

# Quentin D. Read

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

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## ***Professional appointments***

- 2021– **USDA Agricultural Research Service**, Raleigh, NC  
Applied consulting statistician, Southeast Area (GS-13 as of 2023)
- 2018-2021 **National Socio-Environmental Synthesis Center**, Annapolis, MD  
(University of Maryland)
- 2019–2021 Data scientist
- 2018-2020 Postdoctoral fellowship: “Food waste and the environment”  
Mentor: Dr. Mary Muth (RTI International, Research Triangle Park, NC)
- 2016-2018 **Michigan State University**, East Lansing, MI  
Postdoctoral researcher, Department of Forestry; Ecology, Evolutionary  
Biology, & Behavior Program  
“Intraspecific trait variation and community structure at a continental scale”  
Advisors: Dr. Phoebe Zarnetske (MSU) and Dr. Sydne Record (Bryn Mawr)  
Visiting scholar, University of Notre Dame, laboratory of Jason McLachlan

## ***Current roles and responsibilities***

- Support USDA researchers in the Southeast area by designing experiments, processing and visualizing data, and doing statistical analyses
- Develop and teach statistics and data science lessons in virtual and in-person format: see [SEASStats training page](#) for lesson text and slides
- Promote modern statistical approaches and best practices for open and reproducible science at USDA
- Co-write manuscripts, presentations, and research grants; formally review five-year plans of all research units in the Southeast area

## ***Education***

- 2011-2016 **University of Tennessee**, Knoxville, TN  
Ph.D., Ecology & Evolutionary Biology  
Dissertation: “Individual variation in plant traits drives species interactions, ecosystem functioning, and responses to global change”  
Advisor: Dr. Nathan Sanders
- 2005-2009 **University of North Carolina**, Chapel Hill, NC  
B.S. with highest distinction, Environmental Science

## ***Skills and languages***

- Data processing, visualizing, and analysis in R, including tidyverse and data.table
- Developing R packages
- Bayesian modeling with Stan and brms
- Geospatial data processing and modeling with GDAL and R
- Statistical analysis with SAS 9
- Working knowledge of Python and Julia
- Bash scripting
- Creating static webpages with Markdown and Jekyll

- High-performance parallel computing using Linux server
- Using git/GitHub for version control and remote collaborations
- Fluent in spoken and written German; communicate effectively in spoken and written Spanish

## Grants

2019 “Connecting local, regional, and continental scale drivers to biodiversity across NEON through the lens of intraspecific trait variation and disturbance.” NSF Macrosystems Biology, NEON-Enabled Science (senior personnel) \$536,800

## Publications

OA = open access

2025 Chatterjee, A., J. M. Taylor, **Q. D. Read**, M. T. Moore, M. A. Locke, and J. D. Hoeksema. 2025. Water quality and soil nutrient availability trade-offs associated with timing and duration of managed flooding for migratory waterbird habitat. *Soil Science Society of America Journal* 89(3): e70077. DOI: 10.1002/saj2.70077.

Newman, C., R. Austin, R. Andres, **Q. D. Read**, N. Garrity, K. Fritz, A. Oakley, A. Hulse-Kemp, and J. Dunne. 2025. Evaluating UAV captured RGB and multispectral imagery as a proxy for visual rating of leaf spot in cultivated peanut. *The Plant Phenome Journal* 8(1): e70019. DOI: 10.1002/ppj2.70019. (OA)

Jia, J., K. Leep, K. Phillips, E. Willis, L. Robinson, W. Phillips, **Q. D. Read**, W. E. Copes, and S.-E. Lu. 2025. Development of a quantitative PCR method to detect the bacterial gall pathogen *Pseudomonas amygdali* pv. *loropetalii* from loropetalum plant materials. *Plant Disease*, in press.

Rodrigues, N. B., T. R. Barbosa, H. S. Koenow Pinheiro, M. Mancini, **Q. D. Read**, J. Blackstock, H. E. Winzeler, D. Miller, P. R. Owens, and Z. Libohova. 2025. Influences of sampling design and model selection on predictions of chemical compounds in Petroferric formations in the Brazilian Amazon. *Remote Sensing* 17(9): 1644. DOI: 10.3390/rs17091644. (OA)

Kannan, N., B. Fritz, **Q. D. Read**, and R. Srinivasan. 2025. Testing the drift reduction potential of some adjuvants from renewable sources for aerial pesticide applications. Book chapter in *Pesticide Formulation and Delivery Systems: 43rd Volume, Creating Certainty in an Uncertain World*, ed. Danny Brown (West Conshohocken, PA: ASTM International, 2025), 134–147. DOI: 10.1520/STP165220240015.

Woolfolk, S., G. A. Matthews, and **Q. D. Read**. 2025. Comparison of infestation rates of fall armyworm (Lepidoptera: Noctuidae) neonates for maize resistance screening. *Journal of Insect Science* 25(2): 9. DOI: 10.1093/jisesa/ieaf025. (OA)

Mengistu, A., **Q. D. Read**, C. R. Little, H. M. Kelly, and N. Bellaloui. 2025. Severity of charcoal rot disease in soybean genotypes inoculated with *Macrophomina phaseolina* isolates differs among growth environments. *Plant Disease*. DOI: 10.1094/PDIS-10-24-2230-RE.

Smith, B. J., E. T. Stafne, and **Q. D. Read**. 2025. Effect of cover crops on young southern highbush blueberry cultivars. *PhytoFrontiers*. DOI: 10.1094/PHYTOFR-09-24-0096-R.

Caren, J., Y.-C. Zhu, **Q. D. Read**, and Y. Du. 2025. Risk assessment of essential oils on honey bees (*Apis mellifera* L.). *Insects* 16(3):303. DOI: 10.3390/insects16030303. (OA)

Adeli, A., J. P. Brooks, D. M. Miles, **Q. D. Read**, Y. Huang, G. Feng, and J. N. Jenkins. 2025. Integrated effects of tillage, fertilizer sources and a rye cover crop on dryland cotton production. *Agronomy Journal* 117(2):e70019. DOI:

10.1002/agj2.70019.

Lofton, L. W., **Q. D. Read**, H. L. Hamilton, A. E. Glenn, J. A. Hawkins, T. R. Mitchell, and S. E. Gold. 2025. Pyrrocidines A and B demonstrate synergistic inhibition of *Fusarium verticillioides* growth. *Frontiers in Microbiology* 15. DOI: 10.3389/fmicb.2024.1480920. (OA)

Yeh, H.-Y. and **Q. D. Read**. 2025. Immune responses of chickens against recombinant *Salmonella enterica* serotype Heidelberg FimA and FimW fimbriae and FliD and FlgK flagellar proteins. *Veterinary Immunology and Immunopathology* 280:110870. DOI: 10.1016/j.vetimm.2024.110870.

