



Cal-IPC News

*Protecting California's Natural Areas
from Wildland Weeds*

Vol. 13, No. 4, Winter 2006 Quarterly Newsletter of the California Invasive Plant Council



Weeds on the *move*

Centaurea debeauxii (= *Centaurea x pratensis*), meadow knapweed, is one of several plants expanding their range into the Golden State. Several new infestations have been found, and it was recently listed as an A-rated noxious weed by the state's Department of Food and Agriculture. See page 4 for more weeds to watch out for. Photos: Joe DiTomaso, UC Davis.

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A California 501(c)3 nonprofit organization
Protecting California's natural areas
from wildland weeds through
research, restoration, and education.

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Cal-IPC News

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Editors: Doug Johnson and Elizabeth Brusati

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From the Director's Desk

Where the weedy things are

Many of us love maps, and all of us of need them at one time or another. For weed workers, maps are vital. They help us plan our work, follow the results of our work over time, and illustrate our work for others.

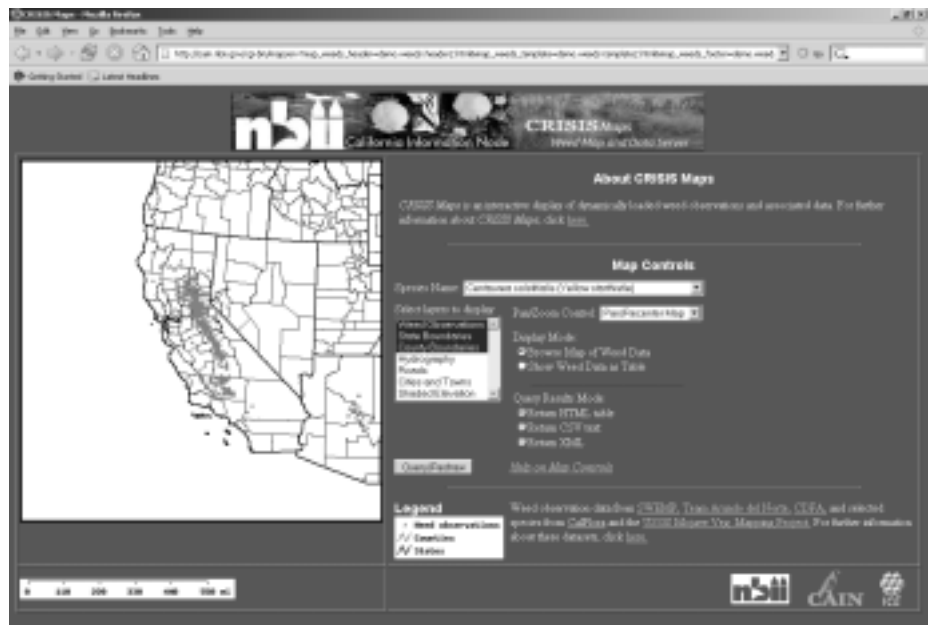
Such mapping, often in GIS, is increasingly used on a local scale by many organizations. However, broader scale maps that could help us plan landscape level restoration are still mostly nonexistent. A proposed multi-agency project to limit yellow starthistle's spread into the Sierra Nevada and eastward is an example of an effort that will require such mapping.

Aggregating local data on a statewide basis has long been a goal of Cal-IPC. Now, with a grant from the USGS National Spatial Data Infrastructure, we can take the first steps toward coordinating those with existing maps. Early meetings are focusing on the goals of designing a web-based system where data is accessible, sources are properly credited, and information can be examined with flexibility.

Some groundwork has already been laid. The Information Center for the Environment at UC Davis has developed tools for aggregating and displaying invasive plant datasets as part of the California Information Node of the National Biological Information Infrastructure (see sample screen capture below). Other organizations, such as CalFlora, the California Native Plant Society, and the Jepson Herbarium, have designed interfaces to improve access to information. CalFlora is set up to accept submissions of new field observations.

At recent Cal-IPC Symposia, the Mapping Working Group sessions have drawn a lot of interest. Our eventual goals will be to design a useful web interface, and to encourage California's weed mappers to participate in sharing data. Getting a handle on the big picture of weed distribution in the state is a crucial step in enhancing our ecological understanding and strategic planning.

Special thanks to recent grant awards from the Marisla Foundation and the True North Foundation.



Wildland Weed NewsNewsNewsNewsNews

It's time to renew your membership! For those who did not attend the Symposium, membership renewal notices are in the mail. Take advantage of our new online membership renewal system at www.cal-ipc.org.

Save the date! The 2006 Symposium will be held October 5-7 in Rohnert Park, Sonoma County.

The California Department of Food and Agriculture has completed the **California Noxious and Invasive Weed Action Plan**. The 45-page report describes the existing structure for noxious weed management in California as well as specific needs to improve prevention, rapid response, monitoring, and restoration. A pdf version can be downloaded from CDEFA's website. www.cdfa.ca.gov/weedhome

False brome's (*Brachypodium sylvaticum*) effect on **redwood forests** was reported by the *San Jose Mercury News* and KPIX San Francisco, who called it a "forest-eating grass." The dense cover of the invasive grass prevents seedlings from growing. Removal efforts are underway. 1/6/05 cbs5.com/video, www.mercurynews.com

The **invasion of hemlock** into the San Gabriel Valley and Whittier area was described in the *Pasadena Star-News*. In addition to outcompeting native plants, dense thickets of hemlock inhibit hunting by hawks. 1/6/05 www.pasadenastarnews.com

