



# Amphibian Disease Portal: *AmphibianDisease.org*

## OVERVIEW OF *AmphibianDisease.org*

The Amphibian Disease Portal (*AmphibianDisease.org*) archives and shares aggregated data on the amphibian chytrid fungi *Batrachochytrium dendrobatidis* (*Bd*) and *B. salamandrivorans* (*Bsal*). This data management portal aims to accelerate information sharing among world scientists, natural resource managers, and the public regarding planned and ongoing surveillance projects and scientific studies, as well as the results of completed work. These data are especially important to inform rapid responses to disease occurrences and decision support for allocation of limited resources, such as development of new projects (including metadata analyses of these world-community data) and disease monitoring programs. This portal includes data from the legacy *Bd-Maps.net* (Olson et al. 2013), the US Geological Survey results for *Bsal* in the USA from 2014–2017 (Waddle et al. 2020), and the *Bsal* Consortium of Germany (Vences and Lötters 2020).

## HOW THE PORTAL WORKS

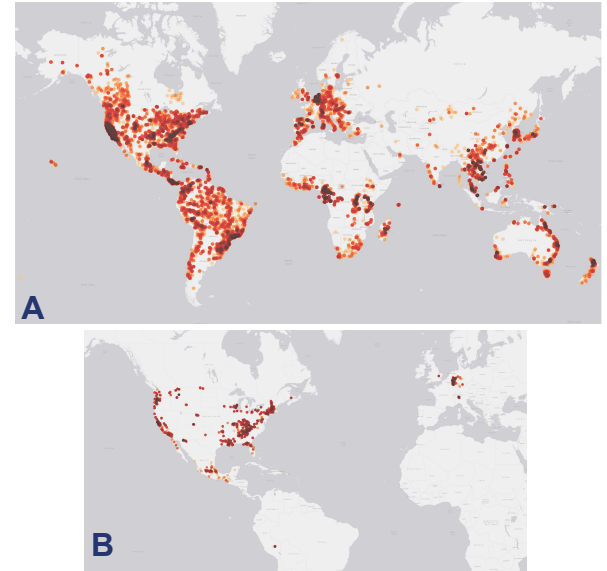
The Amphibian Disease Portal maintains private and public *Bd* and *Bsal* datasets in a standards-compliant, web-accessible portal hosted by the University of California, Berkeley, where it is integrated with AmphibiaWeb and the global bio-sampling database GEOME, expanding its outreach, scope, and capacity.

- Once registered, researchers can import, export, and view data as well as add other managers.
- The public can query data by pathogen, disease mortality, host amphibian taxon, and geographic location.
- Sensitive location data are masked from the public for amphibians with sensitive at-risk status to protect them from potential overexploitation and for unpublished results until release is authorized.
- Data include *Bd* strain, mortality, mappable coordinates, and surveillance results from captive amphibians and environmental DNA.
- Periodically, data are harvested from the scientific literature.

Total Samples: 72411    Total Species: 2830    Total Countries: 128

Top Five Countries		Top Five Species	
Country	No. Samples	Species	No. Samples
USA	29561	<i>Notophthalmus viridescens</i>	6968
Germany	6467	<i>Salamandra salamandra</i>	3172
Brazil	4904	<i>Taricha granulosa</i>	2602
Australia	2864	<i>Batrachoseps luciae</i>	1906
Netherlands	2843	<i>Ichthyosaura alpestris</i>	1899

Example: Disease Portal Query: *Bd* and *Bsal*, Global, All Samples (*Bd/Bsal* detected and not detected). Image source: AmphibianDisease.org; Accessed 23 January 2024



Heat maps of (A) *Bd* and (B) *Bsal* samples (see table), including both positive and negative data. Available on Amphibian Disease Portal, 1 June 2023.

Top Anuran species (7th most-sampled species overall) for *Bd/Bsal* samples is currently *Rana catesbeiana*, with 1299 samples recorded.

## SUGGESTED READING

- Gray, M.J., E.D. Carter, J. Piovio-Scott, et al. 2023. Broad host susceptibility of North American amphibian species to *Batrachochytrium salamandrivorans* suggests high invasion potential and biosecurity risk. *Nature Commun.* 14:3270. Doi: 10.1038/s41467-023-38979-4
- Koo, M.S., V.T. Vredenburg, J.B. Deck, D.H. Olson, K.L. Ronnenberg, and D.B. Wake. 2021. Tracking, synthesizing and sharing global *Batrachochytrium* data at AmphibianDisease.org. *Front. Vet. Sci.* 8:728232. Doi: 10.3389/fvets.2021.728232.
- Olson, D.H., D.M. Aanensen, K.L. Ronnenberg, C.I. Powell, S.F. Walker, J. Bielby, T.W.J. Garner, G. Weaver, the Bd Mapping Group, and M.C. Fisher. 2013. Mapping the global emergence of *Batrachochytrium dendrobatidis*, the amphibian chytrid fungus. *PLoS ONE* 8(2): e56802. doi:10.1371/journal.pone.0056802
- Olson, D.H., K.L. Ronnenberg, C.K. Glidden, K.R. Christiansen, and A.R. Blaustein. 2021. Global patterns of the fungal pathogen *Batrachochytrium dendrobatidis* support conservation urgency. *Front. Vet. Sci.* 8:685877. Doi: 10.3389/fvets.2021.685877.
- Vences, M., and S. Lötters. 2020. The salamander plague in Europe – a German perspective. *Salamandra* 56(3):169-171.
- Waddle, J.H., D.A. Gear, B. A. Mosher, E.H.C. Grant, M.J. Adams, et al. 2020. *Batrachochytrium salamandrivorans* (*Bsal*) not detected in an intensive survey of wild North American amphibians. *Scientific Reports* 10:13012. Doi: 10.1038/s41598-020-69486-x