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Tiny beetles killing millions of pines

Mountain residents nervously watch their landscape change as an infestation of historic proportions thins forests and raises the specter of wildfires.

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Grand Lake - In a mountain subdivision once so wooded most homeowners couldn't see their neighbors, Ed Peterson steps away from a 50-foot lodgepole pine he has just toppled and turns off his chain saw.

"Welcome to 'Stumpville,'" he says.

Around Peterson's log-style home and hundreds of others in this rustic gateway to Rocky Mountain National Park, the land is dotted with the squat reminders of thousands of trees lost to a massive pine beetle infestation.

"It's unbelievable. You can almost hear them eating," says Peterson, who has cut more than 250 lodgepoles on his 5-acre property in a mostly futile attempt to keep the bugs at bay.

"We're fighting a big battle, but we're losing," the 65-year-old retiree laments. "I think every mature tree around is going to die, and it really hurts, because we're not going to see any of these big guys again in our lifetime."

The scourge, more wide-ranging than similar epidemics in Colorado in the 1970s and '80s, has killed millions of 100-year-old trees in the northern part of the state, turning whole mountainsides into jaw-dropping expanses of orange or maroon.

"My wife said if you didn't know what it was, you'd think it was actually kind of pretty - until you realized they're all dead," says Dave Batura, a retired state patrolman and longtime Grand County resident.

Besides creating a blight that could keep tourists and recreationists away, the enormous stands of dead and dying timber raise the specter of wildfires, which could wipe out homes and businesses and cause erosion threatening the watersheds supplying much of Denver's drinking water.

"If we don't do something, it will burn, and in the Williams Fork drainage, that could be catastrophic," says Granby landowner Charles Henry, referring to a hard-hit area west of Byers Peak.

"Based on what happened in the Hayman fire (in 2002), we know the flames could be over the hill and in Winter Park in 3 1/2 hours. ... I don't know if people will want to look at black trees when they're skiing, or build a million-dollar home in an area that won't be revegetated for 30 or 40 years."

The beetle kill is most extensive in the Williams Fork, Troublesome and Grand Lake areas, where aerial surveys show more than 300 square miles of public and private woodlands have been infested - an area roughly the size of Rocky Mountain National Park.

Summit, Eagle and Jackson counties also have been attacked, and a large expanse of orange has been spotted in western Boulder County near Rollinsville - the first outbreak reported on the Front Range.

Likened by many observers to a forest fire without the smoke, the outbreak hasn't yet ravaged any ski resorts. But it appears poised to hit Sol Vista and Winter Park, and it could threaten Keystone, Breckenridge and Vail as well.

Some communities have begun to take on the look of logging camps as residents and cutting crews work to clear out affected trees before they become a fire hazard - and, hopefully, before the burrowing bugs can spread to more stands.

In Grand Lake, piles of logs, slash and wood chips litter properties everywhere, from clusters of aging summer cabins and RV parks along U.S. 34 to luxury homes above Shadow Mountain Lake, just south of the town.

The carnage has yet to cast a shadow over the real estate market "because buyers realize this is nature's way, and there's absolutely nothing we can do about it," says Suzi Maki, a broker with Re/Max Resorts of Grand County. But provisions for the removal of dead trees are being included in new contracts, she says, and homes that would have been touted last year as "wooded and secluded" are listed this year as having "stunning views."

The lodgepoles will grow back, foresters say, but it will take decades; meanwhile, aspen can be expected to sprout in the open areas.

Short of wildfire or the depletion of all host trees, the only thing that could halt the spread of the beetles would be an extended stretch of bitter cold - enough to freeze the bugs in their winter homes beneath the protective insulation of the bark.

Two weeks of minus-30 temperatures every night would do the trick, research from Canada suggests, but Middle Park hasn't had a cold spell like that for years.

Foresters say the state's mature lodgepoles have become vulnerable to beetles because of years of drought, plus crowding brought about by decades of fire suppression and curtailed logging. But even experts are surprised by the extent of the current infestation.

"The system of checks and balances is a little out of whack," says veteran entomologist Dave Leatherman of Fort Collins. "Because of climate change, whatever the cause of that is, beetles throughout the West are doing things people have never seen before."

In the last Colorado epidemic, trees thinned to about 12 feet apart were found to be less susceptible. "But this time, while the thinned areas are the last to succumb, it seems like everything is succumbing," says Mike Harvey, a state forester in Granby.

