Native Plant Society of New Mexico

NATIVE PLANT SOCIETY OF NEW MEXICO NEWSLETTER

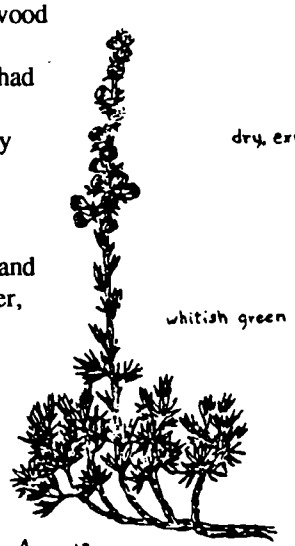
May/June 1993 Volume XVIII Number 3

RIDERS OF THE PURPLE..... WHAT???

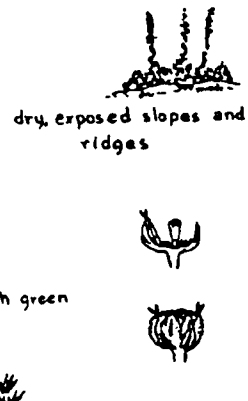
by Jean Heflin

When Zane Grey wrote "Riders of the Purple Sage", he formed an indelible (but blurry) image in American minds—limitless plains and deserts covered with sagebrush. He was a writer, not a botanist, and didn't really say what he meant by "sagebrush". To him, sagebrush probably included all the shrubby desert plants: artemisias, salvias, four-wing saltbush, rabbitbrush, winter fat, and black greasewood among others. This plant mix covers over 100,000,000 acres of the American west so he had plenty of room to roam.

Zane Grey's purple sage was probably the low, shrubby, evergreen gray ball salvia, *Salvia dorrii*, which is showy purple and beautiful in bloom. It is found in the western states from eastern Washington through Idaho and Utah to Arizona. During August and September, people refer to the "purple sage" blooming in sandy areas along the highways of central New Mexico but they usually are talking about that wonderful grey shrub, *Dalea scoparea*, which isn't a sage at all. Its small flowers are so numerous and such a brilliant purple that it makes a splendid show against the rosy sand. With the thinnest of leaves and twigs, it fades into the background during the rest of the year while it goes about its job of holding the sand in place. In Utah, bush mint, *Poliomintha incana*, has been called purple sage, possibly from the purple cast of the calyx as its corolla is usually blue or pink. This attractive sand lover is found throughout the southwest. Texans call the Texas silver leaf, *Leucophyllum frutescens*, "purple sage". Clearly, "purple sage" means different things to different people in different places.



Too, the term sage has gotten well mixed up since it's used for artemisias (members of the sunflower family), for salvias, bush mints and hedge nettles (all members of the mint family). The artemisias are the plants we first think of when we say sage, meaning "sagebrush". Three are common in the wild in New Mexico: Big sagebrush, *Artemisia tridentata*; fringed sagebrush, *Artemisia frigida*; and sand sagebrush, *Artemisia filifolia*. There are a number of others, some of them quite small but all tough with aromatic leaves. The wild tarragon (*A. dracunculus*) is not uncommon in the southwest and is found, among other places, in the Manzano Mountains.

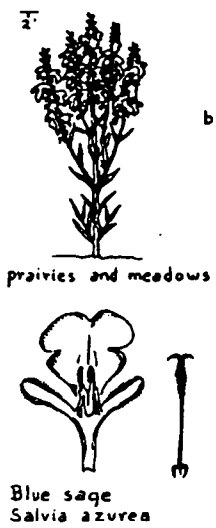


Several artemisias are useful garden plants in high desert areas. The handsome sand sagebrush carries its fine leaves on curving branches. Fringed sagebrush grows all through the Sandia foothills. (Some sources say it is an indication of overgrazing.) It is ground hugging for most of the year, sending up silver bloom spikes in the summer. The grey-leafed *Artemisia ludovichiana* needs more water than the previous two, but is an excellent garden plant with 2' silver bloom spikes in summer.

The salvias are the other large group under the banner "sages." Common garden sage used in turkey dressing, *Salvia officanilis*, is an attractive, fairly drought tolerant, grey-leaved, shrubby 2' perennial with dark blue-lavender flowers and is useful for many dry garden situations. Handsome hybrids may be more choosy about their growing conditions than the original. Used for thousands of years in medicines and flavorings, salvia comes from the Latin word to heal and officanilis derives from the old term for office or pharmacy. There are hundreds of kinds all over the tropical and temperate world, 32 growing wild in the Southwest, where they were commonly used by the native Americans, both as flavorings and medicines.

Inside...

Southwest native salvias vary from small plants to large shrubs. Probably the most useful for water-watching gardens in our area are Mealy Cup Sage, *Salvia farinacea* (which has a number of cultivars including "Victoria"), and Big Blue Sage, *Salvia azurea*. Mealy Cup Sage becomes a handsome 2-3' clump with deep blue flowers set off by rosy purple bracts which hang on after flowering. It is either an annual or perennial depending on the winter but reseeds easily. Big Blue Sage is a winner on my list because it is so drought resistant, and although it freezes to the ground each winter comes back each spring, and, depending on water, produces 2-4' spikes of heavenly blue flowers in late summer.



"Scarlet" sages are as mixed up as "purple" sages. The fire engine red annual beloved by park gardeners all over is *Salvia splendens*. (It has many cultivars that aren't even scarlet.) The Texas native *Salvia coccinea* is listed as "scarlet sage" and is just as red; it's perennial many places, annual in the north. Just to add to the confusion, scarlet hedge nettle, *Stachys coccinea*, is marked "scarlet sage" in many nurseries. For my garden, it is the best of the lot as it winters over well and seems pest free. Hummingbirds love it. The Texas native, Autumn sage or Cherry sage, *Salvia greggii*, is offered by the nurseries now but takes water at least twice a month even when well established and has not proved hardy at my house.

I must share with you my enthusiasm for *Salvia roemeriana*, the Texas native "cedar

The **Newsletter** is published six times per year by the Native Plant Society of New Mexico. The Society is composed of professional and amateur botanists and others with an interest in the flora of New Mexico.

Membership in the Native Plant Society of New Mexico is open to anyone supporting our goals. We are dedicated to promoting a greater appreciation of native plants and their environment, and to the preservation of endangered species. Members benefit from chapter meetings, field trips, publications, plant and seed exchanges and a wide selection of books available at discount.

We encourage the use of suitable native plants in landscaping to preserve the state's unique character and as a water conservation measure.

We maintain a register of business and professional people who are members and can supply information and services related to native plants. To be added to this roster or to request information, contact the Membership Secretary.

Advertising Schedule

Approved advertisements will cost $40 per year.

Schedule of Membership Fees

Dues are $10.00 annually for individuals or families. "Friends of the Society" include organizations, businesses, and individuals, whose dues of $25.00 or more provide support for long range goals. To join us, send your dues to Membership Secretary, 443 Live Oak Loop NE, Albuquerque, NM 87122

Newsletter Contributions

Please direct all contributions for the newsletter to Tim McKimmie, editor.

