Native Plant Society of New Mexico newsletter

MAY-JUNE 1983 VOLUME VIII NO.3

MAY/JUNE	Southeast Chapter has no set meeting time. For information, call Nina Eppley at 622-7180.
MAY	Glenn Niner Chapter will meet with the Albuquerque Chapter.
MAY 11	Albuquerque Chapter meets(normally 1st Wednesdays): Open Meeting. Bring plants to be identified, interesting books, slides, pictures or crafts which involve native plants. The Albuquerque Museum, 2000 Mountain Rd. NW 7:30 pm.
MAY 11	Las Cruces Chapter meets(2nd Wednesdays): Mr. Glenn Staton will show slides of desert plants of southern New Mexico. NMSU Ag Building, Room 156. 7:30 pm.
MAY 15	Las Cruces and Otero-Lincoln Joint Field Trip to Aguirre Springs. LC members: meet at 8:00 am at Branigan Library. OT-LI members: Meet at the sign on the highway at 2:00 pm. Bring water, snack and/or lunch and a jacket.
MAY 18	Santa Fe Chapter meets(3rd Wednesdays): Santa Fe Spring flowers & plant families: a session of identification and classification to prepare us for our summer field trips. St. John's College, Lab Building, Room 118. 7:30 pm.
JUNE	Santa Fe Chapter: no evening meetings during the summer. Field Trips will be substituted. For information, call Iris David at 988-1709.
JUNE 5	Albuquerque Chapter Field Trip: Stops will be made at each of the different life zones from the Rio Grande bosque to the crest of the Sandia Mountains. Bring a picnic lunch. For information on time and place, call Ted Hodoba at 242-3053 or Jackie Farr at 294-2178.
JUNE 8	Las Cruces Chapter meets: NMSU Ag Building, Room 156. 7:30 pm. For more information, call Jean Lozier(526-3771)
JUNE 12	Glenn Niner Field Trip: Tour the Plant Material Center in Los Lunas, located south of the Honor Farm at 1036 Miller St SW. Meet at 2:00 pm. For more directions, call Lisa at 865-5608 (leave a message).
JUNE 26	Otero-Lincoln Chapter meets(Last Sundays): Call Jean Dodd at 434-3041 or Madeline Murray at 378-4117 for details.

CHAPTER NOTES

Otero-Lincoln Chapter

The February meeting at Bill Mayfield's was Show and Tell. Dried flowers, notepaper with pressed wildflower designs, a notebook of dried plants to be used in an elementary classroom, potted plants to give away, and new books acquired were just a few of the items. One of the new books is by an elementary science teacher whose students compiled and published a book of recipes and experiments with native plants. The book is entitled "Environmental Science: Activities with Plants of the Southwest" from Kino Publications of Tucson, AZ.

On March 27th, we saw slides of the Dog Canyon area furnished by Anna Deardorff in preparation for the joint trip with the Las Cruces Chapter to Oliver Lee State Park on April 10th. The slides show representative plants from the three plant communities at Dog Canyon: steep dry slopes, creosote community and the lush riparian community. Lincoln members requested a list of mountain people interested in native plants so that they could get in touch with one another.

-J.D.

Las Cruces Chapter

Our March field trip was to Soledad Canyon and despite gusts and gales of wind, we found cacti and anemones displaying their beauty. At our March meeting, Dr. Elizabeth King, Curator of the NMSU Museum spoke on plans for the Museum and the possibility of a patio garden using native plants.

In April we ventured to Dog Canyon, along with the Otero-Lincoln chapter. There is a wide range of plant communities there and we never grow tired of it. "Plants of Puerto Rico and Florida" was the topic of a slide presentation given by Dr. Dave Richman at our April meeting.

-J.Lz.

Albuquerque Chapter

Our March meeting featured Steven Brack of Mesa Gardens, Belen. He conducted an interesting and enjoyable workshop on starting cacti and succulents from seed. Each member was provided with a variety of different seed and the necessary materials to start them. Mr. Brack also supplied catalogues listing hundreds of species that are available.

A logo design was adopted for the Albuquerque chapter, featuring a native snapdragon vine. Many thanks to Walter Graf, designer of the logo.

Several of us made a weekend trip to Bear Mountain Guest Ranch in Silver City. Friday evening, Phyllis Hughes of Santa Fe, presented a program on Ethnobotany. The rest of the weekend was devoted to field trips to the surrounding areas, such as the Florida Mountains and Gila. Despite our sluggish spring, we managed to see 50 species blooming the first day alone!! Our thanks to Myra McCormick, our wonderful hostess and guide for her splendid hospitality.

-J.L.

HERBARIA, DOCUMENTED

Collections of dried plants for botanical study are valuable natural resources. New Mexico houses several herbarium collections, each with a focus and range as varied and interesting as the flora catalogued therein.