2024

Oi, D. H., R. A. Atchison, and **Q. D. Read**. 2024. Effect of fast and slow-acting bait toxicants on tawny crazy ant (Hymenoptera: Formicidae) foraging and nesting in the field. *Journal of Economic Entomology* toae284. DOI: 10.1093/jee/toae284.

Mears, M. C., **Q. D. Read**, and A. Bakre. 2024. Comparison of direct RNA sequencing of *Orthoavulavirus javaense* using two different chemistries on the MinION platform. *Journal of Virological Methods* 333:115103. DOI: 10.1016/j.jviromet.2024.115103.

Frazier, S., S. M. Brown, **Q. D. Read**, A. L. Jacobson, K. Conner, C. Escalante, and K. S. Balkcom. 2024. Cotton stalk management and a cover crop produce minimal effects on cotton leafroll dwarf virus. *Agronomy Journal*. DOI: 10.1002/agj2.70002. (OA)

Johnson, R. M., K. A. Richard, and **Q. D. Read**. 2024. Effects of potassium fertilizer on sugarcane yields and plant and soil potassium levels in Louisiana. *Agronomy* 14(12): 2761. DOI: 10.3390/agronomy14122761. (OA)

Kim, S.-B., K.-T. Kim, S. In, N. Jaiswal, G.-W. Lee, S. Jung, A. Rogers, L. F. Gómez-Trejo, S. Gautam, M. Helm, H.-K. Ahn, H.-Y. Lee, **Q. D. Read**, J. Woo, K. L. Holan, S. A. Whitham, J. D. G. Jones, D. Choi, R. Dean, E. Park, and P. Balint-Kurti. 2024. Use of the *Puccinia sorghi* haustorial transcriptome to identify and characterize AvrRp1-D recognized by the maize Rp1-D resistance protein. *PLoS Pathogens* 20(11): e1012662. DOI: 10.1371/journal.ppat.1012662. (OA)

Assumpcao, A. L. F. V., K. Arsi, K. S. Alharbi, A. Asnayanti, A. D. Trieu, **Q. D. Read**, R. Perera, A. Shwani, A. Hasan, S. Pillai, A. M. Donoghue, D. Rhoads, P. R. R. Jesudhasan, and A. A. K. Alrubaye. 2024. Electron-beam-killed *Staphylococcus* vaccine reduced lameness in broiler chickens. *Vaccines* 12(11): 1203. DOI: 10.3390/vaccines12111203. (OA)

McMillan, E., E. S. Adams, T. Mitchell, J. Hawkins, **Q. D. Read**, A. Pokoo-Aikins, M. Berrang, C. E. Harris, M. D. Hughes, A. E. Glenn, and R. J. Meinersmann. 2024. Susceptibility of pESI positive *Salmonella* to treatment with biocide chemicals approved for use in poultry processing as compared to *Salmonella* without the pESI plasmid. *Letters in Applied Microbiology* 77(7): ova067. DOI: 10.1093/lambio/ova067.

H. Abou-Shaara, S. Mehrparvar, **Q. D. Read**, J. Chen, and E. Amiri. Impact of commercial plastic queen cell cups on rearing success and development of honey bee queens. *Journal of Apicultural Research*. DOI: 10.1080/00218839.2024.2418682.

Pokoo-Aikins, A., C. M. McDonough, T. R. Mitchell, J. A. Hawkins, L. F. Adams, **Q. D. Read**, X. Li, R. Shanmugasundaram, E. Rodewald, P. Acharya, A. E. Glenn, and S. E. Gold. 2024. Mycotoxin contamination and the nutritional content of corn targeted for animal feed. *Poultry Science* 103(12): 104303. DOI: 10.1016/j.psj.2024.104303.

Libohova, Z., M. Mancini, H. E. Winzeler, **Q. D. Read**, N. Sun, D. Beaudette, C. Williams, J. Blackstock, S. H. G. Silva, N. Curi, K. Adhikari, A. Ashworth, J. Minia,

and P. R. Owens. 2024. Interpreting the spatial distribution of soil properties with a physically-based distributed hydrological model. *Geoderma Regional*: e00863. DOI: 10.1016/j.geodrs.2024.e00863. (OA)

Kannan, N., **Q. D. Read**, and W. Zhang. A natural polymer material as a pesticide adjuvant for mitigating off-target drift. 2024. *Heliyon* 10(16): e35510. DOI: 10.1016/j.heliyon.2024.e35510. (OA)

Toomer, O. T., P. Maharjan, K. L. Harding, T. C. Vu, R. Malheiros, R. Mian, M. Joseph, **Q. D. Read**, E. O. Oviedo-Rondon, and K. E. Anderson. 2024. Effects of full-fat high-oleic soybean meal in layer diets on performance, egg quality and chemical composition. *Poultry Science* 103(10): 104074. DOI: 10.1016/j.psj.2024.104074. (OA)

Copes, W. E., **Q. D. Read**, and B. J. Smith. Environmental influences on drying rate of spray applied disinfestants from horticultural production services. 2024. *PhytoFrontiers*: PHYTOFR-03-24-0019-R. DOI: 10.1094/PHYTOFR-03-24-0019-R.

Mulakala, B. K., M. Salinas, J. Rearick, B. Onyekweli, M. Gurung, M. Ruebel, J. Dada-Fox, J. Zeledon, R. Talatala, L. Davidson, R. Chapkin, **Q. D. Read**, S. Donovan, and L. Yeruva. 2024. Human milk oligosaccharides and Bifidobacteria Infantis interactively shape mouse splenic immune responses. *Current Developments in Nutrition* 8: 103429. DOI: 10.1016/j.cdnut.2024.103429. (OA)

Owens, P. R., M. Mancini, H. E. Winzeler, **Q. D. Read**, N. Sun, J. Blackstock, and Z. Libohova. 2024. Simulating water dynamics related to pedogenesis across space and time: implications for four-dimensional digital soil mapping. *Geoderma* 447: 116911. DOI: 10.1016/j.geoderma.2024.116911.

