



NEWSLETTER

of the

NATIVE PLANT SOCIETY
OF NEW MEXICO

JULY, AUGUST, SEPTEMBER 2020

VOL. XXXXV NO. 3



The New Mexico Rare Plant Website was recently upgraded to make it more user friendly for rare plant enthusiasts of all backgrounds as well as making it easier to update the site quickly with new information. This upgrade was accomplished through the combined efforts of the New Mexico Natural Heritage Program, the University of New Mexico Library, and the NM Energy, Minerals, and Natural Resources Department-Forestry Division's Endangered Plant Program. The NPSNM contributed to the design with funding provided by a Jack and Martha Carter Conservation Fund grant. More information on page 3. Lee's pincushion cactus (*Escobaria sneedii* var. *leei*). Image: Daniela Roth.

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The Newsletter of the Native Plant Society of New Mexico

July–September 2020, Vol. 45 No. 3. This newsletter is published quarterly by the Native Plant Society of New Mexico (PO Box 35388, Albuquerque, NM 87176) and is free to members. The NPSNM, a nonprofit organization, is composed of professional and amateur botanists and others with an interest in the flora of New Mexico.

Original articles from the newsletter may be reprinted if attributed to the author and to this newsletter.

Views expressed are the opinions of the individual authors and not necessarily those of NPSNM.

The next submission deadline is August 25, 2020. Articles and high-resolution artwork supporting NPSNM's mission are welcomed and can be sent to the editor, Margaret Ménache, [npsnmnewsletter \[at\] gmail.com](mailto:npsnmnewsletter[at]gmail.com).

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Mission The Native Plant Society of New Mexico (NPSNM) is a non-profit organization that strives to educate the public about native plants by promoting knowledge of plant identification, ecology, and uses; fostering plant conservation and the preservation of natural habitats; supporting botanical research; and encouraging the appropriate use of native plants to conserve water, land, and wildlife.

If you received this newsletter as a hard copy but would prefer it via email only, please notify [ask.npsnm \[at\] gmail.com](mailto:ask.npsnm[at]gmail.com).

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Correction

In the April issue, the image on page 13 should have been attributed to Joan E. Price. Ms. Price, who will be speaking, and leading a field trip, at the annual meeting in August also emphasized: "There are many plants recorded among the thousands of petroglyphs at Three Rivers Petroglyph Site near Alamogordo. This archaic library is not an art gallery in the Western art sense of the word; the images are documents and memory devices of techniques of cultivation and intimate knowledge of events in native histories."

From the President

by Tom Stewart



Greetings everyone, how have you been? It hurts to think that some of you may have been ill or isolated, or have lost income due to COVID-19. This last half year has helped us appreciate friends and family we haven't seen, and the unsung people who hold the country together—health care and other workers, teachers and volunteers. An unexpected benefit for some of us is extra time to devote to the home, garden, and the great outdoors. Outings in nature and experiencing plants, creatures and the vistas of New Mexico are uplifting physically and spiritually.

Your Native Plant Society of New Mexico is adapting to these times, with some chapters replacing group meetings with online presentations to a dispersed but connected audience. Look on our website under the Chapters tab to see what is coming up locally and beyond, and to access recorded presentations from the homepage.

NPSNM also stays busy analyzing and sending public comments on new plans and proposals drafted by government agencies such as the Forest Service, New Mexico Forestry Division, BLM-BIA and others, addressing potential impacts on our native plants and habitats.

Of course, there have been questions about our annual state conference scheduled for August 28-30 in Alamogordo. The Otero Chapter has not wavered, and we remain hopeful for a memorable reunion of our members and guests as always. Refundable mail-in registration is open, and online registration through the website should appear soon.

We thank those of you who have continued to renew your memberships and we are pleased to welcome new members each month. For those whose memberships have lapsed, we hope that you will be able to renew your memberships soon. You remain welcome in all activities of the Native Plant Society, and we hope your support of our mission will resume as things improve for us all. As this letter shows, your New Mexico Native Plant Society remains active from the local level to our work on conservation issues at the state and national level. ❖

NPSNM Elections Are Coming Submit Your Nominations Soon!

The Native Plant Society is a democratic organization, and the upcoming biennial election is our chance to choose who runs it. Electable officers are President, Vice President, Historian/Archivist, Recording Secretary, and Treasurer, and all are open for nominations.

- A nomination must have the support of the nominee and four other individuals.
- Send nominations to ask.npsnm [at] gmail.com or by mail to NPSNM, PO Box 35388, Albuquerque, NM 87176 between now and August 31.
- Nominees will be announced in the October newsletter.

New Mexico Rare Plant Website Has a New Face!

by Daniela Roth, Endangered Plant Program Coordinator,
EMNRD-Forestry Division, NMRPTC chair.

The home page provides an overview of the main features provided by the website, including links to the Rare Plant List search page, an explanation of the List, the New Mexico Rare Plant Conservation Strategy, and current events in Rare Plant Conservation.

