U.S. Fish & Wildlife Service

White-nose syndrome in bats

Frequently Asked Questions

1. What is white-nose syndrome?
Hibernating bats in the northeastern United States are dying in record numbers, and we do not know the cause of the deaths. This wildlife health crisis, white-nose syndrome, is named for the white fungus evident on the muzzles and wings of affected bats.

This affliction was first documented at four sites in eastern New York in the winter of 2006-07. Subsequently, we saw photographs taken in February 2006 of apparently affected bats at an additional site.

WNS has rapidly spread to multiple sites throughout the northeast. Researchers associate WNS with a newly identified fungus (Geomyces sp.) that thrives in the cold and humid conditions characteristic of the caves and mines used by bats. The fungus could be responsible for the bat deaths, or it could be secondary to the cause.

Bats affected with WNS do not always have obvious fungal growth, but they may display abnormal behavior within and outside of their hibernacula (caves and mines where bats hibernate during the winter).

2. How is WNS is transmitted?
We believe that WNS is transmitted primarily from bat to bat. There is a strong possibility that it may also be transmitted by humans inadvertently carrying the causative agent from cave to cave on their clothing and gear.

3. Where has WNS been observed?
Biologists and/or cavers have documented WNS in bat hibernacula in New Hampshire, Vermont, New York, Massachusetts, Connecticut, New Jersey, Pennsylvania, West Virginia and Virginia. We expect this list of states to increase over time.

4. What are signs of WNS?
Bats may lose their fat reserves, which they need to survive hibernation, long before the winter is over. They often leave their hibernacula during the winter and die. As winter progresses, we find increasing numbers of dead bats in the affected locations.

WNS may be associated with some or all of the following unusual bat behavior:

- 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 hibernacula; and
- Dead or dying bats on the ground or on buildings, trees or other structures.

Hibernating bats may have other white fungus not associated with WNS. If a bat with fungus is not in an affected area and has no other signs of WNS, it may not have WNS.

5. What should you do if you find dead or dying bats in winter or early spring, or if you observe bats with signs of WNS?

- Contact your state wildlife agency, file an electronic report in those states that offer this service, e-mail U.S. Fish and Wildlife Service biologists at WhiteNoseBats@fws.gov, or contact your nearest Service field office (find locations at http://www.fws.gov/northeast/offices.html) to report your potential WNS observations.
- It is important to determine the species of bat in case it is a federally protected species. Photograph the potentially affected bats (including close-up shots if possible) and send the photograph and a report to your contact (above).
- If you need to dispose of a dead bat found on your property, pick it up with a plastic bag over your hand or use disposable gloves. Place both the bat and the bag into another plastic bag, spray with disinfectant, close the bag securely, and dispose of it with your garbage. Thoroughly wash your hands and any clothing that comes into contact with the bat. See a short instructional video on our WNS Web site.
- If you see a band on the wing or a small device with an antenna on the back of a bat (living or dead), contact your state wildlife agency or your nearest Service field office as these are tools for biologists to identify individual bats.

6. What species of bats are affected?
Tri-colored, little brown, northern long-eared, big brown, small-footed and Indiana bats have died from WNS. Big brown bats are typically found in lower numbers in the affected sites, and few have been found with the signs of WNS.

7. What are the Service and other federal and state agencies doing to find the cause and a cure for WNS?
An extensive network of state and federal agencies is working to investigate the source, spread and

