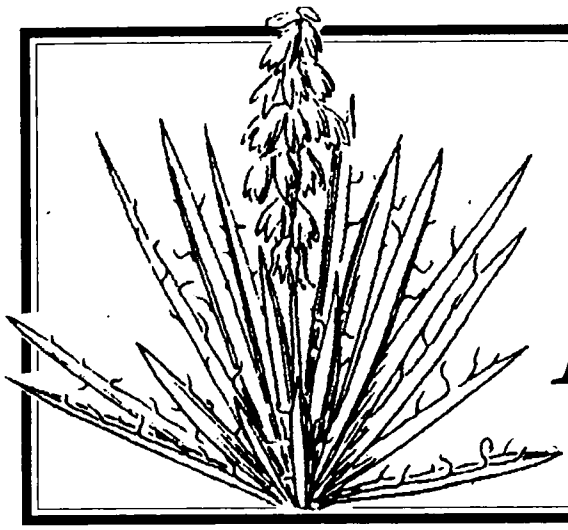



# Native Plant Society of New Mexico

# *NEWSLETTER*

January - March 2000 Volume XXV Number 1


## Editorial

When Charles Foster Kane (Orson Welles) took the reins of the New York Inquirer in *Citizen Kane*, one of the first things he did was to issue a "Declaration of Principles," upon which he would operate his newspaper.

I won't attempt Kane's eloquence, but I do think it's fitting that, as the new editor of this newsletter, I say a few words about my own goals for this publication.

First, this is *your* newsletter, and that simply means it will reflect the individual members, the chapters, and the state board of this organization. Articles will be either about you or, we hope, of interest to you. Each chapter will have a contact person, charged with supplying chapter news. I will serve as a reluctant nag.

We will be seeking out relevant articles from members and non-members alike. There is a lot of talent and knowledge among us, and we ask you not to be shy about coming forward to suggest subjects and writers, or to send your own contributions. Naturally, we reserve the right to edit for space and readability, but all contributions will be acknowledged, and technical articles will go back to the author for final approval.

Lastly, we want this newsletter to be informative, interesting, and fun. And we want to hear from you to keep us on course. In the end, we hope we'll have been more successful with our stated goals than Kane was with his.

## RUIDOSO APPLIES TO BE CHAPTER #9

On November 13th, 14 residents of Ruidoso held an organizational meeting to form the newest chapter of the Native Plant Society of New Mexico. If the chapter's application for inclusion in NPSNM is approved by the State Board, Ruidoso will officially become our ninth chapter, and the third new chapter in two years. Cynthia Trujillo was elected president of the newly formed chapter, and she expressed great excitement about the future of the group. "I've talked to a lot of people who didn't get to our meeting, but are very interested in joining." In March of 1998, Taos joined NPSNM and was followed by San Juan (Farmington) a year later.

### INSIDE



Masthead: Banana yucca by Robert DeWitt Ivey

# The Prez Sez:

I am continuously amazed at the number of phone calls and e-mail messages we receive from a wide range of individuals interested in learning about the Native Plant Society of New Mexico. Their questions cover membership requirements, workshops and short courses, landscaping and plant information for their part of New Mexico, basic research projects, book sales program, names of nurseries and landscapers who sell and use native plants, field trips...and so on!

There is no doubt in my mind that a high percentage of the population is searching for information that relates to the conservation of native flora and water, and simply wanting to know more about their relationship to plants and the land, be it basic knowledge, aesthetics or ethics. It would be so easy for me to question how these folks cannot know the answers to many of these questions; where have they been? But after teaching from sixth grade through graduate school for over 40 years, I know these questions are sincere and that these folks want answers.

The questions remind me of the way Aldo Leopold categorized such requests in *Sand County Almanac.* He recognized what all teachers recognize when they face their students each day: that we are all operating at different intellectual levels and we are each hearing a different drummer. Leopold's categories of environmentalism range from those who first go in search of trophies (that special cactus or orchid they want as part of their personal property), to those who seek opportunities to be alone in nature, either sitting quietly in one spot, or hiking, to those who seek to develop a perception of how flora and fauna have evolved to produce the natural world that surrounds us, to his fifth category — those who strive to protect the land. There is a continuum in the extremely heterogeneous backgrounds of all those who ask these questions concerning conservation, and we are all somewhere on that continuum. There are no "stupid" questions, only questions that deserve answers. The major role of the NPSNM is to assist individuals as they move along this continuum.

What I recognize is that the NPSNM has not been doing its job at a level appropriate to the needs of the larger population, and that if we do a better job our membership and influence will continue to grow. The number of paid memberships (family and individual) in the NPSNM is nearing 700. This means we have a total membership well over 800 people. The message here is that a huge segment of the total population of New Mexico is not aware of our programs, or that we can answer many of their questions. We have eight chapters all anxious to have them join in the work of these regional organizations. We know that our Newsletter and Web Site are not reaching their potential, and that the new editor, Andy Wasowski, and the new webmaster, Terry Peterson, are committed to communicating with a much larger audience. Through workshops in floristics and landscaping, and courses for teachers, we want to increase the knowledge, skills, and the values of New Mexicans towards native plants. We hope that through increased memberships we can continue to support research in our chapters, on state and federal lands, and in major state herbaria.

As you read this first Newsletter of the year 2000, please join with the total membership to help us bring a better understanding of the role of native plants in the conservation of the natural world, and to the aesthetic and ethical values of New Mexicans for their homeland.

*Jack Carter*
President NPSNM

"Don't be an arrogant natural landscaper. Don't be a self-righteous natural landscaper. Remember that you are a pioneer who is trying to win converts, not a martyr willing to go down in a flood of litigation and neighborhood disgust."