Preventive spraying, which costs about \$10 per tree, also is of dubious value because the beetles apparently are boring into trunks at a level higher than the 25 to 30 feet the sprays normally reach.

And the pests challenge long-held assumptions that they don't attack trees smaller than 8 inches in diameter and can't spread much higher than 10,000 feet. In Utah, says Leatherman, the bugs have been attacking centuries-old bristlecone pines.

"I told people in Breckenridge a few years ago that they didn't have anything to worry about," says Harvey. "But these darn things are kind of rewriting the book on us."

The mountain pine beetles aren't the only insects wreaking havoc in the forests of Colorado. Huge numbers of ponderosa and piñon pines have been killed by ips beetles in the south and southwestern parts of the state, and large stands of spruce are under attack by yet another type in northwestern Colorado around Steamboat Springs.

But the pine beetle infestation, which has become blazingly apparent this summer, is raising widespread worry in Grand County, where people's reactions vary from grief and concern to anger and frustration.

"The thing that bothers me is, what's going to happen to the watershed?" says rancher Bob Chase, who "darn near cried" when he saw trees turning red on the spread his grandparents homesteaded in 1899.

In the office of the Colorado State Forest Service, where a wall map charts the progress of the epidemic over the past six years, Mike Harvey says people are looking for a swift solution.

"But all the answers are long-term. With the work we are doing now" - thinning and diversifying the forests to make them more resistant - "the payoff is 40, 50 or 60 years down the road, and that's kind of hard for this society to swallow. We like quick fixes," he says.

"The thing we have to remember is that this is a natural process. In lodgepole, it's normal to have dense stands that grow to maturity, die off in a beetle kill and then regenerate after a fire, like what happened in Yellowstone in 1988."

The difference in Colorado, of course, is that over the past 10 or 15 years, many of the stands of lodgepole now in their death throes have been settled with houses and condominiums.

As Henry sees it, eyeing the ever-growing pile of logs he has hauled out of the woods on his 40-acre retreat southwest of Granby, "I'd love to let nature take its course. But considering the tourist economy and our livelihoods, I don't think we want this forest to burn."

To reduce the most immediate threat, the U.S. Forest Service is mapping out clear-cuts to create firebreaks between private and public lands on several thousand acres in the Grand Lake and Fraser areas over the next few years. In addition, large landowners such as the Grand Lake municipal golf course and the YMCA's Snow Mountain Ranch near Tabernash are cutting aggressively in hopes of minimizing the impacts.

Winter Park, which anchors a band of lodgepole that stretches virtually unbroken for 15 miles along the western flank of the Indian Peaks Wilderness Area, also is working to mitigate the threat.

The ski area has spent nearly \$500,000 to remove deadfall and undergrowth from the 7,630 acres under its control, and 40 members of the ski patrol have been trained to identify beetle-killed trees so they can be targeted even before the snow has melted in the spring.

"We are still hopeful that we can prevent the infestation from spreading, and we think we have a good chance of saving many of the trees," says resort spokesman Matt Sugar.

In the town of Winter Park, he adds, similar measures are being financed through a mill-levy increase approved by voters last year.

Clearing the dead timber from all the areas hit by the beetles would be a daunting task because of the expense, the terrain and the sheer number of trees involved, foresters say.

Another serious obstacle to intensive logging is the limited market for the wood. Much of it is stained blue from a fungus carried by the beetles and is thus perceived by many buyers as blemished, even though it's considered structurally sound.

Two mills close to the current infestation, a waferboard plant in Kremmling and a sawmill in Walden, are no longer open. Except for a few small post-and-pole operations and cabinet-makers who covet blue-stained wood, the only volume buyer in Colorado is the Intermountain Resources mill in Montrose - some 300 miles away.

Henry, a weed-control consultant who heads the nonprofit Grand County Forest Stewardship Association, suggests the dead trees be viewed not as timber but as fuel for a wood-burning power plant like units now operating in Nebraska, California and Minnesota.

A 50-megawatt plant, big enough to meet the electrical needs of 50,000 people, could be built for about \$100 million, he estimates, and it "would provide a viable market for 20 years for all the timber waste in Grand, Routt and Summit counties."

The idea is one of many being considered in wildfire mitigation discussions.

The full extent of this year's infestation won't be apparent for months, because trees attacked this summer won't turn orange until next spring.

But the scourge appears to be spreading exponentially, says Chris Oliver, a timber management technician with the Arapaho-Roosevelt National Forest in Granby.

"For every red one you see now," he says, "what you figure is there are 5 or 10 green ones that will be red at this time next year."

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