

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

## ***newsletter***

VOLUME VI. NO. 3

MAY - JUNE 1981

### CALENDAR

- May 2 Plant Sale at the Albuquerque Garden Center, 9 a.m. to 5 p.m.  
The theme this year is Native Plants.
- May 5 New Mexico Wildflower Association(NMWA) trip to Jemez. Call Dorothy Clark, Albuquerque (831-0347)
- May 9 Santa Fe Chapter's Spring Plant Sale. The Institute for American Indian Arts, Cerrillos Road, 9 a.m. to 5 p.m.
- May 9 NMWA trip to Trigo Canyon in the Manzanos. Call Judy Nickell, Albuquerque (256-0769)
- May 14 Las Cruces Chapter meets ("on second Thursdays") in Room 156, Agriculture Building, NMSU, 7:30 p.m. \*
- May 16-17 NMWA trip to Bisti Badlands. Call Judy Nickell, Albuquerque (256-0769)
- May 20 Santa Fe Chapter meets ("on third Wednesdays") in Room 122, Laboratory Building, St. John's College; 7:30 p.m. Lyle Berger, plant ecologist for Union Geothermal, who has been working on the Baca Geothermal project will speak.
- May 20 Albuquerque Chapter meets ("on third Wednesdays") in Room 34, Monte Vista Christian Church, 3501 Campus Blvd.NE; 7:30 p.m.
- May 23-24 NMWA trip to Sitting Bull Falls(near Carlsbad). Call Judy Nickell, Alb. (256-0769)
- May 30-31 NMWA Silver City trip. Call Judy Nickell, Albuquerque (256-0769)
- June 13 NMWA trip to Water Canyon (Magdalena area) Call Judy Nickell (256-0769)
- June 17 Santa Fe Chapter meets in Room 122, Laboratory Bldg., St. John's College; 7:30 p.m. Terri Fox, plant ecologist, will speak about fire and regeneration of plant cover.
- June 20-21 NMWA trip to San Gregorio(near Cuba). Call Judy Nickell(256-0769)

\*Field trips replace meetings for the summer. Watch the Las Cruces newspaper for announcements of field trips in that area.

## ANNUAL MEETING REPORT

### BOTANY ON HORSEBACK IN THE 1800's

"September 2. \_ We marched out of Santa Fe at 9 o'clock a.m., taking no one of my party except Mr. Bestor, and leaving Lieutenant Peck, who is still an invalid, to assist Lieutenant Gilmer. We descended the valley of the Santa Fe river, nearly west, for five miles, when we left the river and struck across a dry arid plain intersected by arroyos, (dry beds of streams) in a southwesterly course. Twenty-three miles brought us to the Galisteo creek, which, at that time, was barely running. The bed of the creek is sand and pebbles of the primitive rock, and lies between steep clay and limestone, traversed occasionally by trap dykes, which in one place are so regular as to resemble a wall pierced with windows. From this place to its mouth there is scarcely the sign of vegetation. At the dry mouth of the Galisteo, and directly on the Del Norte, is the town of Santo Domingo. Before reaching Galisteo creek, but after leaving Santa Fe some miles, a few sprigs of grama tempted us to halt and bait our nags; but the principal growth on the plains was ephedra, *Fremontia vermicularis*, *diotis lanata*, (Romeria of the Spaniards,) *hendecandia Texana*. There was also picked up in to-day's journey a *verbena pinnatifida*, *sphaeralcea stellata*, a *cleome integrifolia*, (a handsome purple flowered herb,) several aster and a species of *dicteria*, which Dr. Torrey thinks new."

