

# MATTHEW D. THERRELL

## Curriculum Vitae

### CURRENT POSITION

Associate Professor  
Department of Geography  
University of Alabama  
Tuscaloosa, AL 35487-03222

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### RESEARCH AND TEACHING INTERESTS

Dendrochronology, Paleoclimatology, Water resources, human-environmental dynamics,  
Biogeography, Environmental Sustainability

### EDUCATION

Ph.D. 2003 Environmental Dynamics, University of Arkansas, Fayetteville, Arkansas  
Advisor: D.W. Stahle, Dissertation: *Tree-Rings, Climate, and History in Mexico*  
M.A. 1996 Geography, University of Arkansas, Fayetteville, Arkansas  
Advisor: D.W. Stahle, Thesis: *A Predictive Model for Locating Ancient Forests in the Cross  
Timbers of Osage County Oklahoma*  
B.A. 1991 History, Huntingdon College, Montgomery, Alabama

### PROFESSIONAL POSITIONS

2013-present Associate Professor, Department of Geography, University of Alabama  
2007-2013 Assistant Professor, Department of Geography and Environmental Resources,  
Southern Illinois University  
2005-2007 Postdoctoral Research Associate, Department of Environmental Sciences,  
University of Virginia  
2003-2005 Visiting Assistant Professor, Department of Geography, The University of Iowa  
1997 Lecturer, Department of Geography, University of Arkansas  
1996-2003 Research Associate, Department of Geography, University of Arkansas  
1993-1996 Research Assistant, Department of Geography, University of Arkansas  
1991-1993 Field archaeologist, Panamerican Consultants, Inc., Tuscaloosa Alabama

### EXTERNAL RESEARCH FUNDING

Title: NRT INFEWS-POPS (POstdisciplinary Problem Solving)  
Funded by: NSF  
Period: 2017-2022  
Amount: \$2,995,993 (pending)  
Contribution: co-PI

Title: Collaborative Research: Phase II Paleoflood Investigations along the Middle Tennessee River

Funded by: Electric Power Research Institute

Period: 2017-2018

Amount: \$177,839

Contribution: co-PI

Title: Collaborative Research: Phase I Paleoflood Investigations along the Middle Tennessee River

Funded by: Electric Power Research Institute

Period: 2016-2017

Amount: \$74,529

Contribution: co-PI

Title: Assessing Past, Present and Future Drought and Floods in Coastal Mississippi and Alabama

Funded by: Mississippi-Alabama Sea Grant Consortium (NOAA)

Period: 2014-2016

Amount: \$130,000

Contribution: co-PI

Title: Analyzing Extreme Hydroclimate Events in Alabama Watersheds

Funded by: Alabama Geological Survey

Period: 2014-2015

Amount: \$52,282

Contribution: co-PI

Title: Tree-Ring Reconstruction of Flood Dynamics on the Mississippi River and Principal Tributaries

Funded by: National Science Foundation, Geography and Spatial Sciences Program

Period: 2014-2017

Amount: \$296,876

Contribution: PI

Title: Site: Convergence Ecology - Research Experience for Undergraduates in Ecological Diversity Across Systems and Disciplines

Funded by: National Science Foundation, REU Program

Period: 2013-2016

Amount: \$357,755

Contribution: senior personnel

Title: Catalyzing International Partnerships in Community-related Environmental and Sustainability Research and Education: Ethical, Structural and Institutional Issues of Collaboration

Funded by: National Science Foundation, Office of International Science and Engineering

Period: 2012-2014

Amount: \$ 20,000.00  
Contribution: co-PI

Title: Tree Ring Studies of Hydroclimatic Variability in Tropical Southern Africa  
Funded by: National Science Foundation, Paleo Proxies of Climate Change Program  
Period: July 2010-June 2013  
Amount: \$252,127  
Contribution: PI

Title: Southern IL GIS mapping for next generation 911 based on NENA standard data formats  
Funded by: Counties of Southern Illinois, LLC  
Period: August 2010-August 2012  
Amount: \$70,380.54  
Contribution: co-PI

Title: Track 1: Southern Illinois Undergraduate Recruitment and Retention in Geoscience Education (SURRGE)  
Funded by: National Science Foundation, Geosciences Program  
Period: July 2009-June 2011  
Amount: \$186,439  
Contribution: co-PI

