

Albuquerque Chapter Newsletter

Native Plant Society of New Mexico

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Wild Crab Apple:

A Botanical Gem in Northern New Mexico

by Jason Roback

For those of us who seek solace from the modern world in an excursion into New Mexico's wildlands, the public lands surrounding Navajo Lake in northwest New Mexico may seem an unlikely destination. Natural gas derricks carpet the forest and are seemingly more abundant than deer. More dirt roads than can be counted crisscross the landscape, and cattle roam largely unhindered. Once you leave the car behind and explore on foot, however, you'll find yourself in a biologically diverse plant community that's unique in New Mexico.

With an average elevation hovering between 6,000-7,000 feet, the first impression you may get is of a typical transitional forest, dominated by piñon, ponderosa, and juniper. Most of the junipers, however, are Utah juniper (*Juniperus utahensis*), fairly uncommon in this state. Closer inspection of the flora reveals a surprising variety of woody species, many that are rare or nonexistent in central New Mexico, such as antelopebrush (*Purshia tridentata*), Utah serviceberry (*Amelanchier utahensis*), singleleaf ash (*Fraxinus anomala*), and mountain silver sage (*Artemisia cana*). The exceptionally lucky explorer may come across a true New Mexico rarity, the wild crab apple, *Peraphyllum ramosissimum*.

The only member of its genus, this shrub (growing to around eight feet tall) ranges from eastern Oregon through the mountainous regions of the Colorado Plateau in Nevada, California, and Utah, barely entering New Mexico in the canyons of the San Juan Basin. Easily mistaken for fenderbush (*Fendlera rupicola*), a species near which it commonly grows, wild crab apple can be identified by its simple, oblong leaves, which have entire margins except at the apex, where they may be finely serrate. These leaves grow in clusters along the shrub's numerous branches – indeed, *Peraphyllum* means “very leafy” and *ramosissimum* means “many branches”! The five-petaled pinkish flowers appear early in the spring, leading to crab-apple-like pomes in the summer (similar in appearance to those of serviceberry but larger), which are an important food source for a variety of wildlife. The fruit may also have been a traditional source of nutrition for Native Americans, although it is fairly bitter in taste.



Wild crab apple. Photo by Jason Roback

Unlike its neighboring shrubs, namely serviceberry, fenderbush, and mountain mahogany (*Cercocarpus montanus*), wild crab apple's distribution in New Mexico is very limited, both statewide and within its range. Even using herbarium records, it took me several excursions before I managed to track some down. One failed attempt ended with my truck bogging down in a mud pit in the backcountry of the Jicarilla Apache Reservation, with my two-year-old daughter, five-year-old son, no cell phone service, and no other humans for miles! I finally found some wild crab apple in an area so remote that it can only be reached from Colorado, in the tongue of land extending between the two halves of Navajo Lake.

I have heard that there are whole hillsides covered in wild crab apple outside of the entrance to Mesa Verde National Park in southwestern Colorado. It seems to prefer rocky slopes, along ephemeral mountain draws.

Wild crab apple is very drought, cold, and heat tolerant, making it an excellent addition to any xeriscaped landscape, but has a relatively slow growth rate. The few I have growing in Edgewood seem to be doing fine. Even with our last Siberia-esque winter, they were some of the first shrubs to leaf out in late March.

While it can be very disheartening to observe the scale of ecological damage that rampant drilling and cattle grazing has caused, coming across a hidden draw carpeted in wild crab apple blossoms is a poignant reminder of Nature's resilience. In one form or another, “She will endure.”

Jason Roback is an educator and owns Coati Natives Nursery, which gives discounts to NPS members.

Landscaping with Natives: Plan Ahead for Summer Shade

By George Oxford Miller

If one thing defines Albuquerque landscapes more than gravel yards, it's concrete-block walls. Some use decorative blocks or stucco, but many contain the cheapest, roughest material developers can buy. Yet beauty is only a growing season away. Think now about spring plantings of fast-growing vines that can turn an eyesore wall into a landscape showpiece. Some climb with holdfasts (tiny root-like structures that penetrate cracks and anchor the plan, while others need a wood or wire frame. But don't let vines cover surfaces that need periodic painting.