The Rare Plant List search feature now allows you to search not only by common or botanical species name and county, but also by conservation rank, agency status, and Overall Conservation Status based on the New Mexico Rare Plant Strategy. The Agency Status Table is linked into the NM Natural Heritage Program database and will update automatically when the

Continued page 14

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Conservation Corner

by Rachel Jankowitz, NPSNM Conservation Committee Chair

Native or Not: Phragmites

Phragmites australis (Common Reed) is a large rhizomatous grass of wet areas. It is known as carrizo in the southwestern states, for example giving its name to the eastern NM town of Carrizozo. Phragmites could be confused with *Arundo donax* (Giant Reed), but *Arundo* is generally larger, and differs enough in floral structure to be considered a separate genus. *Arundo* is native to the Middle East, has been introduced to the US, and occurs in several counties of southern and central NM. Interestingly, *Arundo* is sterile in many large regions, and evidence indicates there may be only one genetic clone in the entire US, even though multiple introductions are documented. *Arundo* shows promise for use in the phytoremediation of heavy metal pollution, and as a biofuel stock, but it is invasive and provides poor habitat in riparian and coastal settings.

Phragmites, on the other hand, is native to North America and to NM, as incontrovertibly established by both paleontological and historical evidence. However, an introduced strain, Haplotype M, is now more common than the native lineage in the eastern states. A haplotype is a set of DNA variations that are usually inherited together. These sets or haplotypes are located on one chromosome. Haplotype M is found in Western Europe, and is thought to have been introduced to the US Atlantic seaboard in ships' ballast water in the late 18th or early 19th century. In addition to genetic analysis, there are guides to the use of field morphology for distinguishing the strains of Phragmites, but they may be unreliable, or at least difficult, due to the overlap of several characteristics between strains.

Introduced Phragmites spreads aggressively and forms monocultures by outcompeting native wetland plant communities. As such, it's been the subject of dozens of invasive species conferences and publications. In the western states, Introduced Phragmites is most often found in disturbed settings, such as roadside ditches and sewage plant effluent, but it can spread into natural areas, as it has done in wetlands around the Great Salt Lake in Utah. Hybrids between Native and Introduced Phragmites are known from the eastern US, and have

become established in disturbed habitat around Las Vegas, Nevada. Just to keep things interesting, a third strain of Phragmites, known as subspecies *berlandieri*, or Haplotype I, occurs along the Gulf Coast and in southern California. Haplotype I is found throughout South and Central America; it is unknown whether or not it is native to the New World, or to the Gulf Coast in particular.

NM has been included in published range maps of all three types, but I could find documentation of only one specimen from our state ever being subjected to haplotype analysis (from the Shiprock area, it was Native). It seems reasonable enough to presume that Gulf Coast Phragmites would not have a large gap in its distribution, and so probably does occur across southern NM. Has Introduced Phragmites invaded disturbed locations in NM? That is unknown at this time. The question is interesting from a biogeographical standpoint, and important to answer to avoid "weed" control on native plants and to protect native stands by preventing Introduced populations from establishing in our wetlands and riparian zones.

Holy Ghost Ipomopsis Update

Forest Biologist Danny Burton sends along this photo of the new barrier along Santa Fe National Forest's Holy Ghost Canyon Road, intended to protect the federally Endangered Holy Ghost Ipomopsis from vehicle traffic. The posts, with reflectors, will have a cable strung between them. Danny writes:

"The barrier will not be the entire length of the HG road, but rather focus on where HGI are known, starting where there are higher concentrations, and where we have observed tire tracks in the habitat. It is a slow process since putting in these posts is hard work, especially with the ground being fairly rocky."

"You may note that the road barrier posts are right along the pavement edge. We are using extreme caution to ensure we do not install a post on an HGI plant, so we are strategic when placing those after close inspection of each spot we place a post."

"This should help to reduce the number of vehicles that drive up on the slope (while backing and trying to pass other vehicles on such a narrow road) and also will be a barrier for people walking the road or during road maintenance. The barrier won't stop people from stepping over, but at least it should minimize



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how many people walk up on the slopes. We were only able to install a small section in 2019, but we plan to continue in 2020.”

The Forest Service has also installed a live-stock exclusion fence around an HGI population in Indian Creek canyon. This site is an active grazing allotment.



Wild and Scenic Gila River

On May 12, NM Senators Tom Udall and Martin Heinrich introduced the “M.H. Dutch Salmon Greater Gila Wild and Scenic River Act” to designate nearly 450 publicly owned miles of the Gila and San Francisco Rivers and tributaries as Wild and Scenic. The Gila watershed comprises the largest remaining network of naturally flowing river segments in the southwestern United States. The legislation has the support of tribes, faith leaders, private property owners, local governments, civic organizations, sportsmen, and more than 150 small businesses in Grant County.

An initial draft was released in February, in order to obtain input from landowners, outdoor enthusiasts, local officials and others. Changes made as a result of public comment included protecting existing uses, and language to ensure planned projects like broadband infrastructure development can continue. Additional protections were included for property owners to prohibit non-voluntary condemnation of land, and a section was added to allow restoration projects even if river values are affected, as long as water quality, habitats and species are protected.

There are nearly 125 miles of river segments in New Mexico already designated under the Wild and Scenic Rivers Act. Those include parts of the Rio Grande, Rio Chama, Pecos River and the Jemez River. More information about the proposed legislation can be found at <https://www.tomudall.senate.gov/gila>.

