

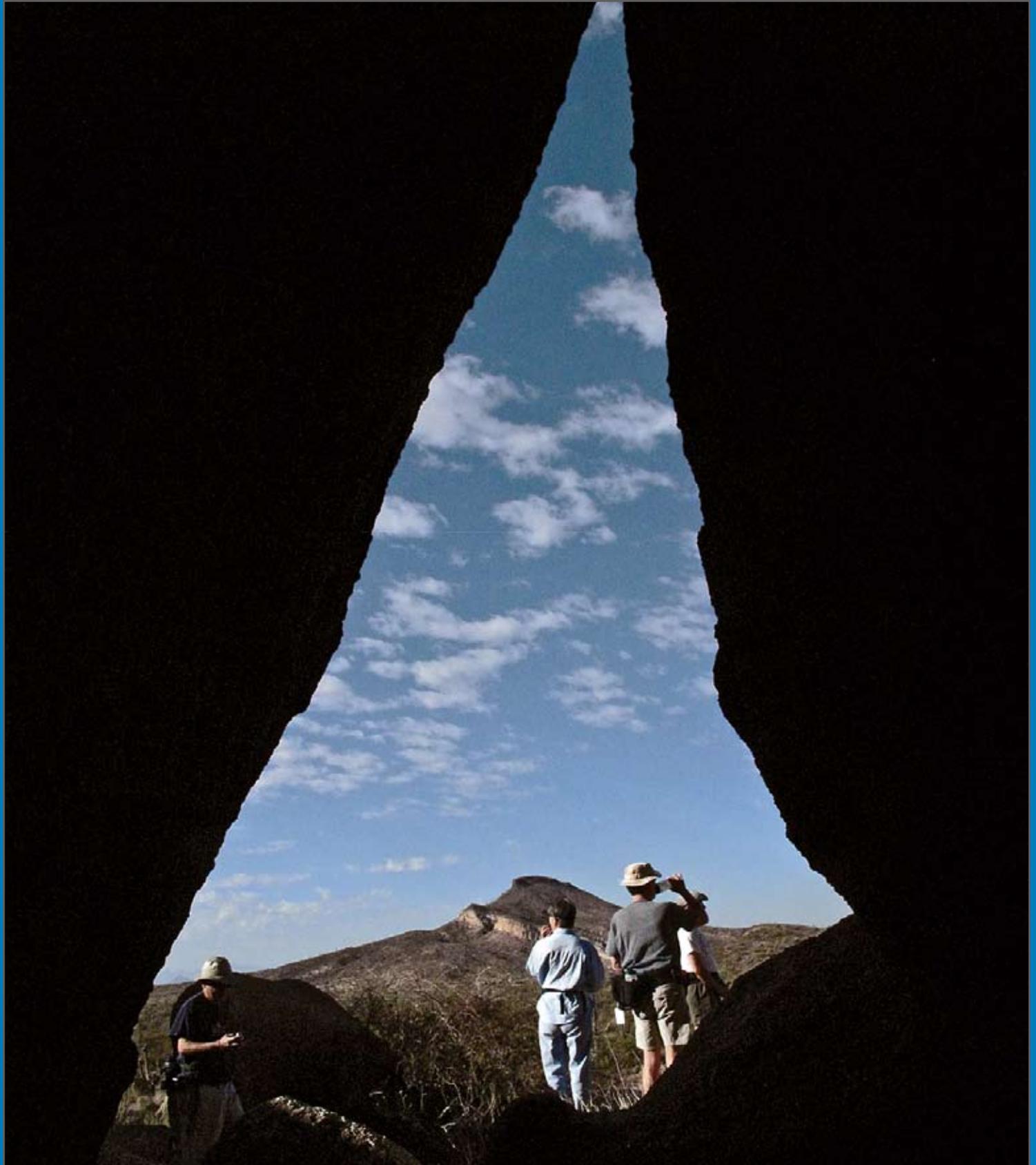
MCDOWELL
SONORAN
— CONSERVANCY —



Mountain Lines



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Summer launches the MSC diaspora, as many of our friends and supporters disperse to cooler climates for a few months. The same happens with some of our Preserve "friends": those bird species and more mobile animals that move north, and to higher altitude, to take advantage of different weather conditions.

For those who stay, summer is a special season; one well worth celebrating. Daybreak comes early, and early morning summer hikes are wonderful. With the sun just rising over the mountains, the cool of the night is still in the air, and many animals remain active. This for me is one of the best times to see wildlife in the Preserve.

I also like hiking after the monsoon rains, and watching the plants pop into life for a few days, until the heat sends them back into their hibernation-like idle.

This issue celebrates summer and the face of the Preserve in this season. Summer is not without its threats, and those stewards who remain in the region help with wildfire watch, patrol, emergency trail maintenance, and other protection needs all through the summer.

This year summer will also be a season of discovery. The biological inventory continues through the summer, with most of the fauna studies kicking off this season. You'll soon be hearing about what we're finding in the way of small mammals, invertebrates, birds, reptiles and amphibians, as well as ongoing plant discoveries. These inventories will run for two years, and I hope many of you will consider joining the search by volunteering for one of the surveys.

Wherever summer finds you, I hope you take some time to get out and enjoy the natural world, and celebrate the profusion of life found in this season.

Even though MSC's outdoor season ends for the summer months, there are always plenty of opportunities to stay engaged in MSC's summer season. Your stewardship this summer will keep the land beautiful and our community safe. Refer to the MSC website calendar and Facebook page for the most up-to-date information on activities offered between June and September.

*"A perfect summer day is when the sun is shining, the birds are singing, and the lawn mower is broken."
- James Dent*

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Finding Shade at Cathedral Rock, Cover Photo by: D. Bierman

About MSC

The McDowell Sonoran Conservancy champions the completion and sustainability of the McDowell Sonoran Preserve for the benefit of this and future generations. We connect the community to the Preserve through public and private partnerships, environmental education and stewardship.

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The Arizona Monsoon: What to Expect for 2011 and How to Be Safe

For those who simply rely on looking out the window to survey the weather before leaving the house each morning, you may have noticed that things have been slightly atypical both in Arizona and around the rest of the world.

What does this mean for the 2011 Arizona Monsoon? Forecasters have been unable to pin down an exact prediction for this season, which begins June 15 and lasts until September 30. La Niña conditions appear to have been weakening over the past three months, likely indicating neutral weather patterns are in store for July and August. Typical Arizona Monsoon seasons see total rainfall of 2.45 inches with temperatures between 103-105 degrees Fahrenheit.

