Native Plant Society of New Mexico

NATIVE PLANT SOCIETY OF NEW MEXICO NEWSLETTER

March/April 1995 Volume XX Number 2

WHAT'S IN A NAME?

Including: What About *Larrea tridentata*?

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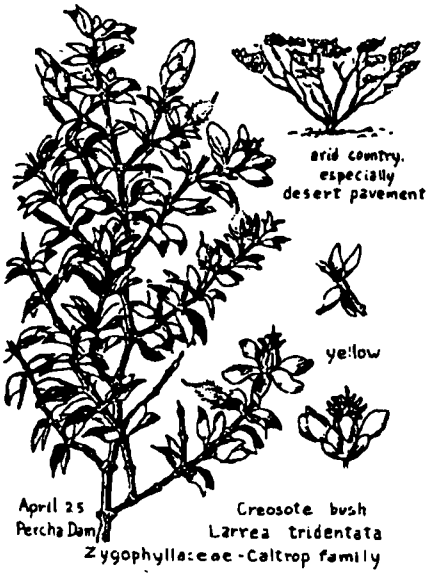
Most of us are familiar with the system of binomial nomenclature that describes our native New Mexico plants. We know that each plant bears a name in two parts, the generic epithet and the specific epithet: *Bouteloua curtipendula* (sideoats grama), *Taraxacum officinale* (dandelion), and *Atriplex canescens* (four-wing saltbush) are common examples. These odd-sounding, Latinized names, though, are more than just convenient markers for our memories. They often bear interesting stories in themselves.

Some names commemorate individuals or places. The origins of generic names such as *Ivanjohnstonia* (not to be confused with *Marshalljohnstonia*), *Captaincookia, Carlowrightia, and Allenrolfea* are apparent. Billie Turner, an eminent (and eccentric) botanist of Texas, is honored by two genera, the obvious *Billieturnera* and the Spanish derivative *Jefea* (because he's the big chief!). Of course, specific epithets also may celebrate an individual: *Astragalus nuttalliana* (Thomas Nuttall), *Muhlenbergia metcalfei* (Orrick Baylor Metcalfe), and *Cheilanthes wootonii* (E.O. Wooton) are a few. August Fendler, who spent the spring of 1847 in the environs of Santa Fe, is remembered by no fewer than 100 New Mexico plants that bear his name (*Arabis fendleri, Aster fendleri, Berberis fendleri, Brickellia fendleri, Cheilanthes fendleri, Cryptantha fendleri, Cymopterus fendleri, Echinocereus fendleri, Eriogonum fendlerianum, Eupatorium fendleri, Hieracium fendleri, Lesquerella fendleri, Malacothrix fendleri, Notholaena fendleri, Poa fenderiana, Senecio fendleri, Sphaeralcea fendleri*, and *Trifolium fendleri* get us started).

Other names are geographical, often noting the place of the plant's occurrence: *Elymus canadensis, Echinocactus texensis, Ranunculus arizonicus, Ribes coloradense, Rosa neomexicana*, and *Vicia americana*, for example. However, names are not always what they appear. *Digitaria californica*, Arizona cottontop, is absent from California, U.S.A., but is quite common in Baja California, Mexico. The name of stinkgrass, *Eragrostis cilianensis*, is sometimes thought to refer to ciliate hairs present on the plant, but actually alludes to the Ciliani Estate in Italy, where it was originally collected.



Similar to geographical names are those relating to habitat: *Asclepias arenaria* (of sandy ground), *Juniperus scopulorum* (of rocky places, the plural, i.e., the Rockies), *Phleum pratense* (of meadows), *Poa arida* (of arid places), and *Scirpus fluviatilis* (of rivers).

