Daniel A Bishop

Weather & Climate Data Scientist

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Awards

2017-2020, NASA Earth and Space Sciences Fellowship

2016, Columbia University Dean's Fellowship

2013, Northeastern States Research Cooperative Grant

Interests

Risk Assessment
Water Resources
Drought
Climatology
Data Analytics

Technical Skills

Expert

Matlab
R

Intermediate

Python
Unix/Linux shell
Jupyter
ArcGIS
LaTeX

Certifications & Short Courses

Machine Learning (2019)
Likelihood Methods in Ecology (2012)

Teaching

Spring 2020, Regional Climate and Climate Impacts

Spring 2019, Dynamics of Climate

Fall 2017, Quantitative Models of Climate-Sensitive Natural and Human Systems

Summer 2009, Satellite Remote Sensing in Biological Oceanography

Education

2016- Ph.D. candidate, M.Phil, M.A. — Columbia University, New York, NY
Earth and Environmental Sciences

2011-2013 M.Sc. — SUNY ESF, Syracuse, NY
Forest and Natural Resources Management

2006-2010 B.Sc. — Cornell University, Ithaca, NY
Atmospheric Science

Relevant Experience

2016- Graduate Research Assistant — Columbia University, New York, NY

- Used MATLAB & R to investigate nature and causes of seasonal precipitation increases in the eastern US and long-term increases in soil moisture gradients across the contiguous US.
- Published two dissertation chapters, awarded competitive NASA graduate research fellowship, & served two years on Lamont's BPE Division Seminar Committee.

2014-2016 Research Assistant — Harvard Forest, Petersham, MA

- Used R to model precipitation, forest composition, & terrestrial carbon sequestration using tree-ring proxy data, & evaluate changing frequency of rainfall events in eastern US.
- Developed & maintained a tree-ring width database, co-managed tree-ring lab, wrote peer-reviewed manuscripts, co-advised undergraduate projects, & co-led research field campaigns.

2011-2013 Graduate Research Assistant — SUNY ESF, Syracuse, NY

- Used R to evaluate the impacts of climate & acid rain on forests of the northeastern United States.
- Used R & ArcGIS to evaluate uncertainty in gridded temperature products using weather station data.
- Developed media outreach skills, awarded competitive graduate research grant, & published two thesis chapters.

Selected Publications

2019 Bishop et al. Increased fall precipitation in the southeastern United States driven by higher-intensity, frontal precipitation. *GRL*.

2019 Bishop et al. Investigating the causes of increased twentieth-century fall precipitation over the southeastern United States. *J Climate*.

2015 Bishop et al. Regional growth decline of sugar maple (*Acer saccharum*) and potential causes. *Ecosphere*.

Select Media Coverage: WAMC Northeast Public Radio, Smithsonian Magazine, Popular Science, Modern Farmer.

2015 Bishop & Pederson. Regional variation of transient precipitation and rainless-day frequency across a subcontinental hydroclimate gradient. *Journal of Extreme Events*.

2013 Bishop & Beier. Assessing uncertainty in high-resolution spatial climate data across the US Northeast. *PLoS ONE*.

Selected Science Communication

Quantifying the drivers of regional hydroclimate change from the fall-season North Atlantic Subtropical High. *2019 AGU Fall Meeting*, San Francisco, CA.

Fall wetting in the southeastern US driven by higher-intensity frontal precipitation. *2018 AGU Fall Meeting*, Washington, DC.

Assessing the causes of 20th century wetting in the eastern United States. *2017 AGU Fall Meeting*, New Orleans, LA.