

# David Fastovich

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## Appointments

2022 – Present

### Postdoctoral Scholar

Department of Earth and Environmental Sciences, Syracuse University

Advisor: Tripti Bhattacharya

## Education

2018 – 2022

### Ph.D. in Geography

Thesis: *Patterns, mechanisms, and legacies of abrupt climate change: examining the Younger Dryas in eastern North America*

University of Wisconsin—Madison

Advisor: John (Jack) W. Williams

2016 – 2018

### M.S. in Geography

Thesis: *Temperature controls on no-analog community establishment in the Great Lakes Region*

University of Wisconsin—Madison

Advisor: John (Jack) W. Williams

2012 – 2016

### B.S. in Environmental Science and Management *with honors*

University of California, Davis

Academic Emphasis: Climate Change and Air Quality

Minor: Biological Sciences

## Research Interests

Paleoclimatology, paleoecology, organic geochemistry, climate dynamics

## Publications

*in prep*

Quantifying timescales of dynamic climate equilibrium for ecological systems

**Fastovich, D**, Finnegan S, Kocsis ÁT, Rillo MC, Saupe EE, Smith J, Williams JW, Hull PM. *Nature*.

Choco jet variability during the Pliocene reconstructed from leaf waxes

**Fastovich, D**, Bhattacharya T, Feng R, Burls NJ, Knapp S, Mayer T, Pérez-Angel LC. *Earth and Planetary Science Letters*.

A two-phase terrestrial response to Younger Dryas climate change

Bernhardt CE, Willard DA, **Fastovich D**, John G. *Geology*.

*in review*

Detecting legacies of millennial scale climate oscillations on modern biodiversity: lessons from a proxy-model comparison

**David Fastovich**, David P. Helmers, Volker C. Radeloff, Benjamin Zuckerberg, and John W. Williams. *Philosophical Transactions of the Royal Society B*.

- 2023 BioDeepTime: A database of biodiversity time series for modern and fossil assemblages  
Smith J, Rillo MC, Kocsis ÁT, Dornelas M, **Fastovich D**, Huang HHM, et al. *Global Ecology and Biogeography*. doi:10.1111/geb.13735  
Roles of climatic and anthropogenic factors in shaping Holocene vegetation and fire regimes in Great Dismal Swamp, eastern USA  
Willard DA, Jones MC, Alder J, **Fastovich D**, Hoefke K, Poirier RK, Wurster FC. *Quaternary Science Reviews*. 311, 108153. doi:10.1016/j.quascirev.2023.108153
- 2022 Spatial fingerprints and mechanisms of precipitation and temperature changes during the Younger Dryas in eastern North America  
**Fastovich D**, Russell JM, Marcott SA, Williams JW. *Quaternary Science Reviews*. 294, 107724. doi:10.1016/j.quascirev.2022.107724
- 2021 More than one way to kill a spruce forest: The role of fire and climate in the late-glacial termination of spruce woodlands across the southern Great Lakes  
Jensen AM, **Fastovich D**, Watson BI, Gill JL, Jackson ST, Russell JM, Bevington J, Hayes K, Lininger KB, Rubbelke C, Schellinger GC. *Journal of Ecology*. 109(1), 459-47. doi:10.1111/1365-2745.13517
- 2020 Spatial fingerprint of Younger Dryas cooling and warming in eastern North America  
**Fastovich D**, Russell JM, Jackson ST, Krause TR, Marcott SA, Williams JW. *Geophysical Research Letters*. 47(22), e2020GL090031. doi:10.1029/2020GL090031  
Deglacial temperature controls on no-analog community establishment in the Great Lakes Region  
**Fastovich D**, Russell JM, Jackson ST, Williams JW. *Quaternary Science Reviews*. 234, 106245. doi:10.1016/j.quascirev.2020.106245

## Invited Talks and Symposia

- 2023 **Yale University**  
Examining patterns, mechanisms, and legacies of abrupt paleoclimate change
- 2022 **American Quaternary Association Biennial Meeting**  
Spatial fingerprint and mechanisms of Younger Dryas warming and wetting in eastern North America.
- 2021 **Woods Hole Oceanographic Institution**  
Spatial fingerprint and mechanisms of Younger Dryas warming and wetting in eastern North America.

