



Cal-IPC News

Protecting California's Natural Areas from Wildland Weeds

Quarterly Newsletter of the California Invasive Plant Council

A scourge of spurge!



The milky sap of Euphorbias is a dangerous eye irritant. Identify Euphorbias by their inconspicuous, yellow-green flowers surrounded by a pair of bracts. Euphorbia oblongata, oblong spurge, pictured above, occurs in central and northern California.

Photo: Bob Case

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Cal-IPC

1442-A Walnut Street, #462
Berkeley, CA 94709
ph (510) 843-3902 fax (510) 217-3500
www.cal-ipc.org info@cal-ipc.org

A California 501 (c)3 nonprofit organization

Protecting California's lands and waters from ecologically-damaging invasive plants through science, educations, and policy.

STAFF

Doug Johnson, Executive Director
Heather Brady, Outreach Program Manager
Elizabeth Brusati, Science Program Manager
Suzanne Harmon, Field Mapping Coordinator
Ginny King, Program Assistant
Agustin Luna, Business Manager
Bertha McKinley, Program Assistant
Dana Morawitz, Mapping Program Manager
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Peter Schuyler
Ecological Consultant
Andrea Williams
Marin Municipal Water District

STUDENT LIAISONS

Annabelle Kleist, UC Davis
Lynn Sweet, UC Riverside

Affiliations for identification purposes only.

Cal-IPC News

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Editors: Doug Johnson, Elizabeth Brusati, Heather Brady, and Bertha McKinley

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From the Director's Desk

Twenty years later

"This invitation is being sent to you because of your interest in invasive exotic plants, especially those that are degrading wildlands in California." Thus began a letter from Greg Archbald to some thirty individuals for an exploratory meeting in Tiburon on February 21, 1992. Eight months later, on October 9-10, the first Cal-EPPC Symposium was held in Morro Bay.

This October, at Granlibakken Resort in Tahoe City, Cal-IPC will hold its 20th annual Symposium. Carla D'Antonio, keynote speaker at the first Symposium, will reprise her role this year, providing some insight into the growth of the field over the last two decades. Our focus will be the role of invasive plant management in addressing today's interrelated trends in ecological change.

The focus twenty years ago was "to launch a new professionally based organization to provide a regular forum for the exchange of ideas and knowledge, to promote needed research and funding, to enhance public awareness of the problem, and to advocate effective solutions." Working groups prepared action lists on the topics of education, policy, funding, control methods, and a database of invasive plant information. Today we have made significant progress on all of these items.

On page 6, Gina Darin interviews Dr. Carla Bossard of St. Mary's College of California, one of Cal-IPC's co-founders. Carla met John Randall of The Nature Conservancy and Greg Archbald of the Golden Gate National Recreation Area's Habitat Restoration Team at a 1990 Natural Areas Association Conference, a meeting that Greg credits as being the formative moment when the idea was born for an EPPC (Exotic Pest Plant Council) in California based on one that had formed in Florida. *Cal-IPC News* issues this year will feature interviews with other long-time members whose perspectives provide context for making our work successful in a rapidly changing world.

We look forward to seeing you in Tahoe, October 5-7, for the 20th Symposium!

Cal-IPC's 20th Anniversary Symposium

**Granlibakken Resort
Tahoe City
October 5-7, 2011**

Join invasive plant managers from throughout the state in learning control techniques, the latest in mapping technologies and research results.

Including these sessions:

-  Ecological change
-  Science, management, and policy interactions
-  Climate change in the Sierras

Stay for exciting Friday Field Trips!



Granlibakken's picturesque resort is nestled among the hills surrounding Lake Tahoe.

Accommodations range from hotel rooms to townhouses, setting the stage for a fun and informative event in a relaxed and beautiful location. Enjoy a hike through 74 wooded acres during your stay.

Wildland Weed NewsNewsNewsNewsNews

A power company in Oregon wants to convert a coal-fired power plant into a biomass generator using *Arundo*. This giant reed invades riparian areas in many states but has not yet naturalized in Oregon (according to plants.usda.gov). Portland General Electric estimates it will need to spend \$600 million to convert the power plant, then grow 100,000 acres of *Arundo* within 50 miles of the facility to make it economically feasible. Nationwide, several planned biomass facilities have been scrapped in recent years when they became too expensive. (*High Country News*, Nov. 8, 2010, www.hcn.org)

Sunset Magazine's garden blog, *Fresh Dirt*, recommends against planting Mexican feather grass (*Nassella tenuissima*) in landscaping, based on Cal-IPC's listing it as a potential invasive plant. While it has not been formally reviewed for the Inventory, it has been listed in weed alerts at the Symposium. The blog quotes longtime Cal-IPC members Jo Kitz and Michael O'Brien, who have seen the grass spreading. freshdirt.sunset.com

Water pollution may give invasive marine species an advantage over native species. An experiment in San Francisco Bay exposed native and exotic organisms to a copper solution and a seawater control. The native species richness decreased with increasing concentration of copper, while exotic species richness did not change significantly. A few exotic species increased with more copper, demonstrating that pollutants affect native and introduced species differently. (Crooks et al., *Biological Invasions*, 2011, 13:165–176)

A Central American invasive plant threatens the world's largest wildlife migration. The Serengeti-Masai Mara ecosystem in Africa is under invasion by feverfew (*Parthenium hysterophorus*). If left unchecked it could threaten the continued migration of millions of animals across the plains every year, including 1.5 million wildebeest, 500,000 Thomson's gazelle and 200,000 zebra. Feverfew displaces palatable plants eaten by migrating species, reducing the carrying capacity of natural pastures by as much as 90%.

