CalEPPC News

A quarterly publication of the California Exotic Pest Plant Council

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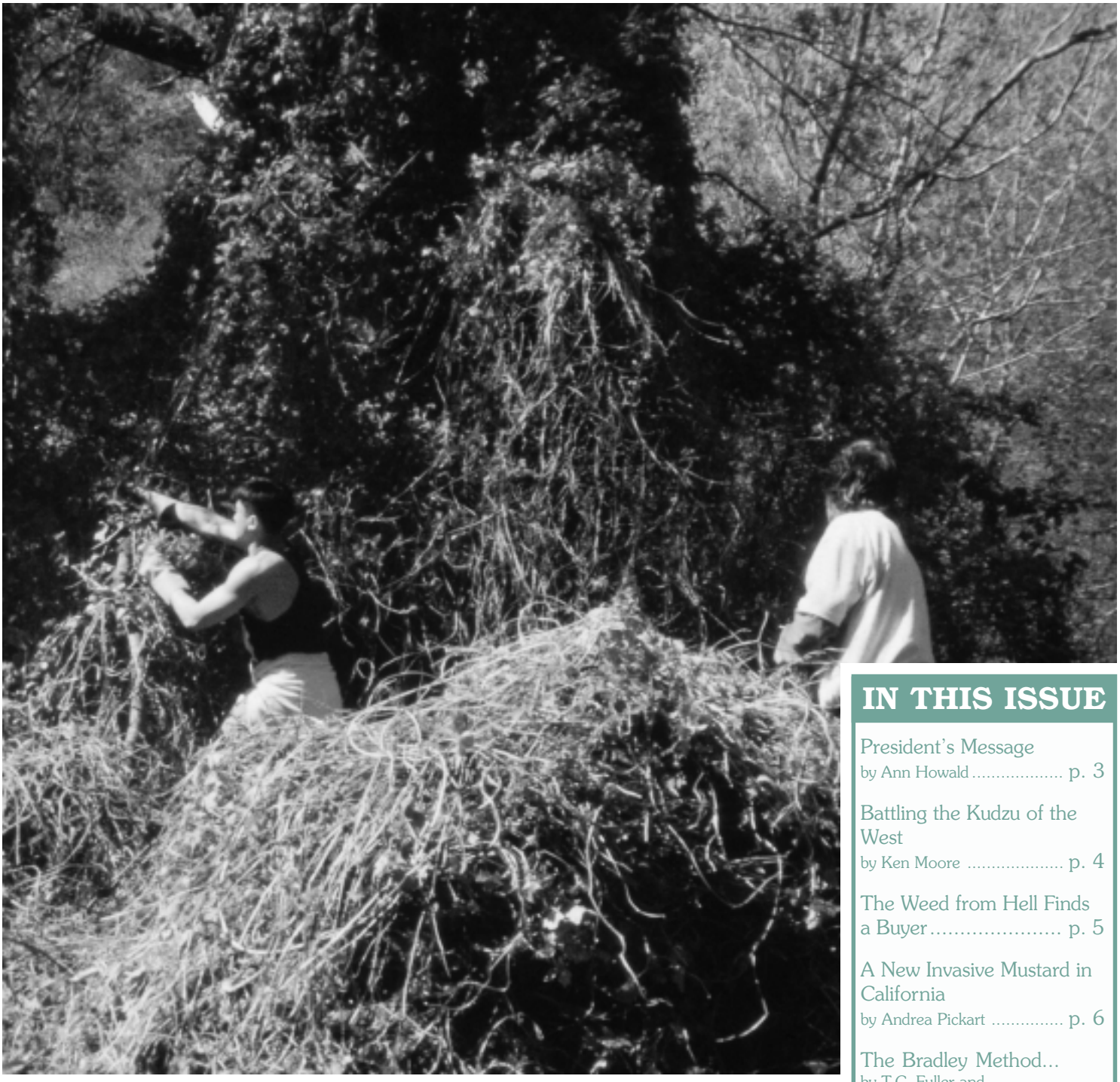

