

Quentin D. Read

Using big open data to understand how humans influence the natural world

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Professional appointments

Agricultural Research Service, U.S. Department of Agriculture, Raleigh, NC 2021–

Applied consulting statistician, Southeast Area (located at North Carolina State University)

- Support USDA researchers by designing experiments, processing and visualizing data, and doing statistical analyses using R, Stan, SAS, and Python
- Design and teach [statistics and data science lessons](#) and workshops to USDA researchers
- Assist researchers with git for collaborations and high-performance computing using Linux
- Pursue a research program modeling the impacts of the food system on human and natural communities, using techniques from ecology, environmental science, and economics
- Received 2024 Southeast Area award for customer service and technical expertise

National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD 2018-2021

Data scientist (2019-2021); Postdoctoral fellow (2018-2020)

- Provided data science consulting for socio-environmental research teams
- Maintained and wrote content for [SESYNC's cyberhelp website](#) using Markdown and Jekyll
- Developed and taught lessons for [data science curriculum](#)
- Modeled impacts of food waste and benefits of food waste reduction interventions
- Obtained \$130,000 NSF fellowship for SESYNC's postdoctoral immersion training program
- Research featured in multiple media outlets ([list](#))

Michigan State University (MSU), East Lansing, MI 2016-2018

Postdoctoral researcher, Department of Forestry

- Compiled, analyzed, and processed environmental and biodiversity datasets in R
- Designed spatial Bayesian models; did GIS analysis in R and GDAL

Education

Ph.D., Ecology & Evolutionary Biology, University of Tennessee, Knoxville, TN 2016

B. S., Environmental Science, University of North Carolina, Chapel Hill, NC 2009

Publications (for full list see [Google Scholar](#))

- 10 first-authored publications in journals including *PNAS*, *Resources Conservation & Recycling*, *Science of the Total Environment*, *Ecography*, and *Biology Letters*
- 58 co-authored publications in journals including *Science*, *Ecology*, *Science of the Total Environment*, and *Global Ecology and Biogeography*

Selected invited talks

- N.C. State University, Plant & Microbial Biology department seminar, Raleigh, NC 2022
- Duke University, University Program in Ecology Seminar Series, Durham, NC 2020
- Commission for Environmental Cooperation, Arlington, VA 2018

Selected software

- Lead developer, [Ostats](#): R package for trait analysis of ecological communities 2021
- Co-developer, [ggalluvial](#): R package adding functionality to ggplot2 2020
- Co-developer, [rslurm](#): R package for running R code in parallel 2019

Selected teaching and mentoring experience

- Mentored student team that won grand prize in a 75-team data science competition 2021
- Designed and taught workshops on R, omics, mixed models, geospatial data, and git 2020-2024
- Taught undergraduate and graduate courses in biology and ecology 2012-2017
- Mentored 17 undergraduates; two published first-author research papers 2012-2020