A ninth-grader in Santa Barbara discovered that a "brew" of **oleander has potential as an herbicide**. She tested her concoctions on arundo and discovered an overall effectiveness of 96%. Her project won the Santa Barbara County Science Fair. *Santa Barbara News-Press*, 12/18/05 news.newspress.com

The *Seattle Post-Intelligencer* reported on the problem of horticultural plants, especially ivy, escaping into northwestern natural areas. 11/30/05 seattlepi.nwsource.com

Massachusetts has banned 140 plants from sale, trade, or distribution, effective Jan. 1, 2006. Some species will be phased out over three years. The list was developed in collaboration with agricultural groups and the Massachusetts Invasive Plants Advisory Group. Banned species include tree-of-heaven, Brazilian waterweed, and purple loosestrife. www.mass.gov/agr/farmproducts/Prohibited_Plant_Index2.htm

In 2001, Florida's leading association of plant growers and vendors asked nursery operators to **voluntarily end the sale of 45 species** of ecologically harmful plants. Now, more than four years later, some nurseries are still not complying. 1/13/06 www.habitattitude.net

New Zealand's native plants are officially outnumbered by invasive species. New Zealand has about 2,350 native plant species but non-

native invasive plants that have naturalized in the wild now number 2,400, according to records from the country's herbariums. New plants are added to the collections by botanists, regional councils, Biosecurity New Zealand and the Department of Conservation, and it is the first time invasive plants have outnumbered natives. *New Zealand Herald*. 12/2/05 www.nzherald.co.nz

Cal-IPC Updates...

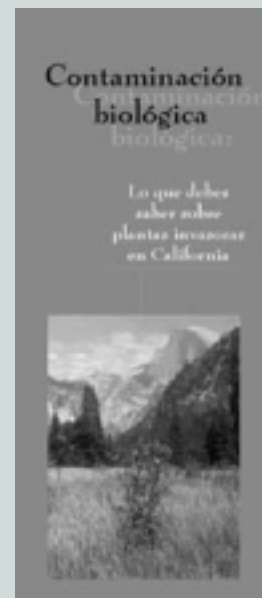
Do you have unused frequent flier miles to donate to Cal-IPC? We plan to send a sizable delegation to the **7th Annual National Invasive Weeds Awareness Week (NIWAW)** in late February. NIWAW is a national effort where citizens from across the country travel to Washington, DC to talk to agency chiefs and legislators about how invasive plants impact their state and to request support for research and control projects. This is the fourth year that Cal-IPC will participate. California's large Congressional delegation gives us a lot of ground to cover to make our voices heard, and our representatives are critical on the national scene. The expense of travel and lodging in DC are significant, so we are seeking donations of frequent flyer miles, airline tickets, or funds to help send Cal-IPC representatives to NIWAW. If you can help, please contact Elizabeth Brusati at edbrusati@cal-ipc.org, 510-843-3902. www.nawma.org

Day at the Capitol 2006 is Wednesday, March 8, in Sacramento. Last year, 53 people met with staff at 80 legislators' offices and dropped off materials at 37 additional offices. **We invite all Cal-IPC members to participate!** All you need is your knowledge of and enthusiasm for invasive plant issues. Legislators are most responsive when visited by their own constituents, and we could especially use more participants from southern California. Check the Cal-IPC website for details or call us for information.

Proceedings from the 2005 Cal-IPC Symposium will be printed in February and posted as a pdf on the website. If you ordered a copy with your symposium registration, it will be mailed to you. We will have a limited number of extra copies available for \$10.

A Spanish translation of our "Biological Pollution" brochure is available on the Publications section of the Cal-IPC website. For the time being, it is available as an electronic download only. Thanks to UC Davis graduate student Eugenia Gonzales for volunteering to translate the

brochure, and to several others who reviewed it. If you have translation skills in Spanish, Mandarin, or other languages spoken in California, please contact Elizabeth Brusati at edbrusati@cal-ipc.org, 510-843-3902.



New Weed Alerts!

As presented by Joe DiTomaso, Extension Weed Ecologist, UC Davis, at the 2005 Cal-IPC Symposium. Photos by Joe DiTomaso unless otherwise noted. Color photos available at www.cal-ipc.org in Joe's "Red Alerts!" presentation on the 2005 Symposium page.

Invasive plants that appear to be spreading:

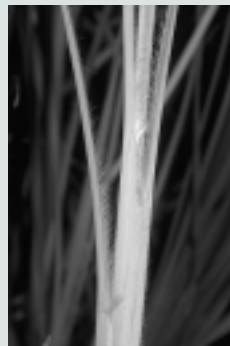
Piptatherum miliaceum (smilgrass) Widespread perennial bunchgrass in CA, mainly on the coast, but also inland. Appears to be expanding its range in southern CA. Produces many viable seeds. Ideal climatic conditions in some years may account for rapid expansion.



Parentucellia viscosa (yellow glandweed) Widespread throughout the coastal areas of central and northern CA, but reports indicate that it is spreading and becoming more of a threat in Humboldt County, and perhaps Del Norte County.



Saccharum ravennae (ravennagrass) Has been known to escape in southern CA, but has recently been rapidly expanding its range along Cache Creek in the Capay Valley between Clear Lake and Woodland. It inhabits disturbed areas near creeks but has also moved into relatively undisturbed riparian areas, occupying much of the same habitat as *Arundo donax* and *Tamarix parviflora*.



Centaurea debeauxii (= *Centaurea x pratensis*) (meadow knapweed) More invasive in Oregon and Washington, and only sporadically found in northern CA, but appears to be rapidly expanding its range in the northwestern corner of the state. Recently listed as an A-rated noxious weed by CDFA.

