Native Plant Society of New Mexico

NEWSLETTER

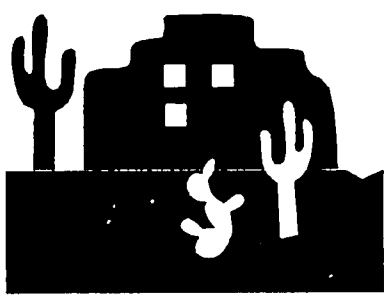
January, February, March 2005 Volume XXX Number 1

The Fallacy of Xeriscaping

Excerpted from an article by Peter N. Spotts in *The Christian Science Monitor, Oct. 28, 2004*

In an effort to reduce water use in the Sonoran Desert, developers are landscaping new housing tracts with drought-tolerant plants, gravel and cacti — so-called xeriscaping.

In looking at biodiversity among insects, particularly spiders, ecologists have found that xeriscaped yards that one would think would mimic desert sites or desert remnants within the city are more like industrial sites in species composition and dominance. This is seen as a warning that xeriscaped yards that look like desert don't necessarily help bolster biodiversity among species native to the region. One challenge is that xeriscaping often is done with plants from Australia, Africa and South America, and not plants native to the Sonoran Desert. One of the real messages that's starting to come out of studies of ecology in urban landscapes is that if systems haven't evolved together, if something new is introduced, it doesn't resonate with the local fauna. Even though to our eyes these imported plants perform the same function, spiders, birds and pollinators avoid them, even if they have big, beautiful flowers.



"The civilized people of today look back in horror at their medieval ancestors who wantonly destroyed great works of art, or sat slothfully by while they were destroyed. We have passed that stage. We treasure pictures and sculptures.

But we are, as a whole, still in that low state of civilization where we do not understand that it is also vandalism to wantonly destroy or to permit the destruction of what is beautiful in nature, whether it be a cliff, a forest, or a species of mammal or bird."

Theodore Roosevelt, 26th President of the U.S.

INSIDE

Point/*Counterpoint*

"I really wonder what gives us the right to wreck this poor planet of ours."

Kurt Vonnegut
Novelist

"God says, 'Earth is yours. Take it. Rape it. It's yours.' "

Ann Coulter
Right wing columnist

Giving Credit Where Credit is Due

A man inherited a house from his maiden aunt. The house was in fine shape but, because his aunt had been ailing for years, the garden was in a terrible state and was overgrown with weeds. To honor the memory of his beloved aunt who had been a passionate gardener all her life, the man set about to return it to its once beautiful condition.

One day the town preacher stopped by to bless the man's work, saying, "May you and God work together to make this garden as beautiful as it used to be!"

A few months later the preacher stopped by again. And, lo and behold, the garden was in magnificent condition — in full bloom and alive with butterflies and songbirds.

"Just beautiful! Amazing!" the preacher said. "Look what you and God have accomplished!"

"Yeah, Reverend," said the man, "but just remember what it looked like when God was working it alone!"

LETTERS TO THE EDITOR

Unlike a lot of states, New Mexico seems to have lost interest in its big trees. There's a list of State and National Champions at: http://www.emnrd.state.nm.us/FORESTRY/FactSheets/bigtrees.pdf, but it's been a long time since anyone has seen these monsters or nominated a new big tree in NM. This is something NPSNM should be working on. A lot of us are in the field and may find trees that could be nominated. Scores are relatively easy to obtain with these instructions: http://www.americanforests.org/resources/bigtrees/measure.php. Anyone who knows of a tree that may be a new state or national record should contact George Duda at the NM Forestry Division, gduda@state.nm.us. Let's take pride in New Mexico's biggest trees and give them some publicity and protection.

Bob Sivinski
Santa Fe

I'm adding to Bob Sivinski's suggestion with a list from the Big Tree Register. Below are species that occur in New Mexico and do not currently have a champion on the register. This means that we need to nominate a champ in New Mexico among these:

a.. Birchleaf buckthorn, *Rhamnus betulifolia/ Frangula betulifolia*
b.. Mexican elder, *Sambucus mexicana*
c.. Littleleaf sumac, *Rhus microphylla*
d.. Schott's yucca, *Yucca schottii*

For those in the field who spot an unusually large specimen of one of these, Bob's message includes a link that offers instructions for measurement.

Sandra Lynn
Carlsbad

THE DRAGON-FLY

Today I saw the dragon-fly
Come from the wells where he did lie.
An inner impulse rent the veil
Of his old husk; from head to tail
Came out clear plates of sapphire mail.
He dried his wings; like gauze they grew;
Thro' crofts and pastures wet with dew
A lively flash of light he flew.

Alfred Lord Tennyson, 1833

If vegetarians eat vegetables, what do humanitarians eat?

"What's the use of a house if you haven't got a tolerable planet to put it on?"

Henry David Thoreau

This **NEWSLETTER** is published quarterly by the Native Plant Society of New Mexico, a nonprofit organization, and is free to members. The NPSNM is composed of professional and amateur botanists and others with an interest in the flora of New Mexico. Original articles from the Newsletter may be reprinted if attributed to the author and to this Newsletter. Views expressed are the opinions of the individual authors and not necessarily those of NPSNM. Manuscripts and artwork are welcome and should be submitted to the editor:

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Next Deadline is March 1, 2005

Membership in the NPSNM is open to anyone supporting our goals of promoting a greater appreciation of native plants and their environment and the preservation of endangered species. We encourage the use of suitable native plants in landscaping to preserve our 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 dealing with plants, landscaping, and other environmental issues are available at discount prices. The Society has also produced two New Mexico wildflower posters by artist Niki Threlkeld and a cacti poster designed by Lisa Mandelkern. These can be ordered from our Poster Chair or Book Sales representative.