(International Union for the Conservation of Nature, Nov. 24, 2010, www.iucn.org)

Medusahead is spreading by 12% per year in Western states, outgrowing other grassland species. Researchers in Oregon found that medusahead has a faster growth rate, a longer period of growth, and produces more total biomass than other plants, including another invader, cheatgrass. While animals can eat cheatgrass, the sharp, twisted points on the ends of medusahead injure wildlife and livestock. (*Science Daily*, Nov. 17, 2010, www.sciencedaily.com)

Managing knapweeds and beekeeping are in conflict in Michigan. Beekeepers are angry at the release of biocontrol insects to control spotted knapweed, a serious invasive plant but frequently used by honey bees. The Michigan Beekeepers Association estimates that knapweed is worth \$40 million annually to the bee industry. The state Dept. of Ag. is working to find native plant species that can substitute as nectar sources. (*The Epoch Times*, Dec. 21, 2010, www.theepochtimes.com)

Cal-IPC Updates

Watchlist

What new weeds are starting to pop up in wildlands? Our new Watchlist compiles information from Symposium Alerts, plants nominated for our statewide Inventory, and comments received from weed workers into one list. It will be updated frequently and we welcome additional information on these and other species. www.cal-ipc.org/ip/management/alerts

Job Board

Looking for a job or need workers? Cal-IPC now has an online job board at www.cal-ipc.org. Submit announcements to us at jobboard@cal-ipc.org.

Join Us!

8th Annual Invasive Weeds Awareness Day at the Capitol March 16 ~ Sacramento

This is your opportunity to help maintain WMA funding by telling state legislators how important it is.

Register to join us at www.cal-ipc.org!



Creative fundraising

Instead of buying a sports car for his 50th birthday, Cal-IPC Executive Director Doug Johnson held an online fundraiser for Cal-IPC through Crowdrise.com (yes, he loves his job), raising more than \$5,000. Thank you to all who contributed!

Membership renewal

Have you renewed your membership for 2011? Check the mailing label to see if you are current. Renew now so you do not miss the Spring newsletter with information about the upcoming Symposium!

When a problem weed is found, you must...WHIPPET!

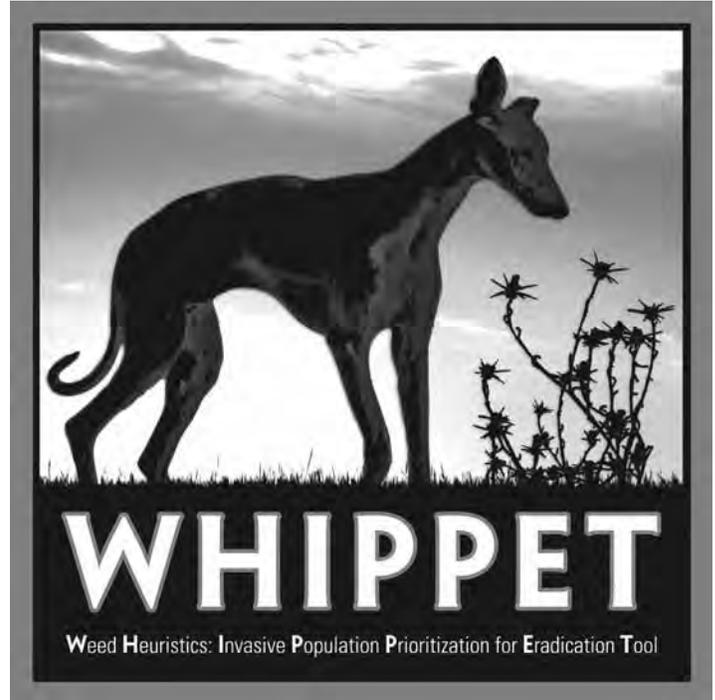
by Gina Darin, California Dept. of Water Resources, and Mike Perlmutter and Aviva Rossi, Bay Area Early Detection Network

If you've ever faced the problem of having more weed infestations than you can manage effectively, you may benefit from WHIPPET (Weed Heuristics: Invasive Population Prioritization for Eradication Tool). WHIPPET helps land managers prevent range expansion of the most potentially damaging weed infestations. WHIPPET factors biological, spatial and logistical information about each population to prioritize weed infestations based on potential impact, invasiveness, and feasibility of eradication.

WHIPPET was envisioned by Steve Schoenig while at the California Dept. of Food and Agriculture (CDFA) and developed with funding from the USDA Forest Service State and Private Forestry Program by Gina Darin while at UC Davis. CDFA needed a systematic tool to help prioritize A-rated weed infestations for eradication by considering characteristics of the target species, as well as their specific locations.

Ms. Darin's Master's thesis tested WHIPPET's ability to prioritize individual infestations for eradication separately, in acknowledgement that not all

infestations of a given weed pose the same threats and feasibility of eradication. The test of the prioritization tool in a sample of CDFA's A-rated weeds showed that by considering spatial, logistical, and biological aspects of individual populations within a species, some ranked significantly higher than others in the resulting prioritization. These high rankings are due to the combination of a location in a concentration of rare species occurrences, proximity to a vector of spread, and easy accessibility.



