



# Cal-IPC News

*Protecting California's Natural Areas  
from Wildland Weeds*

Vol. 13, No. 3, Fall 2005

Quarterly Newsletter of the California Invasive Plant Council



## 'Chokes in the news

*According to the Los Angeles Times, giant cardoon (Cynarus cardunculus) makes a dramatic addition to garden landscaping (see pg. 3). Above, escaped cardoon (also called artichoke thistle) in Valley Center, San Diego County. Photo by Janet Garcia of UC Riverside, first place winner in Specimen category of the 2005 Cal-IPC photo contest. See pg. 10 for other contest winners.*

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Protecting California's natural areas  
from wildland weeds through  
research, restoration, and education.

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*Affiliations for identification purposes only.  
Last year of term noted.*

## Cal-IPC News

Fall 2005 - Volume 13, Number 3

Editors: Doug Johnson and Elizabeth Brusati

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Invasive Plant Council. Articles may be reprinted with  
permission from the editor. Submissions are welcome.  
We reserve the right to edit all work.

## From the Director's Desk

### Media coverage of invasives

This issue of Cal-IPC News is full of tidbits from the mainstream media. Though "any news is good news," we are always curious to see if news reports on invasives will "get it right." Increasingly, we are seeing articles by knowledgeable journalists with a high degree of understanding for the issue. A recent article in the *San Francisco Chronicle* did an excellent job of describing the goals and strategies of the Coastal Conservancy's efforts to rid SF Bay of *Spartina alterniflora* hybrids.

When an article fails, it sometimes does so spectacularly. Such was the case with the *Los Angeles Times* piece extolling the virtue of giant cardoon (*Cynara cardunculus*) as a garden plant. Such pieces are entertaining in an eye-rolling way, but they show the need for continued outreach. As materials like the Don't Plant a Pest! brochures reach more gardeners, awareness of invasiveness as an important factor will grow. We expect invasives will become even more common in the news, and plan to take advantage of this opportunity for education.

As we do each year at this time, we welcome five new board members. Goodbye and a big "thank you!" to **Joe DiTomaso, Alison Stanton, Carri Pirosko, Jon Fox, and Bobbi Simpson**. Welcome to **John Knapp** (Catalina Island Conservancy), **Brianna Richardson** (Arastadero Preserve), **Jenny Drewitz** (Yolo County RCD), **Marla Knight** (Klamath Nat'l Forest) and **Chris Christofferson** (Plumas Nat'l Forest). See you in 2006!

### Cal-IPC Wish List

Interested in making a charitable contribution? We need:

**LCD projector** - for making presentations.

**Airline tickets or frequent-flyer miles** - help send Cal-IPC representatives to meet with legislators in Washington, D.C., for National Invasive Weeds Awareness Week in February.

**Computers (PCs)** - recent models to update our office.

**Pro bono public relations or marketing** - help market the Weed Workers' Handbook and other publications, and publicize events like California Invasive Weeds Awareness Week.

**Pro bono graphic design** - make our educational displays more attractive and effective.



**Weed workers at ease.** October is a good time to take a break, and attendees at the 2005 Symposium found lots to talk about over lunch and between talks.

# Wildland Weed NewsNewsNewsNewsNews

The *Los Angeles Times* raised weed workers' frustration when it described the **invasive artichoke thistle**, or giant cardoon (*Cynarus cardunculus*) as "exotic, dramatic, delicious" in its garden section (7/14/05). The article said it might be difficult to purchase, failing to note that the species is a B-rated noxious weed in California. <[www.latimes.com](http://www.latimes.com)>

The *San Luis Obispo Tribune* reported on the **arundo infestation in San Luis Obispo Creek** and the work of the San Luis Obispo Land Conservancy to remove it and other invasives, while the *Santa Rosa Press Democrat* covered **arundo removal efforts in Sonoma County**. <[www.sanluisobispo.com](http://www.sanluisobispo.com)> <[www.pressdemocrat.com](http://www.pressdemocrat.com)>

**Habitat® herbicide has received approval** from the California Department of Pesticide Regulation for use in California. Habitat is specifically developed for use in sensitive aquatic environments. The herbicide, based on imazapyr, uses less active ingredient than other products and breaks down quickly, yet is highly effective. It provides targeted vegetation control by affecting enzymes found only in plants, not in humans, animals, birds, fish or insects. The Invasive Spartina Project is using it to remove invasive cordgrass from San Francisco Bay. <[www.vmanswers.com](http://www.vmanswers.com)>

ABC News reported that a rust fungus used as a **biocontrol for blackberry** in Australia, New Zealand and Chile has infected commercial blackberry fields (as well as invasive Himalayan blackberry) in Oregon. (7/25/05) [abcnews.go.com/Technology/wireStory?id=976578](http://abcnews.go.com/Technology/wireStory?id=976578)

The U.S. Senate Committee on Commerce, Science, and Transportation voted unanimously to approve the "**Ballast Water Management Act of 2005**" (S. 363), introduced by Sen. Daniel Inouye (D-Hawaii). The bill now moves to the full Senate for consideration. Unfortunately, according to the Union of Concerned Scientists, the bill should be scrapped in favor of S.770 (Levin, D-Michigan), which would more fully reauthorize the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990. S.363 would focus only on ballast water, delay implementation, and loosen

current protections under the Clean Water Act. To follow the progress for these bills, see <[thomas.loc.gov](http://thomas.loc.gov)>.

**Four states sued the U.S. Department of Agriculture** in September for failing to impose effective controls against destructive insects that enter the country in shipping pallets and other wooden packaging. A new rule issued by USDA requires the use of a marginally effective pesticide that damages the environment and is being phased out of use under an international treaty. New York, California, Connecticut and Illinois filed the lawsuit, which seeks a court order directing USDA to

find more effective and less environmentally harmful methods of preventing the insects from entering the country. (9/15/05) <[www.oag.state.ny.us/press/2005/sep/sep15b\\_05.html](http://www.oag.state.ny.us/press/2005/sep/sep15b_05.html)>

The *Monterey Herald* reported that the Department of Defense and the National Wildlife Federation have joined to call for increased coordination among agencies to stop invasive species. **The military considers invasive species a threat to homeland security**, due to the species' consumption of limited water supplies and reduction of land available  
...continued page 15

## Cal-IPC Updates...

**Website moved to new host:** We moved to a new web-hosting service in August. Our homepage address remains [www.cal-ipc.org](http://www.cal-ipc.org), but webpage addresses to Don't Plant a Pest!, the Invasive Plant Inventory, and other programs have changed. If you include links to these pages in your website, please update them.

**Public Review Draft of the updated Invasive Plant Inventory (the weed list) released:** The draft was distributed at the Symposium and is being mailed to all members, as a final solicitation of comments before the final version is published early in 2006. This is your last chance to add information for ratings before the list goes to press. Individual plant assessment forms and a comparison between the 1999 and 2005 lists are available at [cal-ipc.org](http://cal-ipc.org).

**Symposium Lost & Found:** Several items were found as we cleaned up after the Symposium. Contact Cal-IPC if you're missing something.

**Wildland Weed Field Course:** Due to overwhelming demand, Cal-IPC plans to repeat the WWFC in a few months. Contact [info@cal-ipc.org](mailto:info@cal-ipc.org) to be notified of upcoming courses.

**Day at the Capitol 2006:** The event will be held March 8 in Sacramento. Last year, 100 weed workers met with representatives or legislative staff to discuss the need for

funding of invasive plant projects. Watch the Cal-IPC website for details or contact [info@cal-ipc.org](mailto:info@cal-ipc.org) to be notified when more information is available.

**Online store:** We can now accept online orders for books and brochures using secure credit card processing. Online membership renewal and event registration is next.

**Don't Plant a Pest! Program:** Our website now has a section for expanded landscaping alternatives information for each region. Southern California is the first to begin filling in. The Central Coast brochure is now available, covering the coast from Southern California to the Bay Area. Several other regions of the state are developing brochures and looking for comments on invasives and alternatives. If you can help, contact one of the regional organizers:

**Central Valley:** Susan Mason, [sl2mason@sbcglobal.net](mailto:sl2mason@sbcglobal.net) or (530) 892-1666  
**Sierra Foothills:** Joanna Clines, [jclines@fs.fed.us](mailto:jclines@fs.fed.us), 559.877.2218 x3150, and Wendy West, [wkwest@ucdavis.edu](mailto:wkwest@ucdavis.edu), (530) 621-5533

**Tahoe Basin:** Wendy West (see above) and Sue Donaldson, [donaldsons@unce.unr.edu](mailto:donaldsons@unce.unr.edu), (775) 784-4848

**Desert:** Val Page, [valerie.page@ca.usda.gov](mailto:valerie.page@ca.usda.gov), (760) 900-2363.

**Saharan mustard workshop:** Cal-IPC co-sponsored a meeting in Barstow August 30 for land managers in the Southwest dealing with *Brassica tournefortii*. Presentations from the meeting are posted at [cal-ipc.org](http://cal-ipc.org).

