2008
Forest Insect and Disease Conditions Report for
New Mexico State and Private Forest Lands

Compiled by Stephani Sandoval
NMSU Extension Forest Entomologist

Following is a summary of known forest insect and disease conditions on State and private lands based on aerial survey, ground survey, and reports from State Forestry and Cooperative Extension personnel. Aerial surveys were conducted over approximately 1.4 million acres of State and private forest and woodlands.

Aerial surveys were conducted in a Cessna 205, owned and piloted by Jerry Hoogerwerf of Socorro Air Taxi. Surveys are conducted about 1,500 feet above the ground at approximately 100 mph in July after spruce budworm defoliation is complete and last years bark beetle infested trees have begun to fade. Bark beetle infestations occurring in 2008 may not have been detectable at the time of the flight. Information from ground survey and/or additional aerial survey flights in the fall can be used in this assessment of forest insect and disease conditions as needed.

Western spruce budworm*, Choristoneura occidentalis*

Aerial and ground survey detected 73,910 total acres of light to heavy western spruce budworm defoliation. Total acreage of defoliation has declined about 6,000 acres in northern New Mexico from 2007. The Sangre de Cristo Mountains have the most significant and chronic budworm infestations. No significant budworm population was detected on State and private lands in the Sacramento Mountains. Aerial survey maps are available for specific locations of detected infestations.

County	Acres of defoliation on state and private lands attributed to western spruce budworm
Colfax	26,180
Mora	18,270
Rio Arriba	11,780
Taos	14,450
Other	1,110
Total	**73,910**

Piñon needle miner*, Coleotechnites edulicola*

No significant ground or aerial observation of piñon needle miner was made in 2008.

Piñon needle cast, possibly *Bifusella saccata*, **Piñon needle rust**, *Coleosporium spp.*

Piñon needle cast was observed on approximately 20,400 acres of state and private lands in 2007. A significant amount of federal land was observed to have the same fungal needle cast was well. In 2008 no notable amounts Piñon needle cast was surveyed on State and private lands.

Piñon needle scale, *Matsucoccus acalyptus*

Woodland outbreaks of this insect tend to be chronic, but do vary in intensity from year to year. Not all known woodland outbreaks were surveyed in 2008, but 200 acres were captured in Socorro County, a decline from 1,360 in 2007. Other woodland damage from this insect has been found on private lands in Albuquerque, the East Mountains, and areas in and around Santa Fe.

Douglas-fir tussock moth, *Orgyia pseudotsugata*

There a few known forests affect by the Douglas-fir tussock moth. An outbreak has been in progress on Forest Service land around Sandia Peak and on the Santa Clara Pueblo the past few years. This insect has been an urban pest in northern New Mexico. It causes occasional defoliation of ornamental spruce, fir and Douglas-fir in Cedar Crest, Raton, Glorietta, Pecos, Los Alamos and other foothills and mountain communities. No notable acres were recorded this year on state and private lands.

***Neptyia janetae* (no common name)**

This defoliator of white fir and Douglas-fir had been missed marked by aerial surveyors in the past. It was brought to the attention of personnel and taken a closer look. After being sent for proper identification it was determined to be *Neptyia janetae*, a species of fir looper. Most damage has occurred on National Forest with approximately 12,000 acres affected over the past few years. For 2008 only 190 acres of state and private lands were affected by its defoliation.

Tiger Moth, *Lophocampa ingens* (Edwards) also in the literature as *Halisidota ingens*

Tiger moth infrequently gets to populations where damage is noticeable and is not surveyed however, there were several areas that were affected. As it is not considered an economically damaging insect it was found from the Sacramento Mountains north along the Sangre de Cristo Mountains to the Colorado boarder feeding primary on Ponderosa but found on various other conifers. However populations appear to be on the decline and no defoliation was recorded on State and private lands in 2008.

Aspen defoliators including western forest tent caterpillar, *Malacosoma californicum*, large aspen tortrix, *Choristoneura conflictana*, aspen blotchminer, *Lithocolletes tremuloidella*, black leaf spot, *Marssonina populi*, aspen decline.

Aspen defoliation detected during aerial surveys has had an increase over the last couple of years. It has gone up from approximately 10,620 acres 2006 to17,770 acres in 2008. Most of the insect activity detected in Rio Arriba County and on the east side of the Sangre de Cristo

Mountains in Colfax. This increase is due to other casual agents affecting aspen other then the western forest tent caterpillar including overall aspen decline. Aerial survey maps are available for specific locations of detected infestations.

County	Acres of Aspen Defoliation
Cibola	480
Colfax	1,110
Mora	380
Rio Arriba	15,140
Taos	430

Pine tip moths, *Rhyacionia spp.* ,Pinyon tip moth, *Diorytria albovittella*

Landscape pines, particularly ponderosa pine, continue to be severely damaged by several tip moth species of the genus *Rhyacionia*. Nantucket pine tip moth and western pine tip moth appear to be causing the most severe injury to ornamental pines. Several other tip moth species are routinely caught in pheromone traps. Public service announcements regarding effective spray dates for control of pine tip moth in the Albuquerque, Santa Fe, and Los Lunas areas were made with the cooperation of area Master Gardeners.

Piñon tip moth damage continues at low levels statewide.

