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Why We Should Care About Bats: Devastating Impact White-Nose Syndrome is Having on One of Nature's Best Pest Controllers

Witnesses

Gabriela Chavarria

Science Advisor to the Director, U.S. Fish and Wildlife Service

Accompanied By:

David Blehert, National Wildlife Health Center, U.S. Geological Survey

Jim Peña

Associate Deputy Chief, U.S. Forest Service

Jonathan Gassett

Commissioner, Kentucky Department of Fish and Wildlife Resources

Nina Fascione

Executive Director, Bat Conservation International

Peter Youngbaer

White-Nose Syndrome Liaison, National Speleological Society

Justin Boyles

Department of Ecology and Evolutionary Biology, University of Tennessee

Subcommittee Members Present

John Fleming, Chairman (R-LA)

Madeleine Bordallo, serving as Ranking Member (D-GU)

Rob Wittman (R-VA)

The Subcommittee on Fisheries, Wildlife, Oceans and Insular Affairs held a hearing on June 24, 2011 to discuss the devastating impact of white-nose syndrome on the U.S. bat population.

Subcommittee Chairman John Fleming (R-LA) began the hearing with an opening statement summarizing the problem of white-nose syndrome in the country. He explained that the disease has reached bat populations in 18 states and it is estimated that 1 million bats have died. More than \$16 million dollars have been spent on measures to eradicate the disease, but it continues to spread. Bats are critically important to the U.S. economy with a value of between \$3.7 and \$53 billion per annum because they consume between 660 and 1,300 tons of insects per year which would otherwise have to be killed using pesticides. Acting Ranking Member Madeleine Bordallo (D-GU) reiterated the public health, environmental, and economic importance of bats. She noted that the disease was first documented in February 2006 and has managed to spread across the country. Bordallo added that there are large gaps in our understanding of white-nose syndrome.

Gabriela Chavarria of the U.S. Fish and Wildlife Service testified about our current understanding of white-nose syndrome. She explained that 80% to 100% of bats die in affected populations and the disease can now be found from Canada to Tennessee. The spread of the disease may be due to human activity in caves. The United States Geological Survey is responsible for conducting much of the research on white-nose syndrome. Jim Peña of the United States Forest Service explained that decreasing bat populations hurt forest and grassland ecosystems due to their important role as pollinators and insect consumers. He reiterated that this makes them critical to agriculture by decreasing the need for pesticides. John Gassett of the Kentucky Department of Fish and Wildlife Resources provided examples of how white-nose syndrome has affected Kentucky, a state known for its large number of caves and caverns. Earlier this year his organization made the decision to cancel a caving event that usually attracts around 900 people, which had a detrimental economic impact on the surrounding community. The Kentucky Department of Fish and Wildlife Resources implemented an educational campaign in which they sent 80 letters to landowners suggesting that they close the caves on their private property and all but 3 landowners complied. He concluded by stating that congressional support is critical in solving the problem, particularly through research funding.

Nina Fascione, the executive director of Bat Conservation International, stressed that bats are critical to the production of corn, potatoes and cotton and that the agricultural industry will see major impacts in the next 3 to 5 years. Stopping white-nose syndrome, she added, will offset significant future costs that would result from the drastic decline in the nation's bat populations. Peter Youngbaer of the National Speleological Society provided a different perspective on the issue, claiming that not a single case of white-nose syndrome has been traced back to humans. He explained that different species of bats and bats living in different climates are affected differently. He concluded that closing caves is not necessary and that too much money has been spent on bureaucracy related to cave closures and not enough on science. The final witness, Justin Boyles of the University of Tennessee, stated that bats are arguably the most important non-domestic mammal in the United States and that the problem will only be solved through increased understanding of the syndrome and its sources.

Fleming began the question and answer session by inquiring how white-nose syndrome kills bats. Blehert explained how the fungus enters the skin tissues of bats, particularly the wings. He noted that if the disease continues to spread our bat populations will become much more homogeneous, similar to those in Europe. Fleming asked if there have been any attempts at spraying an antifungal film in caves. Blehert responded that it might be possible but that it this could be dangerous to humans. Fleming asked if there was any predator for the fungus and Blehert responded that there probably is, but nothing has been described yet that would be effective in killing the fungus.

Bordallo asked if there is any scientific basis for the cave closures. Blehert responded that bats spread the disease so cave closures cannot be the only method of combating it. Boradallo inquired about the cooperation of private cave owners in closing caves. Gassett explained that cave owners in Kentucky were very cooperative while Blehert added that cooperation in different states has varied. Youngbaer explained that the majority of caves are on private lands and unless endangered species are present in these caves the government can only recommend that private caves be closed. He concluded that closing caves on public lands simply does not work because public caves account for such a small percentage of all caves.

Representative Rob Wittman (R-VA) inquired about the success of the Smithsonian project aimed at saving the endangered Virginia big eared bats from white-nose syndrome. Peña responded that two of the bats in the program were still alive, which he cautiously saw as successful.

Fleming asked if there is a treatment for clothing and other items taken into caves that visitors could be educated to use to prevent the spread of the disease between caves. Though he said earlier that no evidence exists to blame humans for spreading the disease, Youngbaer responded that the National Speleological Society has educated thousands of youth on the importance of washing all clothes and other items taken into caves as a precautionary measure. However, he noted that this impact is limited to organized cave visits, while most caving occurs informally or on private property.

Bordallo asked why there was concern about the disease if some bat species remain unaffected. Boyles explained that the bats that remain unaffected are from uncommon species while the most prevalent species of bat, the little brown bat, has been greatly impacted. Bordallo inquired if there are other animals that could fill the role of bats in eating insects. Boyles responded that there is not a natural alternative to bats. Bordallo asked if there are caves where bats are the main attraction. Fascione responded that there are definitely many caves in which this is the case and the small business owners of commercial caves will be negatively impacted if their bats die off.

Written testimony, text of the legislation, opening remarks and an archived webcast is available from the subcommittee web page.