Title: IRES: US-South Africa International Research Experience for Students -- Impacts of Disturbance on Above- and Below-ground Structure of Southern African Savannas  
Funded by: National Science Foundation, Office of International Science and Engineering  
Period: 2006-2009  
Amount: \$150,000  
Contribution: Funded collaborator

Title: Enhancing Collaborative Research on Past Climate Variability in Southern Africa  
Funded by: IGBP PAGES Programme  
Period: 2006  
Amount: \$2,000  
Contribution: PI

Title: Climate Reconstruction and Analysis using Tree-Ring Data from Ancient Forests of Mexico and the Southern USA  
Funded by: National Science Foundation, Earth System History Program  
Period: 2004-2008  
Amount: \$470,000  
Contribution: co-PI

Title: Hydroclimatic Reconstruction and Ancient Blue Oak Mapping Over the Drainage Basin of San Francisco Bay  
Funded by: CALFED Ecosystems Restoration Program  
Period: 2003-2008  
Amount: \$748,000

Contribution: co/author, funded collaborator

Title: Prehispanic Dendrochronology in Mexico

Funded by: National Geographic Society Committee for Research and Exploration

Period: 2003

Amount: \$17,000

Contribution: Author/co-PI

Title: Doctoral Dissertation Research: Tree Rings, Climate, and History in Central Mexico

Funded by: National Science Foundation, Geography and Regional Science Program: DDI

Period: 2003-2004

Amount: \$8,000

Contribution: Author/co-PI

Title: Tree-Ring Records of Regional Climate and Large-Scale Atmospheric Circulation

Funded by: National Science Foundation, Paleoclimate Program

Period: 2000-2004

Amount: \$437,000

Contribution: co-PI

Title: The Ancient Cross Timbers Project

Funded by: The McGee Foundation, Oklahoma City

Period: 1998-2001

Amount: \$85,000

Contribution: co-PI

#### **INTERNAL RESEARCH FUNDING**

Title: Campus Sustainability Intern Program

Funded by: SIU 'Green Fund'

Period: June 2012-August 2013

Amount: \$18,468

Contribution: PI

Title: Analysis of Paleoflood Impacts Along the Mississippi River Using Dendrochronology

Funded by: SIU Research-Enriched Academic Challenge (REACH) Program

Period: 2011-2012

Amount: \$1,500

Contribution: Faculty Advisor (Christopher Peters)

Title: Campus Sustainability Intern Program

Funded by: SIU 'Green Fund'

Period: June 2011-August 2012

Amount: \$25,007

Contribution: PI

Title: Egyptian High School Summer Enrichment Program  
Funded by: SIU College of Education and Human Services  
Award Period: August 2011  
Amount: \$3,389  
Contribution: Funded collaborator

Title: Southern Illinois University Climate Assessment  
Funded by: SIU 'Green Fund'  
Period: June 2010-August 2011  
Amount: \$8,000  
Contribution: co-PI

Title: Campus Sustainability Project Intern Program  
Funded by: SIU 'Green Fund'  
Period: June 2010-August 2011  
Amount: \$25,007  
Contribution: PI

Title: Green Roof Installation – Learning and Research  
Funded by: SIU 'Green Fund'  
Period: June 2010-August 2011  
Amount: \$20,000  
Contribution: co-PI

Title: Support for Sustainable Vegetable Production  
Funded by: SIU 'Green Fund'  
Period: June 2010-August 2011  
Amount: \$7,886.50  
Contribution: co-PI

Title: "Technology for Problem Based Inquiry"  
Funded by: Undergraduate Student Technology Fee Proposal, SIUC  
Period: 2009-2010  
Amount: \$3,345.00  
Contribution: PI

Title: Tree-Ring Research in Southern Africa  
Funded by: SIU Office of Research Development and Administration  
Period: 2008-2009  
Amount: \$22,533  
Contribution: PI

Title: Development and Delivery of Thematically Integrated Courses in Meteorology and Climate  
Funded by: SIU Excellence Through Commitment Undergraduate Teaching Enhancement  
Award Period: May-June 2008  
Amount: \$6,333

