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Press Release

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Mutating rabies virus puts extra scare in bat researchers

Halloween is a time when many people are preoccupied with ghosts and vampires; however, during this Halloween season, Northern Arizona University researchers and students are focused on something really spooky—rabid bats.

These nocturnal creatures have a reputation for carrying the rabies virus, but what's occurring with the spread of rabies in the Coconino National Forest near Flagstaff is believed to be occurring nowhere else in the world.

"What we're seeing is evolution in action, happening before our eyes," said NAU wildlife ecology professor Carol Chambers. "We have a strain of rabies carried in big brown bats that now is being transferred from skunk to skunk and fox to fox," Chambers said. "These animals no longer have to come into contact with bats to catch this variant of rabies."

Researchers say rabies variants are specific to certain animals. For example, if a gray fox is bitten by a rabid bat, that variant dies with the host animal, the fox. But what's happening here is a mutating virus that is capable of surviving and being passed along by other animals, potentially enabling the rabies virus to become more widespread.

Rabies project coordinator Krista Wenning, of the U.S. Department of Agriculture's Animal and Plant Health Inspection Service, said this is a concern for people and pets because of the potential interaction with skunks and foxes in areas where homes are near or in the forest.

"We are concerned about humans and pets in the Flagstaff area because they are more likely to come into contact with skunks and foxes than with bats," Wenning said.

To combat the spread of rabies, researchers are catching skunks and foxes, vaccinating them and then releasing them back into the wild. They also have dropped oral rabies vaccinations from planes hoping skunks and foxes will eat them.

In the meantime, Chambers, other researchers and forestry students are catching big brown bats flying over ponds at dusk to discover how many are carrying the virus. At makeshift

forest medical stations, Chambers, Wenning, other researchers and students can be found weighing the bats, testing their saliva and taking their blood.

“The big brown bats weigh about 18 grams, or about four-and-half Hershey’s Kisses to a trick-or-treater,” said NAU forestry master’s student Liz Mering.

The bats are then fitted with tiny backpack-like transmitters and released back into the woods where they will serve the helpful purpose of taking a bite out of insect populations that can spread disease.

Through sounds emitted from the transmitters, researchers can track the bats to find out where they are roosting. These creatures of the night prefer standing dead trees, or snags, but those forest components are becoming harder to find.

“Through forest restoration efforts, we are hoping to grow bigger trees faster that will eventually become snags,” Chambers said. “We would rather the bats use their natural habitat in the woods than the roofs or porches of human homes.”

For information about bat research contact Chambers at (928) 523-0014.

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