

The Importance of Our Native Grasslands By Colleen Pelles Madrid



Blue Grama (*Bouteloua gracilis*) in the Galisteo Basin | Photo courtesy Lesley Janis

The Nature Conservancy considers grassland ecosystems to be the most threatened and least protected on earth. In the United States only 4 percent of our grasslands are protected. This plant community makes up the largest plant association in New Mexico and covers the plains at lower elevations in the northern, eastern and central areas of the state.

The grassland around Santa Fe is characterized as Great Basin Grassland (GBG) and typically receives less than 10 inches of rain a year, predominantly in the summer months. Winters are cool and summers hot. Volcanic and fluvial events are the primary processes responsible for the formation of the GBG. The soils are moderately deep with loam surfaces supporting grasses such as blue grama (*Bouteloua gracilis*), sideoats grama (*Bouteloua curtipendula*) and galleta (*Hilaria jamesii*). For a complete list of native grassland vegetation see "New Mexico Vegetation" by William A. Dick-Peddie.

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**SAVE THESE DATES!
Ask a Master Gardener**

Master gardeners will be in the Botanical Garden on the following dates to answer your gardening questions and discuss good gardening practices:

- **Thursday, August 3 (National Watermelon Day)**
- **Monday, September 4 (Labor Day)**

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Oops! In the cover story in our July issue, Master Gardener Chris Durlak was identified as a former school teacher. She is a former school social worker and one of many SFEMG members who have volunteered at the Randall Davey Audubon Center & Sanctuary over the past 20 years. Sounds like something to celebrate, right? See page 10 for more information.

Our Mission

Santa Fe Extension Master Gardeners is a nonprofit volunteer organization whose mission is to learn, teach and promote locally sustainable gardening through reliable, current research-based practices.

sfemg.org

SFEMG is one of more than a dozen county-based master gardener programs run under the auspices of New Mexico State University's College of Agricultural, Consumer and Environmental Sciences.

aces.nmsu.edu

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Changes to the structure and function of Southwestern grassland habitats likely have been responsible for more losses of native biodiversity than any other cause. The most important sources of change to this ecosystem have been the loss of fire as a cyclical event, the elimination of prairie dog colonies, heavy grazing by livestock, the introduction of non-native grasses, shrub encroachment and fragmentation caused by urban development.

Why should we care about having functioning native grasslands?

The majority of native grassland species' biomass is found below ground in their extensive root systems. Native grassland species are known to have up to twice the deep root mass of non-native, introduced grass species. Deep root systems deposit carbon into deep soil layers. This is important because carbon sequestration increases with soil depth. Deep roots are more likely to contribute to great carbon storage through their interaction with soil microorganisms. More diverse plant communities promote more diverse microorganisms leading to long-term below-ground carbon storage. Researchers at the University of California, Davis, found grasslands to be more reliable carbon sinks than forests as forests store carbon in above-ground structures and are increasingly vulnerable to climate change. The extensive root systems of grasses are also important for the prevention of soil erosion.

The biodiversity of vertebrates and invertebrates is critical to the health and longevity of the grassland ecosystem. As an example, invertebrates are a critical component of our native grassland, contributing to essential processes such as decomposition and nutrient cycling, increasing soil porosity and infiltration, regulating the growth of soil bacteria and fungi, and controlling the availability of mineral nutrients for plants. Southwestern grasslands are considered one of the most biologically diverse regions for vertebrates as well. Black-tailed prairie dogs, for example, are a keystone species whose presence enhances local biodiversity. Their burrowing and feeding positively affect the structure, species composition and nutritive value of the surrounding vegetation. Their burrowing modifies the physical characteristics of soils, affects energy and nutrient cycling, and provides shelter for invertebrates and vertebrates. Nearly 170 species of vertebrates are reported to use prairie dog towns.

Given native grasslands' important biological and ecological role it is imperative to conserve this valuable ecosystem. The most prudent course of action is to ensure the ecological integrity of the system by managing for maximum biodiversity.

References:

"New Mexico Vegetation: past, present, and future." William A. Dick-Peddie. University of New Mexico Press. 1993.

"Grasslands May Be More Reliable Carbon Sinks Than Forests in California." P. Dass, et. al. 2018. Environmental Research Letters. 13(7):074027

["Assessment of Grassland Ecosystem Conditions in the Southwestern United States."](#) USDA Forest Service. General Technical Report RMRS-GTR-135-vol. 1. September 2004.



