

Controlling Piñon Needle Scale Story by Peggy Rudberg

Piñon pine (*Pinus edulis*), the state tree of New Mexico, is a primary species in our surrounding piñon-juniper woodland. The ongoing drought and continuing insect damage pose a threat to our forests and urban environment. One native pest that has grown more troublesome in our area is the piñon needle scale, *Matsucoccus acalyptus* (Herbert). PNS infestations are more common in landscaped urban settings as already-water-stressed trees tend to be more crowded with less rooting area.

PNS is a native sap-sucking insect with a complex life cycle that makes treatment challenging. You can identify a PNS infestation by finding tiny black beanlike bumps on last year's piñon needles or noticing cottony egg masses on trunks and branches or nearby ground under rocks or duff. Because PNS commonly attacks stressed trees, deep infrequent watering will help keep trees healthy and more resistant. Most piñons maintain several years worth of new needle growth, but repeated infestations can reduce new growth resulting in a spindly, tufted crown with sparse foliage. This

limits the tree's ability to photosynthesize and create the fuel necessary for its existence. Successive years of attack cause further decline and once the tree is weakened it becomes a target for bark beetles, a more deadly pest.

The life history of PNS is cyclical and the variable stages are related to temperature. Scale insects are inactive at low temperatures. As days warm in early spring PNS females that have wintered under beanlike bumps resume growth and rupture their detachable shelter, subsequently emerging as 1/16-inch female wingless crawlers. Males present in spring are tiny dark midge-like winged but weak flyers. Mated females deposit clusters of eggs and cover them with webbing in sheltered crotches and crevices of the tree or nearby protected areas. About five to six weeks later, the eggs hatch as yellow crawlers that settle on last year's needles and insert their piercing tube-like mouthpiece to feed, resulting in yellow needles and defoliation. They also cover their immobile body with a blackish waxy coat that provides an armor to shelter them from the elements and predators. It also



Adult male *Matsucoccus acalyptus*
4.6 mm wingspan

Copyright © 2015 [Edward L. Ruden](#)

ONLINE PLANT SALE

There's still time to order!

You have until 5 p.m. Wednesday, May 11, to order your favorite plants, so don't waste another minute!

[Click here to shop!](#)

The online plant sale is the SFEMG's main fundraiser and helps support more than a dozen community-based gardening projects throughout Santa Fe, including four demonstration gardens at the County Extension Office on Rodeo Road.

Scheduled curbside pickup will take place from 9 a.m. to 4 p.m. Saturday, May 14, at the Fairgrounds.

In this issue ...

Controlling Piñon Needle Scale	1
A Message from the SFEMG President	3
Xerces Society Expanding the Santa Fe Pollinator Trail	4
Eldorado Cactus Garden Tour	6
Desert Marigold (<i>Baileya multiradiata</i>)	7
Native Plant Society of New Mexico Annual Conference	8
Calendar	9
New & Noteworthy	11
The Garden Journal Radio Show	12

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

NMSU is an affirmative action/equal opportunity employer and educator.

NMSU Cooperative Extension Service
Santa Fe County Extension Office

3229 Rodeo Road
Santa Fe, NM 87507
505.471.4711

santafeextension.nmsu.edu

.....

Tom Dominguez

Santa Fe County
Extension Agriculture Agent

Wendy Wilson

SFEMG President

Kathy Haq

SFEMG Newsletter Editor
news.sfemg@gmail.com





A Message from SFEMG Board President Wendy Wilson

Out walking my dog this morning, I wandered through one of Santa Fe's "secret passageways" — a drive within a private enclave, lined with flowering plum trees. It was glorious. However, I noticed a worrying lack of bees on the blossoms. While you are planning your gardens this spring, please remember that planting for pollinators is vitally important.

The SFEMG [Santa Fe Native Plant Project \(SNaPP\)](#) has a fantastic Native Plant Guide that can be accessed [online](#). The [Xerces Society for Invertebrate Conservation](#) also has a great list of pollinator plants for the Albuquerque and Santa Fe Region. [Click here to access](#).