Pitch nodule moth, *Petrova arizonensis* (Heinrich)

Piñon tip nodule moth is locally common throughout the state.

Twig beetle, *Pityophthorus spp., Pityogenes spp., Pityotrichus spp.*

Extensive outbreaks of twig beetle in association with other bark beetles, especially *Ips spp.* became apparent in late 2000. Conditions between 2001 and 2004 favored continued build up of the beetles. In 2005 populations have declined coinciding with the Piñon Ips Beetle. The most significant damage done in the previous years has been seen in piñon woodlands. However in 2008 a very small amount of damage was mapped in Lincoln County affecting approximately 10 acres.

Twig beetle damage is common statewide in all pine species. Trees on dry rocky slopes, overcrowded stands, heavily infected with dwarf mistletoe or injured by construction activities are most frequently attacked. Twig beetles are a common cause of tree mortality in transplanted pines.

Piñon Ips Bark Beetle, *Ips confuses*.

Dramatic tree mortality occurred in piñon pines due to Ips beetles. Extensive piñon mortality has been reported statewide, especially in northern and western New Mexico. However populations have decreased dramatically since 2004 and continued to collapse for 2008 with less than a hundred acres affects. Additional aerial survey was not flown for 2008 to better determine affected acreages.

Pine bark beetles including western pine beetle, *Dendroctonus brevicomis*, mountain pine beetle, *Dendroctonus ponderosae*, roundheaded pine beetle, *Dendroctonus adjunctis,* pine engraver, *Ips* spp.

Western pine beetle appears to be the most common *Dendroctonus spp.* on ponderosa pine statewide. Western pine beetles were found primarily west of Las Vegas in the Sangre de Cristo Mountains and on Vermejo Park in Colfax County. Populations increased from 2006 at 170 acres to over 4,000 acres in 2008.

Pine engraver beetle sustained population with approximately 1,020 affected acres surveyed this year. However more acres could have been affected by the pine engraver, but was incorrectly marked do to similar discoloration as pine bark beetles. This error could have occurred for the reason that the engraver beetle is killing the entire tree in many cases instead of its usual marking of only causing top kill.

Douglas-fir beetle, *Dendroctonus pseudotsugae*, Fir engraver beetle, *Scolytus ventralis*,

Incidence of tree mortality caused by Douglas-fir beetles and fir engraver beetles populations have declined on State and private lands with approximately 6,450 acres affected. Several high elevation pockets of Douglas-fir bark beetle and fir engraver killed Douglas-fir and white fir were seen in primarily in Taos, Rio Arriba, and Colfax Counties.

Spruce Beetle, *Dendroctonus rufipennis*, Western balsam bark beetle, *Dryocoetes confusus* Swaine

Spruce beetle and western balsam bark beetle were primarily found in the northern parts of the Sangre de Cristo and in the surrounding areas of Chama. The acreages covering state and private remained sustained at about 5,340 from 2007. Majority of this mortality was in Taos County with 3,450 acres followed behind by Rio Arriba County with 720 acres.

Red Turpentine Beetle, *Dendroctonus valens*

Red turpentine beetles were found at low levels in ponderosa pine stands statewide. High numbers of turpentine beetles are often seen in association with thinning and logging activities. No significant tree mortality is usually seen in association with turpentine beetles.

Spider mites, *Tetranychus urticae, Platytetranchus multidigituli, Oligonychus ununguis*

There were dramatic increases in spider mite populations in ornamental juniper, spruce honeylocust and other susceptible trees detected in early 2002. These arthropods are favored by current drought conditions. No populations were reported for 2008.

Dwarf mistletoe, *Arceuthobium spp.*

Dwarf mistletoe infection is common statewide on ponderosa pine, Douglas-fir, piñon pine, limber and southwestern white pine.

State Forestry district personnel work with landowners to reduce dwarf mistletoe levels wherever possible. This is most often accomplished in conjunction with private timber sales and is not usually the motivation for the sale. Varying degrees of follow up control are planned.

Forest landowners have been given information on managing dwarf mistletoe through workshops, site visits and phone assists.

White pine blister rust, *Cronartium ribicola*

No survey work for white pine blister rust was done on state and private forest land in 2008. However, each State Forestry District Office has been informed of the diseases and what they should be watching for.

Miscellaneous Pests

- Smaller European Elm bark beetles, *Scolytus multistriatus* continued to cause mortality in drought stressed Siberian elms in eastern New Mexico and to a lesser extent, statewide.
- Elm leaf beetles, *Xanthogaleruca luteola* (Muller), were at noticeable statewide on Siberian elms growing in urban and rural areas.
- Bagworms, *Thyriodopteryx spp* continue to be primarily an aesthetic problem in the Albuquerque area on junipers, cypress and a number of hardwood trees.
- Fall webworm, *Hyphantria cunea* (Drury) was common in landscape and lower elevation riparian hardwoods, especially Siberian elms, mulberries, cottonwoods and poplar hybrids. It has been noticed near Embudo along the Rio Grande.
- Other reported tree pests occurring in urban areas in New Mexico include: Cooley spruce gall adelgid, boxelder leaf rollers, boxelder leaf miners, brownheaded ash sawfly, pine needle scale, cytospora canker, gymnosporangium rusts on juniper, aphids, juniper twig pruner, pear slugs, cottonwood leaf beetles, and cottonwood borer.