A Message from SFEMG Board President Anne Rivas

In May my husband, dog and I embarked on a road trip to visit friends in Omaha. We drove through eastern Colorado, which looked a lot like Kansas, and then we drove through Kansas. I was impressed by the no-till farming that we saw. Something had changed since our trip from Omaha to Santa Fe five years ago.

Omaha is hilly and was very green. I thought I would want to soak up the green and the shade but found that we have more shade and a greater variety of plants in Santa Fe. Green lawns are ubiquitous in Omaha; they're water-intensive, ecologically impoverished and boring to look at. I missed the insects I've come to know here and the variety of birds. I missed the different colors of a Santa Fe summer. Coming back to Santa Fe felt like coming home.

Becoming a Santa Fe Extension Master Gardener, being a co-leader of the Audubon Wildlife Garden Project for the past two years and experiencing the richness of the Randall Davey Audubon Center & Sanctuary gardens year-round through work sessions in the summer and planning meetings in the winter, has soured me on the turf grass monoculture of the Midwest. In Omaha I battled non-native Japanese beetles on my roses and grubs in my grass. At Audubon, we plant for insects as well as for birds and other wildlife.

On Saturday, Aug. 5, SFEMG will celebrate the 20th anniversary of our collaboration with the Randall Davey Audubon Center & Sanctuary as that organization celebrates its 40th anniversary of ownership of the Randall Davey property at 1800 Upper Canyon Road, Santa Fe. This is a joint celebration, with Extension Master Gardeners providing the welcome and introduction, plus education sessions in the Wildlife Garden and the Meadow Garden. Audubon Center staff will conduct tours of the Randall Davey house and studio.

The garden party is free and open to everyone, and if you have questions about creating bird habitat or growing native plants in northern Santa Fe, you will find some answers here. Come see what you can accomplish in your home landscape.

The event is from 2-4 p.m. so you may wish to wear a hat and sunscreen. Light refreshments will be served. Parking is limited, so people are encouraged to carpool.

Please see page 10 for more information.



CELEBRATE • EDUCATE • GROW And grow we did!

Story by Christine Foster

“Wow!” is all I can say after attending the 2023 International Master Gardener Conference in Kansas City. Hoping for 600 attendees post-Covid, the Kansas State University Extension Master Gardeners of Johnson County drew 1,130 attendees from 44 states as well as Canada and England. Five years of planning by 280 Johnson County Extension Master Gardeners who put in thousands of volunteer hours and filled over 950 volunteer slots enabled them to create a beautifully organized event containing pre-event tours, workshops, a wide variety of daily sessions to choose from, daily keynote breakfast speakers, evening events with additional keynote speakers, a trade show with 100-plus vendors, awards for poster submissions on projects submitted by various extensions, spirit poles and a silent auction. The camaraderie and teamwork exhibited by the local master gardeners abounded throughout.



The 20 spirit poles created for the silent auction and donated by each master gardener extension group in Kansas and the Missouri side of Kansas City were representative of the spirit of the conference. Photo courtesy Christine Foster

I traveled with three St. Tammany, Louisiana, master gardeners to enjoy beautiful private and public garden tours during the pre-event days. We toured private gardens with their beauty, elegance and inspiration. From English gardens to more formal, shade-to-sunny garden spaces, and large-to-small spaces, we were impressed with the sheer creativity these gardeners expressed through their yards, gardens, pots and yard art. In many cases, these were not small gardens but extensive yards, one with a vegetable garden and orchard to pine over. To say we were envious of what they can grow in a less humid (Louisiana) and less dry (Santa Fe) environment was putting it lightly.

The next day we attended the tour of Midtown Gardens, visiting the [Shawnee Indian Mission Gardens](#), the municipal rose garden in Loose Park, Kauffman Memorial Gardens and Missouri Department of Conservation native gardens. The Shawnee Indian Mission is the site of one of eight demonstration gardens in the county. It contains a rain garden to reduce flooding and stormwater pollution as well as four additional gardens on site.

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The 1.5 acre [Laura Conyers Smith Municipal Rose Garden](#) in Loose Park contains about 3,000 roses of 150 varieties and was just coming into bloom. The Kauffman Memorial Garden contains annual and perennial beds, unique trees and bronze sculptures (as well as the remains of the Kaufmanns). It's inspired by spaces throughout Europe seen during the family's world travels. Finally, we visited a Missouri Department of Conservation native garden adjacent to the Kauffman Memorial Garden where native plants are grown throughout the property to attract pollinators.

