



BIG MORONGO CANYON PRESERVE

NEWSLETTER

Friends of Big Morongo Canyon Preserve

Spring/Summer 2015



Bobcat beneath Preserve's palm trees

Sorry You Missed It

by Jane Olson

The last volunteer meeting for the season could be described as great: great program, great camaraderie, and great food.

John Kalish, the Bureau of Land Management's regional manager, complimented the volunteers for their varied and excellent service to the Preserve. Joe Migliore fascinated us with his presentation on local geology. The centerpiece of the morning was definitely honoring two outstanding volunteers with plaques on our Recognition Rock. Bonnie Smith and Donna Thomas received congratulations from everyone. And of course there were pictures taken all around.

I hope this sounds like fun to you and that

you will join us soon. We have many projects and not enough people to maintain all the activities that are needed to support Big Morongo Canyon Preserve. Some current projects are creating new information panels for the kiosk, leading children's programs, and recycling. In the near future, we truly need to organize a trail monitoring program. It is sad to see our trees with initials carved into them. The number of visitors to the Preserve has increased dramatically. We really need more supervision out on the trails.

If you can adopt any of these jobs, please contact Volunteer Chairman Jane Olson at janeelleno@aol.com.

The next volunteer meeting will be held next season on Tuesday, October 20, 2015.

Butterflies and Volcanos

by Jane Olson

A circle of children kneel on the boardwalk and their small heads frame a butterfly. It is not possible to know what the butterfly felt, but the children were enchanted as the butterfly slowly lifted and lowered its wings. It was a wonderful moment of a connection with nature that had to end when one little index finger began to advance on the butterfly. The butterfly was gently prodded onto a twig by the Big Morongo docent and then floated off over the marsh.

Experiences like this have been happening on a regular basis over the past several months thanks to the efforts of a half dozen very dedicated docents. On an average of twice a week, a bus brings a classroom of children to the Preserve. The classes range from kindergarten through fifth grade. Each grade level is offered a program that fits the California science standards for that age child. We call our

programs field studies. Each program includes a walk on some part of the trails and an activity at the Education Center.

The field study programs cover a range of natural history concepts. Here are a couple of samples. For the younger set, we offer the topic Animal Homes. The students go on a trail walk and look for holes, webs, or nests. It is amazing what kids think lives in those holes and who dug them! In the Education Center we have a color, cut, and paste activity that results in a triarama illustrating the animals that live in and around Big Morongo. The students also take home a little booklet that has pictures of homes that they saw on the trail. The most popular field study for the fourth and fifth grades is Geology. The docents lead a walk out to the most dramatic of our geologic features. The showstopper is the exposed formations of gneiss that are aged at around 2.7 billion years old. The most acclaimed activity in all of our field studies is the make-your-own-volcano creation.

The students color animals and plants appropriate to the environment they have been studying. The paper is formed into a cone. ("Easier said than done," say the docents.) In the center is a tube with some yeast in it. The students pour some dyed red hydrogen peroxide into their tubes, and within seconds we have foaming volcanos, a room full of laughing children, and a huge mess. And yes, the mess is definitely worth it.

The only sad thing about our Big Morongo Canyon Preserve Field Study Programs is that there is a waiting list that we cannot fill because there are not enough docents to tour more children. If you think you would like to join our docent group, please contact Kc McKay at kcrobin@netscape.com. We will provide training on all aspects of providing much needed environmental education to children.

NOTE: See page 5 photos of students engaged in the Geology field study.

CALENDAR

at BMCP

APRIL – AUGUST

Gate open 7:30 a.m. to sunset

365 days a year

Wednesday Bird Walks

Every Wednesday at 7:00 a.m. and continuing through the summer. Bring your binoculars and spend a couple of hours strolling the trails with birding experts. Beginning birders welcome.

Saturday Bird Walks

At 7:00 a.m. on the third Saturday in April and May (April 18 and May 16). Same format as Wednesday Bird Walks.

Notice of Election

The Friends of Big Morongo Canyon Preserve Board will elect board members at its meeting on May 13, 2015.

Names to be placed on the nominating slate must be received by April 11, 2015.

Contact Jane Olson,
Nominating Chairman,
janeellen@aol.com for
information.