No matter what comes our way, it is important to always be prepared when Mother Nature decides to bring stormy weather.

The MSC Facebook page is your resource for information during the 2011 monsoon season. Arizona residents are lucky to live in a place that has beautiful sunshine and beautiful storms. Stay safe during all weather conditions and maximize your desert experience! ☀️

Sources: http://www.wrh.noaa.gov/twc/monsoon/monsoon_safety.pdf
http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.pdf

Monsoon Statistics for Phoenix (1896-2009)

Top 10 Wettest Monsoons		Top 10 Driest Monsoons	
1. 9.56"/1984	6. 6.96"/1951	1. 0.35"/1924	6. 0.78"/1980
2. 9.31"/1911	7. 6.15"/1943	2. 0.47"/2007	7. 0.79"/1910
3. 7.45"/1946	8. 6.03"/1897	3. 0.51"/1914	8. 0.86"/1962
4. 7.30"/1939	9. 5.99"/1955	4. 0.61"/1993	9. 0.86"/1944
5. 7.20"/1896	10. 5.70"/2008	5. 0.61"/1932	10. 0.87"/2009



Photo by: D. Stoker

2011 Wildfire & Storm Watch Programs



Photo by: R. Buchbinder

Hot summer temperatures and dry desert vegetation combined with sparklers and bottle rockets increase the danger for wildfires significantly. It is illegal for fireworks to be discharged in the City of Scottsdale, and safety messages must be strongly communicated to our community.

Every year on Independence Day, MSC stewards participate in the Wildfire Watch, when they volunteer to patrol and monitor the established access points into the Preserve. Stewards keep visitors out of the Preserve, and prevent the illegal use of fireworks, informing the public of the potential risks and dangers.

Storm Watch 2011 is another important MSC function during monsoon season. During storms, stewards living within sight of the land watch for potential fires caused by lightning strikes. After storms, stewards blitz the trails to monitor and report on damage. Teams from Construction and Maintenance lead the effort in performing emergency trail repairs, no matter how high the temperature!

For more information on these programs, contact the MSC office today at 480-998-7971.

A special thanks to DC Ranch, Sereno Canyon and McDowell Mountain Ranch for their support of these important programs. 🏠

Report from the McDowell Sonoran Field Institute

By Lesley Forst, Research Program Coordinator

Following the first and very successful spring season of the flora baseline survey, the McDowell Sonoran Field Institute and our research partners are launching the first season of the fauna survey this summer. This project will catalogue animals throughout the Preserve, from creosote bush tree hoppers to mountain lions. Like the flora survey, a baseline survey of animal species is new to the Preserve and the McDowell Sonoran Conservancy. Knowing what animals live in the Preserve, where they live, and how they participate as part of the Preserve ecosystem is essential for determining their protection. We'll start with a baseline study, then survey again in five to ten years to make a comparison. We'll see if species remain in the areas where they were initially found, and compare densities, i.e. the number of species in a given location. If the data has significant discrepancies, we can raise a red flag, informing our future research and management decisions.

Surveying animal life, of course, presents some interesting challenges that we do not have with plants. For one, animals can scurry or fly away from investigators! Also, desert animals have adapted to be active only at specific times of day, especially during the summer heat. Outings will be done at dawn, dusk and during the night so that we can maximize our chances of seeing them. Also, desert creatures are adept at hiding and camouflage, so knowing where and when to look for them is essential. Research methodologies will vary with the type of animal being studied, and could involve taking a photo, recording GPS coordinates, or briefly trapping the specimen for further identification.

Researchers will begin by identifying areas of the Preserve that they think may have interesting fauna. They will use data such as elevation, proximity to washes, slope orientation and information on plant life (generated from the first flora collection), to determine study areas. Researchers will then train volunteers in correct study methodology for their particular animal group and begin their field work. The fauna study is divided into five groups: large mammals, small mammals, reptiles, birds and invertebrates. Each group is led by an expert in that particular class of animals, who will train volunteers and students to become citizen scientists.

A perfect example of how these individual studies work is the reptile study, which began in March. This study is headed by Dave Weber and the North American Field Herpetology Association (NAFHA). Dave led training for MSC stewards on the safest and most effective way to find and document reptiles in the Preserve.



Steve Jones, Principal Investigator of the flora survey, identifies a plant in the Preserve.

For each outing, Dave and several of his fellow herpers (people who study reptiles) lead a collection trip with a team of two to three volunteers. When they find a specimen, they very carefully record its GPS location, the air temperature, a quick description of the animal and take a photograph. This is done with the least amount of disruption to the creature as possible, being careful to ensure the safety of the animal and researcher alike.

MSC steward and citizen scientist Sue Handke describes her experience thus far with the fauna research, specifically the reptile study. "Since I had an interest in reptiles, I was delighted to find out that we were doing a herpetological survey in our Preserve," said Sue. "The training and then going out into the field 'herping' has been extremely educational and a lot of fun. It's like treasure hunting!"

If you want to become a citizen scientist like Sue and many other members of the community and study one or more of these animal groups, please join our team by contacting Lesley Forst at 480-998-7971 ext. 105. Researching the ecosystems throughout the Preserve is both rewarding and fun! 🦎



A citizen scientist collects flora samples from the Preserve and places them in a press. These are then taken to a herbarium for cataloging and further research.

Photos by: M. Jensen

Desert Survival - Reptile Style!

By Dave Weber, President, Arizona Chapter, North American Field Herpetology Association

How can a reptile live in an environment with little or no water and temperature extremes from 120 degrees Fahrenheit to freezing?

Well, how would we survive that environment? When the weather is nice, we most likely complete our activities outside in the daytime, making us "diurnal." When the sun becomes unbearably hot in the summer months, we tend to move indoors during the daytime hours and do more outdoor activities at night, becoming "nocturnal." The same goes for reptiles.

While our activity pattern may be similar, the difference is that we do not require heat to help us sustain our metabolic system and digestion, and we can maintain our internal moisture levels by drinking a big glass of water. Reptiles, on the other hand, don't have these luxuries, so they have developed methods to regulate their body temperatures and maintain their bodies' moisture levels.

