

NATIVE PLANT SOCIETY OF NEW MEXICO
ALBUQUERQUE CHAPTER

NEWSLETTER

SUMMER 2019



FIELD TRIP WILDFLOWERS



First Spring Field Trip By Diane Stevenson

As we drove from the meeting place on south Tramway and Central on April 13, 2019, cold wet rain sporadically dotted the windshield. We were heading to the Pine Flat picnic area in the Manzano Mountains, east of Albuquerque, so I thought we might get snowed on. I was right!

Thirteen of us braved the wet snow and saw Pasque Flower, *Anemone patens* var. *multifida* and Stemless Easter Daisy, *Townsendia exscapa* in this late winter wonderland. The spruce-fir forest was quietly decorated in white, any existence of a trail covered with a snowy blanket.

Pine Flat trail, April 13, 2019 – Looking for flowers in the snow
Photo © Doris Eng

A week later, Craig and I hiked the Pine Flat trail on a warm breezy day. There weren't many flowers along the easy hike that wove in part through recently thinned forest. We were surprised to find a 12 inch wide group of Pasque Flowers near a parking block next to where we parked. Such a treat!

We tried to retrace our steps from the snowy week before, a feat that was harder than we thought because it looked so different. Snow, a distant memory. No puddles remained.



Pasque Flowers at Pine Flats. Isn't it Pasque time for snow?
Photo © Doris Eng

COVER: Field trip wildflowers

Cover photos: Top—wild bergamot (*Monarda fistulosa*). Bottom clockwise—antelope horns milkweed (*Asclepias asperula*), long-spine purple prickly pear (*Opuntia macrocentra*), New Mexico thistle (*Cirsium neomexicanum*), woolly crinklemat (*Tiquilia canscens*).

This spring has been a treat for blooming wildflowers. From the deserts to the foothills, excursions have logged long lists of flowers in bloom. The White Sands Missile Range trip recorded 105 species of wildflower, trees, shrubs, and grasses. The Sandia foothills trip on Pino trail discovered nearly 50 species, and the Petroglyph National Monument short walk around the volcanoes found 26 species of wildflowers. Don't miss the field trips this year, or for sure get out on your own and enjoy the bounties of nature. *GOM*



Proposed San Juan Basin National Monument and Scenic Byway

By George Miller

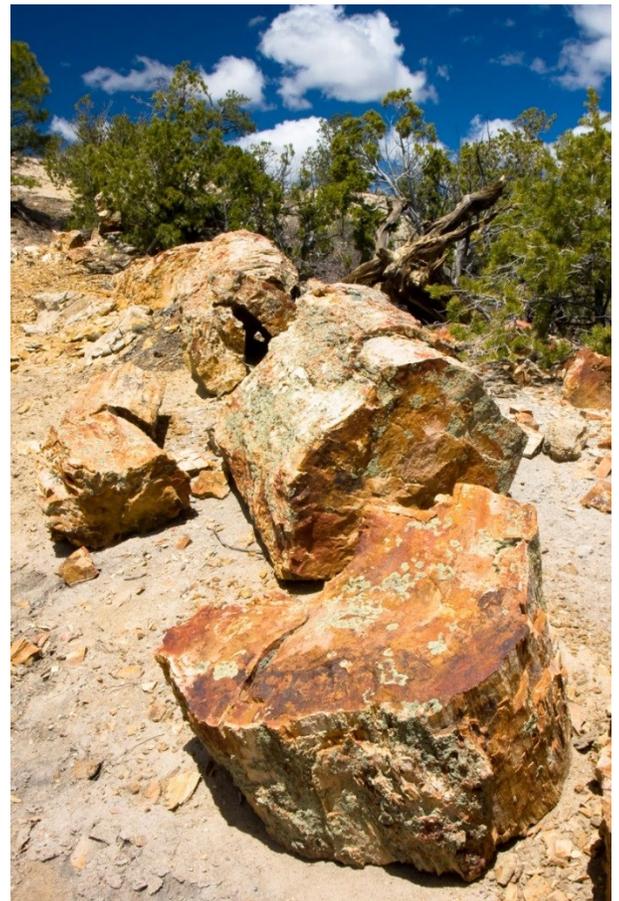
For our June monthly program, Mike Riche presented an inspiring program on the wonders of the badland formations in the San Juan Basin west of Cuba, and why these ecologically and geological unique areas should be preserved as a National Monument.

Erosion reveals a palette of colors in the Cajita Blanca Badlands
Photo © George Miller

Mike, a retired school teacher and dedicated environmental activist, has been advocating for preserving the New Mexico badlands for years. He has written magazine articles and intensely lobbied the BLM. His program, profusely illustrated with his scenic photography, brought the area to life for us. He described the environmental and geological features of the area rich in dinosaur fossils, petrified wood, habitats with 1,000 year-old junipers, and relic refuges from the Ice Age that support “bonsai” for ponderosa pines.

