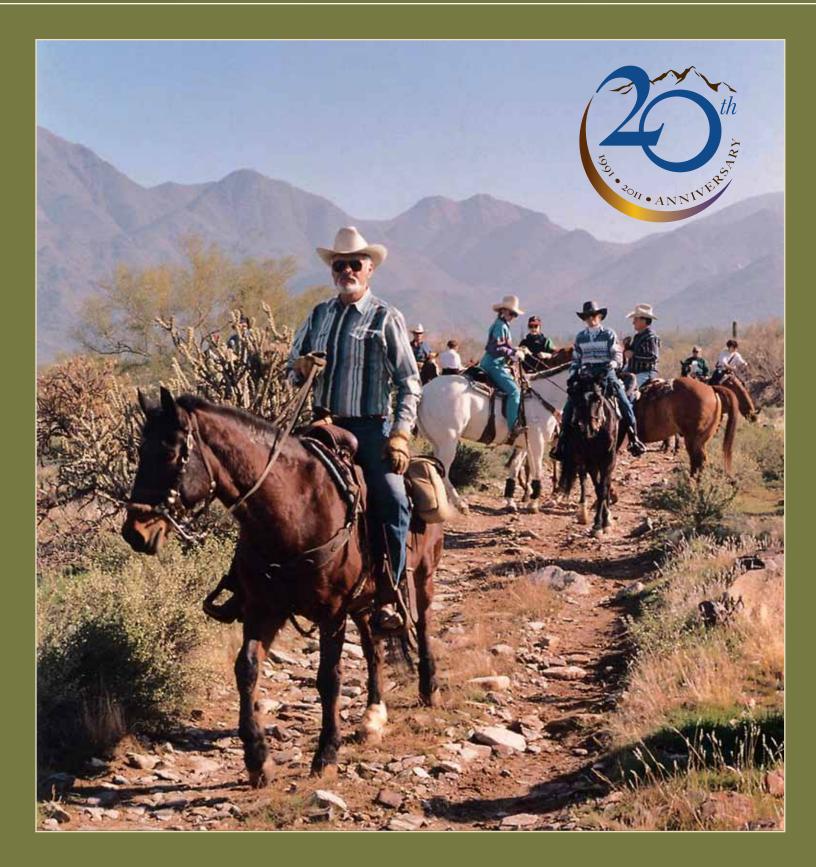


Mountain Lines

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Chairman's Column...



Oliver Smith, McDowell Sonoran Conservancy Board of Directors MSC: Celebrating 20 years in Scottsdale...

We have accomplished so much in the past 20 years... with more than 450 volunteers, an agreement with the City of Scottsdale creating service responsibility for the Preserve, and a strong and diverse Board of Directors; I look forward to what we are going to accomplish in the next 20 years!

To ensure a strong McDowell Sonoran Conservancy, the MSC Board of Directors recently completed a strategic planning process. This plan will ready us for growth opportunities that we anticipate with the opening of the Tom's Thumb Trailhead, the acquisition of 2,000 acres north of Dynamite, the opening of the access area at Alma School Road and potentially receiving service responsibility for an additional 14,000 acres. All of this will get us that much closer to our goal of completing the Preserve.

During my year as chairman, I am particularly interested in one tactic of the plan: "Building bonds with community stakeholders, leaders and groups through ongoing communication, outreach and education to raise MSC's visibility and credibility as the champion of the MSP." My hope is that the community will recognize the McDowell Sonoran Preserve as a living treasure and MSC as the community's best resource for the Preserve.

In celebration of our 20-year anniversary, I invite you to join us in the Preserve. We plan a season of discovery with dozens of events planned throughout the year to celebrate this unique natural wonder. For a calendar of anniversary events, turn to page 15 or visit the "Activities" page of our website at www.mcdowellsonoran.org. Discover the Preserve through a lecture, explore the Preserve on a hike, and help us protect the Preserve through a community service day.

See you on the trails!

Oliver



Photograph by: D. Bierman

Cover Photo: Taken March 4, 1995 at an event called "Last Chance Windaate Ride" across Windaate Pass, with snacks at the mountain spring and a catered lunch at the windmill on the east side of the mountains. The fundraiser provided an opportunity for riders to see the interior of the mountains and Windgate Pass, with funds supporting land acquisition. Donors received two tickets to the Mountain Ball that featured Senator Barry Goldwater as the auest speaker, as well as Marshall Trimble and Mayor Herb Drinkwater. The ride was led by then-MSLT Chairman Bill Ensign (featured in photo). Prior to serving as MSC's chair, Bill headed up the City of Scottsdale's Parks and Recreation department. The event was a part of McDowell Mountain/Sonoran Desert Week held Feb 27-March 5, a precursor to our current McDowell Sonoran Month that now has become a season of celebration!

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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.

Mountain Lines

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Creative design donated by Debra Doss

20 Years and Growing... Protecting our Mountains and Desert

Trail counters in the Preserve: tracking usage trends

By Deke Joralmon, MSC Research Program Chair and McDowell Sonoran Preserve Commissioner

Trail counters located on the perimeter of Scottsdale's McDowell Sonoran Preserve document the number of people using the Preserve for passive recreational activities. The program began in 2005 with the first counter being installed at the Sunrise Trailhead. Other counters were installed as additional trails were built and other access areas opened. Thanks to a grant by the MSC, eight more counters have been purchased and given to the City of Scottsdale (COS). These counters will be placed at some of the minor Preserve access areas and on the trails leading away from the Gateway Access Area.

