

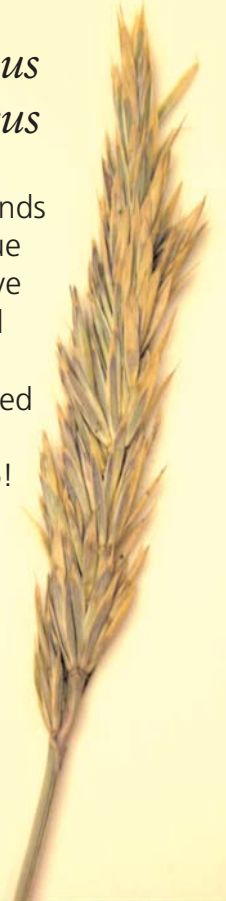


# Native Grassland Restoration News



*Elymus  
glaucus*

26 pounds  
of blue  
wildrye  
seed  
was  
collected  
in  
2006!



## Coastal prairie, remnants of the past

Less than one percent of California's native grassland is still intact today. The northern coastal prairie, which extends into Oregon, is the most diverse type of grassland in North America. Pristine patches of this vegetation still grow at Point Reyes on either side of the San Andreas Fault. *Deschampsia* coastal prairie is found on the Point Reyes peninsula and *Danthonia* coastal prairie is found on Bolinas Ridge. Coastal prairie is dominated by long lived perennial bunchgrasses which can stay green year round with the moisture provided in the fog belt. Volunteers can help the park work toward the goal of restoring native grasslands.



**TO GET INVOLVED**  
Contact: Beth Eisenberg  
Range Technician  
415-464-5216

## 2007 Native Grass Volunteer Projects

### APRIL - SEPTEMBER : Grass Seed Collection

This year we will be collecting purple needle grass (*Nasella pulchra*) from the Olema Valley and Bolinas Ridge; California fescue (*Festuca californica*) along Coast Trail near the Point Reyes Hostel; and California oatgrass (*Danthonia californica*) north of Point Reyes Station along Tomales Bay. Seed collecting can be done on your own schedule while seeds become mature throughout the season.

### NOVEMBER - DECEMBER : Native Plant Revegetation

Native grasses, sedges, and rushes will be planted at watershed improvement project sites. Volunteers are also needed to help with collecting native plant material, seeding with native grass seed, and mulching. Specific work days will be scheduled in the fall.

Site orientation and training will be provided.

# Enhancing the Tomales Bay Watershed

## Watershed Improvement Funded with “319 Grant”

DEMONSTRATING TOMALES BAY RANGELAND BEST MANAGEMENT PRACTICES (BMPs)

A series of projects has been initiated to identify persistent nonpoint sources of pollution from National Park Service pastoral lands and to study the effectiveness of ten Best Management Practices (BMPs) at reducing pollutant delivery from these pastoral lands to the Tomales Bay watershed.

Water quality monitoring will establish baseline data and quantify reductions expected with the performance of the BMPs. Delivery reduction

from source areas of multiple pollutants such as pathogens, sediment, and nutrients will be analyzed to evaluate BMP effectiveness.

The BMPs that will be implemented this year include riparian exclusion fencing, seasonal grazing fencing, spring development, headcut repair, and road repair. The results of these projects will be used to develop a model for total maximum daily load (TMDL) programs on lands within the Tomales Bay watershed.

This work is sponsored by a grant from the California State Water Resources Control Board with funding from the U.S. Environmental Protection Agency under the Federal Nonpoint Source Pollution Control Program, Clean Water Act Section 319.

Additional support is provided by the National Park Service, Point Reyes National Seashore Association, and the Marin Resource Conservation District.

Several of the watershed improvement projects will have a large revegetation component. Volunteers are needed to assist with seed collection and native plantings for this revegetation.



### Purple needle grass

*Nasella pulchra* is the most widespread native perennial bunchgrass found in California. It was an important food source to Native Americans, and is valuable to wildlife and livestock. Purple needle grass is used in many restoration projects. Its life span can last for hundreds of years; and its deep root systems can support the survival of young oak trees through root fungal associations.



### California fescue

*Festuca californica* is a native perennial bunchgrass that lives in both shaded and open areas. It is found in coastal forests, chaparral and grasslands.

At Point Reyes is found at D-ranch as well as in the wilderness, growing on west to southwest facing slopes.

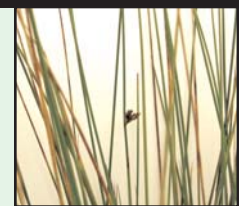


### California oatgrass

*Danthonia californica* is a densely tufted perennial grass. It is found in moist soils, and is moderately drought-tolerant.

It is dominant in the coastal prairie along Bolinas ridge where it grows with purple needle grass.

*Danthonia* has adapted to grazing pressure by producing fertile seed enclosed within the stem.



### Grass-like sedges and rushes

“Sedges have edges and rushes are round,” is an often used phrase to help people know what they are looking at. Like grasses, sedges and rushes have linear plant forms, and inconspicuous flowers which lack color. However, these are three distinct plant families. Sedges and rushes are wetland plants with fewer species than the highly diverse grass family.

# Experimental Treatment at Drakes Beach

## Burning and Seeding on D-Ranch at Drakes Beach



Close up of *Bromus carinatus* seed in the no-till seed drill. This drill is designed for seeds which are much smaller than those of California brome.