As the growing season progresses, I want to acknowledge the unsung, behind-the-scenes, absolutely appreciated SFEMG members who support the public face of our organization.

The SFEMG Online Plant Sale (now underway) is chaired by Pat Oliver-Wright, Holly Henry, Pam Wolfe, Russ Funk and me, guided by last year's chairs, Bonnie Martin and Susie Summers. They are bringing you thousands of shrubs, perennials and vegetables grown just for us. We hope you will shop our [online plant selection](#) now. The plant sale funds all the SFEMG projects.

The SFEMG website is maintained by Darlene Maestes. At sfemg.org, you can find information about the plant sale; gardening classes that are available through NMSU, the SFEMG and other organizations; the SFEMG projects; our Let's Grow/Community Day events; how to make gardening inquiries at the Ask a Master Gardener online site; and most importantly information on how to become a Master Gardener.

Pat Hollingsworth is our incredible project coordinator. She is responsible for the project leader training, organizing the Project Expo that introduces our interns to the projects, and orchestrating the Let's Grow/Community Day events.

Stephen Schmelling keeps our membership roles in order and helps members with renewal questions and emeritus requests. Along with Kathy Brechner he keeps us on track in attaining the 30 volunteer hours required of each Master Gardener annually. Kathy organizes, approves and lists all the volunteer hours, and submits a summary to NMSU at the end of the year. We will donate 10,000-plus volunteer hours this year.

Sandie Lemke is our new treasurer. She brings years of financial experience and has stepped up to publicize the plant sale. We are fortunate to have her.

Our new education coordinator is Stephanie Deutsch. She finds continuing education (CE) activities for the Master Gardeners, interns and the public alike. NMSU requires each of us to complete 10 CE hours per year.

I wish you a spectacular May and remember: Plant pollinators!

Wendy



Xerces Society Expanding the Santa Fe Pollinator Trail *You might be eligible to receive free plants!*

Story and photos by Kaitlin Haase



Volunteers with the SFEMG's Santa Fe Native Plant Project (SNaPP) are helping to grow the Pollinator Trail with plantings in the SFEMG's native plant demonstration gardens at the Santa Fe County Extension Office on Rodeo Road. (Photo from 2021)

To continue creating connected, climate-smart pollinator habitat throughout urban Santa Fe, the Xerces Society is once again offering free pollinator habitat kits in 2022 to Santa Fe residents and caretakers of Santa Fe public spaces who commit to providing the time, space and labor needed to establish a pollinator garden. These habitat kits contain eight perennial wildflower species and one flowering shrub or small tree, for a total of 33 individual plants. Grown pesticide-free by the Santa Ana Native Plant Nursery, these kits will provide native wild flowering plants used by a diversity of pollinators from spring to fall. Selected participants will be notified in mid-July, and kits will be distributed in late August or early September. In 2021, over 250 residents received kits and 11,500 plants were planted throughout Santa Fe.

Visit xerces.org/pollinator-conservation/habitat-kits/santa-fe to learn more and fill out an interest form to participate. Interest forms will be available May 11- June 30. Please direct questions to Kaitlin Haase, the Society's Southwest pollinator conservation specialist, at kaitlin.haase@xerces.org.

Please note that there are a limited number of kits and not everyone who expresses interest will receive one. Participants are selected based on the project information set out in the interest form as well as considerations such as location, maintenance plans and outreach potential at public sites.

Thanks to those Master Gardeners and interns who volunteered last year to distribute, plant and care for these habitat kits!

Continued from Page 1

protects them from insecticides. Hatching and resettling happen quickly and once settled the crawlers will overwinter under their armor as larvae.

In the late fall immature males emerge from their protective waxy covering as crawlers, move to the ground and pupate. They overwinter in duff and soil and emerge as winged adults in early spring to mate with the emerging females, continuing the cycle.

