

SANTA CRUZ ISLAND NATIVE PLANT RESTORATION PROJECT



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Special points of interest:

- 350 volunteers donated 15,548 hours since June 2003
- More than 13,000 invasive trees removed
- 18 other invasive plant species removed
- The project has made nine presentations to community groups

MORE THAN 350 VOLUNTEER FOR ISLAND RESTORATION PROJECT

More than 350 generous and dedicated folks from all over California and beyond have donated their time to the Santa Cruz Island Native Plant Restoration Project since June of 2002. Volunteers made 61 trips and contributed an astonishing 15,548 hours to the project.

Volunteers usually range in age from high school kids to people in their 70s, and all have put in long hours of rigorous work removing invasive plants on the island.

Many volunteers participate through organizations like the California Native Plant Society or high schools, although most are individuals who come on their own or with family members. All have a sincere desire to help preserve California's native landscapes. Most heard about the project by word of mouth or the Channel Islands Restoration web-page.



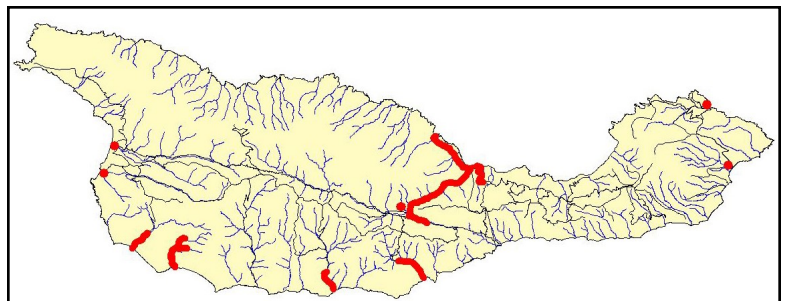
VOLUNTEERS HONORED: Top row from left: Greg Wall (Costa Mesa) Joel Fithian (Santa Barbara) Julie Kummel (Santa Barbara) Jim Moses (Ventura). Bottom Row: Janet Canterbury (Los Angeles) Al Bandel (Simi Valley).

Six volunteers gave exceptional service to the project over the last three years. All participated in more than 5 trips each: Greg Wall and Joel Fithian (11 trips); Jim Moses, Janet Canterbury and Al Bandel (9 trips) and Julie Kummel (5 trips).

These devoted volunteers were recently honored with a special trip to the island and presented with certificates, thanking them for their exceptional service. The project organizers are very grateful for their ongoing volunteer service! ■

LOCATIONS OF INVASIVE PLANT REMOVAL

The map at right shows the primary areas of invasive plant removal by the Santa Cruz Island Native Plant Restoration Project. Removal locations are shown in red. For details, see the stories inside.



WHAT IS HABITAT RESTORATION?

Many people who cherish California's landscapes do not have a clear idea of what "restoration" is or what value it has. Some people also wonder why non-native species are a problem. Those of us who care about the Channel Islands will benefit from an understanding of both concepts. The terms "habitat restoration" or "environmental restoration" have many definitions. In the broadest sense, they refer to returning the functional aspects of a given ecosystem to a semblance of its pre-disturbed state thereby increasing the number and variety of organisms that live there.



Non-native plants like these Eucalyptus trees and the periwinkle covering the ground often spread out of control and almost completely exclude native species.

A habitat provides critical feeding, breeding, and nursery areas that organisms depend on to survive. Once these habitats are disturbed or destroyed, the plants and animals that live there often disappear. Restoration is helpful in reversing long-term trends in habitat loss and in reestablishing threatened and endangered species. It can involve many activities including controlling polluted runoff, removal of barriers to migrating animals and reestablishing or maintaining hydrology. The control of non-native species of plants or animals is most often a major component of a restoration program.

Non-native species cause an estimated \$116 billion in economic damage each year in the United States. Nearly half of the endangered plants and animals nationally have been negatively affected by non-native species. What's more, islands have been disproportionately affected by non-native species. More than 75% of recorded animal extinctions worldwide since colonial times have occurred on islands, and most of these

extinctions were caused by introduced species. On the Channel Islands, non-native species are a threat to the unique plants and animals that exist on the islands and no where else in the world. Some of these species have already disappeared and others have been driven to the brink of extinction.

