

Dispatch



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*Protecting California's environment and
economy from invasive plants*

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FROM THE DIRECTOR'S DESK

Legislative report

By Executive Director Doug Johnson

I t's been busy at the Capitol in Sacramento. Advocates worked to get a natural resources bond on the November ballot as a way of maintaining funding for the Wildlife Conservation Board and others. Meanwhile, the legislature has been busy reviewing bills, one of which was initiated by Cal-IPC.

AB-2509, by Assembly Member Ash Kalra from San Jose, would define the terms "invasive species" and "integrated pest management" in statute. The bill passed through the Assembly and is now under review in the state Senate. Though relatively simple, the bill has required negotiation with agencies and stakeholder groups along the way.

Other bills relating to land stewardship are also under consideration. Here are a few.

- SB 310 (Dodd) would give tribes the sovereign ability to perform cultural burns.
- SB 675 (Limón) aims to recognize prescribed grazing as a formal part of wildfire prevention work.
- AB-1581 (Kalra) would exempt riparian projects that secure a Restoration Management Permit (from the California Department of Fish and Wildlife) from also securing a Lake and Streambed Alteration Agreement.
- AB-1889 (Friedman) would require cities and counties to consider the impact of development on the movement of wildlife and habitat connectivity as part of the conservation element of their general plans.
- AB 2113 (Garcia), which has already been signed by the governor, raises the "mill" assessment on pesticides sold in the state in order to provide more funding for the Dept. of Pesticide Regulation to help them complete registrations

and re-evaluations more quickly and transparently.

- AB-2552 (Friedman) would prohibit the use of anticoagulant rodenticides which can harm raptors who eat poisoned rodents.
- AB 2745 (Mathis) would allow County Agricultural Commissioners to fine, up to \$1,000 per acre, landowners who allow pests to exist on their property without addressing them.
- AB-2827 (Reyes) would clarify and strengthen the role of the California Department of Food and Agriculture in preventing invasive species from entering the state.

Cal-IPC will continue to advocate for responsible, science-based policy initiatives that improve invasive plant management and habitat protection. Thank you for your ongoing support in this work.

ON THE COVER

California State Parks environmental scientists Jessie Vannatta and A.J. Heredia show off a handful of blessed thistle (*Centaurea benedicta*), found during an early detection rapid response survey at the Hungry Valley State Vehicular Recreation Area. More piles in the truck are ready to be hauled out from a fire suppression dozer line. Read about early detection rapid response efforts for another invader, stinking Roger (*Osteospermum calendulaceum*), on page 6.

This issue's cover photo was a submission to the 2022 Cal-IPC Photo Contest. This year's Photo Contest is open now! Submit your photos and share your work with the land management community. More info at cal-ipc.org/photocontest. Cover photo: Leah Gardner, California State Parks.

Wildland Weed News

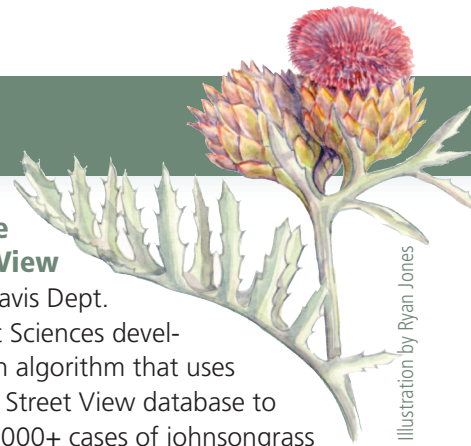


Illustration by Ryan Jones

CAL-IPC UPDATES

2024 Symposium – Join our annual conference, Online, Oct. 23-25. See page 9.

2024 Practitioner Workshops – We are hosting two in-person events: Cal Poly Pomona, Oct. 1 and CSU East Bay, Concord Center, Nov. 15. See page 8.

AB-2509 (Kalra) – As of this writing, the Cal-IPC-sponsored bill to define “invasive species” and “integrated pest management” in code is moving smoothly through the legislature, supported by a coalition of 40 stewardship organizations.

Calibration training – Supported by UC Cooperative Extension experts, we held a free herbicide calibration training hosted by the Ventura County Ag. Commissioner’s Office. Cal-IPC has funding from the California Dept. of Pesticide Regulation to provide training and best management practices for proper calibration, preventing pesticide overuse.

CISAW webinars – With UC Cooperative Extension colleagues, we held lunchtime webinars during California Invasive Species Awareness Week. Find recordings at ucanr.edu/sites/invasivelunch.

Corps training – Cal-IPC and the California Local Conservation Corps Fdn. have received funding to train staff from corps groups across the state, providing ecological education as a foundation for invasive plant management.

NPS plans – We are completing a weed management strategy with the John Muir National Historic Site and beginning a strategy with the Golden Gate National Recreation Area.

YOUR MEMBERSHIP

Thank you for keeping your membership current. Note that your expiration date is shown on the mailing label of this newsletter. Cal-IPC’s success in meeting its mission depends on your vital support.

Roadside vegetation – Cal-IPC is working with partners in Southern California to draft best practices for roadside vegetation management, to protect habitat and reduce wildfire ignitions.



A contractor treats *Spartina* on Bair Island, Redwood City. Photo: Drew Kerr.

Spartina – Cal-IPC received a \$2.5 million grant from the U.S. Environmental Protection Agency to support ongoing invasive *Spartina* work in San Francisco Bay. A new Biological Opinion from U.S. Fish & Wildlife Service opens 6 major sites for treatment. Learn more on the new website: spartina.org.

