

SUMMARY OF AERIAL FOREST HEALTH SURVEY OBSERVATIONS

1-6 July 2012

William M. Ciesla

Forest Health Management International

Fort Collins, CO

AREAS FLOWN

Areas flown included the Sangre de Cristo and Culebra Ranges, (Reporting Areas [RAs] 10, 11, 12 & 15) a large portion of the Wet Mountains (RA 9) and the forested area between the eastern slopes of the Culebras and Spanish Peaks and I-25 (RA 12). Justin Backsen, USDA Forest Service R-2 accompanied me on Friday 6 July. The survey took 23.2 hours of flying time. Ground checks were made in several areas of the Wet Mountains on Saturday, 7 July.

HIGHLIGHTS OF OBSERVATIONS

WESTERN SPRUCE BUDWORM – Defoliation by western spruce budworm was extensive over many areas surveyed.

On the eastern slope of the Culebra Range, defoliation was localized from La Veta Pass south to Cucharas Pass and more or less continuous from Cucharas Pass south to the New Mexico border. Defoliation also occurred on the south facing slopes of the Spanish Peaks.

Defoliation of low elevation Douglas-fir forests was mapped on the west slope of the Culebras from the New Mexico border north to the Ojitos Creek basin. From Trincheros Creek north to La Veta Pass, defoliation tended to be more localized with many stands of susceptible host type unaffected.

Conspicuous defoliation of white fir and Douglas-fir occurred on the eastern slope of the Sangre de Cristo Range from Methodist Mountain south to Medano Pass. From Medano Pass south to Blanca Peak defoliation was more localized. Heavy defoliation was noted in North La Veta Pass and on the north slopes of Mt. Maestas, over all of the susceptible host type of the eastern slopes of Iron Mountain and all of Sheep and Little Sheep Mountains.

Defoliation occurred over most of the low elevation Douglas-fir forests along the western slopes of the Sangre de Cristo Range from Blanca Peak to Musca Pass and from Medano Pass north to Methodist Mountain.

Defoliation by western spruce budworm continued for the third successive year in the Wet Mountains. Virtually all of the susceptible host type from San Isabel south to the southern end of the Range was defoliated on the eastern slopes. Damage continued on the lower elevations of the western slope of the Wet Mountains north to Antelope Mountain.

Ground checks in portions of the Wet Mountains indicated that western spruce budworm had completed feeding and most individuals had also completed pupation. Large numbers of western spruce budworm moths were seen in several areas.

DOUGLAS-FIR BEETLE - Several large groups of Douglas-fir, killed by Douglas-beetle, were detected in the lower Medano Creek area of Great Sand Dunes National Park and Preserve. Groups of 1 to 20 trees killed by Douglas-fir beetle were commonly seen at the lower elevation limits of tree growth in drainages on the western slopes of the Culebra and Sangre de Cristo Ranges.

MOUNTAIN PINE BEETLE – Mortality of limber pine, presumably caused by mountain pine beetle, continued in portions of the eastern slopes of the Sangre de Cristo Range but at lower levels. A high proportion of the limber pine component has now been killed.

SPRUCE BEETLE - Tree mortality by spruce beetle continued in the vicinity of Greenhorn Mountain near areas affected by the blowdown event of 2007. Heaviest damage was noted in the Greenhorn Creek basin and along the Forest road from Ophir Pass to the Greenhorn Peak Mountain trailhead.

Spruce beetle infestations were detected for the first time in several drainages on both the eastern and western slopes of the Sangre de Cristo Range. On the eastern slopes of the Sangre de Cristo, infestations were detected in upper Hayden Creek, near Rainbow Lake, in the Taylor Creek Basin and several other areas.

FIR ENGRAVER BEETLE – Increased levels of tree mortality by fir engraver beetle were detected in low elevation forests of white fir in the Culebra Range from La Veta Pass south to Cucharas, the north facing slopes of the Spanish Peaks and along the entire eastern slope of the Wet Mountains.

IPS ENGRAVER BEETLES IN PONDEROSA PINE – Several small areas of fading ponderosa pines, suggestive of attack by Ips engraver beetles were detected on the eastern slopes of the Culebra Range near the New Mexico border. Areas of scattered ponderosa pine mortality continued into New Mexico.

ASPEN DEFOLIATION - Defoliation of aspen by western tent caterpillar continued on roughly 400 acres in the North Fork Purgatory River basin on the eastern slopes of the Culebra Range. This outbreak has been underway since at least 2007. Defoliation of aspen was also detected in the Brown Creek drainage immediately to the south.

The area of aspen defoliation expanded significantly in the Wet Mountains. A relatively localized area of defoliation, which has been underway since 2008 on a ridge between Turkey Creek and Dry Creek Canyons expanded to include aspen stands from Turkey Creek north to Antelope Creek. A second area of aspen defoliation, first detected in 2011 above Lake San Isabel, also expanded significantly in 2012 and encompassed aspen stands along portions of the Saint Charles Mountain and Cisneros hiking trails. Ground checks of these areas indicated that defoliation was caused by a leaf roller, the large aspen tortrix, *Choristoneura conflictana*. The insects had completed feeding. A number of pupal cases were found in the rolled leaves and about 60% of the pupae had emerged as adults.

Several small areas of aspen defoliation were also detected in portions of the Sangre de Cristo Range.

WINDTHROW – Areas of fresh windthrow, ranging in size from roughly 10 to over 200 acres were detected on the eastern slopes of the Sangre de Cristo Range from Methodist Mountain south to Medano Pass. Thirty-five areas, totaling 1220 acres of blowdown, were mapped. Most of the affected areas occurred in high elevation Engelmann spruce forests near the edge of timberline. However several areas of windthrow were also detected in mid-elevation forests. The windthrow was the result of a severe storm that occurred on 12 November 2011. Winds of up to 120 MPH were reported in Westcliff, which caused considerable damage to both trees and infrastructure.

OTHER OBSERVATIONS – An area of defoliation and discoloration of willow was detected in the upper East Fork Williams Creek Basin near Ophir Pass in the Wet Mountains for the second successive year. A ground check of the affected area indicated that the symptoms were the result of branch dieback and foliar skeletonization by an unknown insect.

A localized outbreak of a leaf skeletonizer was detected in narrow leaf cottonwood in the Williams Creek drainage on the western slope of the Wet Mountains during ground checks. Large numbers of blue-black larvae were found on the foliage. The larvae are believed to be a species of leaf beetle (Family Chrysomelidae) but lack the conspicuous defensive glands characteristic of the common cottonwood leaf beetle, *Chrysomela scripta*.

Heavy defoliation of mountain mahogany, gambel oak and other low woody plants, caused by western tent caterpillar, *Malacosoma californicum*, was seen during the ground check between Colorado City and Walsenburg.