There are actions available to control PNS, but they must be taken at times when the various stages are vulnerable. One strategy is removing and destroying the eggs before they hatch. Using a high-pressure nozzle on your garden hose, dislodge the cottony masses of eggs, working your way down the tree to the lower trunk where eggs have fallen. After waiting 30 minutes for water to drip off, remove and dispose of all duff and mulch beneath the trees, as water does not kill the insects or eggs. All of the egg masses are not formed at the same time so you need to monitor your trees for more activity and repeat the hosing when needed.



**Clockwise from top left: beanlike PNS on piñon needle tips, cottony PNS egg masses on tree trunk, winged male PNS caught in a vaseline wrap on tree trunk, infested tree and PNS egg masses found in soil under rock
Photos by Peggy Rudberg**

PNS on the move are at their most vulnerable stage. A sticky substance can be smeared on material wrapped around the lower trunk as an insect barrier to entrap crawling and winged insects. Dormant oils and lighter horticultural oils are most effective when applied with adequate coverage during the crawler stage. The oils will block the PNS spiracles, or breathing holes, causing asphyxiation. Horticultural oils also disrupt insect egg metabolism. Several weekly applications may be required. Neem oil can also be used on PNS but remember that neem oil will kill bees on direct contact. Insecticidal soaps are natural, nearly non-toxic to animals and beneficial insects but only

Continued on Page 6

Continued from Page 5

work as long as they are wet and in direct contact with pests. For all pest control products follow the instructions regarding proportions, application and environmental conditions with care.

Good luck as well as patience and perseverance are needed to control PNS.

References:

[Piñon Needle Scale, Santa Fe Botanical Garden Head Gardener Linda Churchill, Garden Blog](#)
[Pinyon Needle Scale, U.S. Forest Service, Rocky Mountain Region](#)
[Management Guide for Pinyon Needle Scale, U.S. Forest Service](#)
[Pinyon Needle Scale, University of Arizona Cooperative Extension, Yavapai County](#)



Save the date!

Join the Cactus Rescue Project and Santa Fe Extension Master Gardeners and interns for the 2022 Eldorado Cactus Garden Tour, featuring eight private gardens and two public gardens including one of the largest community volunteer cactus gardens in New Mexico.

The tour is scheduled from 9:30 a.m. to 2:30 p.m. on Saturday, June 4. It will begin at the La Tienda shopping center in Eldorado, 7 Caliente Road, which is about 10 miles outside of Santa Fe.

This is a self-guided tour, and a map of the gardens will be available at La Tienda at 9 a.m. on the day of the tour. Look for the information booth there.

The tour is free with a suggested donation of \$5. For more information, check out the organization's Facebook page: [CactusRescueProject](#) or email John "Obie" Oberhausen at jwo1959@gmail.com.



Desert Marigold (*Baileya multiradiata*)

By John Farmer

If you'd like to add a pop of brilliant yellow to your yard, consider planting *Baileya multiradiata*. This native plant is beautiful, as well as long-blooming, drought-tolerant and pollinator-friendly. A member of the Asteraceae family, it's commonly known as desert marigold, but it's not one of the true marigolds, whose genus is *Tagetes*. Botanists William H. Harvey and Asa Gray first described genus *Baileya* in the nineteenth century. The name honors scientist Jacob Whitman Bailey, a pioneer in microscopical research, while *multiradiata* means "many-rayed." Three species of *Baileya* have been recognized. Our plant, found across the southwest United States and northwest Mexico, is the most common and wide-ranging one. In New Mexico, it grows in the southern and central regions in sandy or gravelly soils on dry rocky slopes, mesas, desert plains and roadsides. It's been identified as an early colonizer after fires or other land disturbances. Reportedly, it's toxic to sheep and goats, but not cattle or horses.

