

NATIVE PLANT SOCIETY OF NEW MEXICO

NEWSLETTER

January/February 1988

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CORN SMUT

Gardeners and farmers know corn smut as an annoying pest, and most assume it is poisonous to humans and livestock. Near Mexico City farmers hope for large harvest of the fungal growth since corn smut is more valuable than the corn it grows on. Indeed, smut brings more per kilo than meat. In the Southwest, native American farmers enjoy their smut harvest too.

Ustilago maydis is a parasite exclusive to corn plants. To European and "Norteamericano" eyes the smuts (fungi that feed on cereals) are disgusting and dirty, hence the word's other meaning to describe obscenity. Government researchers in the U.S. disproved the prevalent opinion that corn smut caused abortions in livestock, and discovered that it was higher in protein and lower in fat than corn. In Mexico, corn smut is a widely available delicacy known as cuitlacoche, huitlacoche or guitlacoche. The word translates roughly as "sleeping filth", referring to how smut's young, firm growth later blackens with spores.

To the Southwest Indians smut was enjoyed and encouraged. The Cochiti of New Mexico tell a story

of how the crying Corn Smut Woman convinced the Women's Corn Grinding Society not to separate out the smutted corn from the rest: "you must put her in with the good corn whenever you shell it, in order that it too may be as fat as she is." Corn smut represented the "generation of life" to the Zuni and was an essential ceremonial object kept in each corn seed granary.

In Mexico, cuitlacoche is popularly used in omelettes, crepes and quesadillas. Ethnobotanists recorded Native Americans eating it raw, sauteed, boiled, cooked with sweet corn and made into a tamale. Cherokee used it as a slave, Apache girls used it to bleach their skin and the Navajo medicine men used the spores as a blackening agent during the Eagleway Ceremony. The Hopi use the smut as a body paint.

If you do not grow corn yourself or don't have access to a friend's fresh corn smut, canned cuitlacoche is available in some grocery stores specializing in food from Mexico. (an article by Kevin Dahl of Native Seeds/Search, in The Plant Press, newsletter of the Arizona Native Plant Society, Vol. 11 No. 2)

PRESIDENT'S MESSAGE

Another year dawns and with it new interest in native plants. First we say a fond fare well to Ellen Wilde and Judith Phillips who have given up their seats on the Board of Directors. However, they will both be active with various projects, so stay tuned.

Welcome to our new Board members, Jean Heflin and Mimi Hubby and welcome to our returning Board members. Your officers are: Lisa Johnston, President; Tom Wootten, Vice-President; Dovie Thomas, Secretary; Jean Dodd, Treasurer; Bob Reeves and Mimi Hubby, Board of Directors; Susan Wachter, Newsletter Editor; and Ted Hodoba, Conservation Chairman.

On a personal note, I've moved to Portales. My husband, Brion, is teaching Band in the Portales Schools. I'm still looking for a job, but the prospects are good-more on that later. My new address is P.O. Box 142, Portales, NM 88130. Phone number: 356-3942. Come and visit if you are near the Llano Estacado!!

We have lots of activities planned for the year, from joint chapter meetings (Otero at Santa Fe in June) to trips to the Peloncillo Mountains and another to Bear Mountain Guest Ranch in Silver City, both scheduled for October. Watch the calendar, events will be posted as we get details. Many chapters have their 1988 year planned. Contact them for a complete schedule.

Remember--THINK NATIVE!!

CHAPTER REPORTS

OTERO

C.J. and Joy Carter hosted the November business meeting in their great new house in the Sacramento Mountains near Mayhill. Everything is large, grand, from the enormous basement to the main floor. The unusual design will allow a garden with running water to be incorporated within the house's glass walls. When that is planted we will have to go back and admire the work.

1988 SPECIAL TRIPS: Santa Fe end of May or the first of June depending on the weather. August 26 camp at Caballo Lake near T or C. Return via Hillsboro and Deming. Paul Gordon leader. October (27), 28 and 29 a trip to the Peloncillo Mountains with Paul Gordon. Plants not seen normally in New Mexico are found in this unique ecosystem. Other chapters are encouraged to come along. For more information on either of these three trips, contact Jean Dodd, 1302 Canyon Rd., Alamogordo, NM 88310.



