) have showy clusters of red-orange flowers at the tips of long, whip-like stems.

As for the outlook this season, a good germinating rain fell rather late in mid-December and the following rains have been spotty. It’s not going to be an exceptional year, but there will be flowers, so enjoy the desert’s color display! ▲▲

# Children's Learning and Play Festival

By Trevor Heffner, McDowell Sonoran Conservancy Communications Coordinator



A young student gets up close to explore the arthropods of the desert with a Conservancy steward. Photo by Lynne Janney Russell

Are you looking for a fun and educational way to spend a summer day with your children? Look no further than the Children's Learning and Play Festival! On June 24th, 2023, The McDowell Sonoran Conservancy is bringing back this family event at Westworld of Scottsdale!

The Conservancy has been an exhibitor at the Festival since 2018 and was a beneficiary of funds raised during the Festival. In 2020, the Conservancy acquired the event, and it is now a part of our annual signature lineup. Due to the pandemic, we had to cancel the Festival in 2021 and 2022, so we are hosting the Children's

Learning and Play Festival for the first time this year.

We are excited about what the Festival will offer for families looking for a unique outing this summer. The Festival is perfect for children of all ages and interests. With more than 15,000 participants in attendance annually, the Children's Learning and Play Festival is a wonderful opportunity for kids to learn and have fun while interacting with others. It features a wide variety of activities that focus on education, health, wellness, active play, and exploration.

One activity that will be featured is 'Ecosystem Jenga,' a fun and interactive way for kids to learn

how the Sonoran Desert ecosystem works, and what will happen if human impacts remove species or resources. Each block is labeled with an animal or resource, like water, cactus, or bobcat. Throughout the game, blocks are removed as humans enter the ecosystem until the whole tower crashes down, prompting a discussion on what we can do to minimize the harm from human factors and protect our delicate ecosystem to avoid a complete collapse.

One of the highlights of the Festival is the variety of local vendors from the Valley that will be in attendance. From children's authors and illustrators to STEAM educators and



Using a microscope, this student is learning and doing what actual scientists do every day! Photo by Lynne Janney Russell



Arizona Game and Fish staff brought this rattlesnake "Creatures of Mystery and Myth" poster to the last Festival to educate attendees about one of Arizona's most misunderstood reptiles. Photo by Lynne Janney Russell

live performances, there is something for every child and adult to enjoy. Not only is the Festival a great way for kids to learn while having fun, but it is also a fantastic event for families to spend quality time together at an indoor venue.

But that's not all. We will be bringing the Sonoran Desert to

Westworld with our wildlife partners and their live wildlife exhibits with reptiles, birds, and other animals iconic to the Arizona desert. These exhibits are always a popular attraction, giving kids the chance to see up close some of their favorite animals that live in the Sonoran Desert. It's an incredible experience that you are sure to be



Interactive and engaging experiences like learning about joint-legged invertebrate animals (Arachnida) like scorpions, tarantulas, and spiders are sure to leave an impression on young learners. Photo by Lynne Janney Russell

hearing about during the entire car ride home!

technology to art, engineering, and literature. It is a great way for kids to discover new interests and passions. Mark your calendars for June 24th, 2023 from 9:00 am – 4:00 pm, and plan to spend the day with your kids learning, exploring, and playing at Westworld. Don't miss out on this opportunity to give your kids a fun and educational experience that they will never forget!

The Festival activities are structured as opportunities for kids to engage in hands-on learning and exploration. These interactive exhibits and workshops allow children to explore a variety of subjects, from science and

With 15,000 people expected to attend, the Children's Learning and Play Festival is a perfect way to get your business advertised front and center! When you become a partner of the Children's Learning and Play Festival, you are supporting youth education, STEAM organizations and programs, and the vital work of the McDowell Sonoran Conservancy. If you or someone you know is interested in becoming a partner, please contact Kerry Quinn, Development Manager at [kerry@mcdowellsonoran.org](mailto:kerry@mcdowellsonoran.org). ▲▲

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# We're Glad You Asked

By Susan Matthews, Lead Steward and Steve Sukenik, Lead Steward

The questions visitors to the McDowell Sonoran Preserve ask steward ambassadors are many and varied. They range from questions about the best hiking routes to questions about flora, fauna, geology, and human history. Here are a few frequent – as well as some not-so-common – questions. Whatever your question, “We’re glad you asked!”



Photos by Dennis Eckel

## How much water should I take on my hike?

Take more than you think you'll need. When your water is half gone, you should be at least halfway through with your hike.

## Are there bathrooms out in the Preserve?

No, the Preserve is a sanctuary for the preservation of the land and does not have park-like amenities like benches, bike racks, or bathrooms beyond the trailhead shelters.

## I saw some black pigs! Are they dangerous?

What you saw was javelina, a wild hoofed mammal that is not related to

pigs. Whenever you see a wild animal, it's important to give them plenty of space.



## Why do I have to pick up my dog's poop if equestrians don't have to pick up after their horses?

Horse poop decomposes much quicker than the protein-rich food you feed your pup and generally does not contain the dietary additives found in commercial dog food.