OTHER NEWS

EDRR notes – Border inspectors found spotted lanternfly egg masses on a metal sculpture headed for Sonoma County. A first suspected observation in the San Francisco Bay Area of *Ventenata*, an invasive grass found in the northwest U.S., has been reported in California.



Ventenata dubia Photo: © 2024 Michael Chasse CC-BY-NC 4.0, California.

Google Weed View

– UC Davis Dept. of Plant Sciences developed an algorithm that uses Google Street View database to track 2,000+ cases of johnsongrass in the Western United States.

Major revegetation – The Yurok Tribe has undertaken a massive revegetation project over 2,000 acres of bare sediment uncovered by dam removal on the Klamath River, planting 76,000 trees and shrubs and scattering 18 billion seeds of 98 native species.

BLM herbicides – The U.S. Bureau of Land Management approved seven herbicide active ingredients for use on public lands following U.S. Forest Service human health and ecological risk assessments.

Plant survey data – Calflora has added to their online maps an important dataset of 45,000 plant surveys from the California Dept. of Fish & Wildlife’s Vegetation Classification and Mapping Program (VegCAMP).

It works – A research metaanalysis in Science on “The positive impact of conservation action” shows that eradication, control, and management of invasive species has the largest impact of any conservation action.

Mowing – The Midpeninsula Regional Open Space District is implementing an enhanced mowing schedule at Rancho San Antonio Open Space Preserve, with the aim of targeting non-native grasses and thistles at their most susceptible stage prior to when seeds become viable.

Stinking Roger in Laguna Beach: EDRR Challenges

Ron Vanderhoff, California Native Plant Society — Orange County Chapter

The City of Laguna Beach is one of the most botanically diverse areas of the California coast. It's home to more than 300 native plant species, including 24 classified as California Rare Plants by the California Native Plant Society (CNPS) and two under state and federal protection. However, Laguna Beach's unique ecosystems face a growing threat from invasive weeds.

Three plants in particular, boneseed (*Chrysanthemoides monilifera*), coastal Galenia (*Galenia pubescens*), and Canary Island St. John's wort (*Hypericum canariense*) have taken up residence in the city. All have similar stories, but to illustrate some of the challenges, let's take a close look at a fourth species that has recently joined the others.

A new weed appears

In April of 2022, I was climbing around one of the city's fuel modification zones (FMZ), checking on a site where I had detected boneseed in 2018. I noticed an obscure, sprawling plant in a small patch. I know the 1,500 or so native and naturalized plant species in Orange County quite well, and this was not one I had encountered before. What was it?

I took a voucher for the herbarium and recorded careful field notes and photos. I knew it was an Asteraceae, but it did not align with any other species recorded in California. I contacted all the best local plant taxonomists with no luck. I then tapped the top Asteraceae expert in California, at UC Berkeley. Finally, after consultation with expert botanists in Africa and Australia, we got an identification. It was a continental U.S. first record (it is



Stinking Roger has very small flowers, hairy leaves and stems, and distinctive ribbed seeds.

known in Hawaii) of a plant known as stinking Roger (*Osteospermum calendulaceum*), a South African native that has been found to be invasive in Southern and Western Australia.

The discovery of stinking Roger in Laguna Beach spawned a small flurry of activity. I began mapping the population, studying its life cycle, seed production, germination, and impacts on other plants. I began preparing a PRE analysis for Cal-IPC. I sent a collection to the California Dept of Agriculture, which quickly assigned it an "A" pest rating. A task force formed, including representatives from the City of Laguna Beach, CNPS, the Laguna Canyon Foundation, the University of California Cooperative Extension, the Orange County Agricultural Commissioner, Orange County Parks, and Cal-IPC.

A small, sprawling, mostly annual plant, stinking Roger has some qualities that elevate it to a high invasive concern. Most notable is that it is a dryland weed, capable of growing on summer dry hillsides, grasslands, slopes, and flats. Second, it appears to flower and fruit

every month of the year, greatly complicating management. Third, it is inconspicuous, with small, non-showy flowers and an unassuming habit. Lastly, it is a prolific seeder. After a fall rain in 2022, a population of less than 2,000 plants quickly expanded to nearly 300,000 seedlings.

We all know that management of new invasive weed detections needs to happen quickly. We may not have time to thoroughly observe, learn, and experiment with assorted management options, especially with annual plants. Plants are flowering, seeds are dropping, and the plants are spreading. If a plant is not stopped quickly following its first, small detection, we could be looking at a much larger regional problem. The window of opportunity is short and actions need to be immediate,



Mature plants have a low-growing, spreading habit.

coordinated, and thorough to be effective. However, systems are not entirely in place to make this happen, nor are existing systems always set up to support an effective response.

Enter the goats

Compounding the complexity of management for stinking Roger is that the plant is growing almost exclusively in one of Laguna Beach's twenty FMZs that have been goat grazed for several years to reduce biomass between wildlands and homes.

Goats can be highly effective at reducing vegetation and they are economical compared with other options, such as hand crews. But goats bring particular risks for spreading weeds. Seeds and other plant materials that are eaten can take up to three days before being deposited back on the soil, still potentially viable. And, of course, goats can also pick up seeds in their hooves and hair. Good invasive plant protocols generally require 72 hours of cleansing before herds are moved from one location to another.

However, we soon discovered there are no sanitation rules in place for the goat herds used in Laguna Beach. They pretty much have free reign, and early attempts by the task force to initiate accurate record keeping and sanitation practices were unsuccessful. Did the weed arrive at the FMZ from the goats? If so, where were the goats feeding previously? Has the weed been transported to other areas of Laguna Beach or Southern California by those same goats? The answer so far is "we don't know." The City of Laguna Beach has not kept records on goat movements, where they came from or went to, which herds were where, or even what dates they were at each location.