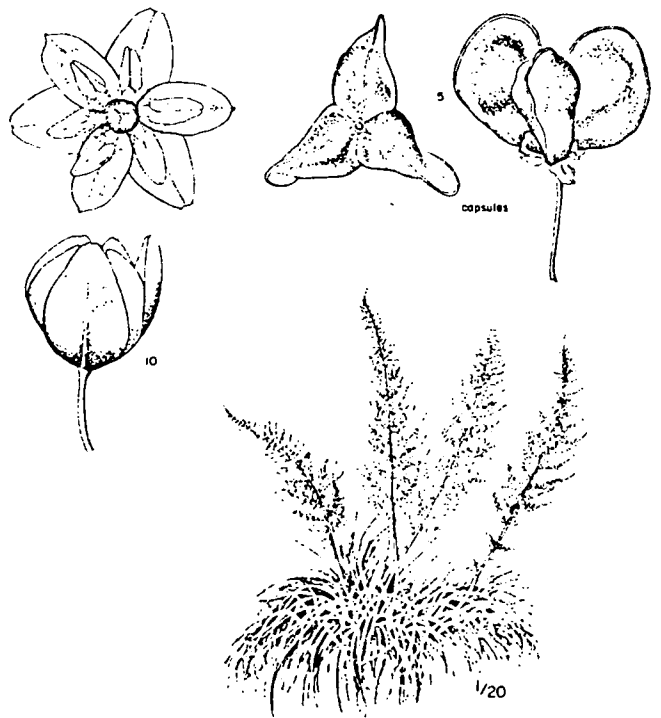
This excerpt from the journal of young Lieutenant A.W. Whipple (Congressional Executive Document No. 41) contains references to plants which, although the names of nearly all have been changed, can still be found in the Galisteo area. The editor will research the current accepted names for these plants which Lt. Whipple, for whom a number of western plant species are named (e.g. *Penstemon whippleanus*) found. Dr. Torrey was the Dr. Torrey, one of the most prominent American botanists of the 19th century, along with Asa Gray. The expedition had started from the Mississippi and went all the way to Los Angeles in the mid-1800's.

Native Plant Society members from all over New Mexico met at the Bear Mountain Guest Ranch in Silver City for the annual statewide meeting April 11th and 12th. A small but enthusiastic group representing Santa Fe, Albuquerque, Los Lunas, Bent, Las Cruces and Silver City was present.

Weekend activities were centered around landscaping with native plants. On Saturday afternoon the group visited home gardens in the Silver City area landscaped with natives. Participants were allowed to take cuttings of various species at the home of Mrs. Anita Morton, who also became a new member. After a delicious meal served by our hostess, Myra McCormick, David Deardorff from Plants of the Southwest showed slides of native plants and discussed cultural requirements of perennial shrubs and wildflower mixes.

Sunday morning we toured a native plant nursery at Ft. Baird Hospital, where they are growing plants from seed supplied by the Los Lunas Plant Materials Center.

A special thanks to Myra McCormick and David Deardorff for making our weekend so enjoyable and informative.



*Nolina microcarpa* (Bear grass)  
Flowers white  
Widespread distribution

## SEX AND THE SINGLE PLANT, PART II

by Roger Peterson

(This is the second of two articles on sexuality in plants.)

A small percentage of our plant species are dioecious - the male and female organs are on separate plants (in di oikoi, two HOUSES). The majority of these -poplars, willows, most of our junipers, and the few dioecious grasses-are wind pollinated. In most dioecious species male and female plants look pretty much alike except for the flowers themselves; but in a few cases, notably our common buffalo-grass (Buchloe), the two genders appear quite different.

