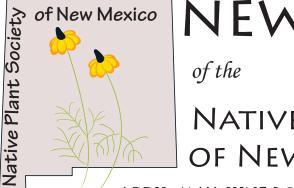
NEW MEXICO'S VOICE FOR NATIVE PLANTS



NEWSLETTER

# NATIVE PLANT SOCIETY OF NEW MEXICO

APRIL, MAY, JUNE 2012

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VOL. XXXVII NO. 2
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# Annual Conference in Alamogordo: August 9–12, 2012 100 Years of Landscape Change

Throughout its history, Alamogordo has helped the nation move from the slow pace of the Old West into the computerized frenzy of the space age. This is one reason Alamogordo was chosen to be the site of the International Space Hall of Fame, now known as the New Mexico Museum of Space History. Many countries have contributed artifacts and exhibits of man's conquest of space to the museum, located on the side of the mountains overlooking the beautiful Tularosa Basin. The most prominent feature to be seen from this spot is White Sands National Monument, the most popular attraction for visitors. Twelve miles south of Alamogordo is Oliver Lee Memorial State Park, with its Chihuahuan Desert Garden, Riparian Trail, Dog Canyon Recreational Trail, and the restored Oliver Lee Ranch House. About 30 miles north of Alamogordo is the Three Rivers Petroglyph site, with over 21,000 petroglyphs and partially reconstructed Native American dwellings.

The Alameda Park Zoo was established in 1898 and is

the oldest zoo in New Mexico. Additional attractions include the nearby Lincoln National Forest; the National Solar Observatory in Sunspot; Trinity Site on the White Sands

Missile Range; Alamogordo Founders Park, with a mural and bronzes; Tularosa Basin Historical Museum; the Toy Train Depot and Museum; and the Clyde W. Tombaugh IMAX Dome Theater.

Our Banquet Keynote Speaker, David Lee Anderson, is a native of Utah. He earned his bachelor's in science in plant taxonomy from Utah State University in 1963; received a master's degree in range ecology from



Keynote Speaker Dave Anderson

Brigham Young University in 1974, and a PhD in range science from New Mexico State University in 1989. He worked *Continued page 18* 

See full details on pages 9–12. Registration form on page 13.

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# **From the President**

#### by Tom Antonio

On February 11, 2012, the Board of Directors of the Society met at Sevilleta Wildlife Refuge for our annual winter meeting. The minutes and budget are posted on the NPSNM website, but I will summarize some of the significant points. The Society is on sound financial

footing, with an unrestricted funds balance of \$124,442 and a restricted fund (the Jack and Martha Carter Conservation Fund) balance approaching \$40,000. The board unanimously approved the budget for 2012.

This year we will begin a series of native plant workshops organized by Bob Sivinski, to be held at various locations around New Mexico: a cactus family workshop in Albuquerque, a Tree and Shrubs of New Mexico workshop in Farmington, Silver City, and Albuquerque, and an aster family workshop at Sevilleta. Please see this newsletter and the website for dates and instructions on registering.

Speaking of the website, Cindy Roper, our Administrative Coordinator, has been working hard and we will soon have a standalone website. The new domain name will be made available once the site is up and running.

The board adopted new amendments to the Policies in Effect and also proposed revisions to the Society's bylaws (see facing page). Let me extend thanks to Renee West and Wynn Anderson for all their hard work on these documents.

The board also voted to fund the following five conservation grant proposals:

- Asombro Institute for Science Education. **Desertification and Restoration: Teaching Students with a Real Conservation Project.** The majority of the board voted to fund the project for the requested \$600.
- Aaron Kauffman, adjunct faculty member, Santa Fe Community College. **Phytoremediation of Urban Runoff with Native Plants.** The majority voted in favor of funding the purchase of native plants for the project for a total of \$500.
- Dr. William R. Norris, professor of ecology and evolutionary biology, Western NM University. Curation and Data Basing of Bryophyte Specimens in the Dale A. Zimmerman Herbarium (SNM) at Western NM University. The majority voted in favor of funding the grant for the requested \$938.52.
- David J. Griffin, Mesilla Valley Audubon Society. Native Riparian Plant Restoration at Broad Canyon Ranch State Park. The majority of the Board voted to fund the requested \$500.
- Liz Block, volunteer garden project manager for New Mexico Rails-to-Trails Association. Trestle Recreation Area Native Plant Garden Project. The Board voted to fund \$300 for their purchase of native plants.

# **Native Plant Society of New Mexico Election of Officers**

The election for officers of the Society takes place May 1– June 30, 2012. Results will be announced August 9 at the Board of Directors meeting held in conjunction with the

#### **President:** Renee West

Currently Vice President of NPSNM and former Newsletter Editor. Chief biologist at Carlsbad Caverns National Park.

## Vice President: Barbara Fix

Santa Fe Chapter. Landscaper in Santa Fe, 1985–present; previously practiced law (JD, 1971, Stanford Law School). NPSNM member for over 20 years.

#### **Recording Secretary:** Pam McBride

Albuquerque Chapter. Currently Recording Secretary. Past president of the Albuquerque Chapter, NPSNM

annual state meeting. The two-year terms begin then. The Nominating Committee of the Board of Directors has nominated these candidates:

member for 12 years. Co-Director, Paleoethnobotany Lab, Museum of NM, Office of Archaeological Studies.

#### Membership Secretary: Lolly Jones

Albuquerque Chapter. Currently Membership Secretary. NPSNM member for over 14 years.

#### **Treasurer:** John White

El Paso Chapter. Former President of the NPSNM and former Chair of the Finance Committee.

Election ballot on back page



# Notes from Cindy (Your Administrative Coordinator)

- NPSNM is finally up and running with PayPal as our online payment service. You can make donations to the Carter Conservation Fund or renew your membership (or join!) through the PayPal links inside our website. You will also be able to sign up for the upcoming workshops. *If you continue to get notices through Network For Good, please disregard them.*
- If you're curious about what goes on "behind the curtain" at NPSNM, the minutes to our meetings are posted on the administrative page of the state's website.
- This is our first issue delivered primarily via email. By the time your fourth issue arrives this year, we should be able to report on how much this change is saving the Society.
- You may notice slight changes to our state website over the next few months while we convert it to a stand-alone site (taking it off of the UNM server). Kindly bear with us. The structure and content should not change noticeably. But the conversion will ultimately give us much more freedom and many more options with the site.

Wishing you all a fabulous Spring! **\*** 

# **Revision of NPSNM Bylaws Proposed**

The Board of Directors of NPSNM has reviewed the Society's bylaws and proposed to revise them to meet current needs. To review them, please see the Society's website, http:// npsnm.unm.edu. If you have concerns with the proposed revision, contact vice president Renée West at keywestern@ hotmail.com. The new bylaws will take effect June 1. \*

# Dee Alton Umberson, December 2, 1920–November 24, 2011

It is with great sorrow that the Otero chapter of the Native Plant Society of New Mexico announces the passing of one of its longtime members.

Dee, his wife Nona, and their two daughters lived in Alamogordo while Dee worked as a civilian supporting Air Force electronics programs. He retired from Holloman Air Force Base after 27 years of service. Dee and Nona moved to Roswell in 2000. Dee had lifelong interest in photography, gardening, cactus, and all native New Mexico plants. He made countless friends through the years, sharing his enjoyment and knowledge of plants and cactus. His expertise in cactus was widely recognized. He presented a wonderful workshop on growing cacti at the Annual State Meeting in Alamogordo in 2004.

We thank him from all our hearts for all his contributions during his lifetime. 🗇

# Thank You to NPSNM from University of New Mexico Herbarium

Dear Tom,

Thank you for the recent gift of \$500 to the Friends of the UNM Herbarium from the Native Plant Society of New Mexico. These funds are vital to the function of our facility especially during difficult financial times at the University. As you likely know the UNM Herbarium is used by researchers from all over the world, but most of our gifts of specimens come from NPSNM members. We've received some very interesting state records and newly published taxa from contributing members in 2010 and 2011. NPSNM funds allow us to purchase materials to complete this process. The cost of mounting specimens continues to rise as does demand for access to our collection. We're quite excited by the use of our state's largest plant collection, and the support from your organization makes the process possible. Mounting paper alone costs almost 50 cents per sheet.