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I am interested in forming a new chapter in

_____

Annual Dues:

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Endowment contribution $_____
Total $_____

Make your check payable to
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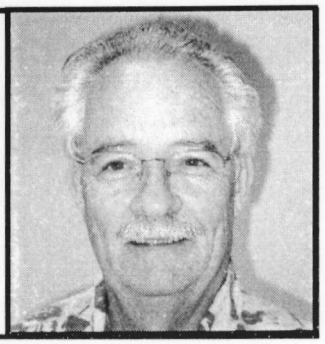
THE PREZ SEZ

Wynn Anderson



I hope that we will be seeing lots of new faces at this winter's NPSNM Board of Directors' meeting at the Sevilleta Refuge, Friday and Saturday, January 28 and 29. This year, in addition to the traditional semi-annual meeting of the Board on Saturday, on Friday afternoon the Board will host a free Chapter Leadership Conference for any and all NPSNM members committed to the future effectiveness of their local chapters.

The program, led by professional facilitator Gladys Shaw of Bisbee, Arizona, will begin at 12 noon and last until 5 pm and will feature sessions on such topics as cultivating leadership from among members, recruiting and retaining membership, how to conduct effective meetings, and tips on effective task delegation and committee work.

For those unfamiliar with the meeting site, it is located at the Visitor's Center and Headquarters for the Sevilleta National Wildlife Refuge, just west of Interstate 25 from the La Joya Exit #169, about 17 miles north of Socorro. A range of lodging is available in Socorro for overnight stays and NPSNM members are encouraged to attend and observe the Board Meeting on Saturday. Contact your chapter representative to the Board for further information.

* * * * *

Speaking of the Board meeting: an important part of the afternoon session will be the award of several thousand dollars of grants to projects that further the purposes of NPSNM. I hope members will help spread the word about this annual availability of grants each up to $1000 from the Society for projects that expand knowledge about, appreciation for, and conservation of the native flora of New Mexico. Proposals are entertained from individuals, organizations or governmental agencies, whether affiliated with the Native Plant Society or not, but the Board encourages consultation with and/or participation by a local chapter in proposed projects. For that matter, chapters may also submit proposals for grants. As of last year, automatic support grants of $500 per year for the four major regional institutions, UNM, NMSU, UTEP and Western New Mexico University, were given to support herbarium collections. Individual herbaria are also eligible to submit proposals for additional support for special projects.

* * * * *

GOOD NEWS! The Finance Committee, chaired by former NPSNM President Jack Carter, has prepared a proposed operating budget for 2005 without resorting to a dues increase as has been the case with so many other organizations. The budget, to be acted upon by the Board of Directors in January, continues to provide a bargain for the membership.

While the grant program is one of the more altruistic ways the state organization uses your membership dues, there are many more material benefits to the membership. Twenty five percent of the dues income received is returned to the member's local chapter for activities at the local level. A variety of statewide educational workshops and seminars are periodically sponsored for members. This newsletter, produced under the very professional eye of Editor Andy Wasowski, and the informative website, maintained and regularly updated by Lolly Jones, available to any user at http://npsnm.unm.edu/ are two other examples.

The most popular benefit, however, remains the great discounts on a wide variety of books available from the NPSNM Bookstore managed by Lisa Johnston. With just a purchase or two each year, a member can easily recoup the cost of their membership and build a great library in the process. Check it out on the NPSNM website.

Check out the NPSNM Plant Resources webpage:

Http://npsnm.unm.edu/merchandise/plant_resources.htm

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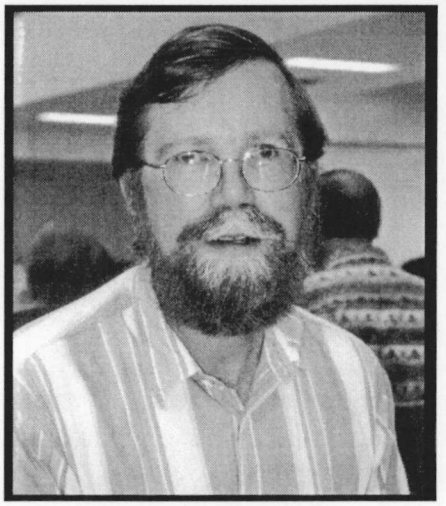


Jim Nellessen
Albuquerque Chapter

You all know Jim as the Conservation Chair of NPSNM, and the author of the newsletter's *Conservation Corner* column (Not this issue; Jim is under the weather). A native Minnesotan, Jim was a plant lover from boyhood and by the 10th grade he knew he wanted to be a biologist. He got his B.S. in biology with a focus on plants from the University of Minnesota in St. Paul. A class on Forest Pathology given by John Skelly, visiting professor from Virginia Tech, inspired Jim to apply to graduate school at V.T. under Skelly. There, he studied the effects of air pollution on vegetation, and his own research project involved screening 150 genetic lines of Christmas trees for sensitivity to ozone pollution.

He earned his Ph.D. in botany at Ohio University where his interest in the interaction between plants and human impacts continued. He then moved to the University of Oklahoma in a post-doctoral program that studied the effects of contaminants (e.g. heavy metals and pesticides) on plants.

Jim came to New Mexico to work for the Air Quality Bureau of the State Environment Department. He then spent a year in the Environmental Section of the Highway Department. Currently, Jim is employed as a biological and environmental consultant in Albuquerque.

A member of NPSNM since 2000, Jim also has been a member of the Nature Conservancy since 1980 and worked as a volunteer in plant restoration when he was a resident of Ohio and Virginia. His home landscape is almost all native.

