Native Plant Society of New Mexico newsletter

VOLUME VI. NO. 4

JULY - AUGUST 1981

CALENDAR

July 13 — Talk on edible and useful native plants of the Southwest. Sponsored by the New Mexico Organic Growers Association, Albuquerque Garden Center, 7:30 p.m.

July 15 — Santa Fe Chapter meets in Room 122, Laboratory Bldg., St. John's College; 7:30 p.m. Terri Foxx, plant ecologist, will speak about fire and regeneration of plant cover.

July 18 — Santa Barbara Canyon, near Penasco. Meet at Furr's parking lot, on Cordova in Santa Fe, 7:30 a.m. Bring lunch and water. Some people will be staying for the weekend, others for the day. Call Anna Deardorff, 827-5531 for further information.

July 19 — Otero chapter meets at the home of Mrs. S.C. (Jean) Dodd, 1302 Canyon Road, Alamogordo (phone 434-3041). NPS members and interested non-members are invited to this unique, passive solar house for a meeting of general interest to all native plant enthusiasts. Bring seeds, books, and plants for sharing, trading, or selling. Residents of Lincoln and Dona Ana counties, and El Paso, this is your neighborhood. The meeting is at 3 p.m.

July 26 — Bandelier Plant Ramble, 9 a.m. A leisurely walk in the Frijoles Creek area to share what we know about the plants we see. Help with using plant keys will be available. Bring lunch, water, and comfortable walking shoes. Meet at 9 a.m. at the back gate to Bandelier Nat'l. Monument, but please call Fairley Barnes (662-5910) to arrange car pools, etc.

August 19 — Santa Fe Chapter meets in Room 122, Laboratory Bldg., St. John's College. 7:30 p.m. Charlie Hohn, Las Cruces, will speak on irrigation systems for water conservation.

August 20 — The Albuquerque chapter will be at the annual open house of the Middle Rio Grande Agricultural Experiment Station, at the Los Lunas SCS Plant Materials Center, 8 a.m. to 3 p.m. There will be guided, walking tours in the morning and tractor tours in the afternoon. Address is 1036 Miller SW, Los Lunas. Go west off of Hwy 85 south of the Correctional Center. Phone 865-7340 or 865-6922.

DRIP IRRIGATION CONSERVES WATER

Paul Clendennin of Sprinkler Irrigation Supply Co. was the speaker at the May 20th meeting of the Albuquerque Chapter.

Clendennin, a drip irrigation specialist, cited several points as essential to the successful operation of drip systems: use of "high-carbon" poly pipe because of its greater UV resistance, use of good filtering and pressure regulating devices to prevent clogging and guarantee uniform water flow and especially proper application of drip irrigation equipment. Best results are obtained with use of such equipment on single plantings, one or more emitters per plant, rather than use on row crops or lawn irrigation.

Clendennin, a consultant on many drip irrigation projects in Albuquerque, suggested the highway median on Gibson SE between Yale and Girard and most of the Bellemah office buildings as examples of drip installation and working models of systems available for public observation. The Gibson median will be landscaped with natuve plant material.

HERITAGE PROGRAM SURVEYS SAN JUAN COUNTY

by Paul Knight

As a result of increased mineral exploration and a promise of future expansion of mining facilities in San Juan County, the New Mexico State Heritage Program has contracted with the BLM to conduct extensive plant surveys in an attempt to identify those areas which foster rare, threatened, endangered or sensitive plant species.

San Juan County is both a complex and exciting area for a botanical study. Because of its unique location in the Four Corners area, it receives floristic influences from many different sectors. Additionally, its complex geology creates a wide range of physiographic variation and a large number of unusual habitats. As a result of these conditions, the Four Corners area contains a large number of rare and endemic plant species.

COMMON CHOKE CHERRY
Prunus virginiana L.

RANGE. The species and its varieties rather widespread. Texas, New Mexico, Oklahoma, Arkansas, and Louisiana; eastward to Georgia, northward to Maine and Newfoundland, and west to British Columbia, Washington, Oregon, and California.