Thicket Creeper, *Parthenocissus vitaceae*

This high-climbing native lacks the holdfasts that allow its popular eastern relative *P. quinquefolia* to scale masonry and stucco walls with ease. Our native species won't damage wood fences or walls, and you can get creative. String a wire zigzag pattern or parallel grid on a wall for dense cover. Deciduous foliage provides summer shade and brilliant reds in the fall. Both are drought tolerant and thrive in half-day sun. A related vine, native wild grape, *Vitis arizonica*, is a wildlife favorite.



Thicket creeper foliage provides brilliant reds in fall.
Photo by S. and A. Wasowski.



Thicket creeper is a high-climbing, vigorous grower. Courtesy of UConn Plants Database.

Western Virgin's Bower, *Clematis ligusticifolia*

This vigorous grower climbs to 20 feet, but without holdfasts it needs a support to wrap its tendrils around. Deciduous leaves give quick summer shade but little fall color. Clusters of half-inch, white flowers bloom from May–September. Western virgin's bower requires watering to establish, but once tap roots develop, it can survive severe droughts.



Western Virgin's Bower. Photo by Joan Avise.

Arizona Honeysuckle, *Lonicera arizonica*

Hummingbirds love this well-mannered, bushy vine with flamboyant red flowers. Clusters of one- to two-inch, trumpet-shaped blooms decorate the plant all summer. Evergreen leaves add an ornamental touch all winter. The three- to five-foot, rounded mass of slender stems will surround a mailbox or patio support and cover a trellis or open fence.

Arizona honeysuckle is cold hardy and moderately drought tolerant, but avoid planting it in hot desert exposures.



Arizona honeysuckle. Photo by Max Licher.

Trumpet Vine, *Campsis radicans*

Though not a true Southwest native, this established immigrant thrives and does everything you could ask of a vine, and better than you might want. It grows fast, climbs high with tenacious holdfasts, and develops heavy branches that will collapse a wooden fence or trellis. Hummingbirds delight in the 3-inch flowers from May–October. Smaller cultivars with different shades of flowers are available.



Trumpet vine. Courtesy of ScienceU.

George Miller wrote *Landscaping with Native Plants of the Southwest*, available from the Native Plant Society and local bookstores.

Volunteer Openings

Refreshments Chair

“Refreshments” are not just about snacking. The break in each monthly meeting distinguishes it from just another spectator event and creates an opportunity for us to socialize, make new friends, and to learn from each other. Right now, a Refreshments Chair is needed, not to bring goodies, not even to bring napkins, but to interest members in providing something and reminding them to follow through a few days before we meet. The Chair also gets to tell them that reimbursement is available as needed.

Please let George Miller, Chapter President (352-9019, goxfordm1844@yahoo.com) or Tom Stewart, Chapter Vice President (881-6296, tstewart@cybermesa.com) know if you would like to fill this rewarding role for our chapter.

Put Down Your Pencils, Please

The last issue of this newsletter (available at <http://npsnm.unm.edu/albuq.html>) included a plant quiz. All five flowering plants (plus one bonus animal) were photographed in Placitas, New Mexico. It’s time to see how you did on our quiz. The answers, provided by Tom Stewart, are below:

- 1) **Broom groundsel** (*Senecio spartoides*): The genus *Senecio* comes from the Latin for “old man,” because of the wispy white hairs on many species, or on the pappus
- 2) **Club cholla** (*Grusonia clavata*): Parts of this prickly cactus were roasted and eaten during times of famine by tribes of the southwest
- 3) **Rabbitbrush, chamisa** (*Ericameria nauseosa*): This common desert plant is being considered for many uses, including the production of rubber and plastics
- 4) **Purple aster** (*Machaeranthera canescens*): *Machaeranthera*, from the Greek for “sword” and from “anther,” refers to the pointed, pollen-bearing organs.
- 5) **Abert’s creeping zinnia** (*Sanvitalia abertii*): With historic uses including everything from sore throats to snakebites, this plant is considered a panacea by southwestern Indian tribes.
- 6) A **horned lizard** is hiding in this photo!