Mike also described the economic benefits to the Four Corners that a National Monument would bring with fifteen badland units connected by a national scenic byway.

As a bonus to his program, Mike will lead a field trip in September for our chapter to experience first hand the wonders of one of the badland units.



Petrified wood in Ceja Pelon, near Cuba, NM,
indicates the badlands were once a lush forest.
Photo © George Miller



Eroded formations and relic ponderosa pines in the Ceja Pelon badland unit. Notice the cut ponderosa and discarded limbs in the right foreground. Wood cutting of pines and ancient junipers is a problem in unregulated areas.

Photos © George Miller

Etcetera

NMSU launches mobile-accessible web database of Navajo Nation rangeland plants

<http://newscenter.nmsu.edu/Articles/view/13624/nmsu-launches-mobile-accessible-web-database-of-navajo-nation-rangeland-plants>

Here is their website called Rangeland Management Tips

http://navajorange.nmsu.edu/rangeland_management.php

What is Plant Blindness? An Information Website:

<https://plantsocieties.cnps.org/index.php/about-main/plant-blindness>

Monarch Joint Venture has a new paper: “The Integrated Monarch Monitoring Program: From Design to Implementation” (Cariveau et al. 2019), shares the rationale, progress and importance of large-scale monitoring of monarchs and their habitats through the Integrated Monarch Monitoring Program (IMMP)

<https://monarchjointventure.org/news-events/news/new-publication-highlights-the-impact-of-imp>

President's Message – Summer 2019

George Miller

I find it hard to believe that our programming year is half over, but our field trip schedule is in full swing. The wet spring has produced an abundance of wildflowers in the deserts and foothills, though the cool temperatures have delayed some of the high altitude bloom times. Instead of having to cancel trips due to wildfires this year, we're concerned with flooding along the Rio Grande!

One of the highlights of the year so far has been the concentrated efforts of the conservation committee, led by Chairwoman Sue Small with Jim McGrath and Lee Regan (also our librarian). They are continuing to work on protecting Little Water Canyon and the surrounding area in the Zuni Mountains from cattle abuse. They've led field trips to introduce our state representatives and agency members, and even a federal senator field representative to the area, and are networking with other conservation groups. It's a long, often frustrating effort, but they continue to persevere.

So far this year, we've had tabling presentations at seven Earth Day, conservation, and plant-sale events, and have four more scheduled at Pueblo and National Wildlife Refuge festivals and a national birding conference. These education outlets present our message of the importance of native plants, healthy-habitat landscaping,

and conservation to hundreds of people. Kudos to Bettie Hines who manages the scheduling and corrals volunteers, and all those whose smiling faces have introduced so many people to native plants.

As the old expression says, our cup is still half full with lots of exciting programs, field trips, and activities yet to come. A recent study on happiness reported that spending a minimum of two hours a week in nature was critical for mental health and more effective than medication for depression and other disorders. So there's no reason why Native Plant Society members shouldn't be the happiest clams on the beach!



Brown Spine Prickly Pear Cactus (*Opuntia phaeacantha*)
with insect
Photo © George Miller



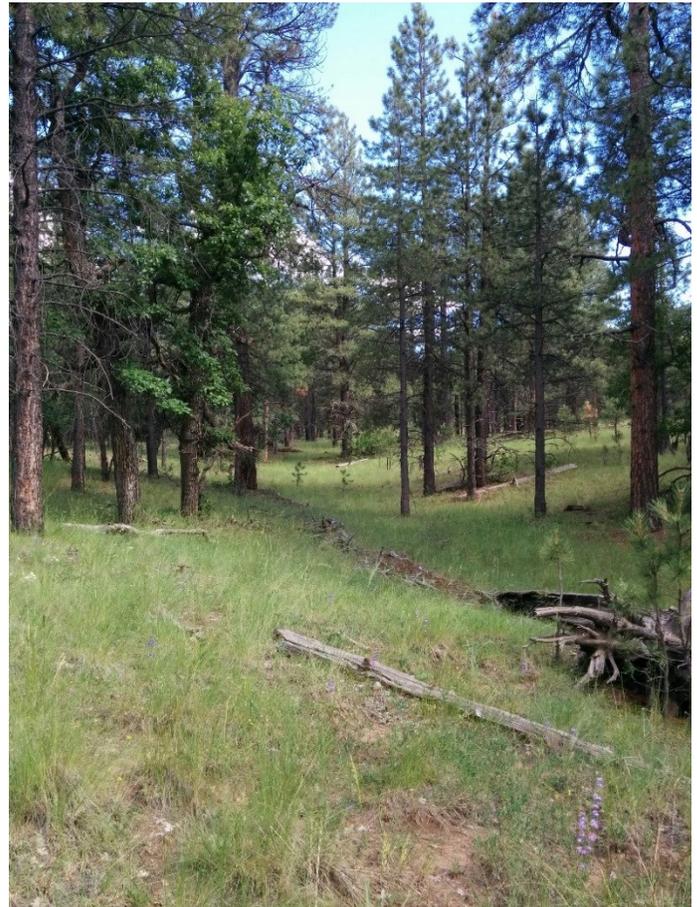
Dakota Vervain (*Glandularia bipinnatifida*) and Tree Cholla Cactus
(*Cylindropuntia imbricata*)
Photo © George Miller

