



Native Plant Society of New Mexico

March/April, 1985

Volume X, No. 2

Calendar

- March 6 Albuquerque Chapter meets at the Albuquerque Museum.
 Tom Wagers will give a slide program on the Thompson
 Arboretum in Arizona.
- Otero/Lincoln Chapter will meet at the Scout Hut, 1012 Oregon, Alamogordo at 7.00 p.m. Herb Hammond, science teacher at the high school, will present a program of slides showing the change in plant communities from the desert floor to the alpine regions.
- March 10 Las Cruces Chapter plans a field trip to Bishop's Canyon. Meet at the Pan Am Center parking lot at 8:00 a.m. Bring water, snack or lunch, and wear comfortable walking shoes.
- March 13 Las Cruces Chapter will meet in the Ag Bldg. Dr. Jim Tipton of Texas A and M Experiment Station will discuss Landscaping with Native Plants.
- March 20 Santa Fe Chapter hosts Charles Galt of Albuquerque in Rooom 118, Lab Bldg., St. John's College, 7:30 p.m.
 Mr. Galt will give a talk and slide show on eastern New Mexico flora.
- March 21
 Chaves County (Southeastern) Chapter will meet at RAC, 807 N. Missouri, Roswell at 7:30 p.m. George Finley will demonstrate successful transplanting of native plants.

(continued)

Chapter Reports, continued

- March 23 Otero/Lincoln Chapter will take a walk around the new Desert Hills Park at the east end of First Street at 9:00 a.m.
- April-- Albuquerque Chapter will have no regular meeting. Members are encouraged to attend the Native Plant Workshop in Rio Rancho. Contact Lisa Johnston at 865-5608 for details on the workshop.
- April-- Chaves County (Southeast) Chapter will be having a basic botany class beginning this month taught by Dr. Jerry Ainsworth. Plans will soon be complete. Phone your Chapter Contact Person for time and place by April 1.
- April 10 Las Cruces Chapter will meet at the Ag Bldg. at 7:30 p.m. Guest speaker will be Tirona Walker. She will discuss herbs--edible and herbs--medicinal.
- April 14 Las Cruces Chapter will have a field trip to the Dona Ana Mountains. Meet in the Pan Am parking lot at 8:00 a.m. Don't forget your water, lunch and comfortable shoes.
- April 17 Santa Fe Chapter will meet in Room 118, Lab Bldg. St. John's College to hear Dr. Don Lowrie who will give a slide program on plants whose ancestors were collected by the Lewis and Clark Expedition in the Grand Teton area of Wyoming. He will also give excerpts from the book Lewis and Clark, Pioneering Naturalists.
- April 21 Chaves County (Southeast) Chapter plans a field trip to the Washington Ranch at Carlsbad to view early spring wildflowers. Meet at RAC parking lot at 10.00 a.m. Bring picnic lunch and water.
- April 27

 Otero/Lincoln Chapter's field trip will be for members only. There will be no publicity. Meet at Tularosa Gate for the trip to the north end of the range in the flats near the lava flow area. Dazanne Taylor, visiting biologist, will lead the group. There will be a Security escort. Members need to bring water, lunch and have plenty of gas in vehicle. Call your Chapter Contact Person for the time.

Chapter Reports

Albuquerque Chapter: Judith Phillips of Bernardo Beach Native Plant Farm was the speaker at our January meeting. Once again, Judith provided us with an interesting talk on propagating native plants. We certainly appreciate her willingness to share her extensive knowledge of the subject.

In February Paul Kemp of the New Mexico Museum of Natural History spoke to the group about the museum's plan for its botanical exhibit. It will be very exciting when the museum is finally opened.