This is the first of what we hope will be a continuing series of reports on the diversity of these herbaria.

THE UNM HERBARIUM

The UNM Herbarium meets several different needs. It serves as a repository of botanical information for students and professionals as well as the public. It is also a reference base for the identification of poisonous, economic, and just plain wild plants.

The General Collection contains just over 71,000 accessioned specimens, with about 1000 "in the wings", waiting to join their brethren on the shelves in the next few months. The primary source of these collections has been floristic studies of New Mexico and surrounding areas. Dr. William Martin, the Curator, has spent over 20 years in a comprehensive study which resulted in A Flora of New Mexico. Many of his graduate students have chosen specific areas, especially mountain ranges, for similar studies. Because of the number of collections made of any given plant, detailed distributional and variability information is now available. Special strengths of the General Collection include the Cactaceae, Compositae, Gramineae, and Scrophulariaceae. Each of these groups is represented by multiple specimens of a great many different taxa.

Special collections within the Herbarium include the Seed Collection, which was begun by Beth Crowder. This consists of "vouchered" seeds and fruits - that is, they were taken from verified plant specimens so that the identifications can be relied upon as being accurate. Michelle Jespersen is currently adding to this a large number of seeds from the Cactus Collection as part of a seed morphology study. Plant fossils from the Illinois Coal Fields and other places are "neat to look at", as are the economic plant material from Dr. Castetter's travels (see below). There's a small Lichen Collection, primarily from montane and alpine regions of the Rockies.

Much important ethnobotanical work has taken place through the botany branch of the UNM Biology Department. The late Dr. E.F. Castetter made many extensive studies of the plants used by native peoples throughout the Southwest as well as in Mexico. Officially associated with the Herbarium since 1979, the Castetter Laboratory for Ethnobotanical Studies actively conducts research for various groups on a contract basis. The studies undertaken by the Laboratory's three Research Associates (Mollie Streuver-Toll, Anne Cully & Karen Clary) centers on palynological and macrobotanical material, often in association with archaeological inquiries. Mollie and Anne are now working on a floristic analysis of the Green and Yampa Rivers with Tim Fischer. Karen is completing a pollen atlas of Panama for the Smithsonian. Beth Crowder, Technical Associate, does much of the plant identification that accompanies these projects.

The Herbarium is the center of activity for 8 graduate students. I'm working on populational variation in Anemopsis californica; Carolyn Barnard is making a vegetative key to grasses of New Mexico; Tom Andrews is doing a floristic-ecological assessment of the Barbara Peaks Watershed in the Sange de Cristos; Terry Dunbar is analyzing the factors creating ecotonal vegetation at Kiwanis Meadow in the Sandias; Bob Sivinski is monographing Cryptantha in New Mexico; Karen Clary is analyzing coprolites of Chaco Canyon; Michael Garwood is trying to raise fungus-resistant Castanea dentata from tissue culture; Scott Van Pelt is doing a floristic analysis of Marquez Canyon, Mount Taylor; Dianne Andrews is beginning a study of riparian vegetation.

Two Research Associates, Paul Knight of the N.M. State Heritage Program and Reggie Fletcher of the U.S. Forest Service. are engaged in full-

time work on the rare and endangered plants of the state. They have made valuable additions to our collection, and their discussions are constantly adding to our knowledge.

The paid staff are: Dr. Martin, Curator, Margaret Caffey, Assistant Curator, and two work-study technicians, Michelle Jespersen and Robert Ray. Together we are trying hard to develop the Herbarium's museum aspect as well as to improve the the quality of our collection.

-M.C.

THE NMSU HERBARIUM

The NMSU Herbarium has the goal of becoming a quality museum, of small size (new about 51,000 specimens, goal of about 150,000) that will emphasize the flora of New Mexico, the northern Chihuahuan Desert, and the northern portion of the Sierra Madre Occidental. This meets our commitment to the state and will produce a regional collection of international value. In the last year we have added about 1,000 specimens from these regions. We maintain a very limited exchange program because of the tremendous amount of work involved in such a program, for so many specimens received on exchange add very little to the collection because of redundancy or poor quality of preparation or labelling.

In addition to this long term project of documenting floristics of the region, we have the following projects. One long term continuing project is a survey of chromosome numbers of New Mexico plant species. Darrell Ward, a former graduate student here, is particularly involved with this. This will eventually be related to the origin of the flora, the habit of the plants, family classification, and the like. The herbarium serves as a repository for vouchers documenting this work.