Elkins, B. H., M. Portilla, K. C. Allen, N. S. Little, R. M. Mullen, R. T. Paulk, and **Q. D. Read**. 2024. Sublethal effects of a commercial Bt product and Bt cotton flowers on the bollworm (*Helicoverpa zea*) with impacts to predation from a lady beetle (*Hippodamia convergens*). *PLoS One* 19(5): e0302941. DOI: 10.1371/journal.pone.0302941. (OA)

Rering, C. C., A. B. Rudolph, Q.-B. Li, **Q. D. Read**, P. R. Muñoz, J. Ternest, and C. T. Hunter. 2024. A quantitative survey of the blueberry (*Vaccinium* spp.) nectar microbiome: variation between cultivars, locations, and farm management approaches. *FEMS Microbiology Ecology* 100(3): fiaeo20. DOI: 10.1093/femsec/fiae020. (OA)

Gurung, M., B. T. Schlegel, D. Rajasundaram, R. Fox, L. Bode, T. Yao, S. R. Lindemann, T. LeRoith, **Q. D. Read**, C. Simecka, L. Carroll, A. Andres, and L. Yeruva. 2024. Microbiota of infants consuming secretors' or non-secretors' mother's milk impacts the gut and immune system in mice. *mSystems* e00294-24. DOI: 10.1128/msystems.00294-24. (OA)

Mengistu, A., **Q. D. Read**, V. Sykes, H. Kelly, T. Kharel, and N. Bellaloui. 2024. Cover crop and crop rotation effects on tissue and soil population dynamics of *Macrophomina phaseolina* and yield under no-till system. *Plant Disease* 108: 302-310. DOI: 10.1094/PDIS-03-23-0443-RE.

Koebernick, J., A. Gillen, R. Fett, S. Patel, B. Fallen, V. Pantalone, G. Shannon, Z. Li, A. Scaboo, W. Schapaugh, R. Mian, and **Q. D. Read**. 2024. Soybean test weight in relation to genotype, environment, and genotype × environment interaction in the southern USA. *Agronomy Journal*. DOI: 10.1002/agj2.21551.

Heintzman, L. J., N. E. McIntyre, E. J. Langendoen, and **Q. D. Read**. 2024. Cultivation and dynamic cropping processes impart land-cover heterogeneity within agroecosystems: a metrics-based case study in the Yazoo-Mississippi Delta (USA). *Landscape Ecology* 39:29. DOI: 10.1007/s10980-024-01797-0. (OA)

Shanahan, M., M. Simone-Finstrom, P. Tokarz, F. Rinkevich, **Q. D. Read**, and M.

Spivak. 2024. Thinking inside the box: Bringing tree cavity textures to beehive design to stimulate propolis collection and support honey bee health. *PLoS One* 19:e0291744. DOI: 10.1371/journal.pone.0291744. (OA)

Safaei, S., Z. Libohova, E. J. Kladvik, A. Brown, H. E. Winzler, **Q. D. Read**, S. Rahmani, and K. Adhikari. Influence of sample density, model selection, and land use on prediction accuracy of soil properties. *Geoderma Regional* 36:e00766. DOI: 10.1016/j.geodrs.2024.e00766. (OA)

Shults, D. D., M. L. Reba, J. Nowlin, J. Massey, and **Q. D. Read**. 2024. Extending irrigation reservoir histories for improved groundwater modeling and conjunctive water management in two Arkansas critical groundwater areas. *Agricultural Water Management* 293:108678. DOI: 10.1016/j.agwat.2024.108678. (OA)

Grady, J. M., **Q. D. Read**, S. Record, N. Rüger, P. L. Zarnetske, A. I. Dell, S. P. Hubbell, S. T. Michaletz, and B. J. Enquist. 2024. Life history scaling in a tropical forest. *Journal of Ecology*. DOI: 10.1111/1365-2745.14245.

Little, N. S., B. H. Elkins, M. Portilla, K. C. Allen, **Q. D. Read**, and R. T. Paulk. 2024. Field evaluation of biological and conventional insecticides for managing multiple insect pests in cotton. *Journal of Entomological Science*. DOI: 10.18474/JES23-37.

2023 Martin Ewert, A., M. Simone-Finstrom, **Q. D. Read**, C. Husseneder, and V. Ricigliano. 2023. Effects of ingested essential oils and propolis extracts on honey bee (Hymenoptera: Apidae) health and gut microbiota. *Journal of Insect Science* 23(6):15. DOI: 10.1093/jisesa/ieado87.

Halbritter, D. A., E. Kariuki, G. S. Wheeler, M. B. Rayamajhi, C. Minter, and **Q. D. Read**. Changes in plant architecture in Brazilian peppertree damaged by the biological control agent, *Pseudophyllothrips ichini* Hood (Thysanoptera: Phlaeothripidae). *Biological Control* 188, 105414. DOI: 10.1016/j.biocontrol.2023.105434.

Penn, H. J. and **Q. D. Read**. 2023. Stem borer herbivory dependent on interactions of sugarcane variety, associated traits, and presence of prior borer damage. *Pest Management Science*. DOI: 10.1002/ps.7843.

Cho, S., L. M. Hiott, **Q. D. Read**, J. Damashek, J. Westrich, M. Edwards, R. F. Seim, D. A. Glinski, J. M. Bateman McDonald, E. A. Ottesen, E. K. Lipp, W. M. Henderson, C. R. Jackson, and J. G. Frye. 2023. Distribution of antibiotic resistance in a mixed-use watershed and the impact of wastewater treatment plants on antibiotic resistance in surface water. *Antibiotics* 12(11):1586. DOI: 10.3390/antibiotics12111586.

Osei-Owusu, K. A., **Q. D. Read**, and M. Thomsen. 2023. Potential energy and environmental footprint savings from reducing food loss and waste in Europe: a scenario-based multiregional input–output analysis. *Environmental Science & Technology*. DOI: 10.1021/acs.est.3c00158. (OA)

Balkcom, K. S., **Q. D. Read**, and A. V. Gamble. 2023. Rye planting date impacts biomass production more than seeding rate and nitrogen fertilizer. *Agronomy Journal*. DOI: 10.1002/agj2.21418. (OA)

de Gracia Coquerel, M., A. McAuley, J. Wegerif, **Q. D. Read**, N. Chowdhury, K. C. Jeong, J. G. Morris, S. J. Martins, E. M. Goss, and M. S. Ascunce. 2023. Preliminary assessment of bacterial antibiotic resistance and *Candidatus Liberibacter asiaticus* titer in three Florida commercial citrus groves. *Crop Protection* 172:106350. DOI: 10.1016/j.cropro.2023.106350.

Taliercio, E., D. Eickholt, **Q. D. Read**, T. Carter, N. Waldeck, and B. Fallen. 2023. Parental choice and seed size impact the uprightness of progeny from interspecific *Glycine* hybridizations. *Crop Science*. DOI: 10.1002/csc2.21015.