## Awards and Honors

- 2023 Union for Quaternary Research Congress Travel Grant

- The National Academies of Sciences, Engineering, and Medicine International Travel Grant
- 2021 Presidential Management Fellowship Finalist  
*Fellowship created by Executive Order to bring promising early-career scientists into public policy development and management. Awarded to 1,100 promising early-career scientists from 8,065 applicants.*
- EarthCube Early Career Travel Grant
- Department of Geography Trewartha Travel Grant
- University of Wisconsin Graduate School Student Conference Travel Award
- Department of Geography Olmstead Award for Outstanding Publication  
*Awarded annually to two individuals in recognition of impactful publication within the field of Geography.*
- 2020 College of Letters and Science Teaching Fellow Award  
*Awarded annually to 15 Teaching Assistants among all within the College of Letters and Science in recognition of excellent teaching, facilitation, and communication.*
- Reid Bryson Poster Competition Runner Up
- 2019 Department of Geography Trewartha Travel Grant
- University of Wisconsin Graduate School Student Conference Travel Award
- 2015 John M. Long Endowed Scholarship

## Presentations and Posters

- 2023 Pliocene variability in the strength of the Pacific Walker Circulation  
**Fastovich D**, Bhattacharya T, Feng R, Mayer T  
*International Union for Quaternary Research. Presentation.*
- 2022 Pliocene variability in the strength of the Pacific Walker Circulation  
**Fastovich D**, Bhattacharya T, Feng R, Mayer T  
*American Geophysical Union. Poster.*
- Detecting legacies of millennial scale climate oscillations on modern biodiversity: lessons from a proxy-model comparison  
**Fastovich D**, Helmers D, Radeloff V, Zuckerberg B, Williams JW  
*American Geophysical Union. Poster.*
- 2021 Spatial fingerprints and mechanisms of temperature and precipitation changes during the Younger Dryas in eastern North America  
**Fastovich D**, Russell JM, Marcott SA, Williams JW  
*American Geophysical Union. Poster.*
- Spatial fingerprints and mechanisms of temperature and precipitation changes during the Younger Dryas in eastern North America  
**Fastovich D**, Russell JM, Marcott SA, Williams JW  
*Geological Society of America. Presentation.*

- 2020 Mechanisms for a spatial fingerprint of Younger Dryas warming in the south-eastern United States  
**Fastovich D**, Marcott SA, Russell JM, Williams JW  
*American Geophysical Union. Virtual Poster.*
- 2019 Spatial fingerprint of temperature changes in eastern North America during the Younger Dryas.  
**Fastovich D**, Russell JM, Jackson ST, Krause TR, Marcott SA, Williams JW,  
*American Geophysical Union. Poster.*
- Spatial fingerprint of temperature changes in eastern North America during the Younger Dryas  
**Fastovich D**, Russell JM, Jackson ST, Krause TR, Marcott SA, Williams JW,  
*International Union for Quaternary Research. Presentation.*
- 2018 Spatial fingerprint of temperature changes in eastern North America during the Younger Dryas  
**Fastovich D**, Williams JW, Russell JM, Jackson ST, Krause TR  
*American Geophysical Union. Poster.*
- Abrupt deglacial temperature and vegetation changes reconstructed from brGDGT and pollen at Bonnet Lake, OH  
**Fastovich D**, Russell J, Jackson ST, Lowell T, Williams JW  
*Ecological Society of America. Presentation.*

## Research Experience

- 2016 – 2022 **Graduate Research Assistant**  
 John W. Williams - Paleoecology Lab  
 University of Wisconsin - Madison
- 2015 – 2016 **Undergraduate Research Assistant**  
 Andy Sih - Behavioral Ecology Lab  
 University of California, Davis
- 2015 – 2016 **Undergraduate Research Assistant**  
 Alan Hastings - Theoretical Ecology Lab  
 University of California, Davis

## Teaching Experience

- Fall 2021 **Instructor, GEOG 335: Climatic Environments of the Past**  
 University of Wisconsin - Madison  
*Average student rating: 4.85/5.*
- Spring 2021 **Instructor, GEOG 206: The Global Environment**  
 Middlebury College  
*Average student rating: 4.6/5.*
- 2017 – 2020, **Teaching Assistant, GEOG120: Introduction to the Earth System**  
 2022 University of Wisconsin - Madison  
 Head Teaching Assistant (3 years) and Teaching Assistant (1 year).  
*Average student rating: 4.70/5.*

2016 **Teaching Assistant, GEOG127: Physical Systems of the Environment**  
University of Wisconsin - Madison  
*Average student rating: 4.52/5.*

## Service

**Peer Reviewer:** Proceedings of the National Academy of Sciences, Geophysical Research Letters, Journal of Quaternary Science, Ecosphere

2018 – 2020 **Ecological Society of America Paleoecology Section Student Liaison**

## Technical Skills

### Programming languages

Proficient in: R, Python, bash/zsh

Familiar with: Julia, MATLAB, CSS

### Software

L<sup>A</sup>T<sub>E</sub>X, Git, Docker, Binder, HYSPLIT, ArcGIS Pro, GRASS GIS

### Languages

English (fluent), Russian (fluent)