NATIVE PLANT SOCIETY OF NEW MEXICO
NEWSLETTER

July/August 1996 Volume XXI Number 4

NATURE IS THE GARDEN'S BEST DESIGNER

by Greg Magee

Studying Landscape Architecture in graduate school completely changed the way I look at constructed landscapes. A garden should be much more than a static collection of imported plants to look at from the street or the windows of your house. A garden that approximates a natural landscape can be a living, dynamic system, a harmonious community of plants and animals that provides a sanctuary for all forms of life (including humans).

Why Natural Gardens?

Many of us are aware that historic landscape practices require too much water, fertilizer and other chemicals. Although resource conservation is an important reason to utilize native plants and natural processes in designed landscapes, the most important reasons are not nearly so tangible. Natural landscapes give us a connection to the land and the "place" we live in. Native plantings provide important habitat for native birds and other wildlife. I believe the aesthetic qualities of natural landscapes far exceed that of the more traditional, homogenEous landscapes commonly found in our communities. Every region of the world contains unique and special qualities and our constructed landscapes should reflect those qualities. As the world becomes more developed and crowded, natural places will become critical to maintaining our health and mental well-being. If we can create natural "sanctuaries" around our homes and places of work, they will go a long way toward improving our quality of life.

Nature as a Model for Constructed Gardens.

Observing and appreciating wild landscapes is the first step towards learning how to create a natural garden. Learn the plants that grow naturally in your area; then study the specific environment in which they grow - soil type, moisture regime, exposure to sun. Noting these conditions will help you match the right plant for the different conditions that may be found around your home or wherever you are trying to restore a landscape that has been disturbed by development.

You should not only study the individual plants, but also how they are arranged in relationship to each other and to different species. Natural landscapes tend to display a pleasing balance between unity and diversity. Certain plants are dominant and are repeated throughout a plant community, yet there are enough different types of plants to create interest without seeming chaotic. A good example of this is a grassland community. Grass species dominate and provide unity with their fine-textured leaves; however, the grassland is punctuated with "drifts" of colorful wildflowers that provide diversity. Other "design principles" to look for in natural landscapes are interesting forms such as can be found in certain tree trunks or succulent plants. These provide accents or focal points in the landscape. Contrasting textures also provide interest. A bold or course-textured plant is often complemented by a backdrop of fine-textured foliage. Observe how colors are displayed in nature. Can you ever remember seeing clashing colors in a natural landscape?

In addition to the plants, observe other elements of the natural landscape. How does water flow and drain across the landscape? This aspect is often overlooked but can be critical, especially in a desert environment. Most natural landscapes contain meandering channels that help dissipate the erosive energy of flowing water. Natural "ponding" areas where water collects and seeps into the ground are common. Another element to observe in nature is the contour of the land. Natural landscapes are rarely absolutely level. Except around rock outcroppings, transitions between high points and low points are generally smooth and gradual. Speaking of rock

Inside...

formations, just how are boulders and outcroppings displayed in natural settings? Most rock formations are not just sitting out on top of the ground out by themselves - they are at least partially buried with plants growing on and around them. These are just a few examples of the things we can learn from natural landscapes and apply to designed landscapes. The more detailed your observations are, the more "natural" your garden will be.

Planning the Constructed Natural Garden.

Once you obtain a basic understanding of the natural landscape in your area, you are ready to start planning your landscape construction project. Before you get out the shovel and rake, sit down with pencil and paper and come up with a plan of action. First, write down what you want from your landscape - is it a place for lots of activity such as entertaining guests or children playing; or, is it a quiet place for contemplation and relaxation? Different uses can be accommodated on the same site if you have enough room, but you must prioritize your specific needs. Next, you should translate your concepts into a working plan. A detailed, scaled drawing is useful, but any kind of sketch or rough drawing will help to formalize your ideas.

You are fortunate if you have the opportunity to do this before the property is developed. A detailed site analysis will show the development opportunities and constraints inherent on any given site. It can also give you the opportunity to preserve the integrity of the existing natural landscape. Note the location and quality of existing vegetation, drainage patterns, steep slopes, or almost anything that may affect how the land will be developed. Once you determine the exact location of any structures, paved surfaces, or other areas that must be cleared to meet your need, fence off the rest of your site as a "do not disturb" area. Once you have done this,

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

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. Articles from the *Newsletter* may be reprinted if fully cited to author and attributed to the *Newsletter*.

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. We encourage the use of suitable native plants in landscaping to preserve the state's unique character and as a water conservation measure. Members benefit from chapter meetings, field trips, publications, plant and seed exchanges, and educational forums. A wide selection of books is available at discount. The society has also produced two New Mexico wildflower posters by artist Niki Threlkeld. Contact our Poster Chair or Book Sales representative for more information. Call chapter contacts for local information.

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, NPSNM, POB 5917, Santa Fe, NM 87502-5917

Newsletter Contributions

Please direct all contributions for the newsletter to Tim McKimmie, editor. See address below or email to tmckimmi@lib.nmsu.edu

Deadline for the next newsletter is August 1.

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survey the area in the development zone and transplant anything you can to a "holding" area. These plants can be used later to plant back around the structures in the development zone.

Once building construction is complete, you need to insure the grade of the earth around the building will provide adequate drainage. By putting impervious surfaces on land (roofs, paving), we are increasing the amount of runoff during rainstorms. Ideally, we should collect the runoff into cisterns and reuse the water for irrigation or other purposes. But in any case, this increased runoff must be accommodated. Most importantly, water should flow away from the structure, but in a way that will not cause erosion or flooding. Now think of ways you can use this runoff to your advantage. Create natural looking "arroyos" that carry water to "ponding" areas where it can seep into the ground and water trees or other plants in your landscape. While you are grading for drainage, think of other ways to make the topography more interesting. Creating mounds and swales can give the landscape more interest. Make sure that transitions between different grades are smooth - you don't want your neighbors thinking you buried an elephant in your front yard.

Next, look at the hardscape element in the landscape - patios, walkway, walls, fences, etc. Using materials indigenous to your area will help your landscape appear more natural. Use native stones for walls, flagstone for walkways and patios, native woods for decks or fences.