The counters use a beam that records a count each time the beam is broken. The COS Preserve staff collects data from the counters about every three weeks. The total number of counts is





Trail crews install trail counters. Photographs by: D. Joralmon

News & Notes

Land Donation Adds to the Preserve

MSC recently accepted a gift from Jack Evans of 5.92 acres within the boundary of the McDowell Sonoran Preserve. Valued at just under \$184,000, the parcel was zoned as developable land and considered valuable open space. The property will be transferred to the City of Scottsdale during an upcoming City Council meeting. McDowell Sonoran Conservancy Chairman Oliver Smith says this donation is an example of how MSC is a valued partner with the City of Scottsdale. "Through gifts of land to MSC that we are then able to donate to the City of Scottsdale, our public/private partnership helps complete the McDowell Sonoran Preserve.

Preserve Up Close

- divided by two (figuring that one person comes and then goes) to provide a final number. These numbers are kept in a data sheet that tracks use by month, year and access area. A simple look at the numbers indicates how use of the Preserve is significantly increasing.
- The new counters are somewhat more rugged in that the reflector used to align the beam with the counter is now housed in a protective covering. This was done in an effort to reduce vandalism, prevent false readings and provide weather protection. In the future, additional counters may be placed within the interior of the Preserve to ascertain use patterns on more remote sections of the trail system.

The data is used for promotional purposes, obtaining grants and determining staffing requirements for Pathfinders during the high season. Scott Hamilton, COS preserve planner, spoke about the value of the data provided by the counters. "The trail counters allow us to track the total number of people entering the Preserve and to track trends in the use of the Preserve. The data is helpful in deploying appropriate resources for the maintenance and operation of the Preserve, and will be very useful in the long-term management of the Preserve." 🖑

A simple look at the numbers indicates how use of the Preserve is significantly increasing.

Connect with MSC through Facebook

As MSC looks ahead to the next 20 years of increased awareness, public education and stewardship on an even grander scale than today, there are innovative tools that will assist us in reaching our institutional goals and pushing them to the limits. Facebook, started only six years ago, was created with the purpose to connect the world. We encourage you to visit and "like" the MSC Facebook page and keep up with all that is happening in the Preserve!

Featured Program: Preserve Construction and Maintenance, Past and Present

Stewards helped shape Preserve "Because we love the land."



By Steve Dodd, MSC Steward and Community Relations program chair

As he often did, Chet Andrews was hiking in the Lost Dog area on a beautiful fall day back in 1998 when he encountered "a fella with a big plastic bag, going along the trail, picking up trash." With curiosity aroused, Chet stopped him to visit and find out more about what he was doing. The "fella" explained he often hiked in the area, and took along the bag to pick up litter and keep the trails looking nice.

Never one to pass up a sales opportunity, Chet explained he was a volunteer with the McDowell Sonoran Land Trust, and that the group had just sched-

uled its first stewardship class for people interested in taking care of the desert, and that he ought to sign up. As a result, Art Agosta became the very first person to sign up for the very first steward class.

> Art was among 22 people in that first class of stewards, many of whom are still active today among the now nearly 500 McDowell Sonoran Conservancy stewards. Easily recognized by their well-known blue shirts, today's stewards still do many of the things those first stewards did, along with much more.

"I have to give credit for the initial concept of stewards to Carla (MSC's first executive director) and her brother Greg Woodall," explained Chet. "The idea was based somewhat on knowledge we had gained from the Land Trust Alliance. We knew the City of Scottsdale wouldn't have money for rangers for a long time, so we developed a plan to train volunteers to take care of the land."

Photograph by: M. Jensen

Carla, Chet and Scottsdale Preservation Director Bob Cafarella, now retired and an active steward himself, along with a group of volunteer experts, handled much of the teaching during the early years. Classes were

volunteer experts, handled much of the teaching during the early years. Classes were taught through Scottsdale Community College.

Today's stewards still build and perform maintenance on trails, lead hikes and patrol the Preserve just as early ones did. But today, not only is there considerably more land to maintain, steward duties have expanded to providing information at trailheads, being nature guides, patrolling by bike and horse, giving presentations to the public, recruiting volunteers, working in the office and a host of other tasks necessary to keep the organization growing. And stewards themselves, many of whom have become experts in their own right through the years, today handle much of the teaching load for new steward classes.

But one thing for sure hasn't changed in all that time.

"We all do this because we love the land and want to protect it for future generations," explained Chet. "That hasn't changed, and it never will."

Sometimes a rocky road and a prickly situation

By Joni Millavec, MSC and Steward Construction and Maintenance program chair

When the first trail construction and maintenance program started back in 1996, there weren't any formal guidelines or instructions to follow. Chet Andrews teamed up with Bob Cafarella to teach a small band of volunteers how to build a trail and maintain it. Within the first year of the program's genesis, they had recruited nearly 90 volunteers to help do this tough, dirty, but satisfying job.



Early trail project. Photo courtesy of MSC.

The construction and maintenance program became more formalized with the creation of a monthly Projects and Activities Calendar, first published in December 2002. Trail building participants signed a sheet each time they volunteered, and many of those early participants are still active members.

Jerry Miller, a longtime steward and current chairperson of the McDowell Sonoran Preserve Commission, became the first trail chair in 2003. Many volunteer trail builders can remember Jerry swinging his pickaxe to help loosen a boulder or a large cholla cactus to move them out of a trail's path. I took over after Jerry moved on to other causes in 2006.

Trail demands expand

Over the years, many projects have remained the same in scope and demand. For example, there will always be trash to clean up and signs to repair or replace. Cactus will continue to need planting or relocating. But as time has passed, we've added substantially to our skill set. We've learned how

> to build and maintain an effective drain dip and move a big prickly cholla without covering ourselves in cactus thorns. We know how to close an unauthorized trail using natural materials to create a physical and psychological barrier. We know the difference between a Pulaski and a McLeod tool.

