

# Cure for chytrid: Scientists discover method to eliminate killer fungus

18 November 2015



The study combined antifungal treatment of Mallorcan midwife toad (*Alytes muletensis*) tadpoles with environmental disinfection. Credit: Jaime Bosch MNCN-CSIC

Research published today details the first-ever successful elimination of a fatal chytrid fungus in a wild amphibian, marking a major breakthrough in the fight against the disease responsible for devastating amphibian populations worldwide. The highly-infectious chytrid pathogen has severely affected over 700 amphibian species worldwide; driving population declines, extirpations and species extinctions across five continents.

Results from the seven-year study show the first evidence of eradicating the chytrid pathogen *Batrachochytrium dendrobatidis* (Bd) affecting amphibians in situ. Published today (18 November) in *Biology Letters*, the paper details the outcome of a project led by scientists from the Zoological Society of London (ZSL), the National Museum of Natural History in Spain (MNCN-CSIC), and Imperial College London.

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tadpoles with environmental disinfection. By using an antifungal to treat tadpoles and a common laboratory decontaminant to sterilise the environment, researchers were able to clear infection from populations of the toad over the research period.

Co-author Dr Trenton Garner, Reader within ZSL's Institute of Zoology, said: "This study represents a major breakthrough in the fight against this highly-destructive pathogen; for the first time we have managed to rid wild individuals of infection for a continued period.

"Amphibian-associated chytrid fungi are a critical conservation issue that requires simple, straightforward and transferrable solutions. Our study is a significant step towards providing these."



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Dr Jaime Bosch, Senior Researcher at MNCN-

CSIC, added: "This is the first time that chytrid has ever been successfully eliminated from a wild population - a real positive which we can take forward into further research to tackle this deadly disease. Chytrid is a global issue which affects [amphibian populations](#) worldwide, and I am proud to be part of a team of leading institutions at the forefront of this pioneering research working towards a solution."

Chytrid fungal infections causing [amphibian](#) mass mortality were first identified at the end of the 20th century by a consortium of scientists, including ZSL researchers.



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**More information:** Bosch J, Sanchez-Tome E, Fernandez-Loras A, Oliver JA, Fisher MC, Garner TWJ. (2015). Successful elimination of a lethal wildlife infectious disease in nature. *Biol. Lett.* 20150874. [dx.doi.org/10.1098/rsbl.2015.0874](https://doi.org/10.1098/rsbl.2015.0874)

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