B. multiradiata has woolly, silvery green, three-lobed leaves that cluster near its base, from which radiate tall, nearly leafless stalks. Each is topped by a solitary yellow flower head called a capitulum, at the center of which is a disk composed of many small flowers (disk florets) closely packed together. The three-lobed "petals" that form the capitulum's outer ring are called ray florets; as the plant ages, they come to resemble tissue paper. This reproductive structure, which attracts diverse pollinators, has been integral to the plant's evolutionary and ecological success. When present, the moth *Schinia miniana* (Grote) seals up the flower heads to build larval cocoons. *B. multiradiata* reminds us that beauty can be found in the most humble places.

Landscape use: Plant in well-drained areas with full sun. Add to cactus or rock gardens to create architectural contrast (but note that this plant tends to wander), wildflower beds with low-water native grasses, shrubs or flowering plants of different hues to weave a polychromatic tapestry that's also biodiverse, or borders along streets or sidewalks.

Planting and care: Plant untreated seeds ¼-inch deep in fall (one study proposes summer sowing may provide the benefit of dormancy-breaking dry heat followed by the monsoon's warm-moist



Courtesy Wynn Anderson,
Lady Bird Johnson Wildlife Center

Continued on Page 8

Continued from Page 7

conditions). No soil amendments and no to low irrigation. Don't overwater. Though short-lived, it usually self-seeds.

Plant type: Winter annual, biennial or perennial forb

Bloom time: March to November, depending on moisture

Size: 8-40 inches tall, 20-40 inches wide

Sun: Full sun

Soil: Sandy or gravelly

Water: Very low

Elevation: Mostly 330-6,600 feet

USDA zones: 6-8

References:

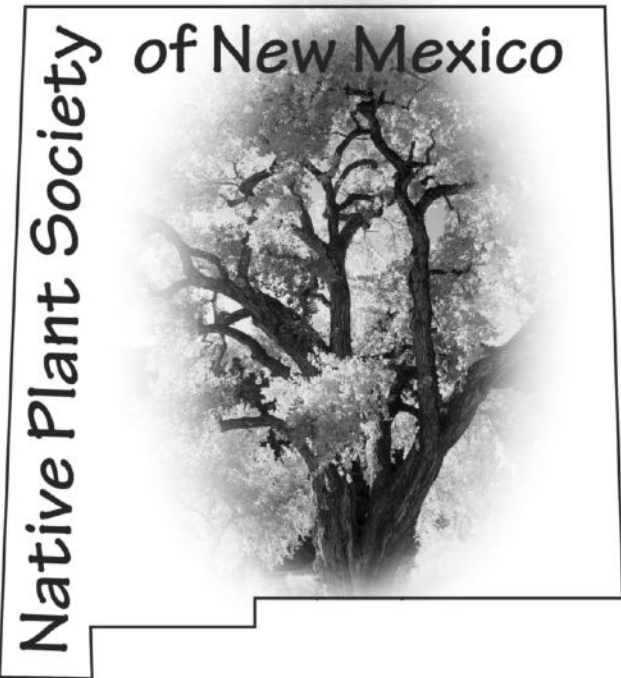
Timothy G. Myles and Bradley F. Binder, "The Desert Marigold Moth," *Desert Plants*, vol. 10:2 (1990): 75-78.

Rosemary L. Pendleton and Burton K. Pendleton, "Germination Patterns of a Suite of Semiarid Grassland Forbs from Central New Mexico," *Native Plants Journal*, vol. 15:1 (Spring 2014): 17-28.

Matt W. Turner, "Systematic Study of the Genus *Baileya* (Asteraceae: Helenieae)," *SIDA, Contributions to Botany*, vol. 15:3 (Sept. 1993): 491-508.



Green bee resting in Desert Marigold blossom | Photo by Pam Wolfe



Native Plant Society of New Mexico

Native Plant Society of New Mexico
2022 Annual Conference
A Land Ethic for Seven Generations

"We are a part of everything that is beneath us, above us, and around us. Our past is our present, our present is our future, and our future is seven generations, past and present."