We helped build and groom most of the trails and trailheads in the Preserve: Sunrise, Lost Dog, Windgate, Bell Pass, Tom's Thumb, Gateway Loop, Bajada and Gateway. Stewards built much of Ringtail and all of Paradise and Lookout trails by hand. Much of our expertise has been gained with the help of classes conducted by Preserve staff Claire Miller and Scott Hamilton. Their knowledge of trail building and fundamental engineering techniques has been invaluable.

As the quantity and scope of the projects has grown, so too have the

abilities and numbers of trail stewards. From 90 stewards in 1996, we have grown to 193 today. In fiscal year 2004, trail construction and maintenance completed 88 trail projects totaling 1,578 steward hours. In fiscal year 2010, we finished 123 projects totaling 4,093 hours.

There is a special camaraderie within the trail crew and that is thanks to COS Preserve management Claire Miller and Robbin Schweitzer, who guide us with a friendly and positive hand. We work as a team and depend on each other. We laugh a lot and complain only a little. We all feel incredibly lucky to be able to work in and care for our Preserve. 48

Looking Back and Moving Forward: MSC, Scottsdale and the McDowell Sonoran Preserve

"Nature is loved by what is best in us." Ralph Waldo Emerson

By Barbara Pringle, MSC Steward and MSPC Promotions committee member

Nothing monumental was going on in the wider world on Saturday, November 17, 1990. The movie "Rocky V" was released. Former fans of the pop group Milli Vanilli signed petitions denouncing the duo after they admitted to not really singing on their hit debut album. A report was released urging Americans not to eat so much animal fat.

But in a conference room at Scottsdale's Mustang Library, some thing enormous was occurring that would have far-reaching consequences for Scottsdale citizens and indeed, the entire Phoenix metropolitan area. A small group of dedicated open space advocates met and formed a non-profit group they called the McDowell Sonoran Land Trust (MSLT), a precursor to today's McDowell Sonoran Conservancy (MSC).

As we mark two decades since MSC's founding, we tip our hats to some of the pioneers who invested their time, heart and treasure to help create what many view as Scottsdale's crown jewel: the beautiful McDowell Sonoran Preserve. Some of these people are well known, while others worked quietly behind the scenes. While space limits us from mentioning everyone who played a role in creating the Preserve, we know they all have had one thing in common: an abiding love for the land and a passion to preserve it for future generations.

The early advocates

Scottsdale activist Jane Rau, then fondly known to city leaders as the burr under Scottsdale's saddle, was in that November 17 meeting and became co-founder of MSLT. "After introducing ourselves we knew we had a lot to accomplish. It was decided our purpose was to preserve the McDowell Mountains and surrounding Sonoran Desert," Rau recalls. Her work continues today. At 88 years young, she is often found in her beloved Preserve, planting cacti or spreading cholla balls to discourage Preserve users from going off trails and trampling the desert. In helping to create a formal organization to advocate for creation of the Preserve, Rau joined a number of tireless advocates.

One of those was Carla, who grew up in south Scottsdale and often joined her brother Greg Woodall to explore the rugged McDowell Mountains. But as development rolled relentlessly northward, Carla and Greg became alarmed at their disappearing nature playground and took action. Carla joined the fledgling MSLT and became an outspoken advocate for a citywide preservation tax. She grew to be a public policy expert, served as MSC's Executive Director and continues to work tirelessly as a member of the McDowell Sonoran Preserve Commission (MSPC). "Carla is a great example of the impact that one individual can have on a community," said Scottsdale's Mayor Jim Lane.

Art DeCabooter, former chair of MSPC and past president of Scottsdale Community College, was another trailblazer. "In many ways the inception of preservation had its genesis with Scottsdale Visioning and I had the opportunity to serve as chairperson for the plethora of citizens who participated in this future thinking," he explains. "One of the four main topics embraced through this process was preservation. The facilitator for this undertaking was Vern Swaback (a noted Phoenix-area architect), and I regard him as a premier founder of the resulting preservation efforts."

Chet Andrews is a name some may not have heard, but he was there at the beginning too. In the 1980s, Chet was an engineer working for the Salt River Project and an Arizona Mountaineer who loved climbing the McDowell Mountains. He too saw the development creeping into his beloved mountains and knew something had to be done to save them. He became a member of the MSLT and grew concerned about the fact that, as he told writer Cynthia Lucas, "the whole area is owned by a variety of entities with varying degrees of control and protection." Andrews had a brilliantly simple solution: partner with the City of Scottsdale (COS). He told the Scottsdale Progress Tribune columnist Lois McFarland in 1993 that, "we are working with the city in hopes that the entire mountain range can become a city-managed preserve." Andrews added, "Our goal at MSLT tied into Scottsdale's visioning process and we found that we needed each other."

Scottsdale's equestrian community got involved in the Preserve effort. Betty Drake, a past City Council member and dedicated equestrian, looks back two decades. "My concerns were that the growth of master-planned communities would dramatically change the character and recreational



Stewards celebrate Preserve tax victory.

potential of our desert areas and mountains. Trails were pretty informal and access was sometimes cut off as development occurred. Construction of new public trails was politically difficult because of homeowner objections," she recalls.

Scottsdale votes and the Preserve takes shape

The 1993 formation of the McDowell Sonoran Preserve Commission marked a big step forward for Scottsdale. Five MSC board members were appointed to the nine-person commission. Initial Preserve boundaries were defined and efforts were begun to ask Scottsdale citizens to approve a



tion tax was significant.

sales tax increase of 0.2 percent over 30 years to purchase Preserve land.