Gila River Diversions Proposed

The Bureau of Reclamation and the NM Interstate Stream Commission have prepared an Environmental Impact Statement to analyze construction, operation and maintenance of the proposed New Mexico Unit of the Central Arizona Project in southwestern New Mexico. The New Mexico CAP Entity, a coalition of counties, municipalities, irrigation districts, and soil and water conservation districts, is the project proponent.

The project area includes private lands in and around portions of the Gila River and its tributaries, including the San Francisco River, in Grant, Hidalgo, and Catron counties. The EIS evaluates environmental consequences of constructing and operating water diversion, storage, conveyance, and delivery facilities for 349 –1,845 acre-feet, depending on the alternative, diverted from the Gila River, its tributaries, or underground water sources, for agricultural users within the Cliff-Gila, Vird-

en, and/or San Francisco River Valleys. In the long term, the Entity intends to develop up to the maximum of 14,000 acre-feet of water authorized under AWSA.

Because contracts for the delivery of AWSA water do not yet exist, the precise water delivery locations and irrigation facilities needed to deliver the water are currently unknown. Additionally, prior to final design and construction of the NM Unit, geotechnical investigations and additional engineering analyses would be needed for all alternatives. The EIS estimates that, under all action alternatives, AWSA diversions would decrease river flows during certain months. These decreases would happen predominantly from August to February, with the largest flow decreases in December and January.

Alternative A is the No Action Alternative. Under this alternative, the NM Unit would not be constructed. New Mexico's rights to access AWSA water would not be legally affected if no NM Unit was built at this time. Since 2014, the Interstate Stream Commission has allocated funding to 16 water utilization projects in southwest New Mexico that are not associated with the NM Unit project. These non-NM Unit projects include ditch improvement, effluent reuse, and municipal water conservation activities. BOR has no authority over the non-NM Unit projects, and they are not part of the Proposed Action or alternatives. Current non-NM Unit projects would continue under Alternative A.

Federal Agency Planning

In April, NPSNM sent comments to the Gila National Forest on their Draft Revised Forest Plan and associated Environmental Impact Statement. We expressed appreciation that the Forest has acted on the Gila Native Plant Society's recommendation to include in their Preferred Alternative the establishment of three large Botanical Areas, in recognition of the presence of several populations of rare plants. We also requested some improvements to the Forest resource monitoring programs, to ensure that they collect the data needed to manage for resilience in the face of climate change.

We also commented on the Bureau of Land Management Farmington Field Office's Draft Resource Management Plan Amendment. The purpose of the Amendment is to assess the impacts of oil and gas development beyond what was considered in the existing RMP, dated 2003. NPSNM recommended adoption of Alternative A, which would involve fewer wells and less surface disturbance than the No Action alternative. Alternative A also includes a few small Plant Conservation Areas for listed species, and it prohibits right-of-way development on fragile erosive soils. The Bureau of Indian Affairs is co-lead federal agency for split mineral and surface estate on Navajo Trust land and individual Navajo allotments. We did not endorse any of the BIA Alternatives, as none of them, including the No Action Alternative, include provisions that would protect native plants. ❖

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 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 7:00 p.m. Monthly meetings are currently scheduled to take place via ZOOM due to the COVID-19 pandemic. ZOOM meeting links are distributed to chapter members prior to the meeting. For more information on programs contact Jim McGrath at [sedges \[at\] swcp.com](mailto:sedges[at]swcp.com), 505/697-1287. For field trips, contact Carol Conoboy, [carolconoboy \[at\] gmail.com](mailto:carolconoboy[at]gmail.com), 505/897-3530. Carol notes: Formal field trips have been cancelled. Some personal plant walks suggested for summer, dependent on precipitation: Sandia Crest/Spur Trail; El Malpais/Narrows Rim Trail; 10K/South Section; San Gregorio Lake; Ox Canyon in the Manzanos; Albuquerque Oxbow; Jemez Mountains/Las Conchas Trail. Check website for updates and plant lists.

Jul 1 Meeting. "Insects in Decline: Why it matters and what we must do about it." Insect conservationist Anna Walker, who works as the Species Survival Officer for Invertebrate Pollinators at the Albuquerque BioPark, discusses the evidence that insects are in decline and demonstrates why it matters.

Aug 5 Meeting. "The Tijeras Creek Remediation Project." Jim Brooks, President and founder of Soilutions, Inc, discusses flooding, pollution and erosion problems and solutions in the Tijeras Creek watershed.

Sep 2 Meeting. "Bernalillo County Vegetation Management Without Glyphosate (RoundUp)." Landscape Architect George Radnovich, whose firm Sites Southwest is developing landscape management strategies for managing Bernalillo County lands without the use of glyphosate, discusses these strategies which include the use of native plants.

El Paso

Meetings are usually at St. Alban's Episcopal Church, 1810 Elm Street (Elm at Wheeling, off Piedras). Programs are second Thursdays at 7:00 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](mailto:jmwhite[at]utep.edu).

Gila (Silver City)

The COVID-19 pandemic has made it impossible, at least for the near future, for the Gila Chapter to conduct our usual summer field trips this year. However, we will post notices of where interesting plants may be found on our website (www.gilanps.org/events/field-trips/) and Facebook page (Gila Native Plant Society).

Jul 15–Sep 15 Online Course "Landscaping with Native Plants."