Wildlands Restoration Team volunteers tackle a wall of cape ivy on Waddell Creek, Big Basin State Park, Santa Cruz County. *Photo by Ken Moore.*

IN THIS ISSUE

Who We Are

CalEPPC NEWS is published quarterly by the California Exotic Pest Plant Council, a non-profit organization. The objects of the organization are to:

- provide a focus for issues and concerns regarding exotic pest plants in California;
- facilitate communication and the exchange of information regarding all aspects of exotic pest plant control and management;
- provide a forum where all interested parties may participate in meetings and share in the benefits from the information generated by this council;
- promote public understanding regarding exotic pest plants and their control;
- serve as an advisory council regarding funding, research, management and control of exotic pest plants;
- facilitate action campaigns to monitor and control exotic pest plants in California; and
- review incipient and potential pest plant management problems and activities and provide relevant information to interested parties.

Please Note:

The California Exotic Pest Plant Council is a California 501(c)3 non-profit, public benefit corporation organized to provide a focus for issues and concerns regarding exotic pest plants in California, and is recognized under federal and state tax laws a qualified donee for tax deducible charitable contributions.

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CalEPPC's web site: http://www.igc.apc.org/ceppc/index.html

Presidents Message

Ann Howald, President

Thanks again to everyone who helped make CalEPPC's ***Symposium '97, Reaching Out and Keeping Out***, an outstanding success. Highlights included sessions on interagency cooperation in weed control efforts, using volunteers in weed removal programs, a variety of case studies, and a wide range of control methods. Working group sessions were well-attended and included biocontrol, Arundo, brooms, German ivy, cord grass, tamarisk, Veldt grass, yellow starthistle, volunteers and perennial pepperweed. Our poster session was a focal point for discussion -- diverse, lively, entertaining and informative. Officers and board members for 1998 were introduced at our lunch-business meeting. We enjoyed perfect fall weather for our two field trips: a half-day trip to see eucalyptus removal on Angel Island, and a "round the Bay in a day" trip that featured weed control and restoration projects in salt marsh, coastal bluff and coastal dune habitats. Above all, there was the opportunity to talk to fellow weed warriors from across the state and beyond, exchanging strategies, sharing successes and failures, and planning for future efforts.

Our keynote speaker, Bonnie Harper-Lore, from the Federal Highway Administration of the U.S. Department of Transportation, updated us on the successes of the Federal Interagency Committee on Management of Noxious and Exotic Weeds (phew!), otherwise known as FICMNEW. What touched me the most was her description of her transformation from a local grassroots activist to a national spokesperson on exotic pest plants. From her we learned how one person with motivation and a message can truly make a difference. Thanks so much, Bonnie, and keep up the good work!

Our sessions on ***Reaching Out*** focused on the many benefits of including volunteers, especially local residents, in our weed control and restoration efforts. It was heartening to hear that motivated volunteers provide much more than free labor. In many cases they become the "heart and soul" of their projects, developing into highly skilled and creative practitioners of their art.

Our ***Keeping Out*** case studies included some updates on "old enemies" like eucalyptus, broom, tamarisk and German ivy (neither German nor ivy, actually a composite from South Africa), and some projects not reported on at previous symposia, including European beachgrass removal and cord grass (*Spartina alterniflora*) control. We also had the CalEPPC version of "America's Most Wanted" in the form of a weed alert -- new invasive weeds for California, including mug shots!

Keeping Out sessions also included discussions of future possibilities for using the herbicides Transline and Arsenal in California, initiating biological control projects, formation of a new Team Arundo del Norte in central and northern California, a comparative analysis of risks of a variety of control methods, how floods spread noxious weeds, a new California database on noxious weeds, a consideration of the value of using local ecotypes in restoration plantings and a description of the weed problems of the Sonoran desert.

We also heard from representatives of several federal and state agencies on their weed control efforts. The U.S. Bureau of Land Management promotes interagency cooperation in many ways, including its mini-grant program "War on Weeds." The California Department of Food and Agriculture has established a noxious weed data base and we learned about the status of their eradication programs. We also heard an enlightening account of recent changes in outlook regarding roadside weed management from the California Department of Transportation.

