

Deadly fungus threatens 9 bat species in Ga., Ky., N.C., S.C. and Tenn., expert says

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A leading bat expert with the USDA Forest Service's Southern Research Station today identified nine bat species in Georgia, Kentucky, North Carolina, South Carolina and Tennessee that she believes are most threatened by white-nose syndrome (WNS), a fungus that kills bats and appears to be rapidly spreading south from the northeastern United States. Station Research Ecologist Susan Loeb, Ph.D. says WNS has been confirmed in Tennessee, and she says it is just a matter of time before the fungus is detected in Georgia, Kentucky, North Carolina and South Carolina.

"In the five states where most of my research has centered, little-brown [bats](#) and Indiana bats are among the most threatened by WNS - meaning their populations could either be seriously decimated or become extinct," said Loeb, a veteran wildlife researcher based in Clemson, S.C.

"Historically, little-brown bats were quite common, but the species appears to be especially susceptible to the [fungus](#) and is being hit hard in the states where WNS has taken hold. While populations of the federally endangered Indiana bat showed signs of rebounding in recent years, those gains may soon be negated by white-nose syndrome."

Loeb is also concerned that WNS will have serious effects on populations of small-footed bats, northern long-eared bats, and Eastern pipistrelles, either because of their small populations, their susceptibility to the disease or both. Other species that could be infected are the Virginia big-eared bat, Rafinesque's big-eared bat, gray bat and southeastern bat. More than a dozen bat species inhabit Georgia,

Kentucky, North Carolina, South Carolina and Tennessee.

"Virginia big-eared bats are endangered, so their small numbers and limited distribution put the species at serious risk of becoming extinct in Kentucky, North Carolina, West Virginia and Virginia if they become infected," said Loeb. "Rafinesque's big-eared bat is a rare species that hibernates in caves in the karst regions of North Carolina, Tennessee and Kentucky. Thus they too could be infected with WNS and suffer dramatic declines. However, this species also roosts in large hollow trees and other structures in the coastal plain regions and may be safe from the disease in part of its range."

Bats play an important role in keeping forests and other landscapes healthy and productive. One of their primary roles is insect, or pest, control. A handful of bats can eat thousands of mosquito-sized insects in one night. In tropical and subtropical regions bats also pollinate many agricultural plants and help with seed dispersal. Unfortunately, most bat populations in the [United States](#) have declined over the years. Habitat loss and disturbance and degradation of hibernacula and maternity roosts are major contributors to their decline.

Loeb is among the many scientists actively studying the spread of WNS. Her research on bat migration will help in monitoring and predicting the spread of WNS in the South. She is also collaborating with partners in the public and private sectors to produce a searchable bat database that will enable researchers to better track populations in the East. The database will serve as a central repository that will provide new insights into bat distributions and movements, which is critical for understanding and predicting the spread of WNS. Other Forest Service offices, Clemson University, and the Southeastern Bat Diversity Network and Northeastern Bat Working Group are partners in the project.

Additionally, Loeb is studying bat habitat associations in the southern

United States and results from these studies could be used to help restore certain bat species and populations in the event that WNS becomes widespread in the South.

Loeb remains in close contact with biologists and researchers in the Forest Service's National Forest System Regional Offices and Northern Research Station to address WNS, as well as scientists at the U.S. Fish and Wildlife Service, U.S. Geological Survey, and state agencies who are aggressively studying and trying to mitigate the effects of WNS.

So far, WNS is confirmed in the following 11 states: Connecticut, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Vermont, Virginia, West Virginia and Tennessee. The disease is also confirmed in Canada. The first case of the disease in the United States was reported in New York State in 2006. The disease is confirmed in six [bat species](#).

WNS affects bats that hibernate in caves and mines. Government agencies closed caves to the public in an effort to reduce the spread of WNS. The disease received its name because of the white fungus often seen on the noses, muzzles and wings of infected bats. In 2008, government scientists identified the fungus that causes WNS. Researchers are trying to better understand exactly how and why the fungus kills bats. More than a million bats have died as the result of WNS. Some experts believe the disease originated in Europe.

Provided by USDA Forest Service

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