In the springtime and late fall here in the desert, snakes will most likely be found during the daytime hours. This is because temperatures are in a range that allows the snake to raise its body temperature to a near optimum level for proper digestion and other metabolic functions. Most of the time, the snake will only be able to gain moisture from its food, unless it happens upon a pool of water from which to drink (not very common in the desert). Therefore, moisture retention becomes a key objective. The snake, being an ectotherm (gaining body heat from the environment), will bask either in the open to gain direct heat radiation, or will hide under, upon or next to a rock that is heated by the sun, thus obtaining heat indirectly. Often the snake will move from one spot to another to vary the temperature to maintain the most optimal metabolic operation.

However, when the ambient temperature exceeds the snake's optimal metabolic range on a regular basis, the snake will then most likely become a nocturnal creature. During the hot part of the day the snake will seek shelter in tortoise burrows, rock crevices, the shade of a bush, tree or rat middens. This enables the snake to maintain its internal moisture levels by avoiding the hot sun and the scalding ground. Then, depending on the species of snake, when the sun has dropped down in the sky and



Photo by: D. Bierman

the temperature has dropped too, the snake will emerge from its burrow in search of food or a mate. The ambient temperature of the environment is such that the snake does not have to bask in the sun's rays to raise its body temperature to maintain optimal metabolic functions; the night air of the desert is heated up enough to do that job.

This emphasis on moisture retention is why it is illegal to interfere with another desert reptile, the desert tortoise. If you pick one up, it will often evacuate its bladder as a defense mechanism, simultaneously eliminating its internal water supply to dangerous levels. If not replenished in a short time, the tortoise will perish.

Lizards on the other hand, for the most part, are strictly diurnal creatures. They will be out basking in the sun's heat during the day and then go under during the night. There are only a few species that are entirely nocturnal all year (i.e. Banded Geckos, Night Lizards) and only a small handful that follow the diurnal/nocturnal plan (Gila Monster).

That's desert survival - Reptile Style! 🦎



The Gila Monster is one of few lizards that is active during the daytime and nighttime hours.

Photo by: B. Coomer

Twenty Years of Wildfire In and Around the McDowell Sonoran Preserve

By Barb Pringle, MSC Steward



Aerial fire fighting was used to gain quick containment of the Patriot Fire. These planes can drop thousands of gallons of water or fire retardant on wildfires.

We enter summer in the desert with a mix of emotions. Our warm nights are ideal for barbecues and swim parties. Visitors and many locals flee the heat, leaving our roads less crowded. But we also know that the hot and dry weather increases the danger of a wildfire in or near the McDowell Sonoran Preserve. The recent Wallow fire in the mountains of northeastern Arizona has once again shown how difficult it is to fight a wild-

land fire and how important preventive measures are to protect structures, wildlife and their habitats.

July 7, 1995 was one of those very hot days, when the temperature topped out at 114°F and a localized thunder and lightning storm started in the north Scottsdale area. A lightning strike ignited one of the worst desert wildfires in Arizona, the Rio fire. Because of atmospheric conditions, high and erratic winds drove the fire through dry and cured fuels at a rate faster than most people could run or even drive a vehicle, according to a City of Scottsdale Fire Department report. "You could not stop this fire," recalled Al DiBenedetto, fire captain of the then-Rural/Metro fire department, first on the scene at the Rio fire. "This thing exploded like a bomb." When the fire was finally contained several days later, it had burned 23,000 acres of pristine desert, including 2/3 of the McDowell Mountain Regional Park (MMRP) and what is now Preserve land.

MMRP Park officials cancelled a celebration to mark ten years of Rio fire-recovery efforts, says Park Supervisor Rand Hubbell, when the even more devastating Cave Creek Complex fire started on July 3, 2005. That fire, also lightning-caused, burned from Bartlett Lake to near New River, destroying over 248,000 acres of desert and making it the largest desert wildfire in Arizona history...so far.

Other notable wildfires have occurred in or near the McDowell Sonoran Preserve (Table 1, Page 7; Map 1, Page 9). Many of

these fires were human-started, i.e. fireworks, welding, desert target-shooting, rebar-cutting and even toilet paper set alight. Thanks to the solid training and fast work by Preserve staff, MSC stewards and the Scottsdale Fire department, all of the fires in the Preserve have been relatively small and rapidly contained.

Human impact increasing desert wildfire

While fire is a serious matter anywhere it occurs, it is particularly troublesome to the desert ecology. Naturally caused wildfires are not part of the long-term history of the desert. "Desert fires are a very recent phenomenon - we've been seeing them since about the late 1970's," says Cecil R. Schwalbe, research ecologist for the U.S. Geological Survey's Desert Research Station in Tucson. That's largely due to human impact.

The availability of fuel is one of the three key factors in fire behavior, the others being topography and weather. The Sonoran Desert evolved with wide spacing among the native desert plants, making it harder for a fire to spread from one dry plant to another. Unfortunately, man's introduction of non-native plants - such as buffel grass, red brome grass and fountain grass - has created a desert floor filled with thick, dry underbrush that multiplies fire dangers and exacerbates their impact.

McDowell Sonoran Conservancy steward volunteers and the fire department have worked hard over the past few years

to reduce the presence of invasive plants in and around the Preserve and to educate residents about their danger and the need to clear them from private property. Progress has been made thanks to their diligence, but many invasive plants remain, increasing the chance for another large desert wildfire.

Desert recovers - slowly

In the aftermath of the Rio fire, some areas began recovering fairly quickly because the fire moved so fast that it didn't sterilize the ground and kill existing seed banks and root systems, recalls Hubbell. "Jojoba, brittlebush, bursage and other plants with intact roots were able to get nutrients out of the soil and reappear in the first year or so." Most grazing and burrowing animals survived the initial fire and returned within the first five years (Table 2, Page 9).

But Sonoran Desert icons like the saguaro cactus and the ocotillo do not recover very fast. One of the saddest sounds heard in the months following the Rio fire was the "thud, thud, thud" of one burned saguaro after another falling to the ground. Hubbell and other experts studying the post-Rio fire impact expect 75% of the burned area's saguaros to ultimately die. Ocotillos have virtually disappeared, except where they have been replanted, and will take just as long as the saguaro to recover.