Management successes and struggles

Under contract from the City of Laguna Beach, Laguna Canyon Foundation (LCF) took the management lead for stinking Roger. Without information about the goat herd's movements around Laguna Beach, LCF had to carefully survey each of the city's other goat-grazed FMZ's. Fortunately, thus far no other colonies of stinking Roger have been located.

Despite the task force's efforts at

interagency communication and coordination, large portions of the population area were grazed again in 2023. After the incident, the city's fire department and arborist assured task force members that it would not happen again.

At least, this time, we have more information on the goats used, so our UC extension agent and I will survey goat pens in Perris, 70 miles east, to make sure the plant has not spread beyond its initial detection. The City of Laguna Beach has now placed signage at the perimeter of the population and created a webpage to better communicate with the public.

The task force agreed on an integrated pest management approach combining manual control with application of pre- and post-emergent selective herbicides, specifically Gallery and Milestone.

Manual controls were used for the initial few treatments, especially during the dry months when germination was low. At the onset of the rainy season, small plots were established to test the efficacy of the treatments, especially on germination. The results were very positive, with very low germination compared to the prior year and very little non-target impacts to adjacent native flora.

The infestation, covering approximately two acres, straddles a property line with Orange County Parks. Management of the plants on parks property has used a combination of manual pulling and tarping in the place of herbicides.

In January 2024, against the recommendations of LCF, CNPS, Cal-IPC, and the US Fish & Wildlife Service, the City of Laguna Beach City Council acceded to public concern about glyphosate by voting to halt the use of herbicides on city property. The details and effects of this new policy are currently unknown, leading to increased uncertainty for this project. Given the plant's "A" rating, the City of Laguna Beach has



The stinking Roger task force meets at a work site.

special obligations to control this species in accordance with CDFA guidelines.

Extirpating an emergent invasive plant

Early management results are encouraging, but we know how difficult full extirpation will be. In highly urbanized, regulated, and populated areas, a new weed is rarely the sole responsibility of one management entity. Success requires that land managers, public agencies, botanical experts, the research community, regulatory entities, university experts, volunteers, NGO's, private landowners, and others all work together. But we have encountered the usual challenges of the complicated coordination needed across multiple land managers and agencies, and the difficulty of instilling a sense of urgency about the limited window of opportunity for stopping a new weed.

Community scientists often perform the initial detections. These "detectors" should get regular updates from the management team, both acknowledging their importance and keeping them engaged in the process, so as to encourage more of the same from them and others.

Given this complicated environment, I find the biggest challenge to a successful early detection-rapid response effort to be the willingness of each participant to engage in open and proactive communication. We must each aspire to a new level of cooperation. We must create the arena where information is openly shared, funding needs are transparent, and management approaches are collaborative. Only

(Continued on page 7)

New additions to the Cal-IPC Inventory

Jutta Burger, Cal-IPC



Clockwise from left: *Asparagus setaceus* (Ron Vanderhoff), *Cuscuta japonica* (Michael Perlmutter CC-BY-NC 4.0 Calflora), *Galenia pubescens* (James Bailey CC-BY-NC 4.0 Calflora), *Impatiens glandulifera* (Asa Spade CC-BY-NC 4.0 Calflora), *Nasella trichotoma* (Julia Scher USDA APHIS PPQ, Bugwood.org), *Osteospermum calendulaceum* (Ron Vanderhoff), and *Pulicaria paludosa* (©Kier Morse, kierocity.com).

New species are introduced into California often, either as hitchhikers through trade and travel or as horticultural or agricultural imports. A small fraction of those introductions become invasive. Our ever-growing Cal-IPC Inventory of now 328 species describes those species and serves as the go-to reference site for land managers, agencies, and the public. Only those species that score as “High,” “Moderate,” or “Limited” status using a Plant Assessment Form (PAF), or as “Watch,” using a Plant Risk Evaluator (PRE) tool are added. The PAF evaluates species that are already well established, whereas the PRE predicts the future climate-specific risk of a species becoming invasive.

Funding from the Western Integrated Pest Management Center (WIPM) has allowed Cal-IPC and our partner program, PlantRight, to maintain an interstate work group to train new PRE evaluators, screen new species of concern, and grow a broader communication network about invasive plants.

Cal-IPC’s Inventory Committee, composed of Board Members and invasive plant experts, selects species to evaluate for California and assists with evaluations and reviews.

In 2023, we evaluated ten species with the PRE tool. Seven of the ten species evaluated were categorized as a “High” risk (PRE score >15) and have been added as “Watch” species to the Inventory. The new additions are briefly described below and can be viewed online through our Plants A-Z page or the Cal-IPC inventory page.

Asparagus setaceus (common asparagus fern; Asparagaceae; PRE score: 17) is a perennial vine with delicate feathery branches and painful thorns that is native to South Africa and sold as a house plant. Its brightly colored purple fruits are dispersed by birds and its rhizomes can be spread through contaminated soil. This species is considered invasive in Australia, Cuba, and New Zealand, where it can form dense thickets and displace native vegetation. It has naturalized in shady, moister environments in southern California counties from Santa Barbara to San Diego.

Cuscuta japonica (Japanese dodder; Convolvulaceae; PRE score: 17) is a yellow-orange parasitic vine that is native to East Asia. It can kill a wide range of host plants by tapping into their vascular system, leeching nutrients, increasing susceptibility to pathogens, and smothering plants with

thick mats of fast-growing, spaghetti-like stems. It has been introduced into various parts of the U.S., including California, Texas, and South Carolina. Abroad, it is a growing problem in both agricultural and natural systems in Kenya. In California, it may have been introduced intentionally for its value as an herbal medicine and is now found in 13 counties, primarily in the Central Valley. Seed production has not yet been observed here, so it appears to be propagating itself vegetatively. All non-native *Cuscuta* species are listed as federal noxious weeds in the United States (note however that we have several native species). The California Dept. of Food and Agriculture (CDFA) gives Japanese dodder an “A” pest rating, lists it as a noxious weed, and targets it for eradication in the state.