This four-part course will use Western New Mexico University's online teaching platform, Canvas. Course cost will be \$25, including a copy of our new Beginner's Guide to Planting Native Perennials of the Gila Region. Students will be able to access the four modules at any times convenient to them from Jul 15 to Sep 15, 2020.

Module 1: plants (trees, shrubs, vines, herbaceous perennials, cacti, etc...) that can be used to create a landscaped garden or space. Native plants highlighted will include those in the Silva Creek Botanical Garden. (Instructor: Betsy Kaido)

Module 2: basic principles of landscape design. (Instructor: Jeff Boyd).

Module 3: how to plant, prune and care for native plants. (Instructor: Elroy Limmer).

Module 4: virtual tour of local environments landscaped with native plants. Depending on COVID-19 conditions, students may or may not be offered a face-to-face tour of local landscaped gardens, in addition to the virtual tour.

To register, send a request and a check for \$25 made out to the Gila Native Plant Society to GNPS, PO Box 457, Silver City, NM 88062. You may reserve your registration at gilanative@gmail.com. The information needed: first and last name, email address and mailing address.

Aug 22 Native Plant Sale. Parking lot at 12th and Pope Streets, 11:00 am to 3:00 p.m. Our Native Plant Sale is scheduled to take advantage of the monsoon season, a good time to plant. A new format will allow buyers to confer with native plant growers and see the plants they wish to buy. Expect offerings from Country Girls Nursery (Silver City), Honeyhawk Homestead (Mimbres), Lone Mountain Natives (Silver City), Plants of the Southwest (Albuquerque/Santa Fe) and Spadefoot Nursery (Bisbee and Tucson, AZ)

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Las Cruces

Meetings are usually the second or third Wednesdays (unless otherwise noted) at 7:00 p.m., in the NMSU Herbarium, at the Biology Annex on the NMSU campus. Field Trips are usually on the Sundays following the Wednesday meeting; most last into the afternoon. None have been scheduled for the next three months at this time. Contact: Carolyn Gressitt, 575/523-8413. Leave a message so we can get back to you.

Jul 8 Meeting. Unconfirmed Zoom meeting with Mr. Von Loh. Contact Carolyn Gressitt or check the NPSNM website for updates.

Aug 12 Meeting. TBA

Sep 9 Meeting. TBA

Otero (Alamogordo)

For workshop and field trip information, contact Elva Osterreich, schoofthedesert [at] gmail.com, 575/443-4408, or Jennifer Gruger, npsnmotero [at] gmail.com, 505/710-2924. More information will be available on the website or by contacting Elva or Jen

Jul 18 Hike. Cloudcroft Deerhead Campground; wander/Rim Trail for a longer hike. Led by Deerhead manager Vernon Edwards. Meet 9:00 a.m. junction Hwy 82/North Florida Ave. to carpool. Bring lunch. Or meet at 9:30 at the Cloudcroft Ranger Station.

Aug 28–30 State Conference, see this issue for more details.

Sep 19 Field trip. White Sands Missile Range adventure. Destination TBA. This is a limited access area and we will be escorted by WSMR personnel. We must submit the full name of each attendee in advance. RSVP by Aug 30. Vehicles must have a high clearance and a full tank of gas. All participants should bring lunch, PLENTY of water, sunscreen, good hiking shoes, and water (yes, it's listed twice!) Subject to change or cancellation.

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, check the NPSNM website. Meetings and talks are free and open to all.

Taos

Meetings are usually third Wednesdays at 6:00 p.m. in Kit Carson Electric Cooperative boardroom, 118 Cruz Alta Rd. However, in this time of a pandemic, those meetings have been suspended. We will be scheduling webinars (which will be recorded and posted on our YouTube channel) and hope to host small group outdoor events which we will announce by email to members and post on social media. Check the NPSNM website or our Facebook page (search for "Native Plant Society New Mexico Taos Chapter") for updates. Contact: TaosNPS (at) gmail.com, or phone Jan Martenson at 575-751-0511.

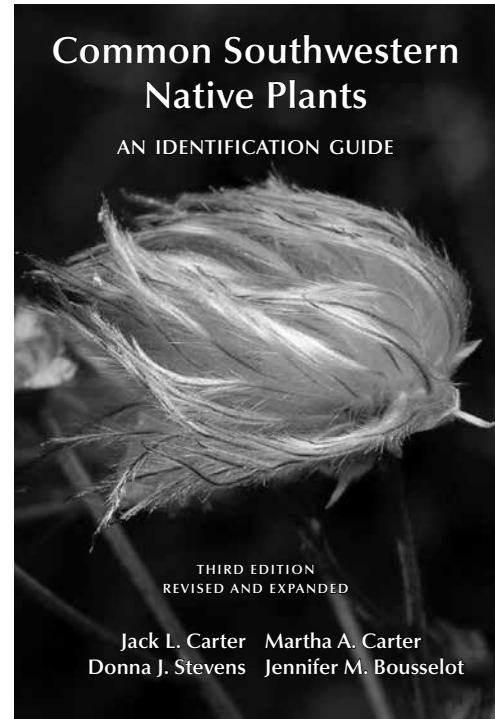
Videos of past meetings can be found at <https://tinyurl.com/TaosNPSvideos> ❖

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Fondly Remembering Jack Carter

by Betty Spence, Gila Chapter



For those of you who know and love Jack and Martha Carter, we are saddened to announce that Jack died on March 10, 2020. On that Tuesday afternoon, he died “peacefully and quietly in his sleep” according to his daughter Diane. She also said “it was a great support for him to see all of the cards and notes that decorated his room. Thank you to so many of you who came to visit him.”

