

NEWSLETTER

of the

NATIVE PLANT SOCIETY OF NEW MEXICO

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Native Plant Society of New Mexico 2019 Annual Conference AUGUST 1–4, SANTA FE

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The Newsletter of the Native Plant Society of New Mexico

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Next deadline is September 1, 2019. Articles and high-resolution artwork supporting the NPSNM's mission are

welcomed and can be sent to the editor, Margaret Ménache, npsnmnewsletter@gmail.com.

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From the President

We Are All in This Together

by Tom Stewart

I am going to depart somewhat from my usual column of Society updates and praises. That is, except for urging everyone please to attend our statewide an-

nual conference in Santa Fe during the first weekend of August. The Santa Fe Chapter has lined up some eye-opening presentations and workshops, as well as field experiences in habitats the public can rarely access. Let's appreciate the hard work it takes to bring together an event like this, and not only as ecotourists in the City Different. The underlying importance of the conference to me is to show support for our mission and each other in our heartfelt interest in plants, conservation, and the future.

Partnership is the name of the game, a principle that supports life as we know it. While pro-wildlife and wilderness organizations are numerous and popular, the Native Plant Society of New Mexico is the only non-profit, volunteer group exclusively devoted to our causes in this state. But we are all partners, hopefully not competitors. Thankfully, there is an increasing recognition that native plants ARE wildlife, enabling the very existence of all other kinds of wildlife including humans.

Partnership with other Native Plant Societies, big and small, nationwide is advanced by the Native Plant Conservation Campaign (NPCC). You may want to sign up for their plant conservation news emails as I have. They send out enlightening, encouraging, and occasionally alarming briefs from the world of native plant conservation and appreciation. You can find the link to this service on our own website (www. npsnm.org) under the Education & Outreach tab. Select Conservation from the dropdown menu. You might want to check out some of the other links while you're there.

We bid our former newsletter editor, Sarah Johnson, a fond farewell and thank her for her skillful production of many excellent issues over the past ten years. She has our best wishes on her continued editing career.

At the same time, the Native Plant Society of New Mexico welcomes Margaret Ménache, an Albuquerque member, who has stepped up to be the new editor. Margaret has earned an Art Studio BFA from UNM and a PhD in Biomathematics from Duke University. She is currently studying historic preservation, with an emphasis on historic gardens. Talent simply blossoms in this great organization!

Being pro-plants is not anti-wildlife, but is it antiinsects? We all understand that bees are necessary. But it is essential that we support the survival of insects and

invertebrates generally, as they and plants are intimately codependent, and not just for pollination. Our biggest partner in this is the Xerces Society which has long advocated the conservation and cultivation of native plants. It is worthwhile to look at their website (xerces.org) where you will find great resources and their interesting news blog.

Everyone loves to quote former New Mexico resident, Aldo Leopold, and I cannot resist relying again on his wisdom. "The last word in ignorance is the man who says of an animal or plant, 'What good is it?' If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering." (Round River: From the Journals of Aldo Leopold)







Conservation Corner

by Rachel Jankowitz, NPSNM Conservation Committee Chair

WOTUS

NPSNM submitted comments to the US Environmental Protection Agency and US Army Corps of Engineers, in response to a proposed revised definition of Waters of the United States under the Clean Water Act. The CWA authority is based on federal jurisdiction over interstate commerce under the US Constitution, hence it is statutorily limited to effects on "navigable waters". Our interest in the reach of CWA coverage stems from the damage that native plant communities will suffer without the protections of the Act. Because plants are important mediators of water quality, the degradation or loss of native plant communities will in turn have significant deleterious effects on the integrity of downstream navigable waters.

The most recent prior interpretation of WOTUS, in 2015, was informed by the findings of an EPA Office of Research and Development report called "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence". The report reviewed the findings of over 1200 peer-reviewed publications and demonstrated the physical, chemical and biological influences of streams and wetlands on downstream waters. The report states that "ephemeral and intermittent streams perform many of the same functions in a watershed as perennial streams" and that "downstream waters are the time-integrated result of all waters contributing to them" (note that this statement is not limited to surface water). Governor Lujan Grisham has removed New Mexico from a lawsuit challenging the 2015 definition.

Since all water in a watershed is connected to some degree, there is a practical necessity to draw a line identifying where the effects on downstream navigable waters become insignificant. While it is possible for reasonable people to disagree with the precise limits drawn by the 2015 Rule, the new rule, as noticed February 14, 2019, in the Federal Register, would err very far on the side of excluding waters with obvious major impacts to traditional navigable water bodies, and the agencies have offered no scientific justification for their conclusions. For example, limiting wetland "adjacency" to those wetlands with abutment or a continuous surface water connection, is arbitrary and does not reflect the potential for a functional relationship. If a rule is adopted that is not based on science, adverse impacts to water quality will in fact result, despite the agencies choosing to selectively ignore findings of the connectivity report.