*Bret Rappaport*
*Attorney and President*
*of The Wild Ones*

# E-Mail From Heaven?

*The author of this conversation is, as far as we know, anonymous, but he or she ought to get a Pulitzer.*

**GOD: Frank, you know all about gardens and nature. What in the world is going on down there? What happened to the dandelions, violets, thistle and stuff I started eons ago? I had a perfect no-maintenance garden plan. Those plants grow in any type of soil, withstand drought and multiply with abandon. The nectar from the long-lasting blossoms attracted butterflies, honey bees and flocks of songbirds. I expected to see a vast garden of colors by now. But all I see are these green rectangles!!!**

**ST. FRANCIS:** It's the tribes that settled there, Lord. The Suburbanites. They started calling your flowers 'weeds' and went to great extent to kill them and replace them with grass.

**GOD: Grass? But it's so boring! It's not colorful. It doesn't attract butterflies, birds, and bees — only grubs and sod worms. It's temperamental with temperatures. Do these Suburbanites really want all that grass growing there?**

**ST. FRANCIS:** Apparently so, Lord. They go to great pains to grow it and keep it green. They begin each spring by fertilizing grass and poisoning any other plant that crops up in the lawn.

**GOD: The spring rains and cool weather probably make grass grow really fast. That must make the Suburbanites happy.**

**ST. FRANCIS:** Apparently not, Lord. As soon as it grows a little, they cut it. Sometimes twice a week!

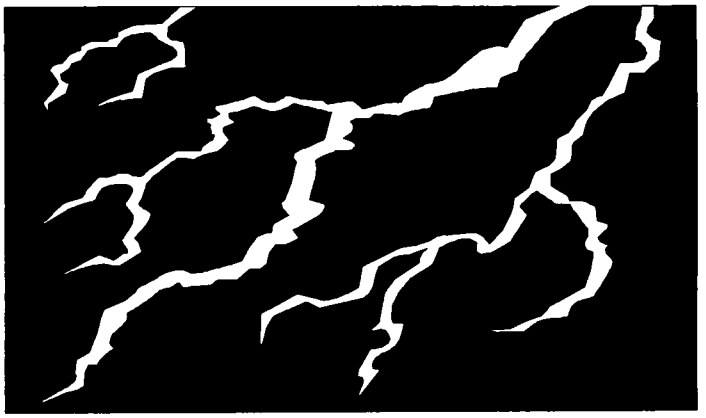
**GOD: They cut it? Do they then bale it like hay?**

**ST. FRANCIS:** Not exactly, Lord. Most of them rake it up and put it in bags.

**GOD: They bag it? Why? Is it a cash crop? Do they sell it?**

**ST. FRANCIS:** No sir, just the opposite. They pay to throw it away.

**GOD: Now let me get this straight. They fertilize grass so it will grow. And when it *does* grow, they cut it off and pay to throw it away?**



**ST. FRANCIS:** Yes, sir.

**GOD: These Suburbanites must be relieved in the summer when we cut back on the rain and turn up the heat. That surely slows the growth and saves them a lot of work.**

**ST. FRANCIS:** You aren't going to believe this, Lord. When the grass stops growing so fast, they drag out hoses and pay more money to water it so they can continue to mow it and pay to get rid of it.

**GOD: What nonsense! At least they kept some of the trees. That was a sheer stroke of genius, if I do say so myself. The trees grow leaves in the spring to provide beauty and shade in the summer. In the autumn, they fall to the ground and form a natural blanket to keep moisture in the soil and protect the trees and bushes. Plus, as they rot, the leaves form compost to enhance the soil. It's a natural circle of life.**

**ST. FRANCIS:** You better sit down, Lord. The Suburbanites have drawn a new circle. As soon as the leaves fall, they rake them into great piles and have them hauled away.

**GOD: No! What do they do to protect the shrub and tree roots in the winter, and keep the soil moist and loose?**

**ST. FRANCIS:** After throwing away your leaves, they go out and buy something they call mulch. They haul it home and spread it around in place of the leaves.

**GOD: And where do they get this mulch?**

**ST. FRANCIS:** They cut down trees and grind them up.

**GOD: Enough! I don't want to think about this anymore! St. Catherine, you're in charge of the arts. What movie have you scheduled for us tonight?**

**ST. CATHERINE:** "Dumb and Dumber," Lord. It's a real stupid movie about....

**GOD: Never mind!!! I think I just heard the whole story!**

# 6 BILLION AND COUNTING!

*Greenhouse effect? Deteriorating ozone layer? Loss of habitats? Plant and animal extinction? Take your pick, we've got enough environmental woes to satisfy the most pessimistic among us. But many believe our most serious environmental problem — the one at the root of all our other problems — is over-population. With this in mind, we are reprinting an article that originally appeared in Sierra magazine written by William G. Hollingsworth, law professor at the University of Tulsa.*

On or about October 12, the human population is expected to reach 6 billion.* While it took until about 1800 to reach the first billion, the trip from 5 billion to 6 billion will have required a mere 12 years. Those born in 1930 will have seen humankind triple within their lifetime.

That makes all the more surprising the strange take of the national media, which over the past few years have been full of stories like "The population explosion is over" (the *New York Times Magazine*) or "Now the crisis is global underpopulation" (the *Orange County Register*).

These contrarian stories are based on two recent demographic trends: Fertility in nearly all developed nations has fallen below the population-stabilizing "replacement" rate (2.1 children per woman, where mortality is low), and fertility is declining in most of the developing world. Those trends led the United Nations to revise its population projections, reflecting a slower rate of growth than previously forecast.

*Slower,* however, doesn't mean *slow*. At the current global growth rate, 1.5 million people — roughly a new metropolitan Milwaukee — are added every week. Despite declining fertility in some countries, birthrates in much of the world remain high. The 43 nations of East, West, and Central Africa average 6.0, 6.2 and 6.3 children per woman, respectively.

The United Nations' "medium" projections (perhaps the most realistic) now assume that fertility in developing nations will fall to about 2.2 children per woman over roughly the next 30 years. Even so, the world's population would reach 8.9 billion by 2050. The 2.9 billion gain would equal the world's entire human population in 1957.