Little Water Canyon - Preserving a Natural Area in the Zuni Mountains

By Jim McGrath

When Dana Price and I first entered the Colorado blue spruce forest, I knew it was a special place in the Zuni Mountains of west central New Mexico. The spruce trees were near record size. The largest spruce tree we found on that day measured 45 inches in diameter. The forest is tucked down in a very deep and narrow canyon which creates a microclimate of cool, wet and shaded conditions. The spruce trees and steep sides of the canyon minimize influence from the sun, thereby creating a relic vegetation that one would expect to find in Colorado where winters are longer and the growing season shorter. In fact, the Colorado blue spruce-red osier dogwood plant association here in Little Water Canyon is the type locality for that plant association in the vegetation classification system maintained by the U.S. Forest Service.

But the Colorado blue spruce forest is not all that makes Little Water Canyon special. A spring at the upper end of the deep canyon generates a stream that flows for about 1 mile. Reports from several people indicate that in the past fish thrived in the stream.



Ponderosa Pine Forest Opening - Little Water Canyon
Photo © Dana Price



A Chiricahua Adder's-Mouth Orchid in Little Water Canyon (*Malaxis soulei*)
Photo © Jim McGrath

The presence of the spring and stream within the Colorado blue spruce forest is exceedingly important to wildlife in the Zuni Mountains. Recent work by a UNM researcher has found that more than 50% of the springs in the Zuni Mountains have dried up. Several people have reported elk and turkey utilizing the area and one naturalist has reported seeing as many as 20 bears in the Little Water Canyon area during numerous visits since the early 1980s.

The Cibola National Forest is currently in the process of revising its Forest Management Plan. As it is currently proposed, the Cibola National Forest will manage the Little Water Canyon as Special Conservation Management Area designed to maintain the high biodiversity. The special management area includes much more than just the Colorado blue spruce forest with spring

and stream. Also included is the Oso Ridge on the north slope of which can be found two species of orchids. Ponderosa pine savanna occupies much of the land encompassed by the special management area.

The most important threat to the integrity of Little Water Canyon is livestock grazing. When Dana Price and I first visited the site, we saw very little evidence of grazing. However, the Little Water Canyon area is part of a grazing allotment. In 2017 the conservation committee of the Albuquerque chapter of the Native Plant Society of New Mexico documented strong evidence of cattle usage at the spring area. The cows had created a trail that we had not previously observed. We protested the presence of cattle within the Colorado blue spruce forest with spring and stream to the Mt. Taylor District Ranger as well as the rancher who possessed the grazing allotment. Unfortunately, the rancher encountered obstacles when he tried to utilize other springs. Some rogue homeowners bearing weapons prevented his cows from accessing one spring and another spring dried up. Therefore, the rancher was forced to utilize Little Water Canyon as a water source. During 2018 the rancher turned his allotment rights back to the Forest Service, who in turn has assigned the allotment to another rancher. The new rancher's operation is much further east and he apparently has not begun to move his cattle to the Little Water Canyon area.



Dana Price with Blue Spruce in Little Water Canyon
Photo © Jim McGrath



Golden Columbine (*Aquilegia chrysantha*) in Little Water Canyon

Photo © Jim McGrath

For now, the Little Water Canyon special management area seems precariously protected from threats to its integrity. The special management area does permit livestock grazing, but the standards require that livestock grazing be managed to maintain the high biodiversity of the area. Guidelines for the management area state that “existing permitted livestock grazing should continue where consistent with other resource needs.” These guidelines are not enough to prevent the eventual effects of livestock grazing on Little Water Canyon. It will be up to the Friends of Little Water Canyon (our NPSNM chapter and other interested parties) to monitor usage of Little Water Canyon to ensure that the integrity of this special place is maintained in a natural state.

Dara Saville leads a Medicinal & Edible plant walk at Bachechi Open Space

By Sue Small

On the morning of Saturday, June 2, 2019, a diverse group of 33 people listened as Dara Saville explained how many of the plants available in our open lands around Albuquerque can be used medicinally or enjoyed gastronomically.

We started by the education center with a look at the horsetail growing at the waterline, followed by a discussion of its uses for kidney and bladder disturbances. Another use of this plant is the application of a poultice to skin wounds and burns. As a sample of a vascular plant that reproduces by spores rather than seeds, it's a delightful sight along our New Mexican acequias and ditches.