Then-Mayor Herb Drinkwater was an enthusiastic Preserve booster. He wholeheartedly supported the efforts of people like Jane Rau and Carla, recollects his daughter, Jamie Drinkwater Buchanan, because he knew "it took

the Preservation Party in 2002. lots of voices speaking out and advocating preservation to make it a reality." In one of his "State of the City" addresses, Buchanan recalls her father saying that he hoped Scottsdale's citizens would vote to tax themselves to save the McDowell Mountains as a preserve for future generations to enjoy, thereby making Scottsdale what he called a true jewel of the desert. Because he was such a beloved figure in Scottsdale (retiring with a 96% approval

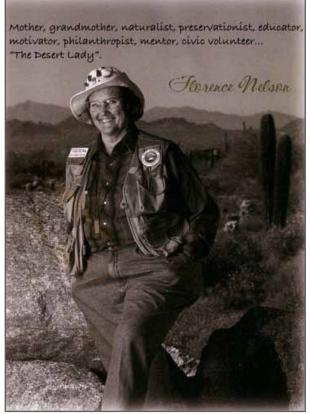
The equestrian community came out strongly in support

rating!), his support for and influence on the first preserva-



Windgate Ride, 1995 Photos courtesy of MSC

Mountain Lines 6



Florence Nelson was an early advocate of open space preservation. Photo courtesy of Jerry Nelson

of what became known as Proposition 400. Jean Anderson, past president of the Arizona State Horsemen's Association, recalls her early service on the equestrian trails committee. "I was very enthused about the idea of the Preserve and that there would be trails to use by equestrians. But I was con-

cerned that the COS could not get the majority of its citizens to support the idea of the Preserve," she says.

Indeed, while many advocated the passage of Proposition 400, there were naysayers. In its published publicity pamphlet, some of these arguments were laid out:

- "What has happened to fiscal responsibility in Scottsdale? The City Council is proposing to give the McDowell Sonoran Preserve Commission anywhere from \$240 million to \$1.3 billion to freely spend over the next 30 years to buy land for a mountain park."
- "There is a 26,000 acre McDowell Mountain Regional Park adjacent to the land the City wishes to buy. We already have access to hiking, horseback riding and picnicking in that area."
- "If the goal is to protect the mountains, and not build a park, why are we buying all the desert and valley land in addition to the mountains?"

Happily for Preserve supporters, May 23, 1995 was a good day, as 58 percent of Scottsdale voters said yes to Proposition 400. This was to be just the first of six votes put to the citizens concerning Preserve-creation efforts. All passed with comfortable margins, proving that Scottsdale citizens were unswerving in their commitment to making the Preserve a reality.

If we build it, they will come

As land was acquired, access became the issue. While the Preserve was envisioned to be a place of passive recreation and limited facilities, the citizen's sizable financial contribution created an obligation for access to the land.

Access meant trails. So, in 1996, the first trail building and maintenance program was started in concert with COS staff. Within the year, nearly 90 volunteers were recruited and eventually cleared a 5-mile trail available to hikers, equestrians and mountain bikers. The trail debuted as the Cactus Cup bike race in March 1996. Today parts of that trail are integrated into the Westworld and Taliesin trails.



Gateway Groundbreaking Ceremony. Pictured from left: Len Marcisz, Carla, Betty Drake, Jamie Drinkwater Buchanan, Mayor Mary Manross, Art DeCabooter, Jane Rau; On horse: Tony Nelssen.

In the fall of 1998, MSC launched the first Preserve steward class in partnership with Scottsdale Community College. That first class included Dick Rosler. "I retired in 1998, and with my love of hiking, the timing was just right for me to get involved with MSC by taking the first steward class in October 1998. A few of us from that first class are still active stewards, including me and Tom Walsh, who prides himself on having worked on every trail within the Preserve."

Today

MSC today looks little like the small band of visionaries who met in the Mustang Library nearly 20 years ago, yet the goals and efforts remain consistent with Jane Rau's comments back then: Protect and preserve the McDowell Mountains and the surrounding Sonoran Desert. MSC's vibrant steward community contributed more than 42,000 hours in fiscal year 2009-2010 to the City of Scottsdale. This is the equivalent of \$880,000 of labor. Stewards put in more than 4,000 hours building and maintaining trails so that over 2,000 participants could enjoy one of the 72 guided-hike experiences offered this past year. The Preserve's Pathfinders greeted 53,000 of the 250,000 visitors drawn to the trails and associated Preserve programs.

Scottsdale is being noticed around the country. According to a recent article in The Arizona Republic, the city ranks among

the nation's leading cities for parks and preserve land. "The city is fourth in per capita parkland behind Anchorage, New Orleans and Virginia Beach, Va., according to a Trust for Public Land report. About 13 percent of the land area of Scottsdale is set aside for parks and preserve. The national median for low-density cities is 5.8 percent," notes the report.

"It's incredible how far we have come in the past 20 years. The credit goes to all the hardworking volunteers who came together in an unselfish pursuit to protect our



Sue Livingston at the Parada del Sol.

incredible McDowell Mountains and surrounding desert from development," says Brent DeRaad, executive vice president of Scottsdale Convention & Visitors Bureau. "It's difficult to overstate MSC's role in getting us to this point."

Tomorrow

What will the Preserve look like in 20 years? The challenges are certainly not over. As this area continues to grow, more people will access the Preserve and more work must be done to keep it as pristine as possible. Monitoring and repairing impacts to trails and other areas within the Preserve will likely become key focuses of MSC volunteers. The recently created McDowell Sonoran Field Institute can help bring a rigorous scientific approach to these efforts.