Although our study is still underway, significant discoveries have already been made in nearly all of the categories of plants previously mentioned. The most important of these would be those plants listed as federally threatened or endangered or under consideration for federal listing. For example, since the onset of the study, several new populations of Sclerocactus mesae-verdae (federally listed as threatened) have been discovered. Additionally, Astragalus humillimus (under Federal review) which has been collected only once since its original discovery and has never been seen in flower, was located, studied, photographed and collected in flower.

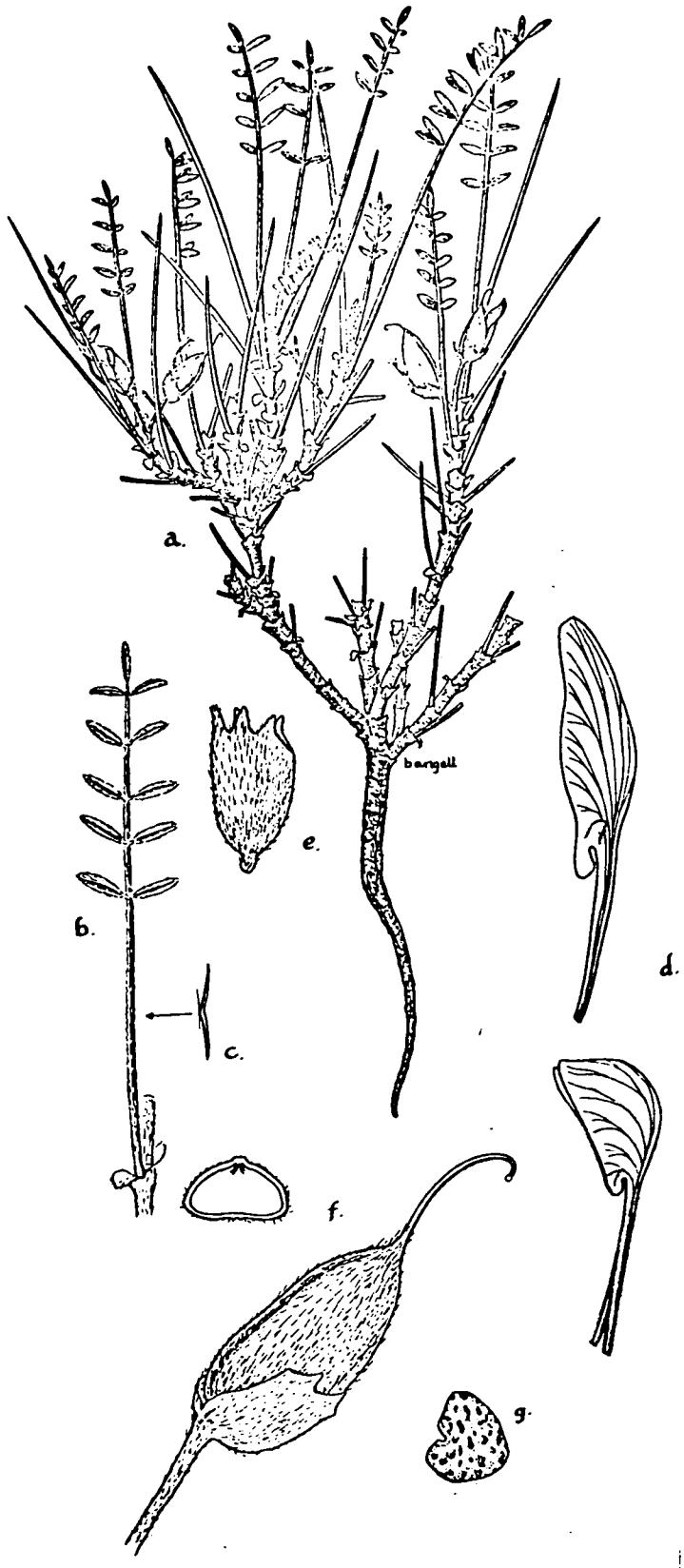
Continued work on these and other federally protected plants is supplying information on phenology, pollination, seed dispersion and affinities for specific geological formations and habitat types. It is this information that is paramount in making rational decisions concerning the care and protection of the threatened and endangered species.