This year up to eight new taxa will be published from New Mexico and our herbarium has processed almost 4,000 specimens in the last 12 months. Financial support from NPSNM in 2010 went into mounting materials, but it also allowed other parts of our budget to be used to hire undergraduate and graduate students to learn herbarium techniques and keep the data entry for all new accessions moving along, just passing 125,000 specimens.

We are a large and growing herbarium that belongs to everyone in New Mexico. Our most frequent users are Native Plant Society members, and we are quite pleased with the relationship we share with them and the organization as a whole. If the Board of Directors has other areas that they would like us to focus on with this year's gift we'd love to hear your ideas.

With sincere appreciation for your support, Tim Lowrey

*Note:* This letter, received in September 2011, was left out of the previous newsletter and is printed here with apologies for the oversight.

## The Newsletter of the NPSNM

April–June 2012. Vol. 37 No. 2. 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.

**Next deadline is June 1, 2012.** Articles and high-resolution artwork supporting the NPSNM's mission are welcomed and can be sent to the editor, Sarah Johnson, at *sarita@gilanet.com*, or PO Box 53, Gila, NM 88038.

# **Native Plant Society of New Mexico**

## **Board of Directors**

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## **Chapter Representatives**

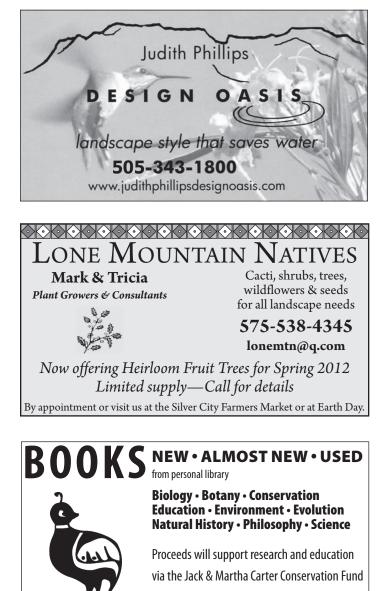
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# **Committee Chairs**

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Conservation Jim McGrath sedges@swcp.com 505/286-8745
Finance & Investment Jack Carter jmcarter01@hughes.net 575/388-9221
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Newsletter Editor Sarah Johnson sarita@gilanet.com
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Administrative Coordinator Cindy Roper nativeplantsNM@gmail.com 505/466-3536



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

# **Contributions to the Jack & Martha Carter Conservation Fund**

The response to the 2011 year-end appeal for contributions to the Jack and Martha Carter Conservation Fund was tremendous! Since the NPSNM Board decided in 2008 to develop a fund from which we can use the income for longterm growth—an endowment—the fund has grown to over \$32,000. Gifts from \$10 on a monthly deduction plan to \$2,000 are set aside, above the regular dues of our membership, because the Board sees the need to protect the native flora of New Mexico in perpetuity.

You may use the donation form below, or contribute through the website via PayPal; a receipt will be sent to you.

Each tax-deductible contribution is also acknowledged by mail. If we've missed you, please let us know.

As we love to tell folks, contribute if you can, and if you can't provide funds, work in your local chapter, join the Board, volunteer in a local garden or herbarium, or plant a tree and devote your time and energy to protecting that tree into the future. We all have a role to play.

We hope we have included everyone in the following list. But if your name has been left out please let us know by e-mailing us at jmcarter01@hughes.net. Thank you. �

~Jack & Martha Carter

## Carter Fund Contributors August 12, 2011 to February 12, 2012

Judy Allen & Lee Stockman Margaret Hadderman & Frank Drysdale Ellen O'Connor Judith Appenzeller Lee & Katherine Hammond Ted & Mary Pockman David Lee Anderson Merritt Helfferich & April Crosby **Douglass Rankin** Suzan Arfman **Bettie Hines** Frances Robertson Arthur & Christine Baker Mimi Hubby David Rose & Ceil Murray Dianne Boles-Scott Marie & Clark Hudson Rebecca Schnelker Corey Sue Hutchinson Christine Boss **Curtis Shimp** Whitney & LaVera Shoup Pearl Burns Gene & Betty Jercinovic Diane Carter & John Elmblad Al & Lolly Jones Gene and Elisabeth Simon Yvonne Chauvin Elizabeth Kaido Bob Sivinski Bill & Margaret Cummings Charlie & Anita King Jean Starr Cameron Duncan Kelly Kindscher Tom Stewart Barbara Fix Gertrud & Ad Konings Dennis Switzer Angela & Spike Flanders Paula Lozar Alex Tonneren-Western Native Seed Joy & Ron Mandelbaum **Doris Francis** Daryl & Susan Williams Bosha Gordon Janice Martenson David Witt Glenn Yocum & Emelie Olson John & Beth Anne Gordon Walter Mellberg

## JACK & MARTHA CARTER CONSERVATION FUND DONATION FORM

	Yes! I would like	to help protect l	New Mexico's flora b	y contributing
	○ \$20 Individual	○\$50 Friend	○\$100 Sponsor	○ \$500 Patron
	○\$1,000 Ben	efactor	Memorial	Other
Name(s)				
Address				
City			State	Zip
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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# CONSERVATION CORNER New Mexico's Best-Kept Secret

#### by Jim McGrath, NPSNM Conservation Committee Chair

Have you ever visited the New Mexico Rare Plant website? If you haven't, you are in for a surprise. It's New Mexico's best-kept secret. The site showcases all the rare plant species in the state. Each rare plant has its own page and associated links. If you want to learn about a rare plant, you can go to the Rare Plant List (http://nmrareplants.unm.edu/), where the plants are listed alphabetically by scientific name. Or you can go to the county list and submit a query for your county. You will then see a list of the rare plants. Click on the scientific name of a plant that interests you. Up pops the taxon report.

At the top of the taxon report is a photo of the species. The report itself includes a complete botanical description of the species, synonymy, an explanation of how the plant is distinguished from similar species, a map showing where the plant has been found in New Mexico, a description of the plant's habitat, conservation concerns, and any additional information relevant to the species and its known populations. A list of pertinent publications relevant to that species is found near the bottom of the taxon report. Lastly, the current regulatory status is listed for the plant. You can determine whether the plant is listed endangered or threatened by the federal government or whether it is listed endangered by the state of New Mexico. Most species are listed as species of concern. Many species are listed as sensitive by the U.S. Forest Service or have Special Status on lands administered by the Bureau of Land Management. On the taxon report page are links to a gallery of photos of the plant, a much larger map showing locations of known populations, and a line drawing of the plant.

But I still haven't told you why the website is New Mexico's best-kept secret, have I? First, it is not like a book that sits in your bookcase and that you see every time you walk by. You have to go to the website to be aware of its existence. Second, the photos and line drawings are very high quality. Enough information is present for you to find and recognize that rare plant.

Thirdly, and most important, the website is *dynamic*. The site is maintained by the New Mexico Rare Plant Technical Council, which periodically meets to update the website. Over the last ten years many species have been added to the website as new species are described in the scientific literature. Similarly, many species have been dropped from the Rare Plant List as botanists have discovered that certain species are much more widespread than previously thought. Those taxon reports are not, however, dropped from the website. You can find them when you click on a link entitled "Species considered, but dropped." In addition, the photo gallery is continually being updated. The website's original photos represent scans of slides. Some were just photos of dried herbarium specimens, because no photographer had photographed that plant in the wild. Today, high-quality digital photos are continually replacing older photos of lesser quality.

It is this dynamic feature that makes this website special. I have rare plant field guides for Colorado, Arizona, and Utah sitting on my bookcase. But I have had these books for nine years or more. The books are set up for additions and deletions of species, but new pages would have to be generated and then distributed. With our website we simply update the information on it. At any time we can download or print the taxon reports or photos and know we have the most up-to-date information on that species. The decision the New Mexico Rare Plant Technical Council made in the 1990s to produce a website instead of a hard-copy field guide is a decision New Mexico botanists will never regret.

The website is a tribute to the behind-the-scenes work of New Mexico's professional and amateur botanists that comprise the New Mexico Rare Plant Technical Council. New Mexico botanists have quietly written the taxon reports and taken the photos. Charlie McDonald, chairman of the Council, edits the website as taxon reports are updated or added and new photos become available.