# The Challenge of Effectively Addressing the Threat of Invasive Species to the National Park System

Lloyd Loope, U.S. Geological Survey, Haleakala Field Station, Hawaii

[This article appeared in the Fall 2004 issue of *Park Science* and is reprinted here with permission. Some photos have been changed. See the original at [www2.nature.nps.gov/parksci/](http://www2.nature.nps.gov/parksci/)]

Ever-increasing transport of species of all kinds is breaking down biogeographical boundaries with profound consequences for biodiversity loss worldwide (Vitousek et al. 1997, Mooney and Hobbs 2000). When species are transported—intentionally or inadvertently—outside their original geographic ranges, many of them become established and spread. Some proliferate explosively, tending to displace native species in their new area of establishment. Evolving technology (e.g., shipping containers) has increased shipping speeds and volumes, making our detection and interception strategies for stemming the flow of invasives in the United States very difficult to implement and certainly inadequate (Campbell 2001, Loope and Howarth 2003).

Given the seeds of catastrophic loss already planted and those yet to come, invasive species pose a highly significant threat to the biodiversity of the U.S. National Park System in the early decades of the 21st century (e.g. Wilcove et al. 1998). Moreover, global climate change is likely to exacerbate the problem by favoring invasive nonnative species over native species (Mooney and Hobbs 2000). Writing as a former (24 years) employee of the National Park Service, now with the U.S. Geological Survey (USGS), my attempt here is at a personal review and synthesis of implications of trends in biological invasions for national parks, based on personal experience and analyses by others.

## Who will prevent and combat invasions?

Invasive plants comprise a highly visible taxonomic group among many serious biological invaders permeating the United States and reaching even the relatively isolated and intact ecosystems of the national parks. Federal natural resource managers can

An NPS workshop in Ft. Collins, Colorado, 4-6 June 2002, in which I participated, produced useful guidelines for monitoring invasive plants in and near the national parks (Hiebert et al. 2002). Noteworthy innovations of the guidelines include the need to “work outside of park boundaries to manage at a landscape scale . . . [and] identify a buffer zone, which, when adequately managed in cooperation with partners, will more effectively accomplish invasive species management goals.” Yet, although increasing attention is being given by public and private entities to the need for controlling plant invasions, almost no barriers to the movement of plant species by humans throughout the world exist, including the United States. Approximately 20,000 species of vascular plants have proved invasive and damaging somewhere in the world (Randall 2002). U.S. federal noxious weed law (APHIS 2000) currently prohibits 91 species and five genera, most of which are well-documented threats to agriculture.

Other taxonomic groups besides vascular plants pose present and even greater future threats to park ecosystems. Insects and fungal diseases that attack trees are probably the most important groups nationwide. The Forest Service began working with the Animal and Plant Health Inspection Service (APHIS) of the U.S. Department of Agriculture (USDA) in the late 1980s to address invasive species threats associated with raw wood imports and solid-wood packaging materials (e.g. Tkacz et al. 1998). Nevertheless, Thomas Hofacker (staff entomologist, USDA Forest Service) sees forest health in the United States as broadly declining, with three to five new problematic insects or pathogens becoming established in this country each year, and with many tree species becoming



**Bull thistle** (*Cirsium vulgare*) invades Tioga Pass in Yosemite National Park. Many park units have been protected by their remoteness or elevation, but these barriers are being breached.

Photo: Bob Case.

potentially address invasive species issues in conjunction with local outreach efforts, working with agencies (federal, state, and local) and individuals in communities surrounding the parks and refuges for education, prevention, detection, and rapid response.

“functionally extinct” (presentation at annual meeting of Entomological Society of America, San Diego, CA, December, 2001). Campbell (2001) believes this situation is at least partly because the international system for regulating trade to prevent transport of potentially harmful organisms places a huge burden of proof on countries wanting to protect their ecosystems from pests arriving through such pathways as raw wood and wood packing materials. Another important point is that the national and international quarantine system was designed to protect mainstream agriculture with little or no reference to the protection of natural areas from biological invasions (Campbell 2001, Baskin 2002).

In the United States, the agency primarily responsible for protecting our nation's borders from biological invasions was until recently USDA-APHIS. Because of growing recognition of the need to address this problem (e.g. the threat to forests of insects and diseases in raw wood and wood packaging material) and others, APHIS had begun to focus beyond its primary mandate of protecting mainstream American agriculture. Most of the large branch of APHIS responsible for protecting our borders from biological invasions at U.S. ports of entry (Plant Protection and Quarantine) was transferred to the Department of Homeland Security (DHS) in March 2003. How this move to a different government department with a different mandate will affect the protection of natural areas and biodiversity is not clear.

A 1993 report by the Congressional Office of Technology Assessment recognized many challenges the existing system faces to keep harmful nonindigenous species out of the United States (OTA 1993). For example, first-class mail within this country is a virtually unaddressed major pathway for transport of biological material (potentially, for example, federal noxious weeds), protected against “unreasonable searches” by the Fourth Amendment to the U.S. Constitution (OTA 1993, p. 48-49). This is just one of many cases cited in the OTA report in which the current system gives invaders the edge.

Since publication of the OTA report, international treaties to facilitate the workings of the multilateral trading system have evolved (Werksman 2004). After years of trade negotiations, the World Trade Organization was established in 1995 and with it a treaty on sanitary and phytosanitary measures (FAO 2004). The treaty is managed by the

Food and Agriculture Organization of the United Nations, which is responsible for implementing the International Plant Protection Convention. Some of the trade-promotion measures have not benefited invasive species prevention. For example, countries cannot legally exclude a potential pest in commerce unless they can clearly establish that a specific, credible threat exists through a risk-assessment process. Moreover, a country can require only the minimum treatment measures documented as effective in reducing risk. On the positive side, it can be said that the international system has responded well to the threat of movement of pests in solid-wood packaging material and has produced largely excellent guidelines for regulating this pathway (FAO 2002).

#### Biological asymmetry and invasions

Not all regions of the world are equally susceptible to biological invasions; some regions primarily seem to be source areas. Called biogeographic asymmetry, this phenomenon has been widely recognized in marine and aquatic invasions (Vermeij 1991, Lodge 1993) although it is just as prevalent in terrestrial invasions. North American forests are particularly vulnerable to invasions of European and Asian insects (North American Forest Commission 2000). Many more plant-eating forest insects from Europe have successfully invaded North America (approximately 300) than have invaded Europe from North America (34) (Nemiela and Mattson 1996). The decline of forest species of eastern North America caused by insects and pathogens, mainly from Asia (Campbell and Schlarbaum 2002), does not seem to be a reciprocal phenomenon. Very few native insects and diseases of North America are known to have become established in Asian forests.

#### Hawaii—the U.S. region most susceptible to biological invasions

Oceanic islands are well known to be especially vulnerable to invasive species. The Hawaiian Islands comprise one of the most isolated island groups in the world, with



The destructive Asian longhorned beetle (*Anoplophora glabripennis*) from China provided a wake-up call regarding the threat of solid-wood packaging material as a major pathway for invasive pests into the United States. After being intercepted repeatedly at ports of entry for several years by border protection quarantine officials, a population was discovered in Chicago in 1998. Photo: US Forest Service.

biological endemism at the species level approaching 100% for many native groups. Over all, Hawaii has approximately 10,000 endemic species (found nowhere else on Earth besides Hawaii), out of a total biota of approximately 20,000 native species (Eldredge and Evenhuis 2003). Hawaii, with far above-average vulnerability to invasions (Loope and Mueller-Dombois 1989), is also a major international hub of commerce. It is by far the U.S. region most damaged by invasions, with large numbers of and serious impacts from invasive vertebrates, invertebrates, and flowering plants (e.g. Loope 1998).