Deadline for the next newsletter is May 15

sage". It is not listed for New Mexico, although I've been told it grows here. Low growing, with large, deep red flowers and charming rounded leaves, it holds promise of being an excellent hardy perennial ground cover and has reseeded happily in my garden for several years.

New Mexico native red salvias include *S. henryi* which I found growing on the rocky cliffs near Alamogordo early one May. Ted Hodoba reports it from San Andres Canyon and Bosque de Apache, as well. It sports brilliant red tubes and cut leaves. Superficially, it resembles *S. davidsonii*, the leaf shape being the most notable difference. Ted has grown them both and found *S. henryi* to be hardier for him, though *S. davidsonii* survived last winter in Tijeras Canyon. *Salvia summa* is on the New Mexico rare and sensitive plant species list. Barton and Warnock list it as "attractive" with 1/2", strongly two-lipped, rose flowers with red dots. It is endemic to limestone cliffs and canyons of the Guadalupes and San Andres-Organ, Franklin ranges and possibly occurs in the Sacramentos. *S. lycioides* is found above 5000' in the Guadalupes and Judith Phillips found it well above 6000' in west-facing canyons of the Organs. Its form is similar to *S. greggii*, producing violet to wine-colored flowers intermittently through the growing season.

Among the other New Mexico salvias, *S. subincisa* is a delightful small meadow plant with blue flowers bearing white on the lower lip. Also small, *S. reflexa* is sky blue and quite charming. Don't introduce it into the garden unless you want it everywhere; it's too successful in reseeding itself if it gets any water at all. Look in our southern mountains for *S. pinguifolia*, a large shrubby plant with blue blooms.

The native salvias, as well as being a joy in the wild, hold great promise as garden plants. Most of them are drought tolerant, hardy, and, for those with a rabbit problem, very low on the rabbit lunch list. Watch for them.

Are You a *Para-Botanist*? It's Time to Come Out of the Closet!

by Carol Brandt

Last year I attended a national meeting in Washington, D.C. of ethnobiologists, professionals who study cultural uses of plants and animals. One of the speakers at this meeting was the director of INBio, an organization that is working to document the biodiversity of tropical forests in Costa Rica. This organization trains local community members as *para-biologists*, who become experts at identifying local plants and animals. These workers, almost none of which have a formal education in biology, collect important data on the status of threatened, endangered, or previously unknown flora and fauna.

This concept of para-biologists has been translated into *para-botanists* by many organizations closer to our own New Mexico. More and more groups are realizing that state and federal funds to document threatened or endangered species are woefully inadequate. Several groups have initiated the strategy of calling for volunteers of local experts or para-botanists to assist in identifying new populations of threatened or rare plants or to help monitor known populations.

In 1991 I attended a workshop held by the Colorado Native Plant Society and the Colorado Nature Conservancy on the Adopt-A-Rare-Plant Program. This effort has been organized for several years now by Bill Jennings, and his efforts along with his fledgling para-botanists have yielded a wealth of new data for the Colorado Nature Heritage Program. In this workshop participants are introduced to the use of a herbarium, appropriate collection of specimens, mapping, habitat description, and field data collection.

As Bill Jennings knows well, a college degree in botany is not a requirement for the Adopt-A-Rare-Plant Program. All that is needed is an interest in the natural flora and ability to make careful, well-documented observations. Bill is a geological engineer, but was a closet para-botanist until he started working with the Colorado Nature Conservancy and the Nature Heritage Program. With his eye for botanical detail along with his love of the wide, open places in Colorado, he decided to develop an expertise in the rare Orchidaceae and Cactaceae of the western states.

Now Bill trains and supervises new para-botanists who adopt a plant, and he helps them become an expert in their own right. By studying herbarium specimens the para-botanist becomes familiar with the identification characteristics of their plant. Herbarium labels also provide important information on habitat type and flowering or fruiting periods. The new trainees are then introduced to known localities of their plants to develop a "search image" so that as para-botanists they could identify their plant in its specific micro-environment.

For example, *Eutremia penlandii*, a rare member of the Cruciferae found in alpine meadows at Hoosier Pass, Colorado, is only 3-4 cm in height at maturity. It would seem that locating new populations of this plant might be a botanist's nightmare, forever crawling on hands and knees across miles of tundra. Not so! says Bill Jennings. Once field workers learned that *Eutremia penlandii* was found in a very specific habitat below melting snowfields on mossy peat mats below 12,500 ft elevation on flat, stable areas, new populations of this rare plant were quickly documented.

I am hoping that more organizations in New Mexico will follow the example demonstrated by our neighbors in Colorado and take advantage of local experts to monitor and document populations of threatened and endangered plants. As for you para-botanists in New Mexico, it's time to come out of the closet! In following newsletters I will highlight how individuals who are teachers, computer specialists, artists, and accountants have used their new expertise to protect and preserve New Mexico's unique flora. I hope these articles will encourage individuals and chapters within the Native Plant Society of New Mexico to make their own lasting contribution to the appreciation and conservation of biodiversity.

Carol Brandt is an ethnobotanist working with the Zuni Archaeology Program at the Pueblo of Zuni, New Mexico.

CALENDAR

OTERO

15 May. Plant Sale. Garden Center across form Library (10th and Oregon). 9-1.

22 May. Arroyo behind Nott's House. 9 am. at Alamorosa (Hwy 54-70).

19 June. Red Cloud (SW of Corona). 9 am at Carrizozo intersection.

GILA

16 May. Bear Mountain. leader Deb Swetnam, 388-3086, 1:00 p.m. WNMU Fine Arts Bldg.

13 June. The Catwalk. Frank Knaus, 388-2371. 9 am, WNMU Fine Arts Bldg.

LAS CRUCES

12 May. "Research: Using Natives for Landscaping" by Norm Lowndes. 7:30 Ag. Bldg. Room 200.

14-? May. Gray Ranch

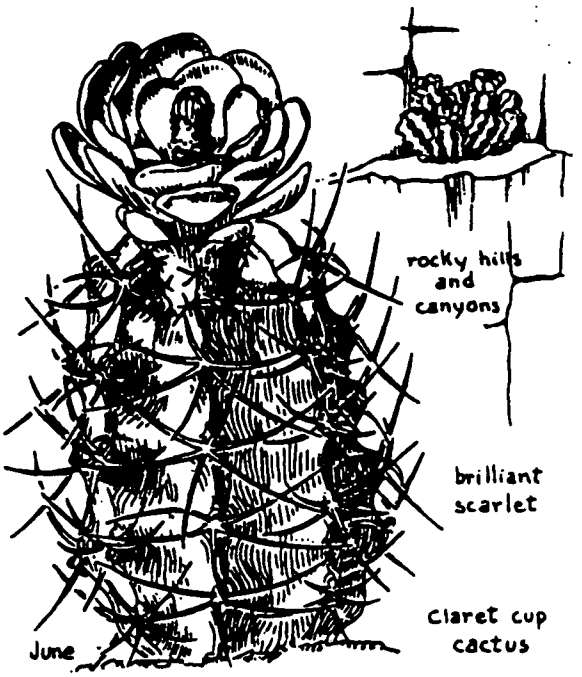
16 May. Bishop Cap, 7 am Pan Am Lot.

