

Project No. 08S236
Annual Report, December 2000
By: Steve Parr

Yosemite National Park
Plant Materials Agreement

**Yosemite National Park
Annual Report, December 2000**

I. Introduction

This report covers the activities conducted by the Upper Colorado Environmental Plant Center, Meeker, Colorado for the plant materials agreement with Yosemite National Park. This agreement was initiated in July of 1997, and formally approved in September 1997. The original agreement involved field establishment and seed increase of five grass species and one legume which are native to Yosemite National Park. The materials are to be used in a revegetation effort to restore flood damaged areas within the park.

II. Targeted Species

Scientific Name	Common Name	PI Number
Bromus carinatus	mountain brome	9070963
Elymus glaucus	blue wildrye	9070956
Lupinus species	lupine	not assigned
Melica californica	melic grass	not assigned
Muhlenbergia filiformis	pullup muhly	not assigned
Muhlenbergia rigens	deergass	not assigned

III. Activities

Seed Increase

Bromus carinatus*

1. **Planted**-September 1, 1998
2. **Established Acreage**-1.76
3. **Harvest**-July 5, 1999
4. **Production**-1200 clean pounds
5. **Seed Test Results**-species identification pending, preliminary indications suggest species is *Bromus commutatus*, a weedy annual

Elymus glaucus

1. **Planted**-August 18, 1997
2. **Established Acreage**-2.5
3. **Harvest**-546 clean pounds, August 4, 1998
Initial PLS = 298.65 pounds (Test 11/19/98)
Germ update PLS = 352.95 pounds (Test 10/19/99)

597 clean pounds, August 18, 1999
384 PLS pounds, (Test March 7, 2000)

140 clean pounds, July 29, 2000
Seed test results pending

**Yosemite National Park
Annual Report, December 2000**

VI. Summary

- 140 pounds of blue wildrye were harvested and cleaned
- 304 PLS pounds of 1999 blue wildrye were shipped to the park

Seed tests from Colorado Seed Lab during the winter/spring of 2000 indicated an annual weedy type brome, *Bromus commutatus*, rather than the targeted perennial species, *Bromus carinatus*, as being the seed produced by UCEPC for Yosemite. The seed was collected under contract between Yosemite and Bitterroot Growers. However, in a discussion with Nancy Dunkle, National Park Service, Denver Service Center, Yosemite National Park had Bitterroot Growers work with volunteers for collection purposes and feared the off type collection occurred as a result.

At any rate, UCEPC sent an additional seed sample to a seed lab in California in hopes of utilizing their expertise with bromes of California. Mik-Lan Seed Company identified the seed as being *Bromus carinatus*, California or mountain brome. Another seed sample was sent to the Agricultural Research Service in Logan, Utah for genetic determination of the species. This facility will grow the seed and use vegetative material to determine the species. Results will be reported to UCEPC during the summer of 2001. Because of the possibility of being a weedy annual, however, Yosemite National Park determined the product to be unusable. UCEPC disposed of the product through incineration.

UCEPC worked diligently to determine the positive identity of the produced brome. It was a very unfortunate set of circumstances which prevented the production of and the future use and benefit of a second species for revegetation within Yosemite National Park. From this experience alone, it is highly recommended that seed collection be done by competent, skilled, professional individuals for the use in seed increase.

Discussions for an amendment to or extension of Inter-Agency Agreement number 2071-7-0003 will also need to progress to determine the future of the seed increase project between UCEPC and Yosemite. The final year identified in the agreement is 2000.

YOSEMITE NATIONAL PARK
2000 Annual Report
prepared by
UPPER COLORADO ENVIRONMENTAL PLANT CENTER,
MEEKER, COLORADO

INTRODUCTION: Yosemite National Park and the Upper Colorado Environmental Plant Center entered into an agreement which was formally approved in September of 1997. This agreement entails field establishment and seed increase of five grasses and one legume which are native to Yosemite National Park. The targeted species include the following: Blue wildrye (*Elymus glaucus*), mountain brome (*Bromus carinatus*), deergrass (*Muhlenbergia rigens*), pullup muhly (*Muhlenbergia filiformis*), melicgrass (*Melica californica*) and lupine (*Lupinus species*). However, only two of the targeted materials were successfully collected during the summer/fall of 1997 for use as starter materials for seed increase work in 1998. One material, mountain brome, or California brome as it is sometimes referred, was added for seed increase in September of 1998. Harvests of blue wildrye and what was thought to be the perennial California brome netted almost 1800 clean pounds of seed in 1999. However, preliminary test results from the Colorado Seed Laboratory indicated the brome to be a weedy annual, *Bromus commutatus*, hairy chess. The field also behaved like an annual and died after harvest. As a result and at the recommendation of Yosemite National Park Personnel, the seed was destroyed. Additional testing was conducted by a seed company in California, and seed was sent to the Agricultural Research Service for genetic identity and species determination. At present, only blue wildrye will be used in revegetation efforts to restore flood damaged areas within the park.

ACCOMPLISHMENTS:

Harvest

The blue wildrye produced 140 cleaned pounds of seed. Seed test results are not available at this time.

Seed Shipment

472 pounds of 1999 grown blue wildrye were shipped to Yosemite National Park in September of 2000 for revegetation work

Contract Extension/Ammendment

Field maintenance and seed production of blue wildrye during fiscal year 2001 and the possibilities of future material production for Yosemite have been discussed.

TECHNOLOGY DEVELOPMENTS: Specific information about harvest methods or soil preparation, seeding methods, seeding rates or seedling establishment techniques are available upon request.