

Castilleja chlorotica mowing plot replicates

Report to the ISSSP funding group, 28 October 2011

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This report documents the work that botanists at the Bend/Ft. Rock Ranger District (Deschutes National Forest) accomplished the summer of 2011 to install two new plot replicates that complement the single replicate that had existed since 2001. (A replicate is one control plot and one treatment plot).

These are the project objectives as stated in the request for funding:

- *Fill data gap for Castilleja chlorotica (CACH15) where it coincides with sites where mowing is a desired fuels treatment.*
- *Add two monitoring plots and two control plots to an existing monitoring effort in order to have three replicates and thus stronger monitoring conclusions.*

The work that was outlined in the project proposal was completed; there are now two more replicates available for annual data collection and management treatment (i.e. mowing), thus strengthening our original monitoring design. This now allows us to conduct mowing on these new plots and continue monitoring to determine if mowing can be done over CACH15 populations without harm to the plants.

The plots were placed within Township 20 South, Range 14 East, Section 21, which puts them about four miles from the original control/treatment plots and roughly 15 miles SE of Bend. They were installed with the same design as the existing plots, with plots being 25 meters long per side. There was an abundance of CACH15 plants in each of the four new plots and all were tagged with individual numbers and recorded on data sheets in the same manner as the original plots.



CACH15 individual in its glory; sagebrush/bitterbrush habitat within CACH15 plot.

We were surprised at the large numbers of CACH15 plants present at each of the four new plots, which were many more than our earlier reconnaissance walk-through visit counts initially revealed. This uber-abundance created a challenge to record the data in a timely manner and will be a continuing issue. The author has noted that in recent years the numbers of plants at the original plots has generally been increasing as well; instead of taking two people one day to read those plots, it usually takes two people two days to read them. The new plots took four people about one day per plot, with roughly 400 plants in each plot to be recorded. The author will consider options to this concern before having the treatment plots mowed.



A subset of CACH15 plants to be recorded at one plot. Blue flags indicate CACH15 locations.



The glamorous world of data collection.

The author wishes to thank the ISSSSP group for the funding grant, which made this summer's new plots possible!

**ISSSSP Proposal
addition of two replicates of
Castilleja chlorotica
monitoring - FY11**

BEND

Area of CACH15 original plots

**Area of CACH15 populations where
new plots are placed**