Here are some of the major categories of NM waters which would be excluded under the proposal, their typical vegetation, and the water quality services they provide:

- a. perennial waters above ephemeral stretches
- typically support cottonwood/willow riparian forests often the location of population centers and, hence, wastewater treatment discharge provide habitat refugia for aquatic organisms deliver organic material to downstream reaches shade reduces water temperature canopy and ground cover slow runoff velocity and reduce sedimentation
- b. high altitude wet meadows a form of wetland typically support sedges and other grass-like species store large quantities of water below ground and keep it cool can take up and sequester excess nutrients, metals and other chemicals root systems retain productive organic soil that would otherwise wash away
- c. ephemeral headwaters networks very extensive in NM, convey a high percentage of flow during precipitation events typically support an increased density of upland plants, also more specialized species adapted to sub-irrigation of the root zone canopy and ground cover slow runoff velocity and reduce sedimentation recharge shallow aquifers that support the baseflow of perennial streams

The proposed definition will fail to offer the "certainty" that is claimed by its proponents. An estimated 88% of New Mexico streams are non-perennial. In addition, many streams exhibit abrupt changes in flow regime caused by underlying geology. There is no universally applicable method Continued next page



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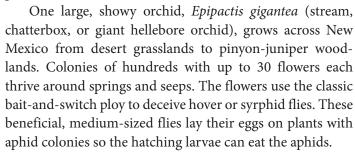
Hunter Ten Broeck

Devious Stream Orchid Tricks Insects

Text and photos by George Miller, Albuquerque Chapter President

Textbook pollination seems so straightforward - a hungry insect visits colorful flowers for energy-rich nectar and protein-rich pollen and spreads pollen from one flower after another. It's win-win: flowers get fertilized and insects get food....

Except when it's not. In 150 million years of developing strategies to manipulate insect behavior, flowers have created elaborate schemes to trick pollinators. Members of the orchid family stand out as the masters of deceit with a plethora of cons, deceptions, and false promises of food and sex.



Here's the deception: The flowers produce a sweetsmelling nectar that mimics the honeydew scent of aphids.



to distinguish "ephemeral" and "intermittent" streams. The FR notice devotes a 3-column page to listing potential sources of information that might be useful in making a decision as to category, stating that "often multiple data points and multiple sources of information could be used to determine flow regime", and cites the necessity of "supporting information, as well as fieldwork" in making the determination.

Likewise, the definition of a "typical year" (a phrase used repeatedly in the proposed rule) could be problematic in a state such as New Mexico which experiences characteristic huge between-year climate variability and episodic precipitation. In most cases, this is not a process that could be completed casually by a landowner, but would require the expertise of trained professional consultants and/or agency staff. There would be no significant process efficiency improvement as compared to the current case-by-case "significant nexus" analysis. Greater clarity regarding jurisdiction could instead be achieved by generating regional guidance for the definition of WOTUS, which would result in practices better suited to regional conditions.

The only certainty here is, that if this proposed defini-



To add to the con, the lip of the orchid has tiny, nipple-like bumps (papillae) that resemble a cluster of aphids. When a fly lands on the lip to lay eggs or sip nectar, its back rubs against the disk-like anther and snares a sticky package of pollen. When it moves deeper into the flower to reach the nectar, pollen from the package transfers to the sticky stigma. The flowers are protandrous (anthers release pollen before stigma is receptive), so the orchid's deception provides a high rate of cross pollination. Meanwhile the hover flies zip from flower to flower never knowing that their larvae have no chance of survival.

George Miller's website www.wildflowersNM.com describes over 550 flowers with photos and identification tips. It also includes some photographs with plant parts identified as well as a distribution map for *Epipactis gigantea*.

> See more photos on back cover



tion is adopted by the agencies, the biodiversity and the water quality of the waters of the United States (by any definition) will decline together, especially in the arid or semi-arid Southwestern states. These effects will only increase over time as climate change pushes more and more water bodies toward the ephemerality end of the spectrum (a very important consideration which is not addressed whatsoever in the FR notice). In summary NPSNM recommended that the agencies not adopt the proposed definition of Waters of the United States. *



Chapter Activities & Events

For further information on the following events, notify the contact person listed, or visit the chapter's web page: First go to www.npsnm.org; click on Local Chapters; then select the chapter. **Hikers** should always bring plenty of water, hat, sun protection, lunch and/or snacks, field guides, and wear sturdy shoes, suitable for rough, uneven ground.

Albuquerque

All scheduled monthly meetings are normally the first Wednesday of the month at 7 p.m. in the NM Museum of Natural History, 1801 Mountain Rd. NW. For more info on programs contact Jim McGrath at sedges [at] swcp.com or George Miller at goxfordm1844 [at] yahoo.com. For field trips, contact Carol Conoboy, carolconoboy [at] gmail.com, 505/897-3530. For meeting places indicated [A] through [H] see website.

Jul 3 Meeting. Plant Pollination Strategies: Food, sex, and broken promises. George Miller, president Albuquerque chapter NPSNM and author.

Jul 13 Field Trip. Sandia Crest Spur trail. Doris Eng, leader. Meet at A at 8 a.m., return 3 p.m. Bring lunch.

Aug 7 No meeting.

Aug 10 Field Trip. Mt. Taylor. George Miller, Doris Eng, leaders. Meet at **G** at 8:00 a.m. for approx 2 hr drive. Bring lunch.