9 June. "Avian-Plant interactions on the Jornada" by Ted Floyd. 7:30 Ag. Bldg. Rm 200.

13 June. Cloudcroft Trip. 7 am Pan Am Lot.

SANTA FE

19 May. "Plants of the Lewis and Clark Expedition" by Don Lowrie. 7:30 St. Johns College, Evens Science Bldg. Rm 122.



Sandia Mts. Echinocereus triglochidiatus

Housekeeping Notes

The NPSNM Board of Directors met at the Bosque del Apache NWR on Feb. 27, 1993. In addition to general business a Life Membership was awarded to Ellen Wilde for her many contributions to the NPSNM. Congratulations Ellen. It was also reported that the poster has been completely paid for, a relief to us. Melanie Florence (our state Vice-president) is moving to Oregon and has resigned her position. Best wishes Melanie. We will miss you. Nominations for a new vice-president are requested from all chapters. Give nominations to any board member.

Las Cruces will host the **State Meeting** on **Sept. 10-12** so mark your calendars. More information will be in the next *Newsletter*.

The Gray Ranch trip for NPSNM is set for the 2nd weekend of May and some of us will be staying on and botanizing for a few extra days. You should have all received a special mailing on this. Call Nancy Daniel in Santa Fe for more details. There has been much interest and the spots are filling rapidly.

Legislatively we can consider the recent session a success in two areas. The bill that would have weakened Endangered Species conservation in New Mexico was defeated. In addition we saw a mining reclamation bill passed which at least begins to tackle the issue of cleaning up mine wastes and reclaiming the lands.

Permits to use State Trust Lands are now available at the New Mexico State Land Office in Santa Fe (827-5760). The cost is $25 per year per individual or family (why should singles have to pay more?). Maps of State Trust Lands (about 8.5 million acres) are also available. Unlike most federal public lands, a permit is required to enter state lands.

There've been several compliments on the quality of the Newsletter articles of late. Thanks authors.
TM

CHAPTER REPORTS

Otero-Jean Dodd

On 2-6-93 Tom Wootten and Mike Howard (BLM) explained the BLM process for protecting the Sacramento Escarpment, especially the riparian areas,with a great diversity of native plants. Concerns are for collection and surface disturbance including mining (gypsum), grazing, and camping in some areas. This is already designated as a scenic area but the BLM would like to withdraw mineral right, and close the road to vehicular traffic at the present gate. If you would like to be informed, call Mike Howard at 525-4348 and ask to be put on the ACEC Sacramento Escarpnent mailing list. You can keep a watch on the protection process which takes several years, and contact people if the process hits a snag. If you see collecting, get a license number and report to Mike. DO NOT get involved with collectors. On weekends or after hours call 1-800-NEIGHBOR and your call will be reported to the correct agency.

2-24-93 Wynn Anderson showed cactus slides and many interesting shapes of stems and the arrangement of spines. The slide collection covered cacti from 10,000' to sea level in New Mexico and West Texas. Benson was the authority used. Note that in Cacti of Texas and Neighboring States by Del Weniger if the identification is different from Benson, both names are given. Cacti have fleshy stems to store water, waxy coatings to prevent transpiration, a fibrous core to support the plant, and thorns to provide shade and direct water to the plant base. If you move a barrel cactus, put a little paint on the spines to tell where the plant should point or lean. Plant it in the same direction. The barrels can grow to 6' tall but it takes 100 years and many are being lost to landscapers. Rescue cacti in the path of clearing. The conversation turned to the rapid disappearance of many plants in the wild especially yuccas and cacti which are carted off and sold to landscapers. So get license plates and report when they see this happening. Thanks to Wynn we now have a large selection of cacti seeds so you can grow your own.

3-20-93 Otero showed off its small piece of an 80 acre natural park in Alamogordo which started out with a magnificent mesquite and all the noxious weeds you could think of. There is no water at the Park. We put down black plastic and covered it with gravel to kill the weeds. On 15 March '89 we cut slits in several places and planted desert willows. Three trees are now well over 6' with no care at all so we have branched out and planted a few shrubs and a *Yucca elata* from Lucille . Next we went south to Alamo Canyon and spent the day admiring the plants along the large wash. The Apache Plumes completely change character in this kind of environment and become enormous in size with absolutely luxurious growth. The canyons are a good place to see mature trees and shrubs and to sort out which is which, especially when you find a number of large specimens near each other. It is also a good place to see how plant growth is affected by the light it receives. On a rock outcropping facing north we saw a sotol with stems at least 5' tall, evidently reaching toward the light. Several Spiny Greasebushes (*Foresellesia spinescens*) in bloom were growing right out of the rock and hanging down. Those that grew in full sunlight were erect. Few plants were blooming so early although the *Rhus trilobata* was in full bloom and the little-leaf sumac was in bud.

Gila-Deb Swetnam

On January 28 our chapter was priviledged to have Dale Zimmerman, Ph.D., professor emeritus and world renowned ornithologist, present a lecture describing the role and history of herbaria throughout the world. In addition, he detailed the history of Western New Mexico University s herbarium, the third largest in New Mexico.

On February 25 our chapter hosted Bruce Hayward, Ph.D., professor of biology at Western New Mexico University and known for his extensive research on bats. He shared his experiences with us with a thorough description and discussion of the coevolution and ecology of pollination by bats.

On March 25 Bob O Keefe, landscape design specialist, presented a comprehensive slide show and herbarium study of native and introduced plants appropriate to lawns and gardens in southwestern New Mexico. There will be a follow up of this topic, with a tour of Silver City native plant gardens on April 4, which begins our chapter field trips for the year.

Las Cruces-Paul & Betty Shelford

In our February meeting, Alice Anderson gave a program on "Weeds." There are various definitions of weeds depending on various human desires. A weed is a plant that is out of place. A weed interferes with man's desire for something else in its place. A weed interferes with the management objective of the land. Alien plants which take over the landscape from otherwise desirable native plants are classified as noxious weeds.

In our March meeting it was agreed to host the annual state meeting of the Native Plant Society. A ~mmittee was formed to take necessary action. Robert Sivinski, from the Forestry Division of the New Mexico Natural Resources Department, gave a talk on "State Programs for Protection of Endangered Plants." It was noted that in addition to endangered plants, there is also concern for plants threatened by extirpation (plants which may be prolific elsewhere but threatened with extinction in New Mexico). There are sixty-seven plants listed as endangered species in the state. Some of these ~ants, such as the rare Knowlton's Cactus, are being actively propagated with limited success. It is very difficult to try to prevent unauthorized collection of endangered plants from state or private lands without permission. It is even more difficult to try to prevent grazing or overgrazing by livestock where endangered plants are threatened. But these programs do make us aware of the problems, and awareness if one of the first steps toward protection.

