

# NEW MEXICO FOREST HEALTH HIGHLIGHTS 2020



Produced by the Forest Health Program of the New Mexico Forestry Division

LINKS FOR WEB-BASED NM

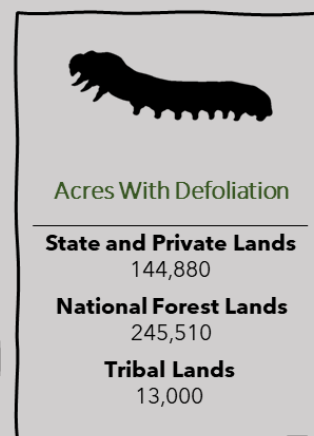
FOREST HEALTH INFORMATION

[2020 NM Forest Health Story Map](#)  
(for state and private lands)

[2020 NM Forest Health Data Dashboard](#)



## 2020 NEW MEXICO CONDITIONS AT A GLANCE



### SUMMARY

In 2020, the number of acres of forest and woodlands with insect, disease, and drought-stress damage on state and private lands increased a modest 9% since 2019. The majority of the increase was due to a rise in aspen defoliator activity, western spruce budworm feeding activity, and drought-stress symptoms in ponderosa pine. The number of acres mapped with ponderosa and aspen mortality both increased more than 100% since 2019. The increase in ponderosa mortality was caused by bark beetles; whereas, the increased aspen mortality was caused by a combination of drought, root diseases, chronic defoliation, and other factors. The ponderosa needleminer outbreak in and around the Vermejo Ranch in northern New Mexico continued for a third year and the number of acres mapped remained relatively unchanged from 2019. Overall, most of the forest and woodland damage mapped in the state in 2020 occurred north of I-40.

### DROUGHT IMPACTED TREE HEALTH

In 2020, approximately 36,000 acres of ponderosa forests with yellow discoloration caused by an unknown agent were aerially mapped (image at left). Post-aerial survey ground checks were conducted to determine the cause of the discoloration. The ground checks revealed that the old needles within the canopy had turned yellow. Ponderosa pine naturally sheds old needles every year; however, these needles were turning yellow months before they do normally. This symptom, and the lack of visible insect or disease signs, was a strong indicator that these trees were severely drought-stressed. Most discoloration was mapped on the Gila National Forest and state and private lands. The discoloration on state and private lands was concentrated to Mora, Colfax, Cibola, and San Miguel Counties. Unfortunately, these visually drought-stressed ponderosa forests may experience increased bark beetle-induced mortality over the next few years.



# NOTABLE FOREST HEALTH ISSUES

## Ponderosa Needleminer

(*Coleotechnites ponderosae*)

The tiny caterpillar of this species feeds within needles of ponderosa pine and can cause dramatic visual change over large areas. Feeding damage caused by this insect doesn't normally lead to tree death, but the damage can stress trees and make them more susceptible to bark beetle attack. This was the third year of a large-scale outbreak of this moth species on and around the Vermejo Ranch near Raton (Image 1). Acres affected by this insect slightly increased between 2019 and 2020, but overall acres have decline since 2018 or the first year of the outbreak. To date, there has been no increased bark beetle activity related to the needleminer outbreak. Additionally, this year, a 5,100 acre pocket of needleminer feeding damage was newly mapped west of the Vermejo Ranch on the Carson National Forest near Tres Piedras (Image 2). Large-scale outbreaks are uncommon in New Mexico; however, there were reports of large outbreaks occurring in the northeastern part of the state in the 1980s and 1990s. For example, about 52,000 acres were mapped in 1989 in San Miguel County.



Image 2. Newly mapped needleminer feeding activity near Tres Piedras, NM (Dan Ryerson, USFS)



Image 1. The large-scale ponderosa needleminer outbreak on the Vermejo Ranch is in its third year, the feeding damage is visible as yellowing foliage (Dan Ryerson, USFS)



# NOTABLE FOREST HEALTH ISSUES

## Twig Beetle

(*Pityophthorus* spp.)

(*Pityogenes* spp.)

(*Pityoborus secundus*)

Twig beetles are a type of bark beetle, but much smaller than well known tree-killing species, such as mountain pine beetle (example of a twig beetle in Image 3). In a typical year, twig beetles can be found in low levels colonizing twigs or branches throughout the forest. However, in times of drought, they can cause widespread twig and branch die-back of mature trees and/or attack and kill young, small trees (Image 4). In 2020, widespread branch and twig die-back on ponderosa pine was mapped on ~4,400 acres of state and private land in San Miguel and Mora Counties. Post-aerial ground checks of these areas confirmed the presence of twig beetle. Many of the ponderosa trees exhibiting crown discoloration were also attacked by twig beetle, which is a strong indicator that the outbreak is most likely related to drought-stress. Twig beetle activity may stay high in the affected areas if drought conditions persist; however, direct mortality of mature ponderosa trees from twig beetle attack is unlikely. It is possible that mortality of small piñons from twig beetle attack may increase if drought conditions persist.



Image 3. A twig beetle freshly extracted from a ponderosa twig



Image 4. A small piñon near Santa Fe killed by twig beetles

### For more information, contact:

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