Table 1
Scottsdale's Significant Wildfire History

DATE	NAME	ACRES BURNED	STRUCTURES THREATENED	CAUSE
4/11/88	Pinnacle	3,402	Yes (approx. 5)	Unknown
6/26/88	Buckhorn	1,183	Yes (approx. 10)	Unknown
6/18/92	Hawks Nest	2,500+	Yes (50+)	Human/welding
6/23/92	Granite Mountain	2,569	0	Desert target shooting
7/3/95	Dynamite	1,183	0	Unknown
7/7/95	Rio	23000	Yes (100+)	Lightning
2001/02	Lost Dog	145	0	Surveyor/burning paper
5/28/05	Lost Dog #2	20	0	Bottle rocket fireworks
7/3/05	Cave Creek Complex	243,800	Yes (50+)	Lightning
2/08	Silverleaf/Lost Canyon	40-60	Yes (1)	Cutting rebar
6/15/10	Patriot	80-100	Yes (1)	Human (welding)



The Scottsdale Fire Department was quick to respond to all of the fires that threatened the city's open spaces.



Fire preparedness a priority

Over the past 20 years, as the Preserve has taken shape with an extensive trail system, multiple trailhead structures and thousands of human users, preparation for a desert wildfire within the Preserve has become more important. The McDowell Sonoran Preserve is recognized as a very important community asset – so much so that last year the Scottsdale Fire department prepared a Fire and Emergency Response Plan focused specifically on the Preserve. The report notes that, “the McDowell Sonoran Preserve and the McDowell Mountains along with the accompanying open space is a real treasure for the people of Arizona and especially the citizens of Scottsdale. Along with this grand expanse of beauty comes the expectation of safe use and protection from devastating natural disasters, like fire.” Complementing the response plan is the MSC steward-developed Wildfire Watch program that takes place every summer when the risk for fire is greatest.

“MSC stewards have volunteered to patrol and monitor all of the various established known access points into the Preserve on the evening of the 4th of July. They have been successful in keeping people out of the Preserve who want to hike up the mountains for a ‘better view of the fireworks’ around the valley and have stopped people with fireworks that were being used, or planning to be used. The stewards also enjoy themselves while monitoring the Preserve because they are making a very

positive impact on the preservation of the land and the safety of their community,” says Preserve Coordinator, Claire Miller. This year, the Wildfire Watch will include closing the Preserve to the public at 3 p.m. and having a strong steward presence at all access areas on Sunday, July 3rd and Monday, July 4th. (See page 3 for more information.)

In addition to the Fire and Emergency Response Plan and the MSC Wildfire Watch, federal, state and local agencies created a joint-training program that follows the National Certification for Wildlands training protocol. With many different organizations placing the preservation of our Sonoran Desert as a top priority, we are able to gain quick control when emergencies do happen. Last year’s Patriot fire in the northern part of the Preserve was contained so quickly that fire damage within the Preserve boundary was limited to approximately 80 acres.

“The efforts of Preserve staff and MSC volunteers are much appreciated by the fire department,” says Ford. As we enter the hot summer season, MSC stewards will once again don their sun hats, fill their water bottles and assist the Fire Department to protect the irreplaceable McDowell Sonoran Preserve from a catastrophic fire. 🧑‍🚒

Information from Rand Hubbell, McDowell Mountain Regional Park supervisor, and *The Times of Fountain Hills and Rio Verde*. All photographs are of the 2010 Patriot Fire which burned near the Tom’s Thumb area in the McDowell Sonoran Preserve.

Images provided by J. Ford, Scottsdale Fire Department.

Table 2

Plant/Animal Recovery Timeline after Desert Wildfire

0 to 5 years

- Most rodents and burrowing animals survive.
- Some grasses and wildflowers sprout in spring.
- Ironwood, palo verde and mesquite trees begin to sprout along with bushes such as jojoba and creosote.
- Grazing animals and rodent predators return, including coyotes, snakes, rabbit, javelina, mule deer and most birds.

10 to 25 years

- Most animals return.
- Desert trees maturing.
- Bushes maturing.
- Most small cactus will be back by now.

50 to 100 years

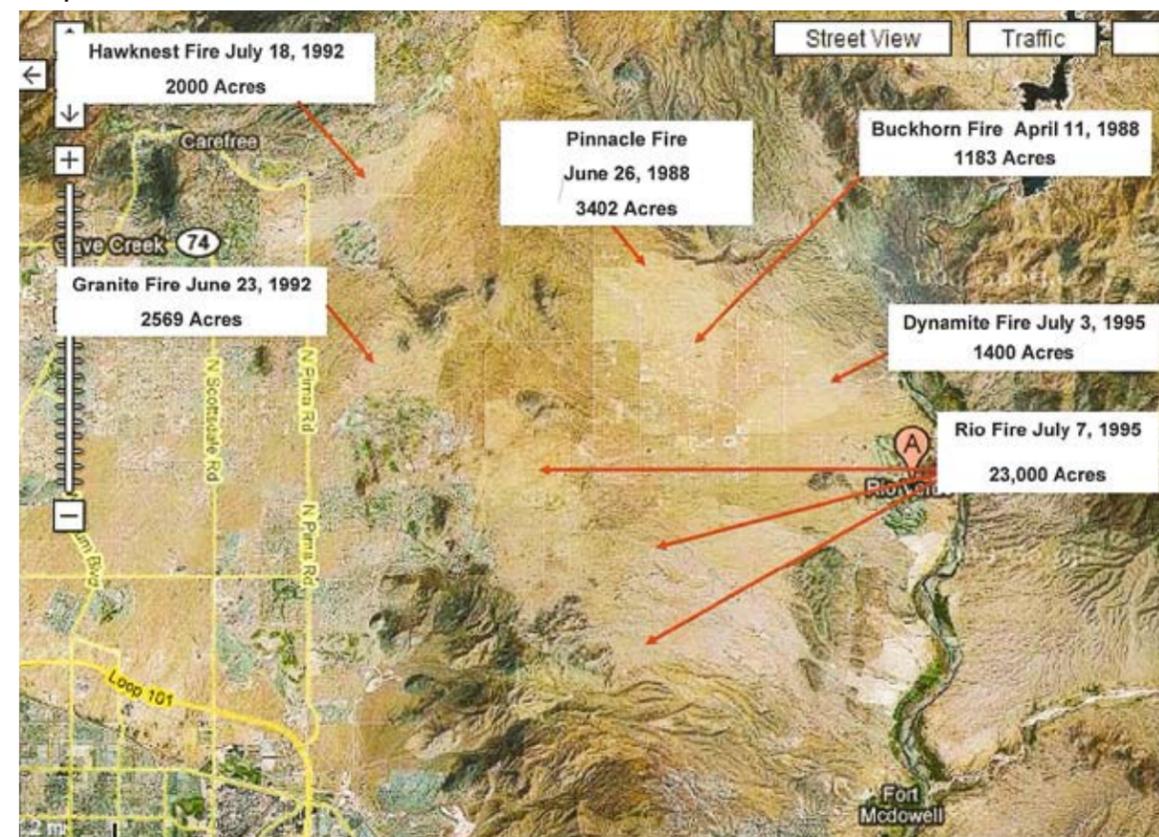
- Saguaros start to visibly appear (approx. 80 years).
- Saguaros reach height at which arms start to develop.
- Gila woodpecker, elf owl and doves dependent on saguaro for food and habitat return.