Cultivated garden plants going wild:

Allium triquestrum (three-corner leek) Only occasionally escaped outside of urban areas, but is becoming more prevalent along the northern coast, particularly in Humboldt County.



Geranium robertianum (herb-robert) Widespread garden escape in the Bay Area. Just beginning to get established away from urban areas.



Geranium lucidum (shining geranium) Recently reported to be invasive in Eugene, OR, by BLM. Found escaping in oak woodlands in mesic/shaded areas, generally under the oaks and in monotypic stands. They tried to hand pull it and it make the problem worse. Probably still only found near the Berkeley Botanical Gardens in CA, but is escaping cultivation there. Keep an eye out for it in wildland areas near there.



Scabiosa atropurpurea (pincushion flower or mourningbride) Very common cultivar. Began to escape into wildlands 4-5 yrs ago and form near- monotypic stands in San Bruno grasslands. Spreading along trails and fire roads between Claremont Canyon and Strawberry Canyon in Berkeley.



© 2002 Brent Miller, from CalFlora.org

Nelumbo lutea (American lotus) Has taken over much of a 30 acre lake in Tehama County. Need to watch that it does not spread to other areas. Has been invasive in the tropics and the seeds are very long lived, reportedly up to 400 years.

R. H. Mohlenbrock, USDA NRCS Wetland Science Institute, from plants.usda.gov



© E. Evans, North Carolina State University

Nassella tenuissima (Mexican feathergrass) Widely sold and grown throughout CA. Also called *Stipa tenuissima* or ponytails. Touted as a good drought resistant plant. Australia and New Zealand list it as a serious threat to agriculture. Q-rated by CDFA in 2004; recently proposed to change to C list. Has not yet established in the wild, but is a frequent escape in gardens. Need to keep an eye on it in wildlands and make sure it does not get established, primarily in coastal areas from the Bay Area to southern CA.



© Mark Brand, U. of Connecticut

Polygonum aubertii (Chinese fleecyvine, silverlace vine) Perennial vine native to China. Not a widely grown ornamental, but is available. Grows rapidly and forms dense cover—the *Sunset Western Garden Book* says it can grow 100 ft² per season. Has become established in at least four locations on the banks of San Francisquito Creek in San Mateo and Santa Clara Counties. Appears to move downstream when the stream bank collapses due to high flow conditions. Produces a large number of seeds that also facilitate rapid spread.

Contact the author at jmditomaso@ucdavis.edu.

Cordgrass and Clapper Rails

by Erik Grijalva, Field Operations Manager, Drew Kerr, Asst. Field Operations Manager, and Katy Zaremba, Field Biologist of the San Francisco Estuary Invasive *Spartina* Project.

*The Invasive *Spartina* Project is one of the state's most ambitious, and most adequately funded, eradication projects. This update follows the first major treatment season. See also an earlier feature article in Cal-IPC News, Fall 2003.*

The San Francisco Estuary Invasive *Spartina* Project (ISP), was created by the California Coastal Conservancy (Conservancy) and the U.S. Fish and Wildlife Service (USFWS) in 2000 in response to the rapid spread of non-native *Spartina* (cordgrass) in the tidal marshes of the San Francisco Estuary (Estuary). Four species of *Spartina* were introduced into the Estuary starting in the early 1970's for erosion control and habitat restoration. Two of these species, *Spartina anglica* (English cordgrass) and *S. patens* (salt-meadow cordgrass) are still limited to single

