



Colorado State Forest Service
5060 Campus Delivery
Colorado State University
Fort Collins, CO 80523-5060
970.491.6303; FAX 970.491.7736
<http://csfs.colostate.edu/>

NEWS

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Contact for Reporters: Ryan Lockwood

970.491.8970

ryan.lockwood@colostate.edu

Recent Cold Weather Unlikely to Kill Bark Beetles

FORT COLLINS, Colo. – Despite what seems a colder-than-average Colorado winter, temperatures have not been cold enough to kill the state’s mountain pine beetles.

Several successive days of -30 degree Fahrenheit temperatures are necessary to kill most mountain pine beetles because the beetles, which spend the winter as larvae under the bark of lodgepole and ponderosa pines, are specially adapted to survive Rocky Mountain winters.

“The larvae produce a substance in their bodies that’s similar to the antifreeze we put in our cars,” said Sky Stephens, forest entomologist for the Colorado State Forest Service. “In winter, they also move to the driest part of the tree where they are less likely to freeze. And they expel nearly all the moisture from the inside of their bodies, which lowers the temperature at which they will freeze.”

The larvae of Colorado’s other bark beetles, including the spruce beetles now infesting the state’s high-altitude Engelmann spruce, are similarly resistant to winter cold.

The coldest temperature to date this winter at Grand Lake, in the heart of the state’s lodgepole pine forests, registered at -20 F.

The last time it was cold enough to kill off a substantial number of mountain pine beetles in Colorado’s forests may have been January 2007, when Grand Lake saw three successive days of at least -29 F; in February 1989, the mercury at the same weather station dipped below -30 F for three consecutive days.

However, even those periods probably were not cold enough to significantly affect mountain pine beetle populations because the reported daily minimums most likely were brief overnight lows. Even if the state experienced 72 straight hours of -30 F or below this winter, not all the mountain pine beetle larvae would be killed.

“A cold snap of that nature would certainly kill some of the beetles, but the populations have been at such a high number that the localized killing of some beetles by the cold would not make a very significant impact,” said Stephens. Rather than concentrate on unmanageable factors like the weather, Stephens added that the CSFS is addressing the beetle epidemic by focusing on creating a healthier, more resilient forest.

For more information about bark beetles, visit the Colorado State Forest Service website at www.csfs.colostate.edu. The site also provides a link to donate to the Colorado Bark Beetle Mitigation Fund; donations are used to remove beetle-infested trees on lands owned and managed by the state.

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