But above all, 20 years from now, lovers of the McDowell Sonoran Preserve want to look out and see the Preserve completed, with the land secured into perpetuity. That would make Herb Drinkwater's family very happy too. "Dad battled cancer for 18 months and ultimately lost the good fight in December of 1997," says his daughter Jamie. "Most of the time he was so positive and sure he would lick the 'Big C', but in a quiet moment towards the end, he told me, my mom and my brother that if he didn't make it, he wanted to be buried at Paradise Memorial Gardens in north Scottsdale with a clear view towards the McDowell Mountains that he loved so much. We made sure his wish was honored." Let's do our part, too, so that we honor Mayor Drinkwater and all those who have loved and fought so long and so hard to preserve this land. 🖑



Herb Drinkwater



Barry Goldwater signing a photograph auctioned at the inaugural Mountain Ball

Thanks for 20 years of support

For the past 20 years, MSC has been relying on support we receive from Perhaps the most the business community to protect the McDowell Sonoran Preserve. significant sup-One of the first companies to step forward was APS, and they continue port received. to support us as a Preservation Partner today.

Jane Rau, one of MSC's founders, knocked on the company's door in 1991 seeking funds to launch our fledgling group. APS became MSC's first major donor, supplying the seed money that got the organization up and running. For a while it offered to match other contributions to the then-McDowell Sonoran Land Trust. At another time it co-sponsored the black-tie Mountain Ball, an early fund-raising event.

In 2006, the company made a considerable donation to help MSC furnish our office that opened in that year. In 2008, the company once again provided considerable support—this time a four-year pledge to generations have long been part of APS' strategic priorities. support MSC youth education programs. And every year since we started our employee community service days, APS employees have made MSC appreciates the ongoing support we receive from Preservation themselves available for work projects in the Preserve. In all, they have Partners like APS! For more information or to become a Preservation provided service hours valued at more than \$7,500. Partner, please contact Linda Raish at (480) 998-7971.

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	Molly McCarthy: I am or New Hampshire. I discov center. I was lucky enoug then went on to work as and family about my new I could not be more excit	ered my love for gh to get to train a Development Ass v job at MSC, even

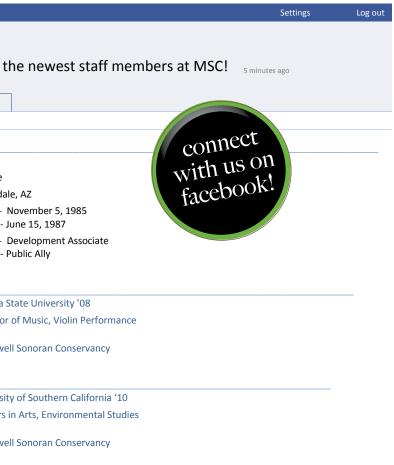
Lesley Forst: I am a native of Phoenix, Arizona and grew up hiking, playing and exploring in the desert. My love of nature influenced me to study Environmental Studies in school and pursue a career in the field. The Preserve has existed for the great majority of my life and without the opportunity to enjoy the desert my life would have been very different. I am so proud to be part of a community that cherishes its natural environment and works to protect it. During my 10-month apprenticeship at MSC through the Americorps Public Allies Program, I will focus on distributing messages about conservation and MSC to the community and helping to develop scientific research opportunities in the McDowell Sonoran Preserve, Remember to "like" us on Facebook and follow on Twitter



Preservation Partner Profile

though, is an opportunity provided through the City of Scottsdale Preservation Office and the APS Forestry Council. On multiple projects over two years, MSC stewards led volunteers along a 15-foot corridor beneath eight miles of APS power lines that stretch diagonally through the McDowell Sonoran Preserve. There, volunteers salvaged native plant material and replanted them a distance from this corridor.

APS is committed to minimizing its impact on the environment and embracing a leadership role in nurturing Arizona's growth in an environmentally responsible way. Just as MSC is focused on a sustainable community, a healthy environment and strong community for future



las. Texas but prior to moving to Arizona in 2006 I lived on the east coast of Florida, and in Concord. fundraising prior to my graduation when working as a Student Supervisor of the ASU Annual Fund call and coach my peers to raise money and make a positive impact on the present and future of ASU. I ssistant for The Phoenix Symphony, providing support for their fundraising efforts. When I told friends veryone told me that this organization is growing and is made up of dedicated and amazing volunteers. of this community!

Ask an Expert

Stevan R. Earl, Anthony J. Brazel, Winston T. L. Chow, Darren M. Ruddell Central Arizona Project Long Term Ecological Research, Arizona State University

Twenty years of Climate Change in the Phoenix Metropolitan Area and McDowell Sonoran Preserve

Urban heat island driving up nighttime temperatures

Global climate change has been among the forefront of headlines and political discussions for the better part of a decade. Largely lost among the discourse and rhetoric, however, is general agreement among climate scientists that changes in climate are occurring at multiple scales, and that changes at local and regional scales may overshadow global patterns. Indeed, while the International Panel on Climate Change (IPCC) reports that global average surface temperature rose 1.3°F between 1906 and 2005, annual minimum temperature has increased by up to 7.6°F in urban areas and up to 2.3°F in rural areas of central Arizona during the 20th century. The rapid growth of the Phoenix Metropolitan area over the past 60 years has altered weather and climate patterns within the city and surrounding area in many ways, but the most noticeable change is a substantial rise in minimum (nighttime) temperatures due to an effect called the urban heat island (UHI). Long-time Phoenix-area residents may remember a time when late evening and nighttime hours brought noticeable relief and air conditioners fell silent even during the hottest days of summer. Over time, minimum temperatures have risen considerably as native desert and irrigated agricultural land have yielded to urban development. The stark change from natural desert surfaces to urban landscapes alters several surface physical properties as concrete and asphalt surfaces trap and store much more heat energy than natural surfaces, and release the stored energy at slower rates. As a result, nighttime temperatures are higher in the city relative to surrounding areas that are less developed. Daytime temperatures in the city are more variable and may be warmer or cooler than surrounding desert regions depending on local conditions.