- Yeh, H.-Y., J. G. Frye, C. R. Jackson, **Q. D. Read**, J. E. Line, and A. Hinton. 2023. Use of automated capillary immunoassay for quantification of antibodies in chicken sera against recombinant *Salmonella enterica* serotype Heidelberg proteins. *Journal of Microbiological Methods*. DOI: 10.1016/j.mimet.2023.106757.
- Jia, Y. and **Q. D. Read**. 2023. Bacteria disinfection of rice seeds by ultraviolet light irradiation in a biosafe flow cabinet. *Plant Health Progress*. DOI: 10.1094/PHP-02-23-0017-RS.
- Cowger, C., **Q. D. Read**, L. Clark, and Y. Dong. 2023. Optimal timing of fungicide application to manage *Fusarium* head blight in winter barley. *Plant Disease*. DOI: 10.1094/PDIS-01-23-0021-RE. *Editor's Pick*.
- Fett, R., A. M. Gillen, **Q. D. Read**, S. Patel, and J. Koebernick. 2023. Evaluating the accuracy and efficiency of test weight instruments for soybean (*Glycine max* L.) research. *Agrosystems, Geosciences & Environment*. DOI: 10.1002/agg2.20354. (OA)
- Mengistu, A., J. D. Ray, H. M. Kelly, **Q. D. Read**, R. J. Smith, N. Bellaloui, and L. A. Schumacher. 2023. Charcoal rot severity and soybean yield responses to planting date, irrigation, and genotypes. *Plant Disease*. DOI: 10.1094/PDIS-06-22-1329-RE.
- Adeli, A., J. P. Brooks, D. Miles, T. Misna, **Q. D. Read**, and J. N. Jenkins. 2023. Effectiveness of combined biochar and lignite with poultry litter on soil carbon sequestration and soil health. *Open Journal of Soil Science* 13:124-149. DOI: 10.4236/ojss.2023.132006. (OA)
- Zollota, S., P. Perez, J. Allen, T. Argenti, **Q. D. Read**, and M. S. Ascunce. 2023. Are ants good organisms to teach elementary students about invasive species in Florida? *Insects* 14:118. DOI: 10.3390/insects14020118. (OA)
- Nestle, R., J. Palacios, A. S. David, **Q. D. Read**, and G. S. Wheeler. 2023. The Brazilian peppertree biological control agent *Pseudophilothrips ichini* (Thysanoptera: Phlaeothripidae) displays a flexible feeding strategy between foliage and reproductive tissues. *Biological Control* 105:159. DOI: 10.1016/j.biocontrol.2023.105159.
- Gurung, M., F. Rosa, B. Yelvington, N. Terry, **Q. D. Read**, B. D. Piccolo, B. Moody, P. Tripp, H. E. Pittman, B. L. Fay, T. J. Ross, J. D. Sikes, J. B. Flowers, R. Fox, T. LeRoith, R. Talatala, F. Bar-Yoseph, and L. Yeruva. 2023. Evaluation of a plant-based infant formula containing almonds and buckwheat on gut microbiota composition, intestine morphology, metabolic and immune markers in a neonatal piglet model. *Nutrients* 15:383. DOI: 10.3390/nu15020383. (OA)
- McMillan, E. A., M. E. Berrang, **Q. D. Read**, S. Ramasetti, A. K. Richards, N. W. Shariat, and J. G. Frye. 2023. Buffered peptone water formulation does not influence growth of pESI positive *Salmonella* serovar Infantis. *Journal of Food Protection* 86:100033. DOI: 10.1016/j.jfp.2022.100033.
- 2022 Allan, M. C., **Q. D. Read**, and S. D. Johanningsmeier. 2022. Impact of sweetpotato starch structures, thermal properties, and granules sizes on sweetpotato fry textures. *Food Hydrocolloids* 2022:108377. DOI: 10.1016/j.foodhyd.2022.108377.
- Winzeler, H. E., P. R. Owens, **Q. D. Read**, Z. Libohova, A. Ashworth, and T. Sauer. 2022. Topographic wetness index as a proxy for soil moisture in a hillslope catena: flow algorithms and map generalization. *Land* 11:2018. DOI: 10.3390/land11112018. (OA)
- Prager, C. M., A. T. Classen, ... **Q. D. Read**, ... and N. J. Sanders. 2022. Integrating natural gradients, experiments, and statistical modelling in a distributed network experiment: an example from the WaRM Network. *Ecology*

*and Evolution* 12:e9396. DOI: 10.1002/ece3.9396. (OA)

Islam, Md. S., P. McCord, **Q. D. Read**, L. Qin, A. E. Lipka, S. Sood, J. Todd, and M. Olatoye. 2022. Accuracy of genomic prediction of yield and sugar traits in *Saccharum* spp. hybrids. *Agriculture* 12:1436. DOI: 10.3390/agriculture12091436. (OA)

Zimba, K. J., **Q. D. Read**, M. Haseeb, R. L. Meagher, and J. C. Legaspi. 2022. Potential of silicon to improve biological control of fall armyworm (*Spodoptera frugiperda*) on maize. *Agriculture* 12:1432. DOI: 10.3390/agriculture12091432. (OA)

Swanwick, R. H., **Q. D. Read**, S. M. Guinn, M. A. Williamson, K. L. Hondula, and A. J. Elmore. 2022. Dasymetric population mapping based on US Census data and 30-m gridded estimates of impervious surface. *Scientific Data* 9:523. DOI: 10.1038/s41597-022-01603-z. (OA)

Kamoske, A. G., K. M. Dahlin, **Q. D. Read**, S. Record, S. P. Serbin, S. C. Stark, and P. L. Zarnetske. 2022. Towards mapping biodiversity from above: Can fusing lidar and hyperspectral remote sensing predict taxonomic, functional, and phylogenetic tree diversity in temperate forests? *Global Ecology and Biogeography*. DOI: 10.1111/geb.13516.

McIntyre, J. S., C. L. Butts, and **Q. D. Read**. 2022. Computational fluid dynamics modeled air speed through in-shell peanuts in drying wagons compared to experimentally measured air speed. *Journal of the American Society of Agricultural and Biological Engineers* 38:489-507. DOI: 10.13031/aea.14771.

Mason, R. E., J. M. Craine, N. K. Lany, ... **Q. D. Read**, ... and A. J. Elmore. 2022. Evidence, causes, and consequences of a global decline in terrestrial ecosystem nitrogen availability. *Science* 376:eabh3767. DOI:10.1126/science.abh3767

Featured in >40 news outlets (see [Altmetric page](#))

Response by Olff et al. DOI: 10.1126/science.abq7575

Rebuttal to response DOI:10.1126/science.abq8690

**Read, Q. D.**, K. L. Hondula, and M. K. Muth. 2022. Biodiversity effects of food system sustainability actions from farm to fork. *Proceedings of the National Academy of Sciences* 119, e2113884119. DOI:10.1073/pnas.2113884119.