— Winona LaDuke

Friday, August 5 - Sunday, August 7
University of New Mexico
Continuing Education Building
1634 University Boulevard NE
Albuquerque, NM 87131

[**Click here for more information.**](#)

Rio Grande cottonwood (*Populus deltoides* spp. *Wislizeni*)
Photo by George Miller

Calendar

Please read the fine print!

- Webinars and in-person courses are listed alphabetically by the sponsoring organization and then by date. Courses are for the most part listed in the monthly newsletter corresponding to the date they are offered. **Many require advance registration to receive the necessary link.**
- \$ means there is a fee.
- The acronym "phc" means Master Gardeners can earn 1 credit hour of continuing education (CE) for each hour attended. NMSU requires that all Master Gardeners complete 10 CE hours annually to retain certification. Master Gardeners are strongly encouraged to record completed courses in Track It Forward (TIF) as soon as possible once a course has been completed. TIF can be accessed from the members-only page at sfemg.org.
- **Note: SFEMG no longer uses the NMSU database for tracking volunteer hours that was piloted in 2021.**
- If you know of other opportunities or have suggestions or questions, please contact SFEMG Education Coordinator Stephanie Deutsch via email at deutsch.stephanie@gmail.org. *Thank you!*

New Mexico State University Cooperative Extension Service

"Ready, Set, GROW!" Webinar Series

- **Previously recorded:** [Drip Irrigation for the Home Garden with Tom Dominguez](#)
- **Wednesday, May 18:** [Soil Issues in New Mexico](#) / 1 CE

Santa Fe Extension Master Gardeners "Let's Grow" public education series

- **Saturday, May 21:** (5-7 p.m. / limited to 30 attendees)
History of Soil Building at El Zaguán / 2 CE / for more information, contact Ruthbeth Finerman via email at rfinerman@gmail.com
- **Saturday, June 4:** *Basic Composting* (hands-on), 9-11 a.m. at the Santa Fe County Extension Office, 3229 Rodeo Road, Santa Fe / 1 CE phc

Valencia County Extension Office

"Protecting Your Fruit Trees from Common Pests" Webinar Series

- **Friday, May 6:** *Weed Management for Fruit Trees*
- **Friday, May 13:** *Fruit Tree Diseases & Diagnostics*
- **Friday, May 20:** *Common Insect Pests of Fruit Trees*
1 CE each / [register](#)

New York Botanical Garden Lectures & Symposia

- **Tuesday, May 17:** [Landscapes of Memory and Meaning](#) / 1 CE / \$
- **Tuesday, May 24:** [Sea to Soil: Using Kelp as a Soil Amendment](#) / 1.5 CE / \$

Pajarito Environmental Education Center

- **Thursday, May 5:** [Preparing your Garden for Spring Planting](#) / 1 CE

Continued on Page 10

Continued from Page 9

Santa Fe Community College Continuing Education

- **Thursday, May 26:** [Create a Pollinator Friendly Backyard](#) / 1.5 CE / \$

Xerces Society for Invertebrate Conservation

- **Thursday, May 12:** [What Bee is That? An Introduction to Commonly Encountered Bees of the US](#) / 1 CE
- **Wednesday, May 18:** [Imperiled Butterflies in the Intermountain West: Biology and conservation strategies for the Four Corners States](#) / 1 CE

Gardening-themed Videos

- [My Garden of a Thousand Bees](#) (PBS) / 0.5 CE
- [Garden Allies: An Introduction to Life in the Landscape](#) (Smithsonian Gardens' "Let's Talk Gardens" Video Library) / 1 CE
- [Institute for Applied Ecology's Native Plant Materials 2022 Virtual Conference](#) / 22 videos / 1 phc



"The destruction of soil is the most fundamental kind of economic loss which the human race can suffer."

