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NEWS EDITOR DAVID BRAUN'S EYE ON THE WORLD

Frightful Halloween for North America's Bats Stalked by Killer Fungus

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As millions of people prepare for fun and a candy-overload this Halloween, bats will feature prominently in their plans for costumes and decor on Fright Night.

But we should spare a thought for the flying, insectivorous mammals that play a critical role in the planet's ecology.

This Halloween is particularly scary for bat colonies in caves across North America. A deadly fungus is stepping up its attacks on bats as they hibernate through winter, causing them to behave eratically and starve, and placing at least some bat species on the road to extinction.

Bats with white-nose syndrome (WNS) exhibit uncharacteristic behavior during cold winter months, including flying outside in the day and clustering near the entrances of hibernacula (caves and other places where bats find refuge during hibernation), according to the U.S. Fish & Wildlife Service (FWS), which monitors the disease.

"Bats have been found sick and dying in unprecedented numbers in and around caves and mines. WNS has killed more than one million bats in the Northeast and Canada. In some hibernacula, 90 to 100 percent of bats have died," the Service says on its WNS website.

In less than four years since the discovery of the disease near Albany, New York, white-nose syndrome has spread to more than a dozen other U.S. states and Canadian provinces, and conservationists fear that entire bat species could be at risk. (National Geographic News story: Deadly Bat Fungus Spreading in U.S.)

This week, FWS, in collaboration with other federal and state agencies, and tribal governments, proposed a coordinated national management plan to address the critical environmental issue.

Available for review and comment beginning today, the draft plan provides a framework for WNS investigation and response, the Service said in a statement. A subsequent implementation plan will identify specific actions, the entities responsible for implementation of each action, and estimated costs.

"More than 50 agencies, organizations and individuals are working in concert on the white-nose syndrome response," said WNS National Coordinator Jeremy Coleman, of the FWS. "The national management plan will help guide our use of limited resources wisely and efficiently in addressing this urgent threat to bats and to our environment."

The draft plan includes an overall strategy for investigating the cause of WNS and finding a way to manage it, FWS said. "The plan identifies key actions and the roles of federal and state agencies and other entities in addressing WNS nationally. It identifies seven focus areas of responsibility--communications, scientific and technical information dissemination, diagnostics, disease management, research coordination, disease surveillance, and conservation and recovery of affected species."

Public Invited to Comment

FWS will accept public comments on the proposed plan through December 26, 2010 to gather additional scientific and commercial information for consideration before the plan becomes final.

The document and additional information about WNS are available online. Comments may be submitted by e-mail to WhiteNoseBats@fws.gov, by mail to WNS National Coordinator,

Photograph courtesy N. Heaslip, New York State Department of Environmental Conservation/

Bats display white-nose syndrome (WNS) in Hailes Cave in Albany County, New York. WNS, which appears in hibernating bats, has been linked to a cold-loving fungus found on the wings, ears, and muzzles of infected bats.

Little brown bat; close-up of nose with fungus, New York, October 2008. Below, likely WNS symptoms at Breathing Cave, Bath County, Virginia, late February 2009. (Left: Photo courtesy Ryan von Linden/New York Dept. of Environmental Conservation. Bottom: Photo by Wil Orndorff, Virginia Dept. of Conservation and Recreation--Division of Natural Heritage)

New York Field Office, 3817 Luker Road, Cortland, NY 13045-9348, or by fax to 607-753-9699.

But for the Center for Biological Diversity, an advocacy group based in Tucson, Arizona, the federal government is doing too little, too late to stop the spread of white-nose syndrome.

"the U.S. Fish and Wildlife Service's plan is still only in draft form and only provides a conceptual framework for responding to the disease. It lists no specific action items and makes no concrete recommendations for research and management of the fast-spreading malady that has hit nine bat species so far, including two on the endangered species list," the Center said in a statement in response to the FWS announcement.

"It's frightening to watch the government's slow-motion response to what biologists call one of the worst wildlife declines in American history," said Mollie Matteson, conservation advocate for the Center for Biological Diversity. "A year after it first released a draft version of its plan, we have yet another draft, and nothing that actually gives direction or provides resources to scientists in the lab or biologists in the field."

White-nose syndrome is associated with a newly identified fungal species that grows on bats' noses and wings and causes them to die of starvation during the winter, the Center explained. "From its epicenter near Albany, NY, the disease has spread rapidly, with the fungus now found on bats in 14 states, from New Hampshire to Oklahoma, as well as the Canadian provinces of Quebec and Ontario. Bats play a vital role around the country in controlling moths, beetles and other insects," the Center added.

