

Recreation and Beetle Information



Northern Front Range Mountain Pine Beetle Working Group
www.FrontRangePineBeetle.org



Arapaho and Roosevelt National Forests and Pawnee National Grassland Visitor Information
970-295-6600
www.fs.fed.us/r2/arnf



Rocky Mountain National Park Visitor Information
970-586-1206
www.nps.gov/romo



U.S. Forest Service Mountain Pine Beetle Incident Management Organization
www.fs.fed.us/r2/bark-beetle



Colorado State Forest Service
970-491-6303
csfs.colostate.edu



Colorado State Parks
303-866-3437
parks.state.co.us



Colorado State University Extension
970-491-6281
www.ext.colostate.edu



Boulder County Parks and Open Space
303-678-6200
www.bouldercounty.org/openspace



Clear Creek County
303-679-2300
www.co.clear-creek.co.us



Gilpin County
303-582-5214
www.co.gilpin.co.us



Jefferson County Weed & Pest
303-271-5989
www.co.jefferson.co.us/weed



Larimer County Department of Natural Resources
970-679-4570
www.co.larimer.co.us/naturalresources

Colorado Fire Restrictions



www.cofireban.info

How can I help keep MPB from spreading?

Humans can spread MPB in transported firewood. To avoid this, select dead and dry firewood from the forest where collection is allowed—standing trees with no needles are the best choice, but any tree with all red needles is acceptable for firewood gathering. At home, burn your firewood by the end of June, before any remaining beetles can emerge to infest other trees.



Pine beetle images courtesy of www.Bugwood.org; Maja Jurc, Univ. of Ljubljana, and Whitney Cranshaw, Colorado State Univ.



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Mountain Pine Beetle

on the

Colorado Front Range



What To Know

Meet the Beetle • Hazards and Concerns • Our Responses

Mountain pine beetle (MPB) damage across the Western United States is more obvious every season. As trees die, entire landscapes turn red, brown, and then gray. On the Colorado Front Range, the beetle epidemic is evident.

Pine forests have experienced severe drought and relatively warm temperatures in both summer and winter during the past decade, resulting in stressed trees and the perfect conditions for an MPB outbreak. The beetles prefer large trees with thick bark, and they have had an abundant food supply in mature lodgepole, ponderosa, and limber pine forests.

Beetle population outbreaks are cyclical, and the current outbreak will not last forever. When the beetles run out of mature trees to infest their populations will subside. Until then, tree species like spruce, fir, and aspen will have a chance to grow up from below the old pines.

Will the forest survive?

Yes! Pine beetles are native to Colorado and outbreaks are a natural ecological process. The MPB does alter forests, but it does not destroy them. Surviving small trees and seeds released from dropped cones are the sources from which our new forests will grow.

WARNING!

Falling trees are always a hazard when traveling in the forest.

The mountain pine beetle epidemic has increased the risk of falling trees. Following these guidelines will help recreationists avoid risks.

- Be aware of your surroundings. Avoid dense patches of dead trees. They can fall without warning.
- Stay out of the forest when there are strong winds that could blow down trees. If you are already in the forest when the winds kick up, head to a clearing out of reach of any potential falling trees.
- Place tents and park vehicles in areas where they will not be hit if trees fall.
- When driving in remote areas of the forest, park close to a main road, rather than on a spur or one-way section. If trees fall across the road you may be trapped.
- Bring an ax or a saw to remove fallen trees from roads in case you become trapped.
- Do not rely only on cell phones for safety as there is no coverage in many areas of the national forest.
- Remember, your safety is your responsibility.



Disclaimer of Liability – With respect to the identification and removal of all tree hazards found in a forested recreation setting, neither the United States Government nor any of its employees makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of the information contained herein, or actions that may be taken by a visitor to the National Forest.

Pitch tubes



Larval galleries



Bluestain



Meet the Beetle



The Mountain Pine Beetle, *Dendroctonus ponderosae*, is a bark beetle native to North America. The beetle usually takes one year to complete its life cycle, developing through four stages: egg, larva, pupa, and adult. All development takes place under the bark of infested trees except for a few days during the summer when adults emerge and fly to new trees.

Female beetles lay tiny, pearl-white eggs under the bark of pine trees in the late summer and early fall. The white larvae winter in galleries under the bark and begin to mature the following spring. By July, most pupae have transformed into adults.

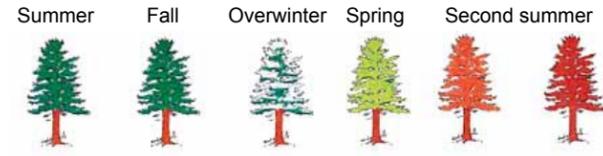
Adults feed under the bark during the summer; where several feeding chambers meet, the beetles emerge through an exit hole. After emerging, the beetles can attack surrounding trees.

Beetles carry the spores of a bluestain fungus on their bodies and introduce them to pine trees. As the fungus develops

and spreads through the sapwood, it interrupts the flow of water to the crown of the tree and the flow of pitch used to push out attacking beetles. The combination of the feeding beetles and spreading fungus kills the tree within a year.

