

# San Luis Obispo County Weed Management Area

To better serve the SLO WMA community in efforts to educate, coordinate, promote & implement special and ongoing pest management projects.



## California Invasive Plant Council Symposium 2023

by Zella Redus

November 2, 2023  
SLO WMA Meeting  
Recap: p.5

Several members of the SLO WMA were recently able to attend the California Invasive Plant Council (Cal-IPC) 2023 Symposium. Cal-IPC has held this symposium annually since 1995. Each year's gathering provides a range of presentations and discussion topics related to invasive plants and weed abatement, largely centered around California.

contains a complete list of the workshops, sessions, and discussions held- there are simply too many to list here! Many of the presentations overlapped with others, so attending every session in real time was not possible.

With that in mind, here are some highlights of the symposium:

- The opening Statewide WMA Meeting, led by Doug Johnson, executive director of Cal-IPC. This meeting set the tone for the rest of the week. Doug Johnson, David Kratville of CDFA, and others spoke about news and updates in weed abatement and invasive management in California. In addition, representatives of four regional



Photo: *Euphorbia lathyris*, copyright 2017 Aaron Nichols, from *Euphorbia lathyris* Calflora

"Weed of the Quarter" p.3  
*Euphorbia*

This October, the organization returned to an in-person gathering for the first time since the COVID pandemic. This time, the symposium was presented in a hybrid format, with live online options for viewing almost all sessions. Some of our members were able to attend the live sessions; others remained at home and watched online. For those who missed the symposium, the majority of the sessions will also be posted online in the near future for free viewing by anyone (<https://www.cal-ipc.org/resources/symposium/archive/2023-cal-ipc-symposium/>).

Cal-IPC dubbed this year's symposium "Reuniting for Resilience." The program ([2023\\_Sym\\_Program\\_Agenda\\_Only-1.pdf](#))



(continued from page 1)

WMAs from around the state spoke about their regional efforts over the last year. Seeing what other counties were doing was energizing and unifying, in addition to simply being fascinating.

- In the “Rare Plants and Weeds” session: Integrated pest management (IPM) to control invasive plant species in a California vernal pool-grassland complex. Jasmine Rios, CSU Sacramento and CA Department of Fish and Wildlife. This presentation was fascinating and very well-presented. The takeaway, in brief, is that an IPM approach works better than any isolated treatment (at least under the conditions in question).

- In the “Fighting Fire and Weeds Together” session: Minimizing weed spread during fire suppression: Weed wash stations and wildfire. Joanna Clines, Sierra National Forest. This talk was practical and interesting. Attendees learned about how weed wash stations are regulated and built, and how useful they can be.
- The breadth of information at the Cal-IPC Symposium was impressive. Check on the archive link regularly to see when links are up to view at these interesting talks.



In early June, the Ag Department celebrated the tenth annual California Invasive Species Action Week (CISAW). CISAW, established by the CA Department of Fish and Wildlife, is an opportunity to spread awareness of invasive species and how to manage their impacts.

The Ag department created an interactive display at the San Luis Obispo Library (see photo). Next year's CISAW is June 1 through June 9.

<https://wildlife.ca.gov/Conservation/Invasives/Action-Week>

# Weed of the Quarter *Euphorbia*

by James Moore

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*Euphorbia* is a very large and diverse genus of flowering plants with over 2,000 species included. Commonly called “spurge” due to the purgative use of the plant’s sap, all members of the genus share the poisonous, latex-like milky sap. The poisonous quality of the sap has long been known. The ancient serpent-king, Arwe, significant in Ethiopian mythology, was killed with the use of *Euphorbia* sap. All members in the genus also share unique floral structures. Each flower is either male or female and is stripped of all but the essential parts of the flower; they have no sepals or petals, nectar or other floral parts, but only contain either stamen in the male flowers or pistils in the female flowers. They are the only plants known to have this kind of flower head.

But that is where similarities between individual species come to an end. *Euphorbia* species can be cactus-like in appearance such as African milk-barrel, *E. horrida*; leafy and vegetative such as the poinsettia; succulent such as balsam spurge, *E. balsamifera*; or can appear as a garden variety ornamental such as gopher spurge, *E. lathyris*. Plants can be annual, biennial or perennial herbs, woody shrubs or trees, very diverse indeed.

Calflora, the online database many field botanists use for observing wild plants in California, has 77 species of *Euphorbia* listed as observed in California. In San Luis Obispo County, Calflora lists 27 species as observed, 16 of which are non-native. *E. lathyris*, *E. oblongata*, *E. terracina*, and *E. virgata* are the 4 species marked as invasive that have been observed in SLO County.

*Euphorbia* species plants are a wide and diverse genus of plants, many of which are adapted to the Mediterranean climate we have along the Central Coast of California. For that reason, it is important that we are careful in the use of these plants in our landscapes, and that we keep our eyes open for them as we conduct our work in the field, whether that is along public roads or in private pastures.