Most growth will occur in the most distressed regions of the Earth, many of which already are experiencing severe deforestation, water shortages, and massive soil erosion. In the medium projections, sub-Saharan Africa's present population of 630 million will more than double to 1.5 billion by 2050. By that time, Afghanistan, Egypt, Iraq, and Pakistan also will more than double in population, as will Bolivia, Guatemala, Honduras, Nicaragua, and Paraguay. Bangladesh will grow by two-thirds, and India will increase by more than a half-billion people to 1.5 billion.

Those projections presume that many more people will have effective access to family planning services. But that may not happen. One reason is the abysmal failure of most rich nations to provide family-planning aid at levels like those envisioned at the population conference at Cairo in 1994.

In the United States, such aid to developing nations has become hostage to the debate over abortion, even though access to contraceptives reduces abortion rates. Family-planning aid from the United Sates has been slashed by at least 30 percent since 1995 and now is a fraction of what it needs to be.

But there still is time to attain world population stability through means that respect human freedom and dignity. It will take many steps to reach that dream. A gentle but early end to the population explosion is one of them.

** This article was written over a year ago, but the October 12, 1999 date was correct. A boy born in Sarajevo became our 6 billionth world citizen.*

**"The command *be fruitful and multiply* was promulgated, according to authorities, when the population of the world was two persons."**
Dean William R. Inge
Anglican prelate and author

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**Botanical Quiz:**

***What is Dr. Heimlich's favorite native plant?***

Send your answer to Botanical Quiz, POBox 607, Arroyo Seco NM 87514. Winner will be drawn from all correct answers received and announced in the next newsletter. **Winner will receive free NPS of NM T-shirt.**

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# Chapter Activities & Events

## ALBUQUERQUE

**Meetings held at 7:30 PM at the Albuquerque Garden Center, 10120 Lomas Blvd NE (Between Wyoming and Eubank)**

**January 6:** Judith Phillips, author and landscape designer, *"Landscaping with Native Plants"*
**February 3:** Claude Ceniceros, City Xeriscape Program, *"Splendor in the Gravel"*
**March 2:** Vic Brown, Nature Photographer, *"Photographing Wildflowers"*

## GILA

**Meetings are held at 7:00 PM at Harlan Hall, WNMU campus.**

**January 21:** Greg Magee, Las Cruces Landscaper, *"Xeriscape Gardens for Southwest New Mexico"*
**February 18:** Frannie Decker, NMSU Weed Specialist, *"Noxious Weeds: Identification and Solutions"*
**March 17:** Andy Wasowski, author, *"The Landscaping Revolution,"* an overview of his latest book.

## OTERO

**January:** Clean up Desert Foothills Park in Alamogordo.
**February 4th, 7 PM:** Joe Duff, *"An Introduction to Oliver Lee State Park and its Flora"* Alamogordo Federal Savings & Loan Bldg, 500 E. 10th St.
**March 4, 7 PM:** Kevin Bixby *"Conservation Challenges in the Chihuahuan Desert"*

## SAN JUAN (Farmington)

**Meetings held at San Juan College, dates vary.**

**February 26, 8 am to Noon:** Ken Heil, *"Cacti taxonomy."* This special Saturday 4-hour class is limited to 25 participants, so call 334-7372 to hold your spot.
**March 4th, 10 am:** Tom Harvey *"Landscape Design With an Emphasis on Water Conservation"*
This new chapter is off and running. Two recent field trips were led by Ken Heil, instructor at San Juan College. The first, in the rain, had 20 chapter members

(cont'd)
exploring native vegetation off Hwy 44 outside Bloomfield. The second trip looked at plants around the Hogback formation near Shiprock. The December program featured Linda Mary Reeves, a botany teacher at San Juan College. Her slide presentation covered "Orchids of New Mexico."

## SANTA FE

**Meetings third Wednesday of the month at the Evans Science Laboratory Building, Rm 122, Saint John's College, 7:30 PM**

**January 19:** Roger Peterson, *"Plants of the Santa Fe River"*
**February :** Program not confirmed
**March 16:** Joyce Begay-Foss *"Native Plants Used for Color in Navajo Weaving"*
**April 19:** David Ferguson *"Chihuanhuan Desert Plants: Gardening with Cactus and Succulents in this Bioregion"*

## TAOS

**Meetings are held second Wednesdays of the month at 7:00 PM, San Geronimo Lodge, 1101 Witt Rd.**

**January 12:** Andy Wasowski *"Photographing Nature"*
**February 9th:** Sally Wasowski *"What is a Native Plant and Why Does it Matter?"*
**March 8th:** Robert Dewitt Ivey *"Far Up and Far North"* Comparing alpine plants of New Mexico to boreal plants of Alaska and Canada.

The chapter is working on a 3-year joint project with the Taos County Chamber of Commerce Beautification Committee to re-landscape the Taos Visitors Center. A seed-gathering committee is collecting local seed for this and a second re-landscaping project at the historic San Geronimo Lodge. And member Virginia Black is now doing a program on KRZA-FM called "The Sage Gardener," which airs every other week, Tuesday at 8:30 AM.

# Jury still out on caged exotic insect

**by W. W. Papich**

A Chinese beetle that eats one of the nastiest weeds in the West, and a rare bird that nests in the plant, have thrown a monkey wrench in the Endangered Species Act.

The Colorado River is choked with salt cedar, an Asian tree-sized weed that crowds out native plants needed to sustain the river's natural ecosystem. But a Chinese beetle, that in laboratory tests eats nothing but salt cedar, may not be released into the environment because the bird has taken up residence in salt cedar.

The endangered Southwest willow fly catcher was named for nesting in native willow. The songbird, however, builds nests in salt cedar because the plant's protective foliage is dense like willow. Conservationists who want the insect released now say that reducing salt cedar won't harm the bird because the less salt cedar there is the more space there is for native willows and cottonwood trees to grow. "Our intention is to release the bug in limited, key areas where we can knock out salt cedar and go in and plant willows," says Gary Cornell of the Utah Department of Natural Resources office in Moab.