In addition to plants of federal concern there are several categories of plants which fall under the realm of Heritage Program elements of special concern. These include rare plants not included under federal protection, endemics (both state and regional), and state peripherals (both narrow and broad). As a result of our studies we are accumulating information in all of these categories. We are finding that some taxa previously considered rare, are in fact widespread and in some areas common, and other taxa not previously considered for state listing are uncommon and in some cases rare. Of greater excitement are the discoveries of new records for the state(plants known to exist in other areas but never before collected in New Mexico). There are exceptional numbers of state records turning up in San Juan County. Some represent members of populations markedly disjunct from the main body of a plant's known distribution others are known to occur just across state borders but have never before been collected in New Mexico. In all cases the discovery of such populations provides valuable information concerning the range, distribution and habitat requirements of these species.

Finally we should mention the possibilities of finding new species of plants in the San Juan Basin. Because of its varied geology, unique habitats and poor state of botanical collection, San Juan County is prime territory for the discovery of new species of plants previously unknown to science. It is this possibility and the general acquisition of knowledge that such field studies invariably bring, that spurs the botanist to search ever further, over the next ridge, across the roadless desert, along the rugged cliffs. Who.knows what lies to be discovered behind the next rock?

Paul Knight is the Heritage Program's new field botanist. He came to UNM in 1975 to study with Dr. Martin and worked in plant taxonomy and ethnobotany, as well as doing a stint as assistant curator of the Herbarium at UNM. He has since done numerous floristic studies around the state, and still finds time to pursue a variety of other interests such as sculpting, prospecting, and writing.

Astragalus humillimus
illustrated by Barbara Angell
a) habit
b) leaf
c) leaf hairs
d) 2 petals, magenta (keel and banner)
e) calyx
f) pod and cross-section of pod
g) seed



A Miniaturized Plant Press and Herbarium

by Vincent D. Roth

(reprinted from THE AMERICAN BIOLOGY TEACHER, Vol. 34, No. 12, December, 1972.)

The object of a personal herbarium is to provide a visual aid to the identification of plants. The large number of plant species in any locality often precludes immediate identification from memory, and the technical descriptions are usually beyond the ability of most casual workers. Consequently, the most practical place for the herbarium is in the field with the collector or at least nearby, in his vehicle.

What I call a miniherbarium has this portability. It is useful to ecology students and their teachers; to professionals in many fields, such as entomology, forestry, range management, and ecology; to farm advisers and county agents; to summer-camp and 4-H leaders; and to hobbyists.

Workers in large herbaria may find that a reference collection of "mini" size will save wear and tear on the larger, standard herbarium sheets. For example, the plant collection of the American Museum of Natural History's Southwestern Research Station at Portal, Ariz., has had such heavy use that protective measures had to be taken. Wear has been reduced by enclosing each standard herbarium sheet in a protective plastic bag, but even this is not sufficient. The large herbarium will be retained, but the miniberbarium will be used for most identifications.

There are other advantages to the miniherbarium. Besides being portable, it is a space-saver at home or in the office. It is inexpensive: the cost of a card file with 300 species is slightly more than 1 cent a plant. The small amount of plant material needed for each specimen results in the conservation of wildflowers. Because the samples are small, the specimens dry more rapidly. The press is small enough to be carried in a pocket or purse and is readily available at any time. (Two or more are useful for long trips.)

Specifications

The plant-press frame consists of two 8-by-13-cm pieces of Masonite pegboard. The holes provide ventilation; however, solid Masonite works well in arid southern Arizona and may be satisfactory elsewhere. The frame overlaps the edges of the 7.5-by-12.5-cm (3-by-5-inch) cards and blotters and so prevents them from being bent by the rubber bands when they are not exactly lined up. Desk blotters or, better yet, thicker herbarium blotters, cut into 7.5-by-12.5-cm pieces, are adequate for pressing plants. Corrugated cardboard spacers are not necessary, but with thick plants two blotters are sometimes advisable, expecially if thin blotters are used. Strong rubber bands maintain the pressure on the plants, but it is a good idea to give the frame a tight squeeze by hand before applying the bands.