Galenia pubescens (coastal Galenia; Aizoaceae; PRE score: 20) is a perennial, prostrate, mat forming forb that is native to South Africa. It may have been introduced into California in the 1970’s by the U.S. Forest Service as an experimental out-planting to reduce fire risk. The species has naturalized in Australia, Chile, and Spain. In California, coastal Galenia is now naturalized in the Santa Monica Mountains, the UCLA campus, Signal Hill, Laguna Beach, Riverside, and San Diego.

It has small, grayish succulent leaves and small, white, five-petaled flowers. Although it is less flammable than many other plants, it covers ground surfaces, preventing germination and establishment of native vegetation.

Impatiens glandulifera (Himalayan balsamroot; Balsaminaceae; PRE score: 18) is a tall, shrubby annual with succulent stems that is native to the Himalayas. It was introduced into Europe and North America as an ornamental but has naturalized and spread quickly. It dominates some landscapes, especially along riverways. Currently, there are only a few records of this species in northern California. Himalayan balsamroot has showy, pendulous pink-to-white flowers and an unpleasant odor. Seeds disperse explosively from capsules and can be moved long distances via waterways, on animals, and in contaminated soil. This species grows quickly and competes with understory riparian plant species, displacing them over time. Its rapid spread and effect on native understory cover contribute to its assessment as a high risk for further future spread.

Nasella trichostoma (serrated tussock; Poaceae; PRE score: 20) is a globally invasive perennial grass that is native to South America, where it occurs in warm, temperate grasslands. It is a major pasture weed in Australia and South Africa. In the U.S., it is on the federal noxious weed list and has become established in Illinois, Kentucky, North Carolina, South Carolina, Arizona, Florida, Hawaii, and Texas. Serrated tussock reproduces mainly by seed; a single plant may produce well over 100,000 seeds that can be dispersed by animals, wind, or water. Seeds are distinctly stouter than those of our native related needle grass species. It forms tussocks of up to 50 cm tall and 25 cm across at the base, has serrated leaf edges, and is unpalatable to most livestock. Serrated tussock has not yet been found in California but is considered a high risk of becoming invasive here if introduced.

Osteospermum calendulaceum (stinking Roger; Asteraceae; PRE score: 16) is an annual to short-lived perennial plant that is

native to South Africa. It has been introduced into Hawaii, and Australia and was first detected in the continental U.S. near Laguna Beach in 2022 (more on page 6). Stinking Roger is low growing with yellow flowers and grayish, lanceolate, toothed leaves. Its local ecology and environmental impacts in California are unclear, but it has rapidly expanded to high density at Laguna Beach and appears to be able to flower and fruit year-round under dry conditions. The species was given an “A” pest rating by CDFG.

Pulicaria paludosa (Spanish false fleabane; Asteraceae; PRE score: 19) is a yellow flowered biennial or short-lived perennial, growing up to over a meter tall with a woody rhizomatous root system. It is native to the Mediterranean region of Portugal and Spain and was first collected in California in Orange County in 1946. It has since spread across Southern California and now occurs in Clark County, Nevada and Western Arizona. Spanish false fleabane favors disturbed sites along roadsides, wetlands, and riparian corridors. While it has been spreading for decades in Southern California, this species has only more recently come to the attention of land managers due to its aggressive habit in riparian areas. Manual methods of control have been difficult at best and harmful at worst, since Spanish false fleabane will resprout from rhizomes if not removed completely. It can create monocultures and is considered a threat to native riparian plant communities.

Three species did not score highly enough to be considered “High” risk. Wild celery (*Apium graveolens*; Apiaceae), a weed of wetlands, scored “moderate risk.” Tangier pea (*Lathyrus tingitanus*), a twining annual legume, and Mexican pokeweed (*Phytolacca heterotepala*), a



Moderate risk, left to right: *Apium graveolens* (© 2016 Joan Hampton CC-BY-NC 4.0, Calflora), *Lathyrus tingitanus* (© 2019 Ron Vanderhoff CC-BY-NC 4.0), *Phytolacca heterotepala* (© 2017 Ron Vanderhoff CC-BY-NC 4.0, Calflora).

perennial herb related to American pokeweed, also scored “moderate risk.” All three species are naturalized in California, but only limited information is available on their impacts.

Please stay on the look-out for these species, and other plant species that are spreading quickly or posing a threat in your area. Document where you find them on Calflora or iNaturalist. Thanks to both services, which serve as invaluable resources for location records of species. Thanks also to the many plant observers who record their observations on these platforms, to WIPM, to our Inventory Committee, and to PlantRight for support in maintaining our Inventory!

Stinking Roger

(Continued from page 5)

with every partner fully committed to such communication will new emergent invasive plants be effectively removed from our lands.

Ron Vanderhoff leads Plant Science and Invasive Plants for the Orange County Chapter of the California Native Plant Society and is a member of the CNPS Invasive Plant Committee. He performs invasive species assessments for Cal-IPC, and works on invasive plant issues with municipal, county, state and federal agencies and land managers throughout the greater Orange County area. All photos for this story are courtesy of Ron Vanderhoff.