The U.S. Fish and Wildlife Service, which oversees how the Endangered Species Act is implemented, wants further tests of the bug to make sure it won't eat salt cedar so fast that native willows and cottonwood trees don't have time to replace the salt cedar. "There are just so many things that could happen if this bug was very effective and it worked quickly," says Fish and Wildlife Service recovery coordinator for the Southwest willow fly catcher, Stuart Leon. "We're dealing with a very endangered species here that is reliant for nesting and productivity on the very substrates that they want to decrease the health of," Leon said.

**Salt cedar arrived in the U.S. in the early 1800s.**

Because of its extensive root system it was widely used to prevent soil erosion along waterways. Today salt cedar grows on more than 1 million acres in almost every drainage system in arid and semi-arid areas of the Southwest.

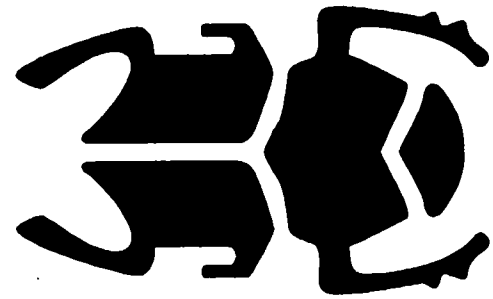
"Salt cedar is beyond manual eradication, beyond herbicides," says Jake Sigg, president of the California Native Plant Society and who wants the beetle released. Biological control is the only possibility of coping with it. Sigg said Fish and Wildlife Service concern about the beetle harming the endangered bird's habitat is too narrow a focus and they don't see the big picture. "Quite a few desert animals are endangered because of displacement of the native plants by salt cedar," Sigg said. "There are springs and seeps out there in the desert that many creatures are totally dependent on and salt cedar finds these seeps and dries them up because its root system is so aggressive." He said the Endangered Species Act is "being used to endanger species."

The Southwest willow fly catcher lives in Mexico and Central America during winter, migrating to the Southwest in summer to nest and reproduce. Since 1996 a Bureau of Reclamation commissioned survey of 350 miles of the lower Colorrado River has found more than 100 nests, more than half in salt cedar.

The surveys were on contract to the biological science section of San Bernardino County Museum, San Bernardino, Calif. The museum's curator of biology, Robert McKernan, says damming of rivers has stopped annual flooding willows need for thick, new growth, so destroying salt cedar may leave the rare bird with nowhere to nest.

"Without spring flooding there are no stands of water that willows need for new growth and no more annual deluges to cleanse sand and soil of salts," McKernan said. "Willows won't grow in extremely salty areas, but salt cedar thrives."

Without actually doing drip irrigation you can't grow cottonwood trees and willows, McKernan said of riparian environments forever altered by damming of waterways in the Southwest. "We can't just release a bug and start eliminating salt cedar habitat because we may not get replacement immediately or maybe never get replacement of native habitat."



Cattle and wildlife do not eat salt cedar, but use dense stands of the plant for hiding or to get out of the sun. Possible loss of that protective canopy has Doc Lane of the Arizona Cattle Growers Association worried. He's also skittish about potential erosion along rivers without roots of salt cedar to hold sand and soil together. "What happens when dams fill with silt because salt cedar is gone?" Lane asks.

**Consequences being monitored**

This past August the U.S. Department of Agriculture erected screened, outdoor cages in six Southwestern states to study the beetle's eating habits, the first studies outside the laboratory. USDA entomologist Jack DeLoach, who has observed the beetle's behavior in China, says the insect will never wipe out salt cedar. "Eradication is a word we don't even use," DeLoach said. "It's still there, but not enough to cause damage anymore. It's in balance with everything else."

A Fish and Wildlife Service decision on whether to release the beetles into the environment will be after they are studied in their cages for a year. That's in addition to the 10 years DeLoach has studied the insects in China and in USDA labs, becoming confident the beetle and bird can coexist.

However, he doesn't envy the predicament of Fish and Wildlife Service biologists who must be absolutely sure. "There's nothing worse that could happen if you were in that situation, with those responsibilities, than to have a threatened species go extinct under your reign - an ecological disaster that you have presided over," DeLoach said.

# No Kidding!

## Goats touted as organic weed eaters in New Mexico

**by Zelie Pollon**
*Excerpted from Dallas Morning News*

ALBUQUERQUE, N.M. - What weekend gardener hasn't wished for an easier way to rid the yard of weeds without chemicals? A method that's easy and requires minimal attention?

Have you considered goats?

About 1,000 of them may get a big try-out along the weed-clogged banks of the Rio Grande, say officials of Albuquerque's Middle Rio Grande Conservancy District.

"Very tightly managed and limited use of goats is a really good and ecologically sound way to manage vegetation without having to use herbicides or fossil fuels for mowers," said district biologist Sterling Grogan.

**Benefits to Native Plants Seen**

Mr. Grogan, who has restored damaged ecosystems for 25 years, says other livestock can work, too. But goats, if managed well, are ideal because they eat non-native broadleaf plants, leaving room for native grasses to flourish.

The grasses prevent erosion and ultimately reduce pollution, he said. And the goats' waste "kick-starts" decomposition, providing essential plant nutrients not easily found in the desert.

"The result is a spectacular chance for native plants to flourish over exotic plants - and it works, Mr. Grogan said.

**No lack of goat food**

New Mexico has 1,234 miles of canals, drains and ditches to be cleared, as well as 20,000 acres of Bosque reserve land - an expanse that until now has been cleared using costly electrical equipment, herbicides, and manual labor.

Public perception is another issue, Grogan said. "There's this whole mythology of the dangers of livestock grazing and the damage that's been done in the West, but that's due to poor management, and not the livestock."

Changing perceptions might be the least of Grogan's worries. So far, he said, the idea has received nothing but praise.