100 to 150 years

- Ocotillo plants return.
- Mature saguaros begin to develop multiple arms (closer to 150 year timeframe).



Map 1





Sunrise is the best time to be a part of the active Sonoran Desert. Early morning temperatures during the summer are still below 90 degrees and wildlife spend these precious moments on the move – gathering food, water and supplies for their habitats. The McDowell Sonoran Preserve opens at sunrise, so come and witness the colorful beauty of the skies and mountains while the air is cool. You may be able to see a desert animal embracing the pleasant climate with you, too!

Birds of Sunrise, Photo by: L. Lynch

Gait-Way: Cultivate Awareness and Discovery

By Moving "Barefoot" Through the Preserve

By Nancy Howe

I spent an afternoon at Discount Tire representing MSC at the company's annual Health Fair. As employees surveyed our table, curious about MSC, I'd ask if they had ever been inside the McDowell Sonoran Preserve. "Oh no," said one of the salesmen. "Take a look at me," he said pointing to his mid-section. "You can see that I'm not a hiker."

It's a misconception that the Preserve and its trail system are only for experienced hikers. These days, everyone knows that exercise is critical for good health, and that walking is one of the best ways to start increasing physical activity. But we have a conundrum. Even as education about the importance of movement has never been more widespread, the number of Americans who exercise regularly (at least three times a week for 30 minutes or more) is declining: the number in 2009 is less than the number in 2008 and 2010 is looking to be the lowest number yet.

One reason people offer to explain why they don't stick to a program of taking regular walks is boredom. They tire of repeating loops around their neighborhoods. They've listened to their



favorite music until they are sick of it; talk radio is too loud; news headlines are too depressing. In short, it isn't fun.

Research conducted by Dr. Jerry Lynch, a Colorado-based psychologist, shows that, "trails just have a way of closing off the rest of the world and all of the chaos." Lynch works with non-athletes who want to become more active. His key guidelines include the importance of calmness and adaptability, along with good-natured patience while the body becomes more fit. Lynch promotes activity as a source of pleasure, and he likes to remind clients of the intrinsic physiological benefits that occur as soon as we start to move our bodies, including the release of endorphins to elevate mood. Writes Lynch, "Simply being aware of these occurrences taking place in the moment motivates [people] to continue and feel good about the process itself."

The increasing popularity of being on-trail recently intersected with a tidal wave of interest in the long tradition of barefoot walking and running. Barefoot running achieved its greatest performance (outside of ancient Greece) in the 1960 Olympic marathon victory by barefoot runner Abebe Bikila, which was followed by similar world-class barefoot performances on the track in the 1970s by Herb Elliot and Zola Budd.

The trail-running philosophy found its most lyrical proponent in Christopher McDougall's 2009 adventure, "Born to Run." Interest in trails and minimalist shoes exploded after millions read McDougall's account of his "Eureka" experience sharing the lives and the running habits of the Tarahumara Indians of Mexico's Copper Canyon, arguably the greatest distance runners in the world. Recalls McDougall, "I meet the Tarahumara, and they're having a blast.... The key secret hit me like a thunderbolt. It was so simple, yet such a jolt. It was this: everything I'd been taught about running was wrong. We treat running in the modern world the same way we treat childbirth—it's going to hurt, and requires special exercises and equipment, and the best you can hope for is to get it over with quickly with minimal damage." The Tarahumara are able to easily run these extraordinary distances in their simple, huarache sandals without the help of cushion or support provided by the modern running shoe.

David W. Jenkins is an Arizona School of Podiatric Medicine professor and co-author of several research and lay articles about the controversy over modern running shoes. Jenkins suggests that McDougall's criticism of well-cushioned running shoes is three-fold: shoes constrict foot motion leading to muscle wasting; inhibit the ability of the feet to feel and adapt to the running surface; and they encourage an unnatural heel strike that increases damaging impact forces.

Concurrent with McDougall's advocacy of trail-running in old-style shoes, some shoe manufacturers began creating shoes that were as close to bare feet as possible. The most-recognized is likely the Vibram "Five Fingers," which is the shoe that MSC Steward Chris Rutz has worn in the Preserve for more than two



MSC steward Chris Rutz enjoys the feeling of going barefoot in the Preserve and can regularly be found running and walking the trails in his Vibram Five Fingers.

years. Rutz bought his first pair as a consequence of reading articles about barefoot running. He started wearing them during a fitness training program that combines high-intensity workouts, weight-training, plyometrics and shorter running efforts.

Today Rutz runs in the Preserve in that same pair for the simple reason that he loves the way they feel under his feet. "It feels like a foot massage," he says. "You feel everything along the way. You wake up the next morning and your legs are still tingly and happy; it feels really good."

Rutz succinctly describes his approach to running trails in these minimal shoes as, "like mountain biking in shoes." When you ride the trails on a mountain bike, you focus on the trail a few feet ahead of you. In the same way, says Rutz, when you run in these shoes, you are more careful about where you put your feet. For Rutz, the best trails feel like they are better groomed and made of decomposed granite like Tom's Thumb and East End, as compared to the trails that are predominately harder shale, like the Gateway Loop. "But I've run them all and enjoy all of them," he says.