After the plant is pressed and dried it is attached to a blank 7.5-by-12.5-cm card. Transparent tape is used or clear Con-Tact paper for more permanency. It is best to label the card, using indelible black ink, before applying the Con-Tact paper.

The plant samples can be taped fresh in the field to 7.5-by-12.5-cm scratch paper or cards and labeled before they are placed in the plant press. This makes a cheaper and poorer-looking card but one that is adequate for classes.

The data on the front of the card include the scientific name of the plant in the upper left corner and the common name immediately below. The family name is placed in the upper right corner, to simplify filing. On the right side, below the family name, the locality and the date of collection are indicated. In the lower right corner is the page number of the local floral list wherein the species is described. The back of the card can be used for additional notes, such as the plant's habit, dates of bloom and seeding, and detailed descriptions of the floral parts. It is useful to place a sample of the flower or floret in a vial of alcohol for later study of the parts: several specimens can be

placed in a vial together and separated later.

Arranging the Miniherbarium

The cards are placed in a standard 7.5-by-12.5-cm file. The miniherbarium can be arranged in many ways, according to the worker's preference: by families, genera, and species, arranged alphabetically, for the botanist; by color of flowers, for the hobbyist; by groups, such as trees, shrubs, grasses, parasites, ferns, spring flowers, fall flowers; or geographically. In large families the locating of a specimen is simplified by arranging the species possessing any groups of characters. For instance, the Cruciferae can easily be divided into (i) white, yellow, or other colored flower groups or (ii) globular seed pods vs. elongated seed pods.

DESERT PEACH-BRUSH
Prunus fasciculata (Torr.) Gray

FIELD IDENTIFICATION. Western thicket-forming shrub 2–9 ft. Sometimes shaped like a small tree. Branches rather dense, spreading, and spinescent.

FLOWERS. Borne March–May, mostly 1-sexed, with staminate and pistillate on different plants.

RANGE. Dry sunny sites on hillsides, mesas, or slopes, usually in sandy or gravelly soils, at altitudes of 2,500–6,500 ft. California and Arizona; northward to Nevada, Utah, and Colorado. To be expected in northern and western New Mexico, and perhaps in Trans-Pecos Texas.

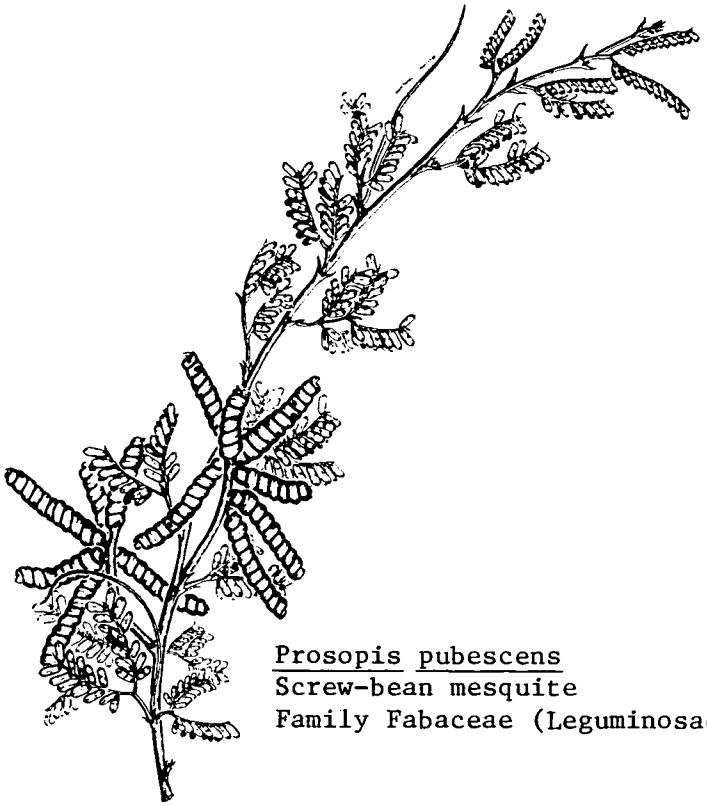
There are various methods of reducing the size of the collection and keeping it portable. The common species or those commonly recognized can be removed to a special file in the office or at home. When flower parts or leaves are bulky or too large they can be split in half: or sketches of the parts can be substituted, for the purpose of identification. Keys to species of easily identified genera, such as Yucca, Penstemon, Dalea, and Astragalus, or those of cacti, pines, oaks, and other plants can be placed on cards to reduce the number of plant cards. For instance, the two columbines in the Chiricahua Mountains of Arizona are simply separated on one card with the words "yellow flowers: chrysanthus; reddish flowers: triternata." No flower is necessary for this easily recognized genus.

