Madagascan frogs at risk from killer fungus

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Devastating chytrid fungus responsible for massive declines of amphibian populations around the world is found on isolated Madagascar

New research, published today (26/02/2015) in *Scientific Reports,* by a team of international scientists including the Zoological Society of London (ZSL) and Imperial College London, document the presence of a potentially devastating amphibian pathogen in Madagascar, an island previously thought to be free of infection. Conservationists are concerned that in Madagascar, home to around four percent of the world's amphibian species, the fungus could devastate worldwide amphibian diversity.

An international team of researchers screened more than 4,100 frogs across Madagascar and found *Batrachochytrium dendrobatidis (Bd*), a type of chytrid fungus that has been responsible for wiping out amphibian species in the wild, such as the Mountain Chicken frog from Dominica, in five remote areas of Madagascar.

With an estimated 500 species of frogs at risk, nearly all of them exclusive to Madagascar, ZSL scientists are researching the origin of the fungus in the island and how it affects its unique inhabitants.

Gonçalo M. Rosa, co-author and researcher at ZSL, said: "For several years Madagascar was thought to be a chytrid-free area, but these findings may suggest that the fungus has been present for a while and not exclusively as a result of recent introduction, as we have seen in places such as Europe or Montserrat.

"We are still trying to figure out whether these findings could be as devastating to Madagascan amphibians as it has been in other regions, or if they have been living with the fungus for years. This would be a more optimistic scenario."

Professor Matthew Fisher, from the School of Public Health at Imperial College London, is currently working on determining whether the fungus they have detected belongs to the same deadly lineage that is threatening to cause the loss of more than one third of the planet's amphibians.

"Our initial results show that the type of *Bd* on Madagascar is very similar to the deadly lineage that has emerged worldwide, but more work needs to be done to confirm this finding," said Professor Fisher, who co-authored the paper.

Rosa adds: "ZSL is actively researching how to mitigate the impact of *Bd*. It's essential to take the lessons learned from other places that have been severely affected by this pathogen in order to help us safeguard the future of Madagascan amphibians."

Chytrid fungus has already caused severe decline in amphibian populations across America, Australia, Europe and east Africa. Infection by*Bd* fungus causes the disease chytridiomycosis that affects keratin levels in amphibians' outer skin layers, making them thick and unable to hydrate or absorb essential minerals, and results in death.

ENDS

Reference

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ZSL

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Frogs in Madagascar

Madagascar is home to approximately 500 frog species. With nearly all of them exclusive to the island, it

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is one of the most important sites of amphibian diversity in the world.

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