While Rutz hasn't analyzed the changes in his gait in detail, this is an area Jenkins has researched. His research shows clearly that barefoot runners have a shorter and quicker stride and experience less overall ankle, knee, and hip motion. Some evidence supports the claim that barefoot runners have increased strength and size in the muscles of the foot, although there is no evidence that those gains result in reduced injuries or improved performance, writes Jenkins. At the same time, there

is no evidence that barefoot running increases injuries or inhibits performance, he continues. Some clinicians observed barefoot runners who acquired overuse injuries as a result of over-zealous enthusiasm. Similarly, many skeptics point to surface hazards like rocks and cactus that exist on the trails, but research does not find evidence that these hazards pose a greater risk to minimal-shoe wearers than to runners in more protective shoes. Avoidance is the key to staying healthy.

Rutz reminds everyone who is intrigued enough to try out the minimalist shoes to gradually build up time on your feet. "I walked around barefoot a lot before I started running in them, so my feet and calves were aware of being barefoot," recalls Rutz. He recommends starting off by walking in the house and building up to longer efforts for a couple months, first walking, then running a mile, and increasing from there.

But no matter what shoes you wear, say the experts, any time spent walking in the Preserve is sure to benefit your mind and your body. 🏃‍♂️

Nancy Howe is an MSC steward and part-time office manager. She holds a Master's Degree in Exercise & Wellness from Arizona State University.

Photos by: M. Jensen

Sources:

- 1 Gallup-Healthways Well-Being Index, Jan 2010
- 2 Gordy Megroz, *The Mental Game*, Runners World, Trails, 2011
- 3 Dr. Jerry Lynch, "Way of Champions" website, 2011.
- 4 David Jenkins, DPM, *American Academy of Podiatric Sports Medicine, Podiatry Management*, Nov/Dec 2010, www.podiatrym.com.

The Keys to MSC's Sustainability

By Melinda Gulick, MSC Board of Directors

The economic downturn has required organizations in every industry to shore up their foundations and evaluate their operations; nonprofit organizations are not immune. As MSC celebrates its 20th anniversary this year, we reflect on what we identify as the keys to our success in surviving and thriving in the new economy: focus on the mission, define our value proposition, solidify important partnerships and nurture valuable collaborations.

MSC remains committed to our mission to champion the completion and sustainability of the McDowell Sonoran Preserve for the benefit of this and future generations. We connect the community to the Preserve through public and private partnerships, environmental education and stewardship.

In order to fulfill our mission, we reflect on the value proposition of the McDowell Sonoran Conservancy: What is it that we do well, uniquely, that provides the most value for the appropriate amount of resources that our constituency supports and demands?

Answering this question strengthened our commitment to our core programs – the public hike program, pathfinder program, nature guides, volunteer recruitment and ongoing steward education, patrol, trail construction and habitat remediation, and building community awareness through outreach.



Community volunteers work together at a trail remediation project. Photo by: B. White



MSC steward Dan Gruber discusses the geology of the Preserve on a public guided hike. Photo provided by: McDowell Sonoran Conservancy

Our volunteer base has grown to more than 400 trained stewards. This year, they have spoken to some 30,000 people at trailheads and at community events, explaining the benefits of open space and our Sonoran Desert ecosystem. Stewards have led more than 3,400 people on educational hikes in the Preserve, many of them from schools or youth groups who are new to the Preserve. Stewards have patrolled miles of trails, and restored many acres of land.

As part of our value proposition, we carefully considered a new core program - the McDowell Sonoran Field Institute. The Preserve is a living classroom, and for many years our stewards, staff and donors have been interested in learning more about its geology and ecology. Over the years, we have actively assisted with studies led by the Arizona Game and Fish Department and the Arizona Geological Survey, and in 2009 stewards Dan Gruber, Larry Levy, Joni Millavec and Bill Ruppert co-published (with scientist Brian Gootee) peer-reviewed papers on the discovery of limestone in the Preserve that were accepted as Contributed Reports by the Arizona Geological Survey.

Therefore, in 2010, we were thrilled to establish the McDowell Sonoran Field Institute (MSFI), a forum for those interested in the ecology of the desert – from scientists to laymen – to discover, learn and share new information. The mission of the McDowell Sonoran Field Institute is to protect the McDowell Sonoran Preserve by advancing research in the natural, earth and social sciences by providing scientific information to guide management practices and educate the community; and by strengthening the community through lifelong learning opportunities. MSFI enjoys committed support from partner institutions including the ASU Global Institute of Sustainability, ASU School of Life Sciences, Arizona Geologic Survey, Arizona Game and Fish Department, Center for Native and Urban Wildlife, and the Desert Botanical Garden. We are delighted with the response to the Field Institute from our donors, partners and volunteers, and we are confident that adding this important component to our organization has already reinforced our strong foundation.

As a nonprofit organization, we rely entirely on individuals, corporations and foundations for our funding. With a very talented staff of only four full-time and three part-time nonprofit professionals, we rely on the time, talent and sometimes brawn of our army of stewards to accomplish our mission and deliver our programs. The McDowell Sonoran Conservancy does not receive any funding from the City of Scottsdale, the owner and manager of the McDowell Sonoran Preserve, or any other government funding.

Of significant value to the city, MSC provides most of the city's workforce in the Preserve through our trained volunteers, the stewards. Stewards have devoted nearly 30,000 hours of their time to the Preserve already this year, the equivalent of 15 full-time employees. The city employs three full-time people dedicated to the Preserve. Without MSC's contribution, a key component of our value proposition, the city might otherwise be required to expand their full-time staff to fulfill the work in the Preserve. MSC's work translates directly to savings for Scottsdale's taxpayers. While Preserve land acquisition and capital improvements like trailheads and access areas are funded by the dedicated Preserve sales tax, the general operations of the Preserve are funded from Scottsdale's general fund.

In 2010, with the leadership of the Mayor, City Manager and our Board of Directors, MSC solidified our long-term partnership with a Memorandum of Understanding (MOU), memorializing MSC as the city's primary partner in the Preserve. Approved by the City Council and signed by the Mayor on December 8, 2009, the MOU clearly defines expectations, roles and responsibilities, and includes opportunities for shared programming and planning. We are pleased and proud of our contribution to the city and the Preserve. Solidifying this key partnership demonstrates to our donors, stewards, and volunteers MSC's long-term role as the city's primary partner in the Preserve.