Dara Saville leading an edible plant walk at Bachechi Open Space
Photo © Sue Small

The highlight of her 1.5 hour walk was finding blooming globe mallow, a favorite in her apothecary. Dara stressed the importance of sustainable collecting in order to not affect the natural distribution of this deep rooted plant. She explained that the teenage size globe mallow root was best collected, so it's advised to grow your own and note the different age plants within your garden. The leaves and flowers of this plant can also be helpful for coughs, colds, and digestive upsets. Dara explained the discriminating nature of this plant as it can respond to the body and moderate the immune response in a dual manner depending upon the conditions of the body system.



Participants in the Medicinal and Edible Plant Walk at Bachechi Open Space
Photo © Sue Small

If you get the idea that Dara has a strong affinity for plants and a natural connection to them, you're right. We ended our hike in the Bachechi rose garden, filled with marvelous scents, where we thought of the love, healing, and life present in all plants.

New Mexico's Biggest Wildflower

By George Miller

In this era of list making, New Mexico loves to brag about the biggest red chile or pistachio statue, green-chili cheeseburger or enchilada, and in some quarters even the biggest most beautiful wall. Maybe it's time for someone to start bragging about the state's biggest wildflower. Any thoughts about who wins the prize in the Land of Enchantment?

Three contenders come to mind, all in the 5 to 6-inch diameter range: the common sunflower (*Helianthus annuus*), the cutleaf coneflower (*Rudbeckia laciniata*), and last but not least, the sacred datura (*Datura wrightii*). But declaring a winner is not as simple as unfolding the carpenter's rule.

Confusion starts when we run this by the experts to get a botanical definition. Do we mean the size of the single flower, the whole inflorescence or cluster, or in the case of Asteraceae, the size of the composite head? Do we consider the floral tube length, or perhaps even total plant size?

A 5 to 6-inch diameter sunflower is really a package of 3-inch ray flowers and 1/4-inch disk flowers. The same with a coneflower but its rays droop decreasing its diameter. A datura may reach 5+ inches in diameter, yet it has a 10-inch long floral tube.

Do we insist on a botanical definition of a flower or go with the layperson's concept? Surely an agave with 3-foot long dagger leaves and a 10-foot tall bloom stalk is bigger than a ground-hugging datura. Or a soap tree yucca with 6-foot trunk topped with a 4-foot bloom stalk with hundreds of flowers out-does a sunflower.

When you get down to it, it's all semantics. So, I'll go with the hallucinogenic sacred datura. It's one of the most beautiful and culturally interesting plants to grace New Mexico soils.



Cut-leaf Coneflower (*Rudbeckia laciniata*)

Photo © George Miller



Sacred Datura (*Datura wrightii*)

Photo © George Miller



Common Sunflower (*Helianthus annuus*)

Photo © George Miller

Medicinal Plant Profile

By Dara Saville

Juniper (*Juniperus monosperma*) is among the most widespread and habitat-defining plants of New Mexico. It is a member of the Cypress family and there are numerous species inhabiting vast middle-elevation acreages of the Southwest and others found across the country. Its commonality and usefulness have also allowed it to find a place at the center of healing practices in our region and most species are used medicinally, excepting the Alligator Juniper *J. deppeana*.



Juniperus monosperma

Photo © Max Licher

SEINet Portal Network. 2019.

<http://swbiodiversity.org/seinet/index.php>. Accessed on June 29.

Ethnobotanical texts often list an extraordinary number of uses for this plant, perhaps second only to Yarrow (*Achillea millefolium lanulosa*).

In Native American herbal practice, Juniper is legion. For people in our area, Juniper berry tea is a diuretic and leaf tea is used for clearing colds and coughs, calming digestive problems including diarrhea and constipation, soothing general aches and pains, and has many associations with the birthing process. Juniper tea serves as both mother's muscle relaxant tea and as a cleansing bath for mother and baby, plants or ashes may be rubbed on newborns, and tea or smoke is sometimes used to aid difficult births. Furthermore, Juniper plays a major role in general gynecological care including teas for postpartum, contraception, and menstrual regulation.

Bark baths soothe itchy bites or sore feet and heated twigs have been applied as a topical treatment for measles, bruises, and swellings. The bark powder is even used for earaches. Burning Juniper branches is also a treatment for colds and general pleasantness. Juniper's association with cleansing and purification is strong and includes preparing diaphoretic baths, emetic or laxative leaf and twig teas, and serving as a protective charm against negativity or evil spirits. Hispanic communities adopted many similar uses including for urinary infections, stimulating digestion, soothing stomachaches, and its role in birthing and postpartum care.