Sep 4 Meeting. From Global Warming to Ice Caves: How and Why a Coherent Science of Notoriously Vague Things Matters More Than Ever. Charlie Jackson, geomorphometrist, remote sensing scientist, geographer.

Sep 7 Field Trip. San Lorenzo Canyon, south of Sevilleta NWR. Jim McGrath, leader. Meet at **G** at 8:00 a.m. for approx 1 hr drive. Bring lunch.

Sep 14 Field Trip - tentative. Florida Mountains and Poly Hills. Gene Jercinovic, leader. Details TBD.

Sep 21 Field Trip. Ceja Pelon Forests for All. Mike Richie, leader. Meet 8:00 a.m. in NW corner of Home Depot parking lot on Hwy 550 north of Bernalillo. Bring lunch. High clearance vehicles and advance sign-ups necessary.

El Paso

El Paso Chapter meetings are at St. Alban's Episcopal Church, 1810 Elm Street (Elm at Wheeling, off Piedras). Programs are second Thursdays at 7 p.m. (coffee social at 6:30) unless otherwise noted. All events free unless a fee is specified. Nonmembers always welcome. Info: John White, 575/640-7555; jmwhite [at] utep.edu.

Jul 12 Meeting. El Paso Weeds - Super Heroes or Super Villains. Mr. Thomas Prokopchuk, retired gov't engineer.

Aug 8 No meeting.

Sep 12 Meeting. Lotions and Potions - Native Herb Gardening. Bea Gonzales, retired EPISD administrator, avid lifelong gardener.

Gila (Silver City)

All programs are free and open to the public. Meetings are third Fridays (Oct-May) at 7 p.m. at WNMU's Harlan Hall, Rm. 219, with refreshments following the program. Field trips are third Sundays (Apr-Sep). Each field trip will be to a different location in order to explore the diversity of our native plants. Meet at 8:00 a.m. at the south parking lot next to the Fine Arts Center Theatre on the WNMU campus for carpooling. For more information, go to www.gilanps.org/Events/.

Jul 21 Field Trip. Pinos Altos Range.

Aug 18 Field Trip. Sacaton Mesa.

Sep 15 Field Trip. Fort Bayard Preserve.

Las Cruces

Meetings are fourth Wednesdays (unless otherwise noted) at 7 p.m., in the NMSU Herbarium or the conference room of the Social Center at the University Terrace Good Samaritan Village, 3011 Buena Vida Circle, Las Cruces. Field Trips are usually Sundays. Bring lunch/snack, water, sun protection, and wear good walking shoes. Please check each listing for where and when to meet. Participants must sign a release of liability form. Children must be accompanied by their parents. Programs and field trips are free, unless in a fee area; non-members are always welcome. Contact: Carolyn Gressitt, 575/523-8413. Leave a message so we can get back to you.

Jul 24 Meeting (Good Samaritan). Ecological Traits of Invasive Plants. Brian Schutte.

Jul 28 Field Trip. Railroad Canyon via Gallinas Canyon in the Black Ridge. Lisa Mandelkern, leader. Meet 8 a.m., parking lot east of Telshor 12 Cinema by former K-Mart lot.

Aug 28 Meeting (Herbarium). Cactus Cuisine. Jim Hasting.

Sep 1 Field Trip. Sacramento Mts, Osha Trail near Cloudcroft. Meet 8 a.m., parking lot east of Telshor 12 Cinema by former K-Mart lot.

Sep 25 Meeting. Speaker and location TBA.

Sep 29 Field Trip. Bar-Soledad Canyon south loop, Organ Mtns. Meet 8 a.m., First National Bank 1870, corner University/Telshor.

Otero (Alamogordo)

For field trip information, contact Elva Osterreich, echoofthedesert [at] gmail.com, 575/443-4408; or Jen Gruger, jengruger [at] gmail.com, 505/710-2924. More info will be available by the beginning of each month.

Jul 27 Field Trip. Grindstone Lake Nature Trail. Meet at 8

a.m. to carpool at the 'Y' (Hwys 54 & 70) in Tularosa.

Aug 24 Alamogordo & environs home tour. Meet 8 am in the Family Dollar parking lot at Florida & Indian Wells in Alamogordo.

Sep 7 Field Trip. Otero Mesa. Day-long trip-bring snacks, lunch, boots, sunscreen & water. Meet at 8 am to carpool at Speedway Gas Station (U.S. 54 across from old Walmart).

Sep 18-21 Otero County Fair booth. Volunteers welcome. Sign up for a shift or two by calling Jennifer Gruger.

Santa Fe

Meetings are third Wednesdays at 6:30 p.m. at Christ Lutheran Church, 1701 Arroyo Chamiso (in the triangle of Old Pecos Trail, St Michael's Dr., and Arroyo Chamiso). For more information, contact Tom Antonio, 505/690-5105. Meetings and talks are free and open to all.

Jul Check website for possible field trips.

Aug See you at IAIA for 2019 NPSNM conference!

Sep Topic/speaker TBD. Check website.