## POINT...*COUNTER POINT*

"Perhaps nature is our best assurance of immortality."
*Eleanor Roosevelt, 1945*

"A tree is a tree — how many do you need to look at?"
*Ronald Reagan, 1965*

## *BOOK REVIEW*

By Virginia Black, Taos Chapter

*Month-to-Month Gardening, New Mexico*
Kelli Dolecek
Four Sisters Publishing Inc., Englewood CO 1999

To annoy a native plant gardener who loves working with what's here, start your book with "New Mexico's soil isn't the best." Kelli Dolocek's book was created by committee — "experts" who can't have explored their state, and Dolocek seems to have spent no time here. Oh, there are special instructions for high elevation gardens "above 5000 feet". But on page 128, describing caliche, she claims it is "from 1 inch to several inches" thick (in the Taos area it goes way down).

The minimum-text format, consisting largely of lists and illustrations, is fun and easy at beginner's level and contains many good tips, but no beginner could dodge the misinformation.

Dolocek's xeriscape list includes purple robe locust, Australian pine, lilac, saltbrush, dianthus, coral bells, and daisy. This book isn't for native gardeners.

## BOOKSIGNING

Andy Wasowski will be signing copies of his latest book, *The Landscaping Revolution*, on Sunday, February 20th at 2 PM at the Bound-to-be-Read bookstore, 6300 San Mateo NE in the Far North Shopping Center, Albuquerque.

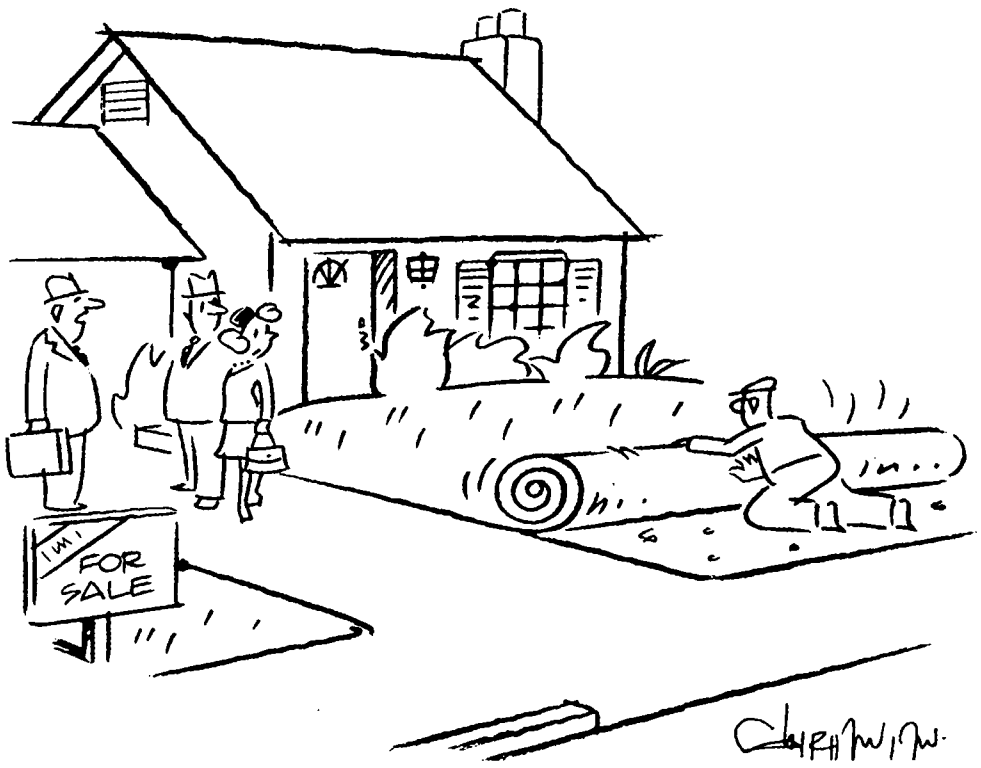
# GET INTO THE GLAMOROUS AD BIZ!

No, you don't have to move to New York and Madison Avenue. Just keep your eyes peeled for potential companies and individuals who might like to advertise in this newsletter. Potential advertisers don't have to be gardening professionals, but they ought to be in harmony with our goals and ideals. A herb shop or a natural food restaurant or even a bank that has an environmentally responsible landscape could qualify. Clearly, we don't want to promote a company that sells toxic chemicals.

The big news is that we're planning on reaching a lot more people than our own NPSNM members. Beginning with the Spring Edition, we'll be overprinting the newsletter and distributing it throughout the state, making it an even better deal for advertisers.

Shy about approaching these companies? Just call us and we'll do the follow-up. Contact the editor of this newsletter at andrzej@laplaza.org, or call 776-1498. By the way, we need an advertising manager, too. No experience needed.






**"Everything goes with the house but the lawn. They're taking that with them."**

Cartoon courtesy of Vahan Shirvanian

# *FLORA NEOMEXICANA:*

## Something Old and Something New

***By Robert Sivinski, Vice President NMSNM***
***Botanist, New Mexico Forestry Division***

The pace of new plant discoveries in New Mexico has slowed down a little during the seven years since my last report under this column, but I have a few new novelties to bring to your attention. There are also a few old species either languishing in synonymy or simply not seen for a long period that have been recently rediscovered by New Mexican botanists. The following is a summary of what is new and what is resurrected in New Mexico plant taxonomy.

In our orchids there is one new variety and one old resurrected name for New Mexico. The new variation is *Hexalectris spicata* var. *arizonica* (Orchid Family: Arizona coralroot). Its smaller, self-pollinating flowers distinguish it from var. *spicata*. The authors of this publication (Catling and Engel, Lindleyana 8:119-125, 1993) did not attribute this variety to New Mexico. Fortunately, we have Tom Todsen here to look at our New Mexican *Hexalectris* specimens. He assures me that all *Hexalectris spicata* collections from southern New Mexico are the new variety *arizonica*. Tom has also discovered the true *Malaxis ehrenbergii* (Orchid Family: adder's tongue orchid) of central Mexico is a different species from the one we have here and in Arizona and northern Mexico (Sida 17:637-638, 1997). An Arizona collection of the northern species has previously been published as *Malaxis porphyrea,* so that is the name we should be using in place of *M. ehrenbergii*.