Another consideration is an irrigation system. In the desert, an irrigation system can be helpful even when using native plants - especially during the establishment period and during extended periods of drought. Just because you have an irrigation system does not mean that you are using more water - a well-designed drip system can be a more efficient way to give your garden supplemental water during periods of extended drought. If you decide you need an irrigation system, zone your landscape and associated irrigation to match the water requirements of the different plants. For instance, your landscape plan may call for a vegetable garden on the east side of the house, shade trees on the west side of the house, a native perennial and shrub border along the back yard wall, and a meadow adjacent to your patio. Since these distinct types of plantings require a different amount and frequency of water, provide a different irrigation zone for each type.

Now comes my favorite part - the plants. Choose plants that are well-suited to your specific conditions. Many nurseries carry a good selection of native plants. However, cacti and succulents are often dug up from the wild and used in natural landscaping. This is also true for other easily transplanted species that are slow growing. Many local populations of native plants have been decimated by unscrupulous individuals who steal from public or private land. For this reason, using propagated nursery stock is recommended. If you do buy plants collected from the wild, most states, including New Mexico, have laws regulating such commerce. Buy your plants from reputable nurseries and avoid the door to door plant peddlers. When installing plants, it is best not to add organic matter or fertilizer unless you have the resources to improve the entire top layer of soil throughout the garden area. If you just improve the soil in the planting hole, you are creating a situation where the roots may be confined to that hole.

Last to consider is the mulching or what to cover the ground with once you have installed the plantings. In many southwestern landscapes, gravel is spread out on the ground over plastic in an effort to give a clean, weed-free appearance. However, impermeable plastic prevents water and air from infiltrating into the soil and is harmful to plants and beneficial organisms in the soil. Besides, it is only a temporary solution - sand and soil will eventually accumulate on top of the plastic allowing seeds to germinate. In fact, you might have some desirable plant seeds in your soil waiting for the right time to grow. Putting down plastic would prevent them from germinating.

In some areas it may be perfectly acceptable to add no gravel or mulch at all. In seeded or wildflower areas, an organic mulch may benefit seedlings or more delicate plants which need extra help in retaining moisture. In Las Cruces, I sometimes use a by-product of sand and gravel operations called crusher fines - this is a mixture of sand and pea gravel left over from the screening process. Although this is not a good growing medium for seeds, it can give the landscape a more uniform, natural appearance. If you do want gravel, consider leaving out the plastic. If you are concerned about especially aggressive perennial weeds, consider using a weed barrier that allows water and air to infiltrate the soil. However, the best solution to weeds is to simply remove them while they are small and before they have a chance to establish.

Conclusion

Think about how establishing and maintaining a native landscape takes a different attitude than what has been historically practiced in landscaping. You will have to let go some of the control to get the real reward. The garden will change over time. Some plants will not grow where you want them, and other plants may seed in places that you don't want them. But maybe a special wildflower will astonish you and volunteer in just the right spot. You may not like that catapillar that ate your prized flower, but that catapillar may turn into a beautiful butterfly to pollinate next years crop of prized flowers. That four-wing saltbush sure is messy with all those seeds it drops, but those pretty Gambels Quail that come to your yard sure do like them. That Autumn sage sure looks scraggly in the winter, but what a summer show when the Hummingbirds are feeding on the bright red flowers. Let's go beyond static, monotonous landscapes we just sit and look at. Let's create mini-ecosystems in our backyards with the give and take that is inherent in all natural landscapes. Although we can never exactly replicate nature on those sites that we've disturbed for development, maybe we can get things started in the right direction. The beauty you create will be much more than you can see with just your eyes. Raising a native garden is a lot like raising a child, if you try to hold it too tightly, you risk letting it slip through your fingers. But if you let it grow and flourish on its own with loving guidance, your natural garden will fill you with a lifetime of wonderful surprises and endless joy.

CALENDAR

ALBUQUERQUE

August 17-18 Annual Native Plant Sale, call Peggy Wells

Sept. 5 "Pueblo, An Ethnobotany" by Carol Brandt.

GILA

July 21 Field Trip to Railroad Canyon. 8 am. WNMU Fine Arts Lot.

August 18 Field Trip to The Catwalk. 8 am. WNMU Fine Arts

OTERO

July 13 Field Trip to Fort Stanton Cave. 9 am. Wortley Hotel, Lincoln, NM.

August 10 Field Trip to Salinas Peak, WSMR. 9:30 am. Tulie Gate near Tularosa.

August 14-17 Otero Country Fair Booth.

LAS CRUCES

July 10 "Show and Tell". 7:30 pm. SW Environmental Center. 1494 S. Solano.

July 14 Field Trip to Three Rivers Canyon (if open). 7 am. K-mart Hwy 70. Lisa, 526-0917.

Aug 14 "Drought Tolerant Plant Production: Questions but few Answers" by Norm Lownds. 7:30 pm SW Environ. Center.

August 18 Field Trip to Achenbach Canyon. 7 am. Pan Am Lot.

SANTA FE

July 10 "Butterflies of Santa Fe" by Steve Cary. 7:30 pm. Santa Fe Main Library.

July 13 5th Annual Santa Fe Butterfly Count. 8 am PERA Lot, Eileen 471-8510.

July 21 Field Trip to the Santa Fe Ski Basin. 9 am. PERA Lot.

August 3 Plant ID party at new homesite. Ellen, 982-1406.

August 18 Field Trip to the Jemez Mtns. 8:30 am. DeVargas Mall near Wards.

August 24 Field Trip to Manuelitas Canyon. 8:30 am PERA Lot or 9:45 am. Las Vegas Roundhouse. Mary, 454-0683

CHAPTER REPORTS

Albuquerque - Lu Bennett

Carolyn Dodson, a Native Plant Society member and University of New Mexico Librarian and Botanist, made a presentation at our April meeting. She showed slides and described where wildflowers may be found in New Mexico. In mid April at Pine Flats one may see Pasqueflower, Dwarf Lousewort and Skyflower. Below Socorro in the Manzano Mountains there is Globe Mallow which is pinkish. Highway 64 between Tres Piedras and Tierra Amarilla is beautiful near the end of May with many flowers along the road including Yellow Paintbrush and Avalanche Lily. Fern Lousewort and several parasitic flowers may be found at Sandia Crest in June. Away from the beaten path in Pecos one may find a spectacular yellow orchid. Shooting Star, Monkeyflower and Monument Plant may also be seen in Pecos. Truchas Peak in August may have Alpine Primrose and Sky Pilot. Late Fall in Red Canyon in the Manzano Mountains has a show of Dayflower.