— *The Essential Aldo Leopold: Quotations and Commentaries*

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. **Note that some of these sources may have paywalls.**

["Plant safety for your garden"](#) by Laurie McGrath, shared with permission of *HOME/Santa Fe New Mexican* (April 2022)

["Santa Fe compost company fills niche"](#) by Scott Wyland, *Santa Fe New Mexican* (April 22, 2022)

["Parts of the world are heading toward an insect apocalypse, study suggests"](#) by Rachel Ramirez, *CNN Project Planet* (April 20, 2022)

["Climate change, big agriculture combine to threaten insects"](#) by Seth Borenstein, *AP News* (April 20, 2022)

["Small bees better at coping with warming, bumblebees struggle"](#) by Kelly MacNamara, *Phys.org* (April 20, 2022)

["Too Many Roots? How to Fix a Root Bound Plant"](#) by Noelle Johnson, *Birds & Blooms* (April 20, 2022)

["Blue corn and melons: meet the seed keepers reviving ancient, resilient crops"](#) by Samuel Gilbert in Acoma Pueblo, *The Guardian* (April 18, 2022)

["Do we still need to save the bees?"](#) by Philip Kiefer, *Popular Science* (April 18, 2022)

["Fruit Stickers are the Scourge of the Compost Pile"](#) by Sarah Jeong, *The Verge* (April 18, 2022)

["Evidence, causes, and consequences of declining nitrogen availability in terrestrial ecosystems"](#) by multiple authors, *Science* (April 15, 2022)

["Sculptor of flowers: how Shannon Clegg makes art from pressed flowers,"](#) *Gardens Illustrated* (April 15, 2022)

[" 'Our Birthright': Proplifting 'Crime' Divides Opinion Online"](#) by Rebecca Flood, *Newseek* (April 12, 2022)

["Mushrooms May Communicate With Each Other Using Electrical Impulses"](#) by Elizabeth Gamillo, *Smithsonian Magazine* (April 12, 2022)

["Cut-flower Carnation Photoluminescence: Potential New Value-added Product"](#) by Sara Powell, American Society for Horticulture Science press release (April 11, 2022)

[" 'Becoming a Gardener' Reviews: Seeds in the Ground and in the Heart"](#) by Barbara Paul Robinson, *The Wall Street Journal* (April 8, 2022)

["Fungi Appear to Talk in a Language Similar to Humans"](#) by Hannah Osborne, *Newsweek* (April 5, 2022)

["Does your garden have a microclimate emergency?"](#) by Molly Blair, *Gardens Illustrated* (April 4, 2022)

["Sustainable Spring Garden Prep"](#) Santa Fe County Sustainability Newsletter (April 1, 2022)

["9 Things Master Gardeners Wouldn't Do in Their Gardens"](#) by Mikayla Borchert, *Family Handyman* (April 1, 2022)

The Garden Journal Radio Show



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

May 7: Slow Food Santa Fe Outloud Edition

Hosts Lissa Johnson and Nina Rosenberg talk with Ron Boyd, who has been farming in La Villita, New Mexico, for the past 20 years. Ron is dedicated to using regenerative and organic methods on his land where he grows corn and grains and cares for hundreds of heritage fruit trees.

May 14: SFEMG Edition

Kevin Hobbs, field geologist and mapper for the New Mexico Bureau of Geology and Mineral Resources, joins co-hosts Christine Salem and Alexa Bradford to discuss how aquifers work and how the current water situation affects them. This is the seventh program in the series on the water crisis in New Mexico.

May 21: Soil Stories Edition

Host Carrie Core returns with a new episode in her series on regenerative agriculture, this time featuring Julie Maitland, division director for agricultural programs and resources with the New Mexico Department of Agriculture where she is responsible for administering the Healthy Soil Program.

May 28: Home Grown New Mexico Edition

Jannine Cabossel, "The Tomato Lady," shares tips and techniques for backyard vegetable gardening. See more at [Giant Veggie Gardener](#).



We are here to help!

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

Just go to sfemg.org and pose your question. We'll do some research and get back to you.