Ted Hodoba

Chaves County Chapter (Southeast): The February regular monthly meeting was devoted to reorganization and ideas for increasing our membership. Several plans of action were decided upon: It was felt our name "Southeast Chahpter" was too encompassing and could infringe upon areas in which other NPS chapters might wish to operate. For that reason, a motion was made and passed unanimously to change our Chapter's name from "Southeast" to Chaves County. Our President, Nina Eppley, and member Shirley Brown will try to arrange a visit to the morning "Round Table" radio program to be interviewed with the object of

our chapter.
3. Tentative plans were made for a five-week, Thursday night wildflower botany class with a late April scheduling. Future programs included another visit to Bitter Lakes and one of instruction on wildflower photography, with actual in-the-field photographing.

getting more publicity for the NPS

and hopefully some new members for

_Jean McElroy

Santa Fe Chapter: Our January botany walk was cancelled because of the Siberian Express. On January 16, Bill Isaacs, former director of the Heritage Program, presented a program on mushrooms of New Mexico. He and Dr. Charles Barrows are compiling information and research for an area guide titled Mushrooms of the Southwest. This quide will cover all of New Mexico, eastern Arizona and . southern Colorado. They have been consulting with Dr. Alex Smith, a world expert on mushrooms. date, there is a limited amount of information on mushrooms and little direct work has been done on the Bill and Chuck sent subject. approximately 5000 specimens to the University of Michigan Herbarium. So far, 650--700 species have been found.

We learned that Central European mushrooms are found in New Mexico because of similarities of soils. The limestone factor as found in the Sango de Cristo Mountains seems to be also a factor in mushroom growing in central Europe.

Bill showed slides of many different types, shapes and colors of mushrooms. Their research has shown that the pinon, juniper, spruce and fir are habitats for mushrooms in Colorado, Wyoming, Idaho and high mountain areas. Mushrooms are found at various elevations and areas such as under the ponderosa pine, pinon, gambel oak and the gray oak of Arizona. Squirrels and other rodents in the Hyde Park area are particularly fond of the underground fungi Hypogeous

July, August and September (our most humid months) are when mushrooms can usually be found in New Mexico. Mushrooms are prevalent only about two weeks because of the fly larvae and lack of humidity. The habitation of fly larvae causes mushrooms to deteriorate quickly.

Do study and learn to recognize the different species of mushrooms as there is no infallible technique for determining whether mushrooms are poisonous.

Dovie Thomas

Field Guides

By Roger Peterson

1984 saw several new New Mexico wildflower guides, most notably Theodore Niehaus' A Field Guide to Southwestern and Texas Wildflowers (Houghton-Mifflin, Peterson Field Guide Series, hb \$18.95, pb \$12.95). I here compare them with some earlier books. "Parks Series" refers to the old faithful trio published by the Southwest Parks and Monuments Association, Flowers of the Southwestern Deserts, ... Mesas, and ... Mountains, variously authored but all illustrated by Jeanne Janish. "M & H" refers to Martin and Hutchins' 1984 Spring Wildflowers of New Mexico (Univ. New Mexico, pb \$12.95) and prospectively to its summer and fall companions. Criteria used are (1) number of New Mexico species, (2) ease of identifying, and (3) usefulness of illustrations and word descriptions to confirm identifications.

I don't know how many of Niehaus' 1500 species are in New Mexico, but it's hundreds more than Ivey's (1983, Flowering Plants of New Mexico) 460 species or M & H's spring-blooming 366. All three volumes of M & H may cover about as many as does Niehaus, but in less compact and more expensive form: in bulk one volume of M & H about equals the three-volume Park Series and considerably exceeds Niehaus; in price three volumes of M & H will be three times the Park Series or Niehaus or Ivey. I picked three genera at random to compare coverages:

Number of New Mexico Species

	Ivey	Niehaus	Park Series
Echinocereus	2	9	4
Gaura	2	4	0
Penstemon	10	21	11

- (2) For ease of identification Niehaus wins handsomely. Easy-to-use color tabs give initial entry and then written stand-out features head the pages, with pictures facing; or the more knowledgeable can enter through an easy family key. M & H has only the latter. The Parks Series is arranged by color but lacks keys and key-feature headings. Ivey arranges by family and provides only a rudimentary key.
- (3) Niehaus' artistic collaborators, Charles Ripper and Virginia Savage, give us good line drawings for most species and watercolors that are both pretty and realistic for the others; there are insets of important details for many species but no habit sketches. M & H has line drawings almost as good as Niehaus' plus 64 color photos. The Park Series and Ivey give us superior line drawings plus habit sketches, and for all species they give well-chosen insets of floral and other details that will pin down most identifications. Thus on pictures alone I prefer the Parks Series or Ivey; someone fond of paintings might choose Niehaus. But words, as well as figures, can be used, and in this department Niehaus and M & H are strong, the Parks Series weak, and Ivey almost lacking (though the few words are key ones).