How to use WHIPPET

WHIPPET is designed for land managers who have more eradication targets than they can afford to treat all at once. WHIPPET will help land managers choose the highest priority infestations among high-priority species targets. The majority of the work involved in using WHIPPET is gathering all the data needed to run the model. Ms. Darin will provide trainings on the use of the model. In time, she hopes to have trained contractors available who can conduct the analyses as well.

First, pick high-priority species. Use the CDFA Pest Plant Rating list (www.cdfa.ca.gov/weedhome) and the Cal-IPC Inventory (www.cal-ipc.org/ipi/inventory) or

consult your Weed Management Area to choose species targets.

Second, assess target species for required information. Figure 1 shows the variety of criteria that need to be scored. Appendix B of Ms. Darin's thesis (available online at www.cdfa.ca.gov/weedhome) describes these criteria and how to score them.

Third, fill out a species assessment for each target species, and assign a score for each criterion. Contact Ms. Darin for sample species assessments for A-rated and additional species already scored.

Fourth, create a GIS inventory of all populations to be considered for eradication. California-wide GIS invasive plant occurrence data can be both downloaded from and uploaded to the Calflora database (www.calflora.org). Thorough data is important for WHIPPET.

Species-level criteria:

- 1) Impact to Wildlands *
- 2) Impact to Agriculture
- 3) Impact to Humans
- 4) Rate of Spread *
- 5) Reproductive Ability *
- 6) Detectability
- 7) Control Effectiveness

* as scored in Cal-IPC's California Invasive Plant Inventory

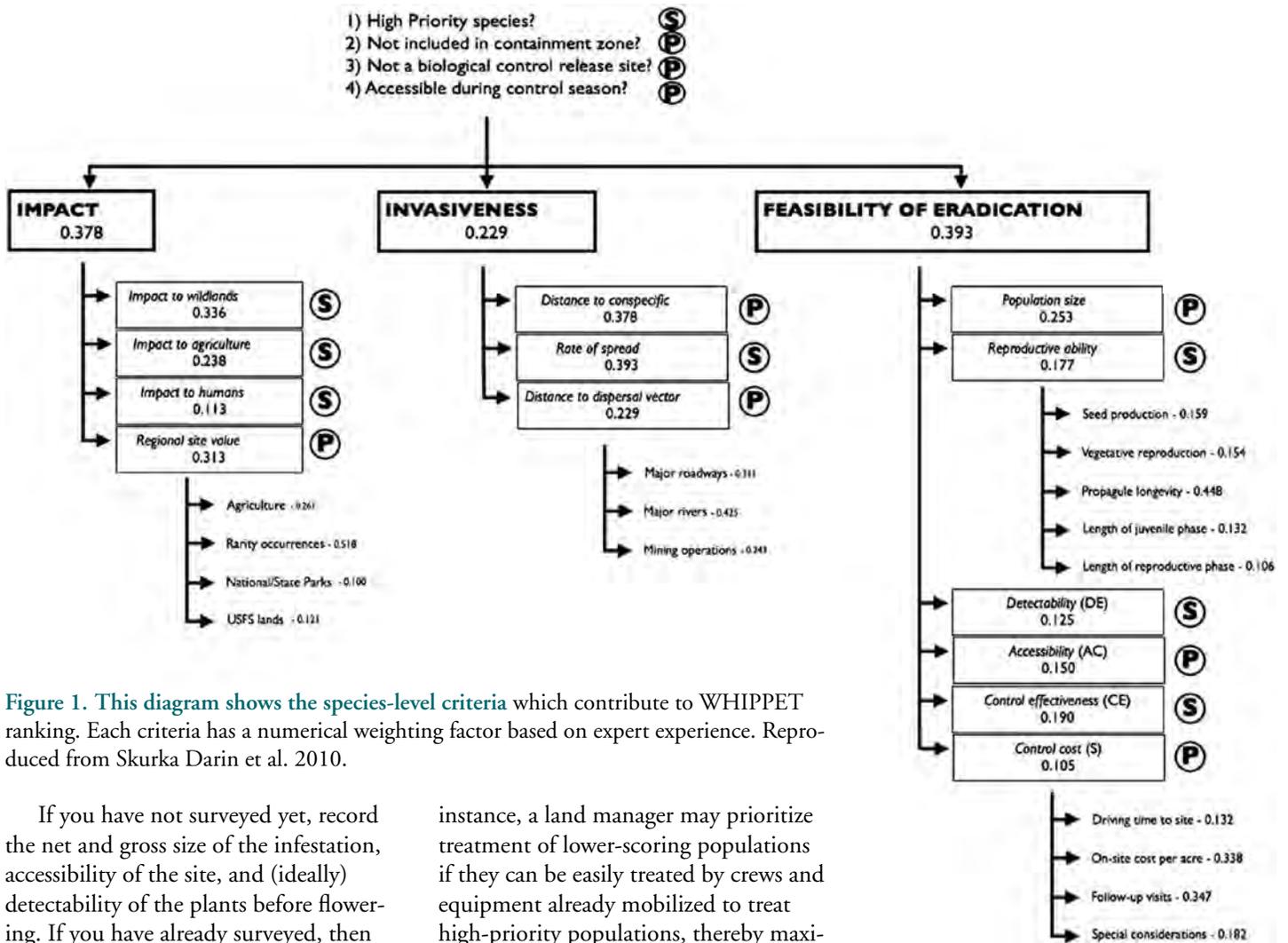


Figure 1. This diagram shows the species-level criteria which contribute to WHIPPET ranking. Each criteria has a numerical weighting factor based on expert experience. Reproduced from Skurka Darin et al. 2010.

