

Chytridiomykose – eine Infektionskrankheit als Ursache des globalen Amphibiensterbens?

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Chytridiomycosis – does an infectious disease cause global amphibian decline?

The amphibian chytridiomycosis, a fungal disease caused by *Batrachochytrium dendrobatidis*, has been supposed to be a major reason for population declines and the disappearance of amphibian species since the beginning of the 1970s. *B. dendrobatidis* has already been diagnosed in more than one hundred amphibian species from Australia, North and South America, Africa, and Europe. According to the results of intensive research projects, a correlation between the observed mass die-offs and the occurrence of chytridiomycosis has been assumed, especially for Australia. Although *B. dendrobatidis* seems to be a highly virulent pathogen causing huge mortalities in populations of susceptible amphibian species, there are an increasing number of species with only asymptomatic infections. To estimate the threat for amphibian populations and to be able to take protection measures, our knowledge about chytridiomycosis has to be significantly improved. Important questions concern the pathogenic mechanism causing the death of infected individuals as well as the dispersal and geographical origin of the fungus. To date it is questionable whether chytridiomycosis represents a novel infectious disease or whether *B. dendrobatidis* is instead a globally distributed pathogen whose virulence has been regionally enforced by altered environmental factors. This review summarises our current knowledge about chytridiomycosis. Findings which shed light on the threat for amphibians are critically discussed and preventive measures for the protection of indigenous populations are proposed.

Key words: Chytridiomycosis, *Batrachochytrium dendrobatidis*, infectious disease, amphibians, population declines, mass die-offs, fungus, pathogen.

Zusammenfassung

Die Chytridiomykose, eine durch *Batrachochytrium dendrobatidis* verursachte Pilzerkrankung bei Amphibien, steht im Verdacht, für Bestandseinbrüche und das Aussterben verschiedener Arten seit Anfang der 1970er Jahre, insbesondere in Australien und Amerika, maßgeblich verantwortlich zu sein. *B. dendrobatidis* wurde inzwischen auch in Nord- und Südamerika, Afrika und Europa bei über einhundert Amphibienarten nachgewiesen. Für einige Arten scheint *B. dendrobatidis* offensichtlich ein hoch virulenter Erreger zu sein, dem innerhalb kurzer Zeit ganze Populationen zum Opfer