Numerous opportunities for education abounded with six options per session offered. This allowed us to listen to four great speakers each day with the addition of breakfast and evening speakers. The breadth of topics included nurturing habitat for wildlife, water-wise landscaping, indigenous backyard gardens, humane gardening, native medicinal plants, creating mini forests, boosting garden harvests, plants for birds, monarch waystations, gardening challenges in a changing climate, why gardens and gardening matters, companion planting partners, growing edible natives, children in the garden, high-performing annuals, herbs, hostas (hardy perennials), personal impacts and value, and the ripples of volunteerism.

Finally, the Garden Thyme Marketplace Trade Show gave us plenty of opportunities to spend money on garden trinkets. Ratcheted pruners and a painted rock generated a TSA search of my bag on the return trip while co-traveler Janice spent time trying to figure out how to get a four-foot shovel home to Louisiana. In the end, she struck a deal to order a batch for free shipping. Plenty of free seeds by Baker Seeds along with their awesome catalog made us drool over what could be in next year's garden. And we loved the spirit poles generated by the various master gardener groups of Kansas and Northwest Missouri. So many wonderful ideas for us to pursue.

Because of ongoing challenges securing conference space, the 2025 International Master Gardener Conference will be a virtual event hosted by the Texas Master Gardener Program of Texas A&M University. It will be exciting to see what they can pull together with their plan of offering registrants a month to view the various presentations.



Santa Fe Extension Master Gardener Christine Foster (center) reunited with fellow master gardeners Jeanne Comeaux (left) and Janice Wells at the conference. All are members of the St. Tammany, Louisiana, Master Gardener Association.



***To weed or not to weed?* Wildflowers as Desirable "Weeds"**

By Sally Roberts with photos by Pam Wolfe

We all know one of the classic definitions of a weed: a plant out of place. So, when does a plant qualify as a "weed?" No definition satisfies everyone because it's highly subjective. Weeds are generally plants growing in places that we humans don't want them, mostly because they share a number of unwelcome traits. They tend to be aggressive, prolific spreaders that get out of control, survive on their own and may be noxious – though many weeds/wildflowers have beneficial qualities. And as is true in real estate, location is key. For native plant champions, this is particularly true of those many native wildflowers that we all love to have except when they arrive in our gardens and interfere with the plants we have actually placed there.

In the SNaPP patio demonstration garden at the Santa Fe County Cooperative Extension complex on Rodeo Road, it becomes an issue when one of these species dominates in a season, disrupting the balance and intent of the garden space. Last year there were so many volunteer cowpen daisies (*Verbesina encelioides*) and three distinct species of globemallow (*Sphaeralcea* spp.) in this small garden that it became difficult for other plants to bloom; they were shaded over and crowded. Since the garden is meant to demonstrate how to use native plants for a patio garden that has something blooming all season, it was important not to let these other plants take over. Both of these species are very attractive and are wonderful for all the pollinators they attract, from native and honey bees to wasps and beetles. But they must either be carefully controlled or eliminated in a more



***Verbesina encelioides* in the
Rose Family Garden**

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formal setting. In the west meadow and east pollinator gardens they are most welcome, but here again have a weedy tendency to out-compete the grasses and other wildflowers we hope to establish there. In those areas these very successful wildflowers are treated differently. We thin them but allow most to remain.

Verbesina encelioides, called golden crownbeard or cowpen daisy, is in the Sunflower family (Asteraceae). It is a many-branched annual growing up to 4 feet high. It has 1 ½-inch flowers, with yellow rays around a yellow disk that are very attractive to a number of pollinators. The genus *Sphaeralcea* (globemallow) in the Mallow family (Malvaceae) has up to 50 perennial species in North America, and most have flowers in the orange to red range, resembling small hollyhocks, from 10 to 40 inches tall, with ½- to 1½-inch five-petaled flowers in clusters on many branches. The most common species in the Santa Fe area are Lobeleaf, or Narrowleaf Globemallow, also called Coppermallow (*Sphaeralcea angustifolia*) and Scarlet Globemallow (*Sphaeralcea coccinea*). Lobeleaf, which grows in USDA Zone 4, is quite xeric, and may reach 6 feet in height. The blooms are orange, white or magenta. The plant is host to the larvae of some moths and butterflies. Scarlet (the more red-orange) Globemallow grows about 12 inches tall, blooms all season and attracts butterflies and hummingbirds, as well as other pollinators.

