



Joseph Brown, PhD

Post Doctoral Climate Researcher

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⇒ [Website](#),
[GitHub Profile](#),
[RPubs Page](#)

Skills

Scientific Communication
Public Speaking
Scientific Writing
R Statistical Computing
Microsoft Office
Communication Skills
Ability to Work in a Team
Computer Skills
Microsoft Excel

Profile

I am a passionate, PhD-trained climate change researcher invested in science communication. Since August 2022 I have been working with the Pacific Northwest National Lab (PNNL) to develop an open-source analysis tool to improve climate change projections to help increase our confidence and understanding of the climate impacts humans will face under different global change scenarios. Through my graduate programs, teaching appointments, and post-graduate work experience I have developed exceptional written and verbal science communication skill and enhanced my technical skills in R programming and analysis.

Employment History

Post-doctoral Researcher, Pacific Northwest National Lab - Joint Global Change Research Institute, College Park, MD

August 2022

I am developing an open-source climate analysis tool for probabilistic climate projections. My aims are to improve climate model analytics using emissions data produced from an integrated assessment model. By increasing the confidence in data driven evidence of climate change from emissions, we can better understand future climate impacts on socioeconomic development under different climate scenarios.

Visiting Assistant Professor, Minnesota State University, Mankato, Mankato, MN

August 2021 – May 2022

I taught introductory-level Biology lecture and lab for Biology majors and upper-level Plant Ecology and Plant Taxonomy. I took responsibility for developing my own material for these courses which had to be prepared on a short timeline. My outstanding performance in this role is evidence of my ability to assemble material quickly and communicate such material effectively to people that do not have extensive background knowledge.

PhD Research/Teaching Assistant, Virginia Commonwealth University, Richmond, VA

August 2016 – May 2021

I conducted research to understand the impacts of climate change on coastal systems. My research aimed to determine how increased disturbance

(from storms) impacted native plant communities and subsequent ecosystem effects, including barrier island stability and how increased nutrient deposition influenced plant communities in coastal systems. I also conducted research on dune grass ecology and how climate change may drive dune-building mechanisms along the east coast.

Education

Integrative Life Sciences Ph.D. , Virginia Commonwealth University, Richmond, VA

August 2016 – August 2021

Outstanding Biology PhD Student in Ecology

GPA: 3.9

M.S. Biology, Virginia Commonwealth University, Richmond, VA

August 2014 – August 2016

Outstanding Biology Master's Student in Ecology

GPA: 4.0

B.S. Biology, Virginia Commonwealth University, Richmond, VA

August 2009 – May 2013

Publications

Brown, J.K., A. Moulton, J.C. Zinnert. 2022. Plant community re-organization and increased productivity due to multi-year nutrient enrichment of a coastal grassland. PLoS One 17(7)

[Access Link](#)

Brown, J.K., J.C. Zinnert. 2021. Trait-based investigation reveals patterns of community response to nutrient enrichment in coastal mesic grassland. Diversity 13(1):19

[Access Link](#)

Brown, J.K., J.C. Zinnert. 2020. Topography and disturbance influence trait-based community composition and productivity of adjacent habitats in a coastal system. Ecosphere 11(5)

[Access Link](#)

Stallins, J.A., L.C. Hsu, J.C. Zinnert, J.K. Brown. 2020. How bottom-up and top-down controls shape dune topographic variability along the U.S. Virginia barrier island coast and the inference of dune dynamical properties. Journal of Coastal Conservation 24(30)

[Access Link](#)

Goldstein, E.B., E.V. Mullins, R.G. Biel, J.K. Brown, S.D. Hacker, K.R. Jay, R.S. Mostow, P. Ruggiero, J.C. Zinnert, L.J. Moore. 2018. Literature-based latitudinal distribution and possible range shifts of two US east coast dune grass species (*Uniola paniculata* and *Ammophila breviligulata*). PeerJ

[Access Link](#)

Brown, J.K., J.C. Zinnert. 2018. Mechanisms of surviving burial: Interspecific differences of similar species drives survival after sand deposition. *Ecosphere* 9(3)

[Access Link](#)

Brown, J.K., J.C. Zinnert, D.R. Young. 2018. Emergent interactions influence functional traits and success of dune building ecosystem engineers. *Journal of Plant Ecology* 11(4)

[Access Link](#)

Recognized as *Editor's Choice*

Presentations

I have presented my research at national and regional conferences including the annual Ecological Society of America meeting, Association of Southeastern Biologists meeting, and a Gordon Research Conference. **In total I have presented or been an author on 19 research presentations (2 invited).**

Organizations

Student Liaison Coordinator

August 2018 – May 2020

Organized and authored monthly newsletters and press releases for the Ecological Society of America Student Section.

Ecological Society of America Southeast Chapter Student Liaison

August 2018 – May 2019

Represented and communicated the needs of graduate students during ESA Student Section and Southeast Chapter leadership meetings.

President of the Society for Ecological Restoration @ VCU, Richmond, VA

August 2017 – May 2017

Organized events for students to participate in ecological restoration projects in the greater Richmond area. I also assembled funding applications to host an annual restoration seminar.

Service and Awards

Attendee at Defending Our Coasts: Ensuring Military Readiness and Economic Viability as Waters Rise, Williamsburg, VA

Selected to attend at the William and Mary Coastal Policy Center

Attendee at AAAS Catalyzing Advocacy in Science and Engineering Workshop, Washington, D.C.

Nominated and selected through VCU College of Humanities and Sciences

Contributing Scientific Peer-reviewer

Contributed to the following journals:

1. Écoscience
2. Ecosphere
3. Ecology and Evolution (2)
4. Scientific Reports
5. Plant and Soil (2)

**Lead organizer for Organized Oral Session at ESA Annual Conference,
New Orleans, LA**

August 2018

Session title: A Coastal Perspective: The Role of Vegetation in Response and Resilience of Coastal Ecosystems to Extreme Events

I functioned as the lead writer for the session proposal and session justification. I also led the recruitment of 10 leading coastal ecology researchers from around the country to present their work in the session.

Total of \$6,250 in Research Travel Awards from 2017-2020

**Total of \$4,750 in undergraduate tuition funds from Mary Kay-Moore
Scholarship for Young Adults with Cancer**