MORE ON RHUS TRILOBATA

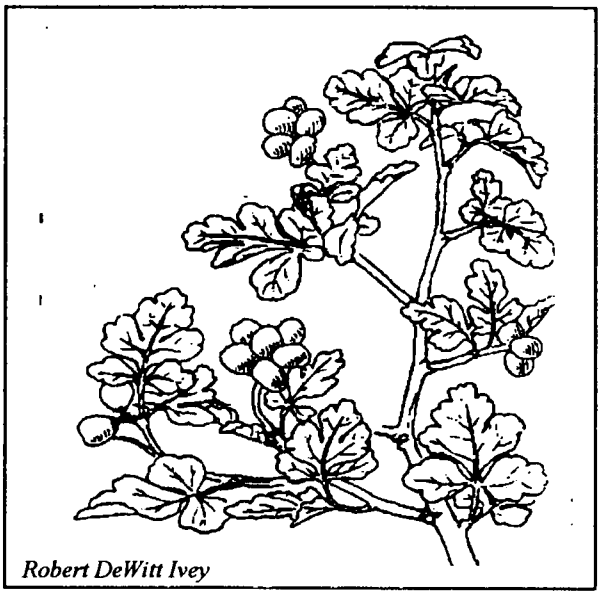
by Judith Phillips

In the last newsletter, Peter Wong voiced both practical and aesthetic preferences for the local *Rhus trilobata*. I agree and, as a nursery grower and landscape designer, I'd like to expand on a few of his comments and clarify some of the *Rhus* puzzle. I doubt that all or even most of the *Rhus trilobata* sold locally come from a single ecotypic source, but I can confirm that provenance makes a big difference in how plants perform.

At our nursery in Veguita, we have at least three distinct varieties of *Rhus trilobata*, probably none of which are local ecotypes. Some botanists regard *R. trilobata* as a subspecies of the very widely distributed *Rhus aromatica* which ranges at least as far east as Illinois. But based on plant adaptation I side squarely with the splitters who maintain *R. trilobata* is a distinct species.

In New Mexico we have six varieties, a few of which are locally endemic while others enjoy a regional distribution throughout much of the U.S. west of the 100th meridian, from southern Canada to northern Mexico. *Rhus trilobata* var. *trilobata* is the most widespread regionally from Alberta south, and probably the species that the old Soil Conservation Service (today the National Resources Conservation Service) cultivar 'Bighorn' represents. This is one of the plants we have growing in Veguita from SCS liner stock. It grows at least 8 feet tall with mixed orange and yellow fall color, and seems fairly heat and drought tolerant despite originating in Montana. *R. trilobata* var. *simplicifolia* and *R.trilobata* var. *anisophylla* are endemic from New Mexico to California, north to Oregon and east to Oklahoma. *R.t. var. quinata* has a similar range but is apparently absent from Colorado and Oklahoma. All of them take a more disciplined mind and better eyesight than mine to distinguish from each other.

Most limited in range, listed for New Mexico and Arizona only, is *R. t.* var. *cracemulosa*. It blooms in early summer after it is in full leaf, while all the other varieties bloom in early spring before they leaf out. It is endemic in Socorro County, but probably not further north, and I don't think I've ever seen it in the field. One of the varieties well represented in New Mexico, with a range from California to Trans-Pecos Texas north into Kansas is *R. t.* var. *pilosissima*. It is on my short list to collect seeds from and grow for both its local adaptability and its fuzzy foliage. From the washes draining west out of the Los Pinos Mountains on the Sevilleta Refuge in the Magdalenas to the Sandia foothills, and just about everywhere else I've hiked in New Mexico this is the variety most easily distinguished from any others by the dense layer of fine bronze, gold or silver hairs that cover the leaves and new stems. It grows at lower elevations, (4000 feet in central and southern New Mexico) than the other varieties and has larger seeds, though I have yet to be in the right place at the right time to collect them.



Robert DeWitt Ivey

Trying to select for well-adapted ecotypes, we buy seeds from several reliable western sources and cull any obvious wimps. Over the years most of the resulting plants have averaged at least 5-feet tall at maturity, but others are a bit more compact. Soils, exposure and availability of water are as important as ecotype in determining ultimate size. So far no fuzzy-leafed ecotypes have shown up in the seeds we purchased.

The *Rhus trilobata* along Tramway may be drought-deciduous because they are poorly adapted, or they may have the limited root systems of transplants rather than the more extensive uninterrupted root-run of wild seedlings, or the irrigation system may be supplying water unevenly, or

Continued Page 13.

A BOTANICAL MYSTERY

by Kelly Allred

One of the earliest scientific expeditions to the western states was that of Major Stephen H. Long in 1820. He left the western banks of the Missouri near Council Bluffs on June 6, 1820, traveled west to Colorado, down the Front Range, jogging east and south to near Branson, and entered New Mexico in present-day Union County on July 28, 1820.

Heading south, the expedition found Ute Creek on July 30 and followed it to its junction with the Canadian River, where they camped on August 4. They then traced the path of the Canadian eastward across Oklahoma to Fort Smith, on the Arkansas River, where the expedition was dissolved.

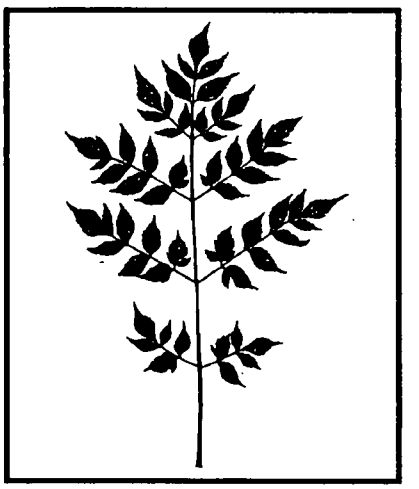
Accompanying Major Long was Edwin James, botanist, geologist, and surgeon for the company. Somewhere on this trip, James collected a specimen of *Melia azedarach* Linnaeus, our familiar Chinaberry tree or Pride of India, native to southeast Asia and northern Australia. The specimen resides at the New York Botanical Garden, where one can read on the label, "On the Canadian. Native."

In reviewing the botany collections made by James on the Long Expedition, George Goodman and Cheryl Lawson (*"Retracing Major Stephen H. Long's 1820 Expedition,"* University of Oklahoma Press, 1995) had this to say about our specimen in question: "This specimen would have been taken from a cultivated or an escaped plant and would not have been collected on the Canadian. It could have been collected in the spring in Missouri, for example, or in September in Arkansas." This strikes one as a reasonable explanation, for it seems unlikely that an exotic plant from Asia would find its way to the remote plains of the wild southwest in 1820.

