Southern Appalachian Creature Feature Podcasts

WNS connection

Greetings and welcome to the Southern Appalachian Creature Feature.

Scientists recently announced a break-through in their study of the deadly bat disease white-nose syndrome. First discovered in a New York cave in 2006, the disease has spread in all directions, including into the Southern Appalachians, and is blamed for the deaths of more than a million bats.

Early on researchers discovered a fungus, *Geomyces destructans* was associated with the disease. In fact, it was this fungus that grows on the muzzles of bats, giving rise to the name "white-nose" syndrome. However, while the fungus was found on bats dying of white-nose syndrome, it wasn't clear what exactly caused the deaths. Was the fungus responsible, or was the fungus merely taking advantage of a bat whose immune response was compromised by something else.

Now a team of researchers have provided an answer to that question thanks to a fairly simple experiment.

Deaths from white-nose syndrome seem to be most prevalent during hibernation. In the experiment, researchers mimicked hibernation conditions in a controlled, laboratory environment, where they treated a group of little brown bats with the *Geomyces destructans* fungus harvested from a pure culture. As a control, they held bats in similar conditions, but didn't infect them. After 102 days, all of the treated bats tested positive for white-nose syndrome, while none of the control bats did. The fungus wasn't taking advantage of weakened bats, the fungus itself is the disease.

For WNCW and the U.S. Fish & Wildlife Service, this is Gary Peeples.