CHAPTER CONTACTS

Albuquerque: Walter Graf
4735 W. Lea SW
Albuquerque, 87105
877-6469

Las Cruces: Melanie Florence
R.T 1 Box 711
Las Mesa, 88044
525-3529

Otero: Jean Dodd
1302 Canyon Road
Alamogordo, 88310
434-3041

Santa Fe: Mimi Hubby
525 Camino Cabra
Santa Fe, 87501
983-1658

CREOSOTE BUSH

Creosote bush (Larrea tridentata) is one of the most characteristic plants of the southwest deserts. It is a much branched evergreen shrub 3 to 11 feet high. The gray stems are banded with black at the nodes and spread out gracefully from the ground to form a broad, flat top. The five petalled axillary flowers open in April or May and are soon replaced by a densely hairy five celled capsule. The leaves are leathery, resinous and divided into tow leaflets (pinnately compound). The plant has a creosote-like odor, especially after a rain, which accounts for its common name. It is a member of the Zygophyllaceae family.

Creosote bush ranges from California eastward through southern Nevada and southwestern Utah, to southern Colorado and western Texas and south into Mexico. It covers many thousands of square miles in pure stands (appearing to be distributed in equal distances from each other) or in association with Bur sage (Franseria dumosa) in the Sonoran desert or Tar bush (Flourensia cenua) in the Chihuahuan desert. Once Creosote bush only occurred on the sandy or gravelly soils or mesas and hillsides in the past. It has now spread to the flats and alluvial fans in the Chihuahuan desert once dominated by Black grama (Bouteloua eriopoda). The invasion of Creosote bush into other areas may be due to overgrazing (cattle do not eat Creosote bush but relish Black grama) and/or a possible climate change.

The resinous covering of its stems and leaves minimizes evaporative moisture loss and protects the plant against the dessicating effect of hot, dry winds. Creosote bush has become especially well adapted to dry conditions by the development of numerous root hairs and very high osmotic pressure within the plant cells, which gives it exceptional power in water absorption. Although Creosote bush has a

capacity for withstanding considerable drought, it attains its best growth where water supply is favorable.

Creosote bush growth may be limited by the availability of nitrogen in the soil. It is theorized that a high cover of spring annuals will use up the nitrogen and make it unavailable for Creosote bush to use in the summer.

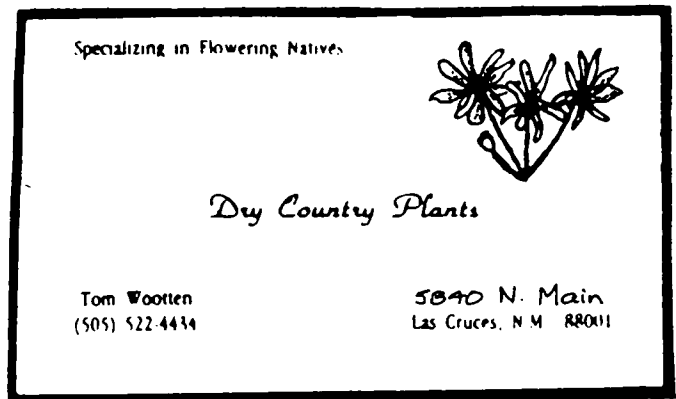
This shrub has been used in the past by the Pima Indians. The reddish brown resin which is deposited on the branches by a scale insect was used for mending pottery, making mosaics, cementing arrowheads and coating baskets. The leaves and twigs were used in decoction, as a tonic and antiseptic.

by Melanie Florence

References: Flowers of the Southwest Deserts by N.N. Dodge, Southwestern Monuments Assoc., Popular Series No. 4, 1951.

Range Plant Handbook, by Forest Service, U.S. Dept. of Agriculture, 1937.

Pattern and Process in Desert Ecosystems, ed. by W.G. Whitford, Univ. of New Mexico Press, 1986.



EXCERPT from A Dictionary of Landscape Architecture by Baker H. Morrow, 1987 University of New Mexico Press.

Litterbug: A popular 1960's term for an irresponsible reprobate who dribbles garbage whenever he appears in public an is incapable of understanding the simplest requirements of civil behavior.

TREES HAVE BETTER EYES THAN HUMANS

Not only do trees have eyes, but trees' eyes are blue and can be more sensitive than human eyes.

Trees can sense light, darkness and the season of the year through their eyes, says Esteban Herrera, horticulturist for NMSU Extension Service.

Trees contain a compound called phytochrome, a pigment system similar to chlorophyll, that senses changes in light. Phytochrome is a blue pigment found in the buds, seeds and leaves of trees which can absorb two types of red light.

The amount and type of phytochrome in a tree changes from day to night and from week to week. Phytochrome can measure differences between day length and night length so the tree knows what part of the growing season it's in. As the concentrations of phytochrome rise and fall, messages are sent to stimulate seed germination, flowering, shoot growth and other "sleeping" movements of a tree.