When settlers brought trees and shrubs to North America they did not bring any of the predators that kept these plants under control. This is one reason many weeds spread aggressively and take over important wildlife habitat, devastating shelter and forage while reducing the diversity and quality of native habitat. Weeds often do not hold and protect the soil the way native plants do, so erosion increases causing sediment in streams. Weeds can also be a painful nuisance to people using recreational areas on public lands. If no effort is made to remove some of the most aggressive non-native plants, they soon overwhelm native

species.

Not every non-native organism is a problem, and no restoration project can hope to eradicate them all. Our project primarily works to eradicate or control non-native plants in some of the most sensitive habitats on Santa Cruz Island. We work with a steering committee of island managers who help us prioritize which plants should be removed and in what areas. This ensures that we are most effective and our resources are maximized.

Habitat restoration helps ensure that the unique plants and animals that are found on the Channel Islands will thrive and not disappear forever. It is an essential part of the effort to preserve one of California's most stunning landscapes for the future. For more detailed information about habitat restoration, visit the Society for Ecological Restoration web site at, www.ser.org. ■

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PROJECT REMOVES MORE THAN 13,000 INVASIVE TREES FROM ISLAND

“...most people do not realize it, but many trees on the island are considered cultural resources and will be preserved as relics of historic times.”

“As part of our restoration project, we remove those trees that are spreading from the historic groves. Left unchecked, these trees would soon fill many of the creeks on the island and shade out native species and dry up the water courses.”

More than 13,000 invasive trees have been removed from Santa Cruz Island by the restoration project since November 2003. Most of these trees were small “recruits” that have spread from older trees planted during ranching times. They were mostly growing in riparian areas and presented a threat to the island ecology, particularly endangered plant species.

Project personnel are often asked if all the non-native trees on the island will be removed. Actually, most people do not realize it, but many trees on the island are considered cultural resources and will be preserved as relics of historic times. These include large stands of blue gum Eucalyptus and other species that have grown on the island for many years.

As part of the restoration project, trees that are spreading from the historic groves are removed. Left unchecked, these trees would soon fill many of the creeks on the island and shade out native species and dry up the water courses. The smallest trees are cut or pulled with hand tools by volunteers, and the larger ones are cut with chainsaws by members of our staff.

Cutting the trees is the easy part. Disposing of the brush and cut trunks is more time consuming and labor intensive. Fortunately, the Park Service has donated the use of a large brush chipper to the project, which greatly helps with disposal. Volunteers are invaluable in helping to haul the brush to the chipper and in stacking the larger wood. The chips are spread near buildings by island staff to help control dust.

Tree removal occurs in many places on the island, but most of the work takes place in the



Volunteers from Santa Monica Mountains youth group remove invasive tree at Prisoners’ Harbor

Central Valley and in Cañada del Puerto, a large riparian area in the north central part of the island. Eucalyptus, pepper tree, Acacia and Italian stone pine trees are the primary species removed from these areas. Italian stone pine has also been removed from the vicinity of Pelican Bay and Prisoners’ Harbor along the northern shore. Salt cedar, an invasive tree that is a problem in riparian areas in many parts of the US, has been removed from the south western portion of the island. Park Service staff and interns have removed many hundreds more Europe-

an olive trees that have spread from an historic grove on the eastern portion of the island.

Although 13,000 plus trees is a good start, there are many more trees still threatening sensitive habitat on the island. Eucalyptus in particular is still spreading in riparian areas and much more work is needed to gain some measure of control. Invasive tree removal will undoubtedly be a large part of future restoration work on Santa Cruz Island. ■

Common Name	Scientific Name	Number
Black locust	<i>Robinia pseudoacacia</i>	172
Blackwood acacia	<i>Acacia melanoxylon</i>	1,581
Blue gum Eucalyptus	<i>Eucalyptus globulus</i>	1,356
Italian stone pine	<i>Pinus pinea</i>	303
Peruvian peppertree	<i>Schinus molle</i>	130
Plume acacia	<i>Albizia lophantha</i>	341
Red gum Eucalyptus	<i>Eucalyptus camaldulensis</i>	8,814
Salt cedar	<i>Tamarix ramosissima</i>	122

Invasive trees removed from Santa Cruz Island (partial list).