Perhaps you may want to learn about a New Mexico rare plant in your area. Go to the website and look up the rare plants in your county. Look up the habitats for the species. Perhaps you may recognize one of those rare plants when you are exploring in the kinds of habitats described for the rare plants in your county.  $\clubsuit$ 



# **NPSNM Steps Up to Education Role**

#### by Bob Sivinski, NPSNM Workshop Coordinator

Botany, local flora, and regional plant ecology are topics rarely taught in New Mexico's public schools and community colleges. The general public—especially amateur botanists, gardeners, naturalists, teachers, conservationists, and land managers—have few choices for botanical training outside a diminishing selection of semester-long botanical classes at universities. The best remaining choice should be participation in the Native Plant Society of New Mexico, which is an organization that focuses upon the regional, indigenous flora.

NPSNM chapters are doing splendid jobs providing regular presentations and field trips, but only occasionally do some offer educational workshops for local members. The NPSNM State Board of Directors and an ad hoc Workshop Committee have recently resolved to begin offering educational workshops on a more regular basis that members and the general public throughout the state can join in. NPSNM workshops will usually affiliate with New Mexico's universities, colleges, museums, and botanic gardens to achieve workshop regularity and distribution throughout the state. These institutions have an educational purpose, the physical facilities, and often the instructional expertise to offer high-quality short courses in botany. NPSNM will initiate, schedule, register participants, and contract a coordinator to accomplish all the tasks of holding workshops.

Most workshops will be limited to one date and one venue per year so some participants will need to travel to those locations. A few workshops will be offered at multiple locations and will serve more participants with less need to travel. Workshop topics will initially be geared towards introductory courses in recognizing and identifying the New Mexico flora and regional ecosystems. As participants become more experienced, NPSNM will begin offering more advanced floristic studies. Gardening for native wildlife and botanical illustration and photography will also be likely workshop topics in the future. Feel free to contact at bsivinski@cybermesa.com with your ideas for NPSNM workshops.

# **NPSNM 2012 Weekend Workshop Schedule** INTRODUCTION TO PLANT MORPHOLOGY AND IDENTIFICATION TERMINOLOGY

*April 28–29, UNM Museum of Southwestern Biology, Albuquerque* 

#### Tim Lowrey and Bob Sivinski

Every group of organisms has its own terminology. Expand your botanical vocabulary! This is an introductory workshop for the beginning botanist, naturalist, or gardener who needs a basic course in plant morphology to use plant identification manuals and decipher family, genus, and species descriptions. It consists of two days of short lectures followed by hands-on demonstrations with fresh plant materials and dried specimens from the UNM Herbarium. See the many different kinds of roots, leaves, flowers, fruits, pubescence, and learn the terminology peculiar to some large and common plant families. Enrollment limited to 16 participants. *NPSNM Members:* \$100

Nonmembers: \$125 (includes 1-year NPSNM membership)

#### CACTACEAE—CACTUS FAMILY

*May* 19–20, *Co-sponsored by City of Albuquerque*— *Rio Grande Botanic Garden* 

Dave Ferguson and Steve Brack

Cacti are bizarre, succulent-stemmed plants that have captured the hearts of southwestern botanists and fascinated plant collectors worldwide. New Mexico has a diverse cactus flora and many are keystone species in our arid ecosystems. This workshop will cover basic cactus morphology and terminology, genus identification of New Mexico cacti, common and rare cacti, and will be followed by a tour of the cacti in the Rio Grande Botanic Garden and a field trip to the foothills of the Sandia Mountains. The next half day is a trip to Mesa Garden in Belen for a private tour of a world-class collection of cacti and a demonstration of how to grow your own cacti from seed. Enrollment limited to 25 participants. *NPSNM Members:* \$80

Nonmembers: \$105 (includes 1-year NPSNM membership)

## TREES AND SHRUBS OF NEW MEXICO

Albuquerque, July 7–8, UNM Museum of Southwestern Biology, with Jack Carter and Bob Sivinski

*Farmington, July 14–15, San Juan Community College, with Bob Sivinski and Ken Heil* 

Silver City, July 28–29, Western New Mexico University, with Jack Carter and Bill Norris

To celebrate publication of Jack Carter's second edition of his *Trees and Shrubs of New Mexico*, NPSNM is offering workshops on woody plant identification in three locations. Woody plants are often the most visibly dominant features of the flora and important to amateur botanists and land managers alike. One day will be devoted to identification training, followed by a full-day field trip to study woody plants from the valley bottom up to the mountainsides. Enrollment limited to 24 participants at each location.

NPSNM Members: \$150 (includes book)

Nonmembers: \$175 (includes book and 1-year NPSNM membership) Continued page 8

## **NPSNM 2012 Workshop Schedule** (continued from p. 7) **ASTERACEAE**—ASTER FAMILY

September 7–9, Sevilleta National Wildlife Refuge, UNM

Ecological Research Station

#### Tim Lowrey

The aster family is the most species-rich plant family in the world and comprises 22% of the New Mexico flora. Don't let the vast diversity in this family and its unique technical terminology intimidate you any longer. This workshop will give you all the skills you need to use Asteraceae identification manuals with greater confidence. It includes lectures, identification exercises in the lab, and a field trip to the nearby Manzano Mountains. Enrollment limited to 24 participants. Registration fee includes two nights' dormitorystyle lodging at the Sevilleta Field Station.

NPSNM Members: \$150

Nonmembers: \$175 (includes 1-year NPSNM membership)

**Register** on the NPSNM website at http://npsnm.unm.edu, or contact Bob Sivinski at bsivinski@cybermesa.com.

# **Enchanting Wings in Your Yard**

by Tatia Veltkamp, Wings of Enchantment Butterfly Farm (Albq.) Monarch Watch (www.monarchwatch.org) states: "Scientists, environmentalists, and politicians have brought habitat destruction and the cost that has for wildlife to the attention of people around the world. In response, many people have begun work to preserve the natural areas that still exist and to restore other areas that once served as home to wild animals and plants." You can take part in this preservation and restoration movement by planting a butterfly garden.

Monarch butterflies can be seen in New Mexico in the

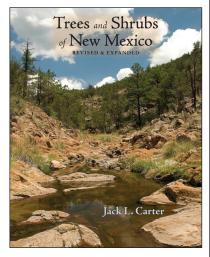
# AVAILABLE MAY 2012!

A fully revised & expanded edition of Trees and Shrubs of New Mexico by Jack L. Carter

Order your copy through www.mimbrespublishing.com or the NPSNM website

#### **This Brand-New Edition Features:**

- Over 500 full-color photos
- Over 450 finely detailed illustrations
- 496 species described (21 more than first edition)
- Colorful countydistribution maps
- Updated nomenclature and taxonomic information
- Biographical sketches of noted botanists
- Landscaping tips for native plants



fall on their migration back to Mexico to overwinter. According to the maps on Journey North (http://journeynorth. org), New Mexico doesn't see many of the Monarchs. We need more citizen scientists to report sightings of this beautiful butterfly. What better way to find them than to attract them right to your own yard! With a little planning and with space as small as a window box, you can enjoy them and other butterflies from spring through fall.

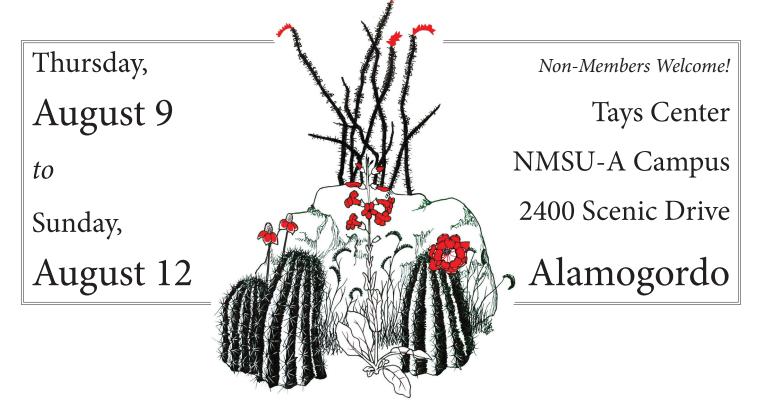
Host plants are a must. Both Monarch caterpillars and adults will eat only plants from and lay their eggs on the Milkweed (Asclepiadaceae) family. Here in New Mexico we have only small stands of it, which are often difficult to find, more often than not near a water source. The three common species that can be found in New Mexico are Asclepias speciosa (showy milkweed), A. latifolia (broadleaf milkweed), and A. verticillata (whorled or horsetail milkweed). I am not aware of any sources that sell these plants locally, but Plants of the Southwest does sell seeds for A. speciosa. Be careful, though: A. tuberosa (butterfly weed), widely sold as seeds and plants, is not a favorite of the butterfly to lay eggs on. Also be aware that seeds for these species of milkweed require cold stratification to germinate well. You will need to give A. speciosa a good two years of growth time in order to have a plant that is large enough to feed many hungry caterpillars, but it is a very good choice with its broad leaves.