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Sthapit Kandel, J., G. V. Sandoya, W. Zhou, **Q. D. Read**, B. Mou, and I. Simko. 2022. Identification of quantitative trait loci associated with bacterial leaf spot resistance in baby leaf lettuce. *Plant Disease*. DOI: 10.1094/PDIS-09-21-2087-RE.

Rewcastle, K. E., J. A. Henning, **Q. D. Read**, R. E. Irwin, N. J. Sanders, and A. T. Classen. 2022. Plant removal across an elevational gradient marginally reduces rates, substantially reduces variation in mineralization. *Ecology* 103, e03546. DOI: 10.1002/ecy.3546.

2021

Dahlin, K. M., P. L. Zarnetske, **Q. D. Read**, L. Twardochleb, A. G. Kamoske, K. S. Cheruvilil, and P. A. Soranno. 2021. Linking terrestrial and aquatic biodiversity to ecosystem function across scales, trophic levels, and realms. *Frontiers in Environmental Science*, 9, 217. DOI:10.3389/fenvs.2021.692401. (OA)

Prager, C. M., X. Jing, J. A. Henning, **Q. D. Read**, P. Meidl, S. Lavorel, N. J. Sanders, M. Sundqvist, D. A. Wardle, and A. T. Classen. 2021. Climate and multiple dimensions of plant diversity regulate ecosystem carbon exchange along an elevational gradient. *Ecosphere*. DOI:10.1002/ecs2.3472. (OA)

Marston, L. T., **Q. D. Read**, S. Brown, and M. K. Muth. 2021. Reducing water scarcity by reducing food loss and waste. *Frontiers in Sustainable Food Systems* 5. DOI:10.3389/fsufs.2021.651476. (OA)



- Read, Q. D.** and M. K. Muth. 2021. Cost-effectiveness of four food waste interventions: is food waste reduction a “win-win?” *Resources, Conservation & Recycling* 168, 105448. DOI:10.1016/j.resconrec.2021.105448.
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- 2020 **Read, Q. D.**, S. Brown, A. D. Cuéllar, S. M. Finn, J. A. Gephart, L. T. Marston, E. Meyer, K. A. Weitz, and M. K. Muth. 2020. Assessing the environmental impacts of halving food loss and waste along the food supply chain. *Science of the Total Environment* 712:136255. DOI:10.1016/j.scitotenv.2019.136255. (OA)
- Read, Q. D.**, P. L. Zarnetske, S. Record, J. M. Grady, A. M. Wilson, A. O. Finley, A. M. Latimer, J. K. Costanza, K. D. Gaddis, K. M. Dahlin, M. L. Hobi, S. V. Ollinger, S. L. Malone, and S. Pau. 2020. Beyond counts and averages: relating geodiversity to dimensions of biodiversity. *Global Ecology and Biogeography*. DOI: 10.1111/geb.13061.
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- 2019 Muth, M. K., C. Birney, A. Cuéllar, S. M. Finn, M. Freeman, J. N. Galloway, I. Gee, J. A. Gephart, K. Jones, L. Low, E. Meyer, **Q. D. Read**, T. Smith, K. A. Weitz, and S. Zoubek. 2019. A systems approach to assessing environmental and economic effects of food loss and waste interventions in the United States. *Science of the Total Environment* 685:1240-1254. DOI:10.1016/j.scitotenv.2019.06.230. (OA)
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- 2018 Grady, J. M., **Q. D. Read**, S. Record, P. L. Zarnetske., B. Baiser, K. Thorne, and J. Belmaker. 2018. Size, niches, and the latitudinal diversity gradient. *Teaching Issues and Experiments in Ecology*, Vol. 14, Figure Set 1. [http://tiee.esa.org/vol/v14/issues/figure\\_sets/grady/abstract.html](http://tiee.esa.org/vol/v14/issues/figure_sets/grady/abstract.html) (OA)
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- 2015 Schussler, E. E., **Q. D. Read**, G. Marbach-Ad, K. Miller, and M. Ferzli. 2015. Preparing biology graduate teaching assistants for their roles as instructors: an assessment of institutional approaches. *CBE-Life Sciences Education* 14:1-11. DOI:10.1187/cbe.14-11-0196. (OA)
- 2014 **Read, Q. D.**, L. C. Moorhead, N. G. Swenson, J. K. Bailey, and N. J. Sanders. 2014. Convergent effects of elevation on functional leaf traits within and among species. *Functional Ecology* 28:37-45. DOI:10.1111/1365-2435.12162. *nominated for the British Ecological Society's Haldane Prize for Young Investigators*
- 2013 Gorman, C. E., **Q. D. Read**, M. E. Van Nuland, and others. 2013. Species identity influences belowground arthropod assemblages via functional traits. *Annals of Botany Plants* plto49. DOI:10.1093/aobpla/plto49. *Editor's Choice*. (OA)
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- 2012 Clark, J. S., B. D. Soltoff, A. S. Powell, and **Q. D. Read**. 2012. Evidence from individual inference for high-dimensional coexistence: long term experiments on recruitment response. *PLoS One* 7:e30050. DOI:10.1371/journal.pone.0030050. (OA)

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- Jeffers, D., J. S. Smith, E. D. Womack, **Q. D. Read**, and G. L. Windham. Comparison of in-field and laboratory-based inoculation methods for evaluation of aflatoxin accumulation in maize inbred lines. *Plant Disease*, in revision.
- Vought, O. K., N. J. Sanders, I. Ibáñez, M. K. Sundqvist, J. A. Henning, C. M. Prager, **Q. D.**