Cal-IPC Practitioner Workshops



Cal Poly Pomona
Oct. 1, 2024



CSU East Bay, Concord Center
Nov. 15, 2024

Photos(L-R): Minh Phan, Jeesse Cantley

In-person workshops in Southern and Northern California

Join a full day of learning and hands-on instruction with Cal-IPC! We're hosting two in-person, full-day workshops — one in Southern California and one in Northern California. Similar content will be offered in both workshops, led by local experts to add regionally-specific flavor.

We encourage people of all career levels and involvement to attend. Whether you're a volunteer or staff, just starting in your career or nearing retirement, there will be something for everyone.

SOUTHERN CALIFORNIA

Tuesday, Oct. 1, 9:00 am – 4:00 pm

Cal Poly Pomona

\$75 Member, \$100 Non-Member, Free Student Member, \$25 Student Non-Member

\$25 Added fee for DPR credits, lunch provided

Maximum capacity: 120

Registration closes September 16, or when capacity is reached.

NORTHERN CALIFORNIA

Friday, Nov. 15, 9:00 am – 4:00 pm

California State University East Bay, Concord Center

\$75 Member, \$100 Non-Member, Free Student Member, \$25 Student Non-Member

\$25 Added fee for DPR credits, lunch provided

Maximum capacity: 120

Registration closes November 1, or when capacity is reached.

WORKSHOP FEATURES

Each workshop includes two hours of morning presentations on weed management principles, integrated pest management (IPM), and a regional overview of invasive plants in the area. Networking opportunities are built into the day to make the most of our time together.

The afternoon offers five concurrent roundtable discussions, where participants can have in-depth conversations. Topics include:

- **Tools and techniques:** Best practices for diverse types of tools such as grazing, herbicides, biocontrol, hand tools, and power tools. Bring your questions to a "Stump the Stewards" panel to get advice on tricky management issues.
- **Restoration practices:** Local habitat restoration, invasive plant management in restoration, and passive versus active restoration.
- **Managing volunteer programs:** Types of volunteer participation, and perspectives from both land managers and volunteers regarding biggest

hurdles, biggest benefits, how to keep volunteers engaged, and how to build successful volunteer programs.

- **Equity in field safety:** A collaborative, facilitated discussion of how to improve field safety protocols and strategies for those who may be at higher risk for harassment or danger because of their identity/identities when doing research or other work in the field.
- **Controlling regional target weeds:** In-depth discussion of three major weeds in the region and how to control them.

The final portion of the day includes an overview of the Weed Control User Techniques (WeedCUT) online decision-support tool and other online resources for weed management.

JOHN H. ANDERSON SCHOLARSHIP

For each workshop, twenty scholarships of \$100 per person (and waived admission fees) are available through the John H. Anderson Land Steward Training Fund, to cover travel expenses and missed work hours for early career professionals and students. Applications are due by August 1, or until all spots are filled.

Find registration and information about the John H. Anderson Scholarship at cal-ipc.org/workshops

Getting Ahead of the Invasion Curve



2024 Cal-IPC Symposium Online, Oct. 23-25

Photos(L-R): Claire F. Meyler, Kellie Wenstrom

Connect with colleagues online. Early Bird Rates end August 26.

SYMPOSIUM FEATURES

Join Cal-IPC for another year of learning and connect with California's natural resource management community. Share your experience in online chat and discussion boards and gain insights from colleagues across the state.

WED., OCT. 23: WMA MEETING, LAWS & REGS, AND MORE

8:30 – 10:30 am: 2024 Statewide Weed Management Area Meeting

11:00 am – Noon: Career Panel

1:00 – 2:30 pm: Workshops and Discussion

- Workshop – Weeds 101: Principles of Integrated Pest Management for Beginners
- Workshop – Weeds 201: Effective Invasive Plant Management
- Workshop – Using WeedCUT to Help Design Your IPM Approach
- Workshop – Mapping Wildland Weeds in California
- Panel Discussion – Field Safety Through an Equity Lens

3:00 – 5:00 pm: DPR Laws & Regulations

THURS. & FRI., OCT. 24-25: SESSIONS AND MORE

Session talks and lightning talks cover a range of topics, including:

- Aquatics, riparian, and wetlands
- Biocontrol for invasive plants
- Community engagement/volunteer programs
- Grasslands management
- Indigenous perspectives on land management approaches
- Intersection of art and science in weed management
- Invasive plant management in rare plant and sensitive habitats
- Lessons learned
- Mapping, remote sensing, and geospatial technologies
- Monitoring and data-driven adaptive management
- New weeds: identifying and managing
- Regional updates
- Restoration and stewardship
- Tools and techniques
- And more!

SPECIAL SESSIONS

- Prevention: The First Step in Protecting Resources
- New Arrivals and Expansions
- Herbicides: A Hot Topic

Plus, our annual Photo Contest, Exhibitor Gallery, and Awards.

REGISTRATION

Early Bird through Aug. 26 / Regular through Oct. 10 / Late registration through Oct. 22, 5:00 pm.

Limited Income and Student rates are available for individuals who find registration costs prohibitive. We encourage field techs, conservation corps members, and other front-line staff to use this rate.

John. H Anderson Scholarships of \$200 per person are available for early career professionals and students. Applications are due by August 1, or until all 20 available spots are filled.

Register, join the Photo Contest, and more at cal-ipc.org/symposium.

Importing EDRR records into Calflora

Nikki Valentine, Cal-IPC

Calflora, an online plant mapping database, offers a valuable “Email Alert” tool for land managers to stay updated on new plant observations of interest. Users can configure this tool to receive notifications on a weekly or monthly basis about new or modified observations for specific plants in designated areas. Cal-IPC utilizes this tool by setting up email alert templates for various regions in California, focusing on early detection rapid response (EDRR) plant species.