Bird's Eye View ... and more

*gleaned from
Dee Zeller*

The Preserve's wildflowers bloomed early and abundantly this year, carpeting the Preserve with a colorful display before spring had officially arrived. Their abundance is a result of sufficient winter rains, and their early bloom was set off by temperatures in February that were a full 7°F above normal—climate change on the march.



And visitors (the human kind) have been flocking to the Preserve, including many from the Midwest and Northeast, perhaps escaping the severe winter in those regions. Locals too have gravitated to the Preserve, where conditions have been ideal—and it's free, unlike the national park and other regional locations where there is an admittance charge. Bird walks are drawing up to 40 people, and nearly every walk visitors, who come from all over the world, add new species to their birding life list.

Visitors to the Zeller's patio and bird feeders ask, "Where are the birds?" With abundant resources everywhere at this time, many birds have found no need to stop by the feeders.

Then there are the snakes brought out by the warm temperatures. One visitor reported seeing three rattlesnakes in one trek on the Yucca Ridge. And with a mountain lion seen twice in February, once just across the boardwalk from the Education Center, it's time to keep those children close in tow.

Unfortunately, ideal weather conditions have caused invasive mustard plants to thrive more than ever. They are EVERYWHERE! with their yellow flowers waving in the breeze, soon to become tens of thousands of seeds released to emerge next year. They have blanketed a field along the Desert Willow Trail, surrounded the Education Center, and appeared alongside the trails. Dee is thankful for the continuing efforts of Tish Miller and Dan

Baumann, who have been pulling and removing huge bagsful of invasive mustard from the Yucca Ridge and elsewhere, to Rich Thompson, who cleared all the mustard and other weeds from around the Preserve entrance, now beautifully refreshed, and to those volunteers who spent a morning pulling mustard near the Education Center.

Vermilion Flycatchers have arrived, and at the end of March, one pair is preparing a nest at Covington Park, and two additional females have been spotted.

Raccoons are around but not in the numbers they've been seen some years. In one respect this is good news for Dee; when he occasionally forgets to bring in the trash before nightfall—no raccoons scatter it around. It is also good news for Virginia Rails, as raccoons are big time predators on rail eggs and even young. The rails are busy nesting in March, a time when they are particularly quiet, but soon they will be heard once again as they noisily communicate with their young.

Gray foxes continue to be seen; one walked right past Dee's window. A visitor reported seeing 2-3 young foxes with their mother. Another visitor reported seeing a gray fox on the Desert Willow Trail, where visitor and fox both stopped and stared at each other.

If you've never seen a wild cucumber, *Marah macrocarpus*, a jaunt along the Desert Willow Trail where it takes off from its T-junction with the Marsh Trail boardwalk will provide good viewing of this large prickly fruit, shaped like its namesake but with spines, hanging from its vines. Dee attributes the abundance of wild cucumber this year to the lack of frost this winter, which in past years often caught the plant before it could form fruit.

The mystery continues as to why the population of yellow-backed spiny lizards, *Sceloporus uniformis*, has declined and been replaced by an increasing population of their spiny relatives, the great basin fence lizard, *Sceloporus occidentalis longipes*. This change is particularly apparent around the Preserve parking lot.

Ahh, Big Morongo Canyon Preserve, so much beauty, so many mysteries.

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NEWSLETTER

Editor: Donna Thomas

Spring/Summer 2015

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Who's a Scientist? You Are! Citizen Science at Morongo

by Joe Zarki

We humans are counting creatures. People love to enumerate just about everything we encounter in life, and we often measure our success by how many things we have, do, or experience. Of course, we count our money, but we also count our ages, the size of our houses, the games we attend, and the calories we eat. We sometimes count our chickens before they hatch. People might not survive without our ability to count and order the things in our lives.

For lovers of natural history, counting takes on a special meaning. Many natural history buffs maintain lists of things they see or experience. For birders there are life lists of birds observed, state lists, annual lists, yearly lists, daily lists, and checklists for our favorite birding locations. Others maintain lists of mammals seen, butterflies, plants, and almost everything imaginable. The lists go on and on.

