Bat fungus documented in Oklahoma

Laboratory tests performed at the U. S. Geological Survey National Health Center in Madison Wisconsin have confirmed that a cave myotis (Myotis velifer) bat collected alive on May 3, 2010 from a cave in northwest Oklahoma has tested positive for the fungus Geomyces destructans. This fungus is associated with a condition known as “white-nose syndrome” which appears to be specific to some species of hibernating bats and was first observed in four caves in New York during the winter of 2006.

Bats with white-nose syndrome have noticeable white fungus growing on their skin, particularly on their noses and other bare surfaces including their wings. White-nose syndrome frequently results in the deaths of the infected bats. Biologists continue to study the bat specimens to determine if all bats that come into contact with the fungus will develop the disease. There have been no reported human illnesses attributed to the fungus or to white-nose syndrome, and there is no evidence to suggest that the syndrome is harmful to organisms other than bats.

Although genetic tests indicate that the bat was harboring the fungus, the pattern of infection was not consistent with the white-nose syndrome infection observed in bats in the eastern United States. There also has not been a mortality event attributable to white-nose syndrome in Oklahoma to date. Both the Oklahoma Department of Wildlife Conservation (ODWC) and the U.S. Fish and Wildlife Service (FWS) are concerned about the potential development of white-nose syndrome in Oklahoma in the near future. The ODWC and FWS’s Oklahoma Ecological Services Field Office anticipate working in partnership with other federal and state agencies, researchers and conservation partners to monitor other Oklahoma caves and bat populations for the fungus and signs of white-nose syndrome.

This finding is the first record of the fungus in Oklahoma and represents the most western report to date. The next closest known report of the fungus occurred in eastern Missouri earlier this year. To date, all of the white-nose syndrome cases have been east of the Mississippi River. This finding also represents the first discovery of the fungus in a bat species that does not occur in the eastern United States. The range of the Cave Myotis extends from western Oklahoma and Texas west and south into New Mexico, Arizona, California and Mexico.

The potential impact of white-nose syndrome is considered to be significant due to the highly beneficial ecological and economic roles played by bats. Bats consume mosquitoes, moths and other night-flying
insects including species that cause extensive forest and agricultural damage. Additionally, bat guano provides essential nutrients to many otherwise nutrient-limited cave environments where other animals live.

Currently, white-nose syndrome is believed to be transmitted primarily through bat-to-bat contact. However, it is possible that the fungus could be transmitted by humans who enter caves and carry the fungus on their shoes, gear and clothing. Within the past four years, white-nose syndrome has been documented in 11 states and two Canadian provinces and is considered likely in two additional states where the fungus has been found.

For more information about white-nose syndrome, including information about ongoing research, recommended decontamination procedures for caving gear and clothing, and answers to frequently asked questions, please visit the Service’s white-nose syndrome national website at http://www.fws.gov/WhiteNoseSyndrome.