Our first fieldtrip of the year was to Mt. Riley and Kilbourne Hole on March 14. Six of us ventured into the desert just 9 miles north of Mexico on a cool and cloudy day. We saw many red-tailed hawks and a dead horse picked nearly clean. We found 16 species in bloom, very good for this early in the year; about half in the desert flats and the others on the slopes of Mt. Riley. There were two mustards (*Descurania* and *Lesquerella*), a cactus (*Neolloydia*), an *Oenothera*, an *Allium*, two composites, two legumes, and an Euphorbia, a solanaceae (*Chamaesaracha*), as well as others which stretched our imaginations, and left us without positive identification (a handlens would have helped but, hey, it's been a while). The view from Mt. Riley is superb.

FLORA NEOMEXICANA: Gone or Just Forgotten?

Robert Sivinski, NM Forestry Division

It is exciting, albeit frustrating, to find a native plant that proves impossible to identify despite your best efforts. Such was the case with a distinctive *Hymenoxys* (bitterweed) I found in the Gallinas Mountains of central New Mexico. The genus had not been monographed (an in-depth study) since 1904 and I could not find a description of this plant in the New Mexico *Flora* or the floras of adjacent states. Finally, while I was studying some early New Mexico collections at the New Mexico State University Herbarium, I ran across the type specimen of *Hymenoxys brachyactis* and knew that I had found my plant. Wooton and Standley collected this plant in the southern Manzano Mountains and published the taxon name in 1913. The subsequent *Flora of New Mexico* (Martin and Hutchins, 1980) apparently missed this central New Mexico endemic and it has been forgotten until now.

Early botanical explorers made many significant additions to the New Mexico flora that have yet to be rediscovered. Some contemporary botanists such as Rich Spellenberg, Paul Knight and Reggie Fletcher have searched the New Mexico flora for these plants, but they still remain elusive. Are these plants gone from New Mexico, or are field botanists now forgetting to look for them? I will confine myself here to a few examples of records that are more than a century old. Jacob Bigelow collected *Cleome multicaulis* (slender spiderflower) "Near the Mimbres" during the Mexican Boundary survey of 1851 and it has not been seen since then in New Mexico. This rare plant was subsequently collected from alkaline cienegas in the Sierra Vieja of western Texas and the San Luis Valley of southern Colorado, so it could potentially occur on wet cienegas or playas anywhere in our state.

Another missing plant from this same general area is *Machaeranthera gypsitherma* (gypsum hotspring aster: synonymous with *Aster blepharophyllus*). This plant has not been seen in New Mexico since Charles Wright collected it at Las Playas Spring in 1851. Las Playas Spring is not identified on modern USGS maps, but Wright's itinerary places him in the vicinity of Playas Lake (Hidalgo County) on the date of collection. This rare plant is presently known only from wet gypsum deposits around a few hotsprings in Chihuahua, Mexico. Don't confuse this one with its close relative *M. riparia* which has more than twelve ray flowers and is common around the margins of the Lordsburg Playa.

Marah gilense (Gila man-root) was collected by Henry Rusby in 1880 at the Burro Mountains of Grant County. It is a riparian plant that needs deep alluvial soils, so I assume Rusby's collection was in the Gila River Valley. This rare member of the Cucumber Family occurs across the border in Arizona, but is it still a member of the New Mexico flora?

The annual *Adenophyllum wrightii* (Wright's dogweed: synonymous with *Dyssodia neomexicana*) was initially discovered in 1851 by Charles Wright near the copper mines at Santa Rita. It was collected again at the same location by Edward Greene in 1880, but has not been seen since then in New Mexico. The only other locations for this plant are a few collections from Chihuahua, Mexico and a 1947 collection near Springerville, Arizona. Look for this one in wet areas such as small playas or depressions that collect late summer rainfall.

I bring these plants to your attention because there is still a chance that they may be relocated, if we remember to look for them. It would be no surprise to find that they have been extirpated from our state since they are all associated with the few wet areas in the dry portion of southwestern New Mexico. Almost all of the springs have been captured to provide water to livestock and copper smelters, and most of the riparian areas have been converted to agriculture. If we are successful in locating remnant populations of these plants, they may need our help to persist as members of the New Mexican flora.

MESQUITE: Harbinger of Spring or Summer?

by O.W. Van Auken
Excerpted from "News from the Botanical Gardens" Spring 1992

It's early February in central Texas, spring in mild years, and many of the early spring flowers are starting to bloom. The beautiful white, pink or lavender wind-flowers extend their blooms to the sky. The yellow flowers of the burr-clover, the white flowers of mouse-eared chickweed, shepherds' purse, and Witlow grass have all made their appearance and will bloom for the next month or so. But what about the mesquite?

In March the array of flowers will change. Wind-flowers and other early blooming plants will continue to display their beautifully colored petals for all who care to look. As the days get longer and the temperatures continue to rise, the variety of blooming plants increases. Pink blooms of the stork's bill or pin-clover, which may bloom on warm days all through the winter, become very common, but only in the morning, for as the morning dew dries and the daily temperature rises, the petals fall. Blooms of flowers including crow-poison, scrambled eggs, evening primroses, phlox, and many others all begin their spring display. But what about the mesquite?

While huisache and many of our fruit trees flower and start their growth early and may be nipped by late season frosts, this happens very seldom to mesquite. Flowering for mesquite usually occurs in May and June, followed by fruit set, growth and maturity. The fruit, called beans or pods, are usually ripe in August or September. Sometimes mesquite may flower more than once, probably depending on rainfall or soil nutrients, especially moisture. Mesquite is an interesting but much maligned plant. It added over twenty million dollars to the Texas economy last year. Nectar from its flowers, collected by bees, produces a very tasty, much prized honey. Mesquite is a favorite for woodcarvers, and it is used to make charcoal. Mesquite seasoning is used in barbecuing and

smoke-flavoring products. It is also used to make furniture, flooring, paneling, moldings and veneers. But, probably the most valuable thing that mesquite does is to house root-module bacteria that fix nitrogen. Although no dollar value has been placed on this service, it is probably higher than all of the other things mesquite is used for. This nitrogen may then be used by grasses for their growth, and finally be turned into beef protein by the grazing cattle. Mesquite occurs from east Texas west to California, and from Oklahoma. south into Mexico. Species of mesquite occur in South America, Africa, southern Europe and Asia. Remains of mesquite have been found in archaeological sites and dated over ten thousand years old. Its distribution probably has not changed much over that time, but its density has changed radically in some areas.

Ranchers have complained that mesquite has turned productive grasslands into unproductive shrublands or woodlands; consequently, millions of acres in Texas and the southwest have been treated with herbicide to eradicate mesquite. It has not even been controlled. Why the perceived problem? The problem has never been treated and in most cases never defined. Mesquite shrublands and woodlands are the result of over-grazing. Poor land management is the problem and mesquite is the result. In the past, the large herbivores in the grasslands of Texas were mainly buffalo; they were migratory and were found at lower densities. They did not remove every last shred of grass from the pasture as domestic herbivores are allowed to do in many places today. They ate some of the grasses and then moved on, so the grasses remained very competitive and were able to hold their own against the woody plants like mesquite. In addition, with the accumulation of dead grass biomass, grass fires swept across the prairies and grasslands at fairly regular intervals, top-killing seedlings and saplings of any and almost all woody plants that did manage to start growth in the grasslands. The grasses were not harmed because the majority of their living parts were underground in the form of rhizomes or underground stems.