References:

[“A Guide to Native Plants for the Santa Fe Landscape,”](#) Santa Fe Native Plant Project, SFEMG, 2019.

“National Audubon Society Field Guide to North American Wildflowers, Western Region.” Knopf, 1979

[Plants of the Southwest 2022 catalog](#)



Native bee foraging in *Sphaeralcea* sp.

Backyard Bugs

Cactus Longhorn Beetle

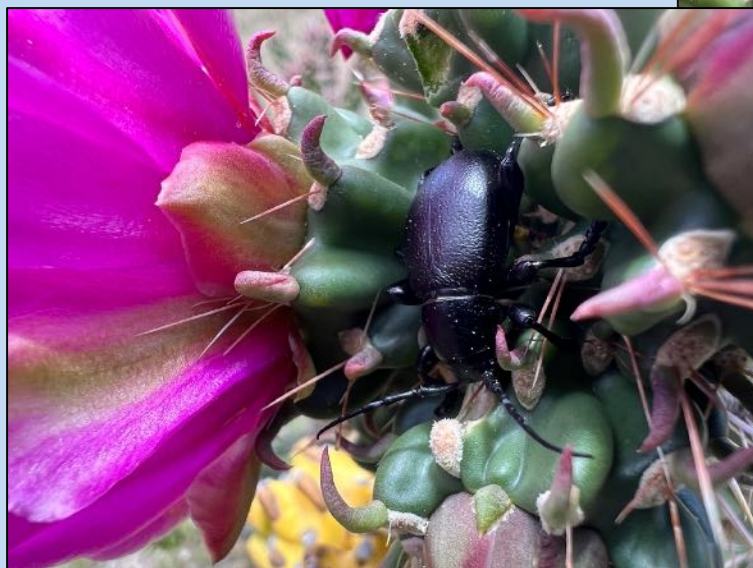
Moneilema annulatum (family Cerambycidae: Longhorn Beetles)

By Pam Wolfe

[Bugguide.net](#) lists six species of this flightless beetle. The genus name is from the [Greek *mon* meaning one and *ilema* meaning covering](#). That is, the elytra (wing covers) are fused together rendering the animal unable to fly, but somewhat protected from moisture loss. An Opuntioideae specialist, *Moneilema* spp. inhabit the desert and semi-desert regions of western North America. Adults lay eggs on prickly pear (*Opuntia*) and, primarily, cholla (*Cylindropuntia*) in spring; larvae burrow into the plant and feed on plant tissue, overwinter there as pupae and emerge in spring as adults. The mature beetle feeds nocturnally on surface tissue – pads, flowers and fruit. In the Sonoran Desert cactus longhorn beetles will occasionally feed on young saguaro (*Carnegiea gigantea*).

Moneilema, mostly black and ranging from 13 to 37 millimeters in length, resemble two other animals in their habitat: ground beetles (family Carabidae) and darkling beetles (family Tenebrionidae). Both are well defended by noxious chemicals. *Moneilema* will [mimic their head-standing behavior](#) to warn predators that one step closer might elicit a very unpleasant spray. The bluff usually works.

The features characteristic of this species:
no white segments on the antennae,
pronotal spines flattened, elytra (wing covers)
stippled rather than striated



Moneilema annulatum foraging on
cane cholla (*Cylindropuntia imbricata*)

Photos courtesy Kathy Haq



Come to the Garden Party!

The SFEMG and Randall Davey Audubon Center invite you to celebrate their [20-year partnership](#) on Aug. 5.

2-4 p.m. Saturday, August 5
Randall Davey Audubon Center & Sanctuary
Upper Canyon Road, Santa Fe

Welcome and Introductions – 2 p.m.

45-minute tours of the Davey House and Studio – 2:30 p.m. and again at 3:15 p.m.

Wildlife Garden – tours every 15 minutes beginning at 2:30 p.m.

Native Prairie Garden – tours every 15 minutes beginning at 2:30 p.m.

All of the day's events are free and open to the public. Light refreshments will be served.

Due to limited parking, we ask that you please carpool. Thank you!