Edible and Useful Wild Plants:

Piñon Nuts

by **Donna Thatcher**

There are few native wild foods available in the winter, so this is the season to appreciate the seeds of our New Mexico State Tree, the piñon (*Pinus edulis*). If you did not gather your own nuts in the fall, you can purchase them, for many people gather them to sell. For some people, the sale of piñon nuts is a major source of income. By law in New Mexico, the names “piñon nuts” and “piñones” can only be applied to nuts grown in the state.



Pinus edulis cone, the source of piñon nuts. Photo by M. Licher, courtesy of intermountainbiota.org.

Nuts from Nevada are also sold here; these come from the singleleaf piñon, *Pinus monophylla*. *Pinus edulis* needles occur in pairs, in contrast to the single needles of *P. monophylla*. Both of these North American trees are important to wildlife, and have great traditions as major protein foods for Native Americans. Nuts from another species of pine come from Italy, where they are called “pignoli.” Cheaper nuts, usually sold as “pine nuts,” often come from China, where the seeds of a related tree are harvested. I have been disappointed in the taste and freshness of the Chinese nuts, and do not recommend them. Technically, all these “nuts” are actually seeds, not true nuts, but I will continue to use the familiar term.

Our *Pinus edulis* has a very interesting life cycle. Piñon nuts are the major winter food of the piñon jay, a large, blue-gray bird that can be seen in flocks in piñon-juniper habitat. Piñon crops in any given area are

extremely variable. It takes three growing seasons for cones to form and mature, and weather, insect infestations, or other events during this lengthy cycle can cause good or poor yields.

Researchers think nuts harvested and buried in soft soil by jays are the main source of piñon seedlings, so the birds and the trees are mutually dependent. The nuts are heavy, and, if the birds did not carry them, would be concentrated under the parent tree, instead of being distributed and gently buried in their new locations. Of course, the birds eat many of the piñon nuts, but the industrious jays gather and stash many more seeds than they can eat. Nuts left on the surface are consumed by rodents, so the ones “planted” by birds are the ones most likely to germinate and grow.

Piñon nuts can be cooked and eaten in any recipe where other nuts might be used. They can be eaten raw, but most people find that raw piñon nuts irritate the throat if eaten in quantity. For eating plain, roasted nuts are preferable. If you are buying or gathering fresh nuts, they should be dark in color. Pale ones, which also feel light, probably do not contain a kernel. Shelling the nuts is challenging. I have found that patiently crushing them a few at a time with a rolling pin works best. Spread the nuts in a single layer on a hard surface covered with a dish towel, cover with another thin towel, and move the rolling pin gently over them. Shell raw nuts to use in cooking. Both shelled and unshelled nuts keep best in the freezer. If you find a good source of nuts, you can stock up and then enjoy them over more than one season.

For more information about our state tree and its delicious nuts, I recommend *The Piñon Pine, a Natural and Cultural History*, by Ronald M. Lanner, University of Nevada Press, 1981.

Donna Thatcher is an educational specialist with the Farmington Museum and director of its Riverside Nature Center. She is an expert in traditional knowledge and in uses of plants in her own and other cultures. She is a member of the San Juan Chapter, NPSNM.

Xeriscaped Yet?

2012 is a great time to pull up that old lawn and start xeriscaping. The Albuquerque Bernalillo Water Authority has increased its xeriscaping rebate from \$.75 to \$1.00 per square foot this year. There is also a new rebate program for saving your trees from drought.

For more information, visit: <http://www.abcwua.org> or call: 505-768-3655.

Milkweed Conservation Feeds New Mexico Butterflies

by Sarah Sheesley

Say the word, “milkweed,” and I instantly conjure the silky feel of its hairs between my fingers. Back when flowers were at eye level, I loved to pull apart the dried plant pod, release the irresistible fluff, and watch it drift across the hills of upstate New York. I had no idea that I was doing my part as a six-year-old to conserve the habitat of some of our most important pollinators. Although there is no shortage of milkweed in the Northeast, milkweed populations are a growing concern here in New Mexico and throughout the Southwest.

Agricultural use of herbicides, roadside mowing, and rural development have infringed on the natural habitat of milkweed, affecting the monarch butterfly’s migratory routes to Mexico and California. Milkweed is the primary food source for monarch butterfly caterpillars, a population that has diminished significantly in recent years. In addition to their striking looks, monarchs play a key role in pollination for plant reproduction (and keeping fruits, veggies and nuts on our tables).