Over all, it's probably clear by now that I think Niehaus is the manual to carry. For me Ivey will continue to be a well-liked and useful back-up--it's such a friendly book!

Guides that cover less than the whole state are also useful and for persons who don't travel might be the best choice. Largest of the 1984 crop is Teralene Foxx and Dorothy Hoard's Flowers of the Southwestern Forests and Woodlands, which presents line drawings of

some 415 species of northern New Mexico, including grasses and other non-colorfuls; the key is well done. Smallest is Bernard's 1984 Wildflowers Along Forest and Mesa Trails with line drawings of 80 species of north-central New Mexico. In between is Gail Tierney and Phyllis Hughes' 1983 Roadside Plants of Northern New Mexico, with line drawings and 28 color photos of about 140 flowering plants and some conifers. Still useful in the mountains are the Craigheads' 1963 Field Guide to Rocky Mountain Wildflowers and Ruth Nelson's 1969 Handbook of Rocky Mountain Plants, but neither is New Mexico-oriented. The Dannens' little 1981 Rocky Mountain Wildflowers with photos of about 100 Colorado species might be the best mountain supplement to Niehaus, and may still be only \$2.95 from Tundra Publications, Moraine Route, Estes Park CO 80517; however, Niehaus does have many mountain species. For our High Plains my second choice--after Niehaus--would be the Loughmillers' 1984 Texas Wildflowers: A Field Guide, with its superb color photos. A supplement might be Fox and Sublette's 1978 Roadside Flowers of New Mexico with 200 lower-elevation, mostly plains, species. For southeastern New Mexico Warnock's 1974 Wildflowers of the Guadalupe Mountains and the Sand Dune Country, Texas is a scholarly product with good color photos of 800 species including grasses, sedges and ferns.

Let's hope that someone more knowledgeable than I will compare the several new cactus guides. I do want to mention my own new favorite, Del Weninger's 1984 Cacti of Texas and Neighboring States, with stunning photos of about 200 taxa: a scholarly and aesthetic triumph.

These are personal opinions. I hope that contrasting and additional comparisons will come forth on these pages. Rave reviews with no comparisons (like my preceding paragraph!) have not served us well, I think.

President's Message

On the way back from the 1983 annual meeting in Capitan, Frances Szeman, Lois Dworshak and myself were driving back to Albuquerque when I noticed a small stand of ocotillo near Bingham on Route Since then Since then I have noticed them growing between San Antonio and Bingham. As far as I have been able to tell, this is the northernmost occurence in New This is just an example Mexico. of what you can do to help increase our knowledge of the range of many of our native plants. If you should be out on a field trip and notice a plant outside its normal range or an unusual plant you can't identify, you may want to write to our newsletter editors and report your

Ted Hodoba

Welcome to our new NPSNM members:
Helen K. Stokes, Los Alamos
Nancy Meyers, Saanta Fe
Thomas and Jeanette Seddon,
Alamogordo
Stan and Jeannie Langham,
Alamogordo
Shirley Brown, Roswell
Marion Enright, Roswell
Kay Ewart, Roswell



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U.S. Fish and Wildlife Service

By Tom Smylie

The United States Fish and Wildlife Service is the principal agency through which the Federal Government carries out its responsibilities for managing the Nation's wild birds, mammals and fish for the enjoyment of all people.

The Service's national responsibilities for fish and wildlife go back over 100 years. Today the Fish and Wildlife Service consists of a headquarters office in Washington, D.C., seven regional offices and over 700 field units and installations. These include more than 400 national wildlife refuges comprising more than 88 million acres; 35 fish and wildlife research stations and laboratories; 45 cooperative research units at universities across the country; nearly 100 national fish hatcheries; and a nationwide network of wildlife law enforcement agents and wildlife biologists.