Finally, scientific names may call attention to details of the plant. In *Cucurbita foetidissima*, the specific epithet is the superlative of foetida, and means exceedingly foul-smelling. The name *Bothriochloa*, meaning pitted grass, alludes to the pit or deep depression in the outer glume of some species. Interestingly, the pit extends into the interior of the spikelet, and may block the exsertion of the anthers, thus bringing about self-pollination. Plants of *Baccharis sarothroides* (sarothrum, broom) are large and broom-like; barbed bristles of *Setaria adhaerens* cause the seedheads to cling to socks, fur, and each other; and the leaves of *Arctostaphylos pungens* (*pungo*, to puncture, ie., with a sharp point) are pointed

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with a little cusp or tooth at the tip.

But there is more to scientific names of plants than the binomials. Following the specific epithet will be a reference (usually an abbreviation) to the author of that name, the person who first described that plant as new to science. Thus we have *Reverchonia arenaria* Gray for Asa Gray of Harvard; *Tragia ramosa* Torr. for John Torrey, a physician and contemporary of Gray's; *Selaginella densa* Rydb. for Per Axel Rydberg, a Swedish-born botanist who described numerous plants of the early west; and *Baccharis neglecta* Britt. for Nathanial Lord Britton of the New York Botanical Garden.

One will often find two authorities after the binomial, one in parentheses and one not. This tells us that there has been a change in the classification of the plant in question. For example, bermudagrass was first known as *Panicum dactylon* L., described by Linnaeus. Persoon, a Dutch botanist, realized that the grass was mis-classified in *Panicum*, and transferred the specific epithet to *Cynodon*. Since the author of the specific epithet follows that epithet wherever it goes, we now have *Cynodon dactylon* (L.) Pers. as the complete scientific name of bermudagrass.

Sometimes determining the correct authorities for the binomial can be quite confusing and complex (and a game really only of interest to professional taxonomists who delight in such esoterica!). Let's take the common creosote bush, *Larrea tridentata*, for an example. In the literature, one finds several different authorities given for the scientific name:

Larrea tridentata (DeCandolle) Coville
" " (Sessé & Mociño) Coville
" " (Mociño & Sessé) Coville
" " (Mociño & Sessé ex DeCandolle) Coville
" " (Mociño & Sessé in DeCandolle) Coville

We immediately wonder why the differences and which is the correct author citation? The story is fascinating and is as follows:

Creosote bush was first known to science through the efforts of the Royal Botanical Expedition to New Spain led by José Mariano Mociño and Martín de Sessé y Lacasta during the years 1787-1803. Artists were employed during the early years of the expedition, until about 1791, and they drew, in the field, numerous

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

Membership in the Native Plant Society of New Mexico is open to anyone supporting our goals. We are dedicated to promoting a greater appreciation of native plants and their environment, and to the preservation of endangered species.

Members benefit from chapter meetings, field trips, publications, plant and seed exchanges, and 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 further info.

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

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, 10800 Griffith Park Drive, Albuquerque, NM 87122

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 April 1.

illustrations of new species of plants. These drawings returned to Spain with Mociño and Sessé in 1803 and were housed for a time at the Royal Botanical Garden in Madrid. Mociño and Sessé intended to publish their botanical results of the expedition in a work entitled "Flora Mexicana," but, due to the untimely deaths of both Mociño and Sessé and then the loss of the manuscript, actual publication was delayed for more than 100 years after its preparation. The set of drawings to accompany this work was known as the "Flora Mexicana Icones" (icones, images or illustrations). Meanwhile, hard times befell Mociño. In 1812, he was exiled from Spain (on political grounds) and fled to France, taking with him the more than 1300 plates of the "Icones" (Sessé had died in 1809) and entrusting them to Augustin Pyramus DeCandolle at Montpellier. DeCandolle used these plates freely as the basis for many of his new species in his prestigious "Prodromus systematis naturalis regni vegetabilis," a 17-volume treatise of all the seed plants known to man at that time (published from 1824-1873). When Mociño was permitted to return to Spain in 1817 he asked DeCandolle for the return of his plates. DeCandolle agreed, but, before giving them back to Mociño, immediately employed some one hundred artists to copy in 10 days more than a thousand of the plates. Mociño returned to Spain and took the plates with him to Barcelona, where he died in 1820. The original drawings never made it to Madrid and have never been found.