Taos

Meetings are third Wednesdays at 6 p.m. in boardroom, Kit Carson Electric Cooperative, 118 Cruz Alta Rd. Free, open to the public. Videotaped. Videos of past meetings are at https:// tinyurl.com/TaosNPSvideos. Check NPSNM website or Facebook for updates, or phone Jan Martenson at 575/751-0511.

Jul 2 Field Trip. Santa Fe Botanical Gardens. Leader: horticulturist Scott Caning. Lunch at Museum Hill Cafe, then visit private rock garden. Fee for SFBG. Reserve space: 575-751-0511 or taosnps (at) gmail.com. Meet at San Francisco di Asis in Ranchos de Taos 8 am for carpooling.

Hike. Location TBD. Meet at KTAO parking lot at Jul 6 8 am for carpooling.

Meeting. Noxious Weeds of Northern New Mexico **Jul 17** Jim Wanstall NM Dept of Agriculture.

Hike. Valle Vidal. Meet at KTAO parking lot at 8 am for carpooling; bring lunch.

Aug 10 Hike. Location TBD

Aug 24 Native plant & book sale in front of Cid's market, 10am-5pm.

Sep 18 Meeting. Program TBA

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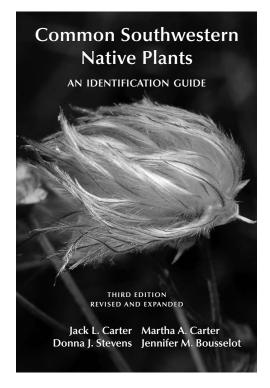
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Native Plant Society of New Mexico

2019 Annual Conference All Trails Lead to Santa Fe:

Thursday,

August 1

to

Sunday,

August 4



Tent Rocks, Margaret Ménache

Institute of

American

Indian

Arts

Santa Fe

Pinyon (left) and Aspens (above), IEA

Capitalize on the Capitol!

Conference Location: The meeting will be held in the Center for Lifelong Education (CLE) on the campus of the Institute of American Indian Arts (IAIA). IAIA is located at 83 Avan Nu Po Road in Rancho Viejo, approximately 8 miles south of Santa Fe or a 15-minute drive from the Santa Fe Plaza.

Accommodations: IAIA Dorm Rooms: Consider staying in one of a *limited* number of reasonably priced single- and double-occupancy dorm rooms on the IAIA campus. These modern rooms with private bathrooms will be available on a first-come first-served basis. Linens and towels are provided. Single and/or double rooms are priced at \$70/night, including breakfast. Please contact Tom Antonio at tom@thomasantonio.org for more information. To reserve your space, include a \$50 deposit with your registration. **Inn at Santa Fe:** Off I-25, take exit 278. It is located at 8376 Cerrillos Rd., approximately 2 miles from IAIA. Mention the Native Plant Conference for the discount (\$99 + tax), including a full American breakfast. 888/871-7138, 505/474-9500. **www.InnAtSantaFe.com**. In addition, there are many other accommodations in Santa Fe, which vary significantly in price. August is high tourist season in Santa Fe, so we urge you to make your reservations ASAP. For additional information, please visit www.santafe.org, the official travel site for Santa Fe.

The Santa Fe chapter welcomes donations for the Silent Auction

We encourage members to donate, new high quality garden tools, creative or whimsical garden art, vacation getaways (use of vacation condos, guest houses), etc. Please do not donate plants or books.

Contact Kathy Dickerson, 505-474-4309, if you have questions regarding your donations.

2019 Annual Conference Program—Native Plant Society of New Mexico Santa Fe Chapter, Santa Fe, New Mexico

Field Trips and Workshops: Directions and meet-up locations will be in your registration packet. Wear appropriate shoes and a hat, bring water, sunscreen, snacks, and hiking poles where needed-don't forget your hand lens. Driving distances given are one-way. Carpooling is encouraged. On longer drives you may be asked to contribute a few dollars to your driver for gas. Certain workshops and field trips have special fees that are to be paid at the conference upon assurance that you are among the participants, and are not to be paid with your registration.

Thursday, August 1

1:30 pm-5:00 pm	NPSNM Board Meeting (Conference Room # 2, 2nd floor, Bldg. #4)
3:00 pm-6:00 pm	Check-in/Registration (Lobby in front of the Auditorium Bldg. #5)
5:30 pm-7:30 pm	Reception for board members TBA

Friday, August 2

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Check-in/Registration (Lobby in front of Auditorium Bldg. #5) 7:30 am-4:00 pm

8:00 am-4:00 pm Silent Auction

7:45 am-8:45 am Coffee, tea, assorted fresh cut fruit and muffins

9:00 am-9:15 am Opening Prayer: Bryson Meyers, President IAIA Associated Student Gov.

