



White-nose Syndrome in Bats

Frequently Asked Questions

What is white-nose syndrome?

More than one million hibernating bats have died in the Eastern United States. These bats have been found with a skin infection in the form of a white fungus on their muzzles and wings. Evidence shows that this fungus, *Geomyces destructans*, is associated with white-nose syndrome (WNS) and is moving westward.

This *Geomyces* fungus thrives in the cold and humid conditions of caves and mines, which provide prime habitat for many bat species. Bats affected with WNS do not always have the characteristic white fungal growth, but they display abnormal behavior in and outside their hibernacula (places where bats hibernate).

Where has white-nose syndrome been observed?

White-nose syndrome was first documented in eastern New York during the winter of 2006-2007. Since then, the fungus associated with WNS has spread westward into the Oklahoma panhandle.

WNS has been found in New Hampshire, Vermont, Connecticut, Massachusetts, Pennsylvania, Virginia, West Virginia, Tennessee and Missouri, as well as in the provinces of Quebec and Ontario in Canada.

Are New Mexico bats at risk?

New Mexico has 28 species of bats. Of the 9 species of bats that have been afflicted in other states, 3 are found in New Mexico. Recently, the fungus associated with WNS was found on the Cave myotis



A little brown bat with white-nose syndrome.

Credit: USFWS

in western Oklahoma, 250 miles from the New Mexico border. With bat to bat, bat to cave and/or human transmission of the fungus into the cave environment, WNS could rapidly spread to New Mexico.

What are the signs of white-nose syndrome?

The skin infections caused by *G. destructans* may act as a chronic disturbance, causing bats to awaken from hibernation. Each time a bat wakes up, it uses some of the fat reserves it has built up to survive over winter. If anything increases the frequency or duration of such arousals during winter, a bat's fat reserves can be depleted. With no insects available for bats to eat, they will starve to death.

WNS may be associated with the following unusual bat behavior or characteristics:

- A white fungus, especially on the bat's nose, but also on the wings, ears or tail.

- Bats flying outside during the day in temperatures at or below freezing.
- Bats clustered near the entrance of their hibernacula.
- Dead or dying bats on the ground or on buildings, trees or other structures.

How is white-nose syndrome transmitted?

The U.S. Fish and Wildlife Service (FWS) believes WNS is spread from bat to bat. However, it is also a strong possibility that the disease is transferred from cave to cave by humans carrying the fungus on their clothing, equipment or caving gear.

What is the effect of white-nose syndrome on bats?

Mortality rates of 90-100 percent have been documented at several hibernation sites in the eastern U.S. If the bat survives the winter with WNS, wing and body damage can be seen on the bat.

Little brown bats have been hit the hardest by the disease, but several federally-listed endangered species have also been affected. These include the Indiana bat and the gray bat.

Which bat species have been affected?

Tri-colored, little brown, northern long-eared, big brown, eastern small-footed and Indiana bats have all died from WNS. Recently, the endangered gray bat, cave myotis and the southeastern myotis tested positive for the fungus. Scars on a bat's wings may be evidence that they were infected with WNS over the winter.

Why should people care about bats?

Bats are an important part of our natural system. They are important plant pollinators and insect predators. Consuming over half their body weight in insects each night, bats in the U.S. eat thousands of tons of insects nightly! It is estimated that the one million bats killed by WNS would have eaten about 2.4 million pounds of insects in one year!

Cave-roosting bats found at El Malpais are an important part of the area's ecology. El Malpais is home to 17 species of bats. They are vital to the health of monument's cave ecosystems as they provide nutrients for many other organisms. Bats are also food for other animals.

What if you find dead or dying bats or signs of white-nose syndrome?

Do NOT touch or remove the bat. Contact a visitor center, or call the Natural Resources Branch Chief or the Chief Ranger at El Malpais Headquarters at 505-285-4641. Leave a message if it is after hours with your contact information so we can get in touch with you.

Please be ready to provide detailed information regarding where the bat is located, the time of day you saw it, what you saw and any other details you think may be helpful.

What do cavers need to know and do?

Cavers should comply with all cave closures and advisories. They should avoid caves and other areas containing hibernating bats to minimize disturbing them and follow the FWS suggested decontamination protocol of all caving equipment as outlined at www.fws.gov/WhiteNoseSyndrome/cavers.html.

Local and national cave organizations have also posted further information on their web sites.

Does white-nose syndrome pose a risk to human health?

Thousands of people have visited affected caves and mines since WNS has been observed. There have been no reported illnesses attributable to WNS, however researchers are still learning about the disease. Bats should not be handled or disturbed.

What is the National Park Service and other agencies doing?

An extensive network of federal, state and non-governmental organizations are working to investigate the source, spread and cause of bat deaths associated with WNS.

The investigation has four primary focus areas: research, monitoring, management and outreach. Home to a large bat population, El Malpais National Monument is collaborating with other federal, state and local partners to stop or slow the spread of the disease.

National Park Service units have been provided guidance in management of WNS including recommendations to close caves and require decontamination of caving gear as recommended by the U.S. Fish and Wildlife Service. Most tourist caves (Carlsbad Caverns, Mammoth Cave, etc.) with high visitation remain open. Parks are using risk assessments to determine whether or not to continue those activities.

What is El Malpais National Monument doing?

Protecting bats and their habitat while slowing the spread of WNS is our greatest priority. As a result all caves in the monument are closed to recreational caving. For researchers a permit must be obtained to enter park caves. Please call the Natural Resources Branch Chief for more information.

We are also:

- Working with researchers to determine whether *Geomyces destructans* is already present in caves.
- Inventorying and monitoring caves and cave-like environments for bat use.
- Providing park visitors with information on WNS and the need to protect bats from disturbance and human-assisted spread of WNS.
- Working with other federal resource managers and the New Mexico Game and Fish to develop a state-wide response plan.

What can you do to help?

Bats are in peril. To help them you can:

- Prevent the spread of WNS by obeying cave closures and advisories.
- When visiting tourist caves, such as Bandera Ice Cave or Carlsbad Caverns, don't wear or carry any gear or clothing that has been in caves or mines in the eastern United States, Ontario or Quebec.
- Report signs of WNS, unusual bat behavior or dead bats to your nearest land management agency.
- Learn more about bats and help spread the word about WNS

For more Information on WNS, visit: www.fws.gov/WhiteNoseSyndrome or www.nature.nps.gov/biology/wildlife-health/white_nose_syndrome.cfm

or contact:

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