Let's Grow is a **free public education series** for home gardeners and the garden-curious who want to learn about soil, compost, native plants, creating habitat for pollinators and more! Mark your calendars! No registration required.

AUGUST

5:30-7:30 p.m. Tuesday, August 1 | Planting Your Fall Vegetable Garden

Santa Fe Public Library Southside Branch, 6599 Jaguar Drive

Yes! August is the month to plant a Santa Fe vegetable garden. Join Jannine Cabossel, "The Tomato Lady," to learn how to plant a successful fall garden. Offered in conjunction with the Santa Fe Public Library.

9-11 a.m. Saturday, August 12 | Landscape Design Basics: Revitalizing a Flower Bed

Garden at El Zaguán, 545 Canyon Road

Learn to create site-appropriate, sustainable and stunning gardens using a historic property as an example. Discover how style, water access, soil, microclimates, color, structure and seasonality shape plant options and placement, and how climate change and biodiversity are inspiring innovative designs and gardening.

6-7:30 p.m. Tuesday, August 22 | Creating a More Resilient Santa Fe Through Seed Saving

Santa Fe Public Library Southside Branch, 6599 Jaguar Drive

Santa Fe Seed Stewards Diane Pratt and Susie Sonflieth will take participants on a journey of why seed saving is so important today. Basic seed-saving methods will be covered along with good techniques for harvesting and storing your seeds. Offered in conjunction with the Santa Fe Public Library.

SEPTEMBER

1-3 p.m. Saturday, September 30 | Save Seeds & Contribute to the Resiliency of Santa Fe Gardens

Under the Exhibit Hall portal, Santa Fe County Cooperative Extension Campus, 3229 Rodeo Road

Learn the basics of harvesting, processing and storing a variety of seeds, and experience hands-on demonstrations with materials covering basic seed-saving methods for vegetables, herbs and flowers.

Presented by Santa Fe Seed Stewards and Master Gardeners Diane Pratt and Susie Sonflieth.



SFEMG volunteers focus on removing invasive mint from the demonstration Herb Garden at the Santa Fe County Cooperative Extension complex at 3229 Rodeo Road, Santa Fe.

The Herb Garden is one of several SFEMG demonstration gardens at the site. They include the Cactus Garden, the Rose Family Garden, the Santa Fe Native Plant Project Demonstration Gardens, the Vegetable Garden and the composting demonstration site managed by the Santa Fe Compost Action Team.

Photo courtesy Thomas Bleich

Calendar

Please read the fine print!

- Master Gardeners must complete 10 hours of continuing education (CE) by Nov. 30 and are encouraged to record CE credit hours in [Track It Forward](#) as soon as possible after completing the activity.
- If there is a dollar sign, there is a fee.
- **Many of these courses require pre-registration.**
- The acronym "phc" means Master Gardeners can earn 1 credit hour of continuing education for each hour attended.
- If there are other opportunities, suggestions, or questions please send them to Stephanie Deutsch: deutsch.stephanie@gmail.com

5:30-6:30 p.m. Friday, Aug. 4

["Mushrooms of Northern New Mexico"](#)

In-person talk at the Los Alamos Nature Center / registration required / 1 CE

11 a.m.-1 p.m. Saturday, Aug. 5

["Identifying New Mexico's Native Bees"](#) with Dr. Olivia Carril

Santa Fe Botanical Garden / \$ / 2 CE

11 a.m.-Noon Thursday, Aug. 10

["Monarchs and Milkweeds"](#) lecture with Kim Pegram

Santa Fe Botanical Garden / \$ / 1 CE

10 a.m. Saturday, Aug. 12

[Learn more about Santa Fe County's Green Initiatives](#)

with Santa Fe County Sustainability Manager Jacqueline Beam and Miriam Vaughn, SFEMG
Gather at the new rain garden at the Santa Fe County Fairgrounds, 3229 Rodeo Road
Free and open to the public / 1 CE

6:30 p.m. Tuesday, Aug. 15

[Santa Fe Cactus and Succulent Club Monthly Meeting](#)

Free and open to the public / 1 CE

3-4 p.m. Wednesday, Aug. 16

[Greenhouse Topics](#)

NMSU Ready, Set, GROW! webinar series / 1 CE

11 a.m.-Noon Thursday, Aug. 17

["The Paradox of Fire: A Threat to Pollinators yet a Key Process They Need"](#)