This initiative began when Cal-IPC partnered with County Agriculture Commissions and Weed Management Areas (WMA) to create regional priority lists of EDRR plant targets for 19 regions across California. These plants are present in less than 10% of their respective regions, making early management crucial to prevent their spread and reduce impacts and management costs. After developing these regional EDRR plant lists, Cal-IPC created corresponding Calflora email alerts to promote landscape-level communication.

To ensure these alerts are comprehensive, it was essential to include all available data, including recent iNaturalist records. Calflora has a monthly automated import of iNaturalist records, which must be designated as research-grade within 30 days of observation to be included. A research-grade record requires a photo, coordinates, a date, and consensus on species ID from multiple iNaturalist users. Typically, one person agreeing with the poster’s ID suffices. However, if this consensus isn’t reached within 30 days, the record may not be imported into Calflora.

To address this, Cal-IPC enlisted experts to review species IDs for recent target species records in a dedicated iNaturalist project. These experts do what they can, though identifying species through photos can be challenging, especially for aquatic plants. Some regions have abundant records, making periodic review manageable, while others have fewer records to sift



Purple loosestrife (*Lythrum salicaria*) in South Lake Tahoe. Photo: Bob Sweatt. [Creative Commons license from iNaturalist.]

through. Verifying IDs helps records achieve research-grade status, allowing them to be imported via Calflora’s automated system.

Despite this, some EDRR records don’t meet the research-grade criteria in time for automated import. To cover these, Cal-IPC manually adds relevant EDRR records into Calflora every six months. Identifying new occurrences early is vital for EDRR success, and new significant records are closely monitored.

In the first half of 2024, 262 research-grade records of regional EDRR plant targets were added to iNaturalist. Only 29 of these were automatically imported into Calflora before Cal-IPC’s manual update. While none of these were first records for a county, several represented new plant populations distant from known populations. Notably, a purple loosestrife (*Lythrum salicaria*) record in South Lake Tahoe was the first for that area and the fourth in El Dorado County. Additionally, a new Portuguese broom (*Cytisus striatus*) record in the Central Coast region (Monterey, San Benito, and Santa Cruz Counties) was found more than 10 kilometers from the nearest known population. This information could guide management efforts.

Calflora’s automated import has other limitations. Only iNaturalist records listed as “wild/naturalized” and those with a Creative Commons license can be imported. Records close to existing documented occurrences in Calflora are also excluded to avoid duplicates. Cal-IPC also avoids importing near-duplicate records unless there is a significant time gap.

Once imported into Calflora, a record is linked to iNaturalist but is not updated with any changes made there. If a record is uploaded incorrectly or is a duplicate, users can “Add a Comment” in Calflora to flag it as questionable. The original poster will be notified and can delete the record if necessary.

Cal-IPC continues to enhance these community science tools to ensure land managers receive timely notifications of important new observations.

To set up Regional EDRR Email Alerts, follow these steps:

1. Log in to your free Calflora account.
2. Under “My Calflora” on the homepage, go to “Groups” and join “Regional Prioritization (2021)” to access saved regional EDRR searches.
3. Click a saved search to go to the “Observation Search” page.
4. Select “Tools” along the green header, then choose “Saved Searches.”
5. Click “Set up an email alert” to see the searches for the “Regional Prioritization (2021)” group.
6. Select the purple crayon next to the desired search and choose either a monthly or weekly alert.
7. Click “Add an Alert,” and the alert will move to “My Alerts.”

You will now receive automatic emails from Calflora about new observations.

Explore the iNaturalist project here: <https://www.inaturalist.org/projects/ca-invasive-plant-edrr-regional-prioritization>

Join the “Regional Prioritization (2021)” group on Calflora: <https://www.calflora.org/entry/onegroup.html?gid=345>

Public Gardens as Sentinels against Invasive Plants

Michelle Beloskur, Midwest Invasive Plant Network, on behalf of the PGSIP Working Group

The prevention and early detection of invasive plants is key to reducing the negative impacts of these plants on our environment, economy, and health. Public Gardens as Sentinels against Invasive Plants (PGSIP) is a continental-scale initiative with a novel approach to early detection. PGSIP utilizes the valuable expertise of public gardens to gather data on non-native plants that are escaping from cultivation.

As living museums of plants from around the world, public gardens are perfectly suited to playing a unique and proactive role in assessing the reproduction and spread of non-native plants in their collections. Public gardens often showcase plants that are not well known and may not yet be available in the horticultural trade. They also maintain long-term historical records of plant introductions and management. The PGSIP initiative provides a standardized framework for public gardens to submit observations of plant taxa in their collection that they have observed escaping from cultivation, which can be an indicator of invasiveness.

Public gardens participating in PGSIP record observations of plant escapes in accordance with guidelines developed by the PGSIP working group. The working group members represent public gardens, universities, and invasive plant organizations. The guidelines ensure that observations are made using a standardized method. Each plant record is assigned a ranking of either "Watchlist," "Potentially Invasive," or "Invasive" based on real-world observations.

Gardens report on the extent of plant taxa escape, as well as the context in which they are spreading. There is also a fourth ranking of "Assessed as Invasive," which is based on a literature review or risk assessment process. Not all public gardens



The Amur cork tree has been identified as the species most frequently reported by participating gardens. Photo: Todd Jacobsen, The Morton Arboretum.

conduct these types of assessments, but this ranking allows those that do to be able to convey the results of their efforts.

A key value of PGSIP lies in records that are ranked "Watchlist" or "Potentially Invasive." These species are either not on the radar of authorities or there is conflicting information about their invasiveness. PGSIP data can be used to inform policy decisions, improve plant risk assessments, and guide propagation research and development decisions away from taxa showing invasive potential.