To attract the butterflies and give them food, you will need a good selection of native, nectar-producing plants. The best source I have found online for researching plants to use is High Country Gardens, a locally owned plant nursery (www.highcountrygardens.com). Use their advanced plant search feature at the bottom of the website to enter your requirements and find plants that attract butterflies. Some really good examples that I've used successfully are *Centranthus*, *Coreopsis*, *Gaillardia*, *Liatris*, and *Lavendula*.

If you want to attract other butterfly species, some good research sources are Monarch Watch (http://monarchwatch. *Continued page 17* 

9

# Native Plant Society of New Mexico 2012 Annual Conference 100 Years of Landscape Change



**Meeting Location:** The Thursday board meeting, early registration, and refreshments will be at the Holiday Inn Express, 100 Kerry Avenue. All other events take place at the Tays Special Events Center on the New Mexico State University–Alamogordo campus.

**Accommodations:** Rooms have been set aside for attendees at special discounted rates at the Holiday Inn Express, 100 Kerry Ave., 575/434-9773; Fairfield Inn by Marriott, 300 Panorama Blvd., 575/437-4000; and Best Western, 1021 S. White Sands Blvd., 575/437-2110. Please make your reservation by July 15 to get your discounts and mention you are attending the Native Plant Society conference. For more information about Alamogordo and the Otero County area, please visit the Alamogordo Chamber of Commerce website at www.alamogordo.com. For information on RV and camping, visit www.alamogordo.net.

**Registration:** For the first time, online registration is an option. Log onto http://npsnm.unm.edu and click on "2012 Conference." For a mail-in registration form, see page 13 of this newsletter.

**Photo Contest Rules and Regulations:** Entry fee of \$10 for up to three photos \* Individually mounted photos and entry fee to be submitted at time of picking up your registration packet \* All photos limited to 8 × 10 inches in size, and mounted on foam board (please, no frames!) \* Name of photo/plant(s) on front \* Name of photographer on back \* **Prizes—1st place:** 50% of entry fee proceeds; **2nd place:** 30% of entry fee proceeds; **3rd place:** 20% of entry fee proceeds \* **Notify:** Everyone entering the contest should notify Sandy Peterson at 414/614-7297 or highdesertpet@netzero.net by July 30. Please include your name, contact information, and the number of photographs that you wish to enter. This will ensure that we have enough display space for our entries.

# 2012 Annual Conference Program—Native Plant Society of New Mexico Tays Special Events Center, NMSU-A Campus, Alomogordo, New Mexico

# Thursday August 9 (Holiday Inn Express, 100 Kerry Ave.)

- 1:00–5:00 pm NPSNM board meeting
- 5:00–7:00 pm Early registration and hospitality room

# Friday August 10 (Tays Special Events Center)

8:00 am-4:30 pm	Registration, silent auction, photo exhibit and book sales
8:45–9:00 am	Welcome and Opening Remarks
9:00–9:50 am	Our Climate Outlook—Dr. Dave DuBois, director of the New Mexico Climate Center, located in the Plant and Environmental Sciences Department at NMSU
9:50–10:15 am	Break
10:15—11:05 am	Chemical Ecology of Creosotebush with Regard to Replacement and Dominance of Arid Grasslands— Paul Hyder, at the USDA/ARS Jornada Experimental Range 1996–2001, where he did his work on the chemical ecology of desert shrubs
11:10—Noon	100 Years of Historical Vegetative Changes: Fire, Drought or Freeze—Dan Abercrombie, Water Resources Specialist for the Division of Resource Management and Protection for the Mescalero Apache Tribe
Noon–1:30 pm	Lunch—Mexican buffet at the Tays Center
1:30-2:20 pm	Heinrich, I Have a Feeling We're Not in Plant Pathology Anymore—Dr. Donovan Bailey, plant evolu- tionary biologist with New Mexico State University
2:20-3:10 pm	Long-Term Changes in Natural Ecosystems of the Southwestern United States— Dr. Robert Webb, U.S. Geological Survey, Tucson
3:10-3:25 pm	Break
3:25–4:15 pm	Historical Agriculture in New Mexico from Native American to Present Day—Scott Green, education coordinator, and Raul Gonzales, landscape manager, Farm and Ranch Heritage Museum in Las Cruces
4:15–6:15 pm	Dinner on your own
6:15–9:00 pm	Refreshments and movie, Green Fire, about Aldo Leopold—Introduced by Dr. Karl Malcolm
<b>Green Fire</b> , t	he first full-length documentary film ever made about legendary environmentalist Aldo Leopold, high-

lights his extraordinary career, tracing how he shaped and influenced the modern environmental movement. **Presenter Karl Malcolm** is a new resident of New Mexico, having recently moved here from Wisconsin, where he volunteered with the Aldo Leopold Foundation and enjoyed many outdoor adventures in the lands that Leopold so loved. Karl recently completed his doctorate degree in the Department of Forest and Wildlife Ecology at the University of Wisconsin–Madison, the very department that Aldo Leopold founded in 1933. Karl will share with us his understanding of and connections with the legacy of Aldo Leopold as he introduces the new film.

Note: As part of the New Mexico Centennial celebration in Otero County, this event will be open to the public.

# Saturday August 11 (Tays Special Events Center)

8:00 am-4:30 pm Registration, silent auction, photo exhibit and book sales
 For field trip and workshop descriptions see pages 11–12. All field trips originate at the Tays Center for carpooling.
 8:00, 11:00 am Field Trip 1: White Sands National Manument.

- 8:00–11:00 am Field Trip 1: White Sands National Monument
- 8:00–11:00 am Field Trip 2: Oliver Lee Memorial State Park
- 8:00 am–Noon Field Trip 3: Bridal Veil Falls in Fresnal Canyon
- 8:00 am–Noon Field Trip 4: Bent, Piñon Juniper Belt

8:00 am–Noon	Field Trip 5: Karr & Water Canyons, Travertine Formations in the Sacramento Mountains
8:30 am–Noon	Workshop 1: Pine Needle Basketry with Cathy Jordan
8:30–10:30 am	Workshop 2: Photography with Sandy Peterson
10:45 am—Noon	Workshop 3: Growing Color—How to Grow a Dye Garden
12:30–1:30 pm	Lunch—Sub sandwiches at the Tays Center
1:30–2:00 pm	Preserving Traces of the Past: The John Green Photographs—Martha Yduarte, curator, Fort Bliss Curatorial Facility
2:00-2:30 pm	An Introduction to the Field of Paleoethnobotany—Pamela McBride, Co-director,
	Paleoethnobotanical Lab, Office of Archaeological Studies, New Mexico Dept. of Cultural Affairs
2:30–2:45 pm	Break
2:45–4:15 pm	<b>Member Presentations</b> . Our members have accumulated a tremendous amount of native plant knowledge. This is your chance to share. Plan a 15-minute presentation. Submit a short abstract of your topic, no more than 100 words, to: onelizbee@aol.com, or snail mail to Liz Block, 30 San Pedro Dr., Alamogordo, NM 88310, by May 1. You will be contacted by June 1 to let you know the time of your presentation.
4:30 pm	Silent Auction and book room close.
5:00–5:30 pm	Silent Auction items must be picked up and paid for.
6:30 pm	Banquet seating begins at the Tays Center. Cash bar. Banquet Keynote Speaker: David Lee

Anderson. His talk is entitled *Pasaron por aquí* (They passed by here).