In modern herbal practice, Juniper leaves and berries are collected to make topical and internal remedies for a variety of purposes. Juniper berries are prepared as tea or tincture (an alcohol-based extract) and are used as an antiseptic diuretic for urinary tract infections and inflammations. Some may also include Juniper in digestive formulas as a carminative and to increase gastric secretions, in topical oils for eczema or psoriasis, or even use leaves and berries in incense. While many herbalists think of *Pedicularis* species for muscle relaxation, Juniper is far more common and leaf preparations can be used both internally as a tincture and topically as a liniment or infused oil for this purpose. Juniper's ability to relax resistance in the body is known to facilitate numerous physical health benefits and also open up the flow of thoughts and creativity in many people. Many of these traditional uses are supported by a body of recent scientific research including studies supporting antimicrobial, antioxidant, anti-inflammatory, pain relieving, hypoglycemic, cholesterol reducing, antilithic, and anti-ulcer actions along with protective effects on the liver and kidneys. Juniper is contraindicated for kidney infections and pregnancy due to its vasodilating effect on the uterus.

Albuquerque Chapter Botanizes at White Sands Missile Range

By Janet Herbst

Unique opportunities to see wonderful and interesting places around New Mexico

On May 18, members of NPSNM's Albuquerque Chapter visited White Sands Missile Range.

Our guide, David (Dave) Anderson was the botanist for 30 years at White Sands Missile Range. Now in his 80's, Dave knows every inch of the sprawling range. These days, the missile range no longer employs a botanist. Current Range staff accompanied us and told us not to wander off, to stick together. If we saw a man-made object, we were not to touch it. A few years ago, someone picked up an object, examined it and tossed it over his shoulder. When it hit the ground, it blew up.

We discovered many interesting plants in flower, the easiest way to identify them. We identified over 50 plants with Dave's help. Dave asked for a volunteer scribe to document what we saw, creating a hand written list. Always the teacher, at the start of our ramble Dave passed out index cards to each of us saying he would collect them at the end of the tour. We were instructed to write the name(s) of any of our favorite plants or those we wanted more information on our index cards. The plant list would be typed, queries researched, then later emailed to us.



Field Trip group at White Sands Missile Range

Photo by Chuck Roberts



Botanizing on the Range

Photo by Chuck Roberts

I wrote Clammy Weed. Of course, it has a Latin name, *Polansia dodecandra*, but sometimes those are hard to remember. This plant caught my eye because it was completely dead yet still in evidence. Its structure still intact above ground, stems strong, flower pods tough like rice paper. It was almost colorless, like a beige ghost. It withstood the elements for months: wind, rain. I could touch it and it didn't crumble. I liked that about this plant. Dave said it gets its common name from its attributes. When alive and growing, it has a hairy covering that feels wet or like your clammy brow. Some of us collected bits of this plant. Seeds were deep inside the flower structure.

The unique geography of the area upstaged the plants for me. Geography in the form of different layers of soils undulating on the horizon, including swaths of deep red colored naturally occurring soil. Dave pointed out the 'Navy mound' where during testing (a ship in the Gulf?) the Navy missed their target. Twice.

Dave brought us to one of the outposts that staff and researchers sometimes use where we ate our sack lunches. These small one

bedroom, one bath buildings have names. This one, called Ben, was complete with a road sign. A working windmill probably brought non-potable well water to Ben.

Electric lines on poles paralleled the road to Ben for miles. Atop about 99% of the poles were huge nests, a couple containing large black birds, probably Ravens. What a unique sight in this desert landscape to see manmade electric poles, tall vantage points as sites for these exposed nests. The Ravens adapted well to the lack of trees here. We also glimpsed a group of 4 or 5 Oryx, an exotic species from the Kalahari Desert in Africa, moving away from the road as we drove by.

One unique geographical feature on our tour was a faraway large outcropping of white on a hill in the distance. Dave asked us to guess what it was. There were a few guesses, Dolomite? Chalk? Quartz? Yes! We found pure white jagged Quartz stones everywhere. Some stones were pink with Mica and Quartz crystal imbedded. Quite beautiful.

The last visit of the day was to a spring where the White Sands pupfish (*Cyprinodon tularosa*) live. This small silvery fish, classified as threatened by the state of New Mexico, is found exclusively in the Tularosa Basin entirely within the Missile Range. These fish are secure thanks to the Cooperative Agreement for Protection and Maintenance of White Sands Pupfish in 1994.

This field trip was very interesting. I am looking forward to the next one.

More about White Sands Missile Range and White Sands National Monument

African Oryx: <https://www.nps.gov/whsa/learn/nature/african-oryx.htm>

White Sands Pupfish:

<http://www.wildlife.state.nm.us/download/conservation/species/fish/White-Sands-Pupfish.pdf>

Call for Instructors at White Sands National Monument. Here's your opportunity to teach a community education course

<https://www.nps.gov/whsa/learn/news/discoverws.htm>

Native Plant Society of New Mexico

2019 Native Plant Conference/ Annual Meeting

All Trails Lead to Santa Fe:



Capitalize *on the* Capitol!