The plot thickens, however.

In the summer of 1845, Lieutenant James William Abert (son of Colonel John James Abert) found himself at Bent's Fort on the Arkansas River (in present day Colorado) under the command of General John C. Frémont. He was given a separate detachment and orders to make a reconnaissance of the Canadian River. He left Bent's Fort on August 9, 1845, and headed south to Raton Pass, thence to the Canadian and then followed that river east to its junction with the Arkansas. From about present-day Logan, New Mexico, onward, his route was nearly identical to the one taken 25 years earlier by Major Long.

Lieutenant Abert recounted the following in his diary under the date of September 2, while camped north of the junction of the Canadian River and Ute Creek in present-day Harding County: "...and we observed, for the first time, an extensive grove of the pride of India, 'Melia zedeach'[sic]... a tree gifted with a beautiful form and dense foliage, not more than 30 feet in height, and covered with yellow fruit containing a single nut having a pulpy exterior, which was exceedingly disagreeable to the taste, and so pungent that it was a long time before I could get rid of the unpleasant impression it produced."



Chinaberry tree was introduced to North America by André Michaux in the late 1700s, and apparently spread rapidly with migrating colonists, pioneers, traders and the like, as they traversed back and forth across the fledgling country. The route along the Canadian followed by Long and Abert was not blazed by them through untraveled land. Rather, this was a very old pathway used repeatedly by the Native Americans, the Spanish and Mexican comanchéros, and early American traders and explorers.

Could it be possible that *Melia azedarach* was, indeed, present along the Canadian in 1820, just as stated by James, and "an extensive grove" found again by Abert as he retraced the route?

Dr. Kelly Allred is on the faculty of NMSU Las Cruces and a frequent contributor to our newsletter.

Wanted: Dead or Alive

by Sandra Lynn

The plants referred to in this article are all dead. They are stashed like bodies in a morgue, toe-tagged or awaiting identification. Dried and mounted on heavy paper, thousands upon thousands of native New Mexico plants are shelved in folders in cabinets, never to flower or ripen seeds or release spores again. Yet they are still very much wanted. They are herbarium specimens.

What is a herbarium? It's a collection of plant specimens, mounted and stored as described above, organized by botanical designation. Each specimen is carefully labeled, usually with a description of the location from which it was taken, the date collected, and the name of the collector. A herbarium is a plant library; it makes volumes of plant information accessible over the long term. Once a specimen is properly dried, mounted and stored, it will last indefinitely, so some of the plants in herbaria are more than a hundred years old and still in good condition.

So, who would want to look at a hundred-year-old, flattened, desiccated plant specimen? And why? Well, botanists, for starters. Also, ecologists, plant geeks, students and teachers, foresters, range scientists and ranchers, land managers, agricultural researchers, *maybe even you*. These varied groups would be interested for equally varied reasons: plant identification; studies of historic and present-day locations, habitats, and ranges; learning about plant anatomy and variation; close examination of specimens not otherwise readily available.

Let us suppose *you* have a reason for wanting to examine some specific plants. Let's say you are trying to learn how to tell one pretty little daisy or *Erigeron* from another. Of course, a field guide can be very helpful, but not as much as seeing the actual plants. You also could go into the field and find several different species to compare, but probably not in January and maybe not conveniently located near one another. That's when an herbarium can be useful for you.

Go into your friendly local herbarium and ask the curator (similar to a librarian in function, with specialized training in botany and the care of plant specimens) to assist you in finding *Erigeron.* He or she will show you the appropriate cabinets and folders and may also explain to you how to properly handle the herbarium sheets.

Once you have a stack of sheets before you on a table that is probably equipped with a dissecting scope, you are able to see exactly how each species looks, compared to the others. You can peer at the small characteristics, such as leaf hairs or flower parts, through the dissecting scope, so long as you don't damage the specimen. From the label, you can learn where a particular species may be found.

You can see the entire plant, too. Ideally, a specimen will include a flower and fruit, leaves, stems, and roots. Of course, tree specimens usually won't include the trunk and roots (!), and cacti and other succulents present special problems. (Ponder for a moment the difficulty of drying and mounting a big, juicy barrel cactus.) Nevertheless, you can find all these types of plants represented in an herbarium collection, though not all plant parts will always be present.

Where is your friendly local herbarium? In New Mexico the largest herbaria are located at universities, such as UNM in Albuquerque and NMSU in Las Cruces. But sometimes national and state parks, national forests, wildlife refuges, and other state and federal land managers have small herbaria available for public use. Also, some individuals have created valuable herbarium collections and generously make them accessible to interested persons.

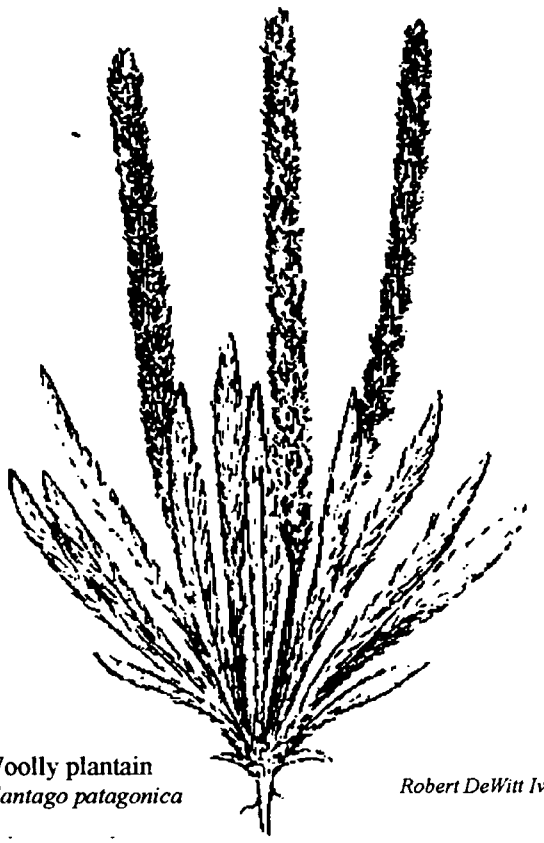
When I was first trying to learn how to distinguish one kind of sunflower from another, I would get completely hung up on a description in a key. The technical wording would leave me stumped. Then I discovered that I could go into the herbarium and look at the differences between the species, and even with the surprising amount of variation within a species, become better able to recognize what I saw in the field.