Mesquite is not the cause of degraded grasslands but the result of overgrazing by too many domestic herbivores. Hopefully, with better understanding of mesquite, it will finally take its rightful place in the minds of most people and it will remain an important component in the natural landscape.

AGAVACEAE: Blockbuster Family of Interiorscaping

By Edward R. DeLollis

reprinted from Southwest Lawn & Landscape 7(6) Summer, 1992

An increased understanding of interiorscaping can be gained by the study of the numerous families that make up the plant kingdom. Genera within each family display similar traits and characteristics, knowledge of which facilitates the placement and care of the different members in interior plantings. The botanists who were responsible for organizing these families can be divided into two groups—the clumpers- who tend to place all similar plants into one large family and the splitters- who see distinctions and split them up into smaller groups. The *Agavaceae* is a relatively new family formed by the splitters from two very large, but closely related families, the *Lileaceae (Lilium. Aloe,* Dra*caena,* etc.) and the *Amaryllidaceae (Amaryllis, Clivia, Agave,* etc.). The *Agavaceae* has 19 genera and about 500 species characterized by their xerophytic adaptations and their fibrous. linear leaves closely set near the base or apex of the stem.

The eight important genera in interiorscaping that will be discussed in these next articles are *Agave, Beaucarnea, Cordyline, Dracaena, Phormium, Pleomele, Sansevieria,* and *Yucca.* Named by Linnaeus, *Agave* is Greek for "admirable" and features about 300 species of striking plants with stiff, heavy, persistent leaves arranged in basal rosettes. The fiber sisal comes from *Agave* as do the liquors pulque and mescal, but it has often been used as a landscape plant.

Prudent plantsmen have been using *Agave* in interior plantings for years, realizing that it seldom needs water—maybe once every three to four weeks. Varieties most often used inside are the soft-leaved *A. attenuata* and the striped A. *angustifolfa* 'Marginata'. With over 50 species, *Dracaena* could be its own family, but it is the top-selling specimen houseplant and we break it into three groups: Marginata; Fragrans (*massangeana, santa rosa* etc.); and Deremensis (*warneckei, craigii, craigi, compacta,* etc.). Marginata, with its spikey green leaves arranged in heads of 25-50 atop twisted gray canes on huge, mature stumps, is the number one seller. Like all members of this family, it can go weeks between waterings. *Dracaena fragrans* features broad, dark green, laxly curved, oblanceolate, soft leathery sessile leaves and performs well In low light situations. *D. derernensis* 'Janet Craig', another dark green broad leaved draceaena has long been recognized as the best low light specimen plant. In recent years D. *fragrans* and *craigii* were crossed to give us a third sturdy low light *Dracaena, D. Michiko.*

Once included in the *Dracaenas, Pleomele* is perhaps the "prototypical houseplant" featuring an ornamental rosette of densely clustering, leathery leaves, deep glossy green 3-5" long. persistently clasping willowy self-branching stems to twelve feet tall if staked. *P. reflexa* is commonly available in 2-3' and 4-5' bush forms and is occasionally found as an 8' specimen. P*leomele* is also available in two striped forms, 'Song of India' and 'Song of Jamaica', but the green form lends itself to wider interior adaptations from low to medium to high light levels. This is a good one.

Another genus that was once included with Dracaena is *Cordyline.* Native to India, Malaysia and Polynesia, this "tree of kings" provides red, green and even purple forms that adapt well to interior conditions. C. *terminalis.* the "Ti Plant" is the type most available to the interior trade with bush, cane and heavy trunked specimen forms coming mainly from Hawaii.

More to Come. The *Sanseveria, Phormium, Yucca,* and *Beaucamea* genera of the *Agavaceae* family will be discussed in my next two articles.

References: 1. L.H. Balley, *Manual of Cultiuated Plants*
2. A.B. Graf, *Exotica* Series Four, Volumes One & Two

Many thanks to Robert Dewitt Ivey for permission to use his wonderful drawings from *Flowering Plants of New Mexico,* second edition, in our *Newsletter.*

EDIBLE NATIVE PLANTS:

Spring and Summer

by Nancy Daniel

The southwestern landscape holds a wide culinary offering; from fresh spring greens for salads and soups, to summer flowers, shoots and roots for everything from beverages to a main course. Autumn is rich with edibles including berries and seeds dried for use through the winter. With early spring comes a broad array of wild edible greens or "quelites" as ethnobotanist, Phyllis Hughes refers to them. Just as commercial salad greens have a range of flavors from mild to sharp, so do our quelites (and many become bitter with age). Your palate is the only guide to an intriguing balance of flavors. Choice, tender, young shoots and leaves from chickweed (*Stellaria media*), chicory, curly dock (*Rumex crispus*), dandelions, field pennycress (*Thlaspi arvense*), fireweed (*Epilobium angustifolium*), lamb's quarters (*Chenopodium berlandieri*), common sorrel (*Rumex acetosella*), mustards, purslane, stork's bill (*Erodium cicutarium*) and watercress are just a dozen possibilities for wild spring salads. A simple cruet of fine olive oil and some lemon wedges offer the perfect dressing, since the fresh flavors will not be obscured. If some violet or nasturtium blossoms are available, they can add colorful and edible accents to any combination of raw, wild greens.

All of the greens mentioned above, like spinach, can be cooked and add nicely to a souffle, soup or any other of the myriad of possibilities open to the fresh spinach leaf. When these greens are cooked they are known as potherbs. Some additional native greens (just potherbs, in this case) include amaranth, mallow (*Malva neglecta*), plantain (*Plantago major*), Rocky Mountain Beeplant, tumbleweed and stinging nettle. The nettle, easily found in the Rocky Mountain region, is shunned when raw, but a pair of gloves and scissors will allow you access to this healthy vegetable. When washed and cooked in the water that clings to the leaves, the stinging effect will be eliminated. Given their bland flavor, nettles are often given a tasteful spark by the addition of mountain sorrel or mustard greens. Sorrel, whether our native, common sorrel (*Rumex acetosella*) or any other of the 100 or so species growing worldwide, contains oxalic acid and therefore a stainless steel or enamel pan should be used. This also applies to curly dock, another *Rumex*.

Some of the potherbs, particularly the field pennycress and Rocky Mountain beeplant, need to be boiled in several changes of water to remove any bitter taste. These sauteed greens require only a dab of butter, salt & pepper and maybe some freshly grated nutmeg or a dash of fresh lemon juice or vinegar to make a good side dish. The addition of some sliced hard boiled egg, crisp fried bacon or croutons can also enhance these greens whether they are cooked or served raw in a salad. Phyllis Hughes suggests a **TUMBLEWEED QUICHE** by adding 2 cups, 2" to 5" tumbleweed plants, cooked 5 minutes and drained, to a standard Quiche Lorraine. If you aren't familiar with the very young tumbleweed, or Russian thistle, which bears no resemblance to the 3' weed that tumbles across the highway in front of your vehicle, identifying the new plants can prove tricky. An annual that tends to resemble a succulent grass when very small, it can often be found growing in clusters. Phyllis recommends marking the spot in the fall so the next spring you can easily find the small tumbleweeds for a quiche, souffle or simple stir fry.