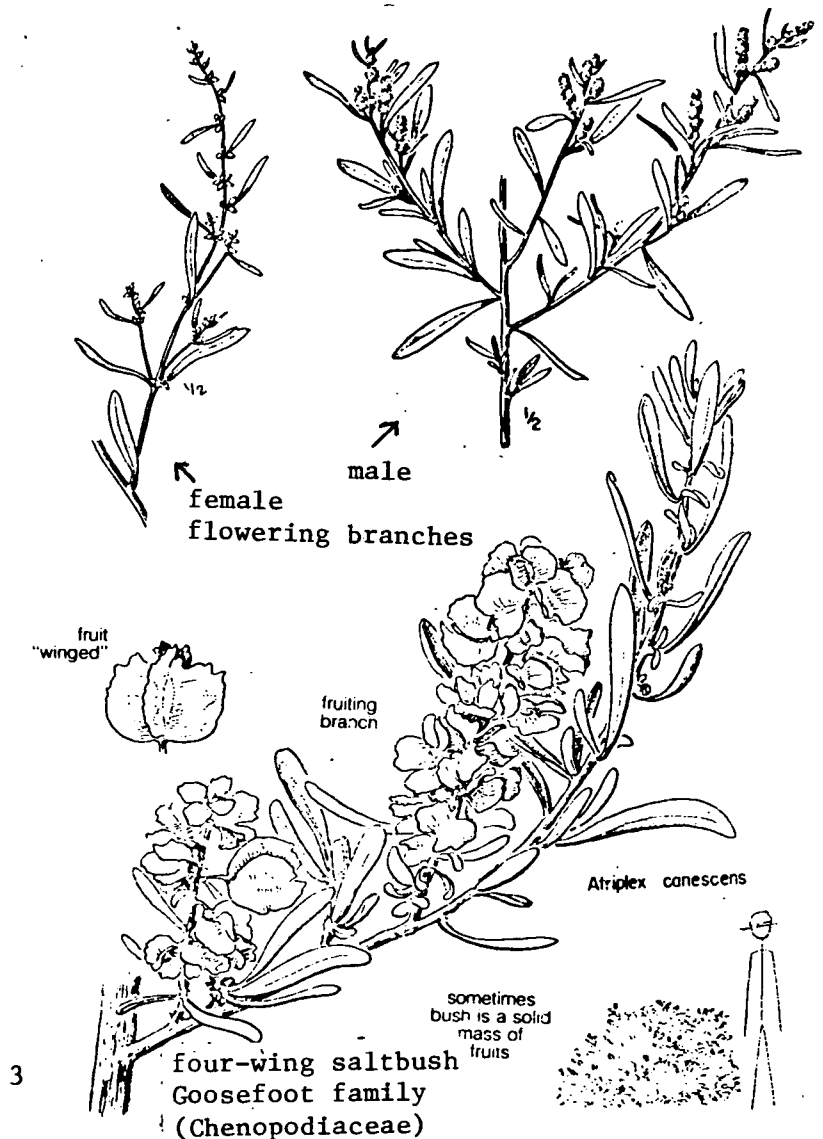
In many diocious plants sex chromosomes like those of animals have been identified. But in plants as in humans, gender is not necessarily unchangeable or clear-cut, and there are so many intermediates that a recent article is titled "Sexual Strategies in Plants. III. A Quantitative Method for Describing the Gender of Plants" (Lloyd, 1980. N.Z. J. Botan. 18). A book was written on Intersexuality in the Genus Salix, referring to willows' sexual looseness. Our common one-seeded juniper (Juniper monosperma) is almost always dioecious: in one large-scale experiment in which thousands of trees were tagged and their genders recorded, three trees shifted sex in the first five years. Four-wing saltbush in a single population has male, female, and a few monoecious plants; but in a sample from Carson National Forest that was followed for four years, 4% changed from male to female or vice versa, and many more changed to or from the monoecious state, apparently in response to environmental stress (McArthur, 1977, Heredity 38).

Control of sex-change in dioecious plants is hormonal, but not a lot is yet known about it; and what is known concerns plants like Cannabis (the female olants of which constitute the by-far-most-valuable agricultural crop in Pacific Coast states). In hemp and spinach, removal of leaves shifts the plant toward femaleness. Injection of gibberellic acid (a hormone) shifts the plant toward maleness. Apparently the normal state is a balance of gibberellins

from the leaves and other hormones from the roots, resulting for these cultivated plants in about a 50-50 mix of genders. Native Plant Society members might like to sample populations in the wild, for instance four-wing saltbushes, to see whether something like 50-50 is the mix for our plants or, as a few scattered counts suggest, do the females of the species predominate?\*

Plants in several groups- aspens, dandelions, some irises-contrive to get along without sex at all; their seeds are either produced asexually or don't grow. However, that is another story ...

\*Ed. Note: Unpublished counts of males and females in Indian plum (Oemleria cerasiformis), a dioecious shrub in the Rose family which occurs in the Northwest states, yielded a ratio of 2 male plants to every female plant, which suggests that still another sexual strategy is at work in this species!



CONTROL INSECT PESTS THE NATURAL WAY -  
WITH KESTRELS

We reprint here, with J.C. McLoughlin's permission, excerpts of his article which appeared in the Albuquerque Journal some months ago, "A Pair of Kestrels in the Garden Worth Many Pounds of Pesticide". Our dry winter has favored grasshopper reproduction once again, and those insects are a significant grazers of native plants in the wild and in our gardens.