MSC enjoys other strong partnerships, such as the one with the residents of DC Ranch and the DC Ranch Community Council. DC Ranch is one of the Preserve's largest neighbors and is adjacent to its busiest trailhead, the Gateway. Its first resident, Don Ruff, was a member of the first steward training class – along with many other residents interested in the stewardship of the Preserve. Eight years ago, DMB and the DC Ranch Community Council (the organization at DC Ranch dedicated to community-building activities), launched the Tour de Scottsdale to benefit the McDowell Sonoran Conservancy. The event, highlighted by the Scottsdale Convention and Visitors Bureau as a signature event for the city, is a 70-mile bike race around the base of the McDowell Mountains. Since

The MSC public hike program has hosted thousands of Preserve visitors, teaching them about the many facets of Scottsdale's natural, living treasure. Photo by: M. Jensen



Preserve Commissioners Howard Myers and Jerry Miller join MSC steward Bernie Finkel and Board Chair Oliver Smith at the January Founders Day Event. Photo by: J. Fudala



Flora principal investigator Steve Jones (right) and MSC Research Project Coordinator Lesley Forst surveying plant life at the Marcus Landslide on a McDowell Sonoran Field Institute research outing. Photo by: M. Jensen

its founding, the Tour de Scottsdale has raised more than \$65,000 and introduced more than 7,000 cyclists to the McDowell Sonoran Conservancy and the Preserve. Today, DC Ranch regularly features articles about the Preserve in their monthly newsletter, holds fundraising benefits for MSC and includes MSC programs in their weekly e-blast. MSC has facilitated this partnership over the years, attracting countless volunteers, advocates, donors and friends from the DC Ranch Community.

MSC has forged collaborations with other local communities and organizations like Legend Trail, McDowell Mountain Ranch, Troon North, and the former North East Scottsdale Property Owners Association (NESPOA). We partner with local nonprofit organizations and civic organizations, schools and hiking clubs, and small and large business owners. In all, these collaborations have ensured that we stay focused and sustainable.

Thank you for your support of MSC. We are proud of the work we have done to align our operations with the new economic reality by focusing on our mission, carefully considering new programs, defining our value proposition, solidifying our partnerships and nurturing important collaborations. We are committed to our mission, our partners, the Preserve and our community – and we'll be here for generations to come. 🌵

What to do as a Family in the McDowell Sonoran Preserve –Take Photos!

Photographs are a great way to capture the fun activities and special occasions that families share together. Chances are you probably have dozens of photo albums in your home right now filled with memories of birthdays, first days of school, weddings, sports games and much more.

Next time you visit the McDowell Sonoran Preserve, be sure to bring your camera. Hike with a goal in mind: perhaps a historical site or a beautiful vista, and when you reach your destination, take a photograph in celebration of your achievement. The mountains and uniquely rich natural surroundings are the perfect backdrop for smiling faces in the outdoors – and you might get lucky and see a desert critter that you can get a snapshot of too while you're there!

When you return home, enjoy your photographs and share them with friends, family and MSC on Facebook!

How to Post a Photo to the MSC Facebook Page

1. Go to www.facebook.com/mcdowellsonoranconservancy
2. Click the “like” button if you haven’t already!
3. Click “Photo” above the status update bar.
4. Select “Upload a Photo” to add an image from your computer.
5. Add an option caption in the text box to describe your photo to other MSC Facebook fans.
6. Click “Share.”
7. Celebrate! You have successfully posted a photo!

Questions about Facebook and other social media tools? Let us be your resource! Contact Lesley at 480-998-7971 ext. 105, and learn how to post your question on our wall.



Photo by: S. Molina



Photo by: T. Parsons

2011 Focus on Conservation Photography Events

Exhibit Opening

Saturday and Sunday, October 1 & 2, 2011

DC Ranch Market Street

9 a.m. – 2 p.m.

This is the first opportunity for the public to see the beautiful photos that have been chosen to be part of the 2011 Focus on Conservation traveling photography exhibit. Don't forget to vote for your favorite photograph while you're there! The opening of the exhibit takes place in conjunction with two events of the 8th annual Tour de Scottsdale: the MSC Walk, Run & Roll Family Fun 5K on Saturday and the Tour de Scottsdale on Sunday. The exhibit will be open in the afternoon hours to ensure that you can participate in all of the events throughout this fun weekend!

Exhibit Closing Reception

Thursday, October 27, 2011

DC Ranch Market Street

5:30 p.m. - 7:30 p.m.

Come and meet the talented artists of the traveling photography exhibit at Market Street before the photos are off to the next venue! The highly anticipated announcement of the Best of Show, Youth Best of Show and the Fan Favorite winners will take place. Bring your friends and family, enter the raffle and enjoy music

provided by the Tetra String Quartet. Tetra is a string quartet founded by four young professional musicians who teach and perform in the greater Phoenix community. Tetra strives to infuse life into the community through chamber music. This promises to be an enjoyable evening of conservation and celebration.



All exhibit events are open to the public. A \$20 donation honoring MSC's 20th anniversary is suggested. For more information, contact Molly at 480-998-7971 ext. 102. Can't make it to the Tour de Scottsdale or the closing reception? Don't worry! The photography exhibit will be open for viewing on three Thursdays during the month of October from 6 p.m. to 8 p.m. Mark your calendars for October 6th, 13th and 20th. We look forward to seeing you there! 📸



Preservation Partner Profile: REI



Of the many partners MSC works with throughout the year, one of the strongest partnerships we enjoy is with REI. MSC and REI share a core purpose: we both want to ensure that the next generation has a connection to the natural spaces we all enjoy today and tomorrow.

Since 2007, MSC has worked with REI on youth and family education programs, conservation stewardship programs, and special events for outdoor enthusiasts. In addition to providing funding for our work, REI has helped encourage new people to come out and enjoy and protect the Preserve. For years, REI hosted *Backpacker Magazine's* "Get Out More" Tour program hosts Sheri and Randy Propster on a hike led by MSC stewards in the Preserve. REI has also encouraged its members and staff to work on community service projects in the Preserve, and encouraged shoppers to learn more about the Preserve through MSC workshops held at their Paradise Valley store.

REI's passion for the outdoors runs deep. Their core purpose is to inspire, educate and outfit people for a lifetime of outdoor adventure and stewardship. REI is committed to getting people outside and leading healthy active lives, caring for our planet by protecting shared natural spaces and engaging others in making a difference. It is how REI operates their stores, finding ways to improve the environmental performance of their business, while they strive to generate positive environmental, social and financial results. REI employees play an important role in these efforts through volunteering for service projects, recycling,

identifying opportunities for efficiencies in operations and much more.