COMING SOON – in September

**Backyard Refuge Program set to launch at Build Your Refuge event at
Valle de Oro on September 28th**

By Judith Phillips



Drawing © Wren Walraven

Every field trip we take is an affirmation of our good fortune to live in New Mexico. To increase appreciation and expand the support for native species, the Friends of Valle de Oro National Wildlife Refuge have garnered the support of 30 plus partner organizations including the Albuquerque Chapter of the Native Plant Society of New Mexico to bring the richness of our public lands and open spaces to the backyards of the Albuquerque Metro area.

Our goal is to spin a web of habitat patches, create and improve linkages between undeveloped spaces that currently host wildlife, making the Metro area a checkerboard extension of Valle de Oro. The criteria for certification as a backyard refuge vary in scale from large connecting and core habitats to small backyards, even patios and balconies. Everyone is invited to participate in any way they are able. Once the initial phase of the program takes off, we hope to expand the reach to include schools and business campuses, but first things first.

For the past year, the Valle de Oro Backyard Refuge Program partners and NWR staff have been working on a guide to the ecological diversity we enjoy so that we can build landscapes for conservation. The guide covers reasons to engage, potential creatures that could benefit (including ourselves) and how-to advice on the exercise of reconciliation ecology—deliberately sharing our landscapes with other species.

While the National Wildlife Federation has a long-standing successful program, because it covers the whole country, it is not as specific as it could be. The Albuquerque Backyard Refuge Certification is tailored to local ecology, climate, cultures, and budgets. The Backyard Refuge Guide has information on the wildlife you are likely to have visit depending on where you live, a sample garden design, an annotated plant list including more than 150 native species and their preferences, and other tips to help you develop your space.

This is a no brainer for native plant advocates as diverse plantings of homegrown and nursery grown native plants is the most direct path to attracting the pollinators, songbirds and other species that rely on natives for food and shelter. If you are already gardening for wildlife, share photos of your refuge at <https://www.facebook.com/friendsofvalledeoro>

The Backyard Refuge Program is set to launch at the Build Your Refuge event at Valle de Oro on September 28th. Meanwhile you can visit https://www.fws.gov/refuge/valle_de_oro/ and scroll down to 2019 events to find a calendar for the year and updates on the Backyard Refuge Program. Sample sections of the Backyard Refuge Guide will be released before September to build enthusiasm.

Editor's Note: *The Backyard Refuge Program information on the above websites is currently under construction. If you don't find what you are looking for, try again later. - DS*



Dalea wrightii
Photo © George Miller



Cirsium neomexicanum
Photo © George Miller

**NATIVE PLANT SOCIETY OF NEW MEXICO – ALBUQUERQUE CHAPTER
July – December 2019 ACTIVITIES AND EVENTS CALENDAR**

Scheduled monthly meetings are the first Wednesday of every month at 7pm in the NM Museum of Natural History, 1801 Mountain Rd. NW. For more info on programs, contact Jim McGrath at 286-8745 or sedges "at" swcp.com. Meeting places for field trips (codes A through H) are described in detail at the end of the schedule. Field trip participants should bring water, hat, sunscreen, snacks or lunch, rain gear and appropriate clothing to deal with poor weather conditions.

Some field trips may be announced with only 1 week to a month notice. Spring field trips depend upon good winter and spring precipitation; therefore, such field trips may be scheduled when we know wildflowers will be present. Please be aware that all field trip participants must sign the NPSNM liability release form before departure. Leaders should have forms available on site for those who have not signed one previously this year.



Calypso or Fairy Slipper Orchid (*Calypso bulbosa*)
Photo © George Miller

July 3. Meeting: "Plant Pollination Strategies: Food, sex, and broken promises."

George Miller, president of the Albuquerque chapter of the NPSNM and author of [Landscaping with Native Plants of the Southwest](#), will explore how plants have evolved to manipulate pollinator behavior not only with pollen and nectar rewards, but also with tricks, stimulants, addiction, deception, and entrapment. Plants and insects have co-evolved for 150 million years to create mutually-dependent physical, chemical, and behavioral systems to insure that sexual reproduction produces seeds, the seeds are dispersed, and the species propagates into the future. But not all plants play fair, and the most creative cheaters almost always win, at least in the short run in terms of evolution. You can bear witness to much of the deceit and debauchery if you have a native plant habitat garden in your yard.

July 13. Field trip: Sandia Crest Spur trail. Leader Doris Eng. Starting at the Crest House parking lot, the moderately strenuous trail drops below the crest into a ponderosa-Douglas fir transition forest. Monument plants, paintbrushes, Townsend's daisies, yellow sky pilot, red columbines, clematis, and the endemic Sandia coral bells line the trail as it winds below the rim to the Tram station. Returning through the spruce-fir forest we'll look for Jacob's ladder, towering fernleaf lousewort, and three species of penstemons. Four-mile round trip, rocky uneven trail with ups and downs, incredible views. Activity moderately strenuous: 4-mile round trip, uneven trail. **Meeting place A**, 8 a.m., return about 3 p.m. Bring lunch.



Petrified wood in Ceja Pelon, near Cuba, NM, indicates the badlands were once a lush forest. Photo © George Miller

July 27. Field Trip: Red Canyon in the Manzanos.

