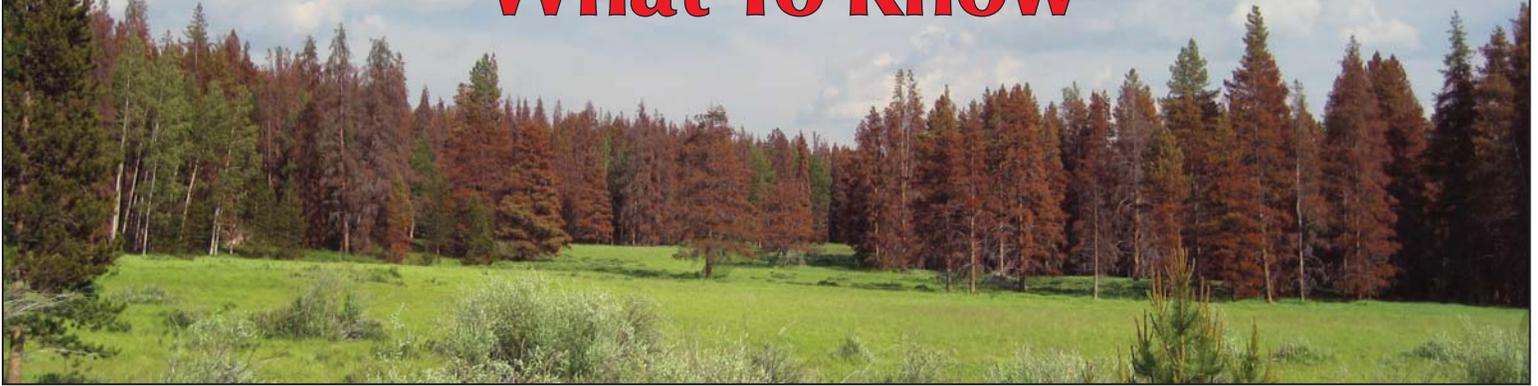


Mountain Pine Beetle on the Front Range

What To Know



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. In Northern Colorado, the beetle epidemic is intensifying.



Severe drought during the past decade, accompanied by relatively warm temperatures in both summer and winter, has resulted in stressed trees and the perfect conditions for 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 populations are cyclical and this outbreak will not last forever. When the beetles run out of mature trees to infest or beetle larvae die during a prolonged and unusually cold winter, their populations 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 pine forests will grow.

WATCH OUT!

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

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 chainsaw to remove fallen trees from roads in case you become trapped.
- Do not rely on cell phones for safety as there is no coverage in many areas of the national forest.

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.

Rocky Mountain Region 

MEET THE BEETLE

HAZARDS AND CONCERNS

OUR RESPONSES





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. Except for a few days during the summer when adults emerge and fly to new trees, all development takes place under the bark of infested trees.

Female beetles lay tiny, pearl-white eggs under the bark of pine trees in the late summer and early fall. The white larvae overwinter 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 from one tree can attack surrounding trees.

Beetles carry the spores of a bluestain fungus on their bodies and introduce them

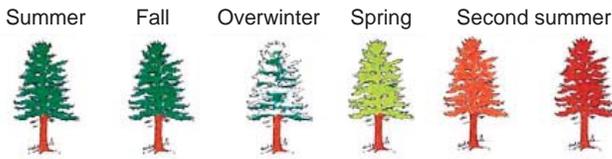
to pine trees. As the fungus develops and spreads through the sapwood, it may interrupt the flow of water to the crown of the tree and the flow of pitch used to push out attacking beetles. The combination of the feeding beetles and spreading fungus kills the tree within a year.

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.