Nevertheless, Hawaii receives no special protection to prevent invasive species introductions. Border protection from foreign passengers' baggage and cargo at the Port of Honolulu is essentially identical to that at all other international ports in the United States (CFR, Chapter 7, 319.56-8). Preventive actions are taken based primarily on an approved list of organisms for which specific legal authority is deemed to exist (James Kosciuk, Agriculture Liaison, Customs and Border Protection, DHS, Honolulu, Hawaii, personal communication, May 2004). Moreover, although Hawaii has better laws for preventing invasive species establishment than most states (OTA 1993), the Hawaii Department of Agriculture has little or no authority for protection from pests from foreign sources and receives limited funding (HDOA 2002). USDA-APHIS has a large program based in Hawaii for airport departure inspections to

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## Event Reports

### California 2005 Invasive Weeds Awareness Week

Local groups around the state organized weed events for the third annual California Invasive Weeds Awareness Week, July 18-23. The California Invasive Weeds Awareness Coalition (CALIWAC), of which Cal-IPC is a member, provided a guide to organizing events to help spur local groups to develop events.

Some highlights included: Friends of Five Creeks ([www.f5creeks.org](http://www.f5creeks.org)) in Alameda County removed invasives along a section of creek that was recently opened to public access. In Santa Cruz County, volunteers removed *Ammophila arenaria* (European beach grass) from dunes. Park staff and a crew of Student Conservation Association workers Redwoods National Park gave presentations at the park visitor's center and led a walk with an invasive plant removal work party. They even landing a front page story in the *Del Norte Daily Triplicate* ([www.triplicate.com/news/story.cfm?story\\_no=1826](http://www.triplicate.com/news/story.cfm?story_no=1826)). The Tahoe Basin Weed Management Area held a "Broom

pull or giving a talk on local invasive plants at a chapter meeting. Contact us to coordinate with our developing speakers' bureau.

that described the threat of invasive plants in the desert and their role in increasing fire danger in southern California.

The challenge for CIWAW 2006 will be to improve publicity and participation by the public. Ideally, the program could grow to something resembling Coastal Clean-Up Day, with a statewide campaign. While many groups organized events, the comments we received afterward included, "unfortunately, we were not able to more widely advertise the event," "small turnout of seven volunteers," "the publicity was not very good, so no one from the general public attended," and "only one person brought in a broom plant." CALIWAC has developed a guide to organizing and publicizing events. Although written for Weeds Awareness Week, it contains information that local groups can use throughout the year to raise their profile in the community. It's available on our website at [www.cal-ipc.org/for\\_land\\_managers](http://www.cal-ipc.org/for_land_managers) or contact Cal-IPC for a copy.

### Sierra Summit

Cal-IPC displayed an exhibit at the Sierra Summit in San Francisco, Sept. 8-11, the first-ever national conference of Sierra Club members, with 4000 attendees from across the U.S. Our exhibit featured photographs of invasive weeds invading stunning natural areas such as Yosemite, with a collage of photos on impacts and information on the need for hikers to clean equipment to avoid transporting weeds in the backcountry. The display drew a steady stream of visitors, most of whom seemed at least somewhat familiar with the issue of invasive plants. The Sierra Club has not made invasive species a focus of its programs, although it does recognize the problem and featured an article on tamarisk removal in Sierra magazine last year.

The "legacy project" during the conference took Sierra Club members to Golden Gate National Recreation Area to remove cape ivy and other invasives. A few attendees paid nearly \$400 for a post-conference field trip to pull invasive weeds for a week at Pt. Reyes (as one of our board members commented, "I'd let them pull weeds on my preserve for free!"). If you belong to a local Sierra Club chapter, please consider organizing a weed

### Preserve Calavera's "Eat the Invasives" Picnic

*Karen Merrill, Preserve Calavera*

Preserve Calavera hosted their 3<sup>rd</sup> annual "Eat the Invasives" picnic this spring. As part of our community outreach efforts, we thought it would be fun, as well as an educational tool, to do our part to control invasive plants by eating them! This year's lecture was given by Doug Gibson, Director of the San Elijo Lagoon Conservancy and manager of a grant to the Carlsbad Watershed Network for invasive plant removal throughout north San Diego County. A guided hike into the adjacent native habitat afforded the guests a first hand look at the pampas grass and arundo removal efforts, as well as a remarkable array of native species. The picnic luncheon featured food made with invasive and non-native plants. The delicious menu items included nasturtium butter, ice plant pickles, Fennel and fruit salad and a stir fry with black mustard and artichoke thistle stalks. The guests had a wonderful time learning about, seeing and eating invasive plants!

### Statewide WMA Meeting

The 7th Annual California Weed Management Area (WMA) Statewide Meeting was held on September 19-20 at the Heidrick Agricultural History Center in Woodland. This meeting provides the opportunity for WMA coordinators, stakeholders, and other interested parties to come together and share experiences, ideas, frustrations and successes. Eighty people participated this year. The conference featured speakers on grants and funding, including talks on the California Invasive Weed Awareness Coalition's (CALIWAC) push for funding and how to spice up grant applications for weed control. We also heard updates on The Nature Conservancy's Weed Information Management System (WIMS) and how to identify some rare A-rated noxious weeds. Regional breakout groups discussed local weed programs and exchanged information on proven techniques and funding sources. The event concluded with a talk by Joe DiTomaso, UC Davis, on effective treatments and new controls. The WMAs had the opportunity to show off their educational displays, along with product exhibits.



**Wok as control tool.** Preserve Calavera serves up some weeds. *Photo: Karen Merrill*

Sweep," in which residents could turn in a Scotch broom plant and receive a non-invasive alternative for their garden. The Lassen Special Weed Action Team (SWAT) held a booth at the county fair. Other programs ranged from training sessions for Master Gardeners to displays of local invasive weeds at county administration buildings and community colleges. Cal-IPC received a mention in a *Riverside Press-Enterprise* article

## Cal Watershed Forum

The 6th Annual California Watershed Forum, hosted by the California Watershed Network, in collaboration with the Salmonid Restoration Federation, was held on September 28 at the California Environmental Protection Agency building in Sacramento. This year's forum brought together agency and legislative representatives and watershed advocates throughout the state to help develop an effective and successful watershed program for California. The day included expert panel discussions on issues such as the future of watersheds and how to pay for a watershed program. The event concluded with an attendee brainstorming session on solutions and developing policy. Local watershed groups and other organizations, including Cal-IPC, displayed exhibits and shared information.

## UC Davis IGERT “Gardens and Guppies”

On September 21, the UC Davis Biological Invasions Integrative Graduate Education and Research Traineeship (IGERT) program hosted a workshop called, “Gardens & Guppies: Working together to prevent introductions of invasive species via the horticulture and aquarium trades.” The workshop provided a forum for leading academics, industry representatives, NGO

staff, agency personnel, and students to discuss the issues of invasive species relating to the nursery and aquarium trades.

The IGERT trainees, graduate students from a variety of disciplines, organized the symposium as a culmination of their second year group project. The theme of the project focused on imports of potentially invasive species by the aquarium trade and the potential for self-regulation by the horticulture trade. The students presented the results of their project along with speakers from the University of Washington, Ecos Systems Institute, Sustainable Conservation, and the Pet Industry Joint Advisory Council. In the afternoon, attendees separated into two groups for more in depth discussion on the aquarium and horticulture trades. The symposium was a very productive meeting of the minds where new ideas were exchanged for preventing introductions of invasive species through these two trades in the future. The IGERT trainees are now in the process of formalizing their results for publication later this year.

## State of the San Francisco Estuary

“Celebrating Science and Stewardship” was the theme of the 7th Biennial State of the



**Weeds impact watersheds.** Cal-IPC staffer Gina Skurka talks with an attendee at the Watershed Forum.

San Francisco Estuary Conference, October 4-6 in Oakland. Topics included restoration projects, ecosystem and water planning in the Delta, and changes in estuarine food webs. Invasive species is one of the major challenges facing restoration projects, and Erik Grijalva of the Invasive Spartina Project described the progress of the 2005 treatment season. Attendees also saw a preview of the public television series “Saving the Bay”, which describes the history (natural and human) of the bay, and how science and stewardship work together to protect its resources. Cal-IPC presented a poster on the weed list revision.

## Detection Classes Offered

Veteran weed workers Bob Case, Don Mayall, and Jake Sigg are available to give presentations on weed detection to interested volunteer groups. Their goal is to train more “detection helpers” who can spot and report new weed infestations. They have begun giving presentations to local chapters of the California Native Plant Society, and the presentations can be tailored to the needs of other local volunteer groups.