"Our poster session was a focal point for discussion - diverse, lively, entertaining and informative "

All in all, it was a great weekend, providing that energizing "shot in the arm" that we all need from time to time. Thanks again to all the officers, board members, CalEPPC members and volunteers who made it all possible!

In closing, let me welcome our new officers and board members for 1998: Mike Pitcairn, president; Greg Archbald, vice president; John Randall, secretary; Sally Davis, treasurer; Anne Knox, Ellie Wagner, and Peter Warner at-large board members.

Battling the Kudzu of the West: Controlling Cape Ivy (formerly German ivy) by Hand Removal

Ken Moore, Habitat Restoration Team

A creeping blanket of vegetation smothering everything in its path is a daunting sight indeed. Unfortunately, it is becoming an increasingly common one as cape ivy drops its green curtain over coastal canyons and streamsides throughout much of California. Cape ivy (*Delaireia odorata*) was until recently called Germany ivy (*Senecio mikanioides*). Capable of growth rates which easily outstrip native species, and possessing twining, easily broken stems able to resprout from any piece containing a single node, this plant combines the worst habits of the notorious kudzu vine and the mythical hydra. These characteristics make the prospect of controlling even small infestations of cape ivy by hand removal seem bleak indeed. Or so I thought when our volunteer program, the Wildlands Restoration Team, first started doing battle with this scourge from South Africa in the fall of 1993.

The project area is in Santa Cruz County, along lower Waddell Creek in Big Basin State Park. For record-keeping purposes, the area was described as 19 separate sites ranging in size from about 200 sq. ft. up to about 15,000 sq. ft. A "site" is here used to mean a single area of contiguous infestation. The total area of the 19 sites is about 146,600 sq. ft., or about 3 1/3 acres. The sites were mapped and named, and detailed records of dates and hours worked and the removal method used for each site were kept in a database since the start of the project. This has made it possible to quantify and compare the effectiveness of each removal method used.

We started out using our tried-and-true method of controlling an invasive species, which calls for targeted removal of the exotic species by hand while leaving the native flora and the site as intact and undisturbed as possible. The cape ivy was stacked on site in tall piles to minimize ground contact area. The team put in a total of 1,130 person-hours using this method; the result was nearly complete failure. Return visits to most sites two to three months later found them reinfested almost as badly as before we started. Careful inspection of the sites confirmed my suspicions; the rampant and tangled mess of native blackberry and stinging nettles in these lush riparian zones was keeping the team from *seeing* and *getting to* the cape ivy. Places where native vegetation was initially sparse showed very little cape ivy regrowth, whereas in areas dense with native vegetation the cape ivy came back immediately. Repeated attempts to rid these sites of cape ivy for the next year with our selective removal method affirmed what I already feared: This wasn't going to work.

Clearly, a new game plan was in order. When we returned to Waddell Creek to do battle in late fall of 1995, I directed a very reluctant team to completely clear the sites of anything that was keeping them from getting to the cape ivy--alive or not, native or not. Telling a bunch of experienced restoration volunteers to clear a site of all vegetation went over almost as well as if I had asked them to plant yellow star thistle on our hard-won former French broom sites. In addition to being counter-intuitive, it was one heck of a lot of work. We used Pulaskis, Mcleods, bank blades, shovels , and chain saws to clear the site of all hindering vegetation. We stacked everything, piling the cape ivy separately from all other plant materials. We cut up and moved large logs which had been deposited by the high winter flows, as cape ivy loves to hide under them. Using the sharpened "hoe" , or straight edge of the Macleod, we scraped the soil clean of all duff to get rid of the nodes and roots I knew were still there. A total of 1,016 person-hours were put in to accomplish complete clearing of the 19 sites. I coined the name "scorched earth" to describe this extremely unpopular method, and I knew I stood to lose some loyal volunteers if it didn't work.

