

# GLOBAL RANAVIRUS REPORTING SYSTEM

Frog larva with ranavirus. Photo Jesse Brunner, Washington State University, WA, USA

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## OVERVIEW

### The Global Ranavirus Reporting System

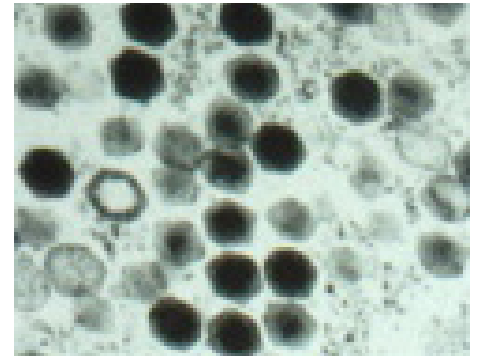
Ranaviruses (family: *Iridoviridae*) are a group of emerging viral infections that affect a variety of taxa, including amphibians and reptiles (Chinchar *et al.* 2017). Ranavirus infection and the resultant disease, ranavirosis, can lead to large scale mortality events, especially in some anuran amphibians and turtles. They are globally distributed and in amphibians are considered to be a reportable disease (OIE 2020), which means that they must be reported to state and federal authorities, which in turn report occurrences to the World Health Organization for Animals (i.e., the OIE). For more information about ranaviruses, please see the PARC DTT Ranavirus Information Sheet.

The Global Ranavirus Reporting System (GRRS) was created in 2015 and re-imagined in 2019 (Brunner *et al.* 2021) to fill in an important gap in knowledge about the diversity of hosts and the distribution of ranaviruses around the globe, similar to the [AmphibianDisease.org](https://amphibian-disease.org) portal, for the amphibian chytrid fungi, *Bd* and *Bsal*. The GRRS is a centralized, open access database, for all taxa of affected animals (Brunner *et al.* 2021) and the web portal is accessible here: [brunnerlab.shinyapps.io/GRRS-Interactive/](https://brunnerlab.shinyapps.io/GRRS-Interactive/)

## WEB PORTAL FEATURES

There are multiple data fields in the system including: location, host(s), infection status, species, and the method of detection used. Data can be sorted and filtered in a variety of ways and visualized in a map or downloaded as a CSV file. These different layers can be used to answer questions about the known ranavirus distribution in a certain taxon or geographic region.

**NOTE:** Submitting reports of ranavirus presence to the GRRS does NOT constitute reporting to State and Federal agencies!