Currently, presentations are only available in the San Francisco Bay Area, but the crew is recruiting presenters in other regions. Presentations are free, though presenters will accept travel reimbursement. Bob, Don and Jake are longtime members of Cal-IPC and CNPS, with decades of experience between them. For more information, contact Bob at bobcase@astound.net or (925) 689-6528.

## Mediterranean Garden Society

The Mediterranean Garden Society (MGS) is an international organization for everyone interested in plants and gardens suited to the world's mediterranean climate regions, including California, the Mediterranean Basin, central Chile, South and Western Australia, and South Africa's Western Cape. Members receive *The Mediterranean Garden*, a quarterly journal with articles of interest, practical information, book reviews and news of events. Regional branches in Northern, Central and Southern California organize programs, symposia, and garden tours throughout the year.

The MGS is a forum for the exchange of ideas and information about appropriate approaches to gardening in the cool, moist

winters and warm, dry summers characteristic of a mediterranean climate. Members study plants in their natural environments in order to grow them successfully, and the Society promotes conservation of natural resources, interest in native plants, awareness of invasive plants, and waterwise gardening in harmony with the climate. There are many advantages to living and gardening in these wonderful climate regions, and members are invited to attend the Society's annual meeting, which is held in a different country each year.

The Northern California Branch produced **The Garden Resource Guide for Northern California's Mediterranean Climate**. To order a copy, send a \$10 donation to: PO Box 542, Lafayette, CA 94549. For lots more information, visit [www.MediterraneanGardenSociety.org](http://www.MediterraneanGardenSociety.org).

*-Katherine Greenberg, Past President*

# Symposium 2005-Chico!

Cal-IPC's 14th Annual Symposium, held this year at Chico State University, was our largest ever, with more than 350 attendees. The conference featured the addition of our first Wildland Weed Field Course, held along Big Chico Creek, where 80 attendees learned about integrated weed management methods from some of the most experienced practitioners in the state.

When Symposium attendees weren't listening to some of the more than 40 talks, they could peruse research posters or visit our sponsors' exhibits. Joe Silveira of the Sacramento National Wildlife Refuge reminded us what we're working toward with his keynote address on "The Return of Natural Diversity to Great Valley Wildlife Habitat." On Friday, participants broke into small working and discussion groups on topics such as Wetlands and Sensitive Habitats, Fire and Fuels Treatment, Mapping, and Education/Outreach.

Attendees didn't spend all of their time listening to talks. During

Thursday evening's social hour, Cal-IPC scholarship recipients meandered through the crowds selling raffle tickets. Winners were drawn live on stage during the awards banquet, while Joe DiTomaso auctioned off some of the more exceptional items like Ken Moore's rare, mini-weed wrench, a wildflower walk at Carson Pass with botanist Bob Case, two fine wines from Joe's personal wine cellar, a Jepson Herbarium workshop, and a weekend getaway in South Lake Tahoe. On Saturday, field trips visited the Sacramento National Wildlife Refuge, the site of a future state park in the Sutter Buttes, weed removal projects in Bidwell Park, and riparian restoration at Stony and Red Bank Creeks.

If you weren't able to make it to Chico, you can view most Symposium presentations on our website. See you next year in Sonoma County!

*Photos below by Bob Case, unless otherwise noted.*

## Wildland Weed Field Course

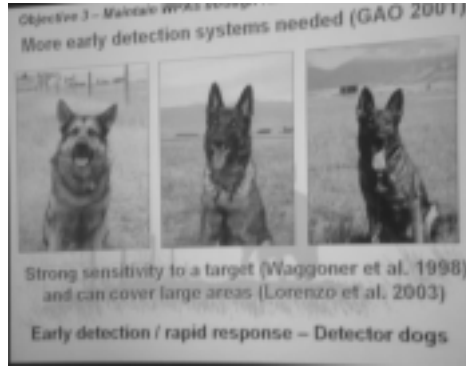


**Wildland Weed Field Course:** Participants take notes in the dappled sunlight of Bidwell Park (upper left). Rob Wilson explains chemical treatment methods (bottom left), and Mark Newhouser demonstrates revegetation techniques (above right), while Mike Taylor and Pete Brucker show the proper way to use a weed wrench, with girdling demonstrations in the background (bottom right, *photo: Jim Bromberg*).



**At right, top:** A full house at Bell Memorial Union. **Middle:** Attendees enjoy lunch, with sponsor exhibits in the background. **Bottom:** Three generations of weed workers—Carla Bossard (right), her former student (and current Cal-IPC board member) Carri Pirosko, and future weed worker Jacob Pirosko.





**Above left:** Susan Mason and Tanya Meyer's display on the development of a Central Valley version of the Don't Plant a Pest! brochure. **Above right:** The knapweed-sniffing dogs of Montana, as described by Kim Goodwin from Montana State University.



**Above left:** Susan Mason accepting the coveted Golden Weed Wrench Award from Cal-IPC's Doug Johnson, with last year's recipient Ken Moore in the background. **Above right:** Bobbi Simpson (left) presents Andrea Williams with the Weedzilla Award.

## *Congratulations to the 2005 Award Recipients!*

Jake Sigg Award for Dedicated Service:  
**Carla Bossard, St. Mary's College of California**, for a decade of service on the Board of Directors, co-editing Invasive Plants of California's Wildlands, participating on the weed list review committee, and mentoring students in invasive plant issues.

Golden Weed Wrench Award for Land Manager of the Year: **Susan Mason, Friends of Bidwell Park**, for her leadership in restoring Bidwell Park habitats.

Catalyst Award for Activism and Advocacy:  
**Frank Wallace, Sacramento Weed Warriors**, for involving hundreds of community volunteers in restoration along the American River Parkway.

Policy Award: **Assemblywoman Lois Wolk (Dist. 8-Davis)**, for her work and legislation promoting agency coordination on invasive species issues.

Weedzilla Award for National Park Service Weed Manager of the Year: **Andrea Williams, Redwood National and State Parks** for diligence in proposing and testing weed projects and acquiring a Student Conservation Association team for a year.

## *Field trips*



**Left:** The Bidwell Park field trip learns about the plantation of trees from around the world as engineering materials. *Photo: Doug Johnson* **Middle:** At Sutter Buttes, participants visited a former ranch, full of yellow starthistle and medusahead, that State Parks recently acquired. *Photo: Elizabeth Brusati.* **Right top:** "Sacramento River As It Was" examines a vernal pool. *Photo: Bree Richardson.* **Right bottom:** Giant reed dwarfs Cal-IPC members on the "Arundo and Tamarisk in the North" trip. *Photo: David Spencer*

# 2<sup>nd</sup> Annual Cal-IPC Photo Contest

## Specimen



### 1st Place

Escaped cardoon in Valley Center, San Diego County. Janet Garcia, UC Riverside



### 3rd Place

Yellow starthistle. Sally Childs



### 2nd Place

“Red on blue: much to do!” Red sesbania. George Hartwell

## Landscape



### 1st Place

*Delairea odorata* (cape ivy) takes over Live Oak Creek, Fallbrook. Carolyn Martus.



### 2nd Place

Gorse on San Bruno Mountain, San Mateo County. John Beall



### 3rd Place

*Cortaderia selloana* at Encinas Creek (the “Costco” population), Carlsbad. Carolyn Martus

## Weed Impacts



### 1st Place

“Darn that starthistle!” Photo by Patti Baker, contributed by Sue Donaldson



### 2nd Place

*Arundo* on pavement. Jason and Jesse Giessow



### 3rd Place

Endangered Yadon's piperia growing at the edge of a dead jubatagrass. Sally Childs

## Humor

### 1st Place

“Teamwork” Stacy Schmidt, Big Sur Land Trust



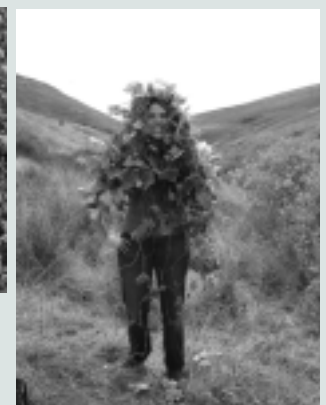
### 2nd Place

Hawaii Five-O “Delta style” (water hyacinth). Holly Crosson, UC Davis



### 3rd Place

“Cape Ivy Goddess” Jim Bromberg, Pt. Reyes Nat'l Seashore



# Weed Workers



**1st Place**  
*Sesbania punicea*  
 removal via canoe  
 along Lake Oroville.  
 Jim Dempsey,  
 California State  
 Parks