But by the end of 1996, I could see that it was working. Very little cape ivy was in evidence on any of the sites, and most of what did come back was from previously pulled plants still hanging on to life in the piles themselves, or from areas around the perimeter of the site that had not been cleared back far enough to see those last few smaller plants lurking there. We reworked all the sites again in the spring of 1997, and this time we were able to repull the remaining cape ivy on all of them in just one team day: 238 person-hours! Our hard work had paid off, as now it was easy to see and remove any new growth on the clean sites. The people who had worked these sites previously were elated. It seemed I would not be burned on a nearby pyre of previously pulled broom, after all!

On sites subjected to "scorched earth," the regrowth of natives was strong and fast, and inspiring to behold: A testimony to the vitality of these nutrient rich riparian

Cape Weed (cont'd)

habitats. Ironically, this vigorous native regrowth is fast becoming our biggest problem, as it makes it difficult for us to see any new cape ivy regrowth. It requires very diligent combing through the dense new growth by experienced people to find those few newly emerging plants, but so far this seems to be working, and many of our sites are showing no ivy regrowth at all this year. The old piles of cape ivy can still harbor live plants, but turning the piles over and extracting the live material once or twice has eliminated this problem on most of the sites. If the site has good sunlight availability, we spread the pile out in a 4 to 5 inch thick layer on top of 10 mil plastic. This greatly speeds up the desiccation and death of any plants which are still viable.

It is possible to control cape ivy using hand removal methods. But it takes a concerted effort to accomplish, and we now know that anything short of that will meet with sure failure. Continued monitoring will be needed, as well as some repulling, depending on how thorough a job was done initially: A poor first pull will result in a site looking like it was never worked at all in a very short time! And even if nearly all of the cape ivy was removed the first time, just the small amount that is invariably missed can reestablish itself with alarming rapidity. Also, If there is a cape ivy source upstream, high water flows in the winter can be expected to transport pieces of plants downstream which can reinfest old work sites and begin new colonies. So, if you are considering tackling a cape ivy project, be sure of your ability to see it to completion before starting in. The propensity of cape ivy to quickly and dramatically advertise a failed effort could have repercussions on your ability to mobilize help for future restoration efforts.

The Weed from Hell Finds a Buyer

Reprinted from the Riverside Press Enterprise, October 23, 1997

Editor's note: For more information on Alex-Alt Biomass, contact Ted Sims, 2901 16th Street, Santa Monica, CA 90405, 310.392.9405, FAX 310.452.7018 email: <Ted Sims@aol.com>

Public agencies call *Arundo donax* "the weed from Hell" and are spending millions of dollars to destroy the giant cane that's choking the Santa Ana River and other waterways throughout Southern California. But what the agencies see as a noxious bane and money drain is a boon and potential gold mine to a Tacoma, WA entrepreneur, Ted Sims. His company, Alex-Alt Biomass, is surprising Southern California agencies with requests to buy or get all the cane that the agencies want to remove and destroy. The company is stockpiling the plants as it lines up sites to make a host of products from furniture to food sweeteners and car wax.

The company signed a five-year contract this weed to pay Riverside County roughly $30 a ton to cut and haul away Arundo from the Santa Ana River in western Riverside County. The company's $30-per ton fee will go toward herbicides and monitoring to keep acres clean of Arundo. That adds up to about $900 an acre, which elates Paul Frandsen, chief of the county's Regional Park and Open Space District, and a leader in the Inland area's war against Arundo. In that war, agencies in Riverside, San Bernardino, and Orange Counties have spent or earmarked more than $4.5 million from different sources to rid the Santa Ana River of Arundo.

Alex-Alt Biomass already is acquiring Arundo from agencies in Los Angeles, Orange and San Bernardino counties, but company President Ernie Altheimer said the thickets that have overrun the Santa Ana River through western Riverside County are the best Arundo around. Arundo grows on at least 3,000 acres of county parkland along the river. It takes an estimated $37,400 an acre to get rid of Arundo and keep it out for 20 years, Frandsen said. He's budgeted $218,000 this year to clear 115 acres along the Santa Ana River. "Alex-Alt Biomass would harvest Arundo by hand or machine as the park district directs," Frandsen said, "but I'm not going to raise cane, if you pardon the pun, for them in the river indefinitely."