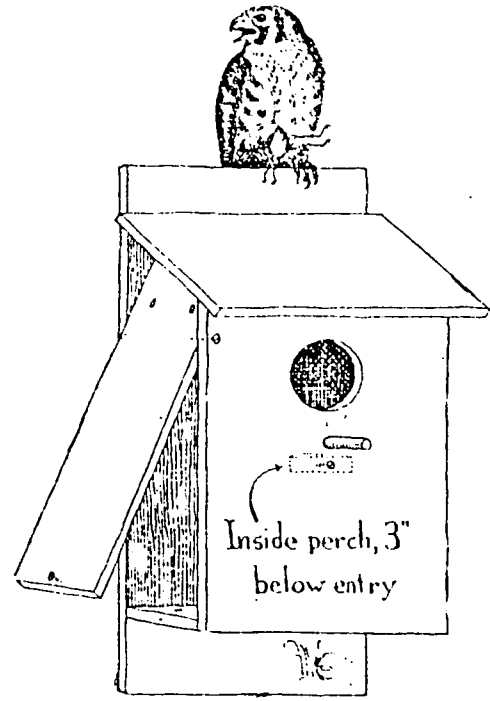
"I caught this morning morning's  
minion,  
Kingdom of daylight's dauphin, dapple-  
dawn-drawn Falcon..."

So wrote the British poet Gerard Manley Hopkins in a homage to the windhover or kestrel. His words are well-chosen. The American kestrel or sparrow hawk, Falco sparverius, is certainly a regal little bird in both color and demeanor. About the size of a robin, the kestrel is often seen perched on utility wires throughout New Mexico or riding the air in its unique hovering hunting-flight.

Besides being conspicuous and strikingly handsome, however, the kestrels are uniquely suited to employment by gardeners. As consumers of grasshoppers, small rodents and other nasty little competitors for our produce, these little falcons know no equal. Furthermore, properly treated, pairs of kestrels cheerfully return year after year to patrol a garden for large insects and the occasional mouse, providing a superb "insecticide" entirely lacking in any side effects beyond their most welcome beauty and high, wild cries.

Kestrels are unmistakable in appearance. The only small hawks with reddish backs, both male and female sport black-and-white facial masks, the black serving to reduce glare that might interfere with their acute eyesight. Adult males at rest display blue-gray wings, and all kestrels have reddish caps and tails. The species inhabits almost all of North (and South) America. Non-migratory in the ordinary sense, the birds follow their food supply as it fluctuates with the seasons.

Small size limits the kestrel's choice of food. Rarely bothering with anything larger than a small rat, the little falcon just happens to enjoy grasshoppers above all the rest of its summer menu.



Noting the kestrel's abundant usefulness to us, there is a way to repay this sprightly falcon for insect-killing services rendered. Since hollow trees and abandoned buildings of the right sort for nesting are comparatively rare in New Mexico, kestrels readily accustom themselves to the presence of human activity and nest in birdhouses of appropriate size and location."

[You can buy a ready-made kestrel house in Santa Fe from John Pierpont (983-4480) or write to NPS editor requesting a copy of plans illustrating how you can build your own kestrel house from a 6-foot, 1-by-10 inch board.]

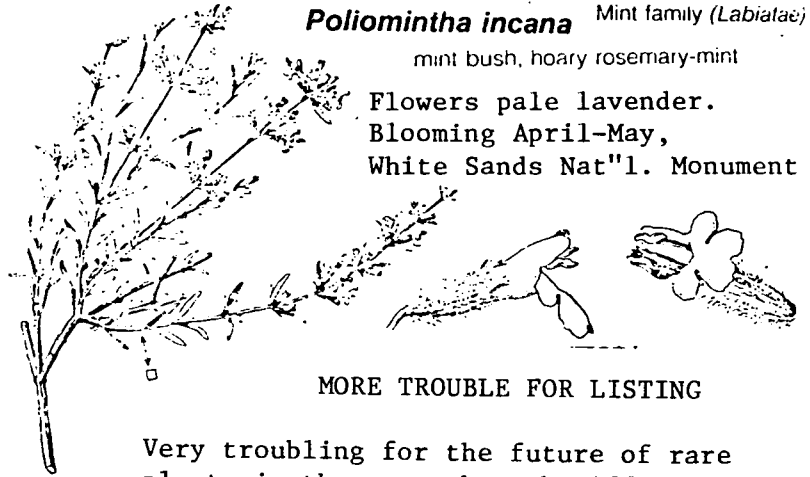
"Kestrel boxes may be mounted anywhere 8 feet and higher above the ground, preferably with the opening facing southeast away from prevailing winds. Sides may be hinged for easy access. The houses may be attached to trees, buildings or other sites within reach of ladders.