In performing these responsibilities, the Fish and Wildlife Service has many tasks. A few of these areas are to provide national leadership for preserving and restoring animal species and plant life threatened or endangered with extinction both in the United States and throughout the world--to continuously monitor fish and wildlife populations to evaluate the effects of pesticides, heavy metals and other pollutants--the agency makes ecological studies of water-use projects like dams and other major resource development programs such as those involving minerals, oil, gas and geothermal steam, and it identifies the potential hazards to fish and wildlife that could result from such projects.

The Service conducts basic research on fish and wildlife at its 35 wildlife research centers and fish laboratories. Through a cooperative research program involving biological laboratories at 45 universities throughout the country, close to 400 research projects are underway.

The agency is responsible for enforcing Federal conservation laws for the protection and management of wild mammals, birds, fishes, amphibians and reptiles. A force of Federal agents work to prevent the exploitation of game and non-game species.

The Fish and Wildlife Service assists state governments in their fish and wildlife management programs through a system of Federal aid which comes from excise taxes on hunting and fishing equipment. Over 60 million dollars a year is distributed to the states on a proportional basis to acquire land for fishing, wildlife habitat, recreation, and research in sport fish and wildlife management.

The agency also operates a national system of nearly 100 fish hatcheries for breeding, raising and distributing sport fish.

The Fish and Wildlife Service is probably best known as the caretaker of over 400 National Wildlife Refuges across the country which provide aquatic, coastal, woodland, arctic, desert and mountain habitat for the Nation's wildlife. It maintains a balanced wildlife management program for migratory birds, endangered species and big game animals of national significance.

Last year, over 17 million Americans visited National Wildlife Refuges, and hundreds of thousands participated in environmental education programs.

Environmental understanding is encouraged by making Fish and Wildlife Service lands available as study areas for schools from elementary through university levels. Formal environmental education workshops on wildland ecology and man's role in his environment are conducted for teacher groups so that the participating teachers may return to the facility with their students and conduct class These activities sessions. constitute a formal, structured program whereby wildlife refuges, fish hatcheries and other Service lands are made available as outdoor classrooms. Service personnel do not normally participate in the actual teaching, but assist in developing lesson plans and reviewing instructional materials for technical accuracy. Nationwide, over 600,000 hours of student participation in a single year were devoted to this activity. Numerous refuges throughout the Nation conducted teacher workshops, made environmental study areas available and developed new environmental education materials.

The agency constantly endeavors to broaden public understanding of fish and wildlife and their habitats by providing interpretative experience opportunities for people on Service lands. Wildlife drives, trails, conducted and self-guiding tours, leaflets, slide/tape shows, exhibits and demonstrations of various types suitable for each locality are the primary means of creating public awareness.

Agency interpretative specialists nationwide devoted considerable time improving graphics and designing and constructing better public communications devices for visitors at national wildlife refuges, fish hatcheries and laboratories.

Fish and wildlife have a special importance for our Nation, and that importance is being more clearly recognized as we intensify our efforts to preserve, restore and improve our environment. and wildlife are needed, not only because of their ecological importance, but also because of the recreation they provide. 1980, over 42 million Americans fished, 17 and a half million hunted and over 83 million took an active role in nonconsumptive form of wildlife associated recreation (wildlife observation, photography, feeding, etc.).

In all 59% of the population enjoyed one or more of these recreational activities in a single year.

In this day and age, we need fish and wildlife more than ever, both as an integral part of our environment and for its highly prized traditional recreational uses.

1985 NPSNM OFFICERS

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For Shade Only

By Ted Hodoba

When gardening with native plants, we tend to think of plants which are drought tolerant and can take the full hot sun of summer. Shady spots are one of the problem areas not usually mentioned in books or articles on wildflower gardening in the southwest.

The columbines are a group of plants which are fairly easy to grow in the shady garden.