### SITE CHRONOLOGY

#### Mid-1800's

\*use of D-ranch as a dairy began

#### 2000

\*a section of D-ranch near Horseshoe Pond was removed from grazing allotment

#### 2003

\*10 pounds of California brome seed was collected and sent to a grower; 125 pounds was produced

#### 2004

\*prescribed fire was applied to 60 acres

#### 2005

\*a pilot seeding test was conducted with California brome on a small area to determine seeding rates

\*prescribed fire was applied again to the same 60 acres

\*post-burn seeding was done with a no-till seed drill on 29 acres

The 1200 acre historic D-ranch was established in the 1800's. Italian ryegrass (*Lolium multiflorum*), a non-native annual planted for forage, dominates the original homestead area today. Monitoring in this area determined that less than 5% of the vegetation was native before treatment. Two prescribed burns and native grass seeding on half of a 60-acre burn unit have been completed; but so far, not much has changed. The seed that was planted, California brome (*Bromus carinatus*), is the most abundant native grass on the site. It has persisted throughout California, even in areas with a long history of grazing.

Ecologists think that mechanical treatment will also be needed to tilt the scales between ryegrass and brome. If the area is mowed after ryegrass undergoes new growth, but before it goes to seed, it will reduce competition for brome. Because the brome is a perennial, it will resprout after mowing, but the ryegrass will not. Repeated mowing in combination with burning is likely to help increase the proportion of native grass on the site.

Meanwhile, native grasses are more abundant in some other areas on D-ranch.



Prescribed fire prepares the site for seeding.



A no-till seed drill plants California brome.

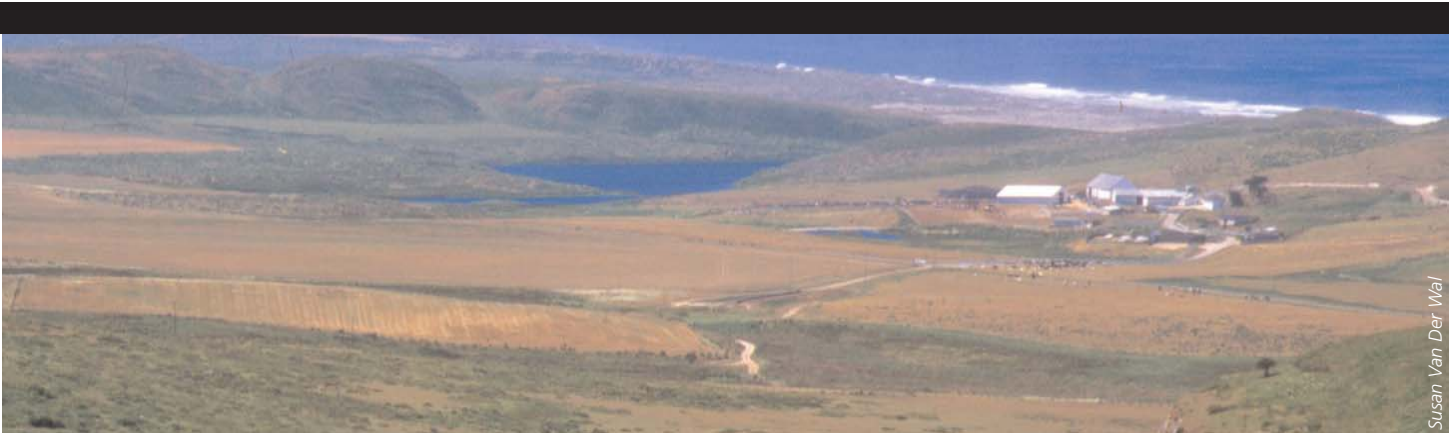


Project area after seeding is completed.



Non-native ryegrass dominates the site.

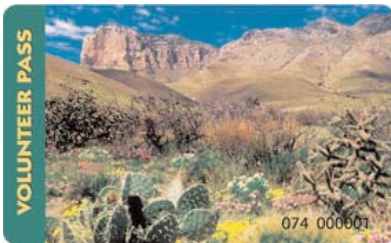




Susan Van Der Wal

## Increasing Native Seed for Use in Pastoral Zone

There are 18,000 acres in grazing allotments within Point Reyes National Seashore and the north district of Golden Gate National Recreation Area. The most common forage plants seeded on these lands are Italian ryegrass (*Lolium multiflorum*) and clover (*Trifolium* sp.). These are non-native species, but they are not invasive. Velvet grass (*Holcus lanatus*), Harding grass (*Phalaris aquatica*), and Tall fescue (*Festuca arundinacea*) are invasive non-native grasses that are prohibited from planting in the pastoral zone. Some species of native grass seed are commercially available, but it is expensive, and would not reflect the local genetic variations. The ideal conservation strategy is to collect seed from local grasses, send it to a nursery, and have it grown out on a landscape scale to create a supply for restoration projects. This has been done with California brome seed collected in the park which has been multiplied to 900 pounds. This supply is enough to seed approximately 75 acres.



## America the Beautiful Volunteer Pass Gives Thanks for Service

Point Reyes is fortunate to have a very active volunteer program. Volunteers have contributed more than 50,000 hours to many different kinds of projects that preserve and protect the park. These include monitoring native plants and wildlife, removing non-native plants, providing information to visitors, developing education programs, maintaining trails, demonstrating Coast Miwok cultural traditions, and working at the Morgan Horse Ranch.

Through a new interagency program, volunteers who perform 500 hours of service will receive a pass to federal recreation sites that charge an Entrance or Standard Amenity Fee. The pass is issued for a year and normally costs \$80. The pass admits the pass holder and passengers in a non-commercial vehicle at per vehicle fee areas. It also admits the pass holder and 3 other adults at per person fee areas (children under 16 are free). Point Reyes does not have an entrance fee, but many other sites do.

It's a small way of giving back to people who help take care of America's public lands.

Special thanks to Frank Borodic, Pam Ross, Charles Gay, Zea Morvitz, and Molly Boyes who spent many hours last summer looking for grass seed that was just right!