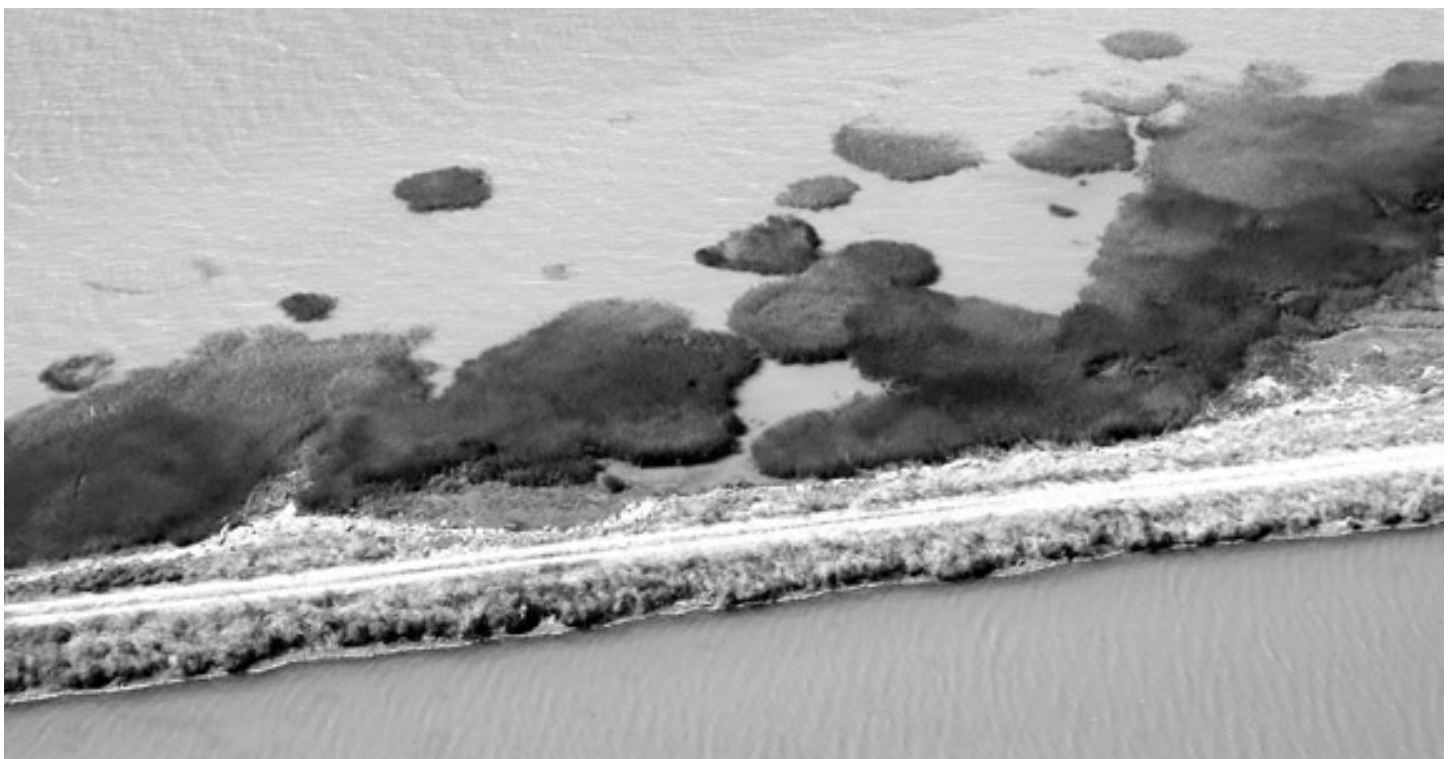
sites in the northern Estuary. The remaining species, *S. densiflora* (Chilean cordgrass) and *S. alterniflora* (Atlantic smooth cordgrass), have spread extensively from their original introduction sites. In the case of *S. alterniflora*, the speed of its population expansion in the Estuary has been compounded by its hybridization with native *S. foliosa* (Pacific cordgrass), producing a vigorous and genetically diverse hybrid swarm. From an initial mapped net acreage in 2001 of just under 500 ac, the plants, predominantly *S. alterniflora* x *foliosa* hybrids, had expanded over 300% to around 1,500 ac Estuary-wide by the end of 2003.

Also by the end of 2003, the ISP completed initial scoping and environmental documentation, including a Programmatic Environmental Impact Statement/Report (EIR/EIS). By the end of 2004 the ISP, in coordination with its regional partners, including USFWS, East Bay Regional Parks District, Alameda County Public Works,

California Dept. of Parks and Recreation, San Mateo Mosquito Abatement District, the Santa Clara Valley Water District, and others, completed pilot treatment on 435 ac of non-native *Spartina* in the Estuary at 42 locations.

In November, 2004, the ISP hosted the 3rd International *Spartina* Conference in San Francisco to bring together worldwide expertise on *Spartina* ecology and control, present the scope of the *Spartina* problem in the Estuary, and solicit input on the ISP's strategy and approach to treatment. At the conclusion of the conference, a discussion panel advised the ISP to act swiftly to ensure that treatment efforts encompass the entire infestation in the Estuary, as any effort short of this would likely result in the infestation growing beyond control.

Taking this advice, the ISP reviewed the inventory mapping for the Estuary and identified a total of 134 areas encompassing over 16,000 ac of marsh with 1,500 net ac of non-native *Spartina*. As 2005 began, the ISP



Invasive cordgrass forms a series of circular islands that grow together into a continuous stand. Relative to native cordgrass, the invasive hybrid grows more densely and at a greater elevation range, resulting in significant alteration of mudflat habitats. *Photo: Drew Kerr.*

worked to develop site-specific plans for each of the 134 locations with existing and new partners around the Estuary. Each Site Plan included detailed site descriptions, alternatives to the proposed action, treatment approaches and methods and Environmental Assessments of each sub-area, detailed impact identification and mitigation checklists to be used in the field during treatment, partner contact information, site maps and photographs and other site-specific information.

California Clapper Rail

The California clapper rail (*Rallus longirostris obsoletus*), a federal and state-listed endangered bird, occupies intertidal habitats throughout the Estuary and, in many cases, uses non-native *Spartina* as surrogate nesting and sheltering areas in the absence of intact, mature native plant communities. The USFWS and California Dept. of Fish and Game (CDFG) have determined that eradicating non-native *Spartina* from the San Francisco Estuary is in the long-term best interest of the rail; however, ISP must avoid and minimize short-term impacts caused by *Spartina* control activities. A fundamental challenge is a requirement to avoid ground-based treatment during the rail's breeding season, Feb. 1-Aug. 31. This is particularly significant because *Spartina* plants go dormant by mid-October, leaving a short window of time, perhaps six weeks, in which to complete work. Treatment opportunities are further restricted by tides and wind, so that ground-based treatment within some clapper rail occupied habitat can be limited to as few as four days per year! For this reason, the ISP looks to helicopter treatment options, which may begin as early as July 15, at suitable sites with clapper rails.

The ISP must also consider potential short-term impacts that may be caused by the temporary loss of cover vegetation at sites dominated by non-native *Spartina*. The ISP and USFWS developed a model, the *Spartina* Control Impact Evaluation Matrix (SCIE-M), to tease out those sites where *Spartina* control efforts were likely to result in temporary loss of clapper rail carrying capacity, and would therefore require additional mitigations. In 2005, the SCIE-M was applied to 81 clapper rail-occupied treatment locations. Of these sites, only four showed a potential for short-term reduction in carrying capacity sufficient to justify additional mitigation beyond simply removing the non-native *Spartina*. The



A MarshMog treats invasive *Spartina* along the edge of a marsh in the San Francisco Estuary. The vehicle is designed to drive on soft surfaces with minimal disruption. Photo: Drew Kerr.

treatment plans for these four sites were subsequently modified to require phasing of treatment over several seasons, and to include habitat enhancements, such as replanting with native vegetation.