But, back to the name of creosote bush. It was originally given the name *Zygophyllum tridentatum* by DeCandolle in his "Prodromus" in 1824, based not on a specimen, but on the drawing of the plant from the "Icones" loaned to him by Mociño. DeCandolle acknowledged the origin of the epithet *tridentatum*, which was written on the drawing, with the abbreviated phrase "fl. mex. ic. ined." (Flora Mexicana Icones, not yet in print). When a binomial is published by one author who uses the unpublished epithet of others, the rules provide for giving credit to all who contribute to the new name, with the insertion of the latin preposition *ex*. In our case, the correct and complete author citation for *Zygophyllum tridentatum* would be Mociño & Sessé ex DeCandolle, meaning that DeCandolle is the actual publishing author, but acknowledges his use of Mocio & Sessé's unpublished epithet. The rules also permit dropping the authorities before the *ex* (Mociño & Sessé), so DeCandolle's name could also be written *Zygophyllum tridentatum* DeCandolle, but this is less satisfactory because it ignores the contribution of Mociño and Sessé.

The rest of the story is easy. Frederick Coville, curator at the U.S. National Herbarium, realized that creosote bush was misclassified in the genus *Zygophyllum*, and transferred the specific epithet to the genus *Larrea* in 1893. Keeping in mind that the authority for the epithet follows that epithet wherever it goes, the complete name for creosote bush thus became *Larrea tridentata* (Mociño & Sessé ex DeCandolle) Coville. (Whew!!)

Now that we're becoming nomenclatural experts, let me open another can of worms to illustrate a point. Suppose that Mociño and Sessé had not only suggested the name on the "Icones" plate, but had also supplied the description and write-up of the new species *Zygophyllum tridentatum*, and that DeCandolle had then asked them to publish it in his "Prodromus.". In this case, the *ex* would then become *in* and Mociño and Sessé would be considered the authors of the epithet, publishing in the work of DeCandolle. Their binomial for creosote bush would then be cited as *Zygophyllum tridentatum* Mociño & Sessé in DeCandolle. In this case, the rules permit dropping the names after the in and the scientific name could be shortened to *Zygophyllum tridentatum* Mociño & Sessé, or, upon transfer to *Larrea*, *Larrea tridentata* (Mociño & Sessé) Coville.

As you might guess, this ex/in difference is easily confused, and all sorts of conjugations of author citations result. Fortunately, creosote bush by any other name smells just as sweet (sour?)!

As an aside, many wonder just what the tridentata refers to in the name of creosote bush. Just interior to the petals and stamens in a flower is a whorl of bracts, each 3-toothed at the tip, or tridentate.

NEWS RELEASE 1 March, 1995

NATIVE PLANT SOCIETY OF NEW MEXICO
ANNUAL STATE MEETING
SILVER CITY, NM
AUGUST 18-20, 1995

The Gila National Forest: A National Treasure

The 1995 Native Plant Society of New Mexico Annual Meeting will address our theme from a variety of perspectives. The Gila National Forest is a unique and beautiful 3.3 million acres of publicly owned forest and rangeland, that today is the center of a national debate. This will be the stage for the annual field trip. Lectures, group discussions, and dramatizations will also provide opportunities for participants to develop a better understanding of the vascular flora and ecology of this critical area in the Southwest. Every member of the NPSNM has a role to play in this debate and in protecting the flora and fauna of this vital part of our national heritage. Please mark the dates of 18 thru 20 August on your calendar and join in the celebration of the Gila National Forest.