In the plant kingdom, sometimes "dead or alive" ceases to matter. When I started to prepare my own herbarium collection of *Helianthus* (sunflowers), I first experienced the paradox of the simultaneous delicacy and immortality of a dried and pressed flower. It was as if all the sunshine of a summer day had been sealed into a single ray.

Small is Beautiful

by Sandra D. Lynn

Most of us are drawn to the showy, the colorful, and the uncommon. We long to see the soaring bloom stalk of the agave, gorgeous but fleeting cactus flowers, the wild orchid secluded in the forest shadows. That which is common and pale and small may entirely escape notice. But I'm quirky that way: I'm attracted to what at first appear to be underwhelming little plants—until I take a much closer look and they reveal themselves to be exquisite.



Woolly plantain
Plantago patagonica
Robert DeWitt Ivey

Plantains fall into this category. New Mexico is home to 11 species of *Plantago* (according to Bob Sivinski's key published in The New Mexico Botanist in May 2001), and they can be found from high- to low-elevation habitats. Some are native and some are introduced. They may be considered weeds or, less often, potential rock garden ornamentals.

Our most common species is *Plantago patagonica* or woolly plaintain, found from desert to piñon-juniper woodlands. As you can see in Ivey's drawing, the plant deserves its common name: the leaves are, in botanical terminology, villous or "bearing long, soft, shaggy, but unmatted, hairs."

You may find some plaintain blooming near you in the early spring. The name comes from *planta,* meaning "sole of the foot," and this suggests where you will find them right at your feet. They may be plentiful but not very noticeable, unless you bend over and pay attention. The linear-veined leaves of a plantain are crowded together at the base of the plant, and the tiny four-part flowers form a spike atop a leafless stem.

It's the flower spike on one of the plantains near my home in Carlsbad, Heller's plantain (*Plantago helleri)*, that initially caught my eye. But wait, don't picture flowers the size of hyacinths. We're talking millimeters here. And don't think in terms of vivid colors. From a distance, these flowers appear quite pallid.

Looking at plants with a magnifying lens is an eye-opening (groan!) experience I strongly recommend. The modest spike of flowers on Heller's plantain can make no claim to being arrayed like Solomon in all his glory, though the flowers do look like pretty, four-pointed whitish stars to the naked eye. But look at them under a lens, and you will discover that the petals are *translucent.* Enlarged, the flower blooms before your eye as if it were hand-blown glass.

Another spring flower that will not blow your socks off, but is well worth a closer look is the *Cryptantha,* also appropriately known as hidden-flower. *Cryptantha paysonii* can be found around Carlsbad, and *Cryptantha crassisepala* can be found in most of New Mexico. Members of the borage family, hiddenflowers are charmingly fuzzy little plants with white or yellow flowers. An interesting feature of these flowers is that they appear in what is called a scorpioid cyme. That means the flower stalk is coiled; as the buds open, the cyme uncurls.

As the new leaves and flowers of early spring begin to garnish the edges of our trails, keep your eyes out for these small delights.

THE FABULOUS FABACEAE

Seventh in a series about flowering plant families by Donna Stevens.

If you've been following this series, you may wonder why I haven't written about two of our biggest plant families, Asteraceae and Fabaceae. Frankly, it's because they are difficult: fairly easy to distinguish in the field, but hard to describe without getting too technical. To ease my guilty conscience, we'll now cover Fabaceae (also called Leguminosae), the legume family.

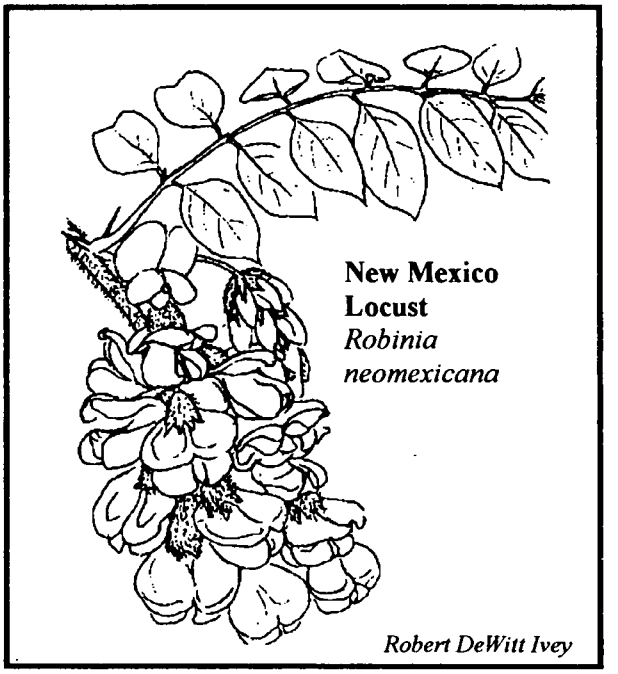
The easiest way to recognize this family is by its fruits; they are legumes, or pods. The fruits vary in size, shape and texture, but it's usually obvious that they're legumes, which open along two seams. What if there are no fruits? Leaves are a big clue. Although a few species in the Fabaceae have simple leaves, most are compound, or divided into two or more segments. Examples of pinnately compound leaves are mesquites and catclaws. The structures look like tiny leaves opposite each other on the stem but are actually leaflets; all together they comprise one leaf. Sometimes there are only three leaflets, as in some clovers and wild beans. And there are some leaves that are palmately compound, with all the leaflets attached at a common point. Lupines have palmately compound leaves.

