Deadly Fungus Found in State Frogs

John Burgeson

March 15--A fungus that devastated amphibian populations worldwide has been found in lakes and ponds in Connecticut, the state Department of Environmental Protection reports.

The fungal disease has spread across the globe. Chytridiomycosis, or amphibian chytrid fungus, causes frogs, toads and salamanders to suffer from a skin disease that gradually weakens the little animals, shortening their life spans, sometimes dramatically.

"This past fall we collected 600 samples from amphibians throughout the state, and we had Yale test them," said Julie Victoria, a DEP wildlife biologist. "About a third of the samples came back with the fungus."

She said that up to this point, there hasn't been any fungus-caused amphibian die-offs in Connecticut or the Northeast. But the discovery still worries biologists because the disease has had disastrous effects in many frog species worldwide, causing 100 percent mortality in some localized populations in Australia, Central America and elsewhere.

Some frog species have even gone extinct from fungus infestations, the DEP notes. About 30 frog species disappeared in a section of Panama alone from chytrid, according to an article published in May 2010 in the Journal National Academy of Sciences, and scientists estimate that as many as 130 frog species worldwide, and perhaps many more, have disappeared primarily because of chytrid. There are about 6,000 known frog species.

"It may have been in Connecticut for some time, but this is the first time we actually looked for it," she said.

With their bulging eyes and sardonic expressions, frogs, thanks in no small measure to Sesame Street's Kermit, have won their way into the hearts of many. Scientists say that they help keep mosquito and other insect populations in check. They're also the planet's "canary in the coal mine," often warning humans of local and even global environmental disasters.

Victoria said that while amphibians in zoos and public aquariums can be treated with a fungicide, this solution isn't practical in the wild. This is because the spore phase of the fungus comes equipped with a flagellum for relatively rapid locomotion, scientists say. The spores can also live for months on end in aquatic sediments.

"In Colorado, it was found that their frogs weren't dying, but they did have a lower survivorship," she said. "So, maybe we won't see a die-off, but maybe our frogs won't live as long. But we don't know that -- it's something that we'll have to study more."

Fifteen species of frogs, toads and salamanders, all natives to Connecticut, were swabbed, and the fungus was found in just about all of these species, she said.

"If the disease takes hold, it causes lethargy, sloughing off of skin and an odd resting pose in which they don't let their bellies touch the ground," she said, noting that this uncharacteristic pose may mean the animal is in some degree of pain.

Although skin is a vital organ in all animals, it's particularly critical in amphibians, because they both breathe and absorb water through it. In fact, frogs don't drink water by mouth at all.

It's believed that chytridiomycosis has spread from the worldwide trade in amphibians. It was first seen as a problem in 1993 when large numbers of frogs in Queensland, Australia, were found dead and dying from the fungus.

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