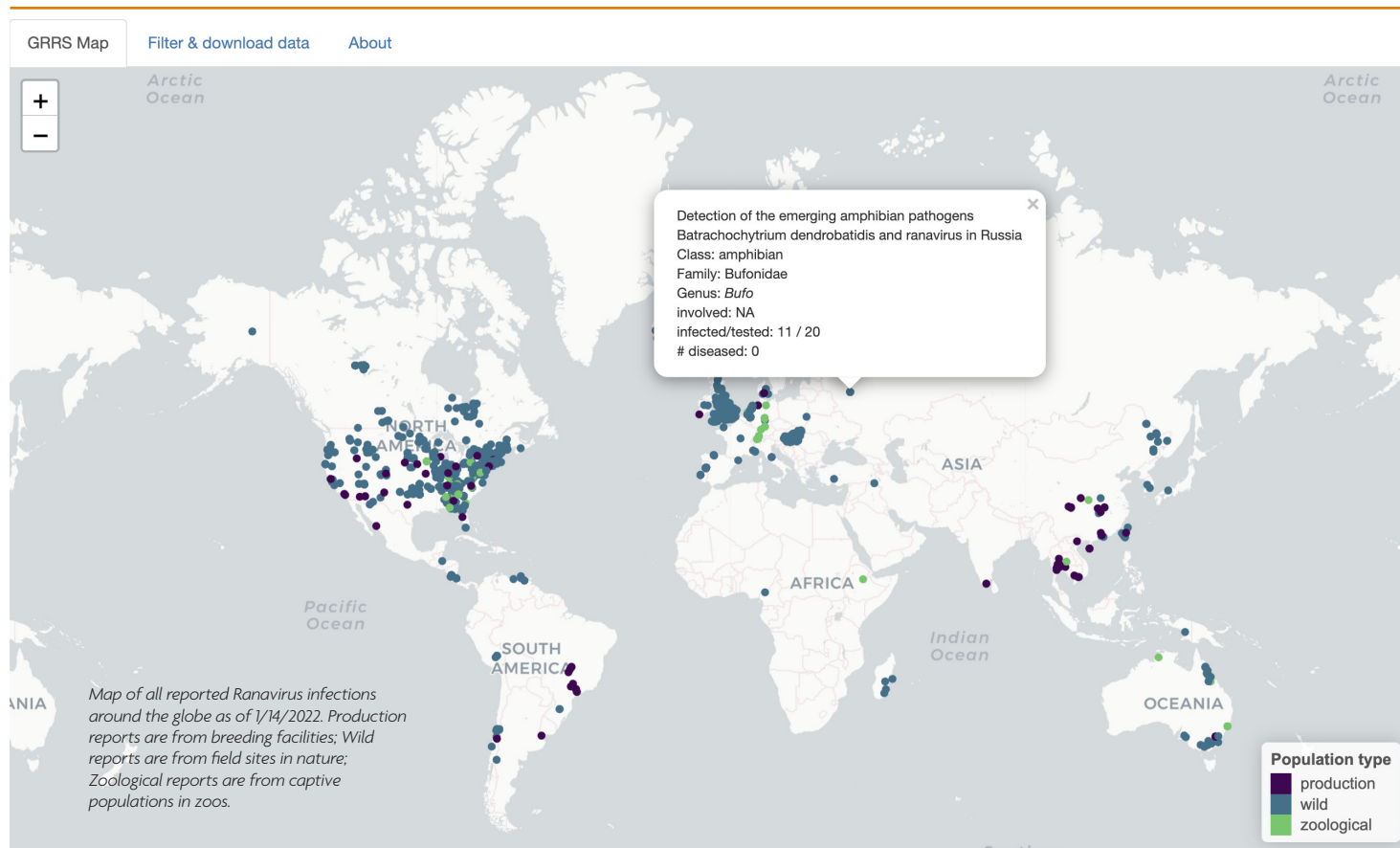


Microscopic image of ranavirus. Photos by Jesse Brunner, Washington State University, WA, USA



Middle and bottom: salamander mortality from ranavirus infection. Photos by Jesse Brunner, Washington State University, WA, USA

continued ▶



## HOW TO USE THE PORTAL

The portal is built around an interactive map, where each colored point represents a record of one or more individual animals tested for ranavirus or ranavirosis. Clicking on a point brings up more information (inset, map above), including the publication title so that users can trace points back to publications or, in the few cases of unpublished accounts, the sources of the reports. The “Filter & download data” tab provides a means of filtering the dataset to be plotted or downloaded by infection status (all records or only confirmed infections or diseased records), population type (wild, production, or zoological), and taxa (class and genera). The “About” tab provides acknowledgements as well as a template spreadsheet for users to enter their own data into the GRRS (by emailing Jesse Brunner; jesse.brunner@wsu.edu).

## QUESTIONS? PLEASE CONTACT:

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## SUGGESTED READING

Jesse L. Brunner, Deanna H. Olson, Matthew J. Gray, Debra L. Miller, and Amanda L.J. Duffus. Global patterns of ranavirus detections. 2021. *FACETS*. 6(1): 912-924. <https://doi.org/10.1139/facets-2020-0013>

Chinchar, V.G., Hick, P., Ince, I.A., Jancovich, J.K., Marschang, R., Qin, Q., Subramaniam, K., Waltzek, T.B., Whittington, R., Williams, T., Zhang, Q., and ICTV Report Consortium. 2017. *ICTV Virus Taxonomy Profile: Iridoviridae*. *Journal of General Virology*, 98, 890–891

World Organization for Animal Health (OIE). 2020. OIE-WAHIS portal: [Animal Health Data oie.int/en/animal-health-in-the-world/wahis-portal-animal-health-data/](https://www.oie.int/en/animal-health-in-the-world/wahis-portal-animal-health-data/).

## RANAVIRUS WEBINAR

Chinchar, G., J. Brunner, and J. Mihaljevic [with J. Robert and L. Grayfer]. 2023. Ranavirus: Threat of Aquatic Wildlife. Webinar, October 14, 2023. Global Ranavirus Consortium with PARC Disease Task Team. Available at: **Ranavirus: Threat of Aquatic Wildlife - YouTube** <https://www.youtube.com/watch?v=ol3dRShDekU>