



# Aspen in Montana and northern Idaho:

third year of monitoring aspen condition in the Northern and Intermountain Regions (INT-F-06-01)



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## Introduction

Evaluation monitoring project (INT-F-06-01) proposed to establish monitoring plots in aspen stands in Nevada, Utah, Idaho, Montana and western Wyoming over three years to provide data on forest damage/decline agents in aspen forests to supplement established FIA Forest Health Monitoring plot system efforts. From 2006-2007, 126 permanent plots were established throughout Utah, Nevada, southern Idaho, and western Wyoming in aspen stands identified by aerial detection survey as having decline symptoms.



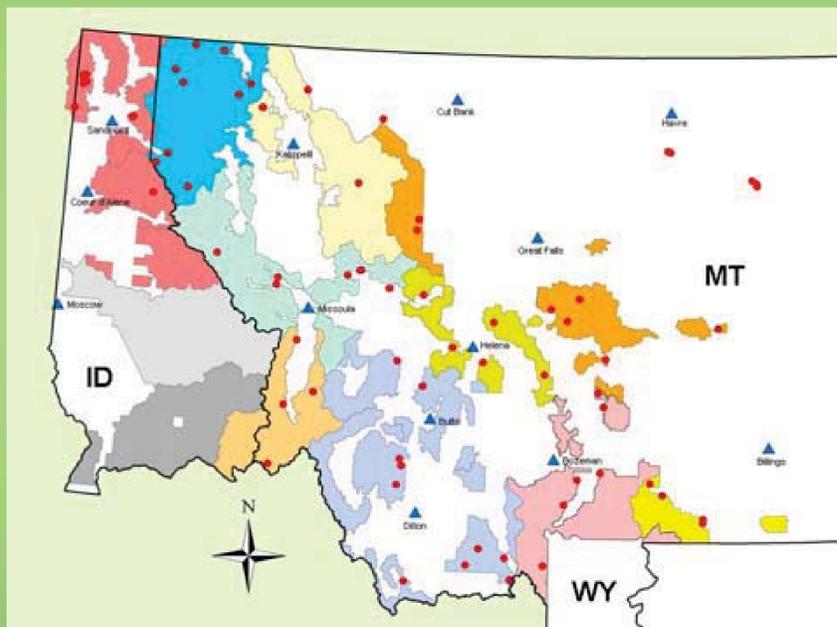
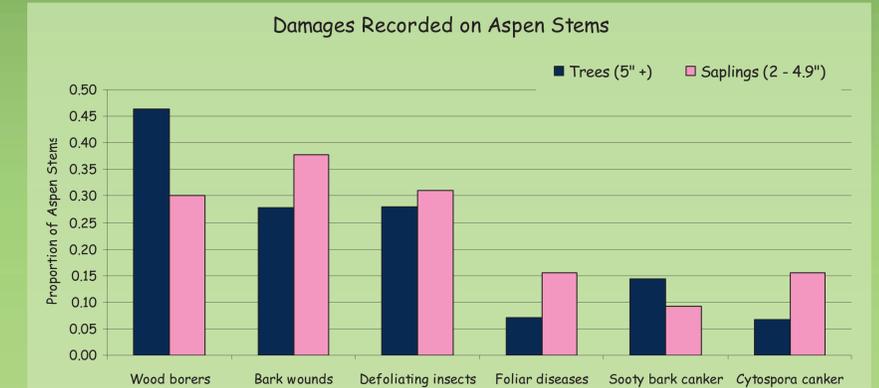
## Preliminary Results

### Plots

- Plots ranged in elevation from 2265 to 8040 ft.
- Conifer competition was severe on 27% of plots and low to moderate on 61%.
- 49% of surveyed aspen clones were stable, 30% were retreating, and 22% were expanding.

## Trees

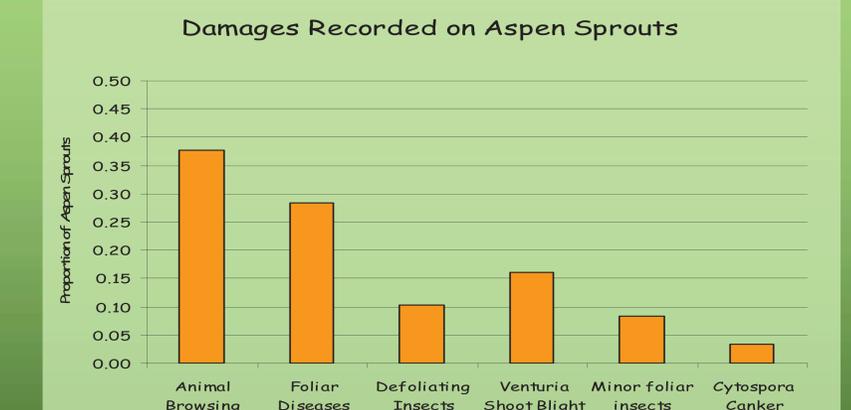
- 1423 aspen 2 to 24.2 inches dbh evaluated for crown dieback and damage agents.
- 91.5% of aspen were alive, 6.0% newer dead, and 2.5% older dead.
- Of the live aspen, 82.1% had minor crown dieback (1-33%), 15.5% had moderate crown dieback (34-66%), and 2.2% had greater than 66% of their crowns dead.



Aspen monitoring plot locations in Montana and northern Idaho.

## Regeneration

- 86% of plots had aspen regeneration. Sprout densities ranged from 100 to 31,600 sprouts per acre (spa); 46% of plots had 1,500 or more spa.
- 53% of plots had seedlings of other species present with densities ranging from 100 to 5300 seedlings per acre.



## Methods

In 2008, 76 permanent plots were established in Montana and northern Idaho. Aerial detection survey data were not available; plots were chosen randomly from stands provided by land managers that met the minimum criteria of having at least seven live stems  $\geq 5$ " dbh within a 1/20<sup>th</sup> acre plot.

Site, stand, tree, and damage data were collected on each 1/20<sup>th</sup> acre plot for all live and recently dead stems  $\geq 5$ " dbh. Small trees ( $\geq 2$ " but  $< 5$ " dbh) and seedlings ( $< 2$ " dbh) were sampled on three 1/300<sup>th</sup> acre sub-plots nested within each plot.

## Principle Aspen Damage Agents 2008 survey of Montana and northern Idaho

**Bronze poplar borer**  
(*Agilus liragus*)

**Wood Borers**

Tentatively Identified  
**Eastern poplar buprestid**  
(*Poecilota cyanipes*)

**Large Aspen Tortrix**  
(*Choristoneura conflictana*)

**Defoliating Insects**

**Leafroller**  
(*Pseudoxentera oregonana*)

**Aspen Two-Leaf Tier**  
(*Enargia decolor*)

**Poplar borer**  
(*Saperda calcarata*)

**Ink Spot**  
(*Ciborinia whetzeli*)

**Marssonina Blight**  
(*Marssonina populii*)

**Foliar Diseases**

**Sooty Bark Canker**  
(*Encoelia pruinosa*)

**Cytospora Canker**  
(*Cytospora chrysosperma*)

**Shoot Blight**  
(*Venturia tremulae*)

**Animal (Ungulate) Browsing**