CALENDAR

OTERO

March 18 "Landscaping and Water Conservation" by Greg Magee. Sierra School, 2 p.m.
April 15 Field trip to White Sands Missile Range led by range botanist Gretchen Norman. 9 a.m. Holiday Inn lot, south end.
April 29 Preparation for plant sale at Gordon's home in La Luz. Bring potted natives.
May 6 Plant sale. Alamogordo Garden Center. 10th and Oregon. 9 a.m. to 1 pm.

ALBUQUERQUE

****NOTE SCHEDULE CHANGES****
Cards will be sent if there are further changes. Call your chapter contacts with questions.

March 2 "Riparian Ecology" by E. Muldavin and P. Durkin. 7:30 p.m. Albuquerque Garden Center, 10120 Lomas.
April 6 Pollen in the Landscape" by Judy Nickell. 7:30 Albuquerque Garden Center.
April 29 Garden Fair and Sale, Albuquerque Garden Center.

May 4 "East Mountain Wildflowers" by Judy Dain. 7:30 Albuquerque Garden Center.
May 6 Potluck and hikes at the Dain Ranch.

LAS CRUCES

March 8 "Botanical Biography" by various chapter members. 7:30 p.m. Southwest Environmental Center, 1494 S. Solano.
March 12 Fieldtrip to Aden Lava Flow. 9 a.m. Pan Am Center lot.

April 12 "Global Warming Issues" by Craig Liddell. 7:30 p.m. Southwest Environmental Center.
April 23 Fieldtrip to North Franklin Mtns. 8 a.m. Pan Am lot.

GILA

March 17 "Identifying Pines, Junipers, and their Allies" by Jack Carter and Deb Swetnam. 7:00 pm, WNMU Harlan Hall, Rm 111.
March 19 Field Trip "Identifying Pines, Junipers, and their Allies". WNMU Fine Arts Lot.

April 9 Field trip to Organic Farm. WNMU Fine Arts Lot.

SANTA FE

March 15 "Rare Plants vs Cows" by David Deardorff. 7:30 p.m. Rm 122 Evens Science Bldg. St. Johns College.
April 19 "Let's Talk about Noxious Weeds" by Dr. Richard Lee. 7:30 p.m. Evens Science Bldg.

EDITORS MESSAGE

Please note my personal address change as well as the return address change for the *Newsletter*. I have been receiving increasing material via e-mail so feel free to use that option for communication as well.

At the recent board meeting, there were several new members, and a wealth of new ideas. The society seems to be becoming more interested in providing education and outreach to the New Mexico Community. In this regard we will be working towards providing educational materials to schools, the production of booklets listing native plants that are suitable for New Mexico landscapes, and becoming more involved in the conservation of our states heritage of native plants. These activities are in line with the mission of our organization and will be welcomed.

As for your *Newsletter*, it is our method of reaching members and the general public with both educational and technical issues. Member's interests vary. This month's feature article deals with naming and nomenclature with many interesting anecdotes. Other topics of interest to members include conservation, identification, landscaping,ecosystems, propagation, and so on. Other NPSNM members would like to know what you are doing and what interesting plants are in your area and your gardens. Who knows those plants better than you do? So here's your invitation to write an article (even a short one) and tell them. You may have noticed that I often publish reprints of articles from newsletters of other Native Plant Societies. These are quite interesting to me, and I hope to you as well. They do not, however, substitute for original articles about New Mexico native plants. For those of you with even more ambition, the 1996 meeting of the Texas Native Plant Society in El Paso will give you the opportunity to present a paper on some aspect of plants of the Chihuahuan desert. These abstracts are published.

Happy Hunting, TM.

CHAPTER REPORTS

Las Cruces-Paul & Betty Shelford

1/19/95 We had a combined meeting with the local chapters of the Sierra Club and the Mesilla Valley Audubon Society to hear Charles "Chip" Cartwright, USDA Regional Forester for the Southwestern Region. He spoke of the reinvention of the Forest Service since 1992. They are working toward an ecology-based, multiple-use management where the role of conservationists will no longer be adversarial but will involve management policy making. The forest service is seeking to become more holistic through adaptive management, which means "controlled monitoring of management approach to assure that it is affecting the environment as we want it to be.