Soups made with native greens are a long standing, worldwide tradition. From Nettle Soup championed on the British Isles to the French claim on Sorrel Soup, curly dock, chickweed, purslane and watercress have their advocates as well. While sorrel will perk up a bland green, conversely it is too strong on its own. Recipes for sorrel soup often combine an equal amount of spinach or lettuce or sorrel can be added to the following recipe. Your palate is the best guide, just as it was when combining greens for a salad. Make sure to pick leaves that are insect free and have not developed a bitter taste.

SOUP OF WILD GREENS 4-6 SERVINGS

For the greens use **10 cups nettle tops,** chopped or **2 cups watercress, purslane** or **chickweed,** chopped or **1 1/2 cups curly dock leaves,** blanched twice and chopped. Sautee **1 chopped onion** and **2-4 diced new potatoes** in **2 tablespoons butter** or **oil** for 5 minutes over low heat. Stir in the greens and add **4 cups good chicken stock** or **vegetable stock.** Simmer covered just until the potatoes are tender. Puree the soup in a blender, in batches if necessary, add **salt & pepper** to taste, return to the pan, add **1 cup half & half** and reheat, but do not allow it to boil. Serve in warmed soup bowls. Croutons, made of wholesome bread cubes, sauteed in butter, serve well as an accompaniment.

Flower teas, known as tisanes, can be made from alfalfa, clovers, dandelions, Navajo tea (*Thelesperma* sp.) or rose petals, to mention only a few. And for a few herbal teas, the leaves of beebalm (*Monarda menthalfolia*), the other mints and yarrow can be used. The twigs of Mormon tea (*Ephedra navadensis*) are probably our most notable native to judge by the pricy bundles sold at farmer's markets and tourist shops. As a general rule, 2 teaspoons fresh or 1 teaspoon dried flowers, leaves or twigs covered with 1 cup boiling water and steeped for 5 minutes will produce a tasteful beverage. A dried herb imparts more flavor than when fresh. *Monarda menthalfolia* is renowned for the additional taste it brings to soups and bean dishes. The fresh leaves of Artemisia serve as a mild seasoning. Once dried, they are quite potent but in no way inedible. Used sparingly they can replace the more common culinary sage (*Salvia officinalis*) for turkey stuffing or flavoring roasted vegetables, soups and breads. Edible flowers, like violets, chickory or yucca flowers are often used to garnish salads and soups. The hearts of the yucca flower are bitter, so discard them before trying this soup.

YUCCA FLOWER SOUP

Wash **3 cups petals,** cover with water and boil for 15 to 20 minutes. Drain the petals, mash or puree them in a blender and return to the pan adding **2 tablespoons butter** and **1 tablespoon cornstarch.** Cook 2 minutes and then slowly add 1 **quart milk,** stirring until the soup is thickened. Season and garnish with a few yucca petals or mint leaves. This recipe is a contribution from Phyllis Hughes, as is the following recipe for:

DANDELION FLOWER FRITTERS

Sift together **1 1/4 cups whole wheat flour, 2 teaspoons baking powder** and a pinch of **salt.** Mix together **1/2 cup milk** and **2 beaten eggs.** Add to flour mixture and mix until just blended. Clip off all of the greens from **2 cups new dandelion flowers,** wash, pat dry, dip in batter and fry in deep fat until brown. Serve with honey.

The "outdoor pantry" or "outdoor cafeteria", the common cattail, produces small spring shoots which can be eaten raw, boiled or baked. When the shoots reach 8" they can be used to prepare "Cossack Asparagus" (a Russian contribution for the use of this spring potherb). Acquiring these young shoots can require some wading, so it is best to be outfitted with some water proof boots and a good sharp, long knife.

COSSACK ASPARAGUS IN BUCKWHEAT CREPES

The crepes can be prepared in advance and refrigerated for three days or frozen for longer storage. Combine in a blender **3 eggs, 1 cup milk, 1/2 cup buckwheat flour, 1/2 cup white flour, 1/2 teaspoon salt, 1 tablespoon melted butter** (melted in the crepe pan so the reserve is left to 'season' the pan), **1 tablespoon sugar** and **2 tablespoons Courvoisier.** Allow to rest in the blender at least an hour. Heat the buttered crepe pan and prepare the crepes. Less than 1/4 cup of batter per crepe, in a 7" pan, will make approximately 15 crepes. Gently swirl the batter to cover the bottom of the pan and cook a minute, or so, loosening the edges with a spatula, turn and cook the other side another minute or less. Stack the finished crepes and allow to cool completely, then wrap for storage. Thaw, if frozen, and bring to room temperature before using. Wash, trim and discard the outer leaves from 40 or **more 8" cattail shoots.** Steam until tender. Place 3-5 shoots in each crepe with two long, thin slices of **Jarlsburg, baby Swiss** or a milder cheese. Roll the crepe fully around the shoots and cheese spears, place in a buttered, ovenproof serving dish and cover with foil. Bake in a 350 degree oven for 5 to 10 minutes or until heated through and the cheese is melted. If cattails aren't within easy reach, this dish can be made with 40-75 pencil thin asparagus spears, filling approximately 15 crepes, serving four.

As the year progresses so do the possible uses for this versatile cattail. The culinary offerings of the southwest, in fact, extend way beyond the young spring leaves and shoots and summer flowers. Volumes have rightfully been devoted to edible wild plants. H.D.Harrington's Edible Native Plants of the Rocky Mountains, (University of New Mexico Press, 1983) is a solid and thorough reference and a necessity if the cursory accounts above interest you. A companion book for its pictures and recipes is Wild Food by Roger Phillips (Little, Brown & Company, 1986). And for good fun, in this neck of the woods, is a walk with Phyllis Hughes, whose wit and knowledge bring a new perspective to even the most common 'weed'.

