

## Special Technology Development Program Progress Report

**PROJECT NUMBER:** R5-1999-01

**PROJECT TITLE:** Effect of thinning, subsoiling, and prescribed burning on black stain root disease impact in eastside ponderosa pine.

**PROJECT STATUS:** Continuing (funds are being requested for the ~~next~~ fiscal year (**for FY 2001**) to continue the project)

**EXPECTED PROJECT DURATION:** three years (for funding; monitor over 10 years)

**EXPECTED COMPLETION DATE OF THE PROJECT:** September 30, 2001 (for funding)

**SUBJECT:** Forest Disease Management Technical Committee; prescribed burning, root pathogens, disturbance, insect vector (*Hylastes*), ponderosa pine, black stain root disease (*Leptographium wageneri*)

**STATUS OF SUBJECT SPECIES:** native

**PROJECT OBJECTIVES:**

- 1) Quantify amount of damage to trees, fine roots, and woody roots incurred by prescribed fire, thinning, and subsoiling.
- 2) Evaluate prescribed fire, thinning, and subsoiling effects on stem attacking and root attacking bark beetle populations.
- 3) Evaluate effects of stand treatments on the incidence of root infecting fungi (*Leptographium wageneri*) and other root pathogens.

**BRIEF DESCRIPTION OF THE PROJECT:**

Establishment of the 16, 2.5 hectare, plots and pretreatment surveys (100%) cruise to determine levels of black stain were completed before STDP funding of the project. Thinning and treatments (burning, no subsoiling; burning, subsoiling; no burning, no subsoiling; no burning, subsoiling) were originally planned to occur in the spring of 1999. However, because of discovery of a bald eagle nesting near one of the four reps (blocks) and resulting limited operating period, thinning could not occur until after the nest was vacated in August. The nest also necessitated relocation of one of the original blocks (4 plots).

The following occurred in FY 1999:

- 1) Four new replacement plots were established in the spring.
- 2) Pretreatment soil measurements (bulk density, soil compaction) were taken.
- 3) Trapping to determine pretreatment levels of putative insect vectors was conducted.
- 4) Long-term subplots were established for permanent monitoring of growth effects of treatments; plot trees were marked and data on species, age, diameter growth, height, dbh, crown class, and crown condition were recorded.
- 5) Thinning (to a residual basal area of 100 to 140 ft<sup>2</sup> per acre) was begun in September, 1999 and completed October 8, 1999.
- 6) All plots were photographed before and after thinning.

The following occurred in FY 2000:

- 1) Subsoiling of the appropriate plots occurred in June 2000.
- 2) Post treatment soil measurements (bulk density, soil compaction) were taken.
- 3) Trapping for insect vectors occurred throughout the year. Trap catches were collected weekly, counted, identified, and representative samples plated on selective medium to determine if *Leptographium* was present.

The following will occur in FY 2001:

- 1) Burning of appropriate plots will occur October or November 2000, when conditions permit.
- 2) Trapping for insect vectors will continue, with trap catches collected weekly.

**CHANGES TO ORIGINAL PROJECT SCOPE OR OBJECTIVES: NONE**

**ADDITIONS TO ORIGINAL PROJECT SCOPE OR OBJECTIVES: NONE**

**FHP LEAD CONTACT** (FHP person submitting proposal):

<u>Name</u>	<u>Affiliation (Office or Dept.)</u>	<u>Phone, E-mail, Fax</u>
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**PRINCIPAL INVESTIGATOR(S)** (add lines as necessary):

<u>Name</u>	<u>Affiliation (Office or Dept.)</u>	<u>Phone, E-mail, Fax</u>
William Otrrosina	Tree Root Biology, SRS, Athens	706-559-4295 <a href="mailto:wotrosina@fs.fed.us">wotrosina@fs.fed.us</a> 706-559-4291

**COOPERATORS** (contributing to, but not leading, the project):

<u>Name</u>	<u>Affiliation (Office or Dept.)</u>	<u>Phone, E-mail, Fax</u>
Sheri Smith	FPM, Lassen National Forest, R-5	530-252-6667 <a href="mailto:ssmith@fs.fed.us">ssmith@fs.fed.us</a>
William Woodruff	FPM, Lassen National Forest, R-5	530-252-6428 530-252-6680 <a href="mailto:wwoodruff@fs.fed.us">wwoodruff@fs.fed.us</a>
Al Vazquez	Lassen National Forest, R-5	530-252-6428 530-257-4188 <a href="mailto:avazquez@fs.fed.us">avazquez@fs.fed.us</a>

