

**Colorado Aerial Forest Health Survey - 2015**  
**Weekly Status Report -1**  
**28 June – 4 July 2015**

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This is the first of a series of weekly status reports covering my participation in the 2015 Colorado Aerial Forest Health Survey.

This week we based in Alamosa and flew portions of the Sangre de Cristo and Culebra Ranges, the Spanish Peaks and the western slope of the Wet Mountains. A total of 17.1 hours of flying time were expended. Dan West and Donna Davis of the Colorado State Forest Service also participated in the survey.

**Spruce beetle** continued to cause extensive mortality of high elevation spruce forests throughout the Sangre de Cristo Range. In a number of areas, much of the mature spruce component has been killed by the outbreak. Small pockets of **spruce beetle** were also seen in mid to high elevation forests on the western slope of the Culebra Range. This is the first time spruce beetle infestations have been detected in this area.

Bark beetle infestations in ponderosa and limber pine were again detected on the eastern slopes of the Sangre de Cristo Range from Bear Creek south to North Taylor Creek. The causal agent is presumed to be **mountain pine beetle**. Group kills in ponderosa pine continued to be relatively small, in the range of 5-10 trees. Limber pine mortality, again presumably caused by **mountain pine beetle**, continued to cause large group kills in limber pine stands for the third successive year on the western slope of the Sangre de Cristo Range from the Cottonwood Creek Basin north to Hayden Pass.

**Douglas-fir beetle** infestations continued to kill mature Douglas-fir on the western slopes of the Sangre de Cristo Range, especially in stands in close proximity to the Medano fire of 2010.

Infestations of **fir engraver beetle** continued in portions of the Sangre de Cristo and Culebra Ranges

**Western spruce budworm** continued to cause moderate to heavy defoliation of Douglas-fir, white fir and spruce in the Culebra/Sangre de Cristo Ranges, the Spanish Peaks and on the western slope of the Wet Mountains. Stands in the vicinity of Cucharas, which have suffered defoliation for a number of years, now have extensive top kill and tree mortality which tends to mask defoliation.

**Aspen defoliation** was detected in a number of areas in the Sangre de Cristo, Culebra and Wet Mountains but at lower levels than in past years. The large area of aspen defoliation, mapped annually in the North Purgatory River Basin since 2006, caused by **western tent caterpillar** has collapsed. The affected area now has extensive aspen mortality, which could not be distinguished from defoliation from the air. The last time the area was ground checked as part of the annual forest health survey was in 2013 and heavy defoliation and large numbers of **western tent caterpillar** life stages were found. Aspen defoliation was also detected in the upper Cucharas Basin. Ground checks indicated that this was climate related, either extreme cold or late spring frost. Some trees are attempting to leaf out.

Other areas of aspen damage, classified as “aspen defoliation” were mapped in the upper Huerfano River Basin north of Blanca Peak , in the Deadman Creek Basin of the western slope of the Sangres and north of Dry Creek Canyon on the west slope of the Wet Mountains

Small areas of relatively recent **aspen mortality** were mapped on the western slope of the Wet Mountains. Some were associated with previous defoliation. Outbreaks of **large aspen tortrix** have been present in the Wet Mountains for several years.

Defoliation of Gambel oak was detected in several areas in an around La Veta and Cucharas, including areas along the Cucharas River and Chaparral Creek, upper Wahatoya Creek north of the Spanish Peaks and on the west slope of Big Sheep Mountain. Ground checks of affected areas on Big Sheep Mountain and along the Cucharas River were defoliated by an **oak leaf roller**, *Archips semifera*. Larvae, pupae and adults were present at the time of the ground checks.

An area of red-brown discoloration of conifer foliage was detected in and around the Blue Lake recreation area (San Isabel National Forest) in the upper Cucharas Creek Basin. Ground checks indicated that affected trees were primarily Engelmann spruce affected by **winter drying** or **red belt**.

Plans for next week are to fly out of Gunnison and survey portions of the San Juan/La Garita Range.

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