To identify sites where clapper rails may be an issue, the ISP teamed up with the Point Reyes Bird Observatory, Avocet Research, East Bay Regional Parks District, USFWS, and CDFG to implement a coordinated, annual bay-wide clapper rail survey. As its part in this collaboration, the ISP surveys approximately 50 marshes in the South and Central San Francisco Bay.

Glyphosate vs. Imazapyr

Aquatic formulations of glyphosate (i.e. Aquamaster®, Rodeo®) have been used for years in an attempt to control invasive *Spartina*, but efficacy has been highly variable and the infestations have continued to expand rapidly. The Estuary is a tricky place for glyphosate, because effective *Spartina* control requires three main conditions to be satisfied for glyphosate to do its work. First, there must be very little to no sediment on the leaf surfaces of the plants during treatment. Second, the plants must get 'good coverage' of the herbicide, meaning that they are coated with the herbicide mixture top to bottom and on all sides. And the third condition is that the plants have adequate 'dry time', i.e. are not

inundated by tides or rained on for 6-24 hrs after application. In an estuary with high sediment loads, twice-daily tidal regimes, and acres-thick infestations of *Spartina* requiring treatment, the convergence of these conditions was difficult, if not impossible, to arrange in many cases. As a result observed kill rates on *Spartina* stands treated in 2004 were not nearly high enough to stay ahead of the observed rate of spread of the infestation in the Estuary.

Glyphosate was the only herbicide registered in the U.S. for use in estuaries until 2003, when USEPA finished a long evaluation of imazapyr and approved the aquatic formulation Habitat® (manufactured by BASF). Imazapyr had been highly effective on invasive *Spartina* in Willapa Bay, WA, and peer-reviewed literature indicated significant reduction in the amount of herbicide needed to produce the intended results, extremely low toxicity to animals, and rapid dissipation in water and salt marsh sediments.

Seeing the continued marginal results from glyphosate applications on *Spartina* in San Francisco Bay, the success in Willapa Bay with imazapyr, and the positive results from some 2004 applications the ISP conducted under a California Department of Pesticide Regulation (CDPR) experimental use permit,

...continued next page

Rating proposed for suspected weeds in nurseries

Thanks to Dortehea Zadig of CDFA for assistance with this article.

The California Department of Food and Agriculture (CDFA) and CACASA, the California Agricultural Sealers and Commissioners Association, are trying a new provisional rating for plants found during nursery inspections that are suspected to be invasive. Nurseries are frequently inspected by county agricultural inspectors for pest cleanliness and to quarantine significant pests and diseases, including plants listed as noxious weeds. This has primarily meant looking for weeds as contaminants in the pots,

The new "H" rating (standing for a temporary "Hold" order) addresses plants that are not rated by CDFA, but which are suspected of being potential weed problems. Currently, such plants are assigned a temporary Q, pending determination of a perma-

nent rating and are supposed to be treated as temporary "A" weeds, requiring eradication. However, this has been taking an extended period of time to complete, creating some confusion. Also, the rating system does not fully address plants that are products, not contaminants.

Along with the new rating, the CDFA/CACASA task force is proposing a process by which a "triage team" will propose a permanent rating within 30 days. The triage team will consist of the current Plant Health Division study team and a representative from each CACASA area group and will consult with stakeholders as appropriate. The chair of the triage team will be immediately notified of non-rated nursery plant samples submitted for identification. If necessary the chair will then notify the appropriate agricultural commissioner to submit an official sample and

the team will convene to propose a rating.

In evaluating each plant, the team will take into consideration the length of time it has been in commerce as nursery stock, the quantity being sold; and any weedy characteristics or beneficial uses. They will also examine whether it is established in the environment, in urban, rural, or landscape settings. Team members will consult with stakeholders, convene via e-mail where necessary, and propose a rating of A, B, C, or D within 30 days after the identification has been made and an H has been assigned.

Once rated, an official Pest Rating Advisory for Plants Sold as Nursery Stock will be published. This rating will become permanent one year from the date of publication unless new information warrants a further review. All other non-rated plant samples submitted will be given a Q or D according to the current policy, and the agricultural commissioners will be immediately notified.

These proposed changes are currently being worked on. For more information on CDFA's existing noxious weed program, go to www.cdfa.ca.gov/weedhome and click on the link to the Noxious Weed EncycloWeedia.

Spartina, from p. 7

the ISP Control Program worked to have Habitat® registered for use in California for the 2005 Treatment Season. Despite all the positive characteristics of imazapyr, and its proven record over 20 years of terrestrial use (mostly in forestry), the challenge of getting a new herbicide formulation registered in California proved difficult. BASF submitted the required studies and other documentation to CDPH in early 2005. Since the ISP and Coastal Conservancy were hoping to use imazapyr in this first year of bay-wide *Spartina* control, they monitored the progress of the registration closely. ISP and Conservancy were very concerned that they would be forced to use the less-effective glyphosate for another treatment season, and repeatedly brought these concerns to CDPH, along with reminders of the "practically non-toxic" rating that US EPA gave imazapyr. This proved effective, and the aquatic formulation of imazapyr (Habitat®) was registered by CDPH for use in California on Aug. 30, 2005. The registration came with just enough time for the ISP partners to acquire the herbicide and

begin applications on Sept. 8, which is when the FWS completed the Biological Opinion for the proposed work. As a result, 96% of the invasive *Spartina* treated with herbicide in 2005 utilized imazapyr.