The amount of and ratio between active and inactive phytochrome helps the tree decide when it's time to shut down for winter or start up for spring. In some trees phytochrome sense is strong. Even with a mid-winter thaw or warm spell, trees won't begin to grow until the phytochrome signal is correct.

Some trees with poor "eyes" may begin to grow in the middle of a winter thaw. Most trees will not. The trees that are not "tricked" into growing by warm temperatures have good phytochrome eyes.

ANNUAL WHITE SANDS MISSILE RANGE VISIT

Plans are still tentative for our annual visit to the White Sands Missile Range outside of Alamogordo. As usual, reservations must be made ahead and members of NPS-NM only are permitted. Entrance will be only by way of the Tularosa Gate at 9:00 a.m. sharp. No photography is permitted, period. For more information and to make reservations, contact Jean Dodd at 434-3041.

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RESTORING THE EARTH CONFERENCE


A four day national conference on ecological restoration and the design of new solutions to the nation's environmental problems will be held January 13-16 on the Berkeley Campus of the University of California.

The conference is convening to build public awareness of ecological restoration and make it a high priority on the nation's environmental agenda. Also the conference plans to develop strategies for creating educational, organizational, financial and political structures necessary for a restoration movement.

If you plan to attend the conference or know of someone who will be attending, please report to NPS-NM on the conference. While this appears to be an organizational meeting, we would like to know what the conference accomplished and its future direction.

BEAR MOUNTAIN GUEST RANCH

Guided Tours :
Wildflowers, Birds,
Ghost Towns



Myra McCormick (505) 538-2538
Silver City, N.M. 88061

SELECTIONS FROM A PRELIMINARY LIST OF
FLORA OF THE WEST ESCARPMENT
AND LLANO DE ALBUQUERQUE

NPS-NM member and naturalist Dan Scurlock recently completed a preliminary list of flowering plants identified within the proposed boundaries of the West Mesa Petroglyph National Monument. Copies were given to City Planning, Albuquerque; the National Park Service: Santa Fe and Friends of the Petroglyphs for use in their efforts to preserve this area.

For a copy of the complete list or to add additional plants, contact Dan Scurlock, 1212 Saiz Rd. NW, Albuquerque, NM 87104. (Be kind and enclose at least a SASE-ed.)

<u>Juniperus monosperma</u>	One-seed juniper	<u>Artemisia filifolia</u>	Sand Sagebrush
<u>Sporobolus airoides.</u>	Alkalai Scatoon	<u>A. ludoviciana</u>	Wormwood
<u>S. cryptandrus</u>	Sand Dropseed	<u>A. tridentata</u>	Big Sagebrush
<u>S. contractus</u>	Spike Dropseed	<u>Thelesperma</u> sp.	Cota
<u>S. flexuosus</u>	Mesa Dropseed	<u>Cirsium neomexicanum</u>	New Mexico Thistle
<u>Hilaria jamesii</u>	Galleta	<u>Brickellia</u> sp.	Brickelbush
<u>Bouteloua gracilis</u>	Blue Grama	<u>Senecio longilobus</u>	Threadleaf Groundsel
<u>B. barbata</u>	Sixweeks Grama	<u>Senecio</u> sp.	Groundsel
<u>B. eriopoda</u>	Black Grama	<u>Grindelia aphanactis</u>	Gumweed
<u>B. curtispindula</u>	Sideoats Grama	<u>Chrysothamnus nauseosus</u>	Rabbitbrush
<u>Muhlenbergia torreyi</u>	Ring Muhly	<u>Haplopappus</u> sp.	Goldenweed
<u>M. porteri</u>	Bush Muhly	<u>Aster tanacetifolius</u>	Tansy Aster
<u>Oryzopsis humenoides</u>	Indian Rice Grass	<u>A. hirtifolius</u>	Baby Aster
<u>Andropogon scoparius</u>	Little Bluestem	<u>A. pauciflorus</u>	Purple Aster
<u>A. saccharoides</u>	Sliver Bluestem	<u>Zinnia grandiflora</u>	Rocky Mountain Zinnia
<u>Bromus secalinus</u>	Cheatgrass	<u>Baileya lyrata</u>	Desert Marigold
<u>Stipa comata</u>	Needle-and-thread	<u>Helianthus annuus</u>	Annual Sunflower
<u>Yucca glauca</u>	Soapweed Yucca	<u>H. petiolaris</u>	Prairie Sunflower
<u>Ulmus pumila</u>	Siberian Elm	<u>Gutierrezia sarothrae</u>	Snakeweed
<u>Atriplex canescens</u>	Four-wing Saltbush	<u>Psilostrophe taetina</u>	Paper Daisy
<u>Eurotia lanata</u>	Winterfat		
<u>Mirabilis multiflora</u>	Colo. Four O' clock		
<u>Abronia fragrans</u>	Sand Verbena		
<u>Dithyrea wislizenii</u>	Spectacle Pod		
<u>Fallugia paradoxa</u>	Apache Plume		
<u>Hoffmanseggia densiflora</u>	Hog Potato		
<u>Dalea formosa</u>	Feather Indigobush		
<u>D. scoparia</u>	Broom Dalea		
<u>Linum aristatum</u>	Yellow Flax		
<u>Rhus trilobata</u>	Skunkbush		
<u>Malva neglecta</u>	Common Mallow		
<u>Tamarix gallica</u>	Tamarisk		
<u>Opuntia polycantha</u>	Prickly Pear		
<u>O. phaeacantha</u>	.		
<u>O. erinacea</u>	.		
<u>O. clavata</u>	.		
<u>Elaeagnus angustifolia</u>	Russian Olive		
<u>Phacelia corrugata</u>	Scorpionweed		
<u>Murrubium vulgare</u>	Horehound		
<u>Datura metelioides</u>	Sacred Datura		
<u>Penstemon</u> sp.	Penstemon		
<u>Castilleja</u> sp.	Indian Paintbrush		
<u>Plantago purshii</u>	Wooly Plaintain		
<u>Curcubita foetidissima</u>	Buffalo Gourd		
<u>Malacothrix fendleri</u>	Desert Dandelion		
<u>Taraxacum officinale</u>	Dandelion		