If you have not surveyed yet, record the net and gross size of the infestation, accessibility of the site, and (ideally) detectability of the plants before flowering. If you have already surveyed, then estimate these parameters for each population if you do not have the data. If you are mapping in polygons or lines, you will need to convert those populations to a point layer that represents the occurrences based on central coordinates.

Fifth, contact Ms. Darin to set up a WHIPPET training. At your training, we will run those populations through geoprocessing models in ArcGIS to calculate the population-level scores. Then we will enter the species-level and population-level criteria scores in the WHIPPET spreadsheet, work out any issues that may arise, and calculate the overall priority scores for each population.

WHIPPET's ranking of populations for eradication priority is not the end of the road. The land manager still needs to consider additional factors such as landowner cooperation, and assess the prioritization to see if it makes sense. For

instance, a land manager may prioritize treatment of lower-scoring populations if they can be easily treated by crews and equipment already mobilized to treat high-priority populations, thereby maximizing overall efficiency.

CDEA is currently using WHIPPET to prioritize A-rated weed infestations in northeastern California, but the major field test is being undertaken by the Bay Area Early Detection Network (BAEDN).

Prioritizing for the S.F. Bay Area

BAEDN (www.BAEDN.org) coordinates early detection and rapid response to infestations of invasive plants throughout the nine-county San Francisco Bay Area. BAEDN proactively deals with new outbreaks before they can grow into large and costly environmental threats.

In 2010 BAEDN published a list of 73 priority early detection species. BAEDN used WHIPPET to prioritize eradication of over 200 populations of the BAEDN priority species reported to the Calflora database over the last 10 years. Because the BAEDN geographic scope covers mul-

iple jurisdictions, and relies on existing data not collected for this purpose, not all populations have necessary attribute data, such as population size, driving time, access, and cost of treatment. Lack of certain attribute data in our WHIPPET run prevented a full run of the model, probably skewing the output to weight species factors heavier than population factors. This is more heavily born out in the results, which show clustered scores for conspecific populations.

WHIPPET results are now being used to plan rapid response work in the San Francisco Bay Area. BAEDN has verified population status and identified treatment needs and additional considerations (such as willingness of landowners to cooperate on management or eradication efforts, or local concerns about herbicide use) through partner contacts and site visits.

...continued page 10

Interview with Cal-IPC co-founder Carla Bossard

by Gina Darin, California Department of Water Resources

As part of Cal-IPC's 20th year celebration, we're tracking down some of the founding board members to ask them what they think of their creation.

This past December, I caught up with Carla Bossard and her husband Earl over some luscious vittles at the Dumpling House in Davis. She had recently returned from a sabbatical on the Tibetan Plateau and is off again in January 2011 to trek with her St. Mary's College students through Thailand, Laos, and Singapore.

Carla begins studying invasives

In her pursuit of a Ph.D., Carla considered 22 different professors at three major universities: Berkeley, Santa Cruz, and Davis. Without question Marcel Rejmánek at UC Davis stood out from the

pack. Carla's original pursuit of study was the ecophysiology of tropical rainforest plants involved in secondary succession. However, after discussing this topic with Marcel and considering the challenge of taking her 7-year-old son Steve to do field work in Sumatra, she decided on ecophysiology of invasive species in the Sierra Nevada... and we're lucky she did!

Carla took Steve into the field regularly while working on her doctorate studying Scotch broom in Redwood National Park. She shared stories with me about the days in the field counting broom seedlings in the sleet and elk poop, and how this unfortunately turned Steve off from ever working in the field.

Carla stuck with invasives throughout her career until last year when she was

invited to join a new project in Tibet to study the ecophysiology of high elevation temperate rainforest plants, climate change, and secondary succession. Never far from her favorite topic, during her sabbatical she gave presentations in China about restoration and invasive species. Carla plans to wrap up her current research project this summer during another trip to Asia.

Carla's intentions for Cal-IPC

First, Carla was concerned that the problem of invasive species was far greater than most people realized, including environmentalists; so her main goal for Cal-IPC was to increase awareness and educate the public on the potentially disastrous consequences of invasive species in California. Personally, her goal was to come up with some applied solutions to these problems, which is reflected in her research and publications.

Another of Carla's aspirations for Cal-IPC was to develop a place where real land managers out in the field pulling weeds by their roots who actually had onsite expertise could talk to academics who knew chemical processes about invasive plants but didn't really understand which problems were most critical in the field. Prior to Cal-IPC, there was not really a forum for the two to come together and share ideas about invasive plant management. Cal-IPC's success lies in getting professional researchers meeting regularly with on-the-ground experts in the field.



Founders of Cal-IPC in the early 1990's: (back, from left) Jo Kitz, Jake Sigg, Ann Howald, Nelroy Jackson, Greg Archbald, Steve Harris, Mike Pitcairn, Sally Davis, (front, from left) John Randall, George Molnar, Mike Kelly, and Carla Bossard.