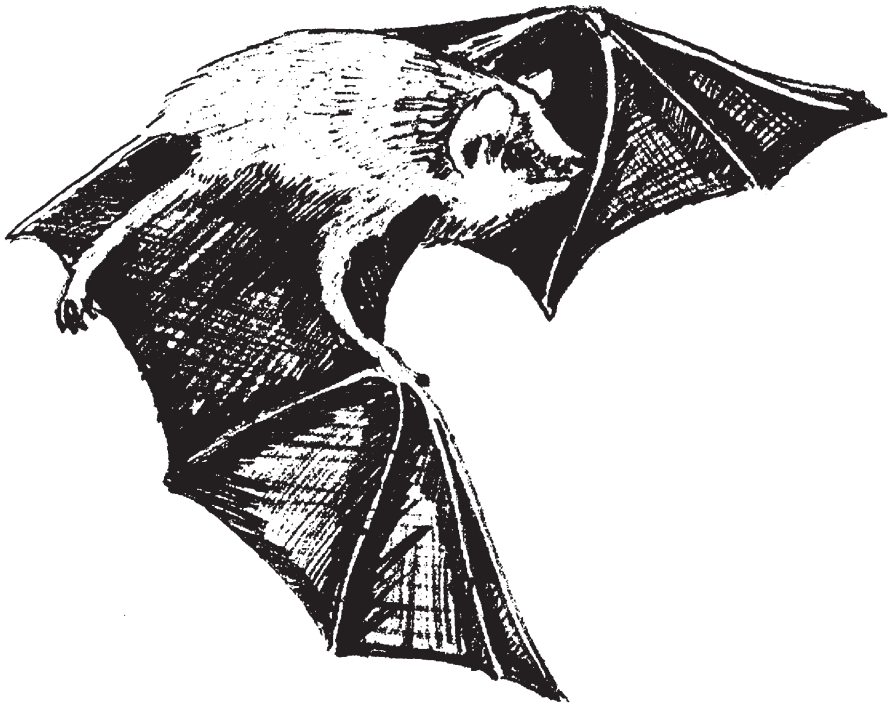
cause of bat deaths associated with WNS and to develop management strategies to minimize the impacts of WNS.

The overall WNS investigation has three primary focus areas: research, monitoring/management and outreach. For example, we are conducting winter surveys to document and track affected sites, working with the caving community and local cave owners to target potential sites for surveys and protective measures, and securing funding to identify and fund research on the spread and management of WNS. In addition, the Service has a Web page as a central repository for up-to-date information and links to other relevant Web sites.

8. What should cavers know and do?
The Service and the states request that cavers observe all cave closures and advisories and avoid caves, mines or passages containing hibernating bats to minimize disturbance to the bats. The Service asks that cavers and cave visitors stay out of all caves in the affected states and adjoining states to help slow the potential spread of WNS. Local and national cave groups have also posted information and cave advisories on their Web sites.

9. Does WNS pose a risk to human health?
Thousands of people have visited affected caves and mines since WNS was first observed, and there have been no reported illnesses attributable to WNS. We are still learning about WNS, but we know of no risk to humans from contact with WNS-affected bats. However, we urge taking precautions and not exposing yourself unnecessarily to WNS. Biologists and researchers use protective clothing when entering caves or handling bats in the Northeast.

10. What is the effect of WNS on bats?
Some 400,000 bats have died from WNS, and there seems to be no end in sight. We have seen 90 to 100 percent mortality of bats (primarily little brown bats) at several hibernacula in New York, Massachusetts, Connecticut and Vermont. However, there may be differences in mortality by site and by species within sites. The endangered Indiana bat hibernates in many of the affected sites. We are closely monitoring Indiana bat populations in many hibernacula and, to the extent possible, in their summer maternity colonies.



In New York and New England, we think as a result of WNS, winter counts of Indiana bats have declined. During the winter of 2008-2009 we conducted our biennial rangewide winter counts of Indiana bats. Early results from New York report significantly fewer bats.

In addition to the Indiana bat, WNS has reached sites that contain the endangered Virginia big-eared bat. While no Virginia big-eared bats have exhibited signs of WNS yet, we are closely monitoring this species.

11. Is global climate change a possible cause of WNS?
While the many possible causes of WNS are being investigated, there is currently no evidence to support a link between climate change and WNS. Microclimates in caves and mines where bats hibernate have been stable during the time period when WNS emerged, and there are no data indicating changes in insect prey populations in the affected region. Potential impacts of global climate change will continue, however, to be monitored as part of the investigation process.

For more information, see http://www.fws.gov/northeast/white_nose.html.

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