If the plants are arranged according to families, genera, and species, index cards can be eliminated or reduced to a few for the most important families or groupings.

The miniherbarium may be inadequate for some workers because of its small size, but it can easily be enlarged and adapted to 10-by-15-cm (4 by 6 inch) cards or even to the extralarge 12.5-by-20.5-cm (5-by-8-inch) cards. After all, even the standard herbarium sheet is inadequate for many large plants - such as shrubs and trees.

* * * * * * *

Another suggestion for a miniherbarium from two Northern Nevada native plant enthusiasts is to fasten fresh plants to 3x5 inch cards which are spirally bound into booklets. Each booklet contains 40 or 50 cards which is suitable for most field trips. Thus the record for each field trip is kept in its own booklet. The plants are attached to the cards with scotch tape and the booklet is secured with a strong rubber band, which flattens the plants. They seem to dry well in arid climates. Betty Larson says that she began doing this in 1977 and those plants that were covered with scotch tape have kept their color well. She wears her scotch tape on a cord around her neck. The spirally bound cards are available in variety stores.



Prosopis pubescens
Screw-bean mesquite
Family Fabaceae (Leguminosae)

FOLLOW-UP NOTES ON WHIPPLE'S COLLECTIONS

Here are some musings on possible plant identities from last issue's excerpt of the journal of Lt. A.W. Whipple.

Can anyone out there help us with Fremontia vermicularis? Fremontia is a western genus of evergreen shrubs in the family Guttiferae, but what New Mexico plant could have been given that name? Please write if you know.

Diotis lanata = winterfat or Eurotia lanata.
Cleome integrifolia = Cleome serrulata.
Dicteria = possible on old name for Abronia the sand verbena. Abronia bigelovii is unique to the Galisteo area.
Verbena pinnatifida = Verbena bipinnatifida very likely.

Hendecandia texana = Hendecandra texensis
Can anyone help with this one?

ILLUSTRATION ACKNOWLEDGMENTS

Desert peach-brush, Common choke cherry, and Southwestern choke cherry from R.A. Vines, Trees, Shrubs, and Woody Vines of the Southwest, University of Texas Press, 1960.

VALENCIA COUNTY FORMS GLEN NINER CHAPTER

Following Bill Mayfield's good example in forming a new chapter for Southeastern New Mexico, Valencia County is organizing the "Glen Niner Chapter", named in memory of the well-known plantsman of the Soil Conservation Service. Much of Glenn Niner's career was spent in bringing in from the wild for evaluation particularly desirable forms of vegetation found mainly in New Mexico and Colorado. Our meetings are planned to alternate between lunches one month and evening sessions the next, along with as many field trips as busy members can handle.

To join us now, and please do, try Mary Wohlers, Rte. 3, Box 767, Los Lunas 87031, and/or 869-6744, between 6 a.m. and 7 p.m. when the stomates close.