After Cal-IPC had been going for a few years and education and awareness was progressing, she hoped Cal-IPC would start backing research and finding solutions. She was particularly concerned about educating people with power, like legislators, who have some pull on the issues.

Where is Cal-IPC going?

Cal-IPC has been exceptional and has exceeded Carla's hopes and expectations on educating the public and providing a forum for researchers and land managers to come together on invasive plant issues. Cal-IPC's work on advocacy is still developing, but it's going strong. Cal-IPC has more



Balancing on a log in Sumatra, Indonesia, Jan. 1995. We were walking across a large bog to get to an island badly infested with eupatory (*Ageratina adenophora*). This location was on the edge of a National Park and they wanted advice on what to do about the eupatory before it got into their park. In 2008, I learned that eupatory has completely taken over the island but not gotten into the park. Now I know how to stop the spread of eupatory: circle the infestation with a really big bog! Photo: Carla Bossard.



JiuZhaiGou National Biosphere Preserve on the Tibetan Plateau, on the Chinese side of the Tibet-China border, April 2010. Carla Bossard and Dr. Tangya of the Sichuan University, along with their students, have been examining changing of the high altitude montane rain forest species composition has been altered due to changing environmental conditions. Photo: Carla Bossard.

staff now than ever before, is doing research and is finding the answers. Carla expects to see Cal-IPC expand advocacy efforts in the future, maybe hiring permanent policy staff, but doesn't expect to see any slow down on the original goals.

Carla's advice for aspiring weed warriors:

- 1) "Assess the invasives situation first thing when they get their job and prioritize efforts to be successful."
- 2) "Endure. Don't give up! ...Think sleet and elk poop!"

Dangerous and invasive *Euphorbias* in California

by Bob Case, former Cal-IPC board member, retired from Contra Costa County Dept. of Agriculture

During recent months as the Cal-IPC mapping crew traveled around the state they have found that few people know the species of invasive spurges in California wildlands. A bit of a refresher on spurge biology and identification can help weed warriors and detection specialists identify and report these dangerous weeds. I say dangerous because I have suffered eight hours of excruciating eye pain from exposure to oblong spurge sap and have accounts of similar pain from other weed warriors. Temporary blindness is well documented.

Generally, invasive spurges are noxious perennials with milky white latex sap that has varying toxic effects depending on dose, mode of exposure and species. They range from 10 to 90 cm tall and are originally from southwestern Europe.

All the spurges in California are perennials that go through a period of senescence, with semi-woody shoots that turn reddish with the onset of the cold season. Leaves often turn reddish to yellowish just before dropping. These are good characters to look for in the fall and winter. In the summer another character to look for is the unusual appearance of the “flowers”. The flowers are distinc-

tive and appear within lemon to greenish colored bracts which are quite attractive. A commonly known member of the Euphorbia family is the poinsettia (*Euphorbia pulcherrima*), whose colorful red bracts can be mistaken for the sepals or petals of flowers.

Weed Warrior and television news anchor Wendy Tokuda was alarmed when she discovered a vase full of oblong spurge in her local beauty salon that the stylist had picked on her way to work. Imagine a few careless touches!

The flowers are monoecious (male and female flowers occurring on each plant but separately). Each flower cluster or inflorescence is umbel-like at the stem tips, with the central inflorescences maturing first. Flowers are insect pollinated and exploding capsules disperse the seeds. These spurges also have a deep spreading root structure which can store vast amounts of energy and they produce



Euphorbia oblongata, oblong spurge, occurs throughout the San Francisco Bay Area and the central Sierras. Photo by Bob Case.

numerous buds, making control difficult.

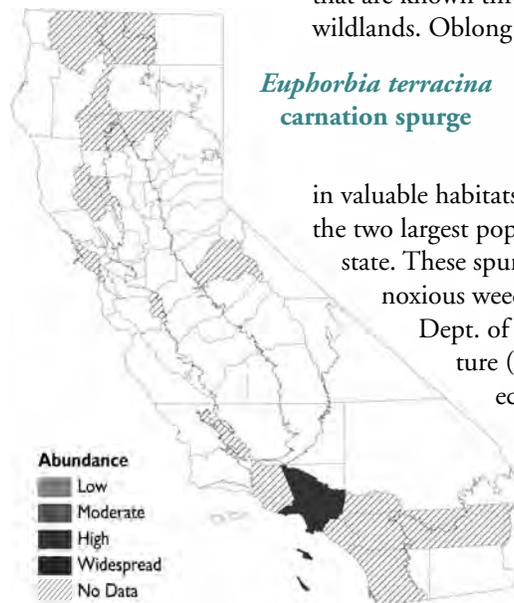
California's invasive spurges

There are several species of spurges that are known threats to California's wildlands. Oblong spurge (*Euphorbia oblongata*) and Geraldton carnation spurge (*Euphorbia terracina*) are found in valuable habitats in wildlands near the two largest population centers in the state. These spurges are both “B” rated noxious weeds by the California Dept. of Food and Agriculture (CDFA), have known economic/environmental detriment and limited distribution.

Cal-IPC's Inventory rates them as limited and moderate, respectively.



Euphorbia terracina, Geraldton carnation spurge, has only been reported in Ventura and Los Angeles counties. Photo by Erin Avina, NPS.