Born in 1929, Jack L. Carter lived for 91 years. In addition to being a lifelong educator, he served as President of the NPSNM from 1999–2000.

The best short biography we can provide right now is the one Jack himself submitted a while back: “Jack L. Carter became aware of the flora that surrounded him on 10 acres of Kansas pasture at about age 12. His enthusiasm for the flora of planet earth has been continuous for over 70 years. He considers plants to be the most important organisms on earth. His personal research has centered on plant evolution and geography. Most of the waking hours of his life have been devoted to the study of natural history and the environment. Jack is professor emeritus of Colorado College, a long-time member of the Gila Native Plant Society, and the author of numerous books and articles on native flora and conservation.”

Many of you will remember the stirring speech Jack gave at the banquet during the 2018 Annual Conference of the Native Plant Society of New Mexico held here in Silver City. A copy of that speech is still available on our website (<http://gilanps.org/events/2018-convention/>). He ended it with a rousing call to action:

“We all have a job we can do. There is a job for everyone in the realm of conservation... Martha and I plan to stay in the ballgame we call conservation as long as possible; we may get rained out, or we may get burned out, but we will suit up and do our damndest to win in this most important game.”

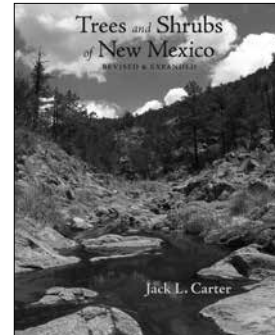
Jack may be out of the game now, but it's up to those of us who are still in it to carry on, inspired by his dedication. ❖

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by Jack L. Carter

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The Gila Native Plant Society is committed to promoting the education, research, and appreciation of the native flora of the southwest; encouraging the preservation of rare and endangered plant species; and supporting the use of suitable native plants in landscaping.

Lemondrops and Limestones

by Jim Von Loh, Las Cruces Chapter

On June 10th, 2019, Las Cruces experienced nearly continuous rainfall over a 15-hour period; from 2–3” fell as sheeting torrents to gentle sprinkles through the day. I made a mental note to visit the mostly limestone rocks of nearby Tortugas Mountain, anticipating a flush of large, pink-to-magenta flowers from Turk's cap cactus/eagle claw (*Echinocereus horzonthaloni* Lem.) and did so on June 14th. It was disappointing when only a handful of Turk's cap had bloomed on the west-facing slope; however, perhaps 40' downslope of the trail, a pair of “lemondrops” appeared to float just above the light-colored gravel and to dance a bit in the breeze! About the same distance ahead, many more “lemondrops”



6/14/19

floated and danced along both sides of the trail, which immediately brought to mind a gentle phrase from Israel (IZ) Kamakawiwoʻole iconic 1993 ukulele cover medley, e.g. "... where trouble melts like lemon drops..." (<https://www.youtube.com/watch?v=V1bFr2SWP11>).



6/14/19: Some flowers (tepals) expand to show stamens and anthers.



6/14/19: These small plants often grow near rocks; the leaves are long, slender, and fleshy.



"flower of the west wind".

To learn a little more about this rain lily population, I returned two days later (June 16th) observing no open flowers, the now-closed flowers were drying at the tips, and 3-lobed



6/16/19: Flowers closed, fertilized, fruits swelling beneath them.

fruits (capsules) were beginning to expand at the flower bases. By June 22nd, all the fruits had swelled to their mature size, maintaining that form through June 27th. They then began to dry and pull open in the last two days of June and the first two days of July. By July 2nd, mature seeds were visible, looking like large, thin, wrinkly, and glossy-black fish scales and stacked like poker chips in each of three capsule chambers; also at this time, seeds had shaken to the ground from some open fruits and were blowing against rocks, downed wood, and living plants, including ocotillo and species of prickly-pear cactus. ❖

See more images on the back cover

Missing Mimi Hubby

Marian Hall Munroe (Mimi) Hubby died of multiple causes on February 16, 2020, in Santa Fe. She was 81, born on June 15, 1938 in Albany, NY to Juliet Garrett Hughes Munroe and Henry Munroe. Mimi, a botanist, received her BA in Biology (Phi Beta Kappa) from Stanford, then her PhD in Plant Development from Yale in 1965. Following a National Science Foundation postdoctoral fellowship at University College, London, Mimi taught at the University of Chicago beginning in the fall of 1966.



There she met her husband-to-be, Prof. John Lee Hubby, a world famous geneticist. They were married in 1970. While still in Chicago, Mimi engaged in epidemiological research at the Dept. of Obstetrics and Gynecology, University of Chicago Hospitals, where she investigated the exposure of women and their offspring to Diethylstilbestrol (DES). She and her husband spent a sabbatical year in Athens in 1973-74.

Upon retirement, Mimi and Jack moved to Santa Fe, where he died in 1996 after a long illness. During her Santa Fe years, she worked part-time for the Max and Anna Levinson Foundation and volunteered at the Public Library. Mimi was an avid naturalist, hiker, world traveler, and conservationist.