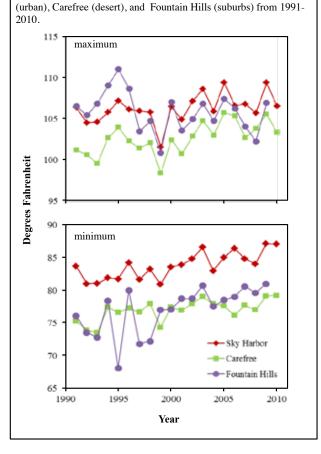
... The Preserve, in addition to its invaluable role as a habitat refuge, may serve also as a climate refuge.

URBAN HEAT ISLAND HAS MULTIPLE IMPACTS

While higher minimum temperatures are the most noticeable and pronounced effect of UHI, the associated energy balance changes may also affect water resources by changing moisture fluxes and contributing to degraded air quality by inducing photochemical smog. Taken together, UHI has considerable implications for human health, biodiversity and ecological processes. In the Southwest U.S., Arizona led the nation in heat-related deaths from 1993 to 2003, and the impacts of climate change are already evident in the region by, among others, shifting bird ranges, changing plant communities and fewer winter days with freezing minimum temperatures. Further, current climate trends may contribute to greater proliferation of invasive exotics, such as Buffelgrass, thereby placing greater strain on native plant and animal communities.



Photograph by: R. Thomas

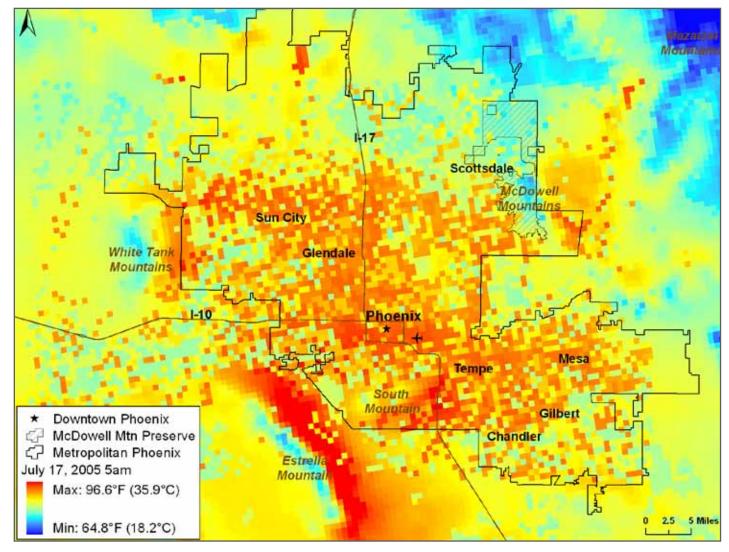


Average July maximum (top panel) and minimum (bottom panel)

temperatures from three Valley weather stations: Sky Harbor

Temperatures in and around the Phoenix Metropolitan area may UHI has considerable implications for human vary considerably, and depend on numerous factors such as topograhealth, biodiversity and ecological processes. phy, the types and density of vegetation, proximity to water features and the extent of engineered surfaces. Though temperature data from within the McDowell Sonoran Preserve is limited, 20-year ALTERNATE MODEL MAPS TEMPERATURES temperature records from a nearby Fountain Hills suburban location and an analogous Sonoran Desert location near Carefree provide A more detailed investigation of spatial temperature variability is possible by Weather Research and Forecast (WRF) model output. some insight regarding climate in the Preserve. Mean July maximum The WRF model uses sophisticated computer algorithms to generand minimum temperatures at Fountain Hills, Carefree and Phoenix Sky Harbor all exhibit a slight upward trend over the past 20 years, ate high-resolution temperature maps that are employed widely by in keeping with documented global and regional patterns. Most proclimate scientists. Model output of minimum temperature in July nounced, however, are the lower July maximum and, particularly, 2005 indicates clearly the cooler temperature of the Preserve relative minimum temperatures at Fountain Hills and Carefree relative to to adjacent areas and the urban core. The Preserve is the recipient of cool downdrafts from mountain ranges to the north and east, and as Sky Harbor. These patterns are indicative of a strong summer UHI a result, may be cooler than other comparably-sized desert preserves signal and suggest some insulation from the UHI at outlying desert (e.g. South Mountain Park) around the Phoenix area. These unique locations. climatological conditions portend that the Preserve, in addition to its invaluable role as a habitat refuge, may serve also as a climate refuge. Such climate refuges will become increasingly important to Sonoran Desert ecosystems near urban areas in light of global climate models that agree almost unanimously that the desert southwest will become increasingly warmer and drier. 4

Long-time Phoenix-area residents may remember a time when late evening and nighttime hours brought noticeable relief and air conditioners fell silent even during the hottest days of summer.



Important Land Acquisitions Ahead for the Preserve Three new trailheads planned

By Barbara Pringle, MSC Steward and MSPC Promotions committee member

Outdoor enthusiasts in today's McDowell Sonoran Preserve have access to an abundance of beautiful trails, from the Bajada Nature Trail to the upper reaches of Tom's Thumb Trail. Such was not the case 20 years ago for those who explored the desert: they created or followed a maze of informal paths.