Euphorbia oblongata has been known in the Bay Area since the 1940s but has recently spread rapidly in burned and managed areas in the Bay Area. *E. oblongata* has also been reported in the Sierran foothills.



Euphorbia esula, leafy spurge, occurs in northern California, and is a serious problem in MT, ID, WY, ND, SD, OR and NV. Photo by Bob Case.

Euphorbia terracina has dramatically increased its distribution over the last five years. Scattered populations are found throughout Ventura and Los Angeles counties, including large populations within the Santa Monica Mountains National Recreation Area.

Leafy spurge (*Euphorbia esula*) and serrate or toothed spurge (*Euphorbia serrata*) are both “A” rated by CDFA, have known economic/environmental detriment and a limited enough distribution to allow for the possibility of eradication or successful containment. Cal-IPC’s Inventory rates *E. esula* as high, but did not evaluate *E. serrata*.

Euphorbia serrata was eradicated from the only known location in the Bay Area decades ago but could easily reappear. The leaves are visibly toothed or serrate which make it easy to identify.

Euphorbia esula is known from several northern California counties and is under eradication. Oregon and Nevada have large populations that are ready to reinvade at any time.

E. esula is considered a serious noxious weed in most western states with



extensive populations in Montana, Idaho, Wyoming and the Dakotas.

Controlling spurges

Managed sheep and goat grazing can reduce the economic impacts but many thousands of acres have been considered useless once this weed takes over. Mechanical controls and hand pulling are generally not effective because of the deep root system and potential for toxic effects on workers. Introduced beetles have helped in *E. esula* management and when utilized with grazing and herbicide applications can be effective tools in serious management and eradication. Unfortunately spurges rapidly reclaim lands if treatments are not coupled with restoration plans that include some type of seeding or replanting.

The spurges are out there, two species are disturbingly well established, two are known threats waiting on the sidelines to invade and numerous other species are potential threats. We must increase our knowledge and detection efforts to protect California’s precious wildland habitats from the threat.

As CDFA-rated weeds these spurges are subject to control or eradication by the county (“B” rated) or state (“A” rated). If you see an invasive weed, take photos and collect a specimen, get information on location (GPS or maps) and the land owner if possible. Check references to eliminate misidentification with non-invasives and natives. Suspects should be taken to the local county Agricultural Commissioner’s office for determination. Positives should be reported to the local Weed Management Area and data entered on Calflora.

For more information about *E. esula*, *E. oblongata*, and *E. terracina*, refer to the plant profiles on Cal-IPC’s website, www.cal-ipc.org

...WHIPPET from page 5

Targeting eradication for high-scoring populations thus directs effort to populations with the greatest potential to cause negative impacts and spread rapidly, and with the highest feasibility of eradication.

BAEDN found WHIPPET to be an extremely valuable tool for planning eradication of high priority species, and looks forward to adapting and employing the tool more broadly through the emerging California Early Detection Network.

In addition another field test of WHIPPET will be undertaken by a partnership led by Ducks Unlimited to prioritize red sesbania populations for eradication. Extensive field surveys of red sesbania were completed during the summer of 2010 to ensure that thorough GIS data was available to run the model. Although WHIPPET was originally developed for multiple species analysis and prioritization, this project will

provide a case study of its use for a single species on a regional scale.

Acknowledgements

Special thanks to collaborators who helped develop and test the tool, to Andrea Williams for the acronym, and to Tim Michels for designing the logo!

Resources

Darin, G. 2008. Prioritizing weed populations for eradication at a regional level: The California Department of Food and Agriculture's A-rated weeds. Master's Thesis, UC Davis. Available: www.cdffa.ca.gov/weedhome.

Skurka Darin, G.M., et al. 2010. WHIPPET: A novel tool for prioritizing invasive plant populations for regional eradication, *Journal of Environmental Management*, doi:10.1016.2010/j.jenvman.2010.08.013

Contact Gina Darin for WHIPPET training opportunities: (916) 376-9749, gsdarin@water.ca.gov.

Advertise in Cal-IPC News

Cal-IPC is now accepting advertisements within the pages of our quarterly publication, *Cal-IPC News*, which has been in circulation for 18 years and reaches several thousand natural resource managers throughout California.

We will consider advertisements from individuals, organizations and companies that provide goods and services beneficial to natural resource management. We believe that this will be a service to our readers while supporting our publication costs.

Please contact Heather Brady to reserve your space in an upcoming issue or to learn more about the cost and process. hjbrady@cal-ipc.org or (510) 843-3902.

2011 Field Course Schedule

Gain understanding of appropriate control methods.

Learn better invasive plant identification skills.

Learn effective mapping techniques.

Create strategic plans to effectively achieve conservation goals.

At Cal-IPC Field Courses you will learn valuable tools needed to manage invasive plants from expert instructors, and you can work towards your Cal-IPC Trained Wildland Manager certificate. Check our website to learn more about course curricula and the new certificate program. Register at www.cal-ipc.org, or call us at (510) 843-3902.



San Luis Obispo

San Luis Obispo Botanic Garden
April 13 - Biology & ID
April 14 - Control Methods

Redding

Lema Ranch
May 17 - Biology & ID
May 18 - Control Methods

San Francisco

The Presidio's Log Cabin
June 21 - Strategic Approaches
June 22 - Control Methods

San Diego

Tijuana River NERR
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August 4 - Control Methods



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Celebrate!