# Sunday August 12 (Tays Special Events Center)

For field trip descriptions see page 12. All field trips originate at the Tay's Center for carpooling.

- 8:00 am-4:00 pm Field Trip 6: Otero Mesa, south of Alamogordo east of Highway 54
- 8:00 am-4:00 pm Field Trip 7: White Sands Missile Range—A Unique Botanical Tour
- 8:00 am–1:00 pm Field Trip 8: Oshá Trail, Lincoln National Forest near Cloudcroft
- 8:00 am–1:00 pm Field Trip 9: Mexican Trestle Trail near Cloudcroft
- 8:00 am-2:00 pm **Field Trip 10:** Switchback Trail near Cloudcroft

# **Field Trips and Workshops**

Please bring water, lunch on Sunday, and wear proper shoes for all field trips. All field trips meet at the Tays Special Events Center parking lot at the start time indicated.

# SATURDAY

# Workshop 1. Pine Needle Basketry 8:30 am–Noon

Cathy Jordan will demonstrate how to make baskets using Ponderosa pine needles. Demonstrations will include cleaning and preparing the pine needles, how to make the baskets, various stitches, and the materials available. You can then start your own basket. Materials will be handed out in the workshop. Limit: 10

# Workshop 2. Photography 8:30–10:30 am

Sandy Peterson, a local professional photographer and Otero Chapter member, will present ideas about capturing our native plants and landscapes with your digital camera. Bring your camera, as you will be photographing and learning about correcting and preparing your photographs for print. Sandy will have her computer and photo printer there, and for a small fee you can have your photo printed to take home with you. **Limit:** 10

# Workshop 3. Growing Color—How to Grow a Dye Garden 10:45 am–Noon

Ric Rao, a fiber arts specialist for more than 35 years, will describe to the class how to grow a dye garden with easyto-grow garden plants, both annual and perennial. The dried dyestuffs will be shown in class along with samples of the colors achieved with each dye/plant. A portion of the class will be devoted to harvesting local plants native to the American Southwest. **Limit:** none

# Field Trip 1. White Sands National Monument—National Park Service 8:00–11:00 am

Take a ranger-guided walk into areas not open to the public. Discover gypsophiles and other plants that survive in

this extremely challenging environment of moving dunes and nearly sterile soil. The walk is 1 mile with moderate climbing. Limit: 30 Leader: David Bustos, Resource Program Manager, White Sands National Monument.

## Field Trip 2. Oliver Lee Memorial State Park 8:00–11:00 am

Visit an award-winning state park to see the wildflowers, bushes and trees while walking the Riparian Nature Trail. A visit to the Chihuahuan Desert Garden, a project of the State Park in conjunction with NPSNM and Otero Chapter, is included. Limit: 30 Leader: Charles Wood, Park Interpretive Ranger and Otero Chapter member.

## Field Trip 3. Bridal Veil Falls in Fresnal Canyon 8:00 am–Noon

Take a walk of less than ½ mile on a moderately steep primitive road to see a 40-ft. high, inspiring, permanent waterfall, formerly a backdrop to a logging railroad. Return to parking, or continue 1½ miles up a scenic canyon along an easy-hiking, former rail bed, crossing a brand-new foot bridge to Fresnal Canyon Road. Then return to parking for a total of about 4 miles round-trip. **Limit:** 20 **Leader:** John Stockert, Otero Chapter member and former President.

## Field Trip 4. Bent, Piñon Juniper Belt 8:00 am–Noon

This walk on private land along "The Hard Way" at 6100-ft. elevation is a unique transition zone that combines a Piñon/Juniper woodland with desert grassland. It features 12 varieties of cacti and yuccas, and more than 40 varieties of wildflowers. The walk is 1½ miles with moderate climbing. Limit: 20 Leader: Styve Homnick, Otero Chapter member.

Field Trip 5. Lower Karr Canyon & Water Canyon, Travertine Formations in the Sacramento Mountains 8:00 am–Noon We will drive up Lower Karr Canyon and over the crest of the Sacramento Mountains, stopping to observe travertine formations and the threatened Sacramento Mountain Thistle. We will stop to observe hummingbirds and butterflies along the way. Includes easy walking along the road-sides. Limit: 20 Leader: Linda Barker, retired U.S. Forest Service/Lincoln NF and Otero Chapter member.

## SUNDAY

## Field Trip 6. Otero Mesa 8:00 am-4:00 pm

Visit the last extensive, undisturbed grassland in New Mexico and the U.S. Climb some way up Alamo Mountain, see ancient petroglyphs. Carpool and drive 75 miles SE of Alamogordo, moderate climbing, walk around 2 miles. **Limit:** 30 **Leader:** Styve Homnick, Otero Chapter member and member of Friends of Otero Mesa.

# Field Trip 7. White Sands Missile Range—A Unique Botanical Tour 8:00 am-4:00 pm

The trip provides a rare opportunity to observe some of the more than 1000 species of plants that inhabit the Missile Range. Cross alkali flats, mesquite dunes, shrub-lands, and grasslands. Drive up to Salinas Peak. Visitors may bring cameras and will be told where and when their use is permitted. Bring lunch and plenty of water. **Limit:** 7 vehicles, approx. 30 people (carpooling required). In addition to signing up for this field trip when you register for the conference, you must register and sign up for this trip not later than July 25 by phone or e-mail with Linda Hall at 575/434-6266, starscaper1@gmail.com. Participants must provide names, phone numbers, and e-mail addresses to be forwarded ahead of time to WSMR. **Leader:** David Lee Anderson, WSMR Land Manager.

# Field Trip 8. Oshá Trail, Lincoln National Forest 8:00 am–1:00 pm

Take a pleasant 2.1-mile circle hike through the montane forest at elevations varying between 8,400–8,650 ft. Participants must be able to climb and walk at high elevations. A wide variety of trees, shrubs, and forbs will be encountered. **Limit:** 20 **Leader:** Helgi Osterreich, Otero Chapter President.

# Field Trip 9. Trestle Recreation Area, Lincoln National Forest 8:00 am–1:00 pm

View the newly renovated Native Plant Demonstration Garden, a project by the Rails-to-Trails Association and Otero County NPSNM members and Master Gardeners; walk to the recently restored Mexican Trestle. Moderately difficult 2.5-mile hike and high elevation. Limit: 25 Leader: Barbara Springer, Rails-to-Trails.

# Field Trip 10. Switchback Trail, Lincoln National Forest 8:00 am–2:00 pm

This is a 4.5-mile circle walk along the old Cloud-climbing railroad bed. Many different Sacramento Mountain plants will be seen along the trail. A carry-along lunch and plenty of water is recommended. Moderately difficult, high elevation. Limit: 20 Leader: William Herndon, Otero Chapter member and VP of Search and Rescue.

Any items you wish to contribute to the **Silent Auction** will be welcome!

<b>2012 STATE CONFERENCE REGISTRATION FORM</b> Please send a <i>separate</i> form for each attendee. Checks should be made payable to NPSNM–Otero.			
Name			
Address	City	State	Zip
Phone Cell Phone		E-mail Addres	S
Please indicate NPSNM chapter you are a member of:			
Register early; space is limited. Registration is on a first-come, first-s Field Trips/Workshops (Indicate by number, with FT or W for Fie			
Saturday 1 <sup>st</sup> Choice (#) 2 <sup>nd</sup> Choice (#			
<b>Sunday</b> 1 <sup>st</sup> Choice (#) 2 <sup>nd</sup> Choice (#	) 3 <sup>rd</sup> Choice (#)		
Banquet and two lunches are included in conference fee. Banquet preference—please check one: 🔲 Beef 🔲 Chicken	Vegetarian		
REGISTRATION       NPSNM Member       Non-Member         Paid by 7/15/12       \$85       Paid by 7/15/12       \$100         Paid by 8/1/12       \$105       Paid by 8/1/12       \$120         Paid after 8/1/12 or on-site (no meals included)       \$85			
Extra banquet tickets—\$25: Beef Chicken V	'egetarian		
TOTAL: \$			
<b>Send registration forms and chec</b> Judy Tribble, Treasurer, 79 Papa		to:	
Questions? Call or e-mail Judy at 57		om	
please go to http://npsnm.unm.e	<b>ne and pay by credit card</b> , du and click on 2012 Conference k you!	2.	
This year you can register a <b>http://npsnm.unm.edu</b> and			
Robledo Vísta Nursery         See us at the Las Cruces Farmers and Crafts Market         See us at the Las Cruces Farmers and Crafts Market         February to December or by appointment         Native & adapted plants for Las Cruces & El Paso         Mention this ad for 20% off all your purchases         from April 1 to June 30, 2012         www.RobledoVista.com • 575-541-8083 • 915-203-4385	For the Finest Garden Products 270 Avenida de Mesilla • L 575•524•1886 Gardens@zianet.com www.nmenchantedgardens Widest selection of native in Southern New Mexico!	lc Las Cruces s.com	Native flowers, shrubs, & trees Herbs & perennials Bird & hummingbird feeders Teas, teapots, & gifts