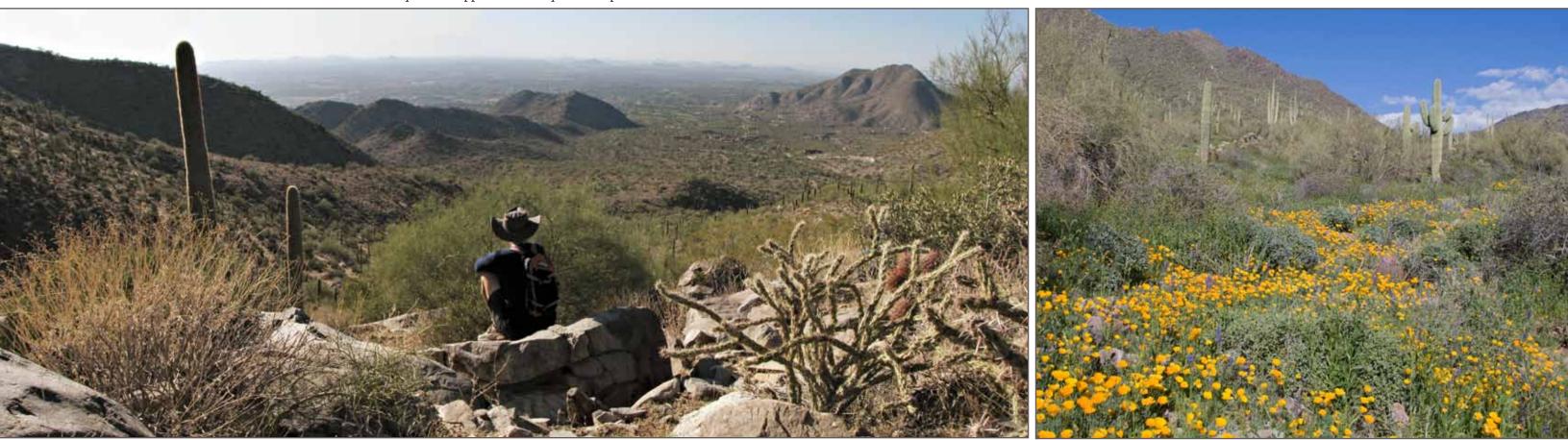
Priority 1 land

On October 15, 2010, an auction was held for 2,000 acres of state trust land near the 96th and Dixileta Drive alignment. A grant from Arizona's Growing Smarter conservation fund, administered by Arizona State Parks, helped Scottsdale acquire this approximate 3-square-mile parcel. Once Scottsdale

and evaluated for safety, aesthetic and environmental concerns. "We will try to use existing trails, but many of them will require realignment and remediation. Some will be abandoned and re-vegetated," says Scott Hamilton, Scottsdale's preserve planner.

Priority 2 land

The informally-named Gooseneck links the southern part of the McDowell Mountains to the northern portions of the planned Preserve. This state trust land will likely be scheduled for auction in the fall of 2011, says Ekblaw, assuming that critical land acquisition conditions do not change significantly.



Photographs by: M. Jensen

Today, the Preserve is home to about 60 miles of trails in the McDowell Mountains, with plans for an entire trail system of about 200 miles. New land acquisitions were recently completed or are in key planning stages.

"We prioritize specific land parcel acquisitions based on a number of factors, including aesthetic and intrinsic appeal, view sheds, land value and how likely the land is to be devel oped," explains Kroy Ekblaw, Scottsdale's strategic projects and preserve director.

bid, Arizona State Parks agreed to match 50 percent of the appraised land value.

The 2,000-acre parcel – characterized by extensive boulder outcroppings, undulating terrain and riparian areas - links up to existing Preserve land, creating about 4,000 acres of contiguous Preserve land.

A trailhead, dubbed Brown's Ranch, will be built north of the present terminus of Alma School Road, and will tentatively open in 2012. It will include equestrian facilities and follow environmentally-sensitive construction principles. An extensive trail network already exists that must be inventoried

The 1,960-acre parcel is undulating upper desert habitat, with large boulder outcrops. It encompasses Rock Knob on its southern end and includes Fraesfield Mountain slopes. Visitors will enjoy views of the Mazatzal Mountains, Weaver's Needle, Four Peaks and Mount Ord. The land abuts Maricopa County's McDowell Mountain Regional (MMR) Park, enhancing wildlife movement into the Preserve.

Trail planning is in the early stages, but priorities include creating connections into the MMR Park and building the tentatively-named Fraesfield trailhead at 128th Street and Dynamite Boulevard. No dates have yet been established for completion.

Priority 3 land

Further north, a 2,300-acre parcel will likely be scheduled for auction in the fall of 2011 or 2012. The eastern part of the land includes the southern slopes of Granite Mountain, Balancing Rock, portions of Cholla Mountain and scenic vistas. The western parcel, west of Cone and Brown's Mountain, is marked by boulder piles, mature saguaros, high desert vegetation and part of Rawhide Wash.

An extensive trail network already exists that must be inventoried and evaluated for safety, aesthetic and environmental concerns.

As with Priority 2 land, trail planning is ongoing, with the currently-named Little Granite Mountain trailhead tentatively located at 136th Street and the power line corridor.

These three parcels total approximately 6,200 acres and their acquisition will expand the Preserve to about 22,000 acres, or just shy of two-thirds of the overall 36,400-acre goal. What a positive milestone that will represent! MSC volunteers can look forward to plenty of work projects creating trails that meet the Preserve's high standards. 🖑

How to Feel Your Best this Holiday Season Nature nourishes your brain

Research shows that people in regular contact with nature are healthier overall compared to those swept away by the sterility of the urban environment. What you may not know is that charitable giving also contributes to a cleaner bill of health. When giving a gift to a 501(c)(3) non-profit organization, such as MSC, an area in the brain that is a major pathway for the neurotransmitter dopamine is activated. Dopamine is responsible for your most fundamental brain functions.

This year, tap into all the opportunities that MSC has to offer and reap the benefits of improved health. Break away from the seemingly endless parties, shopping and re-runs of "A Christmas Story" with a calming walk on the Gateway trail or a vigorous run up Sunrise. Share the Preserve with your out-of-town guests while pointing out the fascinating historical and geological features of the area, and inform them that this pristine, open space has been proven to increase immune function.