Additional plants are to be found in this area. The list from Dan contains about 125 species. For complete list contact Dan at address above.



EMORY BACCHARIS
Baccharis emoryi Gray

TIPS ON UTILIZING NATIVE PLANTS

Melanie Florence and Tom Wooten of the Las Cruces chapter have come up with an idea that I hope others in NPS-NM and elsewhere will support.

Most of us joined NPS-NM to learn about native plants, yet few of those who "know" have the time to contribute to the newsletter on a regular basis. The others of us know a little, have discovered something unusual or just have seen something that others might like to know. This column will provide the opportunity for us to share tips without trying to compose a complete article. Think of this as a type of "Heloise Hints" for native plants. Tips can cover growing, collecting, landscaping and other uses for native plants--yes, Frances, even dyeing.

Just to get started, these are submitted by Melanie....

1. Use a Dust Buster to collect light seeds (Turpentine bush or Rubber Rabbit brush).
2. Use kitchen tongs for handling cacti.
3. Use colanders with different sizes of holes to sift different seed sizes.
4. Carry coin envelopes for seed collection.
5. You can scarify seeds by clipping off a piece with shears.

Now, it is your turn....let's hear from you. Seed tips to NPS-NM Newsletter, 2500 Norment Rd. SW, Albuquerque, NM 87105



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BOARD MEETING NPS-NM

The NPS-NM Board of Directors will meet at Bosque del Apache Game Refuge in January. At present a date has not been determined. All members are welcome to attend. For the date you may contact one of the board members or contact Lisa Johnston at 356-3942.

NEW BOOKS AVAILABLE

NPS-NM is pleased to add Botanical Latin to its book list. Retail price is \$39.00, but NPS-NM member price is \$31.20. Add \$0.75 postage per book ordered. A complete list of books is available from NPS-NM Books, PO Box 1206, Portales, NM 88130. Address specific book requests to the above address.

THINK TREES

Think Trees: an Urban Tree Conference will be held at Albuquerque January 28 and 29 at the Holiday Inn Pyramid (it really looks more like a ziggurat than a pyramid) at 5151 San Francisco Rd. NE. Speakers will include both regional and national speakers; Steve Day, president of the Rocky Mountain chapter of the International Society of Arboriculture and owner of Landscapes Plus in Denver and Sharon Ossenburggen, Information Specialist, Northeastern Forest Experiment Station, Durham, New Hampshire. A few of the New Mexico speakers are Drs. Norm Lownds, Richard Lee, Mike English all from NMSU, Dr. Carol Sutherland and Bob Kane of NMDA and Judith Phillips and Lisa Johnston of NPS-NM!

Programs cover a broad range of topics, from tree care, pesticide application to native trees and Xeriscape.