Otero-Jean Dodd

At Otero's Jan. 14th meeting Dr. Richard Lee,Extension Weed Scientist at NMSU in LasCruces, talked about the noxious weed problem. The longer we wait to pass a Noxious Weed Management Act the more it will cost everyone since the weeds will continue to spread. Another aspect was the concern for private property rights so much talked about now. For example 3 ranches side by side and the 2 on the ends try their best to to control noxious weeds and the one in the middle does not. The wind will blow, roots do not respect property lines, and people will be walking around possibly with weed seeds on their shoes, socks, pants until they fall off and plant themselves. The legislative Bill had no teeth .In other words there would be no requirements to remove noxious weeds. It could be possible to get federal funds to help where large acreages of noxious weeds exist. Without a Bill in place the request could not be made. By the time this *Newsletter* comes out Dr. Lee will have spoken to the Albuquerque and SantaFe Chapters and hopefully shown the video "Explosion in Slow Motion" which gives a graphic description of noxious weed problems in the western states. John Connor, a landowner near Mayhill and an employee of the Forest Service, pointed out that noxious weeds crowd out native plants since their natural controls are left in their country of origin. This will impact tourism, recreation areas, wilderness, farms and ranches, forests, parks, and monuments. He and his two sons spent over a hundred hours last year dealing with weeds on their place. An integrated approach to weed management would involve prevention, mechanical means (pulling,hoeing,etc.), chemical means (some selective sprays are being developed), and biological methods. Rep. Bill Porter of Las Cruces will introduce the Bill in the Legislature. The Highway Department needs to control roadside weeds, and in that context a suggestion from the audience was that cities and counties should stop the practice of grading along roadsides thereby encouraging weed growth. A possibility might be to develop a booklet in color showing noxious weeds in the state with a form to be filled out showing which weeds are in a particular place.

Otero's meeting 2-10-95 started with a potluck at the home of Len and Pat Hendzel up in the canyon from LaLuz. Our program reminded us how well travelled many of our members are. A March '94 trip to Mexico with Dr. Spellenberg, Curator of the NMSU Herbarium, included our members Len Hendzel and Charles Pase plus graduate student Sarah Wood formerly with the Forest Service in Cloudcroft. They were joined by a professor from the University of Chihuahua and the pine expert of Mexico from the Forest Service in Durango. Len & Charley showed slides and told about the trip. It took a half day to cross the Border both going an returning. Their destination was a 6,000 acre national park, Cascada de Basaseachi. Slides showed a tremendous waterfall with a drop of 750' located 60 to 70 miles from the crest of the Sierra Madre Occidental. At camp they found an ornithologist from NMSU. A group of birdwatchers from Tucson were also there. Strangely enough the group saw no wildlife except birds and no fish in the waters-a river ran through the Park. At 7,000' the pines and oaks border the Madrean Forest and do a lot of hybridizing.At this altitude it freezes every night in spring. Three new Apache pines were found, 14 different oaks, and 10 species of pine. Slides included a 20' tall Madrone, a very large cypress, Huckleberry, manzanita, and a tiny Lupine in bloom. North of Chihuahua City were farms and grasslands. Nearer to the Border sand was being taken from the sand dunes to shore up eroding beaches. Helgi Osterreich then showed plant slides from her trip to visit her aunt in Estonia at the end of June '94. It was the first time in 50 years that people could go wherever they want in this country. The plant slides she showed were from Latvia, Estonia, and Sweden. Generally speaking all the slides showed a lush place for plants. Helgie said people in this area give each other flowers all the time. A wild pink rose was 10' tall, almost like a tree. Some plants were similar or appeared to be the same as some of our mountain wildflowers like the *Mertensia franciscana*-Mountain Bluebells with pale blue bells edged with pink hanging down the stalk (Forget me not Family (Boraginaceae) as well as bedstraw *Galium* sp. Several slides show *Silene* sp with white flowers; *Veronica* , many *Stellaria*-. Trees included the Linden tree in bloom. In the countryside were pine, oak, fir,aspen, and birch.