Public Outreach

Public outreach is one of the key components to a successful invasive species control program, especially one of this scale in a large metropolitan area. For the past several years, an extensive education campaign was conducted with all affected landowners, land managers, and other stakeholders as the ISP prepared the Programmatic EIS/EIR and Site-Specific Control Plans for all of the invasive *Spartina* infestations around the Bay. This outreach effort focused on the impacts of invasive *Spartina* on salt marsh habitat as well as flood control capacity, endangered species issues such as California clapper rail, and an evaluation of the full suite of control methods with special emphasis on the advantages and low level of risk of applying herbicide as part of the IPM strategy. The control plans are now being implemented, and the outreach on these issues continues to occur at forums such as public meetings for residents adjacent to

infested marshes. For example, before treatment began at Elsie Roemer Bird Sanctuary on Alameda Island in 2005, the ISP and City of Alameda held three public meetings to allow residents and concerned parties to review the detailed plans for the sites, provide comments and get answers to their questions. Notifications were mailed to nearby residents and businesses, and announcements of the meetings were posted in local newspapers. These meetings ahead of on-the-ground control work allow the ISP to give people a sense of what to expect to see in the treated marsh, and clearly identify the purpose of the work, and the low level of risk to humans or animals from contact with imazapyr or glyphosate.

The ISP also incorporated signage into the outreach effort in 2005. Sandwich board signs with brochure holders were created to be portable information kiosks that could be moved from site to site while control work was in progress. The signs use color photos and written descriptions of the *Spartina* invasion, native marsh ecology, and treatment methods, and also provide ISP and Partner contact

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New and Contributing Members

Thank you for your generous support! This list reflects donors and new members since the last newsletter.

New Members

Debra Bishop, Sacramento
Colleen Cory, Ventura
Reginald Durant, Irvine
Judy Fenerty, San Jose
Pam Hemphill, San Francisco
Bill Hinderliter, Oceanside
Peter Hujik, Los Molinos
John Knight, Weaverville
Marcia Milam, San Diego
Christine Moen, Temecula
Ken Palensar, Los Angeles
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Julie Vandermost and Ceri Williams Dodd, San Juan Capistrano

Generous Donations

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Sandra Diedrich, Portland, OR
Michael Halloran, San Jose
Johnson and Theis, Sebastopol
Mary Ann Matthews, Carmel Valley
Carri and Chris Piroso, Burney
Jennifer Tillman, La Jolla

Conservation Corps Attacks Arundo

John Griffith, Conservationist 1 - Ukiah Center, California Conservation Corps, CCC crew supervisor, relates a recent experience battling Arundo. Additional information by Kirstin Hill.

There were a couple weeks in July that were so hot, tying an ice berg to my back and ducking under a shady tree seemed a much better idea than eradicating invasive weeds. But after remembering what *Arundo donax* was doing to the Russian River Watershed -- pushing out native vegetation essential for wildlife and creating a botanical monoculture -- I was ready to start sweating. My crew of ten young adults was ready too. They joined the California Conservation Corps (CCC) to do hard and rewarding work. Eradicating arundo definitely qualified.

We met our project sponsor from Circuit Riders along the river not far from Ukiah. The riparian area there had been reduced to a thin strip because of an expanding vineyard. Among the remaining oaks, box elder and cottonwoods were vigorous stands of arundo. Armed with loppers, we



A CCC crew member is dwarfed by arundo.

attacked. The strategy was to cut each giant reed to a stub, haul the stalks to the side of the road and lay them into piles. The Circuit Riders planned to return in the fall to paint the stubs with herbicides and burn the piles.

Most of the young men and women on my crew could already recognize arundo, having seen it growing along riverbanks and ditches all over California. Yet, before they joined the CCC, only few were aware of how destructive the plant was. Our sponsor explained that even a piece of the rhizome could eventually create a sprawling stand.

With such a small percentage of California's original riparian habitats remaining, we all understood the importance of our project.

Removing nonnative weeds teaches the young men and women in our program a variety of ecological realities. It demonstrates the deleterious effects that humans can have on the ecosystem by introducing invasive species. It also shows

them that something can be done about it. Who better to restore the environment than those who will inherit it? We can't wait to attack arundo again!

In July of 2005, thanks to the efforts of the California Conservation Corps, three acres of arundo were cut down along the Russian River.

The CCC is a workforce development program that offers young men and women the chance to serve their state and become employable citizens through life skills training and hard work in environmental conservation, fire protection, and emergency response. With 24 residential and non-residential training centers throughout the state, the CCC provides an opportunity for communities throughout California to benefit from the hard work, public service, and educational training carried out by its knowledgeable staff and crews.

The CCC has extensive experience in invasive species eradication efforts. To have the CCC help YOU, contact one of our district offices:

Northern District (707) 725-5106

Central District (916) 341-3139

Southern District (909) 594-4206

Contact Kirstin Hill at Kirstin.Hill@ccc.ca.gov

Western Weed Coordinating Committee

The Western Weed Coordinating Committee convened for their annual meeting on December 1-2, 2005 in Las Vegas, Nevada. Representatives from the western states and tribes gave status reports on their weed control and eradication programs, along with federal government representatives from the US Dept. of Agriculture. Cal-IPC project intern, Gina Skurka, attended this meeting and presented the Yellow Starthistle Initiative; a proposal to fight the eastward expansion of yellow starthistle. So far, agencies and NGO's in seven western states have expressed interest in participating in this 2008 initiative. The group also discussed the future of Weed Management Areas.