Xerces Society for Invertebrate Conservation / 1 CE



**Video sessions from the 2021 ArbNet Conference
are available and can be viewed FREE
at the following link: <https://vimeo.com/showcase/10484654>
ArbNet is a global network of arboreta.**

New & Noteworthy

Have you recently read a gardening-related article or book, visited a horticultural website or blog, listened to a podcast, or seen a nature show or documentary you think other gardeners would enjoy or find useful? Send a link to the newsletter (news.sfemg@gmail.com) and we'll try to include the information in the next issue. The articles were published in 2023 unless otherwise indicated. **Note that some of these sources may have paywalls.**

[“Is Dirt Just Worm Poop? Digging Up the Secrets of Soil”](#) by Sofia Quaglia, *Discover* magazine (July 21)

[“UNM team takes Smart Acequias project to BioDesign Challenge”](#) by Mary Beth King, University of New Mexico press release (July 20)

[“Hotter temperatures, less water present challenges for policy makers, agricultural stakeholders”](#) by Dani Wascher, University of New Mexico press release (July 19)

[“Is a Water Feature Right for Your Garden? Here Are the Pros and Cons”](#) by Kier Holmes, *Gardenista* (July 19)

[“8 Favorites: Roses for Pollinators”](#) by Clare Coulson, *Gardenista* (July 18)

[“No yard? No problem. She’ll teach you to grow mobile gardens that’ll shift your thinking”](#) by Dua Anjum with photography by Mariah Tauger, *Los Angeles Times* (July 17)

[“Alan Titchmarsh: Rewilding is a catastrophe for wildlife”](#) by George Willoughby, *The Times of London* (July 17)

[“Looking for a garden planning app? These 8 will simplify your growing season schedule”](#) by Niko Vercelletto, *HappySprout* (July 17)

[“Why you shouldn’t dig your garden this summer, no matter what”](#) by Kayleigh Dray, *Ideal Home* (July 13)

[“NMSU graduate student selected for national plant-breeding scholars program”](#) by Carlos Carillo López, NMSU press release (July 11)

[“Empty Office Buildings Are Being Turned Into Vertical Farms”](#) by Ciara O’Brien, *Smithsonian Magazine* (July 11)

[“The Art of the Edge: 10 Perfect Ways to Soften a Path”](#) by Clare Coulson, *Gardenista* (July 11)

[“Pollination From Honeybees Could Make Plants Less Fit to Survive and Reproduce”](#) by Margaret Osborne, *Smithsonian Magazine* (July 6)

[“Northern New Mexico ranchers face blight after aerial pesticide spray halted”](#) by Scott Wyland, *Santa Fe New Mexican* (July 6)

[“Does your yard have a ‘hellstrip’? Native plants could help.”](#) by Tovah Martin, *The Washington Post* (July 12)

[“Honey Bees More Faithful to Their Flower Patches Than Bumble Bees”](#) by Kim Kaplan, USDA Agricultural Research Service bulletin (June 29)

[“Hay – yes, hay – is sucking the Colorado River dry”](#) by Samuel Shaw, *High Country News* (June 5)

The Garden Journal Radio Show



Every Saturday
10 to 10:30 a.m. on KSFR 101.1 FM

August 5: Slow Food Santa Fe Outloud Edition

Slow Food Santa Fe's Lissa Johnson and Nina Rosenberg interview Chef Fernando Ruiz about his life story and new Santa Fe restaurant-in-the-making, Escondido.

August 12: SFEMG Edition

Host Alexa Bradford talks with Andrew Erdmann, manager of the water planning program at the New Mexico Interstate Stream Commission.

August 19: Food, Farms and Friends

Join Carrie Core as she talks with farmers and gardeners on how the heat has impacted their growing season and their concerns about the future.

August 26: The Giant Veggie Gardener Edition

Host Alexa Bradford talks with Jannine Cabossel, "The Tomato Lady," about what's going on in the vegetable gardening in September. See Jannine's blog at [Giant Veggie Gardener](#).

You can find past episodes of The Garden Journal here at sfemg.org.



We are here to help!

If you have gardening questions,
Santa Fe Extension Master Gardeners
are available to help.

You can pose your questions online [here](#).

We'll do some research and get back to you.

Blue grama (*Bouteloua gracilis*) | Photo courtesy Pam Wolfe