**2nd Place**  
 On the edge of the  
 world,  
 Big Sur.  
 Stacy Schmidt, Big  
 Sur Land Trust



**3rd Place**  
 Boy Scouts remove a humongous wild radish,  
 Sunset Scrub restoration site, Presidio, San  
 Francisco. Mike Perlmutter

## Special Category: All-Species Weed Workers...



Canine "Woad Warrior,"  
 Klamath National Forest.  
 Julie Knorr



*Diorhabda elongata*, saltcedar  
 biocontrol beetles, on tamarisk.  
 Tom Dudley



"Biocontrol," Catalina Island.  
 John Knapp,  
 Catalina Island Conservancy



Hairy weevil for yellow  
 starthistle control,  
 St. Joseph's Hill Open Space  
 Preserve.  
 Kathleen Jones



**1st Place**  
 Removal of Himalayan blackberry, purple  
 loosestrife, and edible fig, Lake Oroville.  
 Jim Dempsey, California State Parks

## Before and After



**2nd Place**  
 A bank cleared of yellow starthistle.  
 Sally Childs

**3rd Place**  
 Removal of jubatagrass in Manzanita Park.  
 Sally Childs



protect mainstream agriculture on the U.S. mainland from Hawaii's pests but no reciprocal measures for protecting Hawaii (OTA 1993). Clearly, the quarantine system is not protecting Hawaii from what Bright (1999) termed the "pathogens of globalization."

Hawaii has been one of the most unfortunate locations in the world as far as pest introduction is concerned, and its biodiversity and agriculture have suffered. The state is in the midst of an invasive species crisis affecting not only the archipelago's highly endemic biota, but also overall environmental and human health, and viability of its tourism- and agriculture-based economy (CGAPS 1996). The Invasive Species Specialist Group of the World Conservation Union (i.e., IUCN) recently developed a list of "100 of the World's Worst Invasive Species" (ISSG 2002); Hawaii has 47 of them.

Hawaii has roughly the same total number of nonnative arthropod species as the continental United States. McGregor (1973) speculated on the reason: "Although there is much greater diversity of crops and habitats within the continental United States, these are dispersed over a vastly larger land area. In Hawaii, where the overall diversity is less, the various habitats are more readily accessible from the principal port of entry." The more moderate and stable climate of Hawaii is also more favorable to an invading species than the climate in much of the United States. Furthermore, McGregor (1973) recognized this point in relation to agricultural quarantine: "(for insects and mites) in the period 1942-72 the rate of colonization per thousand square miles was 40 species, 500 times the rate of [the] continental United States." There is no evidence to indicate that this pattern has changed in the following 30 years.

More native species have been eliminated in Hawaii than anywhere else in the United States. Hawaii has lost about 8% of its native plant species and an additional 29% are at risk (Loope 1998). The state has lost 27 of its 73 historically known bird species and about 900 of 1,263 described land snail species (Loope

1998). With just 0.2% of the U.S. land area, Hawaii has about 30% of U.S. endangered species. Although habitat destruction has been an important cause of extinction and endangerment, the introduction and spread of invasive alien species has contributed in a major way in the past and is now the predominant cause of biodiversity loss in Hawaii.

Still, much biological richness is left in Hawaii's national parks, mostly at high elevations, but what is left is threatened by old, new, and future invasions. The invasive tree *Miconia calvescens* is an alarming and imminent threat. This large-leaved, shade-tolerant tree from tropical America has greatly reduced biodiversity over most of the rain forest area of Tahiti (Meyer 1996, Meyer and Florence 1996) and promises to do the same in Hawaii without major management intervention. Hawaii's national parks and Hawaii's NPS Exotic Plant Management Team are very much involved in interagency efforts to manage *M. calvescens* (e.g. Loope and Reeser 2001).



**Miconia tunnel.** Biologist Jean-Yves Meyer stands beneath a typical forest of the invasive tree *Miconia calvescens* in Tahiti. *Miconia* has become recognized as an invader capable of extinguishing biodiversity in island rainforests, and is being aggressively combated by the Hawaii Exotic Plant Management Team and others in Hawaii. Photo by Jean-Francois Butaud and Jean-Yves Meyer, 2004.

Good models for improved prevention for Hawaii exist in the largely successful preventive systems in place in New Zealand and Australia. In these countries the public accepts laws and procedures, some involving a small loss of personal freedom, as the price that must be paid for protecting agriculture, forests, and native ecosystems. New Zealand has comprehensive biosecurity legislation and a highly rigorous border control system, utilizing trained dogs and X-ray technology (Baskin 2002, Loope 2004). Australia has a relatively successful plant screening system that has evaluated thousands of new plant introductions since its inception (Pheloung *et al.* 1999, Baskin 2002).

The stakes are high in Hawaii because of the state's world-class biota. No location in the world rivals Hawaii as a showcase for biotic evolution in isolation and adaptive radiation—not even the famed Galapagos archipelago (Williamson 1981). In Hawaii, the National Park Service emerged as a leader in conservation biology about 1970, turning apathy into action, and showed that extensive native ecosystems persisted at high elevations in the state. It has pioneered the use of fencing as a tool for sustained elimination of feral ungulates (Stone and Loope 1996), serious alien plant control within designated "special ecological areas" (Tunison and Stone 1992), pushing for better quarantine measures at airports and harbors (Reeser 2001), and drawing the line against *Miconia* and other invasive species. The National Park Service in Hawaii is well aware that it cannot rest on its laurels, however (Bryan Harry, NPS Pacific area director, personal communication, 2004).

#### Lag time often masks biological invasions on the U.S. mainland

Given unabated action of similar forces responsible for continued ecological degradation—habitat destruction and fragmentation, biological invasion, and cascading effects—biodiversity of mainland national parks is clearly at risk (Vitousek *et al.* 1997). Meanwhile, Hawaii comprises a useful testing ground where strategies to prevent and combat invasions can be applied, tested, and refined.

Lag time is an important and underappreciated phenomenon in invasion biology and tends to mask the

pervasiveness of invasive species on the North American continent. For example, very many nonnative insect and disease problems in eastern North America went unnoticed initially but have gathered momentum and become acutely problematic with time. For example, white pine blister rust (*Cronartium ribicola*), introduced with nursery stock from Europe, has been in this country for more than a century (Maloy 2001), but it is just now killing most of the whitebark pine (*Pinus albicaulis*) trees in the northern Rocky Mountains from Glacier National Park to Yellowstone and Grand Teton.

Likewise, hemlock woolly adelgid (*Adelges tsugae*), a tiny insect, also illustrates well the case of serious invasions, which are revealed as serious only gradually. Native to Asia, it reached the western United States in the 1920s and the eastern part of the country in the 1950s, but the conventional wisdom was that it attacked only cultivated hemlocks (Van Driesche and Van Driesche 2000). In the 1980s, reports surfaced of eastern hemlock death in Virginia, and the infestation has now become a huge problem from New England to North Carolina and is slowly spreading westward. This may be an invasion that could cause functional extinction of two hemlock species, eastern hemlock (*Tsuga canadensis*) and Carolina hemlock (*Tsuga caroliniana*).

Lag times are not always as long. Balsam woolly adelgid (*Adelges piceae*) has virtually eliminated Fraser fir (*Abies fraseri*) in Great Smoky Mountains National Park; it was first noted in the United States about 1950 and started attacking fir in the Smokies in the 1970s. Dogwood anthracnose (*Discula destructiva*), first detected in the country in the 1970s, was reducing or eliminating flowering dogwood (*Cornus florida*) in many eastern national park areas by the 1990s (Langdon and Johnston 1992).

Fast-moving and newly emergent invasive diseases deservedly get the most attention. Sudden oak death syndrome (caused by the fungus *Phytophthora ramorum*) is a high-visibility problem that popped up in 1995 in California and kills healthy trees within four months (Kliejunas 2001). For nearly a decade, the fungus in the United States had been confined to Pacific states, but its chances of invading southeastern states, where numerous potentially susceptible oak (*Quercus*) species are ecological dominants, was learned to have been hastened in early 2004. At that time it was found that in spite of the best preventative efforts of APHIS, one large, infected nursery in Los Angeles had shipped



National Park Service crew removes yellow starthistle outliers at Yosemite NP. Photo: Bobbi Simpson, NPS

susceptible plant material widely. An APHIS update reported, “As of June 15, *P. ramorum* has been confirmed in plants traced forward from the initially positive Los Angeles County wholesaler at 118 sites in 16 states,” including 11 states in the southeast (APHIS 2004).