The Xerces Society, a Portland, Oregon-based nonprofit, is dedicated to the conservation of invertebrates from bees to starfish. Since the survival of countless insects is contingent on the health of insect habitats, The Xerces Society is invested in education, research, and advocacy about native plants. With support from the Monarch Joint Venture and the United States Department of Agriculture’s Natural Resources Conservation Service, Xerces has initiated a project to raise awareness and increase availability of native milkweed seeds for large-scale restoration projects in California, Nevada, Arizona, New Mexico, Texas, and Florida.

Milkweed deserves our attention for reasons beyond its role in supporting monarchs. There are over 100 varieties in the United States with a long list of medicinal, culinary, and practical uses. The fibrous stem of some varieties can be made into rope or cloth, and its soft seed-hair has been used to stuff life preservers and hypo-allergenic pillows.

Belonging to the family Asclepiadaceae, derived from Asklepios, the Greek god of medicine and healing, milkweed is a staple of the traditional medicine cabinet. In North America herbalists use the sap to heal sores or remove warts, and roots have been used to treat lung conditions. The shoots of common milkweed (*Asclepias syriaca*) can be harvested and eaten like asparagus. As with all wild harvesting, caution is advised. The milky latex sap of certain varieties is inedible or toxic in some cases.

(This same toxin infuses the young caterpillars with a foul taste to potential predators.)

I spoke with several of the local volunteers that helped Xerces collect the wild seed this past September. Tatia Veltkamp and Tom Stewart both collected *A. latifolia* (broadleaf milkweed) in Albuquerque along Tramway Boulevard and in Supper Rock Park. “You can check in the morning, and by afternoon the pod has broken open and the seeds blown away,” says Veltkamp. By monitoring milkweeds closely, Veltkamp was able to time her harvest without resorting to unnatural measures like tying rubber bands around the drying pods.

Stewart describes the neatly packed seeds as resembling a “scaly fish” in the pod before the wind tousles and spreads them. Thanks to these volunteers (along with Gail Haggard and Robert Sivinski), Xerces will initiate their milkweed program in New Mexico this winter.



Queen caterpillar on showy milkweed leaf. Photo courtesy of Tatia Veltkamp.

Xerces is working with the Plant Materials Center (PMC) in Los Lunas, New Mexico to propagate broadleaf milkweed and two other varieties collected in New Mexico, *A. speciosa* (showy milkweed) and *A. asperula* (spider milkweed). According to Dave Deesen at PMC, the Center has never grown milkweed and is not sure of the exact conditions necessary for successful propagation. Hopefully, this year’s experiment will yield commercially viable seeds by 2013.

In the meantime, you can get showy milkweed seeds from Plants of the Southwest. Bees, butterflies, and hummingbirds will flock to the pink blossoms in your yard. Keep an eye out for the black and orange monarch caterpillars. Visit the Xerces Society’s website (www.xerces.org) to learn more about their milkweed project and to get involved with their wide-ranging conservation projects around the country. For more information about Tatia Veltkamp’s local butterfly farm, visit <http://www.wingsofenchantment.com>.

Sarah Sheesley is a freelance writer, artist, and gardener in Albuquerque.

Using Beetles to Curb Saltcedar, One Tiny Bite at a Time

by Maya Kapoor

I remember the first time I walked into a stand of tamarisk. It hurt. A lot. I was conducting fieldwork near San Acacia, New Mexico, where tamarisk—also known as saltcedar—grew in dense, strappy clumps. As I struggled to pull a meter tape measure out in a straight transect line along the bosque floor, I walked into the thin, pokey plants repeatedly.

The data I was contracted to collect had, I seem to remember, something to do with goats and tamarisk control, though of course it's hard to recollect now.

Tamarisk and Tamarisk Control in New Mexico

Tamarisk (*Tamarix* spp.), a willowy tree with delicate sprays of pink flowers and green foliage, was introduced to the United States from Eurasia as an ornamental tree in the 19th century. Today, tamarisk often grows in monocultural stands along rivers and arroyos, taking advantage of human disturbance to natural processes such as flood regimes, and replacing native riparian vegetation.