The flowers are where the story gets more complicated. If you're familiar with the flowers of a garden pea, you know what most flowers in Fabaceae look like. They have five petals: the largest petal is called a banner, the two side petals are called wings, and two petals at the base form a keel. These flowers are known as irregular, not because they are deviants, but because they are bilaterally, as opposed to radially, symmetrical. They have ten stamens in one of two arrangements: nine united and one distinct, or all ten united in a tube.

So far, so good, right? So, why was I hesitant to talk about this family, the third largest in the world? Because, not all the flowers actually look pea-like. Some botanists separate Fabaceae into three subfamilies, based on differences in flower structure: Mimosoideae, Caesalpinioideae, and Papilionoideae. Other botanists claim that these groups are distinct enough to warrant separate family status.

Have I lost you yet?

The largest group, Papilionoideae, includes the plants with pea-like flowers. In New Mexico, some common genera are *Phaseolus, Astragalus, Lotus* and *Dalea.*



New Mexico Locust
Robinia neomexicana

Robert DeWitt Ivey

You're probably more intimate with Mimosoideae than you realize. Ever hike through catclaw and emerge with ripped pants and bloody arms? These shrubs are either in the genus *Acacia* or *Mimosa*, and both are in the (sub)family Mimosoideae. So is the familiar mesquite, genus *Prosopis.* Mimosoideae flowers are tiny, and are densely clustered in spikes or heads. The stamens are much more conspicuous than the petals. If you've seen *Acacia* or *Mimosa* in flower, you know that the flowers look like tiny powder puffs.

The smallest subfamily (or family, depending on whether you're a lumper or a splitter) is Caesalpinioideae. This subfamily is named for the genus *Caesalpinia*, the Bird-of-Paradise planted as an ornamental. Other genera are *Hoffmannseggia*, (Hog Potato) and *Senna.* In the flowers of this subfamily, the upper petal is usually different in shape and/or color from the two sets of lateral petals.

Please don't let the tongue-twister subfamily names discourage you. Once you can recognize a few species in this family, it's fairly easy to distinguish other members of Fabaceae. Many of them are quite beautiful; two of my visual favorites are New Mexico Locust and Feather Dalea. My taste-buds, too, like this family, particularly the genus *Phaseolus* - the beans in my burrito.

I CAN HARDLY WAIT FOR SPRING

Jack Carter

I really do not enjoy the cold winter months. You would think a person who has lived most of his 75 years in the north temperate zone would come to appreciate the four seasons, and that my genetic history would at least take the chill off, but not so.

From November through March my toes and fingers freeze and I can't wait to get into bed where the electric blanket has been preheating the covers. In fact, this time of year my thoughts hark back to those wonderful winters I spent in India and Thailand, closer to the Equator, where there are only three seasons and winter isn't one of them.

The only two good things I can say about this time of year is that most winters we receive some important moisture that will provide for a lush spring. Also, the cold season provides a lot of dark, long nights when I can lie awake and plan for the new growing season. Already I am writing notes to myself of areas in the Southwest where there are plant species I would like to photograph and collect, and thinking about what native trees and shrubs would make good biologic sense on our property, and where I want to plant them. I am commonly up enjoying a cup of wonderful Indian tea from 2 to 4 a.m., thumbing through my old Plants of the Southwest and Mountain States Nursery catalogs, looking for those plants I will order during the Gila chapter plant sale.

Another extremely important relief from the cold is reviewing slides taken during past growing seasons. Looking through a tray of slides in December or January has a wonderful warming effect on the body. Winter meetings of the Gila chapter often bring out those lectures and slide talks that draw our attention to the coming spring and field trips.

As I write this note I find great joy in the fact That we have reached the winter solstice. Once I make it through the holiday season, I know spring is on the way and that planet earth can count on that big ball of fire to arouse a new season in our native flora and provide new hope for an old plant nerd.

ACTIVITIES & EVENTS

Gila (Silver City)

Programs at 7 PM, Harlan Hall, WNMU Campus.

Jan. 21. *"Wild Utah: America's Redrock Wilderness."* Bob Brister, Southern Utah Wilderness Society. Presented jointly with Audubon Society.

Feb. 18. *"A Prescribed Fire in the Malpai Borderlands -- Before and After Photos."* Pete Sundt, Safford Botanist.

March 18. *"Land Institute in Kansas."* Bill Baldwin

Las Cruces

Programs at 7 PM, Conference Room, Social Center, University Terrace Good Samaritan Village, 3011 Buena Vida Circle.

Jan. 12. *"Conservation of Wild Plants."* Trisha London, New Mexico Wilderness Alliance. A discussion on what individuals can do to protect our native plant communities will follow.

Feb. 9. *"Ten Plant Families Every Plant Enthusiast Should Know."* Donna Stevens, NPSNM board member and Gila chapter member.

Feb. 12. Field Trip to Rockhound State Park. Led by Lisa Mandelkern and Terry Peterson. Meet at 9 AM, Fairacres Post office parking lot.

March 9. *"Geology of the Organ Mountains and the Mesilla Valley."* A member of the NMSU Geology Dept. will speak on local geology. In addition, connections of geology and some contemporary plant habitats will be discussed.

March 19. Field Trip to Cooke's Peak region, north of Deming. Meet 8:00 AM at the Holiday Inn parking lot, Main and University Ave. Led by Charles Galt, member of NPS-LC. Visit the Fort Cummings site, and the trail of the old Butterfield stage line.

Otero

Feb. 19. *"Grasses of Southern New Mexico."* Dr. Kelly Allred. Books etc. available beginning 6 PM. Talk at 7 PM. Bring grasses you want identified! Location TBA. For more information, call Helgi at (505) 585-3315 or Len at (505) 434-6261.