Does the MPB have any natural enemies?

Birds, especially woodpeckers, feed on bark beetles and expose larvae to the elements by pecking at and removing tree bark. In addition, insect parasites, predators, and fungal diseases attack bark beetle larvae. During epidemics, these natural enemies have little overall effect on the MPB population.



It can take a year to see the impact of a beetle attack.

Hazards and Concerns

Years 1–3: The fine, dry needles on dead pine trees can easily ignite in a forest fire.

Years 3–10: Fire danger decreases after the needles fall from the trees, but toppling dead trees pose a danger to forest visitors, especially during high winds.

After 15 years: When the majority of trees fall down, they create large, dense surface fuels. In some forests, this may increase the risk for high intensity fire. The downed logs can also make it hard to access and control fires.

Our Responses in 2011

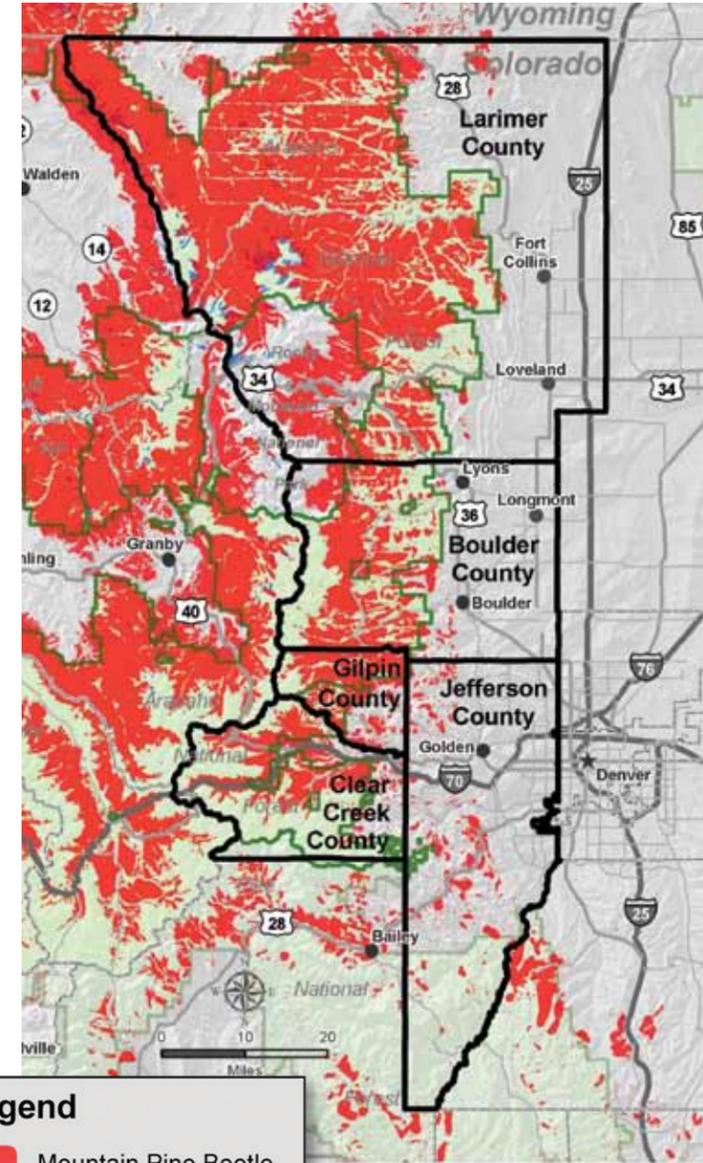
Land management agencies, local communities and private landowners along the Front Range and Western Slope are teaming up to battle the mountain pine beetle epidemic spreading across our region.

Forest crews and contractors are removing thousands of acres of dead, dying and targeted trees in high value areas like roads, campgrounds, trailheads and near power lines. Arapaho and Roosevelt, White River and Medicine Bow-Routt National Forest crews are also taking out woodpiles, brush, anything near communities that may fuel wildfires.

Five Front Range counties (Boulder, Clear Creek, Gilpin, Jefferson and Larimer), along with the Colorado State Forest Service and private landowners, continue to work collaboratively with the U.S. Forest Service to slow the spread of the Mountain Pine Beetle in forests, parks and open space. Efforts include thinning overcrowded tree stands, along with working with other land management agencies to share information and identify needs.

Nine counties along the Western Slope (Eagle, Garfield, Grand, Jackson, Lake, Park, Pitkin, Routt and Summit) are also working with federal, state, county agencies and private landowners to mitigate the mountain pine beetle epidemic.

National Parks in Colorado are also dealing with the mountain pine beetle epidemic. Rocky Mountain National Park's priorities remain the protection of life and property by removing hazardous trees and other potential fuel for wildfires.



Legend

- Mountain Pine Beetle
- Spruce Beetle
- Forest Service

Cumulative acres of affected lodgepole, limber, and ponderosa pine, 1996–2010

County	Number of acres
Boulder	122455
Clear Creek	78497
Gilpin	54577
Jefferson	32150
Larimer	681507