How many more sleeper invasions have already been inoculated within ecosystems worldwide by the recent burgeoning of trade—involving diverse pathways from solid-wood packing and raw lumber to seed trade on the Internet? And how much are protective systems going to improve in the coming decades in addressing continuing inoculations? In my view, change is going to depend more than anything on awareness.

#### Who will tell the people?

Entomologists Nemiela and Mattson, in a 1996 article in *BioScience*, stated (p. 751): “When the outrageous economic and ecological costs of the wanton spread of existing exotics and continued entry of new ones become common knowledge, it is inevitable that there will be a public outcry for actions to mitigate the potentially dire consequences.” Whose responsibility is it to inform the public? One might conclude that the seriousness of the problem of biological invasions seems to be largely unrecognized in the consciousness of the American public. Among environmental concerns, clean air and

clean water perhaps understandably seem to attract the most attention (since their direct effects are readily imagined). The reality is that biological invasions threaten much more than the integrity of natural ecosystems of national parks. They pose immense threats to the U.S. economy, agriculture, and forest resources, and to the public health and quality of life of U.S. citizens. Yet it seems that almost nowhere in American society is this message being conveyed effectively. Admittedly, the press reports with high frequency on specific invading species, but only rarely produces in-depth analyses relevant to the general problem of invasions (e.g. Nash 2004, Choo 2004).

#### How can NPS rise to the challenge?

The issue of the threat of invasive alien species to natural areas obviously presents huge challenges, but there are many possibilities for working toward “solutions.” A recent issue of *BioScience* presents an upbeat mix of ideas on promising approaches by knowledgeable scientists (Dybas 2004). One such scientist’s (Daniel Simberloff) presentation was entitled “We can win this war: The dangers of pessimism about introduced species.” Another (David Lodge) is quoted as having made the observation that screening species for invasiveness is one of the essentials

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and that “we have or are developing the tools to do that. The management and policy tools, however, lag way behind.” A third scientist (Ann Bartuska) expressed frustration over “how little we have done about dealing with ... [the invasive species issue]—given how big it is, how clearly we know the impacts, how widespread it is, and how it touches everyone in one way or another... We seem to have the political will and the public will to really take on fire [in wildland management] in a big way... but we don't seem to be able to do the same with invasive species.” Her suggested solutions included “integrated vector management” and “an effective early detection rapid response system.”

The National Park Service has special incentives for ramping up its efforts to address the invasive species issue. National parks and their ecosystems provide an excellent opportunity to bring the invasions message to the U.S.

Those parks provide unfortunate but strong lessons to be learned by NPS employees and the general public. Those fortunate regions and parks that have up to now been less susceptible and have largely escaped damage by invasions can learn from their neighbors and anticipate threats posed by future invasions.

The 1916 NPS Organic Act states clearly that the national parks are to be kept “unimpaired for the enjoyment of future generations.” The National Park Service now appears to be faced most ominously with massive impairment of the parks' natural resources by biological invasions from outside. One role for the National Park Service might be to accelerate its proactive role in informing its employees and the American public of the insidious nature of biological invasions. Another might be to include serious analyses of the importance of proactive quarantine systems suitable for regions at risk such as the Hawaiian Islands (see Reeser 2002). Major



The NPS Exotic Plant Management Team removes pampas grass from difficult-to-access cliff faces, where plants can serve as significant seed sources. (Photo: Bobbi Simpson, NPS)

public. Parks have been identified in the past (originally by NPS Director George Hartzog in the early 1970s) as “miners' canaries” for U.S. environmental health and indeed can well serve as such for communication of the invasions message. Some regions and parks are much more susceptible to invasions than others, with some already showing substantial degradation. Parks in Hawaii, California, and Florida are especially affected by invasions.

breakthroughs in science, policy, and management will likely be needed to address the complex and important issue of biological invasions if substantial impairment of the parks is to be averted.

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*News, continued from pg. 3*

for training troops. For example, yellow starthistle destroys paratroopers' parachutes at a cost of \$2,000-\$5,000 apiece (10/19/05). <[www.montereyherald.com](http://www.montereyherald.com)>

A letter in the *Annals of Internal Medicine* describes a clinical case in which a 24-yr-old man was admitted to a hospital with **myocarditis (swelling of the heart) resulting from exposure to sap from tree-of-heaven (*Ailanthus altissima*)** through open blisters on his hands. Although it doesn't describe the level of exposure that caused this toxicity, it is a reminder to take care when removing tree-of-heaven. (TNC Invasive Species Listserve) <[tncweeds.ucdavis.edu/news/21072005.pdf](http://tncweeds.ucdavis.edu/news/21072005.pdf)>

*USA Today* described the release of **tamarisk leaf beetles** at 24 sites in the southwestern U.S. (8/2/05) <[www.usatoday.com/news/national/2005-08-01-beetles-battle-west\\_x.htm](http://www.usatoday.com/news/national/2005-08-01-beetles-battle-west_x.htm)>

Australian researchers looking for ways to **eradicate toxic cane toads (*Bufo marinus*)** have found a way to trap them using ultraviolet lights. Cane toads, some as big as dinner plates, can even kill crocodiles and wild dogs with their hallucinogenic venom. Researchers in the Northern Territory found that the **"disco lights" are a great way to attract cane toads** so that they can be trapped. <[www.allheadlinenews.com/articles/7000056132](http://www.allheadlinenews.com/articles/7000056132)>

A report on **"Invasive Weeds, Pests and Diseases: Solutions to Secure Australia,"** has been prepared by the Australian Biosecurity Group, a task force convened by the Invasive Animals Cooperative Research Centre, the Cooperative Research Centre for Australian Weed Management, and World Wildlife Fund-Australia. <[www.wwf.org.au/News\\_and\\_information/News\\_room/View\\_news/225](http://www.wwf.org.au/News_and_information/News_room/View_news/225)>

**South Africa's oldest nature reserve is threatened** by an alien invasion so fierce that environmentalists now fear for the renowned park's future. Hluhluwe-Umfolozi Park is being overrun by trifid weed (*Chromolaena odorata*), an invasive species from Central America. The plant spreads at such a rate—smothering indigenous vegetation and driving off animals—that it was named after the carnivorous plants from the 1951 sci-fi novel *The Day of the Triffids*. <[news.nationalgeographic.com/news/2005](http://news.nationalgeographic.com/news/2005)>

# 2005 Symposium Sponsors

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## New Members and Donors

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

### **New Members**

Riaz Ahmad (Davis), Patrick Akers (Sacramento), Monica Alas (San Rafael), Jason William Allen (San Diego), David Allen (Orick), Kasey Allen (Point Reyes Station), John P. Anderson (San Francisco), Ted Angle (Reno, NV), Greg Archer (El Portal), Sheri Asgari (Irvine), Jerry Asher (Lincoln City), Kristin Asmus (Walnut Creek), Denali Beard (Folsom), CJ Beigle (Pismo Beach), Jim Belsher-Howe (Quincy), Martha Berthelsen (Richmond), Cheryl Beyer (Alturas), Claire Beyer (Richmond), F. Thomas Biglione (Stockton), Cindy Bishop (Fresno), Michael Blankinship (Davis), Lynn Boyd (Walnut Creek), Bill Bradberry (Fountain Valley), Jack Bramkamp (San Dimas), Terrel Brand (Oakland), Brenton VMS LLC (Folsom), Matthew Brown (Oroville), Nancy Brownfield (Oakland), Ernest Bryant (Santa Barbara), Jennifer Buck (Davis), Sarah Bull (Morro Bay), Jennifer Williamson Burt (Sacramento), Jennifer Campbell-Young (Costa Mesa), M.L. Carle (Penngrove), Mike Carpenter (Willows), Jason Casanova (Los Angeles), Brian Cashore (Bishop), Barbara Castro (Chico), Daniel Clark (Los Gatos), Patti Clifford (Arcata), Roger Cole (Oroville), Michael Commons (Whiskeytown), Bernadette Cooney (Weaverville), Karen Cotter (Los Gatos), Michelle Cox (Mineral), Jeff Crain, Kyla Dahlin (San Francisco), Bonnie Davis (Fremont), Gage Dayton (Moss Landing), Denise Della Santina (El Portal), Mark Dodero (San Diego), Joy Durighello (San Francisco), Todd Easley (MCB Camp Pendleton), Adam Erickson (Orick), Susan Erwin (Weaverville), Eric Evans (Rocklin), Eric Folmer (Berkeley), Sue