Carolyn and her husband, Bill Dodson, led a field trip at Tent Rocks on Saturday following the meeting. In this interesting topography one may expect to see Oregon Grape Holly, Western Wallflower, Bladderpod, Wild Mustard, Manzanita, Golden Pea, Evening Primrose, Lemitas, Indian Parsley, Fringed Pucoon, Indian Paintbrush, Penstemons, Fleabane Daisy, Perky Sue and Easter Daisy.

In May, Paul Shaw, an Albuquerque naturalist and cactus hobbyist, shared his collection of cacti planting media, his slides and experience with cacti and succulents from New Mexico and many other areas. His collection includes natives and non-natives that are tolerant of New Mexico climate. He has constructed a garden in his backyard in West Albuquerque for many types of cactus including Red Flowering Hedgehog. The garden is a large raised corner bed surrounded by interlocking blocks and filled with a mixture of coarse sand, potting mix, bales of peat moss and aged cow manure. Many aloes and agaves grow within the bed as well as amaryllis. Paul's field trip to Rinconada Canyon in Petroglyph National Monument was postponed because the drought this year has left this canyon without many cactus or wildflowers.

The Albuquerque Chapter of NPS sponsored awards this year in the Northwestern New Mexico Regional Science Fair. Members judged exhibits and selected winners in the Senior and Junior Divisions for best experiments with native plant subjects. The following were the winning exhibits.

Adam B. Baca, Los Lunas High School, $100 savings bond, "Increasing Pinon Seed Germination."

Eric T. Stanton, Sandia High School, $50 savings bond, "The Effect of Acid Rain and Thermal Pollution on Elodea."

Tara A. Glowka, Moriarty Middle School, $100 savings bond, "Determining a Pinon Tree's Age by Measuring Its Diameter."

Bristol K. Charrow, Manzano Vista Middle School, $50 savings bond, "The Fighting Wildflowers.'

CHAPTER REPORTS

Otero-Jean Dodd

This year Otero's annual 3 day trip took us to Boyce Thompson Arboretum near Superior, Arizona. We were joined at the Arboretum by Drs. Charles and Jean Whitmer who live in Gold Canyon, Arizona in the winter and Gini Jordan formerly of Ruidoso but now in Sun City,Arizona. Len and Pat Hendzel made a trip to checkplaces we would stay in/visit in 1995 and then again later to be sure everything was in place for our trip. One surprise was that at Oak Flat everything was filled up with a group recreating Medieval times. Much of the scenery from the Globe-Miami area to the Arboretum was breathtaking. Long before then we were seeing the Palo verde in bloom. What a beautiful plant! Even new subdivisions seemed to have mature trees. Everyone came together at the Arboretum Saturday morning. Both Gini and the Whitmers were very familiar with this wonderful place. This helped us to see as much as possible. One of the joys of an arboretum is to see mature plants. We are selling the Desert Hackberry (*Celtis pallida*) at our plant sale this May and most of us had never seen a mature tree. Plants and sections of the Arboretum such as the Chihuahuan Desert Trail are all well marked so you can do a lot of learning by yourself. Whitmers had invited us all to lunch. Their neighborhood is completely new as are many in this area. By April 27 it was already getting hot during the day. The houses and yards were all designed with heat in mind-nary a blade of grass in sight, only shady trees and beautiful plants many of which we had never seen before. There was an undeveloped space between the back yards of the houses which included natural drainage. This together with the landscaping provided privacy. After lunch we were off to the Desert Botanical Garden in Phoenix where arrangements had been made for us to go with Cathy Rice, a botanist involved in trying to rescue endangered plants from Arizona, Texas, California, and Florida. They are trying to at least rescue some of the wonderful plants of the virgin desert being destroyed for building. The NPS of Arizona is very much involved in this effort to learn what works and what doesn't .

On 5-4-96 Otero took a trip to Laborcita Canyon out of LaLuz , coming out through Ranchario Canyon onto Hwy 70 east of Tularosa. It is a beautiful trip in the forest however you certainly do need a 4wheel drive and a good map or guide since there are a number of forks-which way to go! The forest is very dry. Not far from LaLuz we saw the only blooming plants on the trip-ocotillo, Trumpet gilia (*Ipomopsis longiflora*), little leaf sumac, algerita full of yellow blossoms, and a few dusty dyssodias. Our many thanks to Zolie and Mildred Evaskovich who scouted out the trip before we went and reported-dry. They said that last year this same place at the same time was full of beautiful wildflowers.

NOXIOUS WEEDS

Otero is having some adventures in cooperation with other groups. One such effort involved the Environmental Office at Holloman Air Force Base, the Otero Chapter of NPS, and officer wives. Dr. Hildy Reiser of the Environmental Office was in charge. She and Dr. Lee, Extension Weed Specialist at NMSU in LasCruces have been carrying on experiments with treatment of African Rue(*Peganum harmala*). Dr. Reiser will present a paper on the results of these efforts at the state meeting in ElPaso this fall. A meeting was held at the Base to determine how best to carry out a population count of noxious weeds along the roadsides and buildings on Base. The result was a specific list of plants to look for, and individual assignments of where each one of us would look. We arrived at the Base at 7:00am on 4-12-96 armed with colored pens-one color per type of plant, Officer wives were our drivers, map readers,and in general an indispensible part of the project. One result was maps with lots of red-African rue. Another group consisting of a representative from many different groups both government and private including Mescalero has been meeting to decide how best to present a program for noxious weed control in Otero County. If and when this takes place it will involve a massive education effort requiring lots of participation so that people will understand the necessity of controlling noxious weeds and the consequences of not doing so.

Las Cruces-Paul & Betty Shelford

At our meeting of April 10th, Dr. David Lee Anderson, botanist and Land Manager of the White Sands Missile Range, gave a presentation of "Plants and Vegetation of the White Sands Missile Range." In the 3200 square miles of the range there are four primary categories of desert land formation and twenty subcategories ranging from the 8,000foot island of ponderosa pine and quaking aspen on Salinas Peak to the desert grasslands. There are 476 transects of 100 square meters which are visited each year to determine the health of the vegetation and to recommend corrective action if the particular area is not well. A total of 1,023 native plants have been thus far identified on the range. This overview was presented as an introduction to our field trip. On April 14ih, Dave Anderson led some 27 members of the local chapter, on a tour of The Cactus Belt." This area included the eastern bajada (alluvium) of San Augustine Peak, Lena Cox Ranch, Mineral Mountain, Pat Garrett Homestead, EMRE Site, Nancy Site and Sandberg Site on the eastern bajada of Black Mountain in the southern San Andres Mountains. A total of 165 species of native plants were identified. We saw 19 species of cactus, including Sandberg's pincushion cactus which was first identified in this area. Of particular, ongoing interest throughout the trip was the large amount of grasses of which 20 were identified. There has been no cattle grazing on this land since it was taken over by the Army 50 years ago. This is a prime example of land recovery, a beautiful contrast to the rather stark rangelands surrounding the missile range area.