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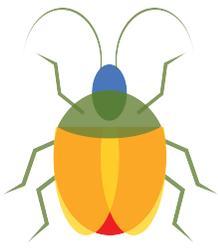


Photo: *E. oblongata*, copyright 2019 Michael Sturtevant, from Observation of *Euphorbia oblongata*



Photos: *E. virgata*, Ag Comm Staff





## Puncturevine

by Zella Redus

Puncturevine, *Tribulus terrestris*, is an invasive weed that can be a serious pest of crops due to its ability to divert water away from surrounding plants. However, it is probably more famous for another unpleasant trait: its seeds. Encased in pods studded with large, hard thorns, these seed pods, which evolved to cling to the fur of passing mammals and thereby distribute the plant to new growing areas, are dangerous and painful to encounter. They are strong enough to pop bike tires, and can certainly cause damage if stepped on.

Fortunately, two species of weevils (a type of beetle) that specialize on puncturevine have been introduced to the state. Populations of both species were released in California in 1961 and have been active in the state since then.

One of the two species is the puncturevine stem weevil, *Microlarinus lypriformis*. It lays eggs in the stem of the puncturevine.



Once the eggs hatch, the larvae live within the stems, which are their sole source of food. Eventually, they pupate, emerge from their pupae, and exit the stem to live as

adults.

The other weevil is the puncturevine seed weevil, *Microlarinus lareynii*. This weevil lays eggs within developing seeds of the puncturevine plant. Once hatched,



*Microlarinus lareynii*  
Photo: Charles Olsen, USDA APHIS PPQ, Bugwood.org

the larvae live within the seed and use it as their sole food source. When they reach adulthood, they emerge from the seed and live outside the plant. Puncturevine remains their sole food source, although as adults they eat all parts of the plant, not just the seeds.

The goal of this type of biocontrol is to reduce invasive weed populations enough to enable manageable control, not to completely eliminate the target weed. These two insects have been fairly effective at reducing puncturevine populations to a manageable population size, with some exceptions.

From WeedCUT: "Adults of both species cause minor defoliation, but larval damage to seeds and stems can be significant. For example, seed production

decreased by 46% within 5 years after the first release in southern CA, and puncturevine coverage decreased by 70% to 100% in 5 of 6 regions studied during 15 years (Huffaker et al. 1983). Impact appears to be higher at non-irrigated sites, or when there is less precipitation. These weevils have substantially reduced the weed population in many areas of California and have been highly effective in Hawaii. However, it has been difficult to establish them at higher elevations and latitudes, presumably because of the negative effect of cold winter temperatures on adult survival. For example, the seed weevil established at only 1 of 5 sites where it was released in Lassen county, and the stem weevil failed to establish at any of these sites (Villegas and Gibbs 2010)."

Here in San Luis Obispo County, when the Department of Agriculture surveyed puncturevine this summer, we found many parasitized plants. Parasitization is evident from the appearance of small exit holes in the stems or seeds of the plant (see picture 1). We are happy to see evidence that the weevils are hard at work!

Sources:

- <https://ag.colorado.gov/conservation/biocontrol/puncturevine>
- <https://weedcut.ipm.ucanr.edu/biological-control/puncturevine/#gsc.tab=0>

# WMA Meeting Recap

November 2, 2023

The SLO WMA has decided to include a short meeting recap in each quarterly newsletter going forward. For more detailed minutes and a link to recordings of meetings, please subscribe to our email list:

<https://forms.office.com/g/BitGbMfdyb>

Organizations represented: Morro Bay National Estuary Program (MBNEP), US Fish and Wildlife Service (USFWS), Land Conservancy of San Luis Obispo (LC SLO), County of San Luis Obispo Department of Agriculture/Weights & Measures (Ag Dept), CA State Parks, San Luis Obispo County Parks Department (County Parks), and private landowners.

- The Pest Detection program at the Ag Dept reports that insect pest detections are on the rise in California right now. This year there have been 700 fruit fly detections in the state, compared to the previous high (in the 1980s) of 200. There are also higher-than-usual finds of spongy moth and Japanese beetle.
- A reminder: if you encounter tree-of-heaven (*Ailanthus altissima*), consider mapping it on Calflora (<https://www.calflora.org/entry/mphotoupload/mphotoupload.html>). The invasive tree is also a favorite food of the invasive spotted lanternfly (SLF), and the more accurately it is mapped, the more it will help CDFA when SLF arrives in California.