New Mexicans and others have tried controlling tamarisk populations with a range of tools, including chemical herbicides, shovels and pickaxes, bulldozers, fires, and, yes, goats. So far, none have had the desired effect upon tamarisk populations.

In 2001 tamarisk beetles (*Diorhabda* spp.) were released near Lovelock, Nevada. These tiny herbivores evolved with tamarisk in Eurasia and thrive on tamarisk foliage.

In New Mexico, tamarisk beetles were released in Artesia in 2003 and at Holloman Air Force Base in 2008 by the lab of Dr. David Thompson, a professor at the time at New Mexico State University. What remained of those populations was wiped out by last year's cold winter. But also last year, tamarisk beetles were found in tamarisk stands in Bernalillo. A different species was introduced in Colorado and Utah, and that species has thrived and spread downriver to the Albuquerque area.



Tamarisk beetle feeding. Photo by Dan Bean.

“People say, ‘My gosh, you went over to Europe and picked this up and let it go, what were you thinking?’ but it’s not that simple,” says Thompson, now Associate Dean and Director at the NMSU Agricultural Experiment Station.

In the case of tamarisk beetles, it took approximately 16 years to get permission from the federal government to release them into the wild; those years included studying the beetles in their home countries and studying them in quarantined laboratories in the United States. Releasing the beetle across state lines required another permit application.

“It’s very interesting from a botanical point of view,” Thompson observes. “It’s going to be really interesting to see, where the beetle is doing really well, what happens to the riparian community.” This point is not lost on others, who worry that the widespread death of tamarisk will lead to habitat loss for species which, like the endangered southwestern willow flycatcher, use tamarisk as breeding habitat.

Thompson doesn’t consider total eradication of tamarisk to be the goal of this biocontrol project. “When saltcedar becomes a monoculture, biodiversity drops to almost nothing,” says Thompson, “but when saltcedar is just a scattered component of the environment, it’s not a bad thing.”

Though tiny, tamarisk beetles can wipe out tamarisk foliage in a feeding frenzy like teenagers around a pizza. The trees may resprout from the base or even branches for several more years, or even multiple times in one year, but eventually they die.

Adult beetles emerge from the leaf litter in spring and crawl up a tree to feed and to breed. Females lay eggs on tamarisk branches. The larvae feed on tamarisk leaves until they drop to the leaf litter to pupate, and the cycle repeats. After a few years, the trees turn yellow-brown and, come spring, they stay that way.

Citizen Science

Although tamarisk beetles in New Mexico have spread from the Farmington area down into central New Mexico, at this time the USDA is no longer funding tamarisk beetle research in the Land of Enchantment. Nonetheless, “there are many people in New Mexico interested in understanding the population extent of the tamarisk leaf beetle at a landscape scale,” reported Season Martin, restoration coordinator at the Tamarisk Coalition, in an email. “The Tamarisk Coalition is in discussions with those people to determine what opportunities there are for the TC and our partners to gain that understanding.”

For Albuquerque NPSNM Chapter members, looking for tamarisk beetles and their effects may be

an interesting exercise in citizen science. Following are photographs of tamarisk beetles, their larvae, and their effects on tamarisk.

If you believe you have found tamarisk beetles, which are approximately 4-6mm in length, or evidence of tamarisk die-off due to beetles, you can contact Hira Walker at the New Mexico Department of Game and Fish (hira.walker@state.nm.us) or David Thompson at NMSU (dathomps@ad.nmsu.edu) to report the sighting. When possible, collecting GPS points adds a great piece of data to your information.



Tamarisk beetle egg case on tamarisk branch. Photo courtesy of the Tamarisk Coalition.



Tamarisk beetle larvae feeding on saltcedar. Photo courtesy of the Colorado Department of Agriculture - Palisade Insectary.

Healthy, flowering tamarisk. Photo by Gertrude Konings.



Stand of Tamarisk turning brown due to tamarisk beetle herbivory. Photo courtesy of the Tamarisk Coalition.



Tamarisk showing the results of beetle herbivory. Photo by Tom Dudley.