Volunteer counting in the service of science is often called today by the democratic sounding name "citizen science." The term has become commonly used and now even appears in dictionaries. Citizen science is also known as crowd science and civic science, but generally it is defined as "the systematic collection and analysis of data; development of technology; testing of natural phenomena; and the dissemination of these activities by researchers on a primarily avocational basis."

Citizen science is nothing new. Much of the early work of science was carried out by what were called natural philosophers, unpaid folks with an abiding curiosity about the natural world. Science luminaries, such as Isaac Newton, Benjamin Franklin, and Charles Darwin, all made important discoveries through self-funded studies. During the 19th and 20th centuries, most scientific studies were carried out by academically trained professionals employed by universities, government agencies, and other institutions.



Citizen scientists collect data during the 2012 BMCP Christmas Bird Count

Today, amateur scientists are often students, retirees, or hobbyists motivated mainly by their interest in particular subjects and their willingness to spend their own time and resources in the pursuit of their interests. For these folks, ample opportunities exist to channel their passions for counting and listing.

Amateur astronomers have discovered comets, supernovae, and even participate in the search for extraterrestrial life. Amateur insect collectors have found many new species, and their collections have supported research at numerous institutions and museums. "Bug clubs" have long supported hobby entomologists, and in the mid 1970s, large-scale counting efforts for butterflies were started by the North American Butterfly Association and the UK Butterfly Monitoring Scheme.

For birdwatchers, organizations such as local Audubon chapters and the American Birding Association offer activities, field trips, and mentoring for those who want to learn about birds. Organized citizen science activities for birders have been around for a long time. The Christmas Bird Count (CBC) was established in 1900 and is perhaps the longest continuously organized monitoring and data collection activity. Christmas Bird Counts were first established at Big Morongo Canyon Preserve (BMCP) in 1960 and at Joshua Tree National Park (JTNP) in 1967. The Morongo count has been run every year since 1981, and CBC participants have recorded 186 species of birds at the Preserve and the surrounding area. At Joshua Tree National Park, 154 species of birds have been found on Christmas counts.

The U.S. Fish and Wildlife Service started the Breeding Bird Survey (BBS) in 1966 to collect data on the status and trends of breeding bird populations in North America. Several BBS routes exist in our local area, and these annual surveys have been collecting data for more than 30 years.

The Great Backyard Bird Count (GBBC) was started in 1998 as a means to collect bird data and display it in real time through the use of the Internet. In 2014, more than 100,000 people in 135 countries took part and documented more than 4,300 species of birds worldwide. California leads the United States in GBBC participation, with more than 9,400 checklists submitted. This year GBBC observations were recorded at both BMCP and JTNP. All data collected through GBBC is self-posted on eBird, in itself a massive online volunteer effort to collect data on bird populations and distribution. Already, 1,381 bird checklists for BMCP, totaling 228 species, have been submitted through eBird, and more records are being submitted all the time.

BioBlitzes and similar short-term biological inventories have become popular at many locations. These activities send groups of professional biologists and volunteers into the field to identify as many species of living things in a specified area within a short period of time, typically 24-48 hours. Information is shared with participants, and often significant media attention is generated when new species are discovered, highlighting that there is still much we don't know about even popular parks and reserves.

(Continued on page 6)

BIG MORONGO CANYON PRESERVE

Geology Quiz *by Joe Migliore*

What do the following have in common with the wetlands of the Big Morongo Canyon Preserve . . . other than their location in the North American West?

- The San Bernardino Mountains
- The Little San Bernardino Mountains
- The Indio Hills
- The Coachella Valley
- The Morongo Valley
- Mount San Jacinto
- The desert climates of the interior of the North American West

Here's a hint. For the most part you can't see it directly but every once in while you may feel it.