What began as a group of 23 mountain climbing buddies is now the nation's largest consumer cooperative with more than three million active members. But no matter how large they grow, REI's roots remain firmly planted in the outdoors. Their passion for outdoor adventure is clear, and their commitment to conservation is unwavering. Thank you REI!

REI helps MSC celebrate National Trails Day June 4, 2011!

National Trails Day celebrations are held nationwide to encourage all Americans to get outside and experience, appreciate and celebrate the natural places in our community. This year MSC also celebrated 20 years of preserving our mountains and desert! Held at the Gateway trailhead, visitors learned more about the human history of the McDowell Mountains on a hike led by MSC Pathfinder stewards, and enjoyed family games and activities exploring summer in the Preserve hosted by MSC Nature Guides.

MSC also had a great volunteer crew pick up litter, pull weeds, and help with basic trimming of the roadway and trail along Thompson Peak Parkway north of Bell Road. MSC trail crew leaders worked with small groups of volunteers on this project to mitigate damage caused by development. 🗑️

Volunteers from REI joined members of the community and MSC stewards to assist with MSC's National Trails Day celebrations on June 4th at the Gateway trailhead. In addition to a public hike on the Gateway Loop and family activities hosted by the nature guides, these individuals worked along Thompson Peak Parkway to beautify the landscape around the entrance of the Preserve's most popular access area. Photo by: D. Bierman



McDowell Sonoran Society

MSC Lifetime Members and members of the McDowell Sonoran Society, whose annual giving to our organization exceeds \$1,500, provide the critical support needed to help the McDowell Sonoran Conservancy carry out our work!

Members have the opportunity to enjoy special hikes, attend lectures and briefings by experts on environmental issues, and join guided trips to areas of our region that have particular beauty and ecological importance. This year we enjoyed a birding walk with *Arizona Republic* columnist Jim Burns and saw how Frank Lloyd Wright supported preservation on a behind-the-scenes tour of Taliesin West led by senior Taliesin architect Arnold Roy. We celebrated MSC's 20th anniversary with a community breakfast and enjoyed astronomy, Arizona history and cooler temperatures during a September excursion to Payson. Upcoming Society events are featured in the Activities section of the MSC website.



Members of the McDowell Sonoran Society and other friends of MSC attend a special event at the Gateway trailhead. Photo by: D. Bierman

Through the dedication of our McDowell Sonoran Society and Lifetime members, the McDowell Sonoran Conservancy protects our area's open spaces, provides educational programs for people of all ages and advances the conservation agenda.

IRA Rollover

In 2010, the President signed a retroactive extension of the IRA Charitable Rollover. If you are 70½ or older and looking to save on your taxes for 2011, take advantage of the IRA Charitable Rollover Extension to make a tax-free gift to MSC up to \$100,000.

Your generosity helps protect land and in return, your donation helps you meet the minimum IRA distribution requirement and saves you taxes on the income. Even if you do not itemize your taxes you may take advantage of this rollover.

Make a gift between now and December 31, 2011, and treat it as a 2011 donation while satisfying the minimum IRA distribution for the 2011 tax year.

Ask your tax advisor whether this tax provision is beneficial to you. Funds must be transferred directly from your qualified traditional or Roth IRA to MSC to receive the tax benefit. For information call Linda Raish, Community Development Director at 480-998-7971.

MSC Receives Google Grant



On May 18, 2011 the McDowell Sonoran Conservancy was awarded a Google Grant for free Google AdWords advertising. MSC's ads are displayed alongside related search results on

Google.com, and when people click on the ad, they are taken to MSC's website. The Google Grant award has helped the McDowell Sonoran Conservancy spread the message of its mission to the public and inform, engage and connect with its constituents. Look for us on the right hand side of your screen when you are Google searching! 🗑️

Join Our Circle of Friends

As a community member who values the outdoors, and specifically the Sonoran Desert, you understand the importance of preserving and maintaining open space now to ensure its availability in the future. This shared appreciation of the desert is why we are inviting you to join us today as a Friend of the Preserve... by returning the membership form below.

Yes!

I want to help preserve my desert and mountains by joining MSC's Circle of Friends.

- McDowell Sonoran Society (\$1,500+)**
 Steward Circle (\$1,000) Trailbuilder Circle (\$500) Caretaker Circle (\$250)
 Pathfinder Circle (\$100) Hiker Circle (\$50) Other _____

Please charge my credit card A check is enclosed
 Credit Card # _____ Expiration Date: _____

Name as it appears on the card _____

Name(s) by which you would like to be acknowledged _____

Address _____ Email _____

Phone _____

I would prefer that my gift remain anonymous

From: McDowell Sonoran Conservancy <info@mcdowellsonoran.org>
Subject: Your Electronic Mountain Lines – Summer 2011
Date: July 5, 2011 3:10:26 PM MST
To: MSC Supporter

Hello Everyone!

Thank you for going green with MSC this summer!

Your friend,
McDowell Sonoran Conservancy

Tour de Scottsdale Kick-Off Party

The DC Ranch Community Council launches the Tour de Scottsdale Kick-Off Party on Wednesday, July 20, at DNA Cycles in north Scottsdale from 5 p.m. to 8 p.m. At the Kick-Off Party, you can meet pro riders and past Tour racers, register for the Criterium, 30-mile mini-Tour, or 70-mile Tour at reduced rates, and preview the latest cycling gear. Come and join fellow cyclists amid the excitement of the final days of the world's best-known cycling event, the Tour de France!



Photo provided by: DC Ranch Community Council

WHAT: Tour de Scottsdale Kick-Off Party

WHO: Cycling enthusiasts and Tour de Scottsdale volunteers

WHEN: Wednesday, July 20, 2011; 5-8 p.m.

WHERE: DNA Cycles
7077 E. Mayo Blvd. Suite 100
Scottsdale, AZ 85054
(101, just south of Scottsdale Road)

WHY: Get in gear and start training for the Criterium and the Tour's 30-mile and 70-mile races; receive discounted race registration rates; learn about volunteer positions and Tour-related fundraising opportunities. Party host DNA Cycles will offer store specials throughout the evening.

FREE

GOODIES: Enjoy light appetizers and beverages. First 100 Kick-Off Party attendees will receive swag-filled goodie bags.

RACE

DATES: Criterium: Saturday, September 24, 2011
MSC Walk, Run & Roll, Saturday, October 1, 2011
Tour de Scottsdale, Sunday, October 2, 2011