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Nearly 7 million bats may have died from white-nose fungus, officials say

By Darryl Fears,

More than five years since the deadly white-nose fungus was first detected in a New York cave where bats hibernate, up to 6.7 million of the animals are estimated to have died in 16 states and Canada, the U.S. Fish and Wildlife Service announced Tuesday.

The estimate, drawn from surveys by wildlife officials mostly in Northeastern states where the disease thrives, confirmed the worst fears of biologists who have been counting dead bats covered in the powdery fungus in mines and caves every winter and worrying whether the little brown bat, the northern long-eared bat and the tri-colored bat will survive."We're watching a potential extinction event on the order of what we experienced with bison and passenger pigeons for this group of mammals," said Mylea Bayless, conservation programs manager for Bat Conservation International in Austin.

"The difference is we may be seeing the regional extinction of multiple species," Bayless said. "Unlike some of the extinction events or population depletion events we've seen in the past, we're looking at a whole group of animals here, not just one species. We don't know what that means, but it could be catastrophic."

Bats are a top nocturnal predator, picking off night-flying insects that feed on agricultural crops and forests. A reproductive female consumes her weight in bugs each night. In a single summer, a colony of 150 brown bats can eat enough adult cucumber beetles to prevent the laying of eggs that result in 33 million root-worm larvae, according to a study cited by Bat Conservation International.

White-nose syndrome is caused by an aggressive fungus called Geomyces destructans that eats through the skin and membranes of bats. It was first detected at Howes Cave near Albany, N.Y., in 2006.

Since then, biologists in Virginia, Pennsylvania, New Jersey, Vermont, Indiana and other states have returned to caves and mines during the annual winter hibernation of bats and reported alarming numbers of fresh dead to wildlife and gaming agencies.

Tuesday's estimate of 5.7 million to 6.7 million dead bats dwarfed the previous count of slightly more than a million in 2009. The estimate was derived from winter trips to mines and caves through December 2011.

Clustered as high as 30 feet above the floor, the bats are difficult to see, so digital images are captured and studied, said Jeremy Coleman, national white-nose syndrome coordinator for Fish and Wildlife.

"They … basically count the noses," Coleman said. Otherwise "you look at a big brown smudge of bats. Indiana bats can have 300 in a square foot. You can get a much more accurate count with digital imagery," he said.

The declining population found in the winter counts was supported by summer counts, where bats are tracked to areas where they feed and roost.

The bats being wiped out by white-nose syndrome are usually long lived, up to 20 years. Mates produce a pup per year. They usually hibernate in the same places year to year, and they return to the same place to feed.

Biologists said the bats' decline could begin to affect the general public if their disappearance results in swarms of the insects they feed on, and higher food prices if food crops are invaded, biologists said.

A paper published last year in the journal Science, relying on the lower mortality rate projected in 2009, estimated that 1,320 metric tons of insect pests were not eaten because of the decline in bats.

The paper products industry could also be hard hit if pests such as the emerald ash borer proliferate in the absence of bats. Loggers in states such as Vermont "ought to be concerned, but I don't think the word has really gotten out to these folks," said Mollie Matteson, a conservation advocate for the Center for Biological Diversity in Richmond, Vt.

"It certainly behooves people concerned about the health of forests — loggers or ecologists — to pay attention," Matteson said. "But it's hard to make a direct connection between 7 million bats dead and what happens to forest pests."

A recent report said bat colonies found in Vermont and Pennsylvania were an indication that some are managing to survive the fungus. But those data are inconclusive, and hopes based on the report might be misplaced, Coleman said.

In Pennsylvania, where the mortality rate of the most common bats is nearly 100 percent, farmers and homeowners are showing concern, said Greg Turner, an endangered-mammals specialist for the Pennsylvania Game Commission.

With 95 percent mortality, there's little hope that little brown bats will survive in the state, but Turner isn't giving up on saving them. "I'm going to plug forward all the way to the bitter end, if there is a bitter end. Hopefully there won't be," he said.