As you make your gift to MSC, your cardiovascular and central nervous systems will thank you for providing the positive feelings of gratification, happiness and purposefulness required for peak performance. And not only will your body be appreciative, MSC will be able to continue successful and active stewardship of the Preserve into the new year. Further your sense of fulfillment by showing your generosity before December 31st and receive the added benefit of a tax deduction.

This year, tap into all the opportunities that MSC has to offer and reap the benefits of improved health.

Looking ahead to 2011, help the Preserve help you. The Preserve is a living, breathing treasure, just like our family of stewards, community partners and visitors. It is our duty this season, and every season, to support MSC's effort to keep this treasure vibrant and healthy. Maximize your feelings of good health and holiday cheer today and make a gift!

Join Our Circle of Friends

Please help commemorate MSC's anniversary by providing support that will launch us into the next 20 years! Join the McDowell Sonoran Society. Through your leadership support of \$1,500 or more, you will make a gift in honor of our past 20 years of service to the community, and play a vital role in the future of the Preserve and the lives of our children and grandchildren.

Yes!	

I want to

preserve

desert ar

mountair

by joinin MSC's Cir of Friend

	McDowell Sonoran Society (\$1,500+)
	Steward Circle (\$1,000) Trailbuilder Circle (\$500) Caretaker Circle (\$250)
•	Pathfinder Circle (\$100) Hiker Circle (\$50) Other
elp	Please charge my credit card A check is enclosed
ny	Credit Card # Expiration Date:
d	Name as it appears on the card
IS	Name(s) by which you would like to be acknowledged
g	
cle	Address Email
S.	Phone
5.	I would prefer that my gift remain anonymous

Mail to: McDowell Sonoran Conservancy • 16435 N. Scottsdale Rd. • Suite 110 • Scottsdale, AZ 85254

Discover, Explore, Protect... Celebrate!

Join us for seasons of discovery, exploration and celebration... events and activities throughout the year!

Throughout 2011, MSC will celebrate 20 years of protecting the McDowell Sonoran Preserve! Through events and activities held in the Preserve and in the community, there will be something for everyone.

We will begin our year of celebration with Founder's Day activities on January 22. Special guests will include many of those who first met to save the land, and who went on the create the McDowell Sonoran Land Trust.

Watch for your activity guide with more information about our 20th anniversary events and activities!

January: Fit City Scottsdale

Outdoor Fitness Trailhead Talks every Saturday morning from 9-11 a.m.

January 16: Martin Luther King Jr. Day of Service

January 15/22: New Steward Orientation

January 22: Founder's Day Hike

January 29: McDowell Sonoran Challenge Bike or Hike or Run 8:00 a.m.

February: Art in Conservation

Photo Expert every Saturday morning at the Gateway 9-Noon

Best Works of Scottsdale's McDowell Sonoran Preserve Photography Exhibit at the Scottsdale Center for the Arts ongoing all month. February 17th 5:30 p.m.-9:00 p.m. Meet the Artists Reception and Lecture

As MSC celebrates our 20th-anniversary, the Scottsdale Charros will celebrate 50 years in Scottsdale! Planned activities include a reenactment of its 1st trail ride that leaves Scottsdale and travels through the McDowell Sonoran Preserve. A gala celebrating their 50 years of service to the community is planned for February 26, 2011.

Wildflower Hikes All Month March 1: Wildflower Watch begins Breakfast

Weekend

sonoran.org

Paint Out

Remember, we have Pathfinders at the trailheads every Friday-Monday morning, Nature Guides at the Bajada Nature Trail every Saturday morning and Public Hikes every Saturday and Sunday. Join us for these and other events and activities planned throughout the year! Visit our website for more information.



February 5: Native American Culture

February 12: Photography Workshop Registration available at www.mcdowell-

February 12: Sonoran Art League Plein-Air

February 25: Cowboy Poetry Series 4:30 p.m

March: Wild about Wildflowers

Wildflower Expert every Saturday morning at the Gateway 9-Noon

- March 10: 20th Anniversary Community
- March 5/12: New Steward Orientation
- March 31: Cesar Chavez Day of Service

April: Families and Conservation

Wildlife Expert every Saturday morning at the Gateway 9-Noon

Family Friday Sunset Series at Gateway, Fridays at 4:30 pm

April 2: Photography Workshop

April 9: Dog Days of Spring at Gateway

April 16: Global Youth Service Day

April 22: Environmental Film Festival and Picnic Dinner



16435 North Scottsdale Road Suite 110 Scottsdale, Arizona 85254 NON-PROFIT ORGANIZATION U.S. POSTAGE PAID SCOTTSDALE, AZ **PERMIT NO. 807**



Challenge Schedule

8:00 a.m. Packet Pickup & Late Registration 9:00 a.m. Challenge Begins 10:00 a.m. - 1:00 p.m. Fitness Expo

For more information, including detailed course descriptions and to register, visit: www.mcdowellsonoran.org www.active.com

20 mile Mountain Bike or 9 mile Hike or 15k Run January 29, 2011

Take the Challenge on January 29, 2011!

Bike 20 miles, hike 9 miles or run 15K in State Trust Land designated for conservation. Through a special land use permit, we have been granted access by the Arizona State Land Department for this special event to support the McDowell Sonoran Conservancy and help spread the message that the Preserve needs to be completed.

Bikers, runners, and hikers will follow a revised route this year that showcases some of the furthest and most interesting reaches of the planned Preserve.

The free fitness expo and celebration will include food and beverages, music, merchandise and fun for hike, bike and runner enthusiasts of all ages.

All proceeds go to the MSC to finish the Preserve and make more trails for you to enjoy! Early registration until December 30th includes t-shirt.

Location

Dynamite Road & Alma School Road. Parking and expo located at the shopping center on the corner of Alma School Road and Dynamite (thanks to Hurd Real Estate). Shuttle service available to the trailhead.