"What would Halloween be without bats? Scarier still, what would America be without them," Matteson said. "If we're going to stem the spread of this deadly disease, we need the government to move quickly with a well-coordinated, well-funded response. In moving too slowly and failing to include concrete action, this plan keeps bats on the path to extinction, and we'll all be poorer for it."

The national plan has been long awaited by wildlife agencies and conservation groups as a way to push response to the disease into higher gear, the Center added. "Already, some bat populations in eastern states have declined by as much as 80 to 100 percent, and scientists fear that as the disease spreads westward, it will eliminate entire species of the insect-eating mammals. Insect populations may take off as a result, biologists say."

"The nightmare of this disease is only accelerating, but the federal government continues to waste time, as if it has decades to figure things out. The bats can't tolerate more dramatic losses, and they can't tolerate any more government foot-dragging," said Matteson.

As an alternative to the Fish and Wildlife Service's conceptual draft plan, the Center for Biological Diversity is urging the federal government take the following actions over the coming several months:

- Immediately declare white-nose syndrome a wildlife emergency
Dedicate at least U.S.$10 million for white-nose syndrome research in next year's Interior budget
- Develop a systematic plan for restricting access to all bat-occupied caves and mines on Bureau of Land Management lands and prohibit nonessential human access to all U.S. Forest Service caves in the Southwest by the end of the year
- Finalize the national response plan for the disease by mid-January
- Develop a National Park Service plan by mid-February to limit the disease's spread
- Prohibit nonessential human access to all Forest Service caves in the Intermountain, Northern, Pacific Southwest and Pacific Northwest regions by late February

Likely WNS symptoms at Breathing Cave, Bath County, Virginia, late February 2009.

The Center for Biological Diversity

filed a petition earlier this year to close all federally owned bat caves in the lower 48 states to protect bats from the possible human-caused spread of the white-nose fungus. Since then, the Center reports, the Forest Service has declared all bat caves in its Rocky Mountain Region (Kansas, Nebraska, Colorado and most of Wyoming and South Dakota) off-limits to recreational use; the Bureau of Land Management advised its state directors to take precautionary measures against the disease, including targeted cave closures; and the Fish and Wildlife Service administratively closed all bat caves and mines within the national wildlife refuge system. Last year, the Forest Service closed bat caves to recreational use in eastern and southern national forests.

"The Fish and Wildlife Service has yet to act on a Center petition, filed last January, to list two white-nose-affected bat species under the federal Endangered Species Act, despite clear evidence that bat numbers have declined dramatically in the East, where white-nose syndrome has been present the longest," the Center added.

Compiled by David Braun from media materials released by the U.S. Fish and Wildlife Service and the Center for Biological Diversity.

U.S. Fish & Wildlife Service

A National Plan for Managing White-Nose Syndrome in Bats

White-nose syndrome in bats
White-nose syndrome is a disease affecting hibernating bats. Named for the white fungus that appears on the muzzle and other body parts of hibernating bats, WNS is associated with extensive mortality of bats in eastern North America. Bats with WNS exhibit uncharacteristic behavior during cold winter months, including flying outside in the day and clustering near the entrance of hibernacula.

More than half of the 45 bat species living in the United States rely on hibernation for winter survival. Four endangered species and subspecies of hibernating bats in the United States are already affected by or are at risk from WNS.

Spread of WNS
The primary method of transfer of the fungus associated with WNS, *Geomyces destructans*, is thought to be through bat-to-bat contact, but biologists believe it can also be transferred inadvertently by humans.

First documented in New York in January 2007, WNS has killed more than 1 million bats in the Northeast and has spread quickly across the eastern United States and Canada. The fungus has been identified as far west as Oklahoma and is expected to continue spreading.

Working together to manage WNS: a national plan
As WNS spreads, the challenges facing wildlife managers in understanding threats to bat populations and managing WNS continue to increase. Collaboration among state, federal and tribal wildlife management agencies and NGOs is essential to the survival of bat species across North America.

Nancy Heaslip/NYDEC

Bats affected with white-nose syndrome

The national plan provides a framework for coordinating and managing the national investigation and response to WNS. The plan outlines the actions necessary for state, federal and tribal coordination, and provides an overall strategy for investigating the cause of WNS and finding a way to manage it.

The plan also identifies roles of federal, state and tribal agencies and non-government organizations in addressing WNS nationally.