Enter Alex-Alt Biomass. The wood industry's demand for fiber and the environmental need to find other resources led the company to Arundo. Altheimer said research through several universities and federal grants showed Arundo can produce strong cellulose fibers for boards at one-third the cost of wood, and with low-waste byproducts. A test factory in Tacoma found Arundo made good pulp, papers and sturdy boards and furniture. Other studies show uses for every part of each plant, he said. The company is "80 percent" along the way in negotiations for a Pomona plant that would produce Arundo board and pulp and employ 250 people, he said.

Altheimer reacts with horror when he hears of government agencies burning Arundo to get rid of it. He's exploring whether farmers in Blythe might be able to grow more. The biggest benefit to the park district is that the company plans to help speed up the removal of Arundo from the Santa Ana River, said Frandsen. Right now, he expects the process may take more than 20 years.

A New Invasive Mustard in California

Andrea Pickart, The Nature Conservancy

In February 1997 Jim Belsher, a botany graduate student at Humboldt State University, sighted an unfamiliar mustard growing on a disturbed site adjacent to the dunes in Humboldt County. For the next four months, specimens made the rounds of botanical experts until Ishan Al-Shehbaz of the Missouri Botanical Garden identified it as *Coincya monensis*, of European origin and heretofore recorded in North America only from the eastern U.S. In 1996 Robert Naczi and John Thieret published an account of the spread of this weed in the eastern U.S. Coincya was first introduced via ballast in the Philadelphia area in the late 1800s, but this population did not persist. It was again recorded in the 1950s as a naturalized weed in North Carolina. In Pennsylvania, Coincya was documented in only one county in 1964 but has currently spread to at least 20 counties and is now advancing into New York. The westernmost known location was previously Michigan, but Naczi and Thieret point out that the plant may be in other states, having been overlooked or ignored.

"Coincya was documented in only one county in 1964 but has currently spread to at least 20 counties."

Coincya is described in the second edition of the Flora Europaea (Tutin et al. 1993). Naczi and Thieret (1996) advise that it is best distinguished by its combination of conspicuously glaucous and distinctively shaped leaves, a usually ebracteate inflorescence, bright yellow petals with pale brown or violet veins, and a single row of seeds in the siliques, which have 3-5 veined valves and a somewhat flattened 1-6-seeded beak. However, the plants growing in Humboldt County were not glaucous and most lacked bracts along the inflorescence, causing the delay in identification. According to Ishan Al-Shehbaz, the taxon is extremely plastic. In the pasture population, most plants were annual, and mature fruiting plants varied in size from about 4 cm to 1-m-long multibranched individuals that were perennial. Basal rosettes ranged in size from 2 to 40 cm, those on the largest plants appearing persistent.

When Jim Belsher first sighted the plant, it was growing abundantly (2,000 - 3,000 individuals) in a pasture next to the dunes, and was just beginning to occur in the dunes themselves. The fact that the plant could not be immediately identified spurred a minor controversy when local dune managers, with the consent of the property owners, made the decision to remove the plants. Although specimens were collected for the local herbarium at Humboldt State, and numerous photographs were taken, some local botanists felt the control efforts were unjustified and premature. However, managers felt that the plants, some of which had already begun to set seed, posed a serious threat to nearby dune preserves and that intervention was justified.

It is unknown how this species arrived so far from its previous known distribution. The pasture in which it was found is underlain by fill, which may have been imported from elsewhere. Large individuals were found sprouting directly from horse manure, another possible mode of introduction. More study is needed, and the population is expected to return from the seedbank next spring. The resemblance of this species to other weedy mustards makes it easy to miss, so botanists elsewhere in California should be on the lookout.

References

Naczi, R.F.C., and J.W. Thieret. 1996. Invasion and spread of *Coincya monensis* (Brassicaceae) in North America. Sida 17(1):43-53.

Tutin, T.G., N.A. Burges, A.O. Chater, J.R. Edmonson, V.H. Heywood, D.M. Moore, D.H. Valentine, S.M. Walters, and D.A. Webb, editors. 1993. Flora Europaea, Volume 1. Psilotaceae to Platanaceae. Second edition. Cambridge University Press, Cambridge, U.K.