- Read**, K. E. Rewcastle, R. E. Brinkhoff, and A. T. Classen. The effects of warming and dominant species removal on plant biomass are driven by early-season production and the timing of water availability. *New Phytologist*, submitted.
- Brinkhoff, R. E., N. J. Sanders, J. A. Henning, G. Newman, **Q. D. Read**, M. K. Sundqvist, M. J. Hovenden, C. M. Prager, K. E. Rewcastle, L. Souza, O. K. Vought, and A. T. Classen. The impact of warming on ecosystem carbon uptake depends on elevation and is mediated by dominant species. *Nature Ecology & Evolution*, submitted.
- Paye, W. S., R. Moral, M. B. Vanotti, A. A. Szögi, and **Q. D. Read**. Agronomic effectiveness of nitrogen and phosphorus recovered from swine manure. *Agrosystems, Geosciences & Environment*, accepted.
- Penn, H. J., **Q. D. Read**, R. T. Richard, and D. J. Dufrene. Prior stem borer damage does not impact conspecific damage or perennial crop yield in subsequent years of growth. *Entomologia Experimentalis et Applicata*, accepted.
- Pawlowski, E., L. Witthaus, J. Taylor, M. Moore, E. Stevens, S. McNamara, and **Q. D. Read**. The role of vegetation, drying, and rewetting on water and sediment phosphorus concentrations in an experimental ditch channel experiment. *Agrosystems, Geosciences & Environment*, in revision.
- Copes, W. E., **Q. D. Read**, and B. J. Smith. Application variables that affect efficacy of disinfectants sprayed on different substrate materials to control *Colletotrichum siamense*. *PhytoFrontiers*, accepted.
- Ruebel, M., S. P. Gilley, P. Jambal, J. Dado-Fox, D. N. Yazza, N. Nakra, C. Uhlson, L. Sian, S. Kode, **Q. D. Read**, L. Yeruva, J. L. E. Westcott, P. S. MacLean, N. F. Krebs, and K. Shankar. Maternal malnutrition exacerbates effects of ambient heat during pregnancy. *The Journal of Nutrition*, accepted.
- Harrell, T., S. Alvarez-Narvaez, **Q. D. Read**, and S. Conrad. Novel strand-specific qPCR assay elucidates different cell associations between different strains of Avian Orthoreovirus. *Microbiology Spectrum*, in revision.
- Eichenwald, A., J. M. Grady, J. Knott, **Q. D. Read**, J. M. Rodriguez, and S. Record. The impact of disturbance on tree size distributions in the United States. *Global Ecology & Biogeography*, in revision.
- Harris-Shultz, K., J. Wallace, S. Sapkota, B. Schwartz, **Q. D. Read**, J. Peterson, A. Santana, D. Smolensky, and A. Coffin. Identification and prevalence of an insertion in a candidate gene for stigma color using a genome-wide association study in centipede grass. *Crop Science*, in review.
- Lee, H.-S., L. E. Ibarra, B. Zuo, J. Zhao, R. Fox, **Q. D. Read**, M. Gurung, L. Yeruva, C. Chen, and S. P. Trudo. Protective effect of apiaceous vegetables against Total Western Diet- and dextran sulfate sodium-induced colitis. *Journal of Nutrition*, submitted.
- Oppenheimer, P., F. Tini, R. Whetten, I. Laraba, **Q. D. Read**, B. Whitaker, M. Vaughan, G. Beccari, L. Covarelli, and C. Cowger. Synthetic spike-in metabarcoding for plant pathogen diagnostics results in precise quantification of copy number within the genus *Fusarium*. *Nucleic Acids Research*, submitted.
- Safaei, S., E. J. Kladvik, **Q. D. Read**, A. Brown, H. E. Winzeler, S. R. Rahmani, K. Adhikari, and Z. Libohova. Influence of grid size, model selection, and sampling depth on prediction accuracy of soil properties: case studies in Indiana, USA. *Catena*, submitted.
- McMillan, E., **Q. D. Read**, T. Mitchell, C. Harris, A. E. Glenn, A. Pokoo-Aikins, R. Meinersmann, and J. Frye. In-vitro synergistic effects of peracetic acid and biocides approved for use in poultry meat processing against four serotypes of non-typhoidal *Salmonella enterica*. *Microbiology Spectrum*, submitted.
- Billings, G., D. Restrepo-Montoya, L. Dentinger, J. Zirkel, T. Campbell, D. Jones, **Q. D. Read**, P. Chee, B. Scheffler, C. Haigler, A. Hulse-Kemp, and J. Scheffler. The Cotton Historical Lines Project – Part I: History and field evaluation. *Crop Science*, submitted.

- Chen, C. and **Q. D. Read**. Variability of ripening peaches from different orchards, seasons, and harvests. *Technology in Horticulture*, submitted.
- Grady, J. M., J. L. Amme, K. Bhaskaran-Nair, V. Sinha, S. J. Brunwasser, **Q. D. Read**, S. Record, A. I. Dell, and K. B. Hengen. Temperature-dependent predation predicts a more reptilian future. *Nature*, in review.
- Portilla, M., N. S. Little, B. H. Elkins, Y. Du, Y. C. Zhu, J. P. Glover, and **Q. D. Read**. Evaluation of *Beauveria bassiana* strain NI8 and conventional insecticides to control *Lygus lineolaris* in cotton. *BioControl*, submitted.
- Valles, S. M., M. Ascunce, **Q. D. Read**, R. White, and R. Vander Meer. Virome of *Solenopsis invicta* (Hymenoptera: Formicidae): Intercontinental differences in the native and introduced ranges. *Journal of Invertebrate Pathology*, submitted.
- Cottrell, T. E., **Q. D. Read**, and C. Starns. Electron beam irradiation for management of in-shell pecan weevil larvae (Coleoptera: Curculionidae). *Journal of Economic Entomology*, submitted.
- Toomer, O. T., T. C. Vu, R. Wysocky, V. Moraes, R. Malheiros, **Q. D. Read**, and K. E. Anderson. A peanut-skin-containing diet impacts egg-producing hens' layer performance, egg quality, and lipid chemistry. *Poultry Science*, submitted.
- Kannan, N. and **Q. D. Read**. Selection of the least drifting spray nozzles for pesticide application to protect insect pollinators. *Journal of the ASABE*, submitted.
- McKenzie-Reynolds, P., I. Owolabi, A. Biswas, **Q. D. Read**, G. R. Burke, A. Levi, and A. M. Simmons. Wild sources for host plant resistance to *Bemisia tabaci* in watermelon: insights from behavioral and chemical analyses. *Crop Protection*, submitted.

## Media articles

- Read, Q. D.**; J. Pitt, editor. 2022. Extinction on our plates. 360info Special Report from Covering Climate Now's joint coverage week on Food & Water. DOI: 10.54377/42f4-f24c.