As more gardens contribute their observations to PGSIP, regional trends are beginning to emerge. These trends are being shared with authorities and green industry/horticultural stakeholders to flag the next invasive plant species before it becomes widespread throughout a region.

The PGSIP network has been growing rapidly over the last few years and we are excited to share that we now have 45 gardens across the United State and Canada contributing data. Many of the records in the PGSIP database represent cases where public gardens have removed species due to invasiveness, or proactively prohibited their use due to risk assessment results.

As a result of this robust garden participation, PGSIP was able to issue its first Plant Alert last fall, highlighting Amur cork

tree, the taxon that is currently most frequently being reported by participating gardens. Plant Alerts are designed to raise awareness of ornamental plants that have been reported by participating gardens and to provide recommended actions to prevent their introduction and spread into the wider landscape.

Another way PGSIP is sharing the results of our work is via a new public data dashboard. The dashboard showcases plants most commonly reported by public gardens. There is an

option to filter the data by location, so anyone interested in early detection can see the most commonly reported taxa in a given state, province, or region.

The PGSIP Working Group is led by The Morton Arboretum and supported by the North Central IPM Center and Richard King Mellon Foundation. Current members include the Chicago Botanic Garden, Midwest Invasive Plant Network, Missouri Botanical Garden, Royal Botanical Gardens, and the University of Cincinnati.

If you would like to learn more about PGSIP, a new video provides an overview of the initiative. The video highlights the benefits and resources that are available not only for public gardens and arboreta, but for the numerous stakeholders such as nurseries, plant propagators, landscape architects, invasive species councils, and others who rely on the kind of early detection information that participating gardens can provide. View the video on the Morton Arboretum YouTube Channel: youtube.com/@MortonArboretum

Learn more about the Working Group or view the database at pgsip.mortonarb.org/Bol/pgsip.

If your garden would like to join PGSIP, or you would like to learn more about the initiative, contact PGSIPAdmin@mortonarb.org.

Ventura County Wildflower and Weed Show

John Regan Beall, Sealer/Deputy Agricultural Commissioner, Ventura County

Each spring, wildflower shows take place throughout the state, reminding us of the beauty and importance of native plants in our local areas and inspiring us to protect them. These shows invite trained botanists, invasive plant workers, and curious members of the public to learn together and view live plant specimens. The Ventura County Weed Management Area (WMA) initiated a Ventura County Wildflower and Weed Show in 2022 to showcase local native plants and the invasive non-native plants that impact them.

The Third Annual Wildflower and Weed show took place at the Ventura County Agriculture Museum in Santa Paula on April 20, 2024, with more than 400 attendees. WMA partners worked together to collect specimens of close to 200 native and non-native plants. This effort required WMA partners to follow agreed-upon protocols for gathering plants and getting them to the staging area within a day or two of the show.

Plants were brought to Ventura County Agriculture/Weights & Measures (VCAWM) warehouse in Santa Paula to be prepared, identified, placed in glass jars, and labeled with common and scientific names by taxonomic experts with the California Native Plant Society. On the morning of the event, the plant specimens were transported one block to the Agriculture Museum, where they were laid out on tables for viewing, grouped by plant family.

Antonio Sanchez, frontman for the band Sage Against the Machine and former director of the Nopalito Native Plant Nursery, gave an inspiring talk, "Bringing California Native Plant Foods into Your Life and the Future of Native Plant Agriculture," which was attended by 120 people. A profile of the band and his work in native plants was highlighted in an April 2024 issue of the *Los Angeles Times*.

The Agriculture Museum led kid's



Volunteers welcomed families with kid-focused games and activities.



The Ventura County Department of Agriculture/Weights and Measures helped visitors get familiar with the iNaturalist app.



Nearly 200 plant specimens were arranged by taxonomic family to help attendees get familiar with both native and non-native plants.

activities and a native/non-native plant quiz. Participants were also invited to tour the Agriculture Museum's native plant garden with volunteers from the UC Extension Master Gardeners program. This dovetailed well with the California Native Plant Society (Channel Islands Chapter) Plant Sale in front of the museum, giving the public a better sense of native plant landscape design when picking out their native plants.

Tables included information on non-bee pollinators, the Barbareño/Ventureño Band of Mission Indians, the Saticoy Center, and the Ventura County Resource Conservation District. The Ventura County Department of Agriculture/Weights and Measures initiated the nature loving

public to the iNaturalist app and invasive plants. Their ongoing goal is to increase the number of local iNaturalist users to improve early detection of invasive plant targets in Ventura County.

WMA partners and individuals had different roles to play, but we all improved our knowledge of local native and non-native plants through our hands-on experiences with the specimens. Working together in person in the sometimes chaotic (but fun) event strengthened our connections to each other.

Next year's show will again showcase our beautiful Ventura County native plants that we strive to protect and the invasive weeds that impact them. In 2025, we want to add actions for the public to take with WMA partners after being inspired by the event. These may include weed removal events, an iNaturalist bioblitz at a park with few existing iNaturalist finds, a Picnic in the Weeds (a field trip to a WMA partner organization's location), and a countywide rare weed field trip.

We are grateful to all the WMA partners who helped produce this event, with special thanks to the Ventura County Agriculture Museum. All photos for this story are courtesy of the Ventura County Weed Management Area.

Harness the power of your will for California's environment

Protecting California's environment from the threat of invasive plants is an on-going testament to the collective will-power of our amazing community — and you can harness the full power of your will (or living trust) during National Make-A-Will Month this August. We partner with FreeWill to help you protect the people and causes you love at no cost. In just 20 minutes, you can find a sense of security knowing that you've protected your family, dictated important decisions, and made a lasting legacy to support Cal-IPC for years to come.