At our meeting of May 8th, Dr. Dave Richman, Professor of zoology specializing in insects, gave a presentation of Spiders and their Kin." He began with the broad family of arthropods including crustaceans, scorpions, daddy longlegs, ticks, mites and spiders. He then spoke of the arachnids of which there are 34,000 spiders throughout the world. And he finally zeroed in on the many common and many little known spiders of the Southwest. Of particular interest were the wolf spiders, including tarantulas, trapdoor spiders, purse web spiders, spitting spiders and jumping spiders.

On May 12th, Greg Magee led seven members on a field trip up Foster Canyon in the nearby Robledo Mountains. A total of 20 flowering plants were identified: nama, verbena bracheaea, white and yellow bladderpods, desert tobacco, desert marigolds, blackfoot daisy, spectacle pod mustard, bahia, roundleaf buckweed, dogweed, euphorbia, fleabane, stickleaf (Somalia?), Navajo tea, threadleaf groundsel, yellow flax, trailing four o'clock, buffalo gourd, and stinging cevallia. They also identified five shrubs: desert willow, brickellia, four wing salt bush, hop bush (or skunk bush), and live oak.

Southwestern and Texas Wildflowers

by Theodore F. Neihaus
Illustrated by C. L. Ripper and Virginia Savage. Peterson Field Guide Series. Houghton Mifflin Company, Boston, 1984. 449 pp.

Book Review by Kate Hillhouse
reprinted from *Native Plant Society of Texas NEWS* 14(2):9, March/April 1996

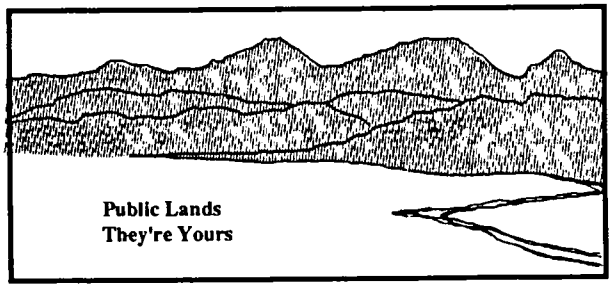
Q: Why am I reviewing a book for the NPSOT News that is eleven years old?
A: Because it is still in print, and contains valuable information, in a form useful to the amateur botanist, that is not as easily accessible in any other book I know of.

The workshop that I led at the 1995 annual meeting in Waco used this book as its foundation. Several participants had owned the book for years without discovenng its great value. The book is worth buying for the nineteen pages in the.Family Descrptlons and Key alone. The family dcscriptions are clear and non-technical. The key can lead a reader to the family to which a wildflower belongs and then to the pages on which it is illustrated more easily than any other book I know. If the particular wildflower species in hand is not included in this book, knowing the family helps to find it in other books on Texas wildflowers. The endpapers contain a very good pictorial glossary, a review of the parts of plants and their proper names and relationships.

All the wildflowers are illustrated by drawings, some in black and white and some in color. Species are grouped by color, and within color, by families with their salient characteristics heading each page, with cross references to similar species in other colors. This is a valid approach more useful for many species than photography and one not used in other available works on Texas wildflowers.

I think, though, that the best role of this book would be as a complement to a book that addresses the wildflowers of a smaller area than Texas. The authors bit off more than they could chew in attempting to cover Texas, New Mexico, Arizona and Colorado in 449 pages. Their slant is western, even Californian. This book would stand on its own better west of the 100th meridian. The coverage of the cacti is thorough but no other shrubs or woody vines are included.

But buy the book. Acquaint yourself with its assets. Use it as a tool to help identify the plant family to which today's flower-in-hand belongs. Then, possibly looking for that family in a book applicable to your part of Texas, find a name to put on it. Being able to name something gives power and the beginning of knowledge. The key in *Southwestern and Texas Wildflowers* helps open the doors to understanding the native plants of Texas.



NOTES:

**Doc Dodd has given the responsibility of mailing labels to Mary Goodman. Thanks Doc! for doing a great job and for all your technical expertise. Best of luck to Mary who has also taken on the job of Membership Secretary that had been done by Virginia Scott. Virginia did a wonderful job at this "thankless" task.

** Special thanks to Paul and Betty Shelford who continue to address the newsletters and get them to the post office.

** Otero Chapter will soon be selling T-shirts with a design by Mame Carl.

**If you know of any demonstration gardens that feature native plants and are open to the public, please inform the editor or another board member so that it can be included in an upcoming direcotry for our members.

** ***Desert Plants***, has resumed publication. It is a biannual botanical journal intended for amateur and professional desert plant enthusiasts. Topics range from ecology to physiology, landscape architecture, horticulture, and botanical history. Write: 2120 E. Allen Rd, Tucson, AZ 85719. Subscription price is $20. (520) 318-7046.

** ***Dry Country News***, has resumed publication after ten years. It is dedicated to the principles of living in harmony with the earth and sustainable southwest living. Topics covered include gardening, solar energy, salternative construction methods, sustaiable lifestyles, Community issues, and personal experience. Subscription price is $10 for 4 issues. Box 23, Radium Springs NM 88054. (505) 526-1853

** From Bonnie Ashing, an Oklahoma garden columnist, "find out how you can live as if what you do matters unto the seventh generation"

Viva El Paso: a preview of the Annual Meeting

ARRIBA! ARRIBA! VIVA ELPASO! where a gracious welcome awaits October 18, 19 and 20 for the first ever joint state meeting of the Texas and New Mexico Native Plant Societies' symposium on "the Chihuahuan Desert and its many ecosystems."

The meeting will be hosted by the El Paso Native Plant Society, an independent organization, and we promise a fine time well worth the long trip. It starts with a pre-convention overnight stay in the beautiful Guadalupe Mountains, led by NPSOT President Terry Tate. The actual convention features two days of workshops. Invited guest lecturers will present papers, focusing attention on the Chihuahuan Desert's climate, geology, geography, plant communities and native flora. Next, a full day of exciting field trips (hiking for the hearty and "drive and stops" for the more sedate) will reinforce the lectures.

