

# Dorian J. Burnette

Curriculum Vitae  
December 2011

Instructor  
Department of Geosciences  
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## EDUCATION

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Ph.D., Environmental Dynamics, University of Arkansas, 2009

- Dissertation: *Reconstruction of the Eastern Kansas Temperature and Precipitation Records into the Mid-19th Century using Historical Sources*
- Committee: Dr. David W. Stahle (Chair), Dr. Cary J. Mock, Dr. Malcolm K. Cleaveland, Dr. Elliott West

M.S., Physical Science (Earth Science emphasis), Emporia State University, 2002

- Thesis: *Meteorological Reconstruction of the Lewis and Clark Expedition*
- Committee: Dr. James S. Aber (Chair), Dr. Richard Sleezer, Dr. Ron McCoy

B.S., Geoscience (Meteorology emphasis), Mississippi State University, 1999

## RESEARCH INTERESTS

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Historical Meteorology and Climatology  
Climate Reconstruction from Tree-Rings  
Severe Storms Meteorology  
Societal Impacts of Weather and Climate Extremes  
Computer Programming Applications

## TEACHING INTERESTS

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Meteorology  
Climate Change  
Climatology  
Natural Hazards  
Physical Geography  
Quantitative Methods  
Severe Weather  
Synoptic Meteorology  
Weather Forecasting

## ACADEMIC EXPERIENCE

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Instructor, Department of Geosciences, University of Arkansas, Fayetteville, AR, August 2011-Present.

Postdoctoral Research Associate, Department of Geosciences, University of Arkansas, Fayetteville, AR, January 2010-July 2011.  
Research Assistant, Department of Geosciences, University of Arkansas, Fayetteville, AR, May 2009-December 2009.  
Graduate Assistant, Department of Geosciences, University of Arkansas, Fayetteville, AR, August 2003-May 2009.  
Instructor, Upward Bound Math-Science Program, Wichita State University, Wichita, KS, Summer 1999-Summer 2007.  
Lecturer, Department of Physical Science, Emporia State University, Emporia, KS, January 2003-May 2003.  
Lecturer, Department of Geology, Wichita State University, Wichita, KS, January 1999-May 2002.  
Graduate Teaching Assistant, Department of Physical Science, Emporia State University, Emporia, KS, August 2000-December 2001.  
Presenter, K-12 Teacher's Earth Science Conference Update, Emporia State University, Emporia, KS, July 2001.  
Graduate Research Assistant, Department of Physical Science, Emporia State University, Emporia, KS, August 1999-May 2000.  
Paper Grader, Department of Physics, Wichita State University, Wichita, KS, August 1997-August 1998.

## PROFESSIONAL EXPERIENCE

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Storm Warning Meteorologist and Shift Leader, WeatherData Services, Inc., Wichita, KS, Summer 2006, 2007.  
Storm Warning Meteorologist and Shift Leader, WeatherData, Inc., Wichita, KS, July 2002-July 2003.  
Back Up and Severe Weather Meteorologist, KSNW-TV, Wichita, KS, September 1998-July 2003.  
Storm Warning Meteorologist, WeatherData, Inc., Wichita, KS, March 1999-July 2002.  
FOX Weekend Meteorologist, KSNW-TV/KSAS-TV, Wichita, KS, May 1998-September 1998.  
Meteorological Internship, KSNW-TV, Wichita, KS, January 1994-May 1998.

## PUBLICATIONS

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### In Press

- Stahle, D.W., D.J. Burnette, J. Villanueva-Diaz, J. Cerano-Paredes, F.K. Fye, R.D. Griffin, M.K. Cleaveland, D.K. Stahle, J.R. Edmondson, and K.P. Wolff: Tree-ring analysis of ancient baldcypress trees and subfossil wood. *Quaternary Science Reviews*.
- Stahle, D.W., D.J. Burnette, J. Villanueva-Diaz, R.R. Heim, Jr., F.K. Fye, J. Cerano-Paredes, R. Acuña-Soto, and M.K. Cleaveland: Pacific and Atlantic influences on Mesoamerican climate over the past millennium. *Climate Dynamics*.

### In Review

- Burnette, D.J., and D.W. Stahle: Historical perspective on the Dust Bowl drought in the central United States. *Climatic Change* [accepted pending revision].

### 2011

- Stahle, D.W., J. Villanueva-Diaz, D.J. Burnette, J. Cerano-Paredes, R.R. Heim, Jr., F.K. Fye, R. Acuña-Soto, M.D. Therrell, M.K. Cleaveland, and D.K. Stahle, 2011: Major Mesoamerican droughts of the past millennium. *Geophysical Research Letters*, **38**, L05703, doi:10.1029/2010GL046472.