Because utility wires across the countryside are favorite perches of kestrels, utility companies might permit attaching houses to their poles. One must get permission from the owners of these poles before tampering with them, but the effort would quickly repay itself in locust mortality. Houses ideally should go up in March or April, but there may still be time to set up a house or two.

Last summer everyone was complaining about grasshoppers. This coming season the same people will likely complain again, too, unless they help the local kestrels and take the little time necessary to build a few simple hawk houses. Needless to say, there are plenty of grasshoppers and mice to feed many more kestrels from our gardens; the gardener who houses these birds will be gratified to see them raising brood after brood, year after year—each generation of the lovely birds being composed almost entirely of grasshoppers that would otherwise be sharing the bounty of the garden and reproducing their own noxious kind."

**Poliomintha incana** Mint family (*Labiatae*)  
mint bush, hoary rosemary-mint

Flowers pale lavender.  
Blooming April-May,  
White Sands Nat'l. Monument



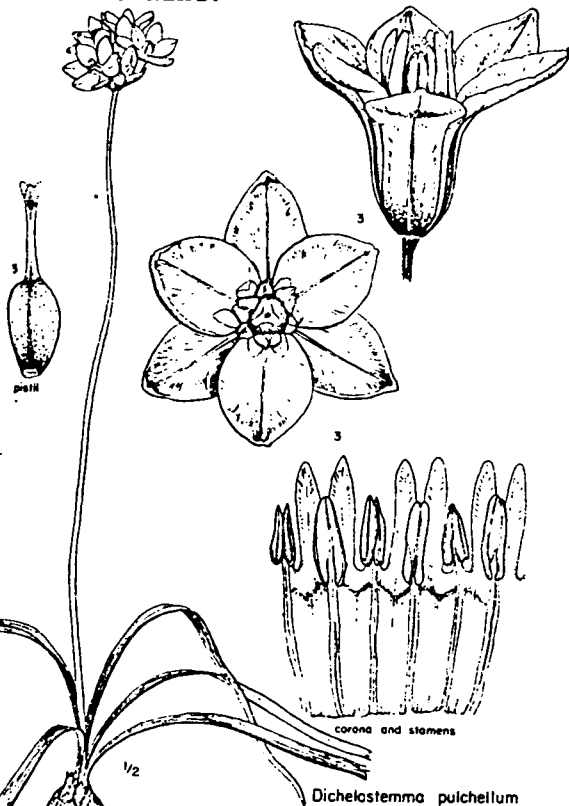
MORE TROUBLE FOR LISTING

Very troubling for the future of rare plants is the news that the Office of Endangered Species has been ordered "to undertake an immediate deemphasis of listing activities...so that a greater stress may be placed on recovery activities". To accomplish this, staff were directed to remove from programmed listing activities for fiscal year 1981 "those for which no work toward a package has begun, as well as taxa below the rank of full species".

This directive falls heavily upon plants. Not until 1973 were they included in endangered species legislation. With the need to gather information, to hire trained personnel, and to implement an entirely new program, it was not until 1978 that any plant species actually were listed. That year and the following one also saw new political impediments to listing in the form of amendments to the Endangered Species Act. Recovery of endangered plants cannot be emphasized until they are listed; formation of recovery teams and development of recovery plans follow upon listing and do not precede it.

A petition recommending a list, delisting, or reclassifying action must be acknowledged by the Fish and Wildlife Service within 30 days. Within 90 days from receipt, an evaluation as to whether "substantial evidence" has been presented in the petition to support the proposed action must be made.