Fritzke (San Francisco), Linda Gamberg, Janet Garcia (Moreno Valley), Tamara Gedik (Trinidad), Joanna Gehrig (Orick), Andrew Georedes (Montara), Pat Gilbert (Shasta), Mark Girard, Jackie Gonzalez (Chico), Kim Goodwin (Bozeman, MT), Sara Greenwald (San Francisco), Abigail Gwinn (Seaside), Carolyn Halde (San Francisco), Mark P. Hansen (Seaside), Jack Hardy (Battle Ground), Leann Hendy (Live Oak), Daniel Hill (San Jose), Linda Hill (Berkeley), Samantha Hillaire (Oroville), Eric Hoff (Orick), Stan Hooper (Los Altos), Beau Howard (Hollister), Lottie Hufford (Cedarville), John Hunt (Chico), Rachel Hurt (Alameda), Ellie Insley (Glen Ellen), Shigero Isuda (Daly City), Elaine Jackson (Martinez), Judy Johnson (Bass Lake), Laura Julian (Blue Lake), Terri Kempton (San Francisco), Drew Kerr (El Sobrante), Guy Keyser (Davis), Alynn Kjeldsen (Sebastopol), Andrew Kleinhesselink (San Francisco), Roy Kroeze (La Grange), Laura Kummerer (Saratoga), Eric Lane (Lake-wood, CO), Brendon Larson (Davis), Amy Livingston (Mineral), Jimi Logsdon (Chico), Scott Loosley (Santa Cruz), Liana Lopez (Mariposa), Lynn Lorenson (Nevada City), Eliza Maher (Riverside), Michael Malmberg (Sausalito), Jean-Philippe Marie (Davis), Anthony Marrone (Stockton), Kevin Martyn (Redding), Sarah McCullough (Mineral), Erin McKinney (San Diego), Norma McKinney (Spring Valley), Jim McCoy (La Grange), Autumn Meisel (Menlo Park), Julian Meisler (Santa Rosa), Eric Menig (Chicago Park), John Merz (Chico), LeeAnne Mila (Placerville), Rick Miller (Folsom), Terry Miller (Blairsden), Joseph Minewiser (Davis), James Moller (Anderson), Joe Molter (Redding), Kathleen Moody (Fort Jones), David Moorhead (Tifton), Virginia Moran (Grass Valley), Aaron Morehouse (Avalon), Michelle Murphy (San Francisco), Deborah Nares (Salinas), Natomas Basin Conservancy (Sacramento), Tony Nelson (Point Reyes), Nancy Ness (Elma), Jon O'Brien (Davis), Jessie Olson (Petaluma), Gary Omori (Oceanside), Ray Omori (Oceanside), Yoko





**Giving 'til it hurts.** Auctioneer and Cal-IPC Past-President Joe DiTomaso reluctantly parts with a bottle of wine from his personal cellar during the auction at the 2005 Symposium. *Photo: Bob Case*

**Omori** (Oceanside), **Raquel Ordorica** (San Diego), **Lesla Osterholm** (Grass Valley), **Richard Parry** (Los Altos), **Dale Patterson** (Santa Fe Springs), **Jim & Barbara Peugh** (San Diego), **Huy Pham** (San Jose), **Barbara Pollock** (Stockton), **John Pritchard** (Watsonville), **C. Anne Prutzman** (Oakland), **Tim Reilly** (Capitola), **David Reneau** (Menlo Park), **Kellie Rey** (Moss Landing), **Caroline Ridley** (Riverside), **Melissa Riedel-Lehrke** (Los Angeles), **Rick Riefner** (Irvine), **Chris Rose** (Winters), **Allison Roth** (San Francisco), **Dan Ryan** (Rolling Hills Estates), **Robert Sanders** (Chico), **Allison Sanger** (Susanville), **Daniel Sarr** (Fort Collins), **Kristina Schierenbeck** (Chico), **Mari Schroeder** (Santa Ana), **Julie Serences** (Carmichael), **Jason P. Sexton** (Woodland), **Joseph Silveira** (Sacramento River NWR), **Onkar Singh** (Clovis), **Siram** (Oakland), **Jeremy Sison**, **Robert Skillman**, **John Smith**, **Trish Smith** (Irvine), **Tamara Sperber** (Modesto), **Charles Starzynski** (Fair Oaks), **Harlan Steele** (Burbank), **Bobbie Stephenson** (San Diego), **Lew Stringer** (San Francisco), **Mark Stromberg** (Carmel Valley), **Chris Swift** (Rocklin), **Kathy Swift** (Lincoln), **Riley Swift** (Lincoln), **Kate Symonds** (Santa Rosa), **Ellen Tatum** (Arcata), **Mike Taylor** (Placerville), **Aileen Thiele** (Oakland), **Suzanne Thomas** (El Portal), **Jenn Tiehm** (Paicines), **Ryan Tiejien** (Orick), **Jamison Tuitele-Lewis** (Prather), **Jessica Umbright** (Chico), **Emma Underwood** (Davis), **Debi Upton** (Oroville), **Kris Vagos** (San Francisco), **Matt Wacker** (Sacramento), **Jessie Walker** (Escondido), **Emily Walter** (Arcata), **Sally Walters** (Folsom), **Holly Warner** (Mariposa), **Judi Weaser** (El Portal), **Amanda Weinberg** (Costa Mesa), **Charles Williams** (Redwood Valley), **Charlie Williams** (Oakland), **Desiree Williams** (San Rafael), **Rob Wilson** (Susanville), **Christopher Winchell** (Clovis), **Spencer Wolfe** (Oakland), **Sheli Wingo-Tussing** (Chico), **Eric Wrubel** (Oakland), **Amanda Yantes** (Hollister), **Anne Yost** (Ft. Jones), **Mahala Young** (Sacramento), **Ellen Zagorey** (Davis)

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**We have them to thank.** Five of the founding Cal-IPC board members—Jake Sigg, Greg Archbald, Carla Bossard, Ann Howald, and Nelroy Jackson. *Photo: Bob Case*

# Readings & Resources

**Nursery Partnership newsletter:** The Partnership to Prevent Invasive Plant Introductions through Horticulture (which includes Cal-IPC) now produces an **online newsletter** describing the group's goals and progress. (See Summer 2005 issue of *Cal-IPC News* for more information on the partnership.) <[www.suscon.org/Invasives/Newsletter/Summer2005/summer2005.html](http://www.suscon.org/Invasives/Newsletter/Summer2005/summer2005.html)>

**Outreach guide:** The California Invasive Weeds Awareness Coalition (CALIWAC) has produced a guide for organizing field trips, contacting local media, and other ways to get your message out. Although originally designed for California Invasive Weeds Awareness Week, it contains ideas that can be used all year (or for CIWAW 2006). The guide is titled **Strategies for California Invasive Weeds Awareness Week**, and is available at [www.cal-ipc.org](http://www.cal-ipc.org).

**Ehrharta management summary:** Ehrharta spp. (velvet grasses) now have an updated entry in The Nature Conservancy's series of management summaries for invasive plants, describing biology, impacts, and control methods. <[tncweeds.ucdavis.edu/esadocs/ehrberec.html](http://tncweeds.ucdavis.edu/esadocs/ehrberec.html)>

**Outreach listserv:** The WEEDAWARE-L listserv facilitates communication among parties interested in **invasive plant awareness and outreach**. This list is intended to provide support and resources to those conducting weed awareness campaigns and to facilitate regional coordination and collaboration. It is open to everyone. <[www.hear.org/hearlists/weedaware.htm](http://www.hear.org/hearlists/weedaware.htm)>

**Deck of weed cards:** "Weeds You Should Get to Know" Weed Deck. TNC-Florida has produced a pocket-sized weed deck of 3.5"x5" laminated cards that can be fanned-out. Designed specifically for land managers, this **waterproof and durable weed deck** includes identifying characters for five weeds, great photos, and control information! <[tncweeds.ucdavis.edu](http://tncweeds.ucdavis.edu)>

**Video game:** Play **Weed Wipeout**, an online video game from Australia that lets you choose your control method and see your bank balance change as your weed management investment either pays off or not. Tell your boss you're "researching" outreach programs.

Have you seen a new resource your fellow weed workers should know about? Please contact [edbrusati@cal-ipc.org](mailto:edbrusati@cal-ipc.org) or (510) 843-3902.