HERBACEOUS SPECIES AND SHRUBS PRESENT A CHALLENGE

In addition to invasive trees, 18 other non-native plant species have kept project volunteers and staff busy on Santa Cruz Island. Even though most of the island remains relatively untouched by invasive plants, a full spectrum of weeds infest certain important habitats, particularly some riparian areas.

Many of the invasive plants found on the island like yellow star-thistle and kikuyu grass are some of the most troublesome plants to land managers across the US and can be difficult to remove. Our project concentrates on weeds that have not yet had a chance to infest large areas of the island. Our goal is to either eradicate these plants or prevent them from spreading to new areas.

One of the most tenacious of these species is garden periwinkle (*Vinca major*). Periwinkle is a popular garden plant because it quickly covers ground with a thick vegetative mat. This same attribute makes it a serious problem in natural settings where it al-



Volunteers remove periwinkle (*Vinca major*) in Cañada del Puerto.

most entirely excludes native vegetation.

The project has removed thousands of square meters of periwinkle from Cañada del Puerto and near the Main Ranch in the Central Valley with funding administered by the Santa Barbara County Weed Management Area.

Removing periwinkle by hand is a particular challenge, because of its exten-

sive system of underground stems, which most often resprout if not completely removed. The plants must be carefully dug out, often from the base of trees or from under logs and other creek debris.

Although invasive plants like periwinkle present a challenge to the restoration project, our progress is encouraging. We plan similar removal projects for the near future. ■

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Common Name	Scientific Name	Number
Australasian fireweed	<i>Erechtites glomerata</i>	472
Fennel	<i>Foeniculum vulgare</i>	456
Geranium	<i>Pelargonium X hortorum</i>	765
Harding grass	<i>Phalaris aquatica</i>	557
Hedge mustard	<i>Sisymbrium officinale</i>	3,022
Kikuyu grass	<i>Pennisetum clandestinum</i>	5,812 square meters
Milk thistle	<i>Silybum marianum</i>	708
Periwinkle	<i>Vinca major</i>	3,348 square meters
Poison hemlock	<i>Conium maculatum</i>	766
Red valerian	<i>Centranthus ruber</i>	7,000+
Silver-leaved horse nettle	<i>Solanum elaeagnifolium</i>	150 square meters
Smilo grass	<i>Piptatherum miliaceum</i>	2,525
Wild radish	<i>Raphanus sativus</i>	8,217
Yellow star-thistle	<i>Centaurea solstitialis</i>	4,300 square meters



"We are a coalition of agencies and volunteers concerned with protecting native plant and animal habitat on the California Channel Islands..."

Members:

Santa Barbara County Weed Management Area

The Nature Conservancy

Channel Islands National Park

UC Santa Cruz Island Reserve

US Geological Service Western Ecological Research Center

Santa Barbara Botanic Garden

Darlene Chirman Biological Consulting

Channel Islands Restoration (project coordinator)

WHAT IS THE SANTA CRUZ ISLAND NATIVE PLANT RESTORATION PROJECT?

We are a coalition of agencies and volunteers concerned with protecting native plant and animal habitat on the California Channel Islands.

History

The project started as a volunteer effort by restoration professionals and students at the University of California Santa Barbara. By the summer of 2002 regular monthly volunteer trips were organized for members of the general public and students alike.

In the spring of 2003, Kate Symonds, formerly with the US Fish and Wildlife Service office in Ventura, applied for and received grant funding for the island project. A steering committee of island landowners and managers formed to set priorities for the project. With funding came a more structured approach to the project, including more trips and greater numbers of volunteers.

Objectives

The main objectives of the project are to 1, synthesize existing information on inva-

sive plants and prioritize control needs, 2, bring together diverse volunteer groups into a coordinated effort to conduct invasive plant control and 3, increase awareness about how to reduce or prevent introductions of non-native flora to the islands.

Since the inception of grant funding, the project has met and exceeded its short-term goals, though much work remains to be done. Many hundreds of volunteers have come together in a coordinated effort to remove tens of thousands of invasive plants. The project steering committee regularly meets to review our progress and priorities.

