

# Death in the bat caves: Experts call for action against fast-moving disease

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A team of wildlife experts led by UC Davis called today for a national fight against a new fungus that has killed more than one million bats in the eastern United States and is spreading fast throughout North America. The new disease has been named "white-nose syndrome." It affects bats' facial skin and wing membranes. Sick bats appear to be coated with frost. The fungal spots of white-nose syndrome can be seen on this hibernating Myotis bat's nose, as well as on its wing and tail membranes. Credit: Alan Hicks, New York Department of Environmental Conservation

A team of wildlife experts led by UC Davis called today for a national fight against a new fungus that has killed more than 1 million bats in the eastern United States and is spreading fast throughout North America.

"If we lose [bats](#), we lose keystone species in some communities, predators that consume enormous numbers of insects, and beautiful

wildlife species that are important parts of North America's biodiversity," said Janet Foley, a UC Davis professor of veterinary medicine at the Center for Vectorborne Diseases.

Foley and her co-authors' call to action appears today online in the Early View section of the journal *Conservation Biology*.

Bats are essential members of natural ecosystems, hunting insects, pollinating plants and scattering seeds, Foley said. "Bats do the jobs at night that birds do during the day. But because they are most active in darkness, few people are aware of how many bats live around us and how valuable they are."

The new [fungal disease](#) has been named "white-nose syndrome." Scientists think the fungus, which normally lives in soil, somehow traveled to cave walls where bats hibernate in winter and began infecting the animals' facial skin and wing membranes.

Sick bats appear to be coated with frost. They fly more than normal, which uses up fat reserves, and also lose water at a faster rate than normal. Disoriented, they move to exposed places, such as cave entrances.

Eventually, they starve, freeze or die of [dehydration](#).

The first infected bats were found by a cave explorer near Albany, N.Y., in February 2006. Since then, infected bats have been found northward to Ontario and Quebec in Canada, south to Tennessee and west to Oklahoma. The authors write that they expect white-nose syndrome to cross the [Rocky Mountains](#) and enter California in the next several years.

There are 23 species of bats in California that hibernate in caves, and so are vulnerable to white-nose syndrome.

Foley said the fungus does not appear to be a threat to people or animals other than bats.

The National Wildlife Health Center, a program of the U.S. Geological Survey, identified the white-nose fungus, *Geomyces destructans*, in 2007.

"In the three years since its discovery, white-nose syndrome has changed the focus of bat conservation in North America," said Foley. "A national response is required, and our epidemiological roadmap is designed to help emerging state and national plans to combat white-nose syndrome across the United States."

Foley and her collaborators developed their recommendations at a workshop in Colorado in August funded by the National Park Service.

The authors' recommendations include: an outbreak investigation network that would establish a standard diagnosis and case definitions; bat population monitoring; and improved public awareness of the problem. "Scientists, policy makers and members of the public will all have a voice in the coming debate over the best course of action," Foley said. They also call for further studies of chemical and biological agents known to kill the [fungus](#) but not yet proven safe for bats, as well as study of treatments for similar diseases.

**More information:** Full text of study, "Investigating and Managing the Rapid Emergence of White Nose Syndrome, a Novel, Fatal Infectious Disease of Hibernating Bats": [onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291523-1739/earlyview](http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291523-1739/earlyview)

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