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

Views from the South

(One member's opinion)

Happy New Year. May 1995 be better than 1994.

1994 offered so much promise on public land issues, yet turned out to be a disappointment. Surely you are aware that mining and grazing reforms died as a result of filibuster by a minority in the Senate. Now we hear a great deal about eliminating subsidies. I say go for it, but it may be that we need to again point out to Bob, Newt, and all just what some of the subsidies are and let them know we want them stopped or at least reduced.

Reducing subsidies or price guarantees to the sugar industry should be a boon to the American households and to the Florida Everglades. The former benefit from lower prices, the latter should reduce phosphorus contamination of the natural areas.

Looking at Arizona and New Mexico, I hope that at some point, mining of public lands will produce some revenues for the treasury. Allowing mining with no royalty payments is absurd. Why do the oil, gas, and coal industries pay, yet copper and gold do not?

Why does the government continue to lose money on cutting timber in the southwest, where it takes 120 or more years to regrow a tree to maturity, and costs more to construct roads into timber areas than is received from timber sales ?

Finally, I guess my biggest heartburn comes from the complete capitulation on reforming of livestock grazing practices on public lands. Here again, the subsidies are obvious. I just read an interesting article from the New York Times. Interestingly, I know both authors personally and assure you they are not from the traditional environmental community. Karl Hess used to work for the New Mexico Department of Agriculture and in the past has been a vocal defender of the livestock industry. Jerry Holechek is a professor who often expresses conservatism in grazing practices, but who has been a vocal critique of "Range Reform". The article discusses the harm done to rangeland as a result of the emergency feed program paid for by taxpayers. The program kicks in not just in the event of real drought emergency, but in years when grass growth is at least 40% below normal. The article points out that although in New Mexico, rainfall has been above average for five of the last six years, yet so has Federal drought relief. "By paying their feed bills whenever grass is scarce, Washington tells them that it is all right to overgraze because the taxpayer will make up the grass deficit." Anyway, last year was a hot and dry one for us until too late in the year to be effective. The country has sure been abused, and as the article indicates, will continue to be. I do want you to know that you are really getting good value for use of <u>your</u> land, though. Figures just released for the Las Cruces District of Bureau of Land Management attest to this. This district includes approximately 7.3 million acres of public land which is grazed by livestock. In 1994 the district received a whopping $1,524,877 in grazing fees or approximately 20 cents per acre for the whole year. Of this, ten cents went to the treasury to pay for administration of the program, and the other 10 cents went back to the area from which it was collected largely to make "improvements" for more livestock. The per acre revenue figures above are slightly overstated since a small part of the area is operated on the basis of competitive bids for grazing privileges and last year these competitive bids ran usually five times the normal non competitive rate.

Public land ranchers, of course, say they should pay less than private ranchers, because they must pay for improvements and because public lands are less productive. Regarding the latter though, grazing fees are based on animal units which means the amount of land needed to support the livestock, not on a flat per acre basis. This simply means that the charge is the same whether it takes ten, twenty or one hundred acres to feed the cow. Regarding improvements, never have I seen an improvement called for wherein the government paid less than 50%, and in brush control projects the government pays 100 % according to all records I have seen. The livestock industry likes to consider the 50% of grazing fees returned by public policy from the treasury for use for "improvements" as their money. Must be "cowboy economics".

Now comes the announcement that grazing fees are to be **reduced** to $1.61 per AUM from the current $1.94. Why ? Because the fees currently are calculated so that they go down when livestock prices go down. My wife, not an economist by training said, "Prices go down because the supply is too high, so we reduce costs to encourage more production." She doesn't understand "cowboy economics" (yes, she really does). Gosh doesn't every business want their costs to go down when sales prices go down ? Private enterprise you say? Only if you subscribe to "cowboy economics".