It's unknown what the long-term effects of tamarisk beetles may be. If tamarisk dies back in our riparian corridors, will multistory riparian habitat disappear with it? Will native plants naturally colonize tamarisk-free areas? Will trees like cottonwoods require planting to become established? Will rafting trips in the Southwest require much more sunblock?

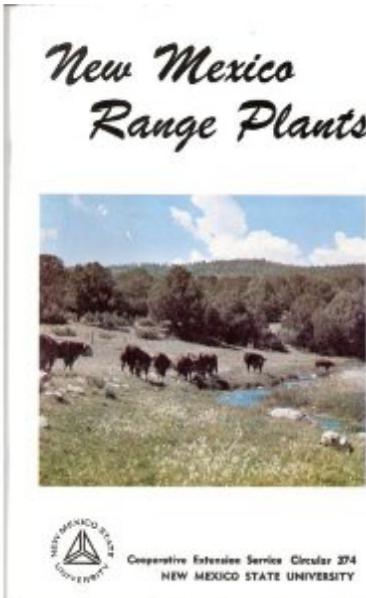
The next time I find myself near (but not in—I've learned my lesson) a stand of tamarisk, I won't be looking around for signs of goats. Instead I will be sifting through leaf litter and turning back leaves, hoping to catch sight of an interesting addition to New Mexico's biodiversity.

For more information on using tamarisk beetle as a biocontrol agent, visit the Tamarisk Coalition website (<http://www.tamariskcoalition.org/>).

Maya L. Kapoor is the editor of the newsletter of the Albuquerque Chapter of NPSNM.

The Book Corner

New Mexico Range Plants. 2005. Cooperative Extension Service Circular 374, NMSU. 84 pages, \$6.00.



Grasses are stunning features of the landscape at this time of year, and with the other flowering plants now in their winter mode, this is an ideal time for becoming acquainted with these often neglected plants. Using *New Mexico Range Plants* you can learn to identify grasses without working through a key or using a dissecting scope.

Range Plants is often overlooked by beginning field botanizers. Written by Extension Service agents, it is directed to stock raisers because, as they point out, “A successful rancher knows the plants on his range.” But of course you don’t have to manage a ranch to appreciate the information in this slim volume.

Profiles of 53 New Mexico grass species are arranged alphabetically by scientific name. Scientific names and common names are indexed. Treated as well are 34 non-grassy flowering plants, shrubs, and trees. Each species is described in detail using non-technical terms and is also depicted in a precise line drawing. The dominant vegetation, elevation, and soil type where each grass occurs is described. Species are noted as warm or cool season, annual or perennial, and sod or bunch grass. The geographic ranges are shown on individual maps.

The introduction to *Range Plants* describes the elevation, precipitation, and dominant plants of the four major rangeland areas of New Mexico: the southern desert, northern desert, high plains, and mountains.

The handy pamphlet is easily carried in a backpack or pocket, readily available for reference in the field. A season of learning grasses using *New Mexico Range Plants* will introduce the novice to the characters of the unique grass family and names of the common plants, preparing him or her for tackling the definitive *Field Guide to Grasses of New Mexico* by grass expert Kelly Allred.

Carolyn Dodson
Book Sales Coordinator

Take Advantage of Member Discounts

The following local nurseries have agreed to give members of NPSNM a 10% discount on plants when you show your membership card:

Coati Natives Nursery

320 Frost Road
Sandia Park, NM 87047
505-934-5396, <http://www.coatinativesnursery.com>

Great Outdoors Native Plant Nursery

10408 2nd Street NW (n. of Alameda)
Albuquerque, NM 87114
505-890-5311, greatoutdoorsabq.com/home.htm

Mountain Gardens

12216-B Hwy 14N
Cedar Crest, NM
505-286-1778, mountaingardensnm.blogspot.com

Plants of the Southwest

6680 4th Street NW (n. of Osuna)
Albuquerque, NM 87107
505-344-8830, www.plantsofthesouthwest.com/

Santa Ana Garden Center

The Pueblo of Santa Ana
157 Jemez Dam Road
Bernalillo, NM 87004
505-867-1322, www.santaana.org/garden.htm

Please support these nurseries and take advantage of the discount being offered to NPS members!

Albuquerque Chapter Board of Directors

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