Aquilegia caerulea, the Rocky

Mountain columbine, is found in the higher mountains from seven to twelve thousand feet in elevation. It is a very pretty and delicate plant with beautiful flowers with blue or white sepals, white petals, and blue spurs. It is the state flower of our northern neighbor, Colorado.

Aquilegia chrysantha, the golden columbine, is found in moist canyons at lower elevations than its relative. It has large showy flowers of bright yellow. One of the prettiest sights is golden columbine growing in association with maidenhair ferns. Dog Canyon near Alamogordo or Sitting Bull Falls near Carlsbad are good places to visit in April when the columbines are in full bloom.

To grow columbines from seed requires patience, as the seed can take thirty days or more to germinate. Fill a pot with your favorite soil mix and then sow the fine seed on top of the growing medium because columbines require light to germinate. Place the pot in water so it soaks evenly and thoroughly. It is advisable to put the planted pot in a "plastic bag greenhouse", as it is important to keep the seed moist after sowing.

Columbines germinate better in cool temperatures and late winter or early spring is an ideal time to start new plants. After the

seedlings have germinated give them a sunny window and pot them up individually when they have two or three true leaves.

Transplant the seedlings to the garden in the spring or wait until fall. They can be transplanted in the summer, but be sure to plant them in the early morning or in the early evening. Add peat moss, compost and manure to your planting area to get the plants off to a good start and water them well. They will require regular watering unlike the truly drought tolerant sun lovers, but less watering and fuss than many non-natives.

Columbines are bothered by few pests in this area, although aphids seem to love the Rocky Mountain columbine, and the alert gardener will need to keep these in check with a strong spray of water or insecticidal soap, which works well.

I have grown both species in Albuquerque and found they do well on the north and east sides of my house. The golden columbine is among the earliest wildflowers to bloom, and planted near the front entrance never fails to elicit a response from visitors. In fact, they bloomed so early last year that I was accused of forcing them in a greenhouse, at a meeting of the Albuquerque Chapter!



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This year will be a big one in New Mexico wilderness planninng: decisions should be made on dozens of prospective areas on BLM lands and half a dozen, at least, in the national forests. Gearing up, the New Mexico Wilderness Study Committee (a coalition), the Sierra Club and the Wilderness Society will put on three Saturday workshops to educate and, they hope, to recruit interested persons for active roles in what is shaping up as something of a battle. Workshops will be in El Paso on March 9, Albuquerque March 16 and Taos April 13. All will begin with registration from 8:30 to 9:00 a.m. At this writing a location is set only for the Albuquerque workshop: Longfellow School at 400 Edith NE (Grand Avenue west off of I-25), next to St. Joseph's Hospital. Lunch will be included in the \$5.00 fee.

Roger Peterson

Cheryl Lewis, a graduate student of New Mexico Highlalnds University, is involved in a seed-germination project. She is asking our members for information and/or sources on collecting seeds, necessary treatments, germination requirements or recommendations of seeds to work with. Her address: Division of Science and Math, NMHU, Las Vegas, New Mexico 87701

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Native Plant Society of New P.O. Box 5917 Santa Fe, NM 87502	—— —— Mexico	Conservation: Endangered species, HabitatsRestoring abused areasWater conservation	How would you describe your level of expertise? What areas would you be willing to help with?
Annual Dues:Individual & Family Friend of the Society	\$8.00 \$25.00	PropagationSeed Collection Landscaping:ResidentialCivicCommercialHighway	Are you a member of an organization with related purposes (Gorden Club, NM Wildflower Association, etc.)?

The Newsletter thanks all the contributors for the fine articles and items of interest sent in. Look for a big issue next time.

Dear Editors:

Would very much like to see an article, with sketches, on four o'clocks. We have seen a number of beautiful varieties but are not sure of the identification. Allionia incarnata--trailing windmills, Abronia villosa--desert sand verbena, Mirabilis multiflora --desert four o'clock, and unidentified, totally different plants are growing in the new city In the mountains we have seen possibly Oxybaphus comatus --velvet umbrellawort.

Jean Dodd

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