

SpREAD: Spatio-temporal Rodent Community Ecology And Disease Database.

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This information is for researchers interested in co-authorship

SpREAD is a project being carried out by the Infectious Disease Systems Ecology Group of the British Natural History Museum. It is a database inspired by previous efforts to gather data from scientific papers (Simons et al. 2023) and other open databases (Hudson et al. 2017). SpREAD aims to aggregate as many previous rodent community trapping studies as possible to a common resolution, to achieve the sample size necessary for robust infection dynamics modelling in rodent communities.

The secondary aim of SpREAD is to provide a much-needed standard of reporting for trapping studies on rodent communities to adhere to going forwards. Previously, the data reported in these studies has often been highly summarised (e.g yearly) and has left out key information about the location and serology of the trapping. This information, if included, would enable the data to be used in studies beyond the initial publication, making the most out of the resources and effort put in by scientists in the field. The SpREAD database will serve as a community-driven tool to be continually added to, ever improving in its completeness and utility.

Requirements for inclusion

The minimum requirements for data to be included in the SpREAD database are as follows:

1. Date of trapping (minimum month resolution)
2. Duration of trapping (or end date)
3. Precise coordinate location of trapping site
4. All captured rodents' abundances are reported
5. All captured are tested for a virus
6. Type of test used and virus name (at least family level)

Desirable:

1. Indication of trapping method (e.g. area/number of traps)
2. Indication of trapping effort (trap nights)

If you are interested in co-authoring this paper and providing your data, please submit it via **this link** or paste this in your browser: <https://forms.gle/BhRf5SP36EHwJYPV9>.

If your initial publication contains some of the information specified above, you need only submit the additional information required, along with the doi of the original publication.

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The SpREAD database as of Sept. 2024

The following figures show the data obtained via extraction from the literature. (refer to figure in text here)

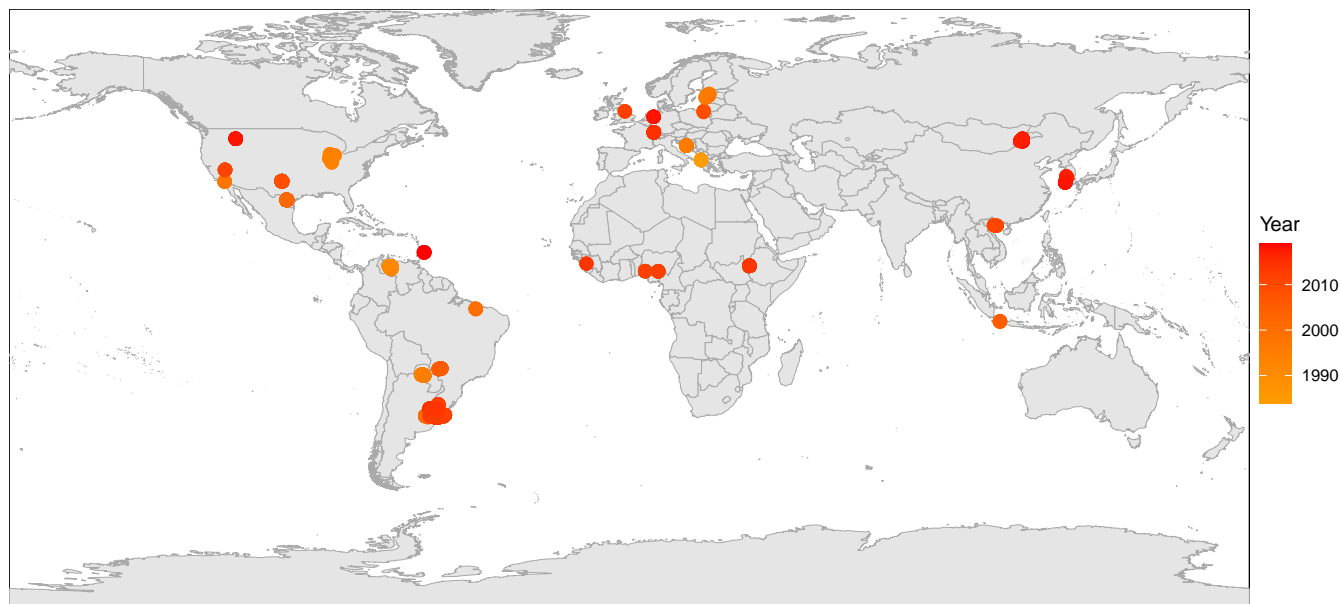


Figure 1: The geographic locations of trapped rodents included in our study. The colour of points denotes the year sampled.