Additionally, the project has made nine public presentations to a diverse array of community groups about how to prevent the introduction of

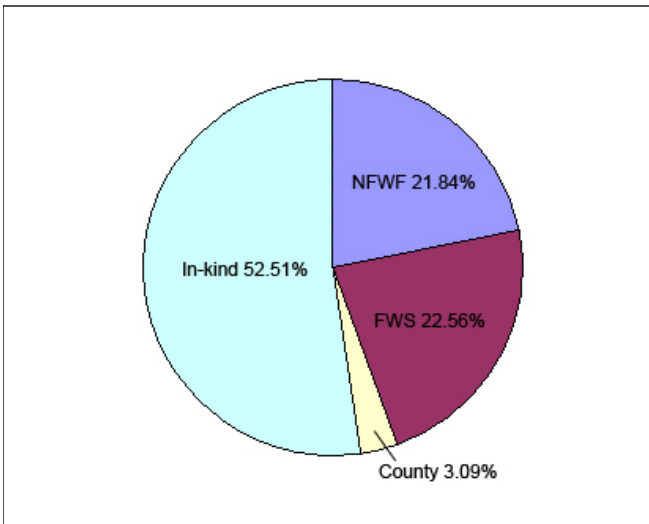


Presentation to Ventura Yacht Club March 2005

non-native plants to the islands. These groups include yacht clubs, sailing clubs and marina managers who do not normally receive information about environmental issues on the islands.

Funding

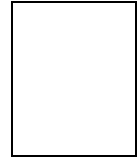
Operating funding has been provided chiefly by two federal agencies, the US Fish and Wildlife Service (FWS) and the National Fish and Wildlife Foundation (NFWF). The County of Santa Barbara Weed Management Area has also contributed operating and in-kind funds. More than half of support for the project has been in the form of in-kind donations, like volunteer time, transportation, housing and equipment. Individual volunteers have provided the equivalent of tens of thousands of dollars in labor. The UC Santa Cruz Island Reserve has been of immense help in donating housing, on-island transportation and heavy equipment. Channel Islands National Park has donated boat transportation and the use of a wood chipper. All member agencies have contributed many hours each of staff time in planning, budgeting and technical expertise. Additionally, Island Packers, the national park concessionaire, has provided discount passage for volunteers and staff. ■



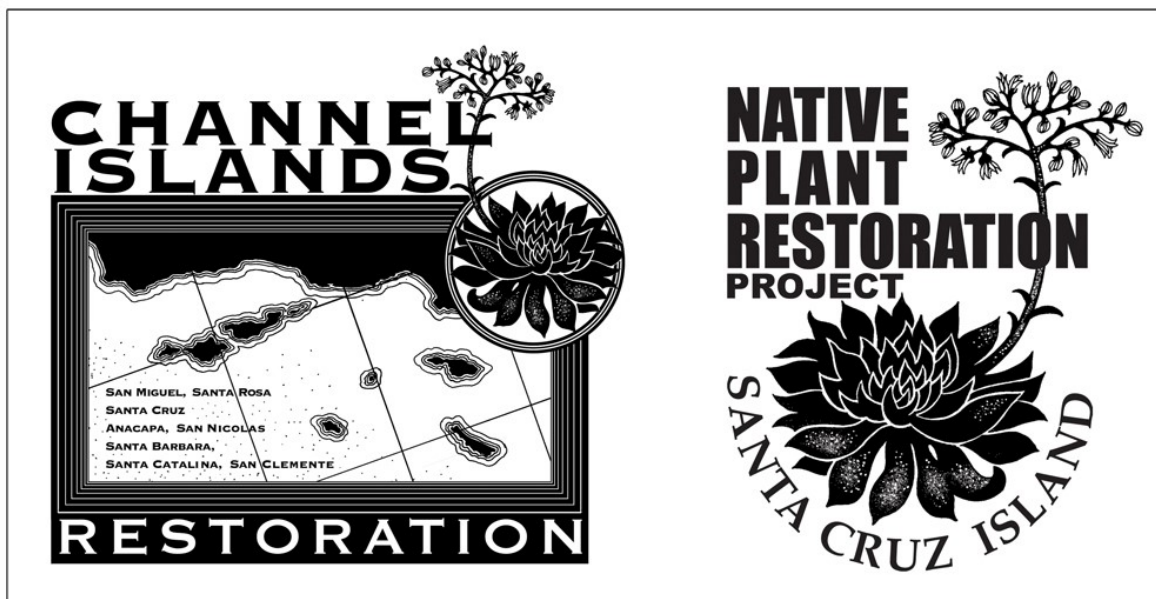
Funding by category (see text for details).

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