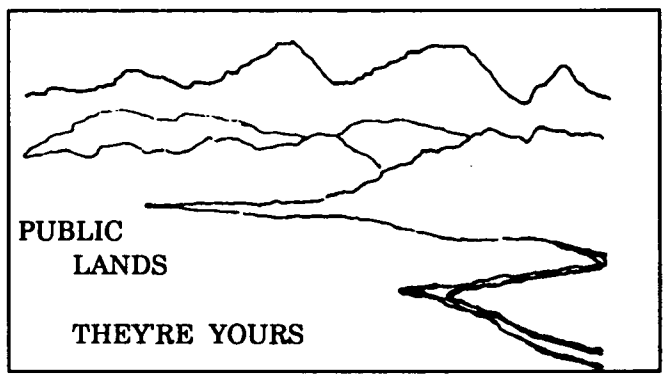
The Breath of Spring on the Zuni Mesas

by Carol Brandt

As the firm grasp of winter weakens and the sun invites us out of doors, I note the first evidence that spring comes to the land of Cibola. On the sandy mesa tops around the Pueblo of Zuni, among the brown, dried grass, are small vibrant fragments of deep, glossy green. These are the dissected leaves of spring parsley, of the genus *Cymopterus*, a member of the Umbelliferae or carrot family. Several species of this genus are found on the Zuni mesas: *C. purpureus*, *C. fendleri*, and *C. bulbosus*. This plant never gains much height, remaining only 10-15 cm above the ground and can require some effort to locate. The leaves are borne on a pseudoscape, meaning the main stem of the plant is below the ground surface with only the petiole of the leaves emerging from the soil. The flowers of this plant are diminutive, pale yellow or purple, gathered into an umbel.

At the Pueblo of Zuni spring parsley is sought as an herb and vegetable. Called *ohba:tsi'* in the Zuni language, the whole plant is collected, including the long tap root that extends 20-30 cm into the sandy soil. The fresh green leaves are added to soups, stews, and salsa, while the root is peeled and eaten fresh. Both the greens and root can be dried and used in the winter stews. Many people prefer to collect *ohba:tsi'* after the flowers appear on this plant in April and May, since the plant seems to be spicy or more flavorful when in flower. It is said that the air around the flowering spring parsley carries a fresh, clean scent.

Often on these cordial days in March and April, I will meet another person strolling along the mesa tops. Their eyes are intently focused on the ground, looking for those glossy green leaves that signal the first breath of spring on the Zuni mesas.



NAMING NUTS

by Roger Peterson

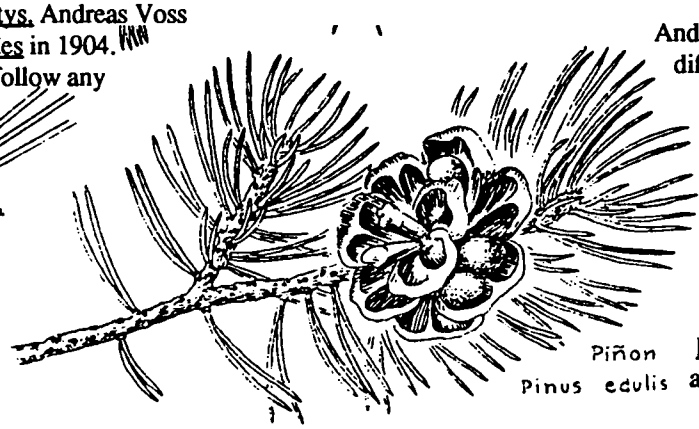
Reprinted from the NPSNM Newsletter, January 1981

Mallow genera split on Tuesdays; asters shift generic names on Saturdays; and long-forgotten older names like Pseudotsuga menziesii have right-of-way any day of the week.

But pinyon, beloved state tree, is pinyon, always and forever and unambiguously the edible nut pine Pinus edulis.

Well, not quite. From 1848 the species was left in peace for 53 years; but then Marcus Jones formalized a growing suspicion that the pinyons were merely varieties by reducing it to Pinus monophylla var. edulis. John Small treated it as a species again, but in 1903 moved it to a pinyon genus, Caryopitys. Andreas Voss in Berlin made it a variety of Pinus cembroides in 1904. Writers in the following decades felt free to follow any of these views.

These vicissitudes are as nothing to George G. Fogg's attempted raids in 1966: he split P. edulis into P. monophylla subsp. diphylla, P. monophylla subsp. edulis, and the latter's supposed hybrid with P. cembroides, P. X eduloides. He thought the hybrid to be the common pinyon of most of New Mexico, however far from parental P. cembroides.



All these changes are now ignored. The state tree rests peacefully as Pinus edulis, just as George Engelmann named it in Wislizenus's Memoir of a Tour in Northern Mexico in 1848.

But New Mexico has two other pinyons, and they are not at peace.

Border pinyon ("Mexican pinyon") is the nut pine of most of Hidalgo County, and mixes with others in parts of Grant County, for instance near the San Francisco River. Most of its life it has been called P. cembroides, a species typified far south in Mexico. Then in 1968 Forest Service dendrologist Elbert Little, in a moment of (for him) wildness, distinguished border pinyon from central Mexican pinyon as P. cembroides var. bicolor. Among other differences, border pinyon has its needles in 3's, whereas its southern counterpart has some 2's and some 3's in every tree. Colorado's Dana Bailey and Frank Hawksworth thought about this a few years (uncharacteristically, since their splitting wedges are usually ready at a moment's notice) and then in 1979, when pinyon names were erupting dangerously —*une jeune francaise* named Marie-Francoise Robert started naming species for (one surmises) her boyfriend Jean—they appeared in an "expeditious" journal with the news that P. cembroides var. bicolor is really P. discolor, new species.

But the September of their announcement also saw publication of Elbert Little's immediately and justifiably prestigious Checklist of United States Trees, which moved in the opposite direction: he gave up his 1968 distinctions and reduced his own variety bicolor to synonymy as plain P. cembroides. The battle is joined, a traditional lumper-vs.-splitter confrontation, and only time will tell whose name will win.

And so too our third pinyon, characterized by needles mostly in "groups" of one. This pine is not common in New Mexico: it is pretty well restricted to the Florida Mountains of Luna County, scattered locations in Grant County, especially in the Mule Mountains and the Big Burros, and southwestern Catron County, for instance at Sheridan Ridge.

The taxonomic question, with long-term support for each side, is a delicate one: is this pine derived from Pinus edulis straightforwardly, or is it derived from P. edulis by way of hybridization with its own earlier-derived Great Basin offspring, P. monophylla? Not much difference there, one might say. But in the first hypothesis, monophylly (one leafness) arose twice; in the second, once.

And the names come out differently. In the first the tree becomes P. edulis var fallax Little (1968); in the second, it may be called P. monophylla according to Ronald Lanner (1974), or it could be given an "X" (hybrid) name. Or perhaps, as in Little's 1979 Checklist, it would be just P. edulis again.

Select positions from these controversies and you can name 99.9% of New Mexico's pinyons by counting to three: P. edulis var. fallax needles are in 1's, P. edulis, var. edulis in 2's, and P. discolor in 3's. The classification does not depend on needle number, however, and minor number variants may be ignored. For instance small clusters of pinyons on Los Cerrillos of Santa Fe County, with many needles in 3's, are simply edulis with no resemblance in other ways to P. discolor.

One who wishes to count to one, two, and three all in the same place may visit Tillie Hall Canyon of the Mule Mountains, hard by the Arizona border. Does anyone know of other localities where all three pinyons occur naturally?

More on *Asclepias Uncialis*

Botanizing for over 30 years in the vicinity of Silver City, I have long been alert for *Asclepias uncialis*, one of several plants described from here by resident E. L. Greene during the early 1880s. James Locklear's timely note in the recent *Newsletter* (XVIII (2):10) prompts this response because it was not until the spring of 1992 that I finally located this diminutive milkweed near its type locality.