The Bradley Method of Eliminating Exotic Plants from Natural Reserves

T.C. Fuller and G. Douglas Barbe

A method of weed control in natural areas, developed at Sydney, Australia, by Joan Bradley and her sister has been so successful that a summary of their method is presented here with the thought that similar endeavors in California would result in better weed control where such methods might be appropriate.

The Bradley method makes practical use of well-known ecological principles. The method consists of hand weeding, without replanting, selected small areas of vegetation in such a manner that after weeding, each area will be promptly reinhabited and stabilized by the regeneration of native plants.

If the weeding is approached as a conventional gardening operation, in which large areas are cleared and burned or the debris carted away, the effort will fail because large exposed and disturbed areas will become recolonized by new weeds. The Bradley method urges a naturalist's approach by encouraging the native vegetation to become reestablished. The Bradleys used their method to successfully rid a 40-acre woodland reserve of weeds so that the reserve needed slight attention only once or twice a year, mainly in vulnerable spots such as creek banks, roadsides, and clearings, to be maintained weed-free. They summarize their activities as follows:

"We are regenerating bush with conspicuous success over a total area of about 40 acres, and our results are plain to see, both in Ashton Park and on nearby Chowder Head. We have also taken care of the weeds induced by a six-acre "silvicultural" winter burn, and about four or five acres of other fires. We have not overworked at it. We are both over fifty, able-bodied but by no means Amazonian. My sister takes the dog for a walk on most mornings, and I do the same in the afternoons. On these walks we might average, between the two of us, about three-quarters of an hour spent actually pulling up weeds."

"Done in our way, the regeneration of weed-infested bushland is an easy and fascinating part-time occupation. We are still forging ahead, my sister mainly on a dry ridge, myself mainly in a damp gully, faster than we should have thought possible. . . . We hope that this outline of our methods will encourage and help you to do the same."

Preliminaries

Permits and Permission. Initially, of course, permission must be obtained from a landowner, whether a public park or private reserve, to carry out the weed control program. If necessary, a permit to collect plant specimens for identification must also be secured from the appropriate authorities.

Plant Identification. Although it is not necessary to know every species in an area, it is essential to be sure that no natives are pulled up and no weeds are left behind. The Bradleys maintain a collection of dried specimens, which had been identified at the National Herbarium in Sydney, for every plant species in their working area.

Labor. The Bradleys emphasize that a single person, working intelligently, will do more good than many persons crashing through a project area.

"The Bradleys emphasize that a single person will do more good than many persons crashing through a project area..."

Strategy. The basis of this method is the native species' ability to recolonize by tipping the ecological balance away from the weeds and toward the native plants. If one begins by clearing the weeds out of the most heavily infested areas, the weeds will come right back because the they are now given ideal conditions: bare, disturbed soil, exposed to full sunlight. But by working a little at a time, from the strongholds of natural vegetation towards the weeds, the native vegetation is favored and its natural regenerative power will prevail over the weeds.

In undisturbed vegetation, soils are often covered with a litter of decaying plant material. This natural mulch, when present, will permit very few weed seedlings to come through. Since disturbed soil favors the weeds over the natives, and weeding disturbs the soil, all natural litter possible should be replaced over the spots that are weeded. Also, wherever possible, the weeds themselves should be used as a mulch, except that such things as seeds, bulbs, rhizomes or other parts

Continued on next page

The Bradley Method (Cont'd)

that might sprout should be removed.

Plan of Work

In this sequence the Bradleys designed work for one person to follow, working from the best stand of native vegetation to the worst infestation of weeds. By keeping the sequence always the same, it can be followed by any number of people in any number of places.

1. Prevent Deterioration of Good Areas. Start by getting rid of weeds that occur singly or in groups of four or five. Check once or twice a year for missed weeds,

2. Improve the Next Best. Choose a place that you can visit easily and often, where the native vegetation is pushing against a mixture of weeds and natives, preferably not worse than one weed to two natives. Start with a strip about 12 feet wide and no longer than you can cover about once a month during the growing season. If this boundary is on a steep slope that might erode, clear a number of patches instead, but still no more than 12 feet from the vigorous native vegetation. Let a few months go by before you lengthen the strip. Your experience will dictate whether to make the strip longer or shorter.