Ken Heil and Mark Porter have published a revised taxonomic treatment of the genus *Sclerocactus* (Cactus Family) which added two new taxa to San Juan County (Haseltonia 2:20-46, 1994). The New Mexico populations that had been called *Sclerocactus whipplei* were separated from that species and given the name *Sclerocactus cloveriae*. There are two infraspecific taxa: *S. cloveriae* subsp. *cloveriae* (Clover's hardwall cactus) and *S. cloveriae* subsp. *brackii* (Brack's hardwall cactus). Brack's hardwall cactus is distinguished by its ability to bloom when still very small and with juvenile spines. The NM Forestry Division has listed Brack's hardwall cactus as a state endangered plant so it is illegal to collect from its natural habitats.

Bill Hess and I finally published *Zigadenus mogollonensis* (Lily Family: Mogollon death camas) as a new species (Sida 16:389-400, 1995). It is presently known to occur only in the high mountains around Whitewater Baldy in the Mogollon Range. Its large, nodding flowers with purple-tinged tepals distinguish it from all other species in the genus. The Mogollon death camas is the most beautiful of *Zigadenus* species. Someone should try to cultivate it from seed.

At somewhat lower elevations in southwestern New Mexico, a new variety of thistle has been discovered and published by Pat Barlow-Irick (Novon 9:318-322, 1999). She named this variety *Cirsium ochrocentrum* var. *martinii* (Aster Family: Martin's thistle) in honor of William Martin, UNM professor and senior author of *A Flora of New Mexico* (1984, 1985). This thistle is a strikingly beautiful plant with large heads of bright red flowers. Look for it next summer on the roadsides of western Catron and Grant counties.

The small genus *Plummera* contained only two species, *P. ambigens* and *P. floribunda*, when it was transferred to the genus *Hymenoxys* by Mark Bierner (Sida 16:1-8, 1994). Warren Wagner, Reggie Fletcher, and Robynn Shannon later combined both species into the single species, *Hymenoxys ambigens* (Brittonia 51:79-86, 1999). They recognize three varieties, and the New Mexican variation is new to science. *Hymenoxys ambigens* var. *neomexicana* (Aster Family: New Mexico bitterweed) is presently known to occur only in the Animas and Peloncillo mountains of the Hidalgo County boot heel.

The Sierra Lucero in western Valencia and southeastern Cibola counties has yielded a new variety of twinpod (Sida 18:673-677, 1999). I named this new variation *Physaria newberryi* var. *yesicola* (Mustard Family: Yeso twinpod). It is endemic to the gypseous Yeso Formation in the Sierra Lucero, hence the varietal epithet *yesicola*. Yeso twinpod is most easily distinguished from other *P. newberryi* varieties by its very long (5-9 mm), filiform styles.

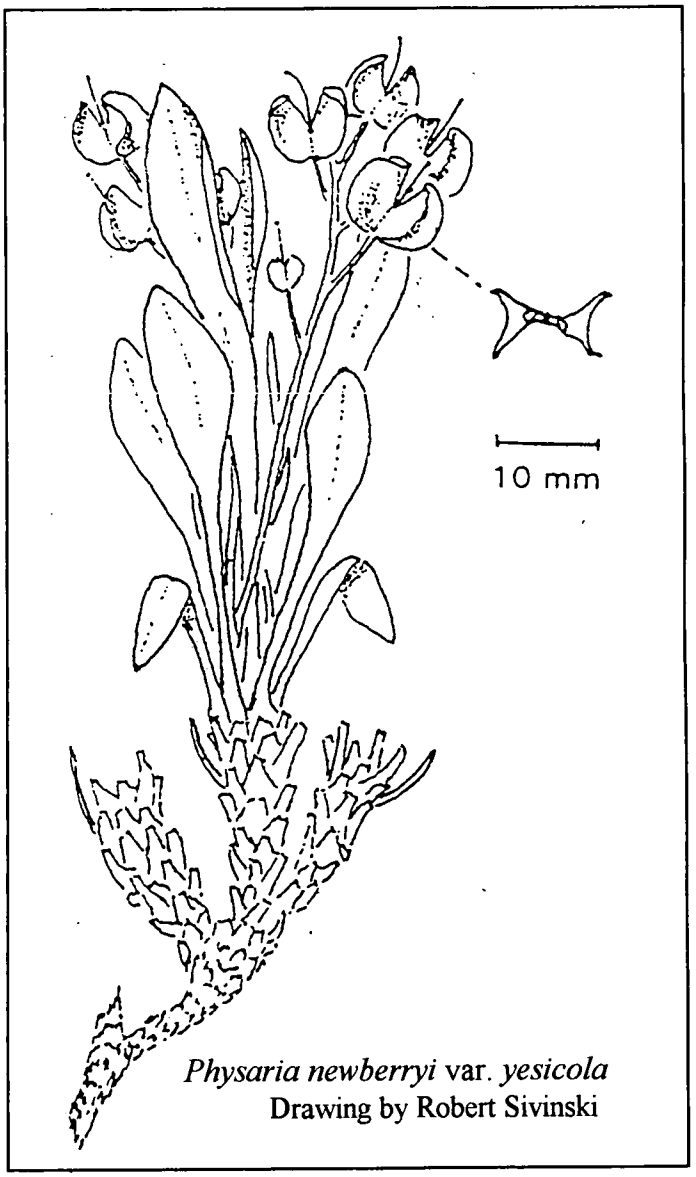
Tom Todsen published the new species *Mentzelia conspicua* (Loasa or Stickleaf Family: Chama blazingstar) which is the most beautiful of our yellow-flowered *Mentzelia* species (Sida 18:819-822, 1999). It somewhat resembles *Mentzelia laciniata*,

but its flowers are at least twice the size and very conspicuous. It is endemic to shaley outcrops in the upper Chama River basin, ranging from near Tierra Amarilla down to Ghost Ranch.