March 19. Hike to Indian wells behind Space Center. Meet at Space Center, 2nd parking lot at 9 AM. Call Helgi (505) 585-3315 or Len (505) 434-6261.

Santa Fe

Programs 7:30 PM, College of Santa Fe, Thaw Art History Center, Room 509.

Jan. 19. *"Natural History of an Endangered Plant, the Holy Ghost Ipomopsis."* Dr. Timothy Meehan, Assistant Professor in Science & Conservation Studies at the College of Santa Fe.

Feb. 16. *"Cerro Grande Fire Recovery: 4 Years Out."* Dorothy Hoard. Botanist, Naturalist & Artist.

March 16. *"Demystifying Propagation of Native Plants for Your Garden."* Bob Pennington, Owner of Agua Fria Nursery in Santa Fe.

Rhus triolobata/cont'd from pg 6

they may be defoliated by *Chrysomela* beetles and their larva, which work on local wild populations as well as on cultivated plants. Stressed plants may be attacked first, but in years with flourishing beetle populations, most plants are affected eventually. Plants are defoliated temporarily, but I've never known any to be permanently damaged. (This may only indicate that I lead a sheltered life.)

As the die-off of pines under *Ips* beetle attack demonstrates all too dramatically, urban heat islands, global warming, and the desertification resulting from greater demand for very limited water resources are reshaping Western ecosystems.

As a grower and landscape designer, I've been looking to the more heat and drought loving of our natives to become the basic framework of our gardens. Local is better, but particularly around larger urban areas, we need to exercise care in seed collecting to avoid degrading the ecosystems we value. If propagating and promoting native plants for cultivated landscapes was ever simple, living in times of rapid ecological change has added new convolutions to the process. #

RETURN OF A CLASSIC

Blackburn Press announces the reprinting of a classic book in botany for the fourth quarter 2004. *Trees, Shrubs, and Woody Vines of the Southwest* by Robert A. Vines with Drawings by Sarah Kahlden Arendale (ISBN 1-932846-00-X)

25 years of labor went into this book by the late Robert A. Vines. Originally printed in 1960, it describes and illustrates more than 1,200 species of native and naturalized woody plants of the southwestern United States. The book covers Texas, New Mexico, Oklahoma, Arkansas, and Louisiana. Over 1,200 black-and-white drawings by Sarah Kahlden Arendale accompany the text. Available at http://www.blackburnpress.com/botany.html.

THE INTERLOPER

A prose poem

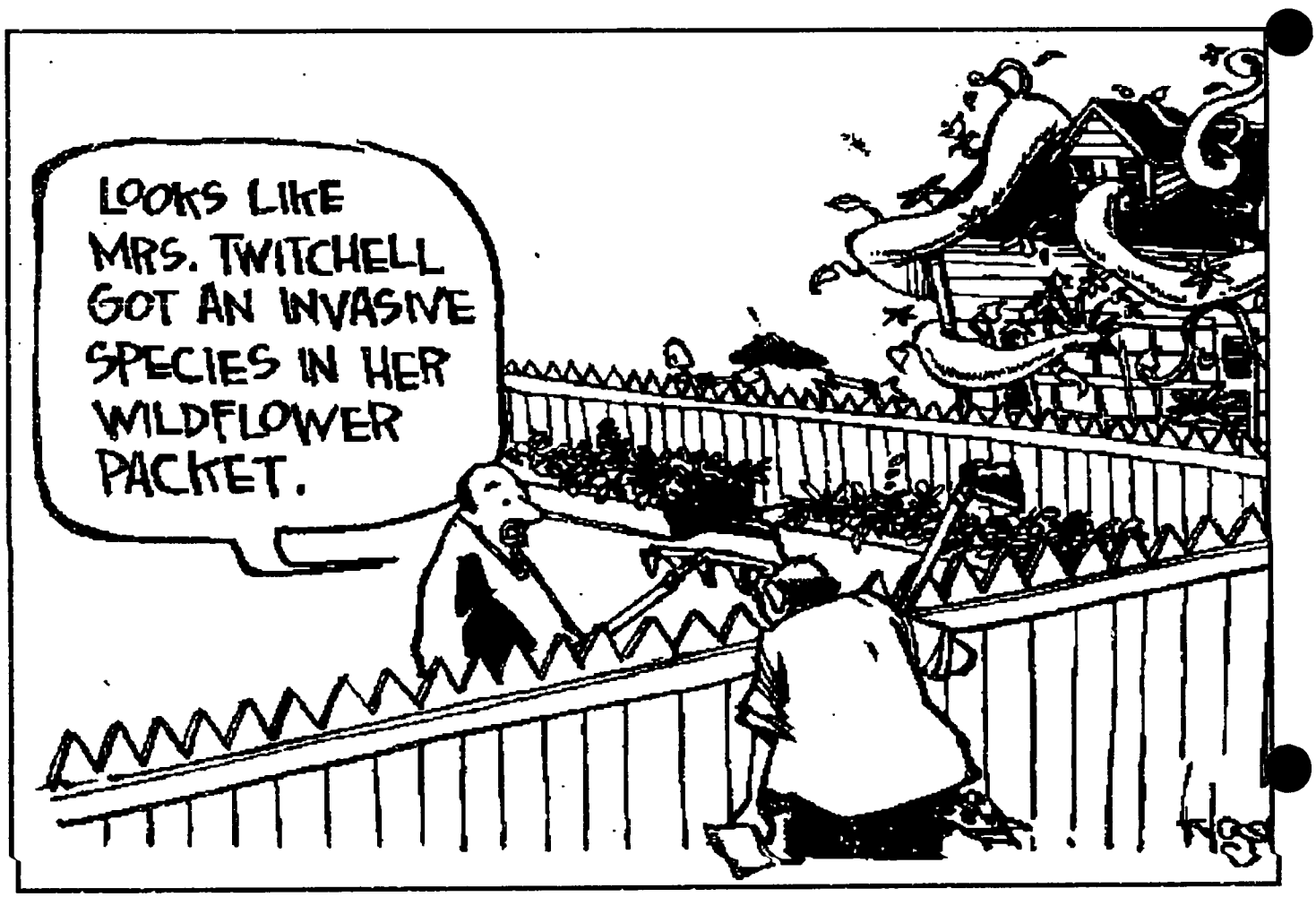
Like a mindless munching machine, he gnaws my young plantings, one by one, to oozing nubs. Weeks were spent, and precious water, giving life to my floral voices of the seasons.