Welcome, Opening Remarks: Dr. Thomas Antonio, President SF-NPSNM

9:15 am-10:00 am Linda Black Elk, born into the Catabwa Nation, Ethnobotanist, Restoration Ecologist, and Sci-

ence Professor at Sitting Bull College. "Plant Stories: Encouraging Environmental Activism and

Relation Building through Storytelling"

10:00 am-10:45 am Dr. Richard Ford, Ethnobotanist. "Indigenous Food Plants of the Southwest"

10:45 am-11:00 am Break

11:00 am-11:50 am David Salman, Chief Horticulturist for High Country Gardens, Santa Fe. "The Beauty of Native

Shrubs and Tree for Waterwise Landscapes"

FRIDAY AFTERNOON

Lunch in IAIA Café (Bldg. #4-included in pre-registration, ticket included with name tag) Noon-1:30 pm

Reagan Wytsalucy, Diné from Gallup, NM. "Importance and Uses of Navajo Spinach" 1:30 pm-2:20 pm

Alesia Hallmark, Ph.D. candidate UNM. "Zombie Shrubs: Light, Cameras, Actions: using col-2:20 pm-3:00 pm

or, imagery, and observational phenology data in aridlands"

Break 3:00 pm-3:15 pm

3:30 pm-4:20 pm Dr. Patrick Alexander, Botanist, Bureau of Land Management Las Cruces District. "Barren, Wild,

and Worthless: Evaluating Desert Plant Communities"

5:00 pm-7:00 pm Reception at the New Mexico Governor's Mansion

with appetizers & drinks, tickets provided with name tag

One Mansion Drive, Santa Fe, NM. Parking available. Please carpool if possible. Note that a valid Driver's license must be shown to gain entrance to this event

7:00 pm Dinner on your own. See registration packet for list of nearby Santa Fe restaurants 10 July-September 2019

Saturday, August 3

SATURDAY MORNING Field Trips and Workshops, 9:00 am-noon, unless otherwise indicated

1. Living Lines in Botanical Art Workshop: Drawing and watercolor for new and experienced artists Facilitator: Lisa Coddington

Location: LTC lecture room in Building #5 **Min:** 4 **Limit:** 10 **Cost:** \$35 (Workshop supplies are provided) This workshop provides specific subjects for various levels of experience. Drawing and watercolor demonstrations support your drawing technique, watercolor control, color mixing, creating dimensional botanical forms, and refining details. Take home handouts and a resource list.

2. Indigenous Foods Cooking Workshop Facilitator: Dr. Lois Ellen Frank

Location: Kitchen located in the lower level of the Hogan, Building #1 **Limit:** 10 **Cost:** \$10 Join renowned indigenous chef Lois Ellen Frank to learn to cook indigenous Native American foods of the Southwest. Prepare Lois' favorite Cactus Pad Salad and Sunflower Seed Cakes. Discover the history of foods from the Southwest Indian Nations while you are cooking.

3. Ancient Life Ways Technology Workshop Facilitator: Mary Weahkee

Location: Room 121 Conservation Lab in Building #9 Limit: 10 Cost: \$10

This workshop will focus on Yucca production of sandals, textiles and other uses of yucca. Each participant will be making one yucca sandal.

4. A Beginner's Guide to Mosses Workshop Facilitator: Dr. Russ Kleinman

Location: Science Lab Room 120 SCITEC Building #9 Limit: 10

Using both compound and dissection microscopes we will explore the amazing world of mosses. We will examine a teaching collection as well as collecting samples from the IAIA nature trail.

5. Beautiful Cactus Gardens of Eldorado Leader: Joe Newman

Driving distance: approx. 20 miles **Hiking distance & difficulty:** easy **Elevation:** 6500′ **Limit:** 15

Leaving IAIA at 8:30 AM or meet us at the first location 1 Hacienda Loop at 9:30 AM. Join us as we tour the beautiful cactus gardens around Eldorado, NM. We will start at 1 Hacienda Loop where we will see the endangered Santa Fe Cholla. Then we will drive past the Vista Grande median and the LaTienda entrance, with a final stop at Nancy and Obie's place (4 Duende Road in Eldorado). Each participant may receive a small Santa Fe cholla to take home.

6. Randall Davey Audubon Center Wildflower and Garden Walk Leader: Carlyn Jervis

Driving distance: 17 miles Hiking distance & difficulty: 2 miles, easy **Elevation:** 7400' Limit: 15

Along the half-mile loop trail, we should find a good selection of wildflowers typical of the Rocky Mountain foothills piñon/juniper habitat in "monsoon" season. Going a quarter mile up Bear Canyon into the Ponderosa Pine/Douglas Fir habitat should reveal additional plants. We will also see the Master Gardener maintained xeriscape gardens. No admission fee, donations welcome. See nm.audubon.org.

7. New Mexico Wildlife Center Leader: Kate Whelan

Driving distance: 32 miles **Hiking distance & difficulty:** about 1 mile, easy **Elevation:** about 5600′ **Limit:** 20

Visit native plant gardens established by Santa Fe Master Gardeners on a former rodeo ground at the New Mexico Wildlife Center south of Espanola. https://newmexicowildlife.org. We will see native plant pollinator gardens, a Cactus Rescue Coalition planted cactus garden, monitoring sites for the endangered Santa Fe Cholla and other restoration efforts. The walk will begin with a photo show and talk by Kate Whelan on native bees foraging on native plants.

