

## **Aerial and ground forest health observations - 29 July - 5 August 2010**

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This report is a summary of week four of my aerial forest health survey season (29 July, 2-5 August 2010). This week, Ben Pfohl, Boulder District, Colorado State Forest Service and I were the aerial observers and we flew out of Rocky Mountain Metro and Fort Collins/Loveland airports. .

### Ground Checks

I conducted a preliminary ground check of areas in the vicinity of the Cache La Poudre Canyon and Long Draw Reservoir on 29 July. These indicated that mountain pine beetle infestations had increased in intensity in low elevation ponderosa pine forests and in mid elevation lodgepole pine forests. At high elevations near Cameron Pass and Long Draw Reservoir, most of the susceptible lodgepole pine component has been killed by the outbreak, and while there are a small number of current year's faders, the outbreak has declined due to depletion of host type.

There appears to be a significant increase in spruce beetle activity along the Forest Road from CO Highway 14 in the Long Draw Reservoir. Large numbers of new faders were seen in the vicinity of Trap Lake and several other locations. Callow spruce beetle adults were collected from several fading spruce along the road.

### Aerial Observations

Areas flown, from south to north, included:

An area west of US 285 from Kenosha Pass north to Guanella Pass and Mt Evans (Reporting Area [RA] 3).

High elevation portions of the southern Front Range from Rocky Mountain National Park south to the Eisenhower Tunnel and east to Mt. Evans (RA 2)

Areas west of Fort Collins and Loveland including the lower Poudre Canyon, Rist Canyon, Redstone Canyon, the Buckhorn Creek Basin and the south facing slopes of the Big Thompson River (RA 1).

Virtually all areas surveyed this week contained outbreak populations of mountain pine beetle in lodgepole, limber and/or ponderosa pines.

In some locations, the massive outbreak of mountain pine beetle in lodgepole pine has collapsed due to depletion of the host type. These include:

Forested areas along the US 40 and I 70 Corridors from west of Empire to Berthoud Pass and the Eisenhower Tunnel.

Portions of the upper Boulder Creek drainage basin, especially the slopes of Tennessee Mountain.

Upper portions of the Big Thompson and Fall River drainages in Rocky Mountain National Park.

Damage in lodgepole pine stands is currently at high levels (about 10 trees/acre) in mid to lower elevation lodgepole pine forests over most of the areas surveyed. Ponderosa pines growing at the edge of the ponderosa/lodgepole interface from Estes Park south to Idaho Springs are being attacked. Highest levels of damage in ponderosa pine were seen on forests west of Estes Park in Rocky Mountain National Park.

Infestations in lodgepole pine forests are continuing to build in the Buckhorn Creek Basin and on the south facing slopes of the lower Big Thompson drainage. Most mature lodgepole stands (> age 60) are infested at the rate of 5-10 new faders/acre. On the north facing slopes of the Buckhorn Basin, there are also extensive stands of young lodgepole pine (<age 40), most of which will, hopefully, survive the outbreak.

Heavy MPB infestations in limber pine stand are continuing throughout the area surveyed, especially from the upper Big Thompson Canyon in Rocky Mountain National Park south along the Front Range to Central City.

Mountain pine beetle in ponderosa pine stands has reached epidemic levels in the lower Poudre Canyon, Rist Canyon, Redstone Canyon, Stove Prairie and the lower Buckhorn Creek Basin west of Fort Collins. Infestation levels average about 5 trees/acre and groups of faders, ranging from 1-20 trees, are scattered over the landscape. These areas had a low level of MPB activity in 2009.

Spruce beetle activity was detected at the head of the Big Thompson River drainage in Rocky Mountain National Park. Spruce beetle infestations were also detected in high elevation spruce forests on the south slopes of the Big Thompson River and the north slopes of the Buckhorn Creek Basin including the slopes of Signal, Lookout, Crystal, Storm and Spruce Mountains.

Scattered tree mortality, ranging from 3-10 trees/acre due to a combination of root disease and was mapped in most high elevation subalpine fir forests.

Area to be covered next week, my final week of aerial survey, will include the northern Front Range and the Colorado State Forest.

This report is a summary of my fifth and final week of the 2010 aerial forest health survey season (9-13 August 2010). This week, Sheryl Costello and Dan Kipervaser, USFS flew with me Monday 9 August and Sky Stevens, Entomologist, Colorado State Forest Service, flew with me for the remainder of the week.

Areas Flown:

Fort Collins west to the crest of the Rawah Range, from the Wyoming border south to the Cache la Poudre River, Laramie River, upper Poudre and South Poudre River Basins (Colorado Reporting Area [RA] 1).

Colorado State Forest (RA 17)

Grand County - Grand Lake, Granby, Kremmling, Rabbit Ears and Williams Fork Mountains (RA 21)

Portions of forested areas from Rabbit Ears Pass west to Steamboat Springs and south to Kremmling (RA 20)

Observations:

Current mountain pine beetle activity in lodgepole pine is most severe in the mid–low elevation stands east of Cameron Pass. Higher elevation stands, where outbreaks have been at high levels for the past 3-6 seasons have lower levels of activity due to depletion of host type. This is especially true in the northern portions of the Rawah Range, Bull Mountain and North Middle Mountain.

Mountain pine beetle activity in lodgepole stands on the Colorado State Forest, the western slope of Rocky Mountain National Park, the Grand Lake, Granby area (Grand County) and forests south of Rabbit Ears Pass (Gore Range) has declined significantly. Most of the susceptible stands, those over age 60, have been attacked and killed and the forests have an overall gray cast. In some areas there are new faders in young stands, some < age 40. These may be the result of mountain pine beetle and/or ips engraver beetle attack and would be worth ground checking.

Mountain pine beetle infestations were detected throughout low elevation ponderosa pine forests from the Wyoming border south to the Cache la Poudre River. Infestations are especially heavy in the isolated ponderosa pine forests in the North and South Branches of Boxelder Creek and Table Mountain east of US 287. This area now contains many group kills in excess of 100 trees.

Spruce beetle continues at outbreak levels in high elevation spruce forests in the upper Laramie River Basin, the upper Cache La Poudre Basin, the upper slopes of Crowm Point, Comanche Peak and on north facing slopes of other high peaks in the Never Summer Range. Levels of spruce beetle activity appear to be significantly higher in these locations than in previous years. Spruce beetle infestations were also detected in high elevation forests in the Rabbit Ears Range east of Muddy Pass.

Douglas-fir beetle activity was detected in several areas southwest of Kremmling. Large numbers of old dead trees in the affected areas suggest that these infestations have been underway for several years.

Please forward this to anyone you think might find it of interest.

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