## Teaching and curriculum development

- |           |   |
|-----------|---|
| 2025      | Designed and taught one-day workshop for USDA researchers: "Machine learning demystified"   |
| 2024      | Designed and taught two-day workshop for USDA researchers: "Bayesian generalized linear mixed models"<br>Designed and taught two-day workshop for USDA researchers: "R for SAS Users"<br>Designed and taught one-day workshop for USDA researchers: "A smorgasbord of options for multiomics data analysis"<br>Designed and presented lectures for USDA researchers on interpreting statistical interactions, means comparison tests, dealing with common errors in statistical model fitting, and analyzing categorical phenotype data |
| 2023      | Designed and taught <a href="#">lessons for USDA researchers</a> : "Bayesian mixed models with brms," "Data visualization basics with R and ggplot2"  |
| 2022      | Designed and taught two-day workshop for USDA researchers: "A practical toolkit for mixed models in R"  |
| 2021      | Co-designed curriculum for day-long geospatial data analysis workshop for postdocs and grad students; taught introductory lesson and lesson on geospatial statistics with vector data   |
| 2020      | Co-designed and co-taught day-long whirlwind data science class for SESYNC postdoctoral researchers   |
| 2020-2021 | Co-taught SESYNC 2020 and 2021 <a href="#">Computational Summer Institute</a> , a week-long   |

	online data science course
	Designed and led workshop on best practices for collaboration with GitHub
2018	Designed graduate teaching module: “Using NEON data to test macroecological hypotheses”
2017	Co-instructor of record, Metacommunity Ecology, MSU
2016	Graduate teaching assistant, Models in Biology, UT-Knoxville
2015-2016	Graduate teaching assistant, Conservation Biology, UT-Knoxville
2015	Designed and led workshop on graphing with R and ggplot2
2014	Designed and led workshops on introductory statistics with R
2013-2014	Member of panel developing and reforming curriculum of undergraduate introductory biology courses, UT-Knoxville
2012-2014	Graduate teaching assistant, General Ecology, UT-Knoxville
2011-2012	Graduate teaching assistant, Introduction to Biodiversity, UT-Knoxville

### ***Mentoring***

2024–	Member of Nirwan Tandukar’s graduate committee, N.C. State University Department of Molecular and Structural Biochemistry
2021	Mentored student team in University of Maryland Data Challenge; team won grand prize in a 75-team competition
2020	Remotely mentored two Bryn Mawr College undergraduates on an R package development project, funded by NSF Macrosystems Biology grant
2017-2018	Mentored 4 undergraduates through Summer Research Opportunities Program and High Performance Computing Center, MSU
2012-2015	Mentored 8 undergraduate field and lab assistants, Rocky Mountain Biological Laboratory
2013-2015	Mentored 3 undergraduate lab assistants, UT-Knoxville

### ***Fellowships and awards***

2024	USDA-ARS Southeast Area Annual Employee Recognition Program: award for Customer Service and Technical Expertise	
2018	NSF SESYNC postdoctoral immersion fellowship	\$160,000
2015	University of Tennessee Science Alliance graduate award	\$3000
	NSF travel grant to deliver biology education seminar at Notre Dame	\$500
2014	Outstanding Outreach and Community Service award, UT-Knoxville Department of Ecology and Evolutionary Biology	
2013	Dr. Jean H. Langenheimer Endowed Graduate Fellowship in the Ecology and Evolution of Plants, Rocky Mountain Biological Laboratory	\$6000
	UTK Graduate Student Senate travel award	\$500
	Honorable Mention, National Science Foundation Graduate Fellowship	
2012	Dr. Lee R. G. Snyder Memorial Fellowship, Rocky Mountain Biological Laboratory	\$700

## ***Invited talks***

V = virtual

- 2025 “Multinomial logistic GLMMs: a patchy landscape of software implementations.” AgStats (Conference on Applied Statistics in Agriculture & Natural Resources), as part of session I co-organized on GLMM best practices, Gainesville, FL (V)
- 2024 “Doing more with less: using prior knowledge and creative experimental design to get more results from fewer animals.” USDA ARS 2024 IACUC workshop, Stuttgart, AR (V)
- “Analyzing ordered categorical phenotypes: challenges and pitfalls.” USDA ARS SIBS Phenomics working group meeting, Raleigh, NC
- “Troubleshooting common errors and warnings in (G)L(M)Ms.” USDA ARS Honey Bee Lab, Baton Rouge, LA
- “Statistical interactions: what are they and what do they mean, anyway?” USDA ARS Southern Regional Research Center, New Orleans, LA
- “Everything you ever wanted to know about means comparisons but were afraid to ask.” USDA ARS Dale Bumpers National Rice Research Center, Stuttgart, AR
- “A smorgasbord of options for multiomics data analysis.” USDA ARS and Arkansas Children’s Nutrition Center, Little Rock, AR
- 2023 “Structural equation modeling in food science.” USDA ARS Food Science & Market Quality & Handling Research Unit lab meeting, Raleigh, NC
- “Power analysis: bureaucratic busywork or critical step in the scientific method?” USDA ARS 2023 IACUC workshop, Athens, GA (V)
- 2022 “Reducing food waste from farm to fork to benefit biodiversity.” North Carolina State University, Plant & Microbial Biology department seminar, Raleigh, NC
- 2020 “Reducing food waste to benefit environment and society: how, why, and in what context?” Duke University Program in Ecology seminar series, Durham, NC (V)
- 2018 “Food waste impacts on biodiversity.” Commission on Environmental Cooperation Food Loss and Waste Measurement Experts Group Meeting, Arlington, VA
- 2017 “Challenges in the functional trait approach to community ecology (and ways to overcome them).” German Centre for Integrative Biodiversity Research (iDiv), Leipzig, Germany
- “Intraspecific variation and community assembly.” National Ecological Observatory Network, Boulder, CO (talk co-delivered with John Grady)
- 2016 “Individual variation in organismal traits: predicting patterns in space and time from local to global scales.” Michigan State University Department of Forestry, Hanover Forest Science Seminar Series, East Lansing, MI
- 2015 “C3UBE undergraduate biology curriculum reform.” University of Notre Dame, Biology Education Seminar, Notre Dame, IN
- 2014 “Roots, leaves, and soils facing global change.” Rocky Mountain Biological Laboratory Seminar, Gothic, CO
- “Plant traits & interactions altered by warming at different elevations.” Oak Ridge National Laboratory, Environmental Sciences Division, Oak Ridge, TN

## ***Conference presentations***

- 2024 **Read, Q. D.** and F. Breidt. “Exploring the options for quantifying uncertainty in derivatives of splines.” NCCC-170 meeting, Mayagüez, PR

- 2023 **Read, Q. D.** and H. J. Penn. “Boring’ for insights in a 28-year sugarcane insect herbivory dataset.” AgStats, West Lafayette, IN
- 2019 **Read, Q. D.**, J. A. Gephart, A. D. Cuéllar, ... and M. K. Muth. “Which supply chain stages should we target to reduce food loss and waste and benefit the environment?” Ecological Society of America-United States Society for Ecological Economics, Louisville, KY
- 2018 **Read, Q. D.**, S. Record, K. M. Dahlin, P. L. Zarnetske, and others. “Measuring geodiversity to explain biodiversity: what is the effect of spatial grain and spatial consciousness?” US-International Association of Landscape Ecology, Chicago, IL
- 2017 **Read, Q. D.**, J. M. Grady, P. L. Zarnetske, S. Record, and others. “Intraspecific variation reflects drivers of rodent community assembly across the National Ecological Observatory Network.” Ecological Society of America, Portland, OR
- 2015 **Read, Q. D.**, N. J. Sanders, and A. T. Classen. “A globally replicated experiment shows that long-term environmental filters constrain plant response to increased temperature and loss of foundation species.” Ecological Society of America, Baltimore, MD