8. Leonora Curtin Wetland Preserve Leader: Natali Steinberg

Driving distance: 9 miles **Hiking distance & difficulty:** 1-2 miles, easy **Elevation:** 6500' **Limit:** 20

The Preserve is a 35-acre cienega being restored from invasive Russian olives. It is managed by the Santa Fe Botanical Garden and has accessible trails in the uplands and wetlands containing over 250 plant species. See santafebotanicalgarden.org.

9. Downtown Santa Fe Walking Tour Leader: David Rasch

Driving distance: 8 miles **Hiking distance & difficulty:** 1½ miles, easy **Limit:** 15

This tour will reveal the tapestry of trees and architecture in Santa Fe's built environment. Majestic cottonwoods and romantic Spanish-Pueblo Revival, enhanced by unusual exotic specimens and Territorial Anglo inspirations, provide a rich diversity that will surprise you as we stroll through the heart of the City Different.

10. New Mexico Capitol Building ("The Roundhouse") and Grounds Tour Leaders: Christal Branch & Tracy Neal **Driving distance**: 8 miles **Hiking distance** & difficulty: 1 mile, easy **Limit**: 20

This tour will begin with the interior of the Capitol, with explanations of the legislative process and views of some of

the Capitol's impressive collection of art. We will then move outside for a tour of the capitol grounds and the extensive plantings designed by Clay Buchanan.

11. Terrero Mine Restoration in the Pecos Leader: Rachel Jankowitz

Driving distance: 30 miles **Hiking distance & difficulty:** less than 1 mile, easy **Elevation:** about 7200' **Limit:** 20

This mine was one of the country's most productive lead and zinc mines in the 1920s and 30s. Site reclamation started in the late 1990s under direction of the NMED. Learn about mining history and the reclamation project, as we visit the El Molino mill site near the village of Pecos to look at what is growing and how it compares with the list of species that were seeded there 15 years ago. Optional ¼ mile walk to the borrow pits.

12. Black Canyon Leaders: Sam Berry & Maria Mullins

Driving distance: 13 miles Hiking distance & difficulty: 2 miles, easy to moderate Elevation: up to 9000' Limit: 15 Join us for a hike near downtown from the Black Canyon campground on NM Hwy 475 in the Santa Fe National Forest through a thinned part of the forest up to a meadow where a prescribed burn was conducted.

13. Beautifully Restored Cienega at Simons Ranch Leader: Bob Sivinski

Driving distance: 9 miles **Hiking distance & difficulty:** 1 mile or less, easy **Elevation:** 7000' **Limit:** 15

Enjoy this special opportunity to view a restored ciénega with its rare and unusual wetland plants on a private ranch next to the Leonora Curtin Wetland Preserve.

14. Santa Fe Botanical Garden at Museum Hill Leader: Scott Canning

Driving distance: 13 miles **Hiking distance & difficulty:** 1 mile, easy **Limit:** 20

Join us for a tour of the lovely Santa Fe Botanical Garden, with a focus on the native plants of the recently opened Ojos y Manos, which is also an ethnobotanical garden and will include a discussion of the traditional uses for these plants.

15. Railyard Park to St. Francis Underpass Leaders: Gail Haggard & Soulange Serquis

Driving distance: 11 miles Hiking distance & difficulty: about 1½ miles, easy Elevation: 7000' Limit: 20

Enjoy a hike from the north end of the City Railyard Park to the new underpass below St. Francis Dr. that connects the neighborhood once severed from downtown. The 13-acre Railyard Park is planted with many natives and was created by Trust for Public Land.

SATURDAY AFTERNOON

Silent Auction 12:30 pm-4:00 pm

12:00 pm-1:30 pm Lunch at IAIA Café (included in pre-registration) ticket with name tag (Bldg.# 4)

Dr. Hilario Romero, former New Mexico State Historian and retired professor of history, Spanish 1:30 pm-2:15 pm

and education. "Las Acequias of Santa Fe: Geography, Ecology and People"

2:15 pm-3:00 pm Larry Deaven. "The Penstemon Gardens at the Los Alamos Nature Center"

3:00 pm-3:45 pm Craig Martin. "Plants of the Jemez Mountains"

Break-Silent Auction closes at 4:00 PM 3:45 pm-4:00 pm

Dr. Ellis Margolis, research ecologist at the USGS NM Landscapes Field Station. "Climate, fire, 4:00 pm-4:50 pm

salamanders, and forests: through the lens of tree rings"

Pickup Silent Auction items 5:00 pm-5:30 pm

Banquet at the Scottish Rite Temple 463 Paseo de Peralta, Santa Fe, NM 6:00 pm-8:00 pm

Plenty of free parking

Drinks in Courtyard 6:00 pm 6:30 pm Dinner in Banquet Hall

7:30 pm Guest Speaker in Scottish Rite Theater

Baker H. Morrow "Gardens in the Sand: Early Pueblo and Spanish

Landscapes in New Mexico"

Sunday, August 4

Field Trips start 8:00 am unless otherwise indicated. Many of the field trips on Sunday range farther afield and you may want to pack a lunch.