## Why is the Preserve closed at night?

Most animals are nocturnal and because the Preserve is a sanctuary, we let them roam freely at night without human interference.

## What are all the holes in the ground?

Many animals, including rodents and even insects, create holes because it's cooler underground in the summer and warmer there in the winter.

## Why are the AEDs (defibrillators) in the women's washroom?

This allows easy access without invasion of privacy.

## I saw a rattlesnake and it's still on the trail! Who do we call to come and get rid of it?

The Preserve's role is to protect wildlife.



When we visit the Preserve, we are in the rattlesnake's home; it's not in ours. We need to wait, and when it's ready the snake will move off the trail. In the meantime, keep your distance.

## Why can't we park in the equestrian lot when the main lot is full?

Horses are sensitive to movement and vehicles may be disturbing. Also, it can be difficult to maneuver large horse trailers, especially if vehicles box them in. Plus, it's in the City of Scottsdale ordinance.



## What does it cost for a helicopter rescue?

Any rescue from inside the Preserve to the nearest parking lot costs you nothing. A transfer from there to a medical facility via ambulance does carry charges; the amount varies, depending upon the specific situation.

## Why shouldn't I wear earbuds while hiking or mountain biking?

Safety. You need to listen for rattlesnakes, other animals, and other trail users around every corner.

## Why do Harris's hawks occasionally steal visitors' hats?

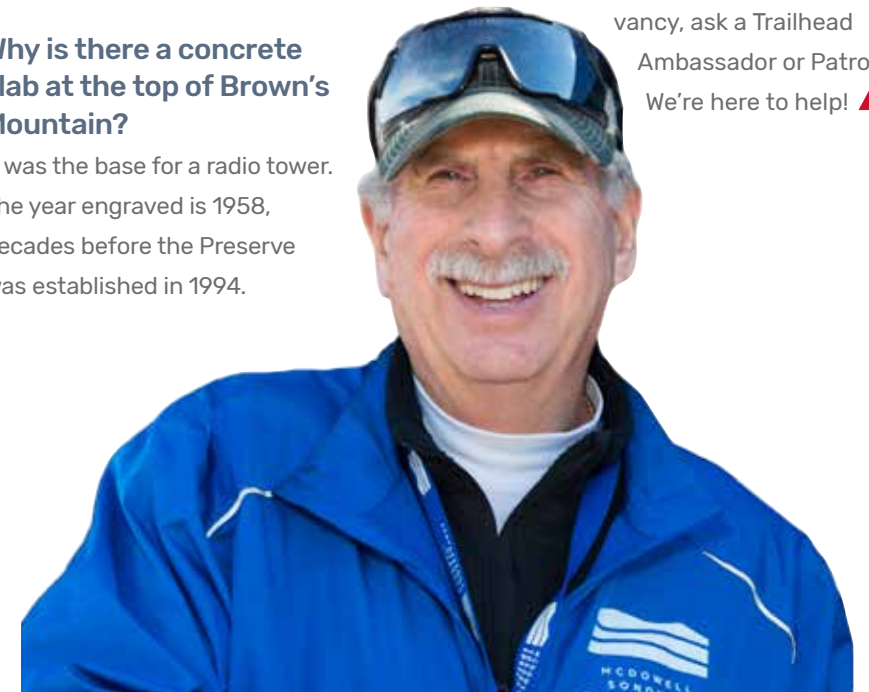
They're wild animals just honing their hunting skills. We don't know what causes them to interact with a person, but they seem to focus on isolated individual trail users.

## Why are bow and arrow hunters allowed off trail when no one else is?

General users of the Preserve must follow the Scottsdale City ordinance that states visitors are not allowed off trail. Hunters, however, are subject to Arizona Game and Fish rules that allow hunters with permits to go off trail during hunting season.

## Why is there a concrete slab at the top of Brown's Mountain?

It was the base for a radio tower. The year engraved is 1958, decades before the Preserve was established in 1994.



## Why is there no potable water at Fraesfield, Granite Mountain, and Tom's Thumb trailheads?

There currently is no local community infrastructure to economically provide access to water in those areas.

## Why don't you have hiker-only trails?

By City ordinance, the Preserve trails are available to hikers, bikers, and equestrians. Enforcing hiker-only trails would be difficult if not impossible. The only exceptions are the short interpretive trails at some of our trailheads, which are for walkers/hikers only.

## Where's the closest Starbucks?

That answer, of course, depends on the trailhead. But Uber Eats has been known to deliver Starbucks to some trailheads.

The next time you have a question about the Preserve or Conservancy, ask a Trailhead Ambassador or Patroller. We're here to help! ▲▲



MCDOWELL  
SONORAN  
CONSERVANCY

15300 N 90th Street,  
Suite 400  
Scottsdale, AZ 85260

Connect with us:



The Scottsdale McDowell Sonoran Preserve is owned by the City of Scottsdale and is managed through a unique partnership between the City of Scottsdale and the McDowell Sonoran Conservancy. Our shared goal for the Preserve is to maintain it in a natural state while providing appropriate recreational and educational opportunities for this and future generations.

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