

Study: Some bats showing resistance to deadly fungus

January 11 2017, by Michael Casey



In this Sept. 17, 2010 file photo a little brown bat is photographed in La Crosse Wis. Researchers for the first time found that little brown bats appear to be showing resistance to white-nose syndrome, which has killed millions of bats across North America. (Peter Thomson /La Crosse Tribune via AP, File)

The little brown bat, a species that has been decimated by a deadly fungus, could be taking the first tentative steps to recovery, scientists say in a recent study published by Great Britain's Royal Society.

Researchers for the first time are finding the bats showing some resistance to [white-nose syndrome](#)—the fungus that has killed millions of them across North America.

First discovered in 2006 in New York, white-nose syndrome has spread through the Northeast and has been confirmed in 29 states and five Canadian provinces. The fungus has caused the decline of little [brown bats](#), an animal weighing less than half an ounce, and other [bat species](#) important to controlling insects that can damage wheat and other crops.

The study, published in the *Philosophical Transactions of the Royal Society B*, found that little browns at several abandoned mines in upstate New York are surviving at rates higher than populations in Virginia and Illinois that had more recently been exposed to the fungus.

"What we found was that bats in New York seemed to have developed an ability to reduce the amount of the fungus on their skin," researcher Kate Langwig, a postdoctoral fellow at Harvard University who conducted the research while at the University of California, Santa Cruz.



In this Dec. 16, 2011, file photo, researchers Amanda Janicki, left, and Cory Holliday swab the muzzle of a little brown bat during a white nose syndrome study at New Mammoth Cave near LaFollette, Tenn. Researchers for the first time found that little brown bats appear to be showing resistance to white-nose syndrome, which has killed millions of bats across North America. (Amy Smotherman Burgess/Knoxville News Sentinel via AP, File)

"Bats in New York and Virginia and Illinois all got infected at the same time and infection patterns among individuals were relatively the same," she said. "But once they got infected, New York bats were able to reduce the fungus, whereas bats in Virginia and Illinois were not."

Thomas Lilley, a researcher at the University of Liverpool who did not take part in the study, said in an email that researchers have had clues about survivor populations for some time and the findings are "highly relevant."

"It assures us that at least the little brown bat will not go locally extinct, but the population will most likely stabilize, probably at a smaller size than before White Nose Syndrome," he said.

Langwig and her colleagues say it remains unclear why the New York bats showed resistance. They theorize that the [bat populations](#) in New York were larger to begin with and had more resistance and greater genetic diversity or they developed an ability to recognize when the fungus reaches dangerous levels on their skin—allowing them to mount an immune response.



In a Dec. 16, 2011 file photo a cluster of little brown bats hibernate in New Mammoth Cave near LaFollette, Tenn. Researchers for the first time found that little brown bats appear to be showing resistance to white-nose syndrome, which has killed millions of bats across North America. (Amy Smotherman Burgess/Knoxville News Sentinel via AP, File)

Also unclear is whether recovery will be seen in other little brown populations or other bat species, such as the federally threatened northern-long eared bat.

University of New Hampshire's Jeffrey Foster, who co-authored the journal paper, said he is hopeful researchers will find resistance is more widespread. For the study, Foster quantified the amount of [fungus](#) on the little brown bats.

"Indeed, we do expect this finding to occur in other bat species other than little brown bats and have been sampling many other bat species to see how universal this pattern of resistance may be occurring," he said.

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