And now, this young hare, driven to my oasis by the hot, dry winds of his desert home where even cacti now wilt, crams his maw with one succulent joy after another, in this paradise for him, unaware I could shoot him, splatter my blossoms with his brains and blood. The gun is nearby. But I don't. Instead, I wonder: in this desert, who is the interloper here? And who really deserves to be shot?

Robert W. Proctor (c) 15 June, 2004

Nature shows no partiality.
Wherever there is bare ground,
she plants a garden.
She cares not whether the soil is
rich or poor,
moist or dry,
in dense shade or full sun,
sheltered or fully exposed
to wind and storm.
Everywhere she grows plants
—beautiful plants—
that flourish and increase
and become pleasing features
of the landscape.

Herbert Durand, 1923



BOOK REVIEW

Rocky Mountain Garden Survival Guide

by Susan J. Tweit.
Fulcrum Publishing, 2004
Paperback $12.95
ISBN 1-55591-507-8

Reviewed by Sandra D. Lynn

Many readers of this newsletter will know who Susan Tweit is, especially those from the Las Cruces chapter. She lived in Las Cruces for several years where she presented a radio program and authored a book available through our NPS bookstore--Barren, Wild, and Worthless: Living in the Chihuahuan Desert. She was a keynote speaker for our annual meeting in El Paso held jointly with the Native Plant Society of Texas. Susan has written six other books on what she refers to as "nature nearby," meaning the nature that we can find around our cities or in our gardens. She now lives in Salida, Colorado, and this book is one of a couple Fulcrum has just published on how to deal with some of the toughest problems gardeners face in very different regions of the country (the other book is intended for the Pacific Northwest). Susan's book is appropriate for the northern half of New Mexico.

Gardening books are numerous, so why—other than the simple fact that this one is by a naturalist author known to many of us and is targeted at part of our region—would I review it for NPS readers? Because of the particular slant of this book, Susan states it succinctly in the introduction: "It's a compendium of one-page tips for dealing with regional *gardening challenges*, interspersed with brief essays explaining the fundamentals of *garden ecology*, design, and maintenance [emphasis mine]." The author focuses on some very current issues, such as climate change, drought, floods, severe weather, wildfires, and invasive weeds that one wouldn't likely find discussed in a more conventional gardening book. She prescribes for the gardener plagued with these challenges a clearer sense of place, gardening with a keen awareness of the local soil, climate, and plants that go with them.

Each section of the book provides a short list of plants recommended for being able to cope with what gardeners see as problem situations: e.g., too intense sun or too much shade, too much or too little moisture. Susan suggests specific natives for specific situations but also includes some non-natives in the plant lists. While I appreciated her careful selection of plants to suit certain conditions, I think she sometimes opted for predictable non-natives when native plant choices would have been wiser and more interesting. For example, for a shady spot she recommends—guess what—the same thing every gardening book recommends, hostas. What about those delicately lovely native species of *Aquilegia?* They're available in nurseries and fare well in cooler corners of the garden.

A handy section at the end of the book provides "Gardening Resources." It includes books, internet sites, gardens and nurseries, and newsletters, including several Native Plant Society state newsletters (but not this one!).

This is a slender little book—easy to afford and use as a source of ideas but not an in-depth look at any aspect of gardening. It would be very helpful for gardeners who are just getting started with gardening in our southern Rockies and wonder how to handle unfamiliar situations, or gardeners who are stumped by a particular problem, such as how to monitor water use, what to do to help plants through winters that are warmer and drier than expected, or how to plant and maintain a fire barrier. It's up-to-date in its approach and organized for quick reference.

"We will conserve only what we love, we will love only what we understand, and we will understand only what we are taught."

Baba Dioum
African Conservationist

SCHOOL GARDENS

How out of touch with nature are today's youngsters? A few years ago a fourth grade class in Dallas visited a demonstration vegetable garden. Half of these kids were amazed to see that *carrots actually grew in the ground.*

Most youngsters view a garden or a meadow as an alien place. Nature is something they experience vicariously, if at all. And that's scary, because these kids are the ones who will have to solve all the environmental problems our generation is handing them.

Katy Moss Warner, the Horticultural Manager at Walt Disney World, put it this way: "The future of the environment depends on involving children as early as possible in growing and appreciating plants, *yet the worst landscaped institutions in this country are the public schools.*"

But there *is* hope. Around the country, some schools are installing gardens where kids can see nature up-close. They get to observe firsthand how plants and wildlife interact harmoniously. And they learn that pollination is not just an abstract concept in a textbook, but a living process vital to all of us.

In Encinitas, California, science teacher Jerry Trust involved his high school students in the design, installation and maintenance of a landscape full of plants indigenous to the region, and incorporated all this into the curriculum. And in Odessa, Texas, biology teachers Glenda McDowell and Barbara Starnes and their students turned the courtyard of Permian High into a regional desert garden.

But, it's not just teachers who are involved in these gardens. In many cases, it's parents and even concerned neighbors. And organizations such as the Audubon Society and the National Wildlife Federation have instituted school gardening programs to lend a hand, and parents and even concerned neighbors are getting involved. In Elmhurst, Illinois, ecologist Patricia Armstrong and a crew of students installed a prairie garden at the Lincoln Elementary School. And in Milwaukee, Lorrie Otto installed a splendid prairie and woodland garden at the Bayside School -- at her own expense!

By the way...how do the schools in your community measure up? Is this a worthwhile project for your chapter?

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