This is not to say it will be all study and no play. Sponsored coffee breaks, informal poster sessions, vendor booths, chapter displays, book sales, autograph parties and a fantastic, attic clearing, two day silent auction will provide plenty of variety. A rootin' tootin', foot stompin', chili eatin' Chihuahuan Fiesta is scheduled under the stars on Saturday night.

What to Expect

The tentative schedule for the workshops on Friday, October 18th, includes sessions on cooking with native plants, wildflower and garden photography, how to-do-it drip irrigation, cactus care and propagation, and using native grasses and groundcovers in xeric landscapes. Group sizes for the workshops held at the A & M Extension Center and the UTEP campus will be limited, so sign up early.

At the Airport Holiday Inn headquarters, we will begin presentation of papers Friday afternoon, ending in time for a two state cocktail and snack mixer to help folks get to know one another. A wide range of native plant and gardening books will be on sale and a half dozen authors of some of the hottest selling books have already agreed to join us for an unprecedented autograph session. Also, that evening a silent auction will get underway. The auction features out of print plant books, artwork, garden items, floral inspired crafts and handiwork, seeds and potted plant specimens, gift certificates for plants, supplies or services—much useful stuff and some not so useful, but fun junk (contributions welcome).

After Friday's reception a special presentation on landscaping with Chihuahuan native plants is planned— a must for designers, nursery personnel and home gardeners.

Saturday, October 19th, will begin with Chapter meetings at breakfast. The Symposium's keynote session is entitled "Mountain Islands and Desert Seas: An Overview of the Chihuahuan Desert." Invited speakers, including the preeminent geographer of the Chihuahuan region, Dr. Robert Schmidt, biologist Richard Worthington and noted horticulturist Dr. Jimmy Tipton, will provide expert orientation to the Chihuahuan Desert and its flora. Following the lunch break (and the end of the silent auction), the paper presentations will be completed and the conference will adjourn to State Society meetings at 4 p.m.

Bus boarding will begin at 5:30 Saturday afternoon for the short trip to McKilligon Canyon, an isolated public park nestled in the Franklin Mountains, which is reserved exclusively for our use. Upon arrival guests may walk about the area observing the plants and the scenery. The area shelters such notables as *Salvia pinquifolia, Haplophyton cimicidium, Tecoma stans, Tequilia greggii, Ferocactus wislizenii, Forsellesia spinescens* and *Mortonia scabrella.*

When the music starts, it will be time to scurry back to the pavilion for something to drink, salsa and chips, and a place to sit for the show "Vlva El Paso." The musical entertainment is excerpted from the award winning presentation of the El Paso Southwest. Then, *un gran comida,* Chihuahuan-style Mexican food, and a fireside chat by noted naturalist Susan Twiet, author of "Barren, Wild and Worthless: Living in the Chihuahuan Desert." After the awards ceremony we will board the buses back to the hotel for a good night's rest because dawn will bring a full day of field trips.

Featured trips on Sunday, October 20th include Hueco Tanks State Park with petroglyphs and unique rock formations. Side trips include nearby active sand dunes and a typical Chihuahuan desert short grass prairie. Another trip will highlight the flora of the Franklin Mtns, just north of El Paso. Climbing above 7,000 feet, it provides the highest drive in Texas. Hiking trips to mountain springs and sheltered canyons, as well as driving tours featuring roadside botany, will be available to meet almost anyone's time schedule and/or stamina.

The Native Plant Society of New Mexico has arranged a very special excursion to Dripping Springs in the Organ Mountains just north of El Paso, near Las Cruces, New Mexico. The Nature Conservancy natural area is home to many isolated relic and endemic plant species and is a source of spectacular scenic beauty.

Self-guided driving tours of the Texas Department of Transportation's highway plantings of native plants, area native plant demonstration gardens which include UTEP's Desert Garden and selected native plant residential gardens will be available for those interested in landscape uses of native plants. Guides will be available at selected locations and photos are in order.

Those wanting to immerse themselves in the Chihuahuan desert must make the trip to the Indio Mountain Research Station (IMRS), a 38,000 acre patch of pure Chihuahuan scrub owned by UTEP, 20 miles south of Van Horn. This wild and primitive area ranges from the banks of the Rio Grande up to the 5,000 foot summit of Squaw Peak. It serves as the field site for UTEP's desert ecology classes. Nearly 400 species of plants have been identified at the IMRS, many of them more common to the Big Bend area lying to the southeast. After a full day exploring the Indios, visitors may return to lodging in Van Horn or camp at the primitive facility at the IMRS.

Because El Paso represents such a long journey for many members we are doing everything we can to make the trip especially worthwhile once in El Paso.

**** SEE RELATED ARTICLE ON PAGE 10 ****

Views from the North (Another member's opinion)

by Bob Sivinski, NM Forestry Division

I always look forward to reading Tom Wootten's column - Views from the South. I have great respect for Tom's opinion and his relentless pursuit of biological preservation. Yet, the recent article titled "Native Plant Protection Abandoned or Who is Minding the Hen House" left many facets unpolished and reflected too little light.

Of the three issues raised in the article, I can add little on the revision of the NM Department of Agriculture's native plant collection regulations. I agree this change increases the likelihood of landscapers and home owners buying native plants infected with disease, pests, or stowaway noxious weeds. Small cacti and herbaceous plants can now more easily be stolen from private or public lands and sold to nurseries or the unwary public. The New Mexico Forest Conservation Act still requires proof of ownership by sellers of all woody native plants. Each legitimate woody plant vender will have a federal lands collection permit, bill of sale, or letter of transfer from a private land owner. Fortunately, the majority of venders are reputable people who obtain healthy plants by legal means. But it is now the responsibility of conscientious buyers to distinguish the good (plants/venders) from the bad (plants/venders).

