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White-nose Syndrome, which has killed as many as 6.7 million bats in North America, has been confirmed in Europe for the first time “ although there is no indication of the mass mortality that has decimated bat populations in the United States and Canada. This wildlife disease was positively identified on three mouse-eared bats (*Myotis myotis*) in the Czech Republic.

The *Geomyces destructans* fungus that causes WNS was confirmed in Europe in 2008, and photographs of bats with the characteristic white muzzles of the fungal infection have been reported for several decades, although the disease itself was not found. In the United States, the fungus was first seen on bats in a New York cave in February 2006.

The implications of this research, which was reported in the *Journal of Wildlife Diseases* in January, are unclear.

“Scientists around the world are discovering new hints about this tragic disease,” said Nina Fascione, Executive Director of Bat Conservation International. “But it often seems as if each new clue raises a host of new questions. The need for additional research “ and sufficient funding to support it “ is more critical than ever.”

“I wish we had a crystal ball and knew what this means for bats in Europe as well as North America,” said Mylea Bayless, BCI’s Conservation Programs Manager. “This really shows that we have so many things yet to learn about this disease.”

Some biologists have hypothesized that European bats may have faced the fungal disease in the past and survivors developed immunity to it. Some have also speculated that the fungus may have originated in Europe and was brought to the United States inadvertently by humans.

“Our results confirm the presence of WNS in Europe and demonstrate that *G. destructans* infection in hibernating bats in Europe can be associated with sporadic deaths that may remain unrecognized in the hibernaculum,” the authors wrote. They conclude that continuing, careful monitoring of bat populations is now especially critical.

The research was conducted by scientists from the University of Veterinary and Pharmaceutical Sciences, Institute of Vertebrate Biology and Masaryk University in the Czech Republic; the U.S. Geological Survey National Wildlife Health Center in the United States; and York University in the United Kingdom.

The researchers examined the carcasses of six emaciated greater mouse-eared bats found in 2010 on the floor of two Czech caves (where the fungus had been confirmed previously), plus a live bat with visible fungal growth that was taken from one of the same hibernation caves in 2011. Microscopic tissue studies of two of the five carcasses and of the live bat met “the current gold standard for diagnosing WNS,” the report said. The *G. destructans* fungus was confirmed through genetic analysis.

The paper also noted: “Mortality rates are low and, to date, have not affected the long-term population size of greater mouse-eared bats.”

This report comes on the heels of a tragic update of the White-nose Syndrome death toll that was issued January 17,

2012, by the U.S. Fish and Wildlife Service. The agency now estimates that between 5.7 million and 6.7 millions bats have been killed by WNS in the past six years. The official estimate had been “more than one million” since 2009.

“We knew that White-nose Syndrome has been taking a devastating toll on bats, and this confirms our worst fears,” Fascione said. “Extinctions are a real and imminent threat across North America.”

“This tragic report puts real numbers on the heart-wrenching images of dead bats littering the frozen floors of caves,” Bayless said. “We’re watching a potential extinction event on the order of what we experienced with bison and passenger pigeons for this group of mammals.”

Since 2006, WNS or the *G. destructans* fungus has spread to 19 states and 4 Canadian provinces, infecting more than 200 caves or mines where bats hibernate. Bat deaths have occurred only in eastern North America so far, but the disease appears poised to spread into the West.

Estimating the total number of bat deaths has been a difficult challenge for biologists, the Fish and Wildlife Service said. “Many bats were lost before we were able to establish pre-White-nose Syndrome population estimates,” said National WNS Coordinator Jeremy Coleman. Under the national WNS response plan adopted last year, scientists are working to improve consistency in data collection.

“We must redouble our efforts to deal with this terrible disease, and additional funding is crucial,” said Fascione. “If WNS continues to take such a huge toll, the environmental and economic costs will be enormous.”

Scientists estimate that 1 million bats would have consumed nearly 700 tons of insects per year. Since many of the insects eaten by bats are agricultural pests, losing more than 5.7 million bats will have expensive impacts on agriculture.

“We don’t know what the future holds for bats in North America,” said Fascione. “But what we do know is that we will keep trying to find a solution.”

You can help BCI fight White-nose Syndrome and other critical threats to bats. Please visit www.batcon.org/donate.

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