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# **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 http://npsnm.unm.edu; click on Local Chapters;

#### Albuquerque

All scheduled monthly meetings are 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, 505/286-8745, sedges@swcp.com. For more info on field trips and forums contact Dana Price, dana\_price@ bicycleaustin.info, 505/872-2646 or (cell) 512/797-1986. For meeting places indicated A through H see website.

Apr 4 Meeting. Albuquerque Soils—How They Happened and What to Do With Them. Judy Dain and master gardeners.Apr 21 Field Trip. Tour gardens of April 4th panelists. Dana Price, trip coordinator.

**Apr 28** Field Trip. San Lorenzo Canyon. Jim McGrath and Karen Bailey-Bowman, leaders. 9 a.m.–2 p.m. Bring lunch.

**May 2** Meeting. New Mexico's Favorite Landscape Plants Over the Past 1000 Years. Dr. Baker Morrow.

**May 6** Field Forum. Sabino Canyon. Gary Runyan, leader. Meet at A.

**May 11** Field Forum. Albuquerque Volcanoes. Gary Runyan, leader. Meet at B.

**Jun 3** Field Trip. Bisti/De-Na-Zin. Joint field trip with Four Corners chapter. Possibly an additional Saturday afternoon trip and overnight at Angel Peak. Contact Al Schneider to sign up (see San Juan–SW Colorado for contact info).

**Jun 6** Meeting. Working with Carbon on the Ranney Ranch: The Interplay of Range Management, Grassfed Beef, Wind and Biomass. Nancy Ranney, co-owner of ranch.

Jun 9 Field Trip. Judy Dain's garden and property (continuation of April 4th topic). Meet 8:30 a.m. at A to carpool.
Jun 16 Field Trip: Plant Photography. Cienega Canyon Picnic Area, Sandia Mtns. Bob Sivinski, leader. Meet 8:30 a.m. at A to carpool.



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.

Jun 23–24 Overnight Field Trip. Early Summer Flora of the Pecos Canyon. Don Heinze, leader. Meet Sat. afternoon at Jack's Creek Campground, just outside Pecos Wilderness. Contact Don, dhhbotany@gmail.com or 505/565-1441, by 6/18 to confirm for either Saturday or Sunday arrival. Jun 30 Field Trip. Edible & Medicinal Plants. Osha Loop Trail, Sandias. Pam McBride, leader. Meet 9:00 a.m. at [A].

## **El Paso**

All programs are second Thursdays at 7 p.m. (coffee social at 6:30) at El Paso Garden Center, 3105 Grant Ave. unless otherwise noted. All events free unless a fee is specified. Non-members always welcome. Info: Jim Hastings, 915/240-7414.

**Apr 12** Meeting. FloraFest Plant Sale Preview, John White, Director Chihuahuan Desert Gardens, discusses plants to be available at the annual sale, April 28–29.

**May 10** Meeting. Photographing Native Plants. Presenter to be announced.

**Jun 14** El Paso's Rio Bosque Wetlands Park. John Sproul, program coordinator, Univ. of TX–El Paso Center for Environmental Resource Management, and park manager.

## Gila (Silver City)

All programs are free and open to the public. Meetings are third Fridays at 7 p.m. at WNMU's Harlan Hall, with refreshments following the program. Hikers meet at 8 a.m. in south parking lot of WNMU Fine Arts Theatre the morning of the hike to arrange carpooling. Participants must sign a release-of-liability form at that time, and will receive a list of native plants in the hiking area. For more info, call Deming Gustafson, 575/388-5192. Destinations may be changed due to weather. Activity updates posted on www.gilanps.org.

Apr 13 Talk. Mosses of the Gila. Russell Kleinman.

**Apr 15** Walk. Hike in the desert area around Deming. Gene Jercinovic, leader.

**May 20** Walk. Southern Burros, probably around C-Bar Ranch Rd.

Jun 17 Walk. Signal Peak.

## Las Cruces

Meetings and workshops are second Wednesdays (unless otherwise noted) at 7 p.m. in the conference room of the Social Center at the University Terrace Good SamaritanVillage, 3011 Buena Vida Circle, Las Cruces. Field trips are Saturdays; most last into the afternoon. Participants must sign a release-of-liability form. Children must be accompanied by their parents. Programs and field trips are free; nonmembers always welcome. Contacts: Carolyn Gressitt, 575/523-8413; Al Krueger, 575/532-1036.

**Apr 11** Meeting. A Stroll Through the Botanical Garden in Tuebingen, Germany. Lisa Mandelkern.

**Apr 14** Field Trip. Jarilla Mountains. Lisa Mandelkern, leader. Meet 8:00 a.m. at east end of Rio Grande Bank parking lot at the corner of University/Telshor.

**May 9** Meeting. Proposed state park, Broad Canyon Ranch. Steve Cary (tentative).

**May 12** Field Trip. Broad Canyon Ranch (soon to become state park). Easy–medium difficulty. Beth Bardwell of Audubon, leader. Meet 8:00 a.m. at the parking lot of the Fairacres Post Office on West Picacho.

**Jun 13** Meeting. Desert Pollinators. Richard Quick of the Las Cruces Museum of Natural History.

**Jun 16** Field Trip. Mesilla Bosque State Park. Easy. Meet 8:00 a.m. at east end of Rio Grande Bank parking lot at the corner of University/Telshor.

## Otero (Alamogordo)

For field trip information, contact Eric Metzler, metzlere@msu.edu, 575/443-6250; or Helgi Osterreich, hkasak@netmdc.com, 575/585-3315. More info should be available by the beginning of each month.

**Apr 21** Plant Sale at Rose Garden, 10th St. and Oregon, in Alamogordo, 8:00 a.m.–12:30 p.m. If you can help, contact Helgi at hkasak@netmdc.com, or 575/443-3928.

**Apr 28** Earth Day booth at the Alamogordo Zoo, 9 a.m.–4 p.m. If you can help, contact Helgi at hkasak@netmdc.com, or 575/443-3928.

**May 12** Field trip. Valley of Fires, near Carrizozo. Meet 8:00 a.m. at the Y in Tularosa. Bring water and snacks.

**Jun 9** Field trip. Bridal Veil Falls. Hike to the site of a unique waterfall. Meet 8:00 a.m. at Post Office in La Luz. Bring water, snacks. *Dependent on national forests being open*: watch for changes in your e-mail!

# San Juan (Farmington)

Meetings are third Thursdays at 7 p.m. at San Juan Community College. For more info, contact Donna Thatcher, dthatcher@fmtn.org or 505/325-5811.

## San Juan (Southwest Colorado)

The San Juan/Four Corners Native Plant Society field trips will start in April and run through September. For details, check http://www.swcoloradowildflowers.com/ and scroll down to the link for the NPS. We will have about 20 field trips, including very special ones to the De-Na-Zin Wilderness south of Farmington, the Weminuche Wilderness area in the San Juans, and a mushroom gathering and eating trip in the Lizard Head Wilderness. For information, email Al at coloradowildflowers@yahoo.com or call him, 970/882-4647.