The two points of contention on recent changes in the NM Forestry Division's endangered plant regulations and the candidate list for federal endangered species deserve greater elaboration. The U.S. Fish and Wildlife Service (FWS) move to change the "Category 2 Candidate" to a "Species of Concern" may actually be a blessing. Only a few people understood that a C2 Candidate was a species for which the FWS had some evidence of vulnerability, but not enough data to support a proposal to list as threatened or endangered. When enough data was obtained by subsequent field surveys, very few (about 5%) of the C2 candidates studied to date were found to be deserving protection under the federal Act. Then the FWS felt obliged to drop the other 95% from the candidate list when data suggest they are not threatened with extinction in the foreseeable future. Yet many of these former candidates are unique, narrow endemics that are presently not endangered, but need special consideration by federal land managers and permitting agencies. Why not continue to call them "Species of Concern"? Sensitive species that would normally be dropped from the C2 list can now be indefinitely maintained on a regional list for species of concern. Such a list will be accepted as the new C2 list, if the FWS Region 2 Office will print and distribute it to other federal agencies and their consultants. Let's encourage the FWS to take this track and help them create a new and more meaningful list of sensitive plant species.

Recent revision of the New Mexico Endangered Plant Regulation's definition of "taking" was more a matter of clarification than a substantial change. Law enforcement officers have always been required to prosecute with evidence that state-listed endangered plants were obtained by illegal collection. Also, the previous version of the NM Forestry Division regulation was often construed as a prohibition against all sales of state-listed plant species. We do not wish to prohibit the sale of endangered plants propagated by legitimate greenhouse operations from parental stocks that were held prior to being listed as endangered. Many New Mexican nurseries provide an important legal source of endangered species to collectors who might otherwise dig-up plants from their habitats and diminish natural populations.

The NM Forestry Division did make extensive changes to the list of state endangered plant species (List 1). We added one plant (*Sclerocactus cloveriae* subsp. *brackii*), but dropped approximately half the other species from the endangered list. Perhaps we accomplished too much at one time, but all plants removed from the list had been carefully considered for many years. We consulted with everyone who expressed an interest or we thought might be familiar with the listed species. We considered all potential threats (illegal collection, small population size, and habitat modification) to rare species that might be vulnerable to extinction. Many widespread plants that are rare in New Mexico, but common in other states were dropped from the state endangered list. Vulnerability to extirpation from the state is an entirely different issue stemming from parochial attitudes rather than species preservation concerns. If we gave endangered status to every plant species that barely enters the New Mexico political boundary on the periphery of its range, several hundred widespread and common species would need to be included as cumbersome additions to the state endangered list. Yet we would hate to lose any of these species from the state when existing laws prohibiting unauthorized collection might prevent such an event. Widespread species we suspect are threatened with extirpation from New Mexico by illegal collection have been retained on the state endangered list (e.g. *Cypripedium pubescens, Lilium philadelphicum*).

A lot of information has accumulated during the decade since the New Mexico Endangered Plant Species Act was passed by the state legislature. Many state-listed species were found to be more common than previously anticipated, or a more careful evaluation of their status revealed no significant threats from collection or habitat modification. When we were in doubt, we retained the species on the endangered list or transferred it to the review list (List 3). All the narrowly distributed endemics found not to be threatened with extinction were transferred to the sensitive species list (List 2). Endangered status must be removed when a clear picture of no real threat presents itself. To do otherwise invites ridicule of the entire list (including the species that are truly endangered), and makes a mockery of policies and legal processes that require careful, time consuming, and expensive analysis for proposed land-use activities. At this point, I can only offer the assurance that the NM Forestry Division acted after much soul searching and on information derived from two rounds of public consultation over a two year period. To add, retain, or remove a species from the endangered list is ultimately a judgement call. Some difference of opinion was unavoidable. I am grateful to everyone who showed us their interest in the state endangered plant list and participated in the regulation revision process.

My dream for the future of the Indiana Native Plant and Wildflower Society and for the state of Indiana includes:

by Carolyn Harstad
reprinted from the *Indiana Native Plant and Wildflower Society News*, March 1996

* Myriads of flowering native plants along beautiful road ways. Deep-rooted, drought resistant native grasses helping control erosion. Reduction of mowing, spraying, spreading rip-rap etc.

* Regular course offerings at colleges and universities in identification, use and value of native plants as landscaping material, as well as the importance of the preservation and incorporation of existing native plants in landscape planning.

* City and town planners choosing and using native trees, shrubs and plants in their urban landscapes-parks, median strips, parking lots, street plantings, etc.

* Walking and biking trails throughout the state with native plants enhancing the trails. Methods of identifying these plants to enhance the trails.

* Legislation to protect vanishing wetlands and woodlands. Requiring developers, builders and landscapers to preserve a given number of native trees on property being developed. Enforcing compliance.

* Educating developers, builders and landscapers as to the value of compliance. Demonstrating how a wetland or a small woodland wildflower area can be a viable part of a commercial or private development.

* Establishing active chapter organizations of INPAWS to identify locations of native plants and wildflowers destined for destruction and to rescue and relocate them to parks, trails, private lands etc. in their area.

* Educating citizens to be aware of and concerned about the dangers of aggressive, invasive exotic plants (such as garlic mustard, loosestrife, Amur honeysuckle) which threaten to outcompete and destroy native plants.

* Choosing a native plant as the Indiana state flower (rather than the cultivated peony which comes from China).

* Encouraging young people through school environmental studies, 4-H projects, etc. to identify native plants and to become familiar with their use and importance in preserving the health of our planet.

* Enlisting the support of Indiana leaders to accomplish the above objectives.

* Helping all to realize that this natural heritage is ours to enjoy, is precious and should not be relegated to the "disposable, throw away" mentality of the twentieth century.

* Indiana Native Plant and Wildflower Society members can make a difference for present and future generations if we consent to unite as one to protect, preserve, utilize, appreciate and understand the value of Indiana's native plants.

editor's note: Important issues are remarkably similar despite geographical distance. These are some of the very issues that the NPSNM Board of Directors will be discussing in a future retreat.

Chrysothamnus nauseosus

By Jim Borland
Horticultural Consultant

Reprinted from the January-March 1996 issue of *Aquilegia*, the newsletter of the Colorado Native Plant Society 20(1):14.

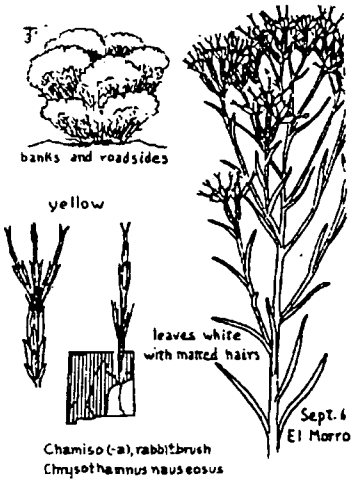
The end of the growing season is seldom heralded by many blooming shrubs. Unusual in this respect, however, is *Chrysothamnus* (rabbitbrush), which festoons the western landscape from Canada to Mexico with golden-colored plumes of flowers.