California Native Plant Week

April 17-23, 2011

Dozens of activities throughout the state will celebrate the diversity, beauty and value of California's native flora.

California Native Plant Week is authorized by California State Assembly Resolution ACR 173 and sponsored by the California Native Plant Society.

Join the festivities!
For details and events, see
cnpweek.org

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New Members

As a Cal-IPC Member, you join a powerful network of land managers, researchers, volunteers, and concerned citizens. Welcome!

Joan and Kevin Bockman (Buena Vista Native Plant Club, Oceanside), **Greg Bringelson** (Santa Clara County Parks & Rec.), **Alejandro Dominguez, Jr.** (Santa Clara Valley Water District, San Jose), **Christian Eggleton** (Forester's Co-Op, Grass Valley), **Charles Fry** (Ft. Jones), **Jackie Heyneman** (Fallbrook Land Conservancy, Carpinteria), **Elizabeth Kellogg** (Tierra Data, Inc., Escondido), **Joel Kramer** (San Elijo Lagoon Conservancy, Del Mar), **Kathryn McEachern** (US Geological Survey Channel Islands, Ventura), **Dietrick McGinnis** (McGinnis & Associates, Reno, NV), **Lisa Paterson** (Livermore), **Melissa Reslock** (McGinnis & Associates, Reno, NV), **James Rexroth** (Lodi), **Tule River Tribal Reservations**



Special thanks to 97 supporters that contributed to Doug's 50th birthday fundraiser. With the help of a few friends, Doug raised over \$5,000. Doug is pictured above chewing gorse during his time as a California State Park employee at Año Nuevo State Park, 2001.

Northern California Botanists 2011 Symposium

The 4th Northern California Botanists Symposium took place at Chico State University, January 10-11. Over 270 attendees enjoyed NorCal Botanist President Linnea Hanson's welcome and introduction to the symposium.

Speakers presented on topics ranging from managing rare plants on public lands, using fire to restore ecosystem health, field implications of *Jepson Manual* changes, using fire to restore ecosystem health, pollination biology, California lichenology and climate change.

Lawrence Janeway, curator of the Chico State Herbarium, led a tour of the herbarium and discussed online data and storage space limitations. Following a delicious banquet, Bob Patterson, San Francisco State University, gave a presentation about the history of the Phlox family. His humor and knowledge was quite engaging.

Next year, the NorCal Botanists Symposium will defer to the CNPS conference, San Diego, January 12-14, 2012, but the NorCal Botanists Symposium will return in 2013.

NorCal Botanists also give \$1,000 student research grants. Applications are due March 31. www.norcalbotanists.org



Cal-IPC hosted an exhibit booth where staff showed off our online quad mapping tool (www.calweedmapper.org). We also presented research on current invasive plant habitat and how it will likely change based on climate change.

Weed Alert: Small smutgrass, *Sporobolus indicus*

by Glenn Nader, UC Advisor, Livestock and Natural Resources, Butte, Sutter, and Yuba Counties

Small smutgrass has been found invading irrigated pastures of the Sacramento Valley, and sandy substrate along riparian corridors in San Diego, and has been reported in San Joaquin, Stanislaus, and Merced counties. Smutgrass is unpalatable to livestock and can quickly dominate pasture causing significant reduction in grazing capacity.

Small smutgrass, *Sporobolus indicus*, is a tufted, perennial grass that is native to tropical America. Smutgrass occurs as a weed in many different regions of the world including Australia, S. Europe, and Chile. One smutgrass plant can produce 45,000 seeds per year. These seeds become sticky and gelatinous when moistened, facilitating distribution.

The results of a Weed Management Area research mini-grant on the control of small smutgrass were presented at a field meeting on October 30, 2010. Chemical, mechanical, grazing control methods were tested, as well as enhanced irrigation.

The meeting highlighted the 95% control attained with the use of a mid-July rotary wiper application of 30% glyphosate (4.5 lbs/gallon). Treatments later in the year were less effective unless the rate of the glyphosate was increased to 75% of the wiper applied solution.

For this treatment method to work it is critical that the desirable plants be lower than the target weeds; grazing animals can be used to reduce the height of desirable vegetation.



Small smutgrass, *Sporobolus indicus*, has a distinct spike-like inflorescence that is obviously not branched. This characteristic makes it easy to distinguish from other irrigated pasture grasses. Photo: Joe DiTomaso.

Please read the full report for an in-depth discussion and analysis of the results. cesutter.ucdavis.edu/Livestock_and_Range_Management/Smutgrass.htm

Readings & Resources

Know of a resource that should be shared here? Send it to edbrusati@cal-ipc.org.