The change in emphasis will directly affect the work in New Mexico of the Heritage Program. We will keep in touch with Bill Isaacs, Director, and report what sorts of recovery projects will be carried out in our state.

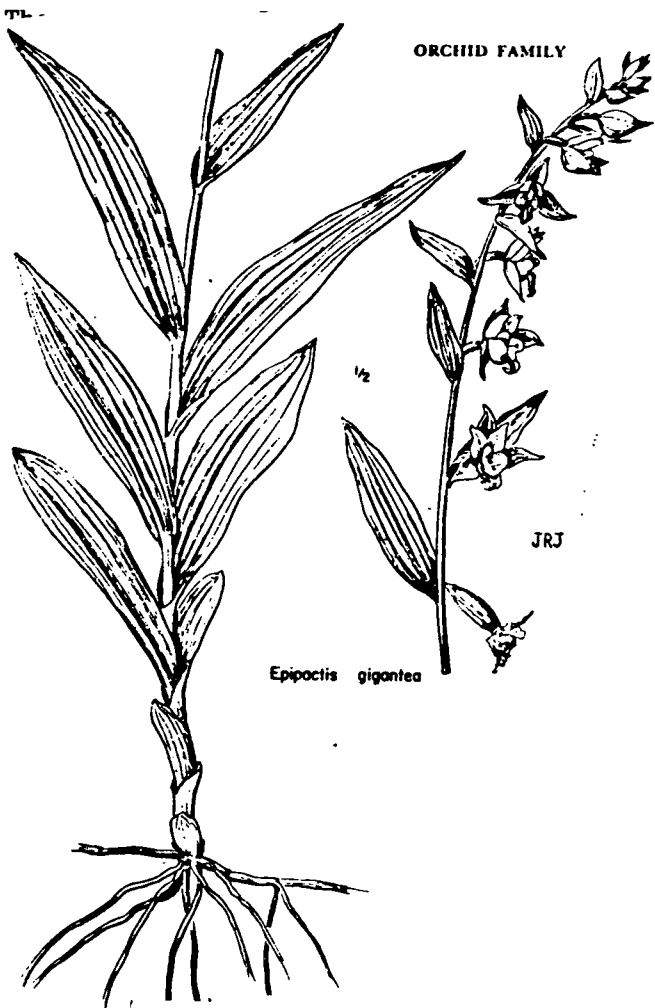


*Dichelostemma pulchellum*  
a lily of dry, rocky soils  
flowers purple  
widespread

CACTUS & SUCCULENT SHOW JUNE 1-5

Cactus and succulent aficionados will want to take in at least some of the events scheduled by the New Mexico Cactus and Succulent Society for June 1 - 5 at U.N.M.. There are speakers from around the world coming here as well as vendors like Grigsby from California and Storms (of Aizoaceae fame) from Ft. Worth, Texas. There are going to be plants on display, also, and a trip to the Sandia's. Contact Mrs. Olivia Rise for further info.:

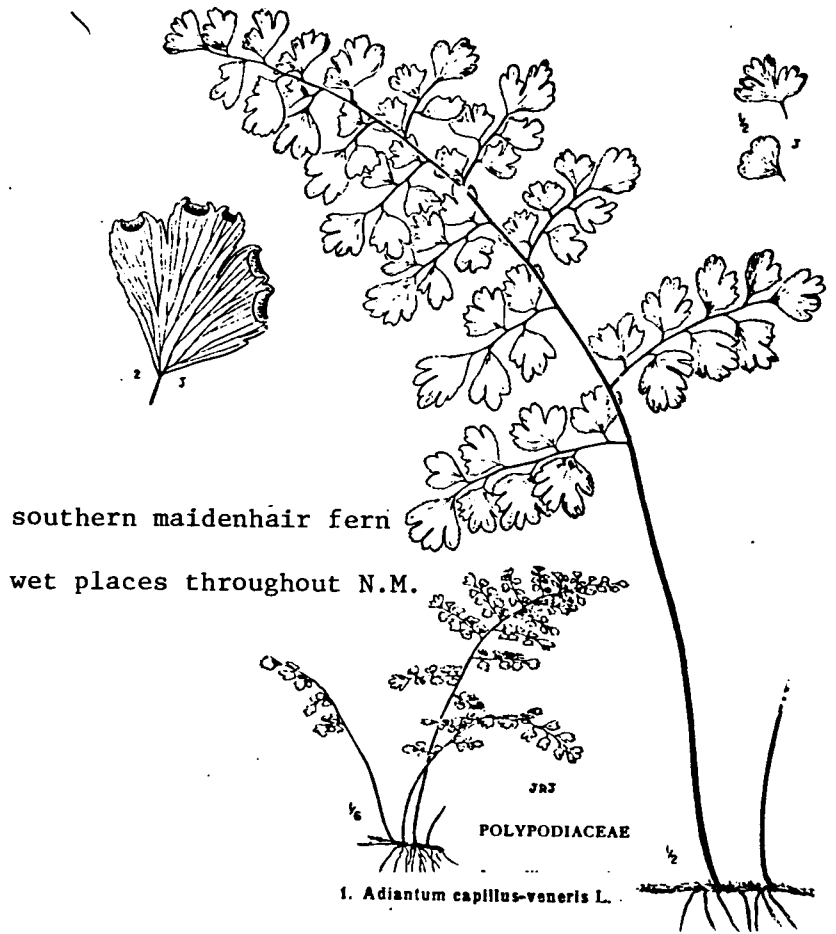
c/o N.M. Cactus & Succulent Society  
6320 Cuesta Place N.W.  
Albuquerque, NM 87120



giant helleborine orchid

flowers green and brownish-purple

found by springs in Dog Canyon near Alamogordo.  
Blooming late April.



southern maidenhair fern  
wet places throughout N.M.

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827-5531

TO JOIN THE NATIVE PLANT SOCIETY:

Dues are \$6 per year per individual, or  
or \$8 for families, or \$4 for students  
and seniors. Write to Dorothy DeWitt,  
1414 Old Pecos Trail, Santa Fe, New  
Mexico 87501.



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Nursery, Phoenix, AZ  
Burr Williams, Midland, TX  
Dan Scurlock, Albuquerque  
Virginia Schmieding, Portales  
Jean Dodd, Alamogordo

NEW CHAPTER FORMS IN THE SOUTHEAST

A large crowd attended an introductory-  
organizational NPS meeting in Roswell  
on April 5th. Featured speakers were the  
delightful Gussie and "Skinny" Schooley,  
artists and naturalists long familiar  
with our native flora.

Following the program, fifteen people  
became NPS members and others expressed  
their intention to do the same. Adequate  
funding for local programs was quickly  
obtained by a free-will collection.

Dr. Jerry Z. Ainsworth is Chairman, and  
Nina Eppley is Secretary. Bill Mayfield  
chaired the organizing part of the  
evening. The following are people in the  
southeastern part of New Mexico whom may  
be contacted by prospective members  
down there for more information:  
Mrs. Virginia Schmiedering, Portales  
Mrs. Jean Burroughs, Portales  
Mr. Paul Sattler, Hobbs  
Mrs. Ellen Miller, Ruidoso  
Mrs. Joe(Nancy) Hutto, Tularosa  
Jerry Braswell, Roswell, Membership  
chairman for the new chapter.

The chapter expects to meet alternate  
months in various southeastern cities.  
Smaller groups will serve as nuclei for  
future independent chapters. Several  
field trips to desert, transition and  
montane areas are planned for early  
announcement in area newspapers.  
We hope also to print a list of these  
trips in the next newsletter.

ILLUSTRATION ACKNOWLEDGMENTS

Atriplex canescens and  
Poliomintha incana from Elmore, F.H.;  
Shrubs and Trees of the Southwest Uplands,  
Southwest Parks & Monuments Ass'n., 1976.

Adiantum capillus-veneris, Epipactis  
gigantea, Nolina microcarpa, Dichelostemma  
pulchellum from Cronquist, Holm-  
gren, Holmgren, Reveal; Intermountain  
Flora, The New York Botanic Garden,  
1972.

Atriplex canescens from Hitchcock et al;  
Vascular Plants of the Pacific North-  
west, University of Washington Press, 1964.

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