My limited experience supports Mr. Locklear's statement that our populations of this species consist of very few individuals. On 24 April I located a single plant about three miles north of Silver City, in a rare ungrazed *Bouteloua* grassland with a few scattered junipers. Similar habitat covered several acres, but a systematic three-day search failed to disclose any additional *A. uncialis*. I also examined other (heavily grazed) sites within a three-mile radius, but without success.

A few days later, by odd coincidence, a naturalist friend telephoned to ask if I could identify an unusual low milkweed growing in his backyard near the Silver City business district. Having seen my first *A. uncialis* that very week, and after seeking the species for so many years, I could scarcely believe that another would come to light so casually and so soon, but minutes after leaving the telephone I was viewing a four-inch-tall example covered with flowers, and I found a second plant growing a few meters away. This event stimulated additional investigation of grassy vacant lots and undeveloped sections of town, but I found no more *A. uncialis*. A few weeks later, noting that one of the above plants was almost as conspicuous in fruit as it was in flower, we continued to explore likely-looking habitat during the remainder of the summer, but with no further success. Although additional populations undoubtedly exist in the Silver City area, this species appears to be genuinely rare in southwestern New Mexico, and of greater concern than some more publicized rarities which, although sensitive to disturbance and certainly deserving of protection, are nevertheless locally rather common.

One naturally speculates on the efficiency of pollinators for individual plants so widely scattered as those of *A. uncialis*, especially as our local populations must now be further fragmented as a result of long-term overgrazing and ever-increasing land development in its habitat. The dull rosepurple flowers are very heavily scented with an aroma suggesting rose fragrance or that of *Citrus* blossoms. With my head near the ground two meters from a plant, I was impressed by the scent which presumably lures pollinating insects from considerable distances. However, I noticed no pollinators at the milkweeds during my brief observation periods. Of the 60-70 flowers on the larger Silver City plant, five set fruit; no fruits developed on the adjacent plant or the one north of town. Such a small, low-density species is easily overlooked. Additionally, it may not bloom every year, or may do so in a limited manner. The spring of 1992 was exceptionally wet at Silver City, and perhaps in more typical dry seasons (Rev. Greene himself remarked on the limited spring flora here) the condition of the few *Asclepias uncialis* plants may preclude their detection. Furthermore, it may be no coincidence that the three individuals observed last year grew in areas with reduced grazing pressure or none at all. Greene made five collections of *A. uncialis* near Silver City during 1880. Alice Eastwood collected enough to be distributed to at least five herbaria in 1919. Although neither collector provided any information on population size, the several collections suggest that the species may have been more numerous during those early years than during the past half-century or so. The few recent botanists who have encountered it at all in New Mexico have found only one or very few individuals.

The site north of Silver City is on private property in the southernmost foothills of the Pinos Altos Range, where the apparently isolated milkweed plant grows in almost rock-hard heavy clay soil on level ground near the base of a large hill. In contrast to adjacent areas, *Bouteloua gracilis* and other grasses are here sufficiently extensive and dense to support breeding (or at least territorial) Eastern Meadowlarks, *Sturnella magna*, although the tract also includes areas of low forb growth and nearly bare soil. The backyard Silver City site is a remnant quarter-acre of original yucca-grassland protected by a fence and surrounded by residences with typical introduced vegetation, several species of which are seriously encroaching on the milkweed's habitat. At both places the native flora is rather unremarkable, conspicuous plants including *Dichelostemma pulchellum, Calochortus nuttallii, Allium bigelovii* (widespread and locally abundant in the wet spring of 1992), *Lomatium nevadense, Astragalus allochrous* and *A. humistratus, Penstemon fendleri* and *Baccharis pteronioides*.

Asclepias uncialis was in full bloom here at 6000 feet on 24 April, and two of the three plants were still flowering on 22 May, 1992. Locklear mentioned Eastwood's several flowering specimens collected as early as 18 April in 1919. The blooming period may, however be somewhat more extensive, as a presumed specimen of this species from an elevation of 5000 feet in Santa Cruz County, Arizona, was in flower as early as 24 March,1990.

Although there is scant herbarium material of this species, I strongly echo Dr. Lochlear's cautions concerning additional collections. For the record, mine consisted of one of the two small stems from the first plant found, and two of the 8-10 stems from the larger of the two plants growing in Silver City. Later, Eugene Lewis, the property owner, kindly preserved two mature fruits from this individual. These fragmentary collections, combined with Kodachrome transparencies of flowers and fruits, resulted in three somewhat limited but perfectly adequate voucher specimens. As only incomplete aerial portions were removed, I expect all three plants to bloom again this spring following another record-setting January-February period during which Silver City has already received over half of its normal annual precipitation of c.17 inches. It may be a good year to further document the distribution of this distinctive plant which deserves closer attention. I would appreciate learning of any additional populations that may be found in this area.

Dale A. Zimmerman, Professor Emeritus of Biology
Western New Mexico University, Silver City, NM 88061
(505) 538-3398

*Drawing of *Asclepias uncialis* by permission from "Great Basin Naturalist" 49(1):101, 1990

Views From the South

(One member's opinion)

New Mexico Department of Game and Fish ? Who cares ? I hunt with a camera and hug trees. Why am I interested in Department of Game and Fish, one word, Habitat. New Mexico Department of Game and Fish is interested in habitat for the state's wildlife. Habitat translates into plants and here we are. I quote in part from our bylaws on the purpose of our society: "....to promote the research, conservation, preservation, and utilization of native plants and plant habitat (my emphasis) in New Mexico. The Department of Game and Fish historically has focused on habitat mostly for game animals, with much less emphasis on general biological diversity. Do we need more browse for deer or grass for elk ? Hunters and fishermen paid the bill at Game and Fish through licenses and taxes on hunting and fishing supplies. We have had somewhat of a free ride other than through funds for Threatened & Endangered species paid by U S Fish and Wildlife or the checkoff program for "Share with Wildlife". Growing awareness of the need for both a broader biological perspective and additional funding (hunting and fishing license fees are declining) are changing NM G&F.

Last year the "Wildlife Conservation Stamp" was introduced. A $10.50 purchase of this stamp at a sporting goods store entitled you to a decal for your automobile, a beautiful poster of a buffalo in a picturesque setting, and most importantly, you became a non-consumptive contributor to the welfare of our wildlife. April 1, starts a new year for the program. This year's poster will be a picture entitled "Cranes in the Bosque". The poster should be available by May 1. If you want to buy a stamp earlier, just tell the vendor that you want the new "Crane" poster. You can still get the "buffalo" if you prefer. The first project funded will be a book called "Watchable Wildlife", due out this year, which will list approximately 80 of the best sites in New Mexico to view specific wildlife (and plants). Belly up to the counter and get your "Wildlife Conservation Stamp". "Times a wasting".

Tom Wootten

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

ADDRESS CORRECTION REQUESTED

Non-profit
Organization
U.S. Postage
PAID
Permit #946
Las Cruces, New Mexico

Printed on Recycled Paper