Another New Mexican blazingstar has recently been brought to light - not as something new, but an old taxon resurrected from synonymy. *Mentzelia springeri* was discovered by paleontologist Frank Springer in Frijoles Canyon of the Jemez Mountains. Paul Stanley published it as a new species in 1913, but Josephine Darlington placed it into synonymy with the more common *Mentzelia multiflora* in her 1934 monograph of the genus. Upon seeing this plant on pumice outcrops in the Jemez Mountains, I could easily distinguish it from *M. multiflora* by its bushy habit, linear stem leaves, solitary flowers, and tiny capsules. I concluded that *Mentzelia springeri* should be resurrected as a valid Jemez Mountains endemic and published a rebuttal in the New Mexico Naturalist's Notes 1(2):43-45, 1998. (This is a new, erratically published journal devoted to recording natural history observations in our state. It is not available for purchase, but is distributed free of charge to all 25 depositional libraries in New Mexico. Look for it in your library and consider submitting articles.)

The penstemaniacs of New Mexico will be glad to hear that another old species name has been resurrected from synonymy (Sida 18:621-622, 1998). Tom Todsen rediscovered *Penstemon metcalfei* (Figwort Family: Metcalfe's penstemon) on Cross-O Mountain near Emory Pass. He could easily distinguish it from *Penstemon whippleanus* where it has languished as a synonym. They look very similar, but *P. metcalfei* has pale blue-lavender flowers, a broad corolla lip, a more bearded staminode, and does not have explanate anthers. Fortunately, Tom made this discovery while Jean Heflin was writing her book 'Penstemons: The Beautiful Beardtongues of New Mexico' (1997), so *P. metcalfei* is illustrated in that handy reference. This long-lost penstemon was discovered in 1906 by O.B. Metcalfe at the now abandoned Lookout Mine in the Black Range. Last summer, Phil Tonne and I hiked down Trujillo Canyon to see if this penstemon was still there. We saw nothing for many miles, then just as we arrived at the old mine workings, the south canyon wall became loaded with Metcalfe's penstemon. Phil also found other locations for this species in the north fork of Percha Creek.

Another long lost Black Range plant is *Adenophyllum wrightii* (Aster Family: Wright's dogweed). The New Mexico population of this plant was originally located at Santa Rita del Cobre during the 1851 U.S./Mexico Boundary Survey. It was found again in 1880 by E.O. Greene (again near Santa Rita), but not seen since then. Phil and I went looking for this plant last summer. We found two small populations in the Pinos Altos Range north of Santa Rita and another larger population on the ridge above McKnight Canyon in the Black Range. Its taller growth, alternate leaves, orangy yellow rays, and double pappus distinguish it from the more common dogweed (*Dyssodia papposa*). We were excited to rediscover *Adenophyllum* in New Mexico after an interval of 119 years. These discoveries are the spices of life that cause botanists to return again and again to the field.




*Physaria newberryi* var. *yesicola*
Drawing by Robert Sivinski

# DESIGNING WINDBREAKS

*by Judith Phillips*
*Author and Owner of*
*Bernardo Beach Native Plant Farm*

Frigid blasts in winter and strong spring winds make outdoor living less inviting and gardening more difficult in our otherwise enjoyable climate. Windbreaks are an effective way to reduce the force of wind and direct its flow.

A mixed evergreen and deciduous planting provides shelter up to five times its height, so that an average fifteen-foot-tall planting protects the space on its lee side forty-five to seventy-five feet from the planting. Windbreaks should extend well beyond the area they are intended to shelter, since wind will eddy and focus inward once it clears the edges of the planting. Wind spilling over a uniform barrier such as a wall increases in velocity on descent. Varying the heights of plants, with or without a wall, breaks up the flow of wind across the top of the windbreak, enhancing its buffering.

**Continuous plantings**

Since any gaps in a windbreak will increase the velocity of wind funneling through them, it's important to keep the planting continuous. Evergreens reduce wind velocity up to 80 percent, fine-textured leafy plants slow wind speed up to 50 percent, and even the twiggy bare branches of deciduous plants slow wind a significant 25 percent. A combination evergreen and deciduous, broadleaf and fine-textured, is more interesting visually and truer to ecological models. From a practical standpoint, a soldier-straight formation of a single species of plant is less effective than an irregularly spaced combination of several types of plants, some taller, others denser at the base, some evergreen, others having seasonal color. The contrast between the plants provides year-round interest, and seasonal blooms and fruits that support wildlife. And the eventual loss of an individual plant or two over time won't diminish the value of the planting.

Because tall trees are alien to all but riparian and high elevation ecosystems in New Mexico, for those of us living in the middleground, it is more effective to select lower-profile plants and cluster them closely around the garden spaces in need of protection than to try to buffer the entire property by planting an oversize border along the perimeter. There is an added advantage in creating smaller enclosed spaces in that frost tends to settle in large openings while small clearings remain significantly warmer.

Many nights I awaken to the eerie whooo-whooo of a horned owl who finds refuge in our windbreaks. If my name was Ultima, the owl's presence might worry me, but I am secure in the knowledge that the death forecast is likely to be that of the rodents mutilating my tender seedlings.