Leaders: Tom Stewart & Doris Eng. This hike begins at Red Canyon Campground which is reached by turning south on Forest Road 253 at the southern edge of the small town of Manzano off N.M. 14. The trail follows alongside and crosses a small stream several times. We may make it to where the trail leaves the drainage at 1.71 miles onto a sloping plateau and just a little bit further to good views to the east, but we are usually so caught up with admiring wildflowers, that we rarely make it quite so far. In the past we have been dazzled

by pine drops, Sandia alum root, birdbeak, harebell, Mexican hat, cut-leaf coneflower, dayflower, and rattlesnake orchid among many others. We'll probably be back late afternoon, so bring lunch, water, rain gear, and sunscreen. **Be ready to depart at meeting place A** at 7:30 am. Return mid-afternoon.

August: No monthly meeting. Annual meeting Aug 3–4 in Santa Fe, NM.

August 10. Field trip: Mt. Taylor. Leader George Miller, Doris Eng. We'll drive to Grants, then take a dirt Forest Service road through spruce-aspen forests to a broad meadow below the summit of Mt. Taylor-expect 1.5–2-hour drive. After botanizing the meadow—Silver lupine, red (instead of yellow) mt. parsley, penstemons; we'll continue a several-miles long ascending trail to the 11,301-foot summit (a good lunch stop). Along the trail we'll look for skyrockets with exceedingly long flower tubes, clumps of the dainty single-delight, and at the top, twin-berry and high-altitude cinquefoils. Activity level moderately strenuous: high elevation, long ascent, uneven trail. **Meeting place G**, 8 a.m. Bring lunch. Return late afternoon.

September 4: Meeting. "From Global Warming to Ice Caves: How and Why a Coherent Science of Notoriously Vague Things Matters More Than Ever." Geomorphometrist, remote sensing scientist and geographer Charlie Jackson provides examples of climatic objects of North America (1980-2016), maximum entropy species distribution, models of dust storms in the US-Mexico border region and recent 3D reconstructions of ice caves at El Malpais National Monument.

Saturday September 7. Field Trip. San Lorenzo Canyon. 8:00-5:00 (more or less). Leader Jim McGrath. We will explore this unique canyon just south of Sevilleta NWR – about 60 miles south of Albuquerque. In addition to wildflowers we might find in the riparian zone, desert flats, and steep slopes, the canyon has unique twists and turns, picturesque rock formations and even a couple small seeps. This trip will take us into the afternoon with return to Albuquerque

around 5:00 pm or so. Bring lunch, lots of water, hat, sunscreen, good hiking shoes and camera. **Meet 8:00 am at "G"** (SW corner of Saver's lot behind Mattress Firm on Carlisle at Menaul).

September 14: Field trip Florida Mountains and Pony Hills with Gene Jercinovic (tentative, details TBD). Drive and stay overnight Friday, hike Saturday.

Saturday September 21. Field Trip. Ceja Pelon Forests for All. 8:00am-5:00pm. Leader Mike Richie. Journey back 63 million years to when the San Juan Basin was covered by thick, tropical jungles and palm fringed swamps. With the dinosaurs gone, the first large mammals were beginning to dominate the ecosystems, but still competed with crocodiles and giant flightless birds for survival. The Ceja Pelon Badlands



Rio Grande flooded bosque trail June 2019

Photo © George Miller

preserves in stone a small portion of our planet's earliest broad-leafed rainforests. One of the biggest concentrations of huge, colorful petrified logs in the southwest lies hidden high atop stair step mesas. Brilliantly colored, giant quartz trunks and root balls lie crosswise in primeval log jams. Palm tree bases erode out of sandstone mesa edges. Rippling, finely layered bedrock from original sand dunes, shorelines and stream beds forms numerous hoodoos. Character laden high desert trees accent the views far south past towering pinnacles to tiny Cabezon Butte on the horizon. The goal is to be as inclusive as possible by offering side loops from the main petrified log areas to various other highlights. Difficulty: moderately strenuous. This trip will take us into the afternoon with return to Albuquerque around 5:00 pm or so. Bring lunch, lots of water, hat, sunscreen, good hiking shoes and camera. **High clearance vehicles and advanced sign-ups are necessary. Meet 8:00 am in Bernalillo** at the northwest corner of the Home Depot parking lot on 550 north of town.

October 2. Meeting: "Wildflowers of Socorro County." New Mexico Tech Emeritus Professor of Physics and avid wildflower photographer Tim Hankins takes us on a wildflower photo tour. Socorro County's 6649 square miles range over habitats including the Rio Grande Valley, the Quebradas, the Plains of San Agustin, and part of the Cibola National Forest with mountains up to nearly 11,000 feet. The varied terrain supports a diverse set of wildflowers. Tim will present a photographic collection of wildflowers from a variety of accessible locations in the county, starting at the lowest elevations near the Rio Grande and climbing to the top of Mt. Baldy in the Magdalena Mountains. Some of the flowers are easy to find, and some he has seen only once in the 30 years he has been hiking around the county.