This year, Cal-IPC has an ambitious goal — to sign up ten donors for our Legacy Circle, a special tier of recognition for folks who have included us in their estate plans. Newly-minted members share why they made the decision to create a legacy gift to Cal-IPC:

"I see my donation to Cal-IPC as an



As a Senior Environmental Scientist for the California Department of Water Resources, Gina's work relies on Cal-IPC resources. She feels it's important to "give back" to an organization that has enriched her life and her work. Photo courtesy of Gina Darin.

investment in sustaining the future stewardship of our environment, on which we all depend. Since you 'can't take it with you,' a legacy gift is an easy way to make sure my remaining assets are put to good use. Even if you list your descendants as first beneficiaries, you could list Cal-IPC as a secondary beneficiary. It's always good to have a Plan B." — *Anonymous Donor.*

"As a long-time supporter of Cal-IPC, I've witnessed the transformative impact they have on our local environment and community — and in my own life. One unforgettable moment was cooking an Italian meal over a campfire with colleagues on Catalina Island during a Cal-IPC Board Strategic Planning Retreat. That weekend, we worked as a team to create a roadmap for Cal-IPC to continue their great work. Including Cal-IPC in my will is my way of ensuring they can continue making a difference and inspiring

others to take action." — *Gina Darin, volunteer since 2004, Past President, Board of Directors, forever fan of Cal-IPC.*

Each helping hand builds the legacy that sustains the crucial work ahead. Thanks to these supporters, and many more, for securing Cal-IPC's future. We invite you to join them. Build your Cal-IPC legacy with a free will or living trust at cal-ipc.org/plan.

Create a plan for the future with Cal-IPC.

Together, we're making a difference in the fight to protect California's wild places from the threat of invasive plants. Create a legacy with Cal-IPC, to continue this important work.

Our partnership with FreeWill makes it easier than ever to start your will or revocable living trust. Use this free online tool to make your most important plan for the future.



Visit cal-ipc.org/plan or scan the QR code to learn more.

Stewardship Workforce Training Program database

Constance Taylor, Cal-IPC

We're excited to announce that the Stewardship Workforce Training Program database is now up and running! This California-focused database is designed to help organizations and individuals find programs that support the training and hiring of environmental stewards interested in conservation, restoration, environmental education, and more.

Though there is high demand in the state for projects with a focus on environmental stewardship, natural infrastructure, and climate resilience, these same programs can struggle to tap into a workforce that already has the specific skill set to successfully implement ecological projects. Ultimately, this database is meant to help increase access to this workforce, diversify and expand the stewardship workforce itself, and help connect programs, early career individuals, and project funders.

The programs are searchable by stewardship focus (e.g. fire management, habitat restoration, invasive plant control), training type, certifications, skills, knowledge level, wages/stipends, location, and more. Organizations from all across the state generously offered their information in order to make it fast and easy for people to search for what's available in their region and beyond. Programs can be easily added, so it is our hope that this resource will continue to grow over time.

The database project was funded by the Moore Foundation and led by the



Explore California's Stewardship Workforce Training Programs in One Place!



Social media posts promote this new resource with photos from partners, including a Cal-IPC training session and workday with Oakland Civicorps (top image). Photo courtesy California Biodiversity Network.

California Biodiversity Network's Stewardship Roundtable (part of the Pathways to 30x30 partnership), of which Cal-IPC is a part. We encourage sharing the training program database with your networks and getting the word out!

Visit the California Biodiversity Network website to learn more about other projects and Roundtables at cabiodiversitynetwork.org. Find the stewardship workforce database at cabiodiversitynetwork.org/stewardship.

Individual Membership

Stewardship Circle	\$1000
Champion	\$ 500
Partner	\$ 250
Professional	\$ 100
Friend	\$ 50
Student/Early Career	\$ 25

Members receive **Dispatch** and discount on Symposium registration!

Organizational Membership

Benefactor	\$2000	Pro membership for 8	Quarter-page in newsletter
Patron	\$1000	Pro membership for 6	Eighth-page in newsletter
Sustainer	\$ 500	Pro membership for 4	Logo in newsletter
Supporter	\$ 250	Pro membership for 3	Name in newsletter

Organizations receive Professional membership for their staff and newsletter recognition for 12 months!

See cal-ipc.org for full membership details

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WILDLAND WEED CALENDAR

Check all websites for latest event updates

Neobiota

September 3-6, Lisbon, Portugal
neobiota.eu/conferences

Land Trust Alliance Rally

September 25-28, Providence, RI
alliancerally.org

NAISMA Annual Conference

September 30-October 3, Missoula, MO
conference.naisma.org

Cal-IPC Practitioner Workshops

October 1, Pomona, CA
November 15, Concord, CA
cal-ipc.org/workshops

Cal-IPC Symposium

October 23-25, Online
cal-ipc.org/symposium

Southern California Botanists Symposium

October 26, Pomona, CA
socalbot.org/symposia

Innovations in Invasive Species Management Conference and Workshop

December 4-5, Nashville, TN
invasivesfree.org

Public Lands Alliance

February 2-6, Las Vegas, NV
publiclandsalliance.org

“The longer [an invasive species] is dormant, we’re more likely to ignore it. This latency allows them to be overlooked, contributing to their eventual emergence as a serious invasive threat. They’re like invasive time bombs.”

— Dr. Mohsen Mesgaran in
“Invasive Plant Time Bombs:
A Hidden Ecological Threat”
by Emily C. Dooley, at ucdavis.edu.