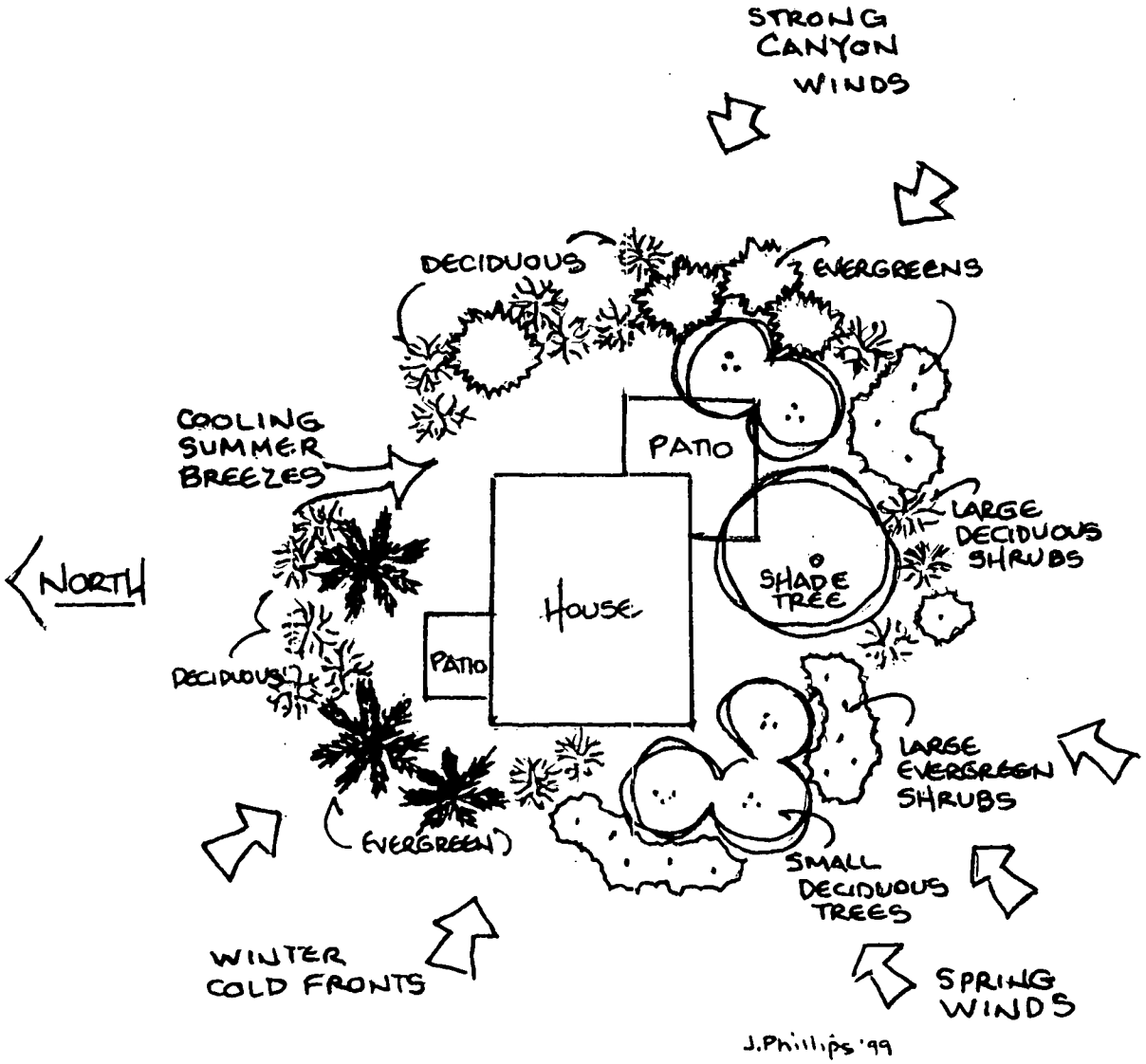
Bless windbreaks and *all* the benefits they afford us!

**Selected Upland Windbreak Plants**
Utah serviceberry *Amelanchier utahensis*
Algerita *Berberis haematocarpa*
Netleaf hackberry *Celtis reticulata*
Curlleaf mountain mahogany *Cercocarpus ledifolius*
Montane mountain mahogany *C. montanus*
Cliffrose *Purshia stansburiana*
New Mexico olive *Forestiera neomexicana*
Rocky Mountain juniper *Juniperus scopulorum*
(select female plants)
Pinyon *Pinus edulis*
Hoptree *Ptelea trifoliata*
Gambel oak *Quercus gambelii*
Shrub liveoak *Q. turbinella*

**Selected Desert/Grassland Windbreak Plants**
Algerita *Berberis haematocarpa*
Neatleaf hacklerry *Celtis reticulata*
Desert willow *Chilopsis linearis*
Arizona cypress *Cupressus arizonica*
New Mexico olive *Forestiera neomexicana*
Cliffrose *Purshia stansburiana*
Emory oak *Quercus emoryi*
Littleleaf sumac *Rhus microphylla*
Mexican buckeye *Ungnadia speciosa*
Arizona rosewood *Vauquelinia californica*

**Selected Riparian Windbreak Plants**
False indigo *Amorpha fruticosa*
Algerita *Berberis haematocarpa*
Netleaf hackberry *Celtis reticulata*
New Mexico olive *Forestiera neomexicana*
Golden currant *Ribes aureum*
Mexican elder *Sambucus mexicanus*

## A Windbreak Landscape Plan




## POLLINATOR STUDY NEEDS HELP

Populations of bees, butterflies, moths, hummingbirds, and bats — some migrating from northern Mexico to southern Colorado through Arizona and New Mexico — are declining at ecosystem threatening rates. The Turner Foundation has made a significant financial contribution toward a regional pollinator study undertaken by the Arizona-Sonoran Museum in Tucson. The Museum encourages interested individuals and organizations to join its multi-cultural conservation team. Individual Native Plant Society of New Mexico members as well as local chapters can write to:

**The Arizona-Sonoran Museum**
**Migratory Pollinators**
**2021 North Kinney Road**
**Tucson AZ 85743 or**
**e-mail pol@desertmuseum.org**

to see how we may contribute to this worthy endeavor.

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| Arizona Flora (Kearney & Peebles, 1960) | 80.00 | 64.00 |
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**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. In addition, a wide selection of books dealing with plants, landscaping, and other environmental issues is available at discount prices. The Society has also produced two New Mexico wildflower posters by artist Niki Threlkeld and can be ordered by contacting our Poster Chair or Book Sales representative.

**See page 5 for all Society Contacts.**

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Dues are $12 annually for individuals or families.

Organizations, businesses and individuals who wish to support the Society's activities and long range goals may contribute $25 annually as "Friends of the Society."

To join us, please send your dues to:

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Santa Fe NM 87502-5917

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Newsletter Editor
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Arroyo Seco NM 87514

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