

Scientists: Tumor-causing virus widespread in wild turkeys

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Credit: Yathin S Krishnappa

Wildlife biologists tracking a tumor-causing virus first diagnosed in eastern wild turkeys five years ago have found the virus is far more widespread—but less deadly—than expected.

The new study eases fears among wildlife managers and hunters that lymphoproliferative disease [virus](#)—which can turn a turkey's head into a

gruesome mass of scabby tumors and clog its airway— isn't to blame for a drop in the wild turkey population.

In 2009, scientists at the University of Georgia diagnosed the virus in a tumor-riddled wild turkey from Arkansas, the first time it was found outside of domestic turkeys in Europe and Israel. A follow-up study found the virus in numerous healthy turkeys shot by hunters in 17 states from Colorado to Maine.

"Once we discovered this virus and found it was common, there was a big scare," said Justin Brown, lead researcher at the Southeastern Cooperative Wildlife Disease Study and now state wildlife veterinarian for Pennsylvania. "There was a fear that this virus was decimating turkeys and we've missed it all these years."

The discovery of the virus, which can also cause cancerous growths on the liver, spleen, kidneys and lungs, came at a time when the National Wild Turkey Federation said turkey populations had decreased 15 percent across their range. New York's wild turkey population, for instance, is at a 15-year low.

The new study, to be published in coming weeks, provides some much-needed perspective, Brown said.

"We found that infection is widespread and common, but the development of tumors is actually a rare event," he said.

It's unknown what percentage of infected turkeys get tumors and what the death rate is, Brown said. "We can say it's a sporadic cause of tumor formation and mortality."

Prized by hunters, eastern wild turkeys can stand 2 1/2 feet tall and weigh up to 25 pounds. Males in spring breeding season have red, blue

and white skin on their heads, a long beard of hair-like feathers, and glossy black plumage with an iridescent copper and greenish sheen.

Eastern wild turkeys had once been exterminated in New York but boomed under restoration efforts in recent decades, so much so that the state's wildlife agency helped re-establish populations throughout the Northeast.

Over-hunting and forest-clearing in the late 1800s eradicated the species in New York, but they were re-introduced around 1948 from a small remnant population in Pennsylvania. As abandoned farms reverted to forest, New York's turkey population reached a high of 300,000 birds in 2001, when the population of raccoons and other common nest predators had been decimated by rabies. The state shipped hundreds to Vermont, New Hampshire and other New England states.

"There has been a gradual decline over the past decade, to about 180,000 statewide today," said Mike Schiavone, a wildlife biologist who heads wild turkey research for the Department of Environmental Conservation. The decline has been attributed to a decrease in habitat, an increase in predators, and bad weather in spring or summer that hurts breeding and survival of young.

Schiavone said the tumor virus was first detected in New York in 2012. "What we discovered after we ramped up testing in the last three years is that prevalence is really high, like 50 percent," Schiavone said. The prevalence rate ranges from an estimated 30 to 80 percent, depending on the testing site.

Katrina Alger, a graduate student at the State University of New York College of Environmental Science and Forestry, is testing for the virus in blood collected from [wild turkeys](#) during banding and bone marrow from the legs of birds sent by hunters.

The virus hasn't been detected in domestic poultry in North America, but some labs in the Northeast are testing backyard flocks to see if they're infected, Brown said. It's not contagious to humans, but DEC advises against eating diseased birds.

"One of the things we need to do moving forward is to try to determine if there are other effects of this virus other than tumors," Brown said. Similar viruses in poultry have been found to cause other disease syndromes that leave birds weak and immune-suppressed.

"We also don't know the impact on really young turkeys," Brown said. "That's one of a number of things we still have to evaluate."

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