#### Santa Fe

Meetings are third Wednesdays at 6:30 p.m. at Morgan Hall—New Mexico State Land Office, 310 Old Santa Fe Trail, Santa Fe. Free parking available adjacent to the building. For more information, contact Tom Antonio, tom@ thomasantonio.org, 505/690-5105; or visit npsnm.unm.edu. **Apr 18** Plants and Ecology of the Valles Caldera. Rebecca Oertel, Forest & Range Plant Ecologist, Valles Caldera Preserve.

**May 16** Sunflowers: History, Culture and Evolution. Dr. Thomas Antonio, President of NPSNM, Science Coordinator IAIA, and author of the book *The Sunflower Family in the Upper Midwest*.

**Jun 20** Trees and Shrubs of NM. Jack Carter, former NPSNM president, author of the new, second edition of *Trees and Shrubs of New Mexico*.

#### Taos

Meetings are third Wednesdays at 7 p.m. in Coronado Hall at the Taos Convention Center. Please check the NPSNM website for updates and additional information on activities, or contact Sallie at taos800@aol.com or 575/776-0860.

Apr 14 Field Trip. Vista Verde. Easy half-day hike.

Apr 18 Meeting. Program TBA.

May 12 Discovery Hike. Lower Los Colonias.

**May 16** Meeting. The Life and Legacy of Ernest Thompson Seton. David L. Witt, author and curator.

**Jun 9** Field Trip. Cactus tour in Arroyo Hondo. John Ubelaker, leader. Easy half-day walk.

Jun 15 Field Trip. Seton Village (Santa Fe). Christie Green, leader. Easy all-day walk.



# **Overview of Compositae in New Mexico**

#### by Tim Lowrey, University of New Mexico Herbarium

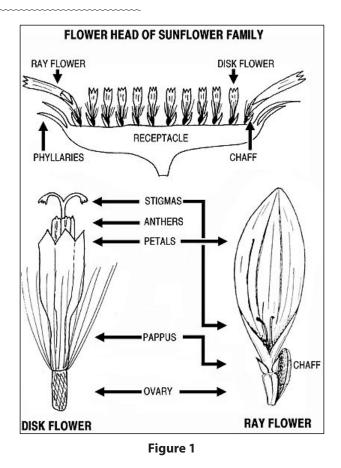
The Compositae (Asteraceae) is the largest flowering plant family on earth. Orchid experts may argue otherwise. About 25,000 species are currently recognized in the family, with estimates of the total number of species nearing 30,000. To put this into perspective, about 10% of all flowering plant species throughout the world are in the Compositae. In New Mexico there are 618 species of Compositae out of a total of 3,648 flowering plant species. The Compositae constitute 17% of all flowering plant species in the state, or nearly one out of every five species (Allred 2011). It is easily the largest plant family in New Mexico.

Species of Compositae are found in all habitats at all elevations in New Mexico, from wetlands to arid habitats and from the lowest valley habitats to the highest alpine habitats. There is almost no place with soil in New Mexico that lacks at least one species of Compositae, particularly since there are a number of aggressive weedy species in the family that grow in disturbed habitats such as agricultural fields and urban areas.

The family is easy to recognize by floral characteristics. The inflorescence is always a head consisting of one to many florets surrounded by bracts (phyllaries). The Compositae derives its name from the composite of florets in the head, often with two different types in the head (Fig. 1). The anthers of the stamens are nearly always fused together (synatherous) into a tube. The fruits are achenes (technically, cypselas) that have a modified calyx, called the pappus, that serves to disperse the ripe achenes (Fig. 1).

The hypothesized origin of the Compositae was probably in South America, perhaps 50 million years ago in the Eocene (Lundberg 2009). This hypothesis is based on the analysis of DNA sequence data and the occurrence of the most closely related family, Calyceraceae, also occurring in South America. However, the oldest fossil pollen grains of the family were discovered in Southern Africa, with a suggested age of 55–65 million years ago (Zavada and De Villiers 2000). It may well be that soon after the origin of the family in South America sometime between 50–65 million years ago, it was dispersed to Southern Africa.

The Compositae has a complex classification system due to its immense size. The family is currently delimited into 12 subfamilies and 43 tribes (Table 1 [see facing page]; Funk et al. 2009). The subfamilies include one or more tribes, which are groups of related genera. Some tribes may even contain subtribes. New Mexico has representatives of 4 subfamilies and 21 tribes (Table 1; NM taxa in bold). The largest tribes in New Mexico are the Astereae (daisies), Senecioneae



(groundsels), and those in the "Heliantheae alliance" (sunflowers). DNA sequence data indicates that these tribes have evolved fairly recently in western North America, perhaps within the last two million years (Funk et al. 2009). Many of our "DYCs" may well be relatively recent species and this might explain why many genera have species that are closely related and difficult to identify, such as Cirsium (thistles), Solidago (goldenrods), and Erigeron (fleabane daisies). Despite the difficulty in identifying some species of the family in New Mexico, most of the other taxa in the family are easily identified with the use of a good key and a hand lens. Embrace the family and enjoy.  $\Rightarrow$ 

#### **Literature Cited**

- Allred, K. 2011. Third Statistical Summary of the Flora of New Mexico. *The New Mexico Botanist* 54:1.
- Funk, V. A., A. Susanna, T. Stuessy, and H. Robinson. 2009. "Classification of Compositae." In Systematics, Evolution, and Biogeography of the Compositae, ed. V. A. Funk et al., 171–89. Vienna: International Association for Plant Taxonomy.

Lundberg, J. 2009. "Asteraceae and Relationships within Continued page 17

#### **Overview of Compositae in NM** (continued from p. 16)

Asterales." In *Systematics, Evolution, and Biogeography of the Compositae*, ed. V. A. Funk et al., 157–70. Vienna: International Association for Plant Taxonomy.

Zavada, M., and S. De Villiers. 2000. Pollen of the Asteraceae from the Paleocene-Eocene of South Africa. *Grana* 39:39–45.

**Table 1.** The current classification of the Compositae at the subfamilial (roman numerals) and tribal ranks (numbers). The NM subfamilies and tribes are in **bold**.

I. Barnadesioideae (D. Don) Bremer & Jansen (1992)	19. Liabeae (Cass. ex Dumort.) Rydb. (1927)
1. Barnadesieae D. Don (1830)	20. Vernonieae Cass. (1819)
II. Stifftioideae (D. Don) Panero (2007)	21. Platycarpheae V.A. Funk & H. Rob. (2009)
2. Stifftieae D. Don (1830)	22. Moquinieae H. Rob. (1994)
III. Mutisioideae (Cass.) Lindl. (1829)	XI. Corymbioideae Panero & V.A. Funk (2002)
3. Mutisieae Cass. (1819)	23. Corymbieae Panero & V.A. Funk (2002)
4. Onoserideae (Bentham) Panero & V.A. Funk (2007)	XII. Asteroideae (Cass.) Lindl. (1829)
5. Nassauvieae Cass. (1819)	24. Senecioneae Cass. (1819)
IV. Wunderlichioideae Panero & V.A. Funk (2007)	25. Calenduleae Cass. (1819)
6. Wunderlichieae Panero & V.A. Funk (2007)	26. Gnaphalieae (Cass.) Lecoq. & Juillet (1831)
7. Hyalideae Panero (2007)	<b>27. Astereae</b> Cass. (1819)
V. Gochnatioideae (Benth. & Hook. f.) Panero & V.A. Funk	28. Anthemideae Cass. (1819)
(2002)	<b>29. Inuleae</b> Cass. (1819)
8. Gochnatieae (Benth. & Hook. f.) Panero & V.A. Funk	30. Athroismeae Panero (2002)
(2002)	"Heliantheae alliance"
VI. Hecastocleidoideae Panero & V.A. Funk (2002)	31. Feddeeae Pruski, P. Herrera, Anderb. & FrancOrt.
9. Hecastocleideae Panero & V.A. Funk (2002)	(2008)
VII. Carduoideae p.p. Cass. ex Sweet (1826)	<b>32. Helenieae</b> Lindl. (1829)
10. Dicomeae Panero & V.A. Funk (2002)	33. Coreopsideae Lindl. (1829)
11. Oldenburgieae S. Ortiz (2009)	34. Neurolaeneae Rydb. (1927)
12. Tarchonantheae Kostel. (1833)	<b>35. Tageteae</b> Cass. (1819)
<b>13. Cardueae</b> Cass. (1819)	36. Chaenactideae B.G. Baldwin (2002)
VIII. Pertyoideae Panero & V.A. Funk (2002)	<b>37. Bahieae</b> B.G. Baldwin (2002)
14. Pertyeae Panero & V.A. Funk (2002)	38. Polymnieae (H. Rob.) Panero (2002)
IX. Gymnarrhenoideae Panero & V.A. Funk (2002)	39. Heliantheae Cass. (1819)
15. Gymnarrheneae Panero & V.A. Funk (2002)	<b>40. Millerieae</b> Lindl. (1929)
X. Cichorioideae (Juss.) Chevall. (1828)	41. Madieae Jeps. (1901)
<b>16. Cichorieae</b> Lam. & DC. (1806)	42. Perityleae B.G. Baldwin (2002)
17. Arctotideae Cass. (1819)	43. Eupatorieae Cass. (1819)
18. Eremothamneae H. Rob. & Brettell (1973)	