Yep, it's the San Andreas Fault and all the faults associated with this great tectonic

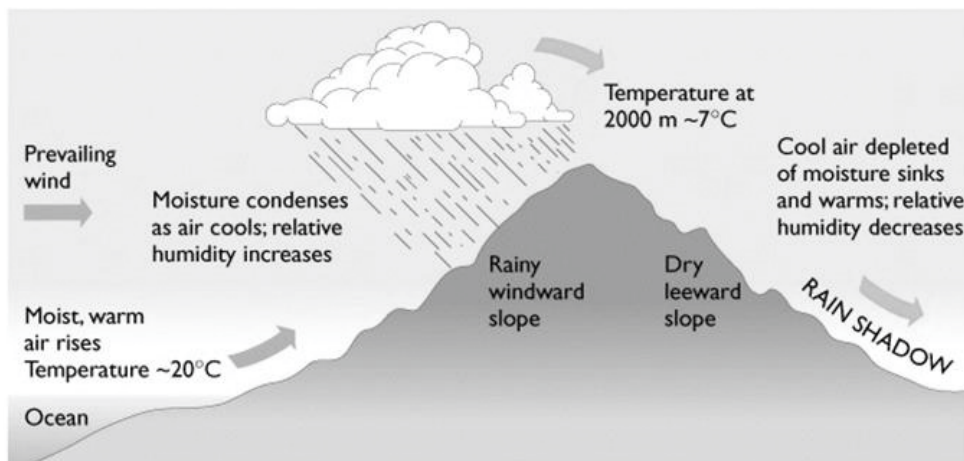
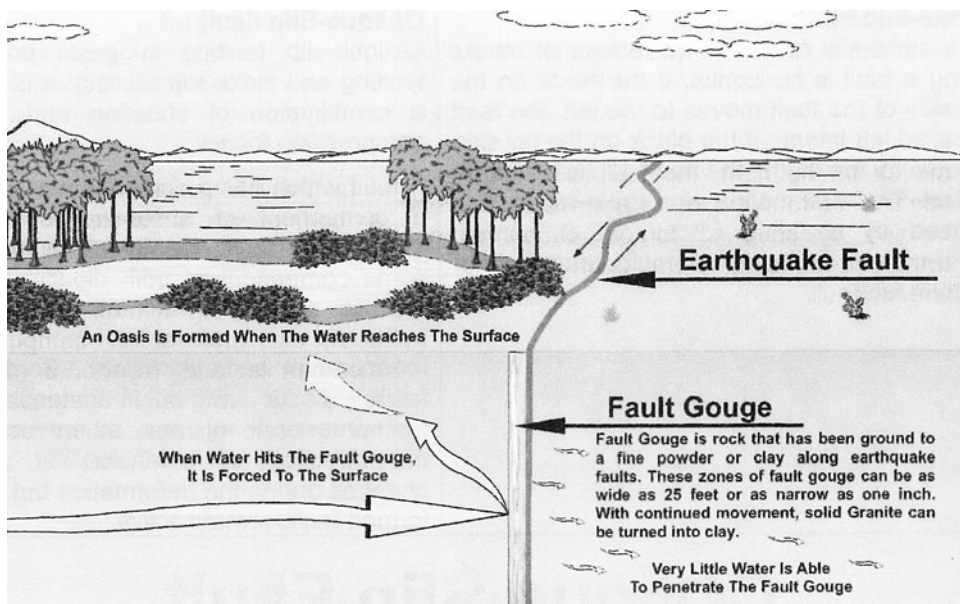


plate boundary between the North American Plate and the Pacific Plate. These faults are directly or indirectly responsible for all of the topography (mountains and valleys) across our landscape.

One of those faults is the Morongo Valley Fault which defines the southeast margin of the Morongo Valley. Whenever there is

movement along that fault, it grinds up the adjacent rocks into a fine clay-like powder named fault gouge, which creates a dam-like barrier to the ground water percolating through the sediments across the valley on its way to a lower level.

When the water behind the dam accumulates to the surface, it creates ponds, streams, and wetlands even in the desert. The result can be an oasis like the Big Morongo Canyon Preserve, providing habitat for a rich diversity of plants and wildlife.



What does the San Andreas Fault have to do with the interior deserts? These deserts are called rain shadow deserts because prevailing storm systems moving east off the Pacific Ocean must rise over high mountains (created by plate boundary faults like the San Andreas), cooling the moist air causing most of the condensation as rain and snow to fall on the windward slopes. When that cool dryer air falls down the lee side of the mountains, it compresses and warms up, and the relative humidity drops, resulting in intense solar radiation, high temperatures, high evaporation, wind, and low, unreliable rainfall. That's a desert.