Subsidies, you bet, and this does not even address costs of Animal Damage Control, tax concessions given to the agriculture industry in general, and on and on.

Come on Newt. Come on Bob. Let's cut subsidies, but not just to the poor.

Come on my friends. Please give them your thoughts.

Tom Wootten

Saltbush Serves Many Purposes

by J. Joseph Pearl
reprinted from Southwest Lawn and Landscape Jan. 1992

Like most desert plants in the Southwestern part of the United States, *Atriplex* or saltbush has numerous uses in the landscape. Whether grown for a hedge, used on highway medians or as an erosion-control plant, this genus is gaining in popularity. These hardy, drought tolerant plants can be found as far west as the California coast and as far east as Kansas. The most common variety that grows in Arizona is *Atriplex canescens* or Four-winged Saltbush. Another variety that is gaining in popularity in the commercial market is the *Atriplex semibaccata* or Australian saltbush.

The Four-winged saltbush can reach a height of eight feet. but this is a rarity. Normally they will be found growing to a height of four to six feet in height and six to eight feet in width. The natural shape of the four-winged saltbush is globular or rounded. Some pruning can give the plant a more formal appearance if desired.

Atriplex canescens makes a good screen or hedge. It has tremendous erosion control capabilities, and is used for that purpose along the California coastline. The most desirable characteristic of the Four-winged saltbush is the gray-green foliage. The two and a half inch long and quarter inch wide leaves are very attractive. The shiny leaves are fuzzy on the underside and the top side of the leaf tends to glisten with the reflection of the sunlight.

Atriplex semibaccata usually grows to a height of 12 inches, but can get up to two feet. This shrub should be considered a groundcover due to its prostrate growth habit and spread of up to six feet. The actual plant is rather rough looking, giving it a unique appearance.

There are other *Atriplex* species that grow in the southwest, such as the *Atriplex hymenelytra*. This species, Desert holly, is noteworthy because it looks like a true holly except that it has white berries instead of red. Cut branches can be used for decorative purposes during the holiday season.

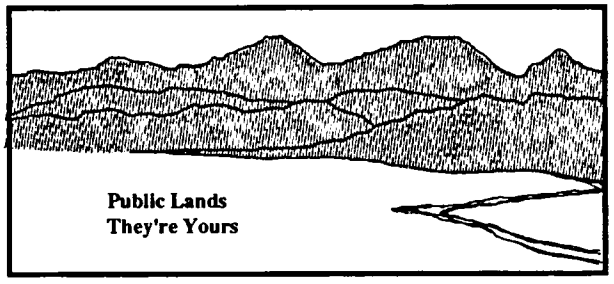
These plants' ability to grow in high alkaline soils make them ideal for the desert, although they also prosper along the coast. Especially in areas where there is danger of brush fires, which is common in many California areas, these fire-resistant plants do well. They are often used for revegetation purposes after fires to prevent further erosion because of their quick-rooting abilities. If burnt by fire, they tend to germinate quickly after being scorched. The fruits and flowers of *Atriplex canescens* are rather inconspicuous. The flowers are small, but when planted in mass they can put on quite a show. Birds enjoy the fruit as a source of food. and livestock consider the plant a delicacy.

No known cultivation of *Atriplex* for livestock food has been found. although it is considered an alternative food in the event of fire to hay or feed. Since this plant has such ecologically sound properties, it should be planted out in pastures where livestock is kept.

In the home landscape these plants should be planted where they can be left alone. As an accent plant, with its shiny foliage and globular growth habit it looks great. The fact that no special soil is required for these drought tolerant plants is a plus for the homeowner. The homeowner can throw it in the ground and almost expect it to survive.

Commercially these plants can be suggested for a replacement for the *Acacia redolens*, or "Highway acacia." In Arizona, the freeways are inundated with the *Acacia*, and a change of pace would be nice.

