

Aerial survey shows beetle epidemic in Yellowstone

By MEAD GRUVER | Posted: Monday, December 7, 2009 5:40 pm |

A beetle epidemic that's killing trees across the Rocky Mountain region has taken an especially heavy toll on whitebark pine trees in the Yellowstone ecosystem, according to preliminary findings of a recent aerial survey.

The six weeks of flights this summer covered 2.5 million acres of whitebark forests in 21 mountain ranges in the 22-million-acre Yellowstone ecosystem. The survey involved the National Park Service, the U.S. Forest Service and the environmental group Natural Resources Defense Council.

Up to now, aerial surveys conducted by the Forest Service have focused primarily on documenting beetle damage among the lower-elevation species.

"We knew the impact was huge. But we really didn't have a good feel of the true extent," said Jesse Logan, a retired forest service beetle expert who helped coordinate the survey.

Beetles have all but wiped out some whitebark forests, including along the east side of Yellowstone National Park, researchers said.

The demise of the high-elevation forests has implications that include the survival of grizzly bears and the ability of mountain ranges to hold snow and supply water for farming, ranching and municipal use, said Louisa Willcox, of the council in Livingston, Mont.

The council has a petition pending before the U.S. Fish and Wildlife Service to list the whitebark pine as endangered.

"We're watching the collapse of an ecosystem in less than a decade. And it's Yellowstone," Willcox said.

Whitebark pines thrive in higher, colder and windier environments than other trees in the Rockies. They can live 1,000 years or more.

But for a century, whitebark pines in the Rockies have been suffering from blister rust, a nonnative fungus species from Europe. The trees also seem especially vulnerable to beetles, and some whitebark forests, including the Avalanche Peak area near the east entrance to Yellowstone, are now all but wiped out.

"Essentially every cone-bearing tree is gone in those areas," said Logan.

Other mountain ranges in the Yellowstone region with high whitebark pine mortality _ up to 70 percent _ include the Absaroka and Gros Ventre ranges in Wyoming and Gravelly Range in Montana, said Willcox.

The aerial survey also showed that whitebark pines in some areas, such as Montana's Beartooth Plateau and the central part of Wyoming's Wind River Range, have remained relatively unscathed, said Wally Macfarlane, a geographic information system/photogrammetry specialist with GEO/Graphics Inc. in Logan, Utah.

Macfarlane, who helped plan the aerial survey, suggested those areas could be studied to find out why those trees have survived.

The results of the survey won't figure into the council's endangered species petition. The U.S. Fish and Wildlife Service, for the time being, is only looking at whether the information in the petition warrants review, said Ann Belleman, a Fish and Wildlife biologist in Cody.

The service will decide next year whether to take a more detailed look at listing the species, she said.

Detailed findings from the aerial study, which included taking thousands of photos and piecing them together into mosaic maps, are expected to be released in early January.