Her friend Roger Peterson notes: "For the last twenty years Mimi devoted an afternoon per week to the NM Natural History Institute Herbarium (supported by the Native Plant Society of New Mexico) at the Randall Davey Audubon Center, one of a happy threesome with me and Chick Keller. She collected plants near and far. Alpine camping on Gold Hill was one highlight; working at Clayton Lake and Sugarite state parks and Bitter Lake Wildlife Refuge were others. In recent years she produced a collection of plants for Audubon: the mounts are on page-size cards in ten large binders. We'll miss her."

Mimi's other passions included her involvement with the Native Plant Society of New Mexico. She served as president of our organization from 1993-1996. ❖

The Making of a Conference: A Journey for Sure

by Jen Gruger, Otero Chapter and Conference President

When I became president of the Otero Chapter of the NPSNM in January 2018, I did so primarily because the president at the time (also my mother) had been serving in that capacity for 13 years and I felt it was high time she took a break. Helgi Osterreich joined the chapter in 1992 and, in addition to myriad other things, has shepherded the chapter through previous state conferences in 2004 and 2012. Having her experience as a 2020 conference planning committee member has been invaluable. Beyond her advice and lessons learned from a conference perspective, she guides me through the journey of being president of the chapter in many ways – reminding me how important it is to pick up the phone to welcome new members, finding ways to share knowledge, and supporting me in making tough decisions during the COVID-19 pandemic. I certainly didn't expect the presidency or the conference planning journey to be as enlightening, inspiring, and humbling as it has been.

Early planning began in March of 2019 with a group of amazing and dedicated committee members; Jane Huisling, LeAnne Roberts, Elva Osterreich (Vice President), Helgi Osterreich (Membership Secretary and Past President), Cathy McClosky and Esther Fyock (Treasurer). As we began to think about speakers and field trips, we quickly realized we could be overwhelmed by all the potential topic choices. We found focus and direction in picking our theme. "People and Native Plants, A Journey Through Time" allowed us to expand the native plant conversation to the people using those plants. The time element allowed us to logically lay out the order of things.

As inspiring as that was, we also saw a subtheme emerging. While reviewing the proposed content of each presentation, we noticed a shift from plant use to plant status to plant restoration: it caused us to reflect on the incredible impact humans have on our environment. When committee member LeAnne Roberts read a quote from educator, philosopher, ecologist and wilderness advocate, Aldo Leopold, she was so inspired she called me up to tell me about it on the spot.

We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.

Aldo Leopold

The truth is I am generally not passionate about conservation. LeAnne's discovery and the ensuing conversation among the committee members forced me to investigate a man I had heard about, probably all my life, but never really paid attention to. I found excerpts of his works and explored the efforts

of The Aldo Leopold Foundation (www.aldoleopold.org) and watched the documentary film, *Green Fire*. In the foreword to *Sand County Almanac*, Leopold wrote, "One must make shift with things as they are. These essays are my shifts."

This conference is my shift. I understand now that I must change my relationship with the land. I thought I was doing my part by reducing my use of plastic; I see now that I need to change my mindset even further. Leopold died 21 years before I was born, yet here is a man I would like to get to know better. While through this journey I feel like I have, I have asked the universe to provide me an opportunity to somehow meet him some day, in some magical way that I could still take his passion and his understanding and transfer it to the cultivation of my own ecological conscience.

My thing is plastic. I am not going to get a new degree. I am not going to write letters to my legislators. I am not going to line up with signs to protest. What I do is reduce

my use of plastic. At this conference, I will invite you to do the same. Whether you are already anti-plastic or are just curious, I am pleased to tell you that, at this conference, the presence of plastic will be at a bare minimum. Here is how we are doing that:

- There will be no disposable plastic eating utensils or disposable plastic (or Styrofoam) cups;
- We will provide water dispensers for refillable containers in lieu of disposable water bottles;
- Any conference-goer who brings their own refillable water bottle will receive a free conference logo sticker (also on sale at the conference along with t-shirts).

Those are the reasons I am excited about this conference. Here's why I think you should be...

The breadth and depth of the experience and diversity of the speakers and field trips leaders is one of things I am most proud of. There is something for everyone. Your presenters include experts employed at the state and federal levels of land use and management, authors and artists, archaeologists and ethnobotanists, potters and a medicine man. And...don't forget that special guest at the banquet (universe willing).

During the conference, we'll take some time to acknowledge that this is the 40th anniversary of State Conferences be-

Please don't hesitate to register. We'd rather reserve your spot and issue a refund than find out you wanted to attend and couldn't if we learn we will need to limit the number of attendees.



ing held by the NPSNM as well as honor the passing of two men who were tremendous contributors to the world of native plants and who were important voices in recording the history of the Tularosa Basin: Jack Carter and Pete Eidenbach.

The field trips and workshops (which we designed to correspond with the presentations as much as possible) will reveal the high desert beauty and historical significance of the Tularosa Basin and surrounding areas. Please don't hesitate to register. We'd rather reserve your spot and issue a refund than find out you wanted to attend and couldn't if we learn we will need to limit the number of attendees.

