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Bat decline gets in-depth endangered species review

by Beth Daley

Researchers at Boston University and elsewhere in the last five years have sounded the alarm over the rapid disappearance of bats from New England and the nation's night sky.
Now, the federal government may step in to better protect the winged mammals by possibly listing them on the endangered species list.

U.S. Fish and Wildlife Service officials say they are concerned enough about the fate of the eastern small-footed and the northern long-eared bats that they will conduct an in-depth status review to determine if they should be listed. The agency is also doing a preliminary review of the more common little brown bat and two other bat species to determine if they also need protection in part because of the fungus, known as white nose syndrome.

If any bat species are ultimately listed, it would likely result in bat habitat protection, setting up potential conflicts with wind farms whose blades can kill bats, mining and logging.

CAPTION: Bat with white nose syndrome. (Al Hicks. New York State Department Of Environmental Conservation.)

"We are pleased - we know the (US Fish and Wildlife) Service is genuinely concerned,'' said Mollie Matteson, conservation advocate for the Center for Biological Diversity, whose advocacy group filed a petition early last year asking the service to list the two species as threatened or endangered. "If action isn't taken to close caves in uninfected areas…we will lose these two bat species and perhaps many others."

White nose syndrome, first discovered in New York in 2006, has decimated some bat populations in the Northeast and is rapidly spreading across the country. The disease has now been confirmed in 16 states and the fungus has been discovered on bats in three other states. It is now confirmed in six bat species and three other species has been found with the fungus.

Scientists originally believed the fungus, like most on mammals, were topical – think Athlete's foot - and bats were dying from the loss of precious energy reserves as they scratched the fungus during hibernation. But now, there is emerging

evidence the fungus is invading live tissue - interrupting bats physiological processes, such as temperature regulation and the animal's ability to stay hydrated.

"It's a different kind of fungal infection known to mammals at this point,'' said Ann Froschauer, a spokeswoman for the U.S. Fish and Wildlife Service. "It's very complex."

The service also says habitat destruction and degradation, disturbance of hibernation areas and maternity roosts are other reasons for a deeper look at the species.

The review is expected to take more than a year for the two species and as long for the preliminary review of the little brown bats as federal researchers sift through biological to flight information on the species.

Tom Kunz, a bat specialist at Boston University, whose lab has just received a $2 million grant from the National Science Foundation to study white nose syndrome, said very little is known about the biology of the northern and small-footed bat.

Plus he said in an email "from my perspective, the threat to little brown bats far exceeds the threat to small-footed bats, but perhaps is similar to northern long-eared bats."

One study led by a Boston University post doctoral student concluded white nose syndrome – and continuing deaths from wind turbine blades – could render the little brown bat regionally extinct in the Northeast within two decades.

Kunz and other researchers have concluded that natural pest-control services by insect-eating bats save the U.S. agriculture sector at least $3 billion a year and as much as $53 billion a year.

In Chester, Massachusetts, where thousands of bats once inhabited old graphite mines, the winged animals have disappeared from the night sky.

"They are pretty much gone, sadly,'' said Richie Small, owner of Richie's General Service, an auto repair shop, in Chester. "They are very scarce and we don't have nearly the bat populations we once had.

But, he added, "the mosquitoes are doing fine."