

**National Park Service Plant Materials
Year 2001 Annual Report**

Prepared by

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Petrified Forest National Park

Introduction

On November 14, 2000, an agreement to propagate plants was made between the National Park Service, Petrified Forest National Park of the U.S. Department of Interior, and the Natural Resources Conservation Service Plant Materials Center (PMC) in Los Lunas, New Mexico. 500 plants of three shrub species and two forb species will be delivered to the Petrified Forest National Park by the PMC in the fall of 2002. Park personnel collected the seed used for these plants from indigenous ecotypes from the park. The plants will be grown in deep, 14-inch, one-gallon tree-pots. The long root systems developed in these pots will enhance field establishment.

Accomplishments

Seed of the five different species was cleaned at the PMC. The PMC was successful in starting about 800 plants (see the following tables). The 24 sand sage and 75 jimmy weed will be transplanted to one-gallon containers in the spring of 2002, and they should be ready for field planting in the fall of 2002.

Shrubs:

Species	Common Name	Container	Total
<i>Artemesia filifolia</i>	Sand sage	Tree-pot	144
<i>Artemesia filifolia</i>	Sand sage	Cone-tainer	24
<i>Atriplex canescens</i>	Fourwing saltbush	Tree-pot	144
<i>Parryella filifolia</i>	Dune broom		0
		Total	312

Forbs:

Species	Common Name	Container	Total
<i>Aplopappus heterophylus</i>	Jimmy weed	Tree-pot	108
<i>Aplopappus heterophylus</i>	Jimmy weed	Cone-tainer	300
<i>Sphaeralcea ambigua</i>	Desert globe mallow	Tree-pot	84
		Total	492
		Grand Total	804

Technology Development

No new technology was developed during this time.

Grand Canyon National Park

Introduction

In July of 1990, an agreement to produce seed and propagate plants was made between the Grand Canyon National Park of the U.S. Department of Interior and the Natural Resources Conservation Service Plant Materials Center (PMC) in Los Lunas, New Mexico. Amendment No. 1 of 1999 and Amendment No.2 of 2001 provide for the production of two species of native grasses for seed production, and for ten species of native trees or shrubs transplants. From Amendments 1 and 2, 900 transplants of the ten species will be delivered to the Grand Canyon National Park at an agreed upon future date. All species will be grown using seed collected from indigenous ecotypes on the park.

Accomplishments

Seed Production 2001:

The Blue Grama and Muttongrass fields were planted at the PMC in the year 2000. Seed production fields usually take two years to mature. The seed will be harvested from the Blue Grama and Muttongrass in the year 2002.

Transplant Production 2001:

Common Name	Number of Transplants Delivered in 2001
Mexican Cliffrose	126
Fernbush	348
Apache Plume	211
Big Sagebrush	48
Pinon Pine	674
Ponderosa Pine	50
Currant	53
Desert Barberry	51
Curl-leaf Mountain Mahogany	20
Morman Tea	89
Mountain Snowberry	214
Utah Serviceberry	119
NM Locust	64
Gambel Oak	20
Datil Yucca	261
Century Plant	198
Fourwing Saltbush	91
Elderberry	15
Black sage	299
Utah Juniper	19
Total	2970

Technology Development

The Blue Grama and Muttongrass fields did well this year. The production of a good, viable seed crop from this collection continues to be our goal. The PMC continues to explore production methodologies that will produce a greater amount of seed. The two fields received the following treatments in 2001: In March 2001 we applied pepper wax to the Muttongrass to help reduce rabbit damage. To control seed damaging insects, we applied one application of Orthene and two applications of Lannate insecticides. During the growing season, we applied 100 pounds of nitrogen and phosphorus fertilizer to both fields.

Appendix A Climatological Data

Table A-1 shows the climatological data for the year 2001 at the New Mexico Plant Materials Center.

Table A-1: Climatological Data for Year 2001–New Mexico Plant Materials Center				
	Average Temperature Fahrenheit			
Month	High	Low	Monthly	Precipitation/Inches
January	48.0	18.1	33.1	1.46
February	59.3	23.4	41.4	0.41
March	65.3	29.8	47.6	1.01
April	76.5	36.0	56.3	0.21
May	86.4	47.6	67.0	0.19
June	95.4	53.6	74.5	0.06
July	95.1	62.3	78.7	1.09
August	91.7	59.5	75.6	1.28
September	88.6	49.0	68.8	0.37
October	78.9	36.1	57.5	0.21
November	64.4	30.4	47.4	1.14
December	52.8	15.5	34.2	0.12
Total				7.55