NATIVE PLANT SOCIETY ADDRESSES

State Coordinator: Fairley Barnes
P.O. Box 5917
Santa Fe, NM
87502
662-5910(home)
667-4933(work)

Santa Fe: Anna Deardorff
P.O. Box 5917
Santa Fe, NM
827-5531

Albuquerque: Judith Phillips
Star Route 7
Box 145
Veguita,NM 87062

Las Cruces: Bob Reeves
475 La Colonia
Las Cruces, NM88001
646-1799

Southeast: Jerry Z. Ainsworth
207 No. Union
Roswell
623-4299

Glen Niner: Mary Wohlers
Route 3
Box 767
Los Lunas, NM 87031
869-6744

Otero: Bill Mayfield
Star Route
Bent, NM 88314
671-4617

TO JOIN THE NATIVE PLANT SOCIETY:

Dues are $6 per year per individual, or $8 per family, or $4 for students and seniors. Send your dues to Dorothy DeWitt, 1414 Old Pecos Trail, Santa Fe, New Mexico 87501. Check the Native Plant Society addresses on page 6 to find a chapter near you, or to call locally for more information about meetings and programs.

WELCOME TO NEW MEMBERS

Santa Fe

Clark and Elizabeth Cooley
Tina Siewers
John Hubbard
Martha Appel
Dr. and Mrs. Victor Zalma

Roswell

Mr. and Mrs. Elmer Schooley
Mr. and Mrs. Norman Shaw
Mr. and Mrs. Morgan Nelson
Mr. and Mrs. John Pettit
Isabel Rigby

Alamogordo

Susan Shyne
Darrell Warren

Other New Mexico

Sandra Shank, Loco Hills
Anita Morton, Silver City
Paul Sattler, Hobbs
Margaret Pinyon, Los Alamos
Mr. and Mrs. George Swift, Tularosa
Sheryl Mayfield, Albuquerque

Out of state

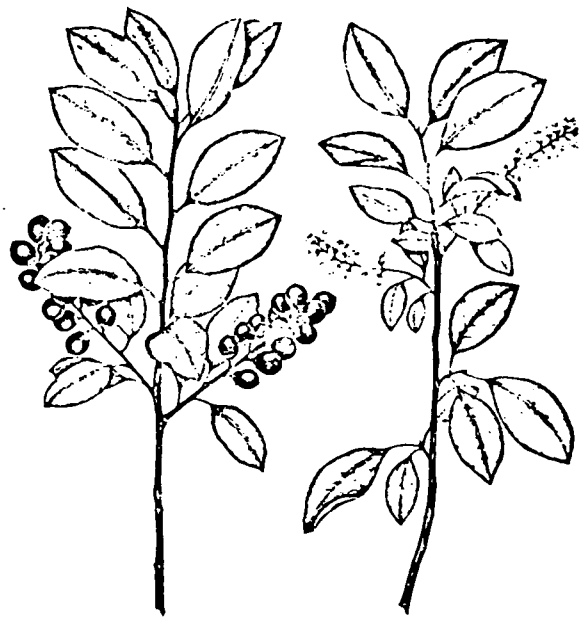
Mrs. Joe B. Horsley, El Paso, TX
Orville M. Steward, Briarcliff Manor, NY
Henningson, Durham & Richardson, Omaha NE

GARDENERS' CORNER

Mary Wohlers recently remarked how tolerant her Penstemon ambiguus plant is of the extreme heat and drought her area has been suffering lately. It continues to bloom and thrive, proving itself a fine drought tolerant garden perennial. Now is the peak of the Penstemon bloom, by the way.

Now is the time to notice the location of those special wildflowers you've always wanted to grow in your own garden. Tag the plants, or press small samples of the foliage (see our articles on mini-herbariums, this issue) so that you can easily relocate and recognise the plant. Most important, write yourself a note on your calendar (2 to 4 weeks away is usually long enough) to go and collect the seed.

Gardeners! Please share your observations with us and use this corner for requesting advice. Just drop a line to the editor, Box 5917, Santa Fe. Seed exchanges are appropriate, too.



SOUTHWESTERN CHOKE CHERRY
Prunus virens (Woot. & Standl.) Shreve

Field identification: partially evergreen shrub or small tree to 30 ft., the spreading branches forming a dense wide crown.

Range: along streams and canyons at 4500-5000 ft. Trans-Pecos Texas and New Mexico to Arizona, southwest into Mexico.

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