Pre-registration must be postmarked by January 20, 1988. Fee is \$55.00 which includes two day conference, two lunches, resource materials, refreshments, hors d'oeuvres (cash bar). Send registration to Think Trees, PO Box 21037, Albuquerque, NM 87154-1037

FROM HORTIDEAS, DEC. 1987

From Drylander: The Newsletter of the Dry Lands Research Institute (available from David Bainbridge, 2217 Geology Building, University of California, Riverside, CA 92521) suggests using live cuttings to stabilize soil near streams to prevent erosion. One obvious advantage is the cost over the more expensive retaining walls or rip-rap. Proper species selection is critical as are soil moisture at planting, planting techniques and type of cutting. Plants adapted for this type of use include willows, poplars, mulberries, sycamores and desert willows.

For use near intermittent streams, supplemental water will be required, at least initially.

GARDEN NEWSLETTER FOR ALBUQUERQUE

Landscape architect and NPS member Robert Squires has a gardening newsletter for the mid-Rio Grande area. Published monthly, The Albuquerque Gardener reflects Robert's interest in developing innovative ideas for our landscapes.

Subscription is \$10.00 per year payable to Robert Squires, 824 Summit Dr. NE, Albuquerque, NM 87106.

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RELIEF MAPS OF WESTERN STATES

Are you a map fanatic? Do you enjoy gazing through an atlas imaging the countryside, where are the mountains?, valleys?, towns? Somehow the AAA maps don't quite provide the interest as does a good relief map. Raven Maps and Images of Oregon has a new series of large format, shaded relief maps with elevation tints at 500 foot intervals.

At present eleven western state maps are available at \$20 per map plus \$4.00 postage. Maps sizes vary but generally run 1:550,000 scale (except for California of course) for a resulting map of about 43"x51".

For more information about these maps contact Raven Maps and Images, 34 N. Central, Medford, Oregon 97501.

MEMBERSHIP APPLICATION

Name _____

Address _____

Phone No. _____

Other interested family members:

Please enclose your check payable to:

Native Plant Society of New Mexico
P.O. Box 5917
Santa Fe, NM 87502

Annual Dues:

___ Individual & Family \$8.00
___ Friend of the Society \$25.00

Please send a gift membership and card to:

To better serve our membership, please check areas of particular interest.

Conservation:

- ___ Endangered species, Habitats
- ___ Restoring abused areas
- ___ Water conservation
- ___ Propagation ___ Seed Collection

Landscaping: ___ Residential
___ Civic ___ Commercial ___ Highway

- Special Uses: ___ Food ___ Fiber
___ Medicinal ___ Dyes
___ Photography ___ Field Trips
___ Ethnobotany ___ Paleobotany
___ Growing for resale
___ Informal classes
___ Newsletter ___ Youth projects
___ Organize new chapter
___ Membership drive
___ Other (please specify)

How would you describe your level of expertise? What areas would you be willing to help with?

Are you a member of an organization with related purposes (Garden Club, NM Wildflower Association, etc.)?

CALENDAR

SANTA FE

January 20 7:30 p.m. at St. John's College, Room 122. Larry Deaven of Los Alamos Biology Department on "New Approaches to the Taxonomy of Cacti of New Mexico."

February 17 7:30 p.m. at St. John's College. Gerald Chacon, Santa Fe County Agent will talk on "Management Problems with Native Trees and Shrubs".

March 16 7:30 p.m. at St. John's College. Kathleen Dittmer will speak on a new botanical garden for Santa Fe.

ALBUQUERQUE

The Albuquerque chapter meets the first WEDNESDAY of every month at 7:30 p.m. at the Museum of Albuquerque on Mountain Rd. in Old Town. Meeting announcements are sent to each Albuquerque chapter member about one week prior to the meeting with the program.

OTERO

February 27 2:00 p.m. Alamogordo Public Library, corner of 10th and Oregon. Outstanding slides of natives by John McNelly.

March 26 tentative Hueco Tanks. Carpool from Fairgrounds in Alamogordo at 8:00 a.m. (Hueco Tanks are 281 miles east of El Paso so plan for a long day.)



Y'ALL COME TO ALPINE

Saturday, January 30, 1988 at 7:00 p.m. at the Community Room of the Alpine City Hall, the Texas Native Plant Society-Southwest Region will present "Healing Plants and Holy Plants". Betty Alexander, a Big Bend Ranger will talk on plants used by "curranderos". LeRoy Anderson will then talk on plants used in Indian ceremonies in the Southwest. Slides will be shown with both programs.

If the weather permits, a fieldtrip will be held the following day.

NPS-NM Editor
2500 Norment Rd. SW
Albuquerque, NM 87105

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