BIG MORONGO CANYON PRESERVE



Students go hands-on with the Preserve's 2.7-billion-year-old gneissic rocks.

Big Morongo Canyon Preserve . . .

. . . nurturing our children's connection with the natural world



In the Education Center, students learn more about geology as they create their own erupting volcanos.



FRIENDS OF
BIG MORONGO CANYON PRESERVE

Yes, I Want to Help

PLEASE RETURN YOUR TAX-DEDUCTIBLE DONATION TO:

**FRIENDS OF BMCP
P.O. Box 780
MORONGO VALLEY, CA 92256**

NAME(S) _____

MAILING _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

EMAIL _____

ENCLOSED MEMBERSHIP DUES:

- \$ 25.00 INDIVIDUAL ANNUAL MEMBERSHIP
- \$ 35.00 FAMILY ANNUAL MEMBERSHIP
- \$ 250.00 LIFETIME MEMBERSHIP
-

ADDITIONAL CONTRIBUTIONS:

- \$ 10.00
- \$ 20.00
- \$ 50.00
- OTHER

**BECOME A MEMBER OF
FRIENDS OF
BIG MORONGO CANYON PRESERVE**

Friends of Big Morongo Canyon Preserve is a nonprofit 501(c)(3) association organized solely for the advancement of programs at Big Morongo Canyon Preserve/Area of Critical Environmental Concern. The primary purpose of the Friends is to enhance wildlife viewing, wildlife protection, educational programs, and recreational opportunities provided by the Bureau of Land Management (BLM) within the Preserve. The Friends provide ongoing support of the Bureau's conservation, education, and recreation programs within Big Morongo Canyon Preserve. The Friends achieve these goals by raising funds, accepting donations, recruiting volunteers, and assisting the BLM in the planning, creation, and maintenance of programs and facilities at the Preserve.

All donations received from visitors are used by the Friends to purchase materials for trail construction, benches, signs, and displays. Maps, trail guides, brochures, and educational and informative printed material are also provided to visitors from these funds.

Donations to the Friends are tax-deductible and are not used to cover overhead or operational expenses.

As a Friend, you will receive an annual summary of accomplishments and, if requested, new environmental education materials and programs made possible through the donation fund. Friends of BMCP are invited to attend the annual fall general membership meeting. As a special thank you, new Friends receive a unique BMCP embroidered color patch. Lifetime members also receive a canvas Preserve tote bag in addition to two BMCP color patches.

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the Preserve



Who's a Scientist? . . .

(Continued from page 3)

In recent years, the rise of the Internet and awareness of the impacts of climate change have prompted the creation of new citizen science projects. Project Budburst, sponsored by the National Science Foundation, collects data on the timing of leafing, flowering, and fruiting of plants, a process known as phenology. The California Phenology Project was started at Joshua Tree National Park in partnership with UC Santa Barbara and uses volunteer-collected data to monitor long-term changes in targeted plant species.

At Big Morongo Canyon Preserve, many opportunities are available for volunteers to collect data on

the area's rich natural history and biodiversity. The challenge is to ensure that amateur data collecting is done through some recognized program to make sure that the information collected allows professional scientists to make use of the data in peer-reviewed studies. Who knows, maybe you could even get a new species named for you someday. Hey, it could happen! Regardless, there is still the satisfaction of knowing that your efforts contribute to the growing body of knowledge about one of California's most special places.

Author's note: Wikipedia and other sources on the Internet were consulted in the preparation of this article.

BMCP Weather *by Ray Yeager*

The Big Morongo Canyon Preserve has been experiencing warmer than average temperatures, especially in February where nearby Yucca Valley recorded the highest average high temperature in the 37 years that records have been kept. The average high of 70°F is 9 degrees above normal.

The Morongo Basin is still experiencing drought conditions, about half of normal for this time of year, but miraculously Morongo Valley is having a normal rainy season with 5.47 inches so far this weather year (since July 1, 2014). In December, 2.50 inches were recorded, which provided the perfect kick start for a wildflower season that now, at the end of March, is in full bloom. Along the Mesquite Trail, Desert Canterbury Bells and Sand Blazing Stars are especially profuse.