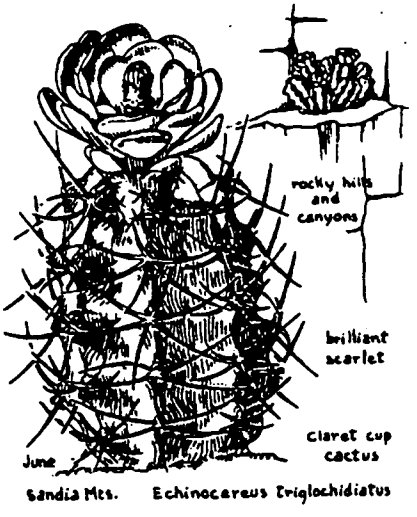
When deciding on how to design a desert landscape or xeriscape, consider one of the many *Atriplex* species. Whether it be the four-winged saltbush. the Australian saltbush or the Desert holly. these plants are a worthwhile addition to desert design. Try it, you'll like it!



THE HUMMINGBIRD CONNECTION:
A NEW MEXICO HUMMINGBIRD SURVEY

The New Mexico Audubon Council and Partners in Flight have organized a survey of hummingbirds in New Mexico starting in 1995. The purpose is to learn what birds are visiting, when, and where they are present. Participants will receive a packet of flower seeds (to attract hummers) and survey instructions. The surey results and a newsletter will be sent when the survey is completed.

To participate, send $5 (check payable to NM Audubon Council) to:
The Hummingbird Connection
Randall Davey Audubon Center
POB 9314
Santa Fe, NM
87504-9314



NEW TUCSON AREA CODE

Beginning March 19, 1995 the area code for Tucson (and all of Arizona outside the Phoenix Metropolitan area) will change to **520.**

The Building Envelope:

New Ground Rules for Building on Natural Land
by Andy Wasowski

reprinted from *Native Plant Society of Texas News* 13(1):2, 1995.

Each year, thousands of acres of uncultivated, natural land—woodlands, prairies, savannahs, and desert habitats—are transformed into homesites. Because of traditional bull-dozing land-clearing methods, these habitats are destroyed. The very character of the land that attracted the homebuilders to those locales in the first place has been lost...to be replaced by conventional, high-upkeep landscapes.

Yet, there is hope. All over the country, concerned landscape architects and designers, builders, and homeowners are rethinking this destructive practice. The result is an innovative response—the **"building envelope".** This is how is works:

* The site is surveyed; the exact location of the home and the driveway are determined. This is designated as *The Private Area.*

* Next, all the **important plant materials** that fall within this private area are **dug up and boxed for later replanting.** They are kept on a drip irrigation system for the duration of the construction period. If a tree that is too large to be replanted sits in the private area, every effort is made to incorporate it into the overall design, perhaps as the focus of a patio. Even the soil is removed and boxed for later use in revegetation; it contains valuable seeds and nutrients. **Outside topsoil is never used!** It invariably contains unpleasant surprises such as nutgrass, etc.

* A substantial fence is erected 10 to 20 feet out from the private area; **this buffer** is called the *transitional area.* **It is where all the construction takes place and all materials and equipment are stored.**

* Outside the fence is the *natural area,* and it is sacrosanct! All major plants within this area should be tagged with their market values, and this should be a part of the contract with the builder. If his people destroy a forty-year old tree, **hec pays for replacement.** Not the cost of a 5 gallon sapling, but the valid price of that mature tree.

* When construction is completed, those boxed up plants and the original soil are used to revegetate the transitional area.

While the envelope adds about 5% to the overall construction costs, this is more than made up for by eliminating the need to have the property landscaped from scratch.

The result: The home looks as if it had been set down gently into a natural, undisturbed setting. This landscape is extremely low maintenance and provides a welcome home to songbirds, butterflies, and a host of other desirable wildlife.

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