3. Hold the Advantage Gained. Resist the temptation to push deeper into the weeds before the regenerating natives have stabilized each cleared area. The natives need not be very tall but should form a dense ground cover. The Bradleys think excluding light from the ground is very important since weed seedlings consistently appear in bare soil at the edges of paths and clearings even when relatively undisturbed and surrounded by dense native vegetation.

4. Cautiously Move into the Really Bad Areas. When the new growth consists almost entirely of native species with only a few weeds, it is safe to move further into the weeds. *Don't start to clear a block of solid weeds until you have brought the good native vegetation right up to that area.* Solid infestations of weeds can be worked on at the edges by forming peninsulas of weeds, small clearings less than six feet in diameter. Also, spot weeding, removing a single large weed plant next to a native plant in the middle of a solid weed infestation, will bring remarkable results by allowing the native plant to grow much faster. There is no reason to hurry this process; much more is gained by allowing the native plant to grow well before removing another adjacent weed.

Records

The Bradley sisters keep general written records, make periodic surveys, and map the weed infestations. They find it much easier than relying on memory of past infestations. Also, the mapping is useful to show local authorities the progress of the work. Their work has been so successful, and the regenerated native vegetation looks so good, that it is difficult to show people what has been done. Wouldn't it be nice if all our parks and reserves were that weed-free?

Reference

Bradley, Joan. 1971. *Bush Regeneration: The Practical Way to Eliminate Exotic Plants from Natural Reserves*. The Mosman Parklands and Ashton Park Association, Mosman (Sydney), New South Wales. 15 pp.

Artichoke Thistle Meeting

Late January has been tentatively set as the time frame for an informal meeting on artichoke thistle (*Cynara cardunculus*). The meeting will be hosted by the National Audubon Society at its Starr Ranch Sanctuary in southeast Orange County, California and is expected to last 5-6 hours, including a tour of the Sanctuary where this thistle is a major problem. Topics of discussion will cover artichoke thistle biology as well as various control strategies, including newly available biocontrols, mowing experiments, and other methods.

Attendance will be limited by the size of the facility. Contact Sandy DeSimone at 714.858.0309 or email: sdesimone@audubon.org to indicate your interest.

Videos on Invasive Plants

Leif Joslyn has produced two videos concerning exotic plant species that may be of interest to members: ***Invasion of the Tamarisk: Control of an Exotic Species at Joshua Tree National Park***. This video profiles the tamarisk control efforts underway at Joshua Tree National Park. Particular emphasis is placed on the desert bighorn sheep and their need for native vegetation and the threat tamarisk poses to desert springs. Price: $15 includes delivery.

Plant Invaders: A Threat to California's Remnant Natural Areas. This video was produced for California Department of Parks and Recreation, and many sites profiled were on state park land. It is an informational video that can be viewed in any part of the state by people concerned about our natural heritage. Price: $20 includes delivery. Contact: Leif Joslyn, 707.826.2177. email: <Inj1@axe.humboldt.edu>

Klamathweed

Bud Hoekstra

No event in the history of rangeland science rivals the arrival of klamathweed to California. A member of the St. John's wort family, *Hypericum perforatum* invaded the eastern United States before it traveled westward to California.

A neat plant, it boasts of a fluorescent pigment that tritrates red in acid and green in base. Hypericin, its unusual poison, causes severe sunburn in sheep, cows and horses. While white-haired animals are extremely susceptible to sunburn, one photosensitizer's case recorded a description of black and white Holstein cows as "…the white skin hanging in rags with the dark skin supple as a glove."

Introduced into California in 1900, the plant spread and soon affected millions of acres of rangeland. By 1930, University Coop Extension judged the plant to be the cause of the heaviest financial losses to pasture and range lands of California.