Rabbitbrush grows native from the Great Plains to above timberline (up to about 10,000 ft), a vast area that includes hardiness zones 2, 3, and 4.

Used sparingly in today's landscapes. C. *nauseosus*. along with several other rabbitbrush species, is becoming important in water-scarce environments. Nearly all rabbitbrush species exhibit the same growth pattern; multistemmed and upright but rounded. They differ mainly in height and winter stem color, which varies from green to blue to white.

C. nauseosus var. *graveolens* is a midsized race measuring 2 to 3 feet tall with gray-green stems and leaves. *C. nauseosus* var. *nauseosus*, on the other hand, is referred to in the trade as dwarf blue because of its shorter height and noticeable bluish stems and leaves. Both display 1 to 2 inch long linear leaves arranged alternately on densely hairy stems, and both bloom in late summer or fall.

Rabbitbrush can tolerate drought. Deep taproots. branching extensively at depths of 6 feet or more, help it thrive on less than 15 inches of annual precipitation. In addition, rabbitbrush accommodates almost all soil types, including sandy and gravelly soils and clay loams, as well as saline conditions. When planting rabbitbrush, consider only sunny, dry locations to avoid weak, drooping habits and root disease. Once established in an area without excess water, it seldom experiences problems more significant than an occasional aphid or stem gall infestation, neither of which is seriously debilitating.



Used singly or in masses, most rabbitbrushes can be sheared or cut almost to the ground each winter. However. neither practice is needed or recommended for a natural effect.

Since it has proved so difficult to propagate rabbitbrush from cuttings, most people propagate it from seed, which germinates best at 60 to 70 degrees F with light. Approximately 50% of the tiny pappus-bound seeds germinate 2 to 4 days after sowing. Without special storage conditions, the seed remains commercially viable for only one year. When nursery grown in almost any soil, rabbitbrush produces 1-gal. plants after one season, and 5-gal. plants after two seasons.

editors note: This article is a convenient follow-up to our recent tribute to rabbitbrush, tm

What's on the Internet?

by T. McKimmie

There are hundreds of sites on the World Wide Web (WWW) that provide information about botany and gardening, and you may expect great variability in the quality and quantity of the information at these sites.

One way to find information is to use a search engine such as lycos or webcrawler to search by subject for keywords such as "native plants", "botany", etc. This is a great way to find hidden gems on the internet. Be aware, however, that many of the sites are trying to sell you something, some will be deadends, and others may hardly be applicable to your interests. I am always on the lookout for lists of "best of" sites put together by someone with the time and knowledge to evaluate them for content; sort of a review of the internet by topic.

With the structure of the WWW and its hypertext links, it is theoretically possible to get to any important site with one good site as a starting point. With that in mind, I visited numerous WWW sites to determine which might be of interest to *Newsletter* readers. There was little information dealing directly with native plants of New Mexico as of this writing, but NPSNM members may find some of the following sites to be of interest.

http://www.allware.com/kdepew/botmenu.html

The Internet Directory for Botany. One of the best general sites for all types of botany, gardening, etc. Indexed and annotated with links to checklists, botanical gardens, graphics, newsgroups, directories.

http://www.calpoly.edu/~dchippin/cnps_main.html

The California Native Plant Society Home Page. This site is excellent. A very comprehensive set of links organized by category such as Endangered Species, Viewing Wildflowers, Federal Agencies, Herbaria, Taxonomy, Wildflowers and Gardening, and links to other organizations.

http://www.wild-flowers.com/

Wild-Flowers. A well organized site with great links to categories such as associations, catalogs, and states and countries.

http://www.gardenweb.com/spdrsweb/

The Garden Spiders Web. Horticulturally oriented, provides links to sites on IPM, Virtual Garden Tours, Seed ordering, and more.

http://aggie-horticulture.tamu.edu/introhtml/botgard.html

Botanical Gardens and Arboreta, indexed by Texas A&M. In addition to links to some worldwide sites, has plenty of Texas-specific information.

http://muse.bio.cornell.edu/cgi-bin/hl?botany

Botany Resources from Cornell. Another list of good sites from around the world. For example, there are links to academic botany departments, botanic gardens, and research organizations.

http://www.wazoo.com/~dkeeney/npsoc.html

Home Page for Otero Chapter, NPSNM. This is the first chapter of NPSNM to put up a home page. It lists the society mission, contact phone numbers, and a bibliography of some books on botany and native plants from the Alamogordo Public Library.

http://lib.nmsu.edu/subject/ag/hort.html

Horticulture and Gardening Page: NMSU Library. All of the above mentioned sites (and others) can be reached from here, saving you the trouble of typing in long addresses.

AZPlants

A listserv dedicated to the flora of the Sonoran desert includes dates of plant sales and conferences, discussion of xeriscaping, habitats, field tripping, plant study, ecology, propagation, landscaping, nursery management, landscaping business. Send email to listserv@listserv.arizona.edu, no subject, write only "sub azplants yourfirstname your lastname". This discussion group started in May, 1996.

More on the Annual Meeting

Plans for the 1996 Annual Meeting are nearly complete (see related story page 7). There has been great cooperation between the members of the Texas and New Mexico Native Plant Societies. Texas has hired an experienced individual to handle registration, name tags, receipts, etc. Registration forms will appear in the next issue of the *Newsletter*. The following are some of the many choices of activities that meeting goers will have to choose from.

Thursday, Oct. 17. Pre-conference trip to Guadulup Natl. Park

Friday, Oct. 18.
* Workshops on Drip Irrigation, Photography, Care and Propagation of Cacti, Native Grasses for Landscapes, Cooking with wild plants.
* Paper sessions focusing on the Chihuahuan Desert.
* Evening Landscaping Workshop
* Visits to Demonstration Gardens
* Reception, Book Sale, Silent Auction

Saturday, Oct. 19
* Seminars on Geography, Plant Communities, Horticulture.
* Poster sessions
* Book sales and silent auction
* Paper sessions focusing on the Chihuahuan Desert.
* State Board Meetings
* Dinner and speaker

Sunday, Oct. 20
* Tours to Heuco Tanks, Grasslands, Franklin Mountains, Organ Mountains, El Paso landscapes.