**Roadside distribution.** Sign with noxious weed pamphlets spotted in Fields, OR. *Photo: Heidi Martin, Caltrans District 11.*

<[www.weeds.crc.org.au/for\\_schools/weedwipeout\\_flash.html](http://www.weeds.crc.org.au/for_schools/weedwipeout_flash.html)>

**Evaluation guides:** Cornell University has produced several fact sheets with information on **evaluating effectiveness** of outreach and education programs. <[staff.cce.cornell.edu/administration/program/evaluation/evalrefs.htm](http://staff.cce.cornell.edu/administration/program/evaluation/evalrefs.htm)>

**Online book:** The full text of the book **Alien Plant Invasions in Native Ecosystems of Hawaii: Management and Research** (1992; Stone, Smith, & Tunison, eds.) is now online on the Hawaiian Ecosystems at Risk project website. <[www.hear.org/books/apineh1992](http://www.hear.org/books/apineh1992)>

**Brochure:** **Weed-free Rangelands & Wildlife Habitat, a brochure for hunters** on preventing weed spread, is available from the Center for Invasive Plant Management at Montana State University. <[www.weedcenter.org](http://www.weedcenter.org)>

**Book:** **Measuring and Monitoring Plant Populations** (1998, Elzinga *et al.*), is recommended as a "must-have manual for monitoring weed projects." Published by the Bureau

of Land Management. Available by e-mailing [BLM\\_NCS\\_PMDs@blm.gov](mailto:BLM_NCS_PMDs@blm.gov) or faxing 303-236-0845. Although BLM's website says it's out-of-print, it's actually been reprinted. PDF download also available, although graphics are better in the printed copies. <[www.blm.gov/nstc/library/techref.htm](http://www.blm.gov/nstc/library/techref.htm)>

**Class:** The Western Society of Weed Science offers the **Noxious Weed Management Short Course for Land Managers**, April 24-27, 2006 at Chico Hot Springs in Pray, Montana. The course was developed for land managers who want to gain a better understanding of ecologically-sound integrated weed management concepts. Lab and field exercises, in addition to classroom sessions, will be used as teaching methods. Registration for the course is limited. *Melissa Brown* (406)558-4568, [writemlb@yahoo.ca](mailto:writemlb@yahoo.ca)

**Free software:** An updated version of The Nature Conservancy's Weed Information and Management System, **WIMS 3.0 beta**, is out for review. Changes include a streamlined data model, a more user-friendly interface, and improvements for data sharing. Download from [casil.ucdavis.edu/projects/wims](http://casil.ucdavis.edu/projects/wims) (select the "Files" tab and pick the topmost one). A message board is provided to discuss ideas and announce new releases: [ice.ucdavis.edu/wims](http://ice.ucdavis.edu/wims). The current production version, 2.1b, is still in use and available. <[tncweeds.ucdavis.edu](http://tncweeds.ucdavis.edu)>

**Virtual library:** Online access to the **American Institute of Biological Sciences** virtual library is now free to all visitors. Includes talks from 2004 55th Annual AIBS Meeting - Invasive Species: The Search for Solutions. <[www.aibs.org/virtual-library](http://www.aibs.org/virtual-library)>

**Free photos:** The Natural Resource Conservation Service Photo Gallery contains **natural resource and conservation related photos** from across the USA. Photos are available free of charge. Search by state or category. Great for presentations. <[photogallery.nrcs.usda.gov](http://photogallery.nrcs.usda.gov)>

**Database:** USGS scientists and TNC have completed a regional database of invasive non-native plants as part of the **Southwest Exotic Plant Mapping Project** that will help land managers share information about invasive plant occurrence and distribution. <[www.usgs.nau.edu/SWEPIC/index.asp](http://www.usgs.nau.edu/SWEPIC/index.asp)>

**Website:** The Nature Conservancy has redesigned its web site for **fire practitioners**. It includes reports on forest management and fire as well as information on training programs. <[tncfire.org](http://tncfire.org)>

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# The WILDLAND WEED CALENDAR

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## Southwest Vegetation Management Association Annual Meeting

November 2-4, 2005  
Phoenix, AZ  
<[www.svwm.org](http://www.svwm.org)>

## Western Weed Coordinating Committee Annual Meeting

December 1 and 1, 2005  
Las Vegas, NV  
<[www.weedcenter.org/wvcc/docs/annualmeeting.html](http://www.weedcenter.org/wvcc/docs/annualmeeting.html)>

## Advanced Invasive Plant School

December 6 and 7, 2005  
Ontario, CA

A new course from Dr. Nelroy Jackson and Carl Bell with in-depth information on impacts and control of invasives.  
<[cesandiego.ucdavis.edu](http://cesandiego.ucdavis.edu)>

## “Invasive Plants in the Midwest: Assessment, Management, Partnerships”

December 14-15, 2005  
Kansas City, MO

Cosponsored by the North Central Weed Science Society and the Midwest Invasive Plant Network.

<[www.ncwss.org/meeting/2005/Invasivemeeting05.htm](http://www.ncwss.org/meeting/2005/Invasivemeeting05.htm)>

*Know of an event that should be posted here?*

*Please contact [edbrusati@cal-ipc.org](mailto:edbrusati@cal-ipc.org).*

## Ecological Society of America Annual Meeting: “Ecology in an Era of Globalization: Challenges and Opportunities for Environmental Scientists in the Americas”

January 8-12, 2006  
Merida, Yucatan, Mexico

Sponsored by the Ecological Society of America. Invasive species is one of three major themes.

<[www.esa.org/mexico/](http://www.esa.org/mexico/)>

## California Weed Science Society 58th Annual Conference: “Improvise, Adapt, and Overcome”

January 16-18, 2006  
Ventura, CA

<[www.cwss.org](http://www.cwss.org)>

## Weed Science Society of America Annual Meeting

February 13-16, 2006  
New York, NY

<[www.wssa.net](http://www.wssa.net)>

## National Invasive Weeds Awareness Week

February 26-March 3, 2006  
Washington, D.C.

This seventh annual event brings together weed workers from across the country to the nation’s capitol to visit their congressional representatives. Interested in joining the California team? Contact Cal-IPC!  
<[www.nawma.org/niwaw/niwaw](http://www.nawma.org/niwaw/niwaw)>

## Day at the Capitol

March, 2006 (date to be announced)  
Sacramento, CA

Attendees from around the state visit legislators to educate them about the need for invasive plant projects. Everyone is encouraged to attend. Registration is free.

<[www.cal-ipc.org](http://www.cal-ipc.org)>

## 12th Annual California GIS Conference

April 5-7, 2006  
Santa Barbara, CA

<[www.calgis.org](http://www.calgis.org)>

## Noxious Weed Management Short Course

April 24-27, 2006  
Pray, MT

*See description page 18.*

## 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, the US, and Mexico.

<[www.desertmuseum.org/borderweeds](http://www.desertmuseum.org/borderweeds)>  
[borderweeds@desertmuseum.org](mailto:borderweeds@desertmuseum.org)

## “Managing Weeds in a Changing Climate” 15th Australian Weeds Conference

September 24-28, 2006  
Adelaide, South Australia

Submit abstracts by December 2, 2005.

<[www.plevin.com.au/15AWC2006](http://www.plevin.com.au/15AWC2006)>

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## Quotable

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“The enemy is cordgrass? Is there anyone left in conservation who is not spraying, ripping out, cutting down or burning? It seems to be popular science to destroy things in order to save them.”

*Laurie Stoelting, letter to the editor, San Francisco Chronicle, Oct. 15, 2005*

“Pampas grass, an ornamental plant from Argentina...marches up and down California like a bunch of feather-headed Vegas showgirls, trampling sensitive coastal habitats with their high heels.”

*Lisa McKinnon, Ventura County Star, Oct. 14, 2005*

# 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, including scientists, land managers, policy makers, and concerned citizens. Please photocopy the form below, complete, and mail with your payment. Additional donations are always welcome to support our projects; we are a 501(c)3 nonprofit organization, and donations beyond regular membership rates are tax deductible.

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- Regular \$35
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- Joint Cal-IPC/SERCAL \$55
- Joint Cal-IPC/CNGA \$70
- Cal-IPC/SERCAL/CNGA \$95
- Student/Volunteer \$15

## Institutional

- Regular \$150
- Contributing \$300
- Patron \$600
- Sustaining \$1,000
- Small company or Nonprofit \$100

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### Ways to join:

**Mail:** send this form with check (made out to "Cal-IPC") or credit card info to Cal-IPC, 1442-A Walnut Street #462, Berkeley, CA 94709

**Fax:** fax form with credit card info to 510/217-3500

**Phone:** call us at 510/843-3902 and provide contact and credit card info



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