16. Mosses on My Mind: Bryophytes for the Beginner Leader: Dr. Russ Kleinman

Driving distance: 18 miles **Hiking distance & difficulty:** less than 1 mile, easy **Elevation:** 10,000′ **Limit:** 15 Enjoy the spectacular cool drive to the Santa Fe Ski Basin. You'll learn how to see and identify mosses, all the while engaging in informative conversations. Handouts provided. Bring a 10x hand lens if you have one.

17. Holy Ghost Canyon Leader: Danny Burton

Driving distance: 47 miles **Hiking distance & difficulty:** 2–3 miles or more, easy/moderate **Elevation:** 8000–8500′ **Limit:** 15 The endemic endangered Holy Ghost Ipomopsis (*Ipomopsis sancti-spiritus*) occurs only along a small stretch of road in the Holy Ghost Canyon near Pecos, NM. Learn about this beautiful plant and the struggles to save it, in addition to seeing many other plants in this rich canyon habitat.

18. The Other Side of Town: Acequia Trail, Two Cemeteries, Baca Railyard & Santa Fe's First City Well Leaders: Barbara Fix & Alysia Abbott

Driving distance: 11 miles **Hiking distance & difficulty:** 3–4 miles, easy **Elevation:** 7000′ **Limit:** 20 Learn about the history of the former farmland and industrial area once outside the City of Santa Fe. We will see: the two cemeteries moved in the 1880s from downtown, the developing City-owned Baca Railyard, the Baca Street Well, once part of PNM's power plant where groundwater contamination is continuing to be addressed. Learn about changing land uses occasioned by drought, population growth, culture change, city water system and possible brownfields treatment for potential public benefit, including the role of native plants.

19. Butterfly Walk in the Jemez Mountains Leader: Steve Cary

Driving distance: 50 miles **Hiking distance & difficulty:** 2–3 miles, easy/moderate, on/off trail **Elevation:** 7500′–9500′ **Limit:** 15 Enjoy a hike in the Jemez Mountains to see three different butterfly habitats, including two in post-wildfire recovery. Starting at the Trailhead for Burnt Mesa, in an often burned, dry grassland with interspersed stands of oak and ponderosa pine, the tour will continue to Camp May to see high meadow and mixed conifers. We will end at Valle Canyon, a recently burned area in the early stages of recovery.

20. Kasha-Katuwe Tent Rock National Monument Leader: Gail Haggard

Driving distance: 34 miles **Hiking distance & difficulty:** 2 miles, moderate **Elevation:** 5500′–6700′ **Limit:** 15 **Cost:** \$5 fee/vehicle

Enjoy a hike through this expansive geological park amid cone-shaped tent rock formations, products of volcanic eruptions 6–7 million years ago. There are many native plants, including the unusual Manzanitas.

21. Rio en Medio Leader: Linda Wiener

Driving distance: 25 miles **Hiking distance & difficulty:** 8 miles, moderate—some steep inclines & wet crossings **Limit:** 12 See butterflies and native flora as we hike through forested areas, open meadows, up steep inclines and cross many streams to a beautiful waterfall in the Sangre de Cristo Mountains near Tesuque.

22. Big Tesugue Plant Ecology Walk Leader: Dr. Sylvan Kaufman

Driving distance: 27 miles **Hiking distance & difficulty:** 3 miles, easy/moderate **Elevation:** 9600′ **Limit:** 20 Starting at the Big Tesuque Campground in the Sangre de Cristo Mountains this trail winds through aspen and conifer forests and a lovely meadow. We will see a variety of high elevation plants in different plant communities. We will discuss the plant community types and plant-animal interactions encountered on the walk.

23. Santa Fe Ski Basin Leader: William Neuwirth

Driving distance: 18 miles **Hiking distance & difficulty:** 1–2 miles, easy/moderate **Elevation:** 10,000' **Limit:** 15 We will meet near the steps leading up to the lodge at 9:30 AM, break for a quick lunch and end at 2 PM. Enjoy a cool hike through majestic Engelmann Spruce and Corkbark fir forests, stream-side meadows and montane grasslands in the Santa Fe Ski Basin. More than 215 plant species, including 5 orchids, 4 gentians and many other montane species may be seen.

24. Cañada Bonita Leader: Chick Keller

Driving distance: 50 miles **Hiking distance & difficulty:** 2–3 miles, moderate **Elevation:** 9000′ **Limit:** 15 Please car pool and meet at the Sullivan Field Parking Lot across from the Los Alamos High School. This hike starts at Pajarito ski area Road/trail to high meadow (Cañada Bonita) and is about a one-mile level walk. Wildflowers such as *Pedicularis parryi*, sneezeweed, Geyer's onion, death camas, four species of paintbrush, kittentails and many more.

Valles Caldera National Preserve Van Tour Leaders: Monique Schoustra & Tom Ribe

Driving distance: 60 miles **Hiking distance & difficulty:** about 2 miles in short walks, easy **Elevation:** 8000′–8600′ **Fee:** \$75 Full-day van tour through valleys and highlands of the Valles Caldera Natural Preserve. Great Southwest Adventures is offering this tour at a 40% discount to NPSNM attendees. A van will pick riders up in the morning at IAIA or in town. Stops will be made at various native plant habitats. Lunch will be provided. See swadventures.com for more info.

26. Hike into the Watershed Leaders: Santa Fe Water Association & others TBA

Driving distance: 17 miles Hiking distance & difficulty: 5 miles, easy/moderate Elevation: 7500′-8000′ Min: 10 Limit: 25 9 am to 2 pm. From the Nature Conservancy's Santa Fe Canyon Preserve, we will hike up the Santa Fe River to the rarely seen upper part of the watershed, closed to the public since 1932. We will visit the lower of the two reservoirs. We'll see beavers, riparian areas, forest, native plants. We'll learn the natural and cultural history of the area and how the watershed is being managed. We may spot and report on invasive weeds. Bring your GPS units.

The Wildflower Special

The Cumbres & Toltec Scenic Railroad is offering NPSNM members a 10% discount on tickets for its unique Wildflower Special on Sunday, August 4th.

An all-day 64-mile train trip starting from Antonito, Colorado to Chama, NM to study the unique Southern Rocky Mountain ecosystems along the Cumbres & Toltec Scenic Railroad. Daniela Roth, the NM state botanist for rare and endangered plants, and Bob Pennington, native plant promoter and owner of Agua Fria Nursery, will be the botanical leaders for this train trip. Seating is limited, so early reservations are advised. Please call 1-888-286-2737 for reservations. Use the code NPS19 to get the discount. For more info and reservations, go to http://cumbrestoltec.com.



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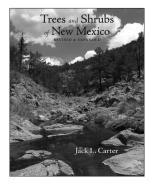
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All Trails Lead to Santa Fe: Capitalize on the Capitol! 2019 NPSNM STATE CONFERENCE REGISTRATION FORM

Please complete and send a separate form for each attendee OR register individually and pay online at www.npsnm.org

Name					NPSNM Ch	napter
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		ks during conference brea nsion in Santa Fe { <i>note a v</i>		•		
The Saturday e additional \$30.		the beautiful historic Scott	ish Rite Temple in d	owntown Santa Fe	(drinks incl	uded) is an
Pay any worksh	nop or extra field tri	p fee, once confirmed, at t	he conference.			
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Saturday 8/3	1st Choice	2nd Choice	3rd Choice			

Registration Date	NPSNM Member	Non-Member
On or Before July 15	\$120	\$140
July 16 and After	\$140	\$160
Saturday banquet including 2 drinks	\$ 30	\$ 30
Dorm lodging deposit"	\$ 50	\$ 50

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Sunday 8/4

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Membership in the NPSNM is open to anyone supporting our goals of promoting a greater appreciation of native plants and their environment and the preservation of endangered species. We encourage the use of suitable native plants in landscaping to preserve our state's unique character and as a water conservation measure. Members benefit from chapter meetings, field trips, publications, plant and seed exchanges, and educational forums. The Society has also produced a New Mexico wildflower poster by artist Niki Threlkeld and a cactus poster designed by Lisa Mandelkern. These can be ordered from our poster chair—check out http://www.npsnm.org/posters/





Cactus poster: 18"×24", \$5 (nonmembers, \$8) Wildflower poster: 22"×34", \$8 (nonmembers, \$10)

Contributions to the Jack & Martha Carter Conservation Fund

The generous financial support from so many NPSNM members and friends of the flora of New Mexico will make it possible for the Board to approve more funding for workshops throughout the state, additional basic research on a variety of critical plant taxa, continued support for the state's major herbaria, and hopefully for the development and support of more early education programs from K–12 in New Mexico schools.

Use the form provided below, or contribute through Pay-Pal on the website, www.npsnm.org. Every contributed dollar is being used to protect the flora of New Mexico well into the future.

~Jack & Martha Carter

NPSNM Membership Application Name(s) **Address** City State Zip Telephone E-Mail/Fax *I (we)* wish to affiliate with the checked chapter: (Please check only one) ☐ Otero (Alamogordo) ☐ Albuquerque ☐ El Paso, TX ☐ Santa Fe ☐ Gila (Silver City) ☐ Taos ☐ Las Cruces ☐ No affiliation ☐ *I am interested in forming a new chapter in:* **Annual Dues:** ☐ Individual 30 ☐ Family 45 ☐ Friend of the Society 60 ☐ Sponsor 125 Patron 250 ☐ Life Member 1,000 ☐ Student/Teacher 20 **Additional Contribution: \$** Total: \$ _____ Remember that 25% of contributions are returned annually to the individual chapters! Make your check payable to **Native Plant Society of New Mexico** and send to **Membership Secretary** PO Box 35388, Albuquerque NM 87176

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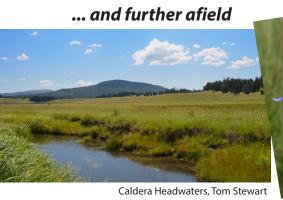
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See you in Santa Fe at the Conference ...



Details on page 8!



Santa Fe Botanic Garden, Margaret Ménache



See "Devious Stream Orchid" on page 5!

Stream Orchid (Epipactis gigantea) Photos: George Miller