NATIVE PLANT SOCIETY OF NEW MEXICO
NOMINATIONS FOR OFFICERS AND DIRECTORS 1997-1998

Nominations committee: Greg Magee, Mary Whitmore, Jean Heflin

Officers

President: Mary Whitmore, Santa Fe Chapter 454-0683 Longtime interest in education and conservation issues. Retired professor of zoology from Oklahoma. Charterr member of Oklahoma Native Plant Society. PhD from U. of Minnesota.

V. President: Jack Carter, Silver City Chapter 388-9221 Professor emeritus of biology at Colorado College. Currently engaged in research at Gila National Forest and is preparing for publication "Trees & Shrubs of New Mexico" .

Treasurer: Babs Peck, Santa Fe Chapter 466-1348 Currently serving her first term as treasurer of NPSNM. A retired teacher with many years of successful experience in financial management and a longtime committment to environmental issues.

Membership: Mary Goodman, Santa Fe Chapter 474-7996 Recent transfer from Oklahoma. MS in Zoology. Worked in Cartography and Geography. Volunteer experience from the Smithsonian Institution.

Recording Secretary: John Stockert, Otero Chapter 585-2546 Retired National Park Service, Volunteer at Lincoln National Forest. Preparing "Visitor Guide to Lincoln National Forest" for publication 1997.

Conservation Chair: Dean Ricer, Carlsbad Chapter. 887-5292 Botanical Curator at the Living Desert Museum in Carlsbad. BS in Floraculture, Texas A&M.

Publications Chair: Tim McKimmie. Las Cruces Chapter. 646-7483. Science Librarian at NMSU. NPSNM *Newsletter* editor since 1991. Served on Board of Mesilla Valley Audubon, Southwest Environmental Center. MS in Plant Sciences, U. of Arizona.

Directors at Large

Sandra Lynn, Albuquerque Chapter 255-0410 Albuquerque chapter president, Member NPS in Texas before moving to NM. Professional writer who has published articles on native plants that appeared in Horticulture and Fine Gardening.

Greg Magee, Las Cruces Chapter 525-0424 Landscape architect, owner of "Naturescapes" in Las Cruces, specializing in natural gardens. Author of "A Hiking Guide to Dona Ana County".

Don Tribble, Otero Chapter 585-9017. Retired Air force officer in NM 16 years, NPS member 10 years. Interested in native plant landscaping and water conservation issues.

Mary Helen Brunt, Carlsbad Chapter 885-4532 Native of Carlsbad, NM. Writes articles on "plant of the month" for the Chihuahuan Desert Times.

Ballot

Please mark ballot and return to:

Mimi Hubby, 525 Camino Cabra, Santa Fe, 87501 **or:**

Ballots may also be delivered to any current board member before or during the Annual Meeting in El Paso.

Vote for as many as you wish. You may vote for each candidate. Deadline for voting is 4:00 pm, Saturday, Oct. 19, 1996.

_____ Mary Whitmore, President

_____ Jack Carter, Vice-President

_____ Babs Peck, Treasurer

_____ Mary Goodman, Membership Chair

_____ John Stockert, Recording Secretary

_____ Dean Ricer, Conservation Chair

_____ Tim McKimmie, Publications Chair

_____ Sandra Lynn, Director at Large

_____ Greg Magee, Director at Large

_____ Don Tribble, Director at Large

_____ Mary Helen Brunt, Director at Large

A Field Guide to the Plants of Arizona

Epple, A., 1995, Falcon Press, $25

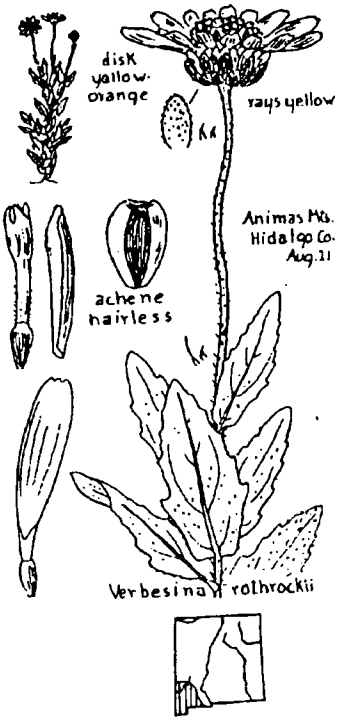
Book Review by Tim McKimmie

Arizonans now have a new and welcome tool for plant identification. This work is the effort of a husband and wife team who retired to Arizona in 1985 and, finding no suitable field guide, proceeded to compile one.

The arrangement is similar to the Audubon Guide to Wildflowers. The first section consists of color plates containing photographs of 850 of Arizona's approximately 3000 species. The photos are of excellent quality but do add to the book's weight. Fifteen ferns are pictured! These are followed by trees (arranged by leaf type), then by cacti (arranged by stem type), then by about 10 members of the Agave family (yuccas, beargrass, and sotol are included here). The rest of the nearly 700 plants are grouped under "wildflowers and shrubs with conspicuous flowers". They are arranged by flower color and then by flower type or shape. Grasses are not included.

From the photographs the user proceeds to the descriptions in part II. Arrangement is by family, apparently in order of complexity, that is, families with regular flowers progressing to families with irregular ones. This arrangement will appeal to some readers while others would prefer an alphabetical order. The inclusion of key family characteristics will be helpful. There are no keys (as with Peterson's) but the species descriptions are very good. Common and scientific name(s) are given for each species followed by botanical characteristics, habitat information, and "comments" such as wildlife attraction, medicinal and cultural use, and other plant peculiarities. Each description describes the date and the place that the photograph was taken. This will permit enthusiasts to be able to pinpoint the location of a species. While some users will appreciate the photos for their lifelike portrayal there is the drawback that they are from a specific instant in time. Some users like the artist's freedom to create a drawing of a species with several characteristics over time. Users with a basic knowledge of plant family characteristics (and perhaps a guess as to genus) will benefit most from this work, e.g., you can look up the genus, compare species descriptions, then check the photo. It can also, of course, be used as a check against other handbooks.

A sample of about 100 species included in this work revealed that approximately 80% occur in New Mexico. This work will not substitute for Iveys *Flowering Plants of New Mexico* and some people will prefer the layout and drawings of the Peterson guide (see Review page 6) with adjacent descriptions. The real use of this work will be as a companion to these and other regional guides. Some strengths include the good species descriptions, coverage of shrubs, and high quality photographs.



The Native Plant Society of New Mexico
1105 Circle Drive
Las Cruces, New Mexico 88005

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