Managing grassland weeds

The USDA-ARS Ecologically-Based Invasive Plant Management program produces materials related to managing invasive annual grasses. They focus on cheatgrass and medusahead in the Great Basin, with information on adaptive management, revegetation, and biology. www.ebipm.org

Mexico strategy

“National Strategy on Invasive Species in Mexico – Prevention, Control, Eradication” is now available in English. www.conabio.gob.mx/invasoras/images/e/e4/Invasive_species_Mexico_dec2010.pdf

Distinguishing *Phragmites*

The Plant Conservation Alliance’s Alien Plant Working Group has a fact sheet and detailed guide to distinguishing between native and introduced forms of *Phragmites*

australis (common reed), with diagrams of morphological characteristics. www.nps.gov/plants/ALIEN/fact/phau1.htm

Calflora invasives interface

Calflora has a new page dedicated to collecting invasive plant mapping data in California, with links for uploading your data and observations. www.calflora.org/entry/invasives.html

Weeds Across Borders

Presentations and proceedings from the 2010 Weeds Across Borders conference are now available. WAB brings together weed managers from the U.S., Canada, and Mexico in a bi-annual conference. www.weedcenter.org/wab/2010/index.html

Gender and invasive species

A new report from the Global Invasive Species Programme examines the effect of gender differences on issues related to invasive species management worldwide. “Mainstreaming gender into prevention and management of invasive species” describes how differences in the management and utilization of resources between

men and women translate into differences in the impacts and effectiveness of control for invasive species. www.gisp.org/whatsnew/docs/GISP_GenderIASA4.PDF

Conservation Biology for All

A conservation biology textbook with chapters by eminent ecologists is available free of charge as an electronic download. Topics include conservation challenges and possible solutions worldwide. Download the full book or individual chapters as pdfs. This may be a limited time offer. www.mongabay.com/conservation-biology-for-all.html

Weedy weekly planner

Montana’s Ravalli Co. Weed District put together a noxious weed and native plant 2011 weekly planner. Get yours today for only \$12 by calling 406-777-5842 or emailing Melissa Maggio: melissa.rcwd@yahoo.com.

Weed busters song

If you need something to sing while hiking to your field site, just belt out the Weed Busters Theme Song. www.nps.gov/plants/ALIEN/weedsong.htm

In memory of Les Mehrhoff

After years of service to the conservation community, Dr. Leslie J. Mehrhoff passed away in December. He is recognized as a national leader in early detection and rapid response and was the Director and life force behind the Invasive Plant Atlas of New England. IPANE tracks the distribution and spread of more than 100 invasive plants throughout New England. Les was a passionate and charismatic spokesperson for the flora of New England, and he devoted his life to protecting and preserving nature. Les’ family has requested that those wishing to honor him “perform an act of kindness for the preservation of our environment.”



Les Mehrhoff examines invasive plant specimens in the biology collections facility at the University of Connecticut. Photo by Frank Dahlneyer.

THE WILDLAND WEED CALENDAR

February - April

National Invasive Species Awareness Week
February 28 - March 4
Washington, DC
www.nisaw.org

Western Society of Weed Science
March 7-10
Spokane, WA
www.wsweedscience.org

Invasive Spartina Forum
March 10-11
Oakland
HybridForum@spartina.org

Invasive Weeds Awareness Day at the Capitol
March 16
Sacramento
www.cal-ipc.org/policy/state/ciwad.php

Western Aquatic Plant Mgmt Society Mtg
March 28-31
Denver, CO
www.wapms.org

Cal-IPC Bio & ID and Control Courses
April 13 & 14
San Luis Obispo
www.cal-ipc.org

Noxious Weed Short Course, WSWS
April 18-21
Loveland, CO
www.usweedscience.org

May - July

SERCAL's 18th Annual Conference
May 10-12
San Diego
www.sercal.org/conference.htm

Cal-IPC Bio & ID and Control Courses
May 17 & 18
Redding
www.cal-ipc.org

CNGA Grassland Monitoring Wrksp
May 27
Davis
www.cnga.org

Cal-IPC Strategic Approaches and Control
June 21 & 22
San Francisco
www.cal-ipc.org

ESRI International User Conference
July 11-15
San Diego
www.esri.com/events

California Invasive Weeds Awareness Week
July 18-22
Sponsor an event!
www.cal-ipc.org/policy/state/ciawaw.php

August & beyond

Cal-IPC Mapping and Control Courses
August 3 & 4
San Diego
www.cal-ipc.org

Ecological Society of America
August 7-12
Austin, TX
www.esa.org/austin

SER Int'l Congress on Ecological Restoration
August 21-25
Merida, Yucatan, Mexico
www.ser2011.org

Cal-IPC's 20th Annual Symposium
October 4-7
Granlibakken, Tahoe City
www.cal-ipc.org

Natural Areas Conference
November 1-4
Tallahassee, FL
www.naturalarea.org

Quotable

“You can see the invading hordes right on the horizon.”

~ Christy Brigham, NPS, discussing the invasion of sand dunes by fountain grass (*Pennisetum setaceum*) on “Bad Seeds” by Ilsa Setziol, broadcast on KPCC, www.scpr.org, November 22, 2010

“You could probably stun a bear with it.”

~ Joe Eaton and Ron Sullivan referring to the weighty *Jepson Manual*, in “Weeding out the bad plants”, *San Francisco Chronicle*, December 5, 2010.

“Eat local. Eat wild meat. Eat for habitat. Eat invasive.”

~ Rachel Kesel in a blog post arguing for the “invasive species diet.” From James Gorman, “Invasivores”, *The New York Times*, January 2, 2011



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- CNGA only add \$35
- SERCAL & CNGA add \$65

Cal-IPC Membership runs on the calendar year. Those who join after June 30 will be current through the following calendar year. Joint memberships receive a \$5 discount on each organization's normal rate and apply only to Regular Cal-IPC memberships.

- Check here if you would prefer to receive the *Cal-IPC News* as a link to an online pdf file rather than a paper copy.
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