Readings & Resources

Invasive ornamentals: The San Diego County Invasive Ornamental Plant Guide, created by local chapters of the American Society of Landscape Architects and the California Native Plant Society, features invasive plant information as well as tools to assist landscape architects and others in protecting local biodiversity. <www.asla-sandiego.org/content/plantguide.html>

Invasive species worker directory: The Biological Invasions Researcher Database is a public database where people working on invasive species can find potential collaborators with skills that they seek. It is open to anyone working on invasive species ecology. <www.bio.miami.edu/nsfinvdb>

Garden tour: Participants on the free Bringing Back the Natives Garden Tour (San Francisco Bay Area) will learn how to attract butterflies, birds and bees, garden without using pesticides, lower their water bills, design a low-maintenance garden, and select and care for California native plants. More than 60 showcase gardens will be open from 10 a.m. to 5 p.m., Sunday, May 7. <www.BringingBackTheNatives.net>

Arizona weed list: The Arizona Wildlands Invasive Plant Working Group has released its inventory of "Invasive Non-native Plants that Threaten Wildlands in Arizona." Using the same criteria as the upcoming Cal-IPC Invasive Plant Inventory, the review committee assessed 74 species. More than 20 organizations contributed to the project. A full report and a summary booklet are available from the Southwest Vegetation Management Association. <www.usgs.nau.edu/SWEPIC/SWVMA>

New website: The New Mexico State University Weed Information Website provides information to the public on weedy plants in the southwestern US, specifically New Mexico. It contains an interactive Weed ID tool, fact sheets and presence/absence maps by county on New Mexico's state-listed weeds, and pdfs of weed management reports from NMSU. <weeds.nmsu.edu>

Scholarship: The Western Aquatic Plant Management Society announces a \$1000 scholarship to support students pursuing a

degree in aquatic sciences. Course work or research related to the biology, ecology, or management of aquatic plants in the west is required. Due February 15. Contact David Spencer, dfs Spencer@ucdavis.edu. <www.weedcenter.org>

Grant listings: The Center for Invasive Plant Management, out of Montana State University, has an extensive listing of grants for weed workers, and offers some of their own. Guidelines and application information are now available for CIPM's research grants, with proposals due March 10. CIPM also offers grants for Weed Management Areas. <www.weedcenter.org>

Workshops: Wildland Weed Mapping Training Workshops at Utah State University cover field methods for landscape-scale weed inventory and mapping. Offered continuously, whenever there are enough applicants to fill a session. Three-day workshop costs \$525, with extended training at \$125 per additional day. Trainees bring a GPS unit, and supply their own transportation, meals, and lodging. Contact Steve Dewey, steved@ext.usu.edu, 435-797-2256.

Federal weed website: In 2006, the National Invasive Species Council will move its website to a new site managed by the National Agricultural Library. It will replace www.invasivespecies.gov and contain information on impacts of invasive species, the federal government's response, species profiles, and links to agencies and organizations. <Invasivespeciesinfo.gov>

Native plants book: The recently released *California Native Plants for the Garden* by Carol Bornstein, David Fross, and Bart O'Brien features 500 native plants for horticulture, illustrated with 450 color photos. Includes chapters on design, installation, and garden care, with lists of recommended natives for a variety of situations. \$27.95 paperback and \$37.95 hardcover, with a 20% discount when ordered directly from Cachuma Press, (805) 688-0413. <www.cachumapress.com>

SOD proposals requested: The Pacific Southwest Research Station will issue its 2006 Sudden Oak Death/*Phytophthora ramorum* Request for Proposals in January. Proposals will be due in mid-February. The RFP will fund research to increase the

understanding of SOD and to guide development and implementation of regulatory policies, monitoring programs, and management and treatment strategies. Contact Susan Frankel, SOD Research Program Manager, sfrankel@fs.fed.us. <www.suddenoakdeath.org>

Restoration grant program: The Partners for Fish & Wildlife Program in the San Francisco Bay Focus Area invites requests for assistance for voluntary habitat restoration projects on private lands in Sonoma, Marin, San Mateo, and Alameda counties. Landowners, tribes, for-profit and nonprofit organizations, and local public agencies are encouraged to apply for projects on working lands, particularly ranches. Landowners are required to provide in-kind (labor, materials) or monetary cost-share, with most awards ranging from \$5,000-\$18,000. Emphasis is placed on high priority on-the-ground activities that improve habitat for federal trust species. Contact Kate_Symonds@fws.gov, 707-578-8515, by February 28. <www.fws.gov/capartners>

Quotable

“O come all ye stewards
Of our coastal beauties
And rise to the challenge of the
Invasive plants.
Come to the wetlands
And the coastal watersheds-
O extirpate *Spartina*
O extirpate *Spartina*
O extirpate *Spartina*
From the Bay!”

from "O Come All Ye Stewards," to the
tune of "Adeste Fideles," Hal Hughes,
California Coastal Conservancy

“Scale of dragon, tooth of wolf, witch's
mummy, maw and a gulf, of the ravin'd
salt sea shark, root of hemlock digg'd in
the dark ... ”

From Shakespeare's Macbeth
(the witches' brew), quoted in the
Pasadena Star-News

The WILDLAND WEED CALENDAR

Know of an event that should be posted here?
Please contact edbrusati@cal-ipc.org.