That was no small billing, for the plant beat out the 1928 epidemic of hoof and mouth disease, and competition from native poisonous plants such as larkspur and aconite. Larkspur and aconite lose their toxicity as the season progresses, so ranchers could first turn out their horses to pasture, as they weren't as affected as sheep and cattle,. Later, the cattle would be turned out after the danger stage had passed. Unlike larkspur, the poisoning caused by klamathweed could not be managed.

Australian experiments regarding the preferences of insects for certain plants led to the discovery of *Chrysolina quadrigemina*, a beetle with an affinity for this species of St. John's wort. The first beetles were released in 1946, with a major program launched in 1951. By the end of the decade klamathweed had been pared back to less than one-percent of its former level. So grateful were the big ranchers of Humboldt County that they erected a bronze plaque and dedicated it to the beetle, which, unbeknownst to them, began the first biocontrol effort in the world.

No weed before or after has ever matched the tidal wave of change that klamathweed caused on the California range. From the introduction of this weed to its near extinction, the rangelands underwent upheavals of species unprecedented anywhere. Rivaling fire as a disturbance, klamathweed ushered in the most single, dramatic event of range history, unparalleled in extent except for the grass invaders.

Help for Eradicators

Georgia Stigall, Native Habitats

Having just spent 15 minutes removing stickers from my socks as a result of last evening's eradication work, and realizing that if I had worn my gaiters I wouldn't have had this problem, it occurred to me it might be a good idea to collect helpful ideas for eradicators and compile them into an article for the CalEPPC newsletter.

Gaiters. Leg gaiters work very well for keeping seeds, stickers and ticks out of socks and shoelaces. As vegetation becomes dry it becomes crucial to wear them. Especially given the cost of good socks these days! After I removed hundreds of milk thistle from my land a couple of weeks ago and my arms were bleeding as a result, I realized that I MUST fulfill my promise to myself to make "arm" gaiters. I definitely need these in Yosemite where I'm pulling bull thistle from thickets of Himalayan blackberry. Because I have to wear a uniform shirt in Yosemite arm gaiters made from pack cloth, elastic and Velcro would be very helpful. (Yes, the term "Eradi-Gaiters" comes to mind.)

Pants. I find long cotton or lightweight nylon to be the best. Fortunately I only have to wear the uniform shirt, not pants. I have sewn D loops in the edge of my front pant pockets. This allows me to clip my Swiss Army knife (on a lanyard) to the D loop so I can keep it in my pocket but don't have to worry about losing it. Of course my sack contains the all-important tweezers. I'm going to put my hand clippers on a lanyard and clip them to a loop. I still need the leather holder, however, which also has to be secured. The point is that I tie on everything possible! I've spent too much time looking for my loppers, although I haven't come up for a solution for that one yet -- short of attaching an avalanche beeper.

Water. I never, ever, go eradicating without carrying water. This becomes even more crucial as temperatures rise, particularly in higher elevations. I also use HydraFuel (similar to Gaitoraid) to supplement my water. It works very well, as I never get sore muscles!

Please send your comments and ideas to: Georgia Stigall, 415.941.1068 <gstigall@aol.com>

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CalEPPC New Members

CalEPPC would like to welcome the following people who have joined CalEPPC in the months from August through October 1997:

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** Students, please include current registration and/or class schedule*

Calendar of Events

February 12 - 14 The Wildlife Society, Western Section Annual Conference, Sacramento. Contact: 510.465.4962.

March 31-April 2 Ecology, Management, and Restoration of California Annual Grasslands, UC Davis. Sponsor: UC Cooperative Extension. Course topics include: Plant invasion, ecological history and habitat value of California grasslands, grazing and watershed management, control of weedy ex otics, perennial grass and riparian restoration. Contact: Craig Thomsen, 916.752.8810, email: <cdthomsen@ucdavis.edu>

April 18 Marin County Open Space District 25th Anniversary Free Year-Long Celebration, San Geronimo. Picnic featuring Poet Laureat Robert Haas. Contact: 415.499.6387.

October 2 - 4 CalEPPC Symposium '98, Ontario, CA. Contact: Carl Bell, 760.352.9474, email: <cebell@ucdavis.edu>

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