Finally, in closing, I appeal to each of you to be thoughtful of others, as well as of yourself, as we each move through our own personal journeys during this historical time. Be patient with each other and respect those who are suffering from the conflict between self-care, healthcare and livelihood. Be kind. Be well. Read some Aldo Leopold. See you in August! ❖

Pam McBride Botanist/Archaeologist

by Kathleen Hall, Albuquerque Chapter


The keynote speaker for the 2020 NPS annual conference has been a member of NPS for two decades and served as a board member. She is more than three decades into a scientific vocation that pairs her interests in native plants with the places and peoples of the Southwest. She was enjoying a walk on a Florida beach, a well-timed break from the late winter chill of New Mexico, when my phone call caught up with her.

Pamela McBride is an archaeobotanist. She studies the plants used by ancient peoples. She didn't know at a young age that she would one day be Director of the Ethnobotany Lab of New Mexico Office of Archaeological Studies, would analyze plant materials from archaeological sites throughout the Southwest as well as in Europe, would write and present scientific papers and become a leading expert in her field.

She loved plants as a child, especially the gone-wild apple trees near the home where she grew up. "Apple trees are never wild, but they were unkempt, and nobody else wanted the fruit." She read *Stalking the Wild Asparagus*, the Euell Gibbons classic, about which, she laughs, "Asparagus isn't wild either." But that got her out gathering plants where they grew, including stalking asparagus on the ditches of Taos. After a few dead-end jobs in retail she decided to stalk a career in botany. An early course in ethnobotany drew her into what would become her profession. Her college studies led her to UNM, graduating in 1990. By 1994 she had established her own contracting company.

Enron constructed a pipeline across the northwest corner of New Mexico beginning in the early 1990s, and that, oddly enough, kickstarted Pam's career. All public works, construction projects that break new ground, highway expansions, and even restoration projects in state parks – anything that disturbs

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soil on public land – must be surveyed for sites of archaeological interest or value, and every site must be analyzed before any destructive process is permitted. Every corner of New Mexico is rich with these sites. She worked for "two or three years," she says, analyzing materials from multiple sites in the path of the planned pipeline.

The down and dirty work of an archaeobotanist is deconstructing mixtures of materials and then identifying the plant parts. Some plant parts, like corn kernels and cob fragments, may be large enough to easily separate from the matrix of sand, rock, roots, bones, and other materials from an excavation. But most plant parts are small to microscopic. Being lighter than the other particles, they can be separated by mixing the materials with water in a bucket. Swirling the water allows the heavier bits to settle to the bottom, and the water and lighter particles are poured through a filter. When the filtered particles are dried they are ready to be sorted by size and analyzed.

If the site is in a shelter or protected space, free from wind, animals, and other disturbances, the work of the archaeobotanist may be simplified. Plant products such as twine, baskets and their contents, and other artifacts and associated food items are sometimes well preserved, especially in the dry climate of the Southwest, and can be readily identified. But those are the lucky finds.

The identification of most archaeological plant materi-

Continued page 14

Native Plant Society of New Mexico
2020 Annual Conference
People and Native Plants
A Journey Through Time

Friday,
August 28
 to
 Sunday,
August 30



Alamogordo
 Tularosa
 Otero
 County

Conference Location: Registration and presentations in the Sgt. Willie Estrada Memorial Civic Center in Alamogordo, NM.

Accommodations: **Magnuson by Desert Aire.** 1021 S White Sands Blvd, Alamogordo, NM 88310. 575-437-2110. Special Advance Rate to all State Conference attendees. Reservations must be made by August 13 to guarantee these rates. All rates are plus tax: Queen \$65.00, King \$69.50, Double Queen \$79.89. Guests must declare all pets at check-in (\$15/pet; 2 pets). Full hot breakfast, large outdoor pool, WIFI, room microwave and fridge. Promo code "State Conference 2020".

Holiday Inn Express and Suites. 100 Kerry Ave, Alamogordo, NM 88310. 575-434-9773 Special rate of \$149.00 plus taxes per night. Two Queen beds or one King bed. Hot/cold breakfast, swimming pool, hot tub, exercise room and room work area, Keurig coffee maker, fridge and microwave. Promo code "State Conference 2020".

Important Conference Registration Announcement

Jen Gruger, President Otero Chapter

- As of the deadline for submission to this issue of the newsletter, the Otero Chapter is moving forward with the original dates of the conference, August 28–30, 2020 with the State Board Meeting taking place the afternoon of the 27th.
- However, in light of the possibility of having to restrict the number of attendees (should this be ordered by the governor and/or the New Mexico Department of Health), we are numbering the registrations as they come in.
- In the event we must limit the number of participants, we will issue full refunds for those who are unable to attend.
- The moment we know of any need to impose attendee limits or to change the dates (worst case scenario), we will announce such changes on the npsnm.org website.
- We encourage you to register early to ensure your spot.

**People and Native Plants A Journey Through Time
2020 NPSNM STATE CONFERENCE REGISTRATION FORM**

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

Name		NPSNM Chapter	
Address	City	State	Zip
E-mail Address	Home Phone	Mobile Phone	

Included in conference fee: Snacks during conference breaks, Friday & Saturday lunches, Friday evening reception (appetizers & drinks).

Meals are buffet style with meat and vegetarian choices.

The Saturday evening banquet includes two drinks and is an additional \$30.