References

- Hudson, Lawrence N, Tim Newbold, Sara Contu, Samantha LL Hill, Igor Lysenko, Adriana De Palma, Helen RP Phillips, Tamera I Alhusseini, Felicity E Bedford, and Dominic J Bennett. 2017. “The Database of the PREDICTS (Projecting Responses of Ecological Diversity in Changing Terrestrial Systems) Project.” *Ecology and Evolution* 7 (1): 145–88.
- Simons, David, Lauren A Attfield, Kate E Jones, Deborah Watson-Jones, and Richard Kock. 2023. “Rodent Trapping Studies as an Overlooked Information Source for Understanding Endemic and Novel Zoonotic Spillover.” *PLOS Neglected Tropical Diseases* 17 (1): e0010772.

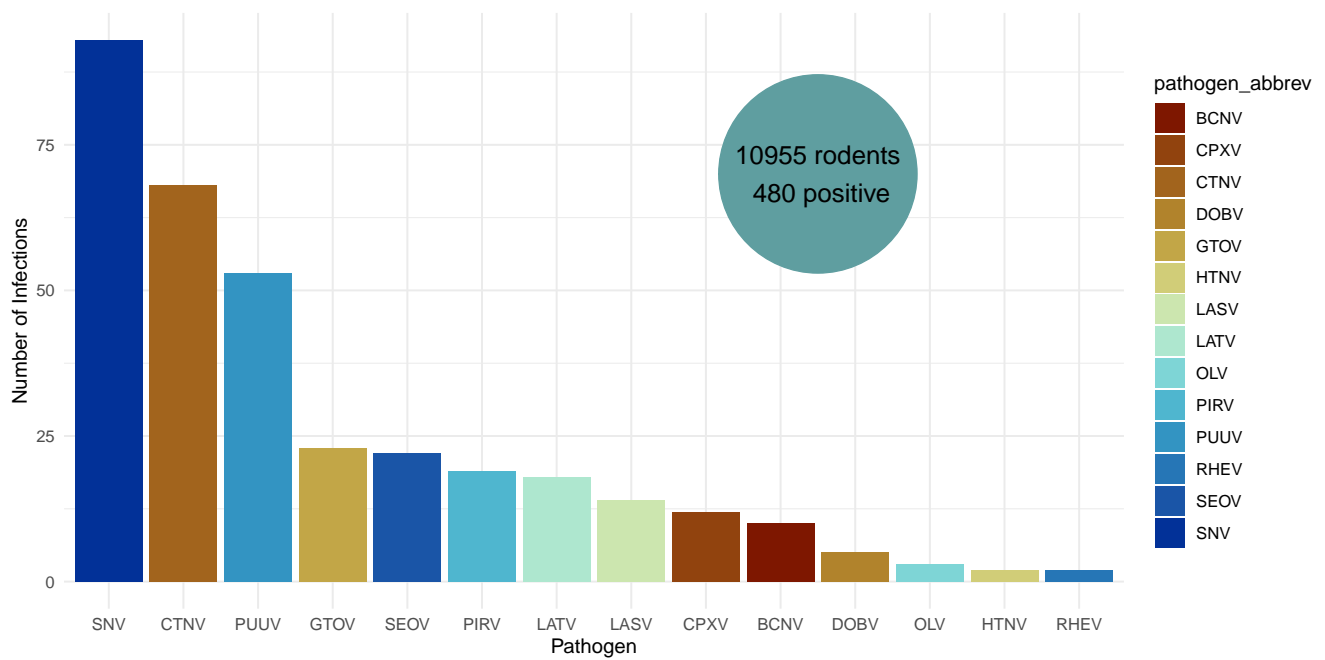


Figure 2: The number of infections for each virus tested