

Beetle battle involves variety of weapons

Infestation fought in key areas with poison, pheromones, tree-cutting and planting.

*By Cory Hatch, Jackson Hole, Wyo.
August 12, 2009*

Last in a series—Eds.

Past Munger Mountain and up a U.S. Forest Service road east of Red Top Meadows, red trees have begun to encroach on homes tucked back into the hillside.

The buildings are just a small sample of hundreds along the base of the Tetons on the wildland-urban interface, the line between the forest and civilization, that pose a challenge for land managers trying to balance what's best for the forest and best for the humans living on its fringe.

"This is a fairly high-risk area," says Andy Norman, a fuels specialist with the Bridger-Teton National Forest. "We are trying to figure out how to let fires burn in the Palisades and the Caribou-Targhee but have a fire break that stops [the blaze] before it gets to Red Top" and other developments.

As Pine beetles slowly, relentlessly chew their way through millions of acres of forest in the northern Rocky Mountains, land managers have long since resigned themselves to the hard truth: The beetle epidemic will stop when the bugs run out of food, and the landscape will likely never look the same again in our lifetime.

Still, the beetles and the dead trees they leave behind pose challenges that affect almost every aspect of the Forest Service mission. Fire and falling trees are a threat to campgrounds, power lines, road corridors, scout camps and the people that use them. The bugs can devalue entire swaths of timber set aside for logging. And, perhaps most important, the epidemic could result in the extinction of a keystone, high-elevation tree species, the whitebark pine.

The Forest Service doesn't really have a comprehensive policy on pine beetles specifically, said Liz Davy, forest timber program manager for the Bridger-Teton. Rather, individual forests rely on their forest plans to decide how to deal with beetles in a given situation.

"There really is no policy like thou shalt get rid of all the bugs," she said. "It's where it lays on the land."

In places like designated wilderness or roadless areas, land managers let the bug infestation run its course. In these areas, Davy said, pine beetles are a natural part of the landscape and play a role similar to fire, creating a mosaic of tree types and age classes that encourages diversity of plants and animals.

In campgrounds and developed sites, an aggressive campaign to protect trees using insecticides like carbaryl and pheromones like verbenone might be called for. Otherwise the dead trees could pose a danger to campers, and removing them could spoil the campsites' ambiance.

Forest Service officials "wanted to avoid having a huge hazard-tree removal program," she said. "It would be a huge task and change the characteristic of the campground."

Forest Service technicians apply carbaryl using a pressurized sprayer on a truck, saturating a trunk with the chemical once every other year. In areas that the trucks can't reach or near water with aquatic insects, the less-effective verbenone patch is used every year. In all, the Bridger-Teton spends about \$150,000 a year on beetles at campsites and other developed areas. Part of the budget covers tree removal.

While homeowners might apply these techniques to their land in the wildland-urban interface, the Bridger-Teton typically limits itself to tree thinning – fuels reduction programs – in these areas. Fire managers are currently working up a plan to thin, or treat, portions of wildland-urban interface within an 80,000-acre zone extending from south of Teton Village, past Red Top Meadows to Dog Creek. While the plan is preliminary, an environmental review is expected next year, with the project to start in fall of 2010 or 2011.

Timber salvage could help

While fuels reduction programs are not limited to areas with beetle-killed trees, Rod Dykehouse, forest, fire, aviation and vegetation staff officer for the Bridger-Teton, said the current epidemic is one impetus for the project. One of the reasons for selecting that 80,000-acre analysis area is the amount of mortality from up in there, he said.

In areas of beetle kill where officials have deemed logging an appropriate use, such as Spring Creek in the Greys River Ranger District and East Fork in the Kemmerer Ranger District, Davy said the Bridger-Teton is attempting to get lumber companies to conduct salvage operations.

"The whole reason for salvage is to get the value out of the product," she said. After about two years, dead lodgepole pine trees crack and twist, making them less valuable as lumber.

Aside from the value of the logs, timbering can also accelerate regeneration of the forest, according to Davy. However, the demand for logs has fallen sharply.

"If we put up a timber sale, we have no idea whether it will sell or not," she said.

Finally, pine beetles, in combination with an invasive fungus called blister rust, have wiped out a significant portion of whitebark pine in the region. Forest Service biologists have just started to get a handle on the problem, and land managers across Greater Yellowstone are developing a strategy for the restoration and conservation of the species.

Seedlings offer hope

Usually, the high-elevation terrain where whitebark grow is too remote, and the whitebark habitat is too widespread for treatments like verbenone and carbaryl. Instead, biologists and ecologists have started collecting seeds to save the species.

One such project, on Grouse Mountain south of Togwotee Pass, would involve a combination of prescribed burns, logging and planting seedlings to regenerate the whitebark in an area of heavy beetle kill. The project is currently on hold.

Davy said the best part about planting whitebark pine seedlings is that the trees wouldn't be susceptible to a pine beetle infestation for 80 to 100 years. "That kind of effort has been done elsewhere," she said. "We're thinking ... it might be successful here."

Brian Sybert, Wyoming director for Greater Yellowstone Coalition, praised local forests like the Bridger-Teton and the Shoshone for their restraint when it comes to dealing with the pine beetle epidemic.

"They tried to stay as much as they could out of roadless areas and sensitive habitat," he said. "All of the work was in the front country, not in the backcountry. As a result, in the front country they're creating defensible space, [and in the backcountry] they've now allowed for fire to come on the natural landscape."

Even if the Forest Service wanted to try to stop the beetle epidemic in the backcountry, perhaps with large clear-cuts, those efforts would disturb habitat for dozens of species including bears and ungulates, Sybert said. Further, he said, the beetle epidemic is a natural phenomenon, exacerbated by drought and climate change, and clear-cuts likely wouldn't work.

"In some cases, we're seeing an ecosystem shift," he said. "And I don't think anything is going to stop that from happening."

Andy Stahl, executive director of Forest Service Employees for Environmental Ethics, was more critical of the Forest Service response to the beetle epidemic. Stahl said he started his career cutting beetle-infested trees on the Dillon Ranger District in 1979.

"It occurred to me that regardless of whether you cut one ponderosa tree in a campground or thin one 10,000-tree-per-acre lodgepole pine stand, the effect on the pine beetle is the same: none," he said. "Forest policy doesn't make a damn bit of difference when it comes to pine beetles."

Instead of spraying chemicals, cutting down trees and clearing fuels, Stahl said the most economically viable and effective way to deal with the beetle epidemic is, in most cases, to do nothing.

"It's mostly a complete waste of money," he said. "I think the best policy is smart policy, fiscally and environmentally. The Forest Service has not subjected its current policies to any of those criteria."