### ***Guest lectures***

- 2023 Food waste, Global Environmental Issues (undergraduate course), William Peace University, Raleigh, NC  
Ethical and responsible statistical practices, Bioethics (graduate/undergraduate course), N.C. State University
- 2022 Food waste, Agroecology (undergraduate course), University of Maryland
- 2021 Food waste, People, Land and Food (undergraduate course), George Washington University, Washington, DC
- 2020 Data synthesis in food-energy-water nexus research, Global Stewards (graduate seminar), University of Maryland
- 2015 Mock trial activity, Conservation Biology, UT-Knoxville
- 2013 Climate change and communities, General Ecology, UT-Knoxville
- 2012 Biogeochemistry, General Ecology, UT-Knoxville

### ***Software***

- 2022 Weinroth, M. and **Q. D. Read**. 2022. epi2me2r: Process Nanopore EPI2ME Output for Use in R. R package version 0.1.0. <https://mweinroth.github.io/epi2me2r/>.
- 2021 **Read, Q. D.**, A. Yue, I. E. Fluck, B. Baiser, J. M. Grady, P. L. Zarnetske, and S. Record. 2021. Ostats: O-stats, or pairwise community-level niche overlap statistics. R package version 0.1.1. <https://neon-biodiversity.github.io/Ostats/>. DOI:10.5281/zenodo.5706470.
- 2020 Brunson, J. C. and **Q. D. Read**. 2020. ggalluvial: Layered Grammar for Alluvial Plots. R package version 0.12.2.0001. <https://corybrunson.github.io/ggalluvial/>.
- 2019 Marchand, P., I. T. Carroll, M. Smorul, R. E. Blake, and **Q. D. Read**. 2019. rslurm: Submit R Calculations to a 'Slurm' Cluster. R package version 0.6.1. <https://sesync-ci.github.io/rslurm>. DOI:10.5281/zenodo.5705430.

### ***Online content***

- 2019-2021 Blog posts on the SESYNC Cyberhelp blog (<https://sesync-ci.github.io/blog>)

- “Making a fifty-state USA map, 2021 edition”
  - “Making free maps with R, ggspatial, and Mapbox”
  - “Goodbye %>%, hello := (Using R data.table to speed up my data science)”
  - “How open reproducible methods benefit the research community: a shiny story”
  - “The carbon footprint of R code, and how to reduce it”
  - “Resources to help you learn GitHub Pages”
  - “Tips for a smooth R(Studio) workflow and reproducible R code”
  - “How do I resolve merge conflicts in git/GitHub/GitLab?”
  - “Using the rslurm package to run code in parallel”
  - “ggplot tricks not to forget about”
- 2021 Marchand, P., I. T. Carroll, and **Q. D. Read**. “Introduction to Geospatial Data.” Jul. 2021, SESYNC Cyberhelp online lesson. <https://sesync-ci.github.io/geospatial-packages-in-R-lesson/>
- 2020 **Read, Q. D.** “Advanced git Techniques.” Sep. 2020, SESYNC Cyberhelp online lesson. <https://sesync-ci.github.io/advanced-git-lesson/>
- Read, Q. D.** and I. T. Carroll. “Online Data with R.” Jul. 2020, SESYNC Cyberhelp online lesson. <https://sesync-ci.github.io/online-data-with-R-lesson/>
- Muth, M. K. and **Q. D. Read**. “Effects of COVID-19 meat and poultry plant closures on the environment and food security.” 7 Jul. 2020, RTI Insights blog. <https://www.rti.org/insights/covid-19-effect-meat-supply-chain>
- Blake, R. E., R. Beilinson, N. Motzer, K. L. Hondula, and **Q. D. Read**. “Resources and tips for elevating your team science in an all-virtual world.” Mar. 2020. <https://www.sesync.org/resources-and-tips-for-elevating-your-team-science-in-an-all-virtual-world>

## ***Professional service***

- 2024– Member, [NCCC-170](#) “Research Advances in Agricultural Statistics” research coordinating committee
- 2024– Member, USDA SciNet (high-performance computing network) Advisory Committee; chair of Education subcommittee
- 2020– Peer reviewer of R packages for [RopenSci.org](#)
- 2019–2023 Maintainer of the R package *rslurm* ([earthdatascience.org/rslurm](https://earthdatascience.org/rslurm))
- 2019 Review panelist, SESYNC immersion postdoctoral fellowship program
- 2017 Co-organizer of oral session at Ecological Society of America meeting: “Challenges and opportunities for investigating ecological communities across space and time: insights from coordinated research networks.”
- 2013– Peer reviewer for >40 scholarly journals

## ***Community outreach***

- 2016– Maintain a personal science blog ([blog.quentinread.com](https://blog.quentinread.com))
- Answer community programming questions on StackOverflow
- 2023 Panelist, federal careers discussion panel, NC State University biotechnology undergraduate course



- 2021 Interviewed on food waste for SESYNC podcast ([anchor.fm/sesync-communications](https://anchor.fm/sesync-communications))
- 2018 Organized event and gave presentation on citizen science opportunities, MSU Science Festival
- 2017 Gave public research talk, MSU Biology On Tap
- 2014 Organized and coordinated Darwin Day Tennessee
- 2013 Coordinated advertising for Darwin Day Tennessee
- 2012 Discussed my research and assisted 7<sup>th</sup>-grade students with climate change projects
- 2011-2015 Volunteered at kids' science education events at the University of Tennessee and the Rocky Mountain Biological Laboratory

### ***Professional training***

- 2024 Bayesian Procedures in SAS training course
- 2021 SAS for R Users training course
- 2020 ReproHack reproducible science workshop, SESYNC
- 2019 Google Earth Engine workshop, SESYNC  
Ecosystem services valuation workshop, USDA, Washington, DC
- 2018 Data to Motivate Synthesis workshop, SESYNC
- 2018-2020 SESYNC postdoctoral immersion series, including multiday workshops on interdisciplinary techniques, team science, socio-environmental hydrology, land system science, methods in social science, ecology, environmental policy, and public health
- 2014 Structural equation modeling workshop with Dr. Jim Grace, Knoxville, TN
- 2013 Short course: Boreal Forest Ecology, Swedish University of Agricultural Sciences, Umeå, Sweden
- 2012 Short course: Fundamentals of Ecosystem Ecology, Cary Institute of Ecosystem Studies, Millbrook, NY