#### **Enchanting Wings in Your Yard** (continued from p. 8)

org/garden/bfly.htm) and The Butterfly Site (www. thebutterflysite.com). There is also Steve Cary's fabulous book *Butterfly Landscapes of New Mexico* (reviewed in the Jan.–March 2010 NPSNM newsletter), with details about butterflies throughout the state. Remember that butterflies (in all stages) *are* insects, so don't use chemical sprays or you won't have them staying around for very long!

So, find the nectar plants that will flourish where you are, plant the host plants for the butterflies you want to attract, and have fun watching those enchanting wings!  $\diamondsuit$ 



**Annual Conference in Alamogordo** (*continued from p. 1*) summers for the U.S. Forest Service in Idaho, Utah, and New Mexico from 1956–1963. And he worked for the Argentine equivalent of the Agricultural Research Service (INTA) in San Luis, Argentina, from 1965–1985.

Dave began working at White Sands Missile Range (WSMR) in 1990 and continues as land manager. He created small regional herbaria at Uinta National Forest, Utah; San Luis Province, Argentina; and WSMR, for which he also maintains a floral checklist. He has led numerous field trips for NPSNM Las Cruces and Otero chapters, as well as for other organizations, and will lead one on Sunday at this conference. His banquet speech is entitled *Pasaron por aquí* (They passed by here).

#### **Photo Contest**

Most of us have lots of pictures stored either on our computers or on our memory cards and zip drives—we are offering a photo contest so you can show off your favorite(s)! Pictures must be of native plant species. We will have all entries on display in the lobby of the Tays Center. (See page 9 for rules and regulations.) \*

# A New Friend: The Sterculiaceae Family

#### by Angela Flanders, Gila Chapter

Data entry may sound boring to some, but in the Dale A. Zimmerman Herbarium, where I work thanks to a grant from the Gila Native Plant Society, I read specimen labels and am reminded of plant names I already know and learn new plant names. Recently I read a label for a member of the Sterculiaceae family, *Ayenia filiformis*, collected by Gene Jercinovic in the Florida Mountains. The flowers on this specimen were so small as to be unnoticeable, but a photograph of its flower was attached to the specimen. What a strangelooking flower! You may see Gene's beautiful photographs by visiting his website, www.newmexicoflores.com.

Of the many species in the Sterculiaceae family (in 17 genera), three can be found in New Mexico: *Ayenia filiformis, A. microphylla,* and *A. pilosa.* Another member of the family with which we all are familiar, even though it doesn't grow in New Mexico, is *Theobroma angustifolium,* common name cacao, mmm . . . chocolate! The Sterculiaceae family is also referred to as the Cacao family. You can remember the name Sterculiaceae the same way I do, if you like. Just think about making hot chocolate. Put the chocolate in a pan with milk, heat, then stir and cool. I'm not known for correct pronounciation of scientific names, by the way.

The Ayenia genus was named for Louis de Noailles (1713–1793), Duc d'Ayen, 4th Duc de Noailles, Marshal (Marechal) of France. The Marechal de Noailles was one of three people named as Honorary Members of the Linnean Society in its first publication, in 1788. Linnaeus had difficulty finding acceptance for his work in France, but found an ardent supporter in Noailles, who sent some of his own specimens to him. Not only was the Duc Linnaeus's protector, he also procured for him the favor of the King of France, who sent him seeds from his gardens at Trianon.

Ayenia filiformis (filiformis meaning thread-like) keys out in Flora Neomexicana III: An Illustrated Identification Manual by Kelly W. Allred and Robert DeWitt Ivey as follows. (If you are unfamiliar with botanical terms, you may want to refer to *Plant Identification Terminology: An Illustrated Glos*sary by James G. Harris and Melinda Woolf Harris.)



Ayenia filiformis

Sterculiaceae, in New Mexico, mostly shrubs or trees with soft wood *Leaves:* alternate, entire, simple, often with stellate hairs *Stipules:* present *Flowers:* actinomorphic, perfect or unisexual *Sepals:* 3–5, more or less connate *Petals:* 5, distinct or connate *Stamens:* 5 or 10, the outer whorl often reduced to staminodes *Pistil:* superior, of 2 to many united carpels *Fruit:* in NM *Ayenia,* a capsule or a berry

And so we have *Ayenia*. To get to *Ayenia filiformis* we follow further along the path below.

Stems: stiffly erect Flowers: mostly fascicles Leaf: blades typically lanceolate, often narrowly Fruit: on a slender stipe 2–3 mm long, sometimes more (plants don't read keys) Petals: with or without an appendage

On his website, Gene Jercinovic comments, "The petals of this plant are hard to recognize as petals with their extremely long and threadlike claws and with their apices adnate to the staminal column."

I've added *Ayenia filiformis* to my list of native New Mexico plants that I hope to see on a hike one day! **\*** 

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. Members also qualify for membership in New Mexico Educators Federal Credit Union. A wide selection of books dealing with plants, landscaping, and other environmental issues are available at discount prices. The Society has also produced two New Mexico wildflower posters by artist Niki Threlkeld and a cactus poster designed by Lisa Mandelkern. These can be ordered from our poster chair or book sales representative (contact information listed on page 4).







New Mexico wildflower posters: \$8 (nonmembers, \$10) Cactus poster: \$5 (nonmembers, \$8)



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*Remember that 25% of contributions are returned annually to the individual chapters!* 

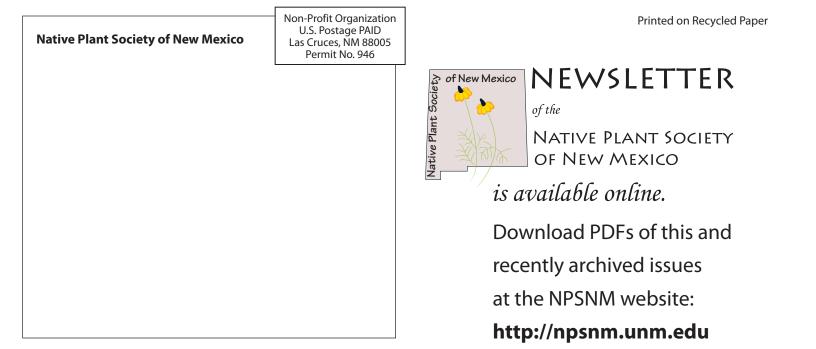


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# NPSNM BALLOT—Election of Officers, 2012

(Candidate information on page 2.)

This ballot may be duplicated for use by any NPSNM member. Only one ballot per member. All ballots must be signed or enclosed in a signed envelope by the voting member. Only one vote for each position is allowed.

President: Committee Nominee, Renée West 🔲	Write-in
Vice President: Committee Nominee, Barbara Fix 🔲	Write-in
<b>Recording Secretary:</b> Committee Nominee, Pam McBride	Write-in
Membership Secretary: Committee Nominee, Lolly Jones	Write-in
Treasurer: Committee Nominee, John White	Write-in
<i>Voter eligibility certification:</i> I am a current member of NPSNM. <i>S</i>	igned

Print this ballot if from electronic newsletter. Ballots must be returned by June 30 to: Cindy Roper, NPSNM, PO Box 35388, Albuquerque, NM 87176