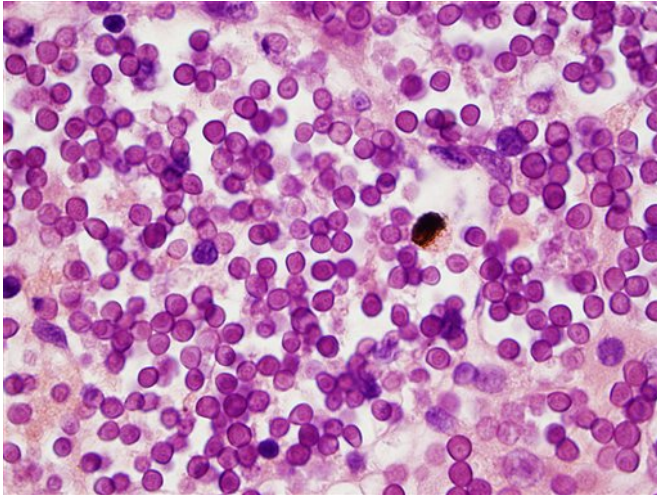


Newly identified tadpole disease found across the globe

10 August 2015



This handout image provided by Michael J. Yabsley, University of Georgia is from the liver of a tadpole that died in 2006 as part of a mass die-off in a lake in Athens, Ga., and magnified 100 times. The purple dots are stained parasites that have now turned up in frogs and tadpoles worldwide and is just one more threat for an already declining amphibian population. Credit: University of Georgia./Michael J. Yabsley

Scientists have found that a newly identified and highly infectious tadpole disease is found in a diverse range of frog populations across the world. The discovery sheds new light on some of the threats facing fragile frog populations, which are in decline worldwide.

The study, published in the *Proceedings of the National Academy of Sciences* journal, led by the University of Exeter and the Natural History Museum, describes the molecular methods used to test frog tadpoles for a newly identified [infectious agent](#).

Tadpoles from six countries across three continents were tested for 'protists' - single celled microbes with complex cells which store their DNA

in a nucleus, like human cells. The previously unidentified parasite was present in tadpole livers in both tropical and temperate sites, and across all continents tested. The infectious agent was identified as a distant relative of *Perkinsea* sp., a marine parasites found in animals and algae.

Professor Thomas Richards from the University of Exeter said: "Global [frog populations](#) are suffering serious declines and infectious disease has been shown to be a significant factor. Our work has revealed a previously unidentified microbial group that infects tadpole livers in frog populations across the globe."

"We now need to figure out if this novel microbe - a distant relative of oyster parasites - causes significant disease and could be contributing to the frog population declines."

It is widely recognised that amphibians are among the most threatened animal groups: for example, in 2008, 32% of species were listed as 'threatened or extinct' and 42% were listed as in decline. The decline of amphibian populations, particularly frogs, is thought to suggest that Earth is currently undergoing a sixth mass extinction event.

More information: Cryptic infection of a broad taxonomic and geographic diversity of tadpoles by *Perkinsea* protists, *Proceedings of the National Academy of Sciences*, www.pnas.org/cgi/doi/10.1073/pnas.1500163112

Provided by University of Exeter

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