Saturday October 12. Grass Field Trip: 9:00 am – Noon. Leader Jim McGrath. We will revisit Pueblo Montano Park (the park with the pieces of animal art carved out of tree trunks and logs located on the west side of the Rio Grande on Montano just east of Coors), the site of our 2018 grass field trip. We will learn how to identify common grasses. Last year we learned 25+ grass species. Returning participants will be quizzed to see how well they learned grasses on last year's field trip. We will walk along the drain toward San Antonio Oxbow. **Meet at Pueblo Montano Park** at 9:00 am.

Saturday October 19. Upland Grass Field Trip – Three Gun Spring Trail. 9:00-12:00+. Leader Jim McGrath. Join Jim on his favorite trail in the Sandia Mountains. We will focus on grasses and perhaps hike about 3 miles through a mixture of juniper, pinon pines, mountain mahogany, beargrass, scrub oak and Apache plume to the base of the steep slope and return via the wash. Participants from the October 12 Grass Field Trip will get a chance to practice what they learned the week before and also learn some new grasses. Bring water, snacks, hat and sunscreen. **Meet at 9:00 am at "A"** (SW corner of Smith's parking lot on Tramway at Central).

November 6. Meeting: "Early Ethnobotanists of the Late 19th and Early to Middle 20th Centuries." Paleoethnobotanist and past President of our Albuquerque chapter of the Native Plant Society of New Mexico, Pam McBride, will describe her professional field of paleoethnobotany, how botanical materials are retrieved from archaeological sites, their identification, and their interpretation, followed by a discussion of at least four of the pioneering ethnobotanists whose research make interpretation of the past possible. This discussion will include two of the most colorful and controversial ethnobotanists of the late 19th century: Matilda Coxe Stevenson and Frank Hamilton Cushing.

December 7 or 14, Annual holiday potluck and officers election. Saturday, 11am-2 pm. Pam McBride's House, 5409 9th St. NW. Pam will provide some vegetarian posole. Everyone bring a dish to share. From I-25 going north, take the Comanche/Griegos exit. Go west to 4th street, turn right, go to the next traffic light at Douglas MacArthur and turn left. Go to 9th street and turn north. Our driveway is just past a small dirt road, Juanita Lane, on the left. The house is straight back. Park on 9th street and walk in.

MEETING PLACES FOR FIELD TRIPS

- A. SW corner of Smith's parking lot at Tramway and Central.
- B. NE corner of Wal-Mart parking lot on the east side of Coors about 0.25 miles north of I-40.
- C. Albertson's parking lot at Tramway and Academy. Park along east wall.
- D. Far North Shopping Center at San Mateo and Academy. Park near Wienerschnitzel.
- E. Placitas. Parking lot of grocery store in Homesteads Village Shopping Center. Directions: I-25 north from ABQ to exit 242 (second exit at Bernalillo). Turn right and go east on Hwy 165 for approx.

5 miles to shopping center in Placitas on left. To car pool to Placitas, meet at D (Far North Shopping Center site).

F. Michael Emery Trailhead Parking Lot. Go east to the end of Spain Road (east of Tramway). At "T" intersection turn right and go 0.1 mile and turn left into parking lot.

G. Saver's parking lot) on Carlisle on NE side of Carlisle/Menaul intersection. Park behind Mattress Firm in SW corner of lot.

H. Los Lunas. SW corner of Home Depot parking lot by the tool sheds. Directions: From ABQ drive south on I-25 to Exit 203. Head east through 2 traffic lights. Home Depot is on left.

Articles, photos, and news submissions for the Albuquerque chapter NPSNM Spring Newsletter should be submitted via e-mail to Diane Stevenson by Saturday, September 21, 2019 (distevenson331 "at" hotmail.com). Any mistakes you see in this newsletter are mine. Thank you!

Become an NPSNM Member:

Join at <http://www.npsnm.org/membership/>

NPSNM is a non-profit organization dedicated to promoting the conservation of native New Mexico flora. The Society, and its local chapters, work to educate its members and promote the conservation of our native flora so future generations may enjoy our valuable resource.

Membership Benefits

Members benefit from regional chapter meetings, field trips, an annual meeting, and four issues of the state newsletter each year. Some chapters also hold plant sales and annual seed exchanges and offer discounts on a variety of books providing information on native plant identification and gardening with New Mexico native plants.

Additional benefits to members include discounts on New Mexico Wildflower and Cactus posters.

Albuquerque Chapter Benefits

Members who show a valid NPSNM membership card

- Qualify for Plant World discounts without having to purchase a Plant World membership
- Receive a 10% discount at Plants of the Southwest
- Receive a 10% discount at Santa Ana Garden Center

NPSNM Albuquerque Chapter

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