**COOPERATOR INVOLVEMENT** (add lines as necessary):

<u>Name</u>	<u>Role</u>	<u>Time Commitment</u>
Sheri Smith	insect trapping/collection	6 weeks
William Woodruff	sample collection/isolation	4 weeks
Al Vazquez	plot treatment/maintenance	8 weeks

**PRODUCTS AND DUE DATES:** As sound information is developed, seminars and informal meetings will be held targeting appropriate districts and users. The final product will be written recommendations (3420 evaluations) on minimizing losses in ponderosa pine in at-risk stands as they relate to prescribed fire and subsoiling. Additional products will include publications in refereed

Journals, Station Technical Reports, and FPM evaluations/reports distributed to NFAS land managers concerned with the issues addressed by the proposal.

**STATUS OF PRODUCTS/PRESENTATIONS:** Progress on the project to date is acceptable.

**ACCOMPLISHMENTS TO DATE:**

**Products: none**

**Publications: none**

**Technology Transfer: presentation of the project and its objective at culturists workshop**

**FIRST FISCAL YEAR FUNDED:** FY 1999

**FUNDS OBLIGATED FROM BEGINNING OF PROJECT THROUGH ~~CURRENT~~ (FY 2000) FISCAL YEAR:**

	<b>Item</b>	<b>Requested Funding</b>	<b>Expended Funding</b>	<b>Unused Funding</b>
<b>FIRST YEAR</b> (FY 1999)				
<b>Administration</b>	Salary	\$6,000	\$6,000	0
	Overhead	0	0	0
	Travel	\$8,500	\$8,500	0
<b>Procurements</b>	Contracting	0	0	0
	Equipment	0	0	0
	Supplies	\$7,000	\$7,000	0
<b>Year Totals</b>		\$21,500	\$21,500	0

<b>SECOND YEAR (FY 2000)</b>				
<b>Administration</b>	Salary	<b>\$4,000</b>	<b>\$4,000</b>	
	Overhead	<b>0</b>		
	Travel	<b>\$4,500</b>	<b>\$5,500</b>	
<b>Procurements</b>	Contracting	<b>0</b>		
	Equipment	<b>0</b>		
	Supplies	<b>\$4,000</b>	<b>\$4,000</b>	
<b>Year Totals</b>		<b>\$12,500</b>	<b>\$13,500</b>	
<b>CURRENT YEAR (FY 2001)</b>		<b>Requested FHP STDP Funding</b>	<b>Other Source Funding</b>	<b>Source</b>
<b>Administration</b>	Salary	\$4,000	\$28,000	TRB, Lassen
	Overhead	0	0	
	Travel	\$4,500	\$4,000	FPM
<b>Procurements</b>	Contracting	0	0	
	Equipment	0	\$1,000	
	Supplies	\$4,000	\$2,000	TRB
<b>Year Totals</b>		<b>\$12,500</b>	<b>\$34,000</b>	
<b>PROJECT TOTALS</b>		<b>\$46,500</b>		

**FUNDS NOT USED FROM PREVIOUS FISCAL YEAR**

<b>Fiscal Year</b>	<b>STDP Funding Allocated</b>	<b>Funds Obligated</b>	<b>Funds Unused</b>
<b>FY 2000</b>	<b>\$12,500</b>	<b>\$12,500</b>	<b>0</b>

**EXPECTED BUDGET FOR NEXT (FY 2002) FISCAL YEAR: 0** (project will be completed in FY 2001; monitoring to continue with FH dollars)

**DIFFERENCE BETWEEN ORIGINAL AND AMENDED REQUESTS AND JUSTIFICATION** (the difference between originally requested funds and funds needed based on changes in the budget or scope of the project): **NONE**

**STDP FUNDING NEEDED:**

Total estimated additional future funding needed beyond the current (FY 2001) fiscal year: **0**  
(projected will be completed in FY 2001; monitoring to continue with FH dollars)