- Stahle, D.W., R.D. Griffin, M.K. Cleaveland, J.R. Edmondson, F.K. Fye, D.J. Burnette, J.T. Abatzoglou, K.T. Redmond, D.M. Meko, M.D. Dettinger, D.R. Cayan, M.D. Therrell, 2010: A tree-ring reconstruction of the salinity gradient in the northern estuary of San Francisco Bay. *San Francisco Estuary and Watershed Science*, **9** [Available online at <http://www.escholarship.org/uc/item/5cz3q8v4>].

2010

- Burnette, D.J., D.W. Stahle, and C.J. Mock, 2010: Daily mean temperature reconstructed for Kansas from early instrumental and modern observations. *Journal of Climate*, **23**, 1308-1333.

2009

- Dodds, S.F., D.J. Burnette, and C.J. Mock, 2009: Historical accounts of the drought and hurricane season of 1860. *Historical Climate Variability and Impacts in the United States*, L.-A. Dupigny-Giroux and C.J. Mock, Eds., Springer, 61-77.
- Stahle, D.W., E.R. Cook, J. Villanueva-Diaz, F.K. Fye, D.J. Burnette, R.D. Griffin, R. Acuña-Soto, R. Seager, and R.R. Heim Jr., 2009: Early 21<sup>st</sup> century drought in Mexico. *EOS*, **90**, 89-90.
- Stahle, D.W., M.K. Cleaveland, H. Grissino-Mayer, R.D. Griffin, F.K. Fye, M.D. Therrell, D.J. Burnette, D.M. Meko, and J. Villanueva-Diaz, 2009: Cool- and warm-season precipitation reconstructions over western New Mexico. *Journal of Climate*, **22**, 3739-3750.

## INVITED PRESENTATIONS

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2011

- Mock, C.J., and D.J. Burnette, 2011: Meteorological conditions during the CSS Hunley event of February 1864, a Civil War example of climate reconstruction. UnCivil Wars Conference, Athens, GA.
- Mock, C.J., V.C. Slonosky, D.J. Burnette, and L.-A. Dupigny-Giroux, 2011: North American historical climate, current status and comments. International Union for Quaternary Research (INQUA) Congress, Bern, Switzerland.

2010

- Burnette, D.J., 2010: Recovery of 19<sup>th</sup> century weather observations in the central United States. Illinois State Water Survey, Champaign, IL.
- Burnette, D.J., 2010: The value of dendrochronology and historical weather observations. Archaeology Field School, Thomas Jefferson's Poplar Forest, Forest, VA.
- Burnette, D.J., 2010: The value of historical climate records. Ecomunch, Department of Biological Sciences, University of Arkansas, Fayetteville, AR.

2009

- Burnette, D.J., 2009: A new 180-year daily temperature record for Kansas. Annual Meeting of the Southwestern and Rocky Mountain Division of the American Association for the Advancement of Science, "Climatology and Ecology of the Cross Timbers and Southern Great Plains," Tulsa, OK.

2008

- Burnette, D.J., 2008: Screening, correction, and analysis of a new 180-year daily temperature record for Kansas. Annual Meeting of the Association of American Geographers, "Climate History II: Thermal Climate History," Boston, MA.
- Burnette, D.J., 2008: Recovery, screening, and correction of instrumental climate records in the Great Plains. "Historical Climate Change Reconstruction in the Great Plains" workshop, University of Saskatchewan, Saskatoon, SK, Canada.

- Burnette, D.J., 2008: A new daily temperature record for Kansas, 1 July 1828-31 August 2007. Department of Geology, Wichita State University, Wichita, KS.
- Burnette, D.J., 2008: A new daily temperature record for Kansas, 1 July 1828-31 August 2007. University of Arkansas Sigma Xi Chapter, Fayetteville, AR.
- Burnette, D.J., 2008: The value of historical climate data to archaeology and ecology. Society for Historical Archaeology Conference, "Recent Research in Archaeobiology and Historical Ecology," Albuquerque, NM.
- Stahle, D., E. Cook, J. Villanueva-Diaz, F. Fye, D. Burnette, and R. Seager, 2008: Drought in Mexico: 1944-2008. Annual Meeting of the Association of American Geographers, "Climate History V: Drought Histories," Boston, MA.
- Stahle, D., E. Cook, J. Villanueva-Diaz, F. Fye, D. Burnette, and R. Seager, 2008: Drought in Mexico: 1994-2008. Mexican climate meeting, Ensenada, Mexico.