There is presently one graduate student in taxonomy at NMSU, Rob Soreng, who is working on a problem regarding the alpine Poa of the Rocky Mountain region, specifically examining the relationship between variation in populations as it relates to breeding systems. He is also an active collector and has discovered many state distribution records and a new species on Sierra Blanca, its description now in press. Rob and I are also working on a morphometric study of the genus in which this new species has been placed, Chaetopappa, and will have a few specimens to accession regarding this study.

John Ludwig, one of our ecologists, has contracts with the U.S. Forest Service to type forest vegetation in the southern Rocky Mountain region, and has a contract with the National Park Service to study vegetation in Big Bend National Park. Numerous, well-prepared specimens are being produced by these studies. He works with a post-doc, Ron Nielson, and two students, Steve Wondzell and Bob DeVelice.

Tom Todsen, an adjunct research associate affililated with the herbarium has been very active in collecting in remote sites, finding numerous rare species and several undescribed ones, descriptions of which he has published. His collections are also accessioned here.

Richard Spellenberg, curator of the herbarium, has had many contracts with various public and private agencies for plant surveys, most emphasizing threatened and endangered species. Most of these surveys are in areas poorly collected, so general collections are made and accessioned into the herbarium. Many state records have been found in this manner. He has several long-term projects, one the cytotaxonomy of Dalea formosa, a polyploid complex centered on the Chihuahuan Desert, the other a cytotaxonomic study of Astragalus. His speciality is the systematics of the Nyctaginaceae, particularly the species of the Chihuahuan Desert region. Presently he is working on geographic variation and a revision of the small genus Cyphomeris.

The NMSU herbarium maintains an active but limited exchange program with several herbaria, particularly the New York Botanical Garden. For material collected in the region of specialization of the NMSU herbarium, NY receives the second set; for material outside the region of specialization NY receives the first set. Loans are made of specimens from the herbarium to any recognized institution or investigator for research purposes.

-R.S.

Next month:
Eastern NMU, St. John's College & ??

HACKBERRY NIPPLE GALL & BLISTER GALL

Plant galls--abnormal growths of plant tissue triggered by the activities of bacteria, mites, insects and other organisms--are among the most fascinating phenomena of nature. They are also frequently a cause of alarm to gardeners. In actuality, of more than 2000 types of galls, only a few really pose a serious threat to the survival of the affected plant; the others are merely unaesthetic.

In the latter catagory is the hackberry nipple gall, a condition commonly seen on hackberry (Celtis spp.) in New Mexico. It is characterized by conical projections 1/8" to 1/4" high on the lower surface of the leaves. These first become noticeable in late spring and continue to increase in size until late summer. In severe cases, almost every leaf on the tree will have one or more galls.

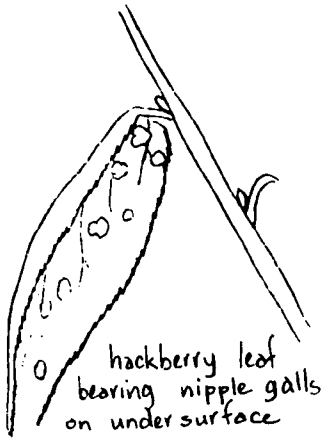
One culprit is the psyllid, Pachypsalla celtidismamma(Riley).


adult psyllid greatly enlarged

Psyllids belong to the order Homoptera, a large and diverse group which also includes the aphids, scale insects, leafhoppers, whiteflies, mealybugs and other insects beloved by gardeners. Examined under a hand lens, adult psyllids resemble tiny cicadas with powerful hind legs adapted for jumping; hence their other name: jumping plant lice.

A closely related insect, the hackberry blister gall psyllid, P. celtidisvesicula Riley, also attacks hackberry. Blister galls are generally smaller than nipple galls and protrude from the upper, rather than the lower leaf surface.

The life cycles of the two species are similar. Adults overwinter in crevices on tree bark or in other protected locations. About the time the leaf buds begin to unfold in the spring, they emerge, mate and lay their eggs. The eggs hatch in 7 to 10 days and the young nymphs begin to feed on the leaves. The feeding insect injects an enzyme into the leaf tissue which triggers the formation of a gall around the nymph, eventually enclosing it. Here it remains all summer, sucking sap from the leaf.


hackberry leaf bearing nipple galls on under surface

By early autumn the nymphs have matured. They emerge from the galls as adults and begin seeking sheltered locations in which to spend the coming winter. At this time swarms of these insects can become a nuisance, especially around homes.

Even a heavy infestation apparently does little harm to the host tree, although repeated attacks over a period of years may eventually weaken it. The galls themselves are unsightly, to say the least. Fastidious gardeners will probably want to eliminate them; others may decide that the problem isn't serious enough to justify the expense.