Tree of heaven,  
*Ailanthus altissima*  
Photo: Patrick Wall



Adult spotted lanternfly  
Photo: L. Barringer  
PA Dept of Agriculture  
Bugwood.org

- At last week's Cal-IPC Symposium, there was discussion of the new biocontrol agent combatting yellow starthistle, called the root-crown weevil or rosette weevil (*Ceratapion basicorne*). It has been released in 2 sites in northern California.
- Populations of *Dittrichia graveolens* have exploded in recent years. State Parks has discovered it on their property and are working hard to reduce populations. The Ag Dept has had to reduce control efforts due to difficulty of obtaining permission to control the plant on private properties. State Parks would like to stop *Dittrichia's* spread along a line at Los Osos Creek Bridge.
- LC SLO discovered an invasive clam in SLO Creek ([https://ucanr.edu/sites/CalAIS/Clams\\_Mussels\\_and\\_Snails/?uid=5&ds=771](https://ucanr.edu/sites/CalAIS/Clams_Mussels_and_Snails/?uid=5&ds=771)). The City of San Luis Obispo reports it has also been found in Laguna Lake, and County Parks found it in Lopez Lake recently. It may threaten infrastructure due to its tendency to gather within pipes. There are no native freshwater clams in SLO County, so if you see a suspicious one, report it (<https://wildlife.ca.gov/Conservation/Invasives/Report>) or take it to the Ag Dept for identification.
- Clethodim has long been used to treat veldtgrass. Wildlands, refuges, and state parks often haven't been able to use it legally due to label restrictions. Christie Boser of USFWS has been doing a lot of work to change the label so that Clethodim is more usable in these situations. It looks like this effort is progressing well.
- LC SLO (with help from USFW) just finished the first round of treatments on a long-untreated arundo population. This population, at the bridge over SLO Creek at Los Osos Valley Road, had long been prohibited from treatment. Treatment was OKed by the city and the first phase was completed this fall. They will return to treat again next year.
- The Ag Dept is evaluating possible approaches to spraying the jubata grass infestation at Hearst Castle. While cheaper, drone spraying is less commonly used to relatively minute spot-spraying targets, and it might prove less effective at this

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- than a helicopter. In the meantime, the Ag Dept has seen high efficacy of treatment at its other major jubata treatment site, the Morro Bay power plant.
- LC SLO would like the Ag Dept to treat jubata on the roadsides leading up the Pismo Preserve, if possible, and the Ag Dept agrees to.
- A potential great resource: DOD Skillbridge (<https://skillbridge.osd.mil/>). This program connects returning military veterans with projects that need personnel at no cost to the project's organization.
- MBNEP wrapped up limonium treatment over the summer. There is new USFWS funding for iceplant removal. They will start where State Parks left off.
- MBNEP has also applied for funding for arundo mapping in the Chorro Watershed, and they have internal funding if that doesn't come through. They are hoping SLO County can help.
- *Euphorbia segetalis* has been seen on Estero bluffs. It has also been spotted at Pismo Preserve (ed. note: identity confirmed by CDFA on Monday, November 6th).
- The WMA can be anything we want. In addition to sharing information and resources, we can host trainings, workshops, or anything else that we like. If you have ideas for possible trainings or activities, share them via email or at the next meeting (in January, date TBD)

## Thank you to Karen Lowerison!

### The County of San Luis Obispo Department of Agriculture congratulates

**Karen Lowerison on her upcoming retirement.** Karen will sail off into the sunset at the end of the year after an incredibly successful 21-year career with the department.

Karen joined the department in 2002 as Agricultural Inspector/Biologist, bringing with her years of valuable experience working in the local nursery industry. In her biologist role, Karen worked in many different programs including Pest Exclusion and Pest Detection but was especially passionate about the Weeds program. For years, Karen was a key member of the Weeds team and was always willing to bag up a pioneer patch of yellow starthistle on its way to producing seed or plow through a hedge of poison oak to get to an Arundo clump that needed to be treated.



Upon promotion to the Deputy Agricultural Commissioner position in 2010, Karen worked primarily in the Pest Detection Trapping program but never lost her interest in weed management. In 2016, Karen took over as the supervisor for the department's Pest Management/Weeds program and has led that program through these past seven years. During that time, Karen helped revitalize the program by obtaining new grants and expanding upon the departmental staff trained to work in the weed management program.

Karen's dedication and commitment have been extraordinary, and we are thankful for all of the hard work and effort that she has put into the weed management program. We know that Karen's passion for weed control will carry in to her retirement days, and although we wish her a lot of extra time for rest and relaxation, we know she's also going to spend some of that extra time relentlessly eradicating the yellow starthistle and other noxious weeds on her own property. Good luck Karen – in all of your future endeavors – you will be missed!

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## 2023 3rd Quarter SLO CAC Survey, Treatment & Removal Work

- Treated jubata grass on 287 gross acres
- Treated 16 locations in our current north coast grant
- Treated 57 total locations, both spray and hand-removal
- Spent a total of 292.5 person-hours on treatment
- Spot-treated a few roadsides for YST

Thank you SLO WMA  
members and readers!

Reach out to be part of our next  
newsletter or to join our mailing list!

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[www.cal-ipc.org/solutions/wmas/  
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UPPER SALINAS-LAS TABLAS  
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