2007

- Burnette, D.J., 2007: Screening, correction, and analysis of a new 180-year daily temperature record for Kansas. Departments of Physical Sciences, Emporia State University, Emporia, KS.
- Burnette, D.J., 2007: Historical Meteorology/Climatology. Departments of Physical Sciences, Emporia State University, Emporia, KS.

## CONTRIBUTED PRESENTATIONS

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2010

- Burnette, D.J., 2010: Historical perspective on the Dust Bowl drought in the central United States. High Plains American Meteorological Society/National Weather Association Chapter Conference, Dodge City, KS.

2007

- Burnette, D.J., 2007: A new daily temperature record for Kansas, 1 July 1828-28 February 2007. High Plains American Meteorological Society/National Weather Association Chapter Conference, Hastings, NE.
- Burnette, D.J., 2007: A new daily temperature record for Kansas. Annual Meeting of the Association of American Geographers, "Climate Reconstructions from Land to Sea," San Francisco, CA.

2004

- Mock, C.J., D.O. Mayes, D.J. Burnette, and M. Chenoweth, 2004: Meteorological aspects of the Lewis and Clark journals in the Northern Plains as compared to other historical extremes in the last 200 years. Center for Great Plains Studies Symposium, "The Nature of Lewis and Clark on the Great Plains," Lied Conference Center, Nebraska City, NE.

2002

- Burnette, D.J., 2002: Meteorological reconstruction of the Lewis and Clark expedition. American Meteorological Society/National Weather Association Wichita Chapter, Wichita, KS.

1997

- Burnette, D.J., 1997: Case study: upslope flow yielding severe thunderstorm event (25 June 1997). Mississippi State University Summer Workshop, Starkville, MS.

## **GRANTS**

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Stahle, D.W. (PI) and D.J. Burnette (Co-PI), "Doctoral Dissertation Research: 19th Century Meteorology and Climatology in Kansas", National Science Foundation, Geography and Regional Science Program, Doctoral Dissertation Research Improvement Grant, August 2006 – January 2009, \$7,032.

## **AWARDS**

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Certificate of Achievement for Outstanding Presentation, Graduate Student Paper Competition, High Plains AMS/NWA Chapter, 2007.  
Earth Science Club (Lanier) Award of Excellence, Emporia State University, 2002.  
Lightning Award for redesign of company intranet, WeatherData, Inc., November 2002.  
Nominated for Board of Trustees Excellence in Teaching Award, Wichita State University, 2002.  
Nominated for Academy for Effective Teaching Award, Wichita State University, 2002.

## **UNIVERSITY COURSES TAUGHT**

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Climatology, Wichita State University  
Earth Science and the Environment, Wichita State University  
General Geology, University of Arkansas  
Global Change, University of Arkansas  
Introduction to Earth Science, Emporia State University  
Meteorology, Wichita State University  
Severe Weather, Emporia State University  
Visual Basic.NET Programming, University of Arkansas

## **UNIVERSITY LABS TAUGHT**

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Environmental Geology Lab, University of Arkansas  
General Geology Lab, University of Arkansas  
Honors General Geology Lab, University of Arkansas  
Introduction to Earth Science Lab, Emporia State University

## **COMMITTEES**

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Committee Member, Rebecca Rowland, Department of Geosciences, University of Arkansas, Fayetteville, AR, M.A., 2011.  
Student Representative, Environmental Dynamics Ph.D. Program Steering Committee, Department of Geosciences, University of Arkansas, Fayetteville, AR, December 2005-October 2007.

## **PROFESSIONAL AFFILIATIONS**

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American Geophysical Union (AGU)  
American Meteorological Society (AMS, Full Member)  
AMS/NWA High Plains Chapter  
AMS/NWA Wichita Chapter--former President and Webmaster  
Association of American Geographers (AAG)

International Commission on the History of Meteorology (ICHM)  
National Weather Association (NWA)  
Sigma Xi  
The American Quaternary Association (AMQUA)  
The Planetary Society

## **SKILLS**

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Custom Assembly of Personal Computers  
Geographic Information Systems Software: ArcGIS (ESRI Certificate in ArcGIS I) and Idrisi  
Programming Languages: Basic, C, C++, HTML, Javascript, R, SAS, Visual Basic.NET, and  
Visual C++.NET  
Tree-Ring Lab Software: ARSTAN and COFECHA  
Other Software: Dreamweaver, Fireworks, Flash, Illustrator, Microsoft Office, and Photoshop