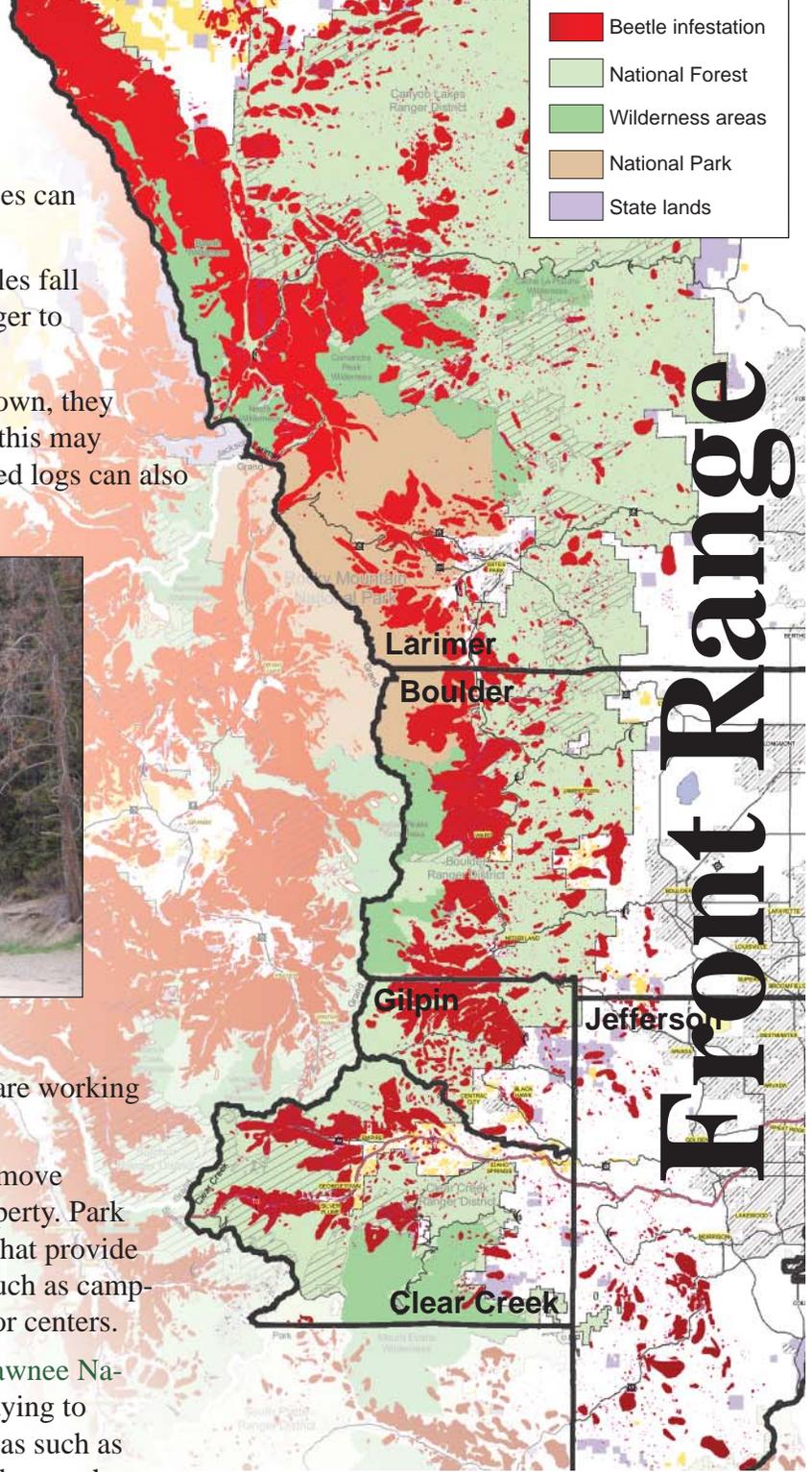
In addition, insect parasites, predators, and fungal diseases attack bark beetle larvae. During epidemics, these natural enemies have little overall effect on the MPB population.





WYOMING

COLORADO



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 2009

Land management agencies along the Front Range are working together to address the MPB epidemic:

Rocky Mountain National Park’s priorities are to remove hazard trees and hazard fuels to protect life and property. Park personnel selectively spray to protect healthy trees that provide shade, beauty and a good seed source in locations such as campgrounds, historic landscapes, picnic areas, and visitor centers.

The Arapaho and Roosevelt National Forests and Pawnee National Grassland is using both tree removal and spraying to respond to the epidemic in high value recreation areas such as campgrounds and trailheads. Workers have removed more than 3,000 hazard trees. The forest staff also continues to thin forests near communities to reduce risks associated with wildfires.

Five Front Range counties (Boulder, Clear Creek, Gilpin, Jefferson, and Larimer), the Colorado State Forest Service, and private landowners are working collaboratively to reduce the spread of MPB in parks and open space. State and county workers thin overcrowded stands and work with other land management agencies to share information and identify needs on a landscape scale.

Colorado County	Acres of affected lodgepole, limber, and ponderosa pine 1996-2008
Boulder	78,100
Clear Creek	50,200
Gilpin	39,500
Jefferson	28,700
Larimer	286,000



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
970-295-6700
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 Team
www.fs.fed.us/r2/bark-beetle/index.html

Colorado State Forest Service
970-491-6303
<http://csfs.colostate.edu/>

Colorado State Parks
(303) 866-3437
<http://parks.state.co.us/>

Colorado State University Extension
970-491-6281
<http://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 Open Space
303-271-5925
www.co.jefferson.co.us/openspace/

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

COLORADO FIRE RESTRICTIONS

<http://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 a good choice. (By the time wood is dry, the beetles have flown.) 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.