Weed Science Society of America

February 13-16, 2006
New York, NY
<www.wssa.net>

Salmonid Restoration Conference and Steelhead Festival

February 22 – 25
Santa Barbara, CA
24th annual conference, with focus on riparian habitat quality.
<www.calsalmon.org>

National Invasive Weeds Awareness Week

February 26-March 3, 2006
Washington, D.C.
7th annual gathering brings together weed workers from across the country to the nation's capitol to visit congressional representatives and agency officials. If interested in attending with the California delegation, contact dwjohnson@cal-ipc.org.
<www.nawma.org/niwaw/niwaw>

Invasive Weeds Awareness Day at the Capitol

March 8, 2006
Sacramento, CA
Attendees from around the state visit legislators to discuss the importance of invasive plant control projects. An excellent opportunity to increase support for resource management work. Organized by the California Invasive Weeds Awareness Coalition.
<www.cal-ipc.org>

Western Society of Weed Science

March 14-16
Reno, NV
<www.wsweedscience.org>

Western Aquatic Plant Management Society 25th Annual Meeting

March 27-29
San Diego, CA
<www.wapms.org>

National IPM Symposium: Delivering on a Promise

April 4-6
St. Louis, MO
Sessions address technologies and strategies to solve pest problems in agricultural, recreational, natural, and community settings.
<www.ipmcenters.org/ipmsymposiumv>

12th Annual California GIS Conference

April 5-7, 2006
Santa Barbara, CA
<www.calgis.org>

Noxious Weed Management Short Course

April 24-27, 2006
Pray, MT
Lab and field exercises, in addition to classroom sessions. Contact: *Melissa Brown* (406)558-4568, writemlb@yahoo.com

Weeds Across Borders

May 25-28, 2006
Hermosillo, Sonora, Mexico
The 3rd Weeds Across Borders Conference sponsored by the Federal Highway Administration and the Arizona-Sonora Desert Museum. Share information with scientists, practitioners, and policy makers from Canada and Mexico.
<www.desertmuseum.org/borderweeds>
borerweeds@desertmuseum.org

15th Australian Weeds Conference: Managing Weeds in a Changing Climate

September 24-28, 2006
Adelaide, South Australia
<www.plevin.com.au/15AWC2006>

Society for Conservation Biology: Conservation Without Borders

June 24-28
San Jose, CA
This meeting aims "to transcend real and perceived boundaries of ecology, sociology, politics, and human behavior that impede conservation science and its application." Early registration deadline is March 17.
<www.conbio.org/2006>

Spartina, from p. 8

information. These signs helped engage people, provided a basis for discussing the treatment work, and assisted with trail and sidewalk closures. The ISP is developing more permanent signs for a subset of the infested marshes, which will go into greater depth on the ecology of invasions, including the flora and fauna supported by a healthy tidal salt marsh.

Results

The treatment window in 2005 was only Sept. 7-Oct. 19, although manual control at several sites in Corte Madera Creek in Marin County continue over the winter. Seventy-eight sites were treated representing 60% of the known infestation sites. Some small, discrete sites were controlled by digging or covering, while the remainder were treated with herbicide applied by amphibious tracked vehicle, helicopter, airboat, backpack sprayer, or trucks working from levees. Approximately 1,010 net acres of *Spartina* were treated (67% of infested acreage), with 70% treated aerially using helicopters with boom sprayers. According to estimates from applicators, the use of imazapyr (and its significant reduction in required spray volume) increased the efficiency of treatment operations by as much as 1/3.

Outlook

The ISP was designed from its inception as a project that would ultimately work itself out of a job. As a regionally coordinated program, the goal of the ISP is to do the heavy lifting necessary at the outset of this major weed control effort—environmental documents, permits, research, funding, monitoring and treatment—such that the ISP can eventually hand off *Spartina* control to an informed and empowered land manager network in the Estuary. It will be several control seasons, likely through 2008, before the infestation is reduced to levels that are low enough to be easily absorbed into regular maintenance activities of land managers. However, given the project's success in bringing large groups of stakeholders together for the 2005 season, the improved efficacy expected from imazapyr, and the political will behind the *Spartina* control effort, ISP planners believe that this is an eminently achievable goal.

For more information, visit www.spartina.org.

Cal-IPC Membership Form

We're working to protect California's wildlands from invasive plants—join us!

Cal-IPC's effectiveness comes from a strong membership that includes scientists, land managers, policy makers, and concerned citizens. Please complete this form and mail with check or credit card number. Additional donations support our projects. We are a 501(c)(3) nonprofit organization, and donations beyond regular membership rates are tax deductible. **You may also join or donate online at www.cal-ipc.org.**

2006 Individual Membership

- Regular \$35
- Family \$60
- Contributing \$75
- Life \$1,000
- Joint Cal-IPC/SERCAL \$55
- Joint Cal-IPC/CNGA \$70
- Cal-IPC/SERCAL/CNGA \$95
- Student/Volunteer \$15

2006 Institutional Membership

- Regular \$150
- Small company or nonprofit \$100

Donation: \$ _____

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Affiliation

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Phone

E-mail

Credit Card No. Exp. Date

Mail this form with check (payable to "Cal-IPC") or credit card info to Cal-IPC, 1442-A Walnut Street #462, Berkeley, CA 94709.

Fax form with credit card info to 510/217-3500.

Phone us at 510/843-3902 with contact and credit card info.

- Check here if you would prefer to receive the *Cal-IPC News* via email as a link to a pdf file online rather than a paper copy.
- Occasionally, we share our members' addresses with like-minded organizations. Check here if you *do not* want your information shared.



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