Some control might be achieved simply by blasting the trunk and main branches with a strong stream of water to dislodge the overwintering adults from the bark. Of course, to have any effect, this would have to be done in the wintertime. A dormant oil spray applied to the bark in early spring should help too, although I'm not aware of any controlled studies that have been done to test the effectiveness of either procedure. Certain parasitic mites and nematodes, and predaceous insects have been reported to provide significant natural control where they are present.

If the infestation is so serious that drastic measures are called for, diazinon, malathion, carbaryl (Sevin R.), or acephate(Orthene) will provide control if applied at the proper time, i.e. when the psyllid nymphs are still in the crawler stage, before the galls are formed. Once the nymph is safely enclosed within the gall tissue, it's too late, and spraying may also wipe out any beneficial insects that might be present.

The appearance of these galls can be frightening to an unknowledgeable gardener, especially when they cover an entire tree. The urge to "do something" is powerful. Yet, sometimes just understanding the nature of a problem like hackberry galls can provide considerable peace of mind, even if nothing much can be done about it for the moment. As some wise individual once observed, knowledge replaces fear.

-T.W.

LETTERS TO THE EDITORS

"...the Otero-Lincoln chapter is planning a session on edibles in the fall of '83 and the spring of '84. We will have a field trip to identify edible plants and a party with everyone bringing a dish made from the edibles. We would appreciate any recipes that your readers could supply, especially other species besides cactus."

Jean Dodd
1302 Canyon Road
Alamogordo NM 88310

"...I'm willing to give slide talks on "Alpine flora of the Costilla Peaks" and "Natural areas of New Mexico" even to miniscule audiences, if the times can be scheduled. Contact me c/o St. John's College, Santa Fe NM 87501."

Dr. Roger Peterson

"....I have 4 extra copies of the #4 Mentzelia: The Journal of the Northern Nevada Native Plant Society, 1979. This entire 92 page issue is devoted to a paper entitled "Biogeography of the Intermountain Region" by James L. Reveal. It is a superb paper, full of black and white photos. I will pass them along at cost-$5.00 each. Interested? Contact Melissa Savage,1404 Cerro Gordo Rd, Santa Fe NM, 87501."

-M.S.

Contributors to this issue:

-R.S. Richard Spellenberg
-M.C. Margaret Caffey
-T.W. Tom Wagers
-M.S. Melissa Savage
-J.L. Jim Lube
-J.Lz. Jean Lozier
-J.D. Jean Dodd

FROM THE EDITORS

WANTED: Volunteer(s) to assume the editorship of the Native Plant Society Newsletter as of January 1984. The major requirement is enthusiasm for all aspects of native plants, although some experience with "cut & paste" helps. The editor(s) is responsible for soliciting news and feature articles from any likely source(both member and non-member) and putting it all together. The benefits are many -- you have access to people around the state, you get to meet many of the members through correspondence, and you are at the hub of NPS activity. If you're interested or know someone who might be, please write to us: NPS Newsletter Editors, P.O. Box 934, Los Lunas NM 87031.

-The ED.

Lisa & Judith

RARE AND ENDANGERED NATIVE PLANT EXCHANGE

A group of concerned botanical gardens and plant societies have started a program of giving endangered plants to people who will provide homes for them and then will return seeds and cuttings at the end of each growing season. Records of all plants and seed exchanges will be maintained in the computer system of the City University of New York. If you are interested, send a self-addressed, stamped envelope for information on how you can participate in the Rare and Endangered Plant Exchange to:

Plant Exchange
c/o New York Botanical Garden
Bronx, NY 10458

(reprinted from the March 1983 issue of the Northern Nevada Native Plant Society Newsletter.)

NATIVE PLANT SOCIETY OF NEW MEXICO
Membership Application

The Native Plant Society of New Mexico is a non-profit organization dedicatied to promoting public interest in native plants and to the preservation of endangered species. The Society encourages the use of native plants in landscaping, especially as a water conservation measure. As a member you will have the opportunity to learn more about the native plants of New Mexico, participate in field trips, seminars, and programs, and share your knowledge and questions with others. The Society's work is voluntary and completely supported by membership dues and gifts. These, of course , are tax deductible.

Members receive the Native Plant Society Newsletter, which is published in alternate months. There are chapters throughout the state and if you are interested, you will be informed of the chapter nearclosest to you. All memberships are registered in Santa Fe, and chapter membership is an optional activity.

Membership Categories

Annual Membership. $8.00
Friend of the Society. . . $25.00 minimum

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

_____New
_____Renewal
_____Annual($8.00)
_____Friend($25.00 min)

Please check the following list to indicate your area(s) of interest and/or anything that you would like to assist with. Address your check to the above address.

	Interested	Willing to help
Landscaping with Native plants		
Conservation/Ecology		
Rare or Endangered plants		
Photography,slide collection		
Field trip		
Program planning		
Newsletter:Writing		
Mailing		
Clerical		
Membership Committee		

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