Please list any special dietary needs _____

Field Trip/Workshop Preferences (*Space is limited. Descriptions in April 2020 newsletter & on NPSNM website*)

Use numbers/letters listed for field trips/workshops:

Saturday 8/29 8:00 am-noon 1st Choice _____ 2nd Choice _____ 3rd Choice _____

Sunday 8/30 starts 8 am 1st Choice _____ 2nd Choice _____ 3rd Choice _____

Registration Date	NPSNM Member	Non-Member
On or Before August 1	\$100	\$130
*After August 1	\$115	\$145
Saturday banquet including 2 drinks	\$30	\$30

TOTAL ENCLOSED \$ _____

* Registrations received after August 21 will not include meals

Any questions, contact Jennifer Gruger 505-710-2924 or npsnmotero@gmail.com

Send form(s) with check (payable to NPSNM/Otero Chapter) to:

**Jen Gruger
712 2nd Street
Tularosa, NM 88352**

The silent auction has become a highlight of each year's state conference.

For most chapters, it is also an opportunity for fund raising. This is for sure the case for the Otero chapter this year. We are raising funds that will enable us to continue to issue grants to students in the botany and ecology programs at New Mexico State University and New Mexico Institute of Mining and Technology. Your support of the annual conference as an attendee helps us build the funds needed for these grants and one way you can do that is to make a donation to the silent auction. The Otero chapter invites you to donate items that might be of interest to other members.

To offer an item, please contact Jane Huisingh: [jhuisingh\[at\] gmail.com](mailto:jhuisingh[at]gmail.com) or (575) 491-0507.

Whether you donate an item or not, don't forget to bid on such amazing items as the "Plaza Treehouse" and "Plaza Rojas" in historic downtown Santa Fe. One week vacation rental, good for 4 people. Two bedroom, two bath home 400 yard walk from Santa Fe Plaza directly across from the Scottish Rite Center on



Bishops Lodge Road. A \$1,750-\$2,000 value depending on season. Generously donated by Adobe Destinations.

New Mexico Rare Plant Website, *continued from page 3*

status of a species changes. It includes all 235 species listed in the New Mexico Rare Plant Conservation Strategy as well as species once considered rare but dropped for a variety of reasons. Lists can be downloaded in spreadsheet format.

Improvements to the individual rare species abstract pages include a table with the agency status and the Overall Conservation Score given in the New Mexico Rare Plant Conservation Strategy Scorecard, including a summary of documented threats and conservation actions needed. The Scorecard, which can be downloaded, summarizes all data available for a given rare plant species and calculates a variety of conservation scores based on the information stored in the NM Natural Heritage database.

A link at the bottom of the page will direct you to the species page of the NM Natural Heritage Program, which includes a range map of the species and reference materials. Species abstract pages can be downloaded in PDF format.

Brand new is the 'Plants in the News' section, which will frequently be updated with the latest and greatest news pertaining to rare plant conservation.

Check it out at <https://nmrareplants.unm.edu/> ❖

Pam McBride, *continued from page 11*

als is informed by fire. Food caches and items of daily use are less likely to have been left behind by their users, and many sites were exposed to the elements, so what is usually found in archaeological sites is not considered an artifact unless it is burned.

Plant parts that fell into the cooking fire, as well as fuel for the fire, are often preserved as charcoal. Their identification can be accomplished by comparing them visually, usually using microscopy, to reference samples of known plants. Pam and other archaeobotanists create their own reference collections. They collect specimens of native plants specific to the area. Living plants and seeds as well as dead twigs, roots and pods. "You need the botany," Pam explains. "You have to know what you're collecting. Then you burn it."

To prepare specimens for her reference collection she puts dry plant parts into a foil packet with a label and sets them on her gas grill to burn, she says, "And hope that I don't overdo it and reduce them to ashes."

This gathering and burning of plant materials unites Pam in a sense with the people whose life and culture she studies and, she says, bridges the gap between botany and anthropology. Pam's work is the product of both disciplines.

She retired from OAS in 2017, but continues to provide ethnobotanical expertise as a contractor. She is currently involved in Tularosa Basin/White Sands projects directed by Alex Kurota, a Research Associate with Jornada Research Institute.

Pam will speak on "Evidence for Plant Use from Archaic Traditions (approximately 6,000 BC –AD 200) through the El Paso Phase (AD 1275-1450)." ❖

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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/>

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 PayPal 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)*

- Albuquerque Otero (Alamogordo)
- 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
- Teacher (PK-12)/Youth (thru 26 yrs) 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**

JACK & MARTHA CARTER CONSERVATION FUND DONATION FORM

Yes! I would like to help New Mexico's flora! Enclosed is my contribution of \$ _____

Name(s) _____

Address _____

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Phone _____ E-Mail _____

All contributions are tax-deductible as provided under the law.

*Make your check payable to: NPSNM—Carter Endowment Fund
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recently archived issues
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www.npsnm.org

Las Cruces Chapter member Jim Von Loh documents the short life of the ephemeral rain lily (*Zephyranthes longifolia* (Hemsley) Cockerell)–more on page 8



6/14/19: Turk's cap cactus with a group of rain lilies that had probably opened within the past 24 hours.

6/14/19: A bee-eye view of the anthers.



6/22/19: Capsules with three distinct locules quickly form and mature.



6/14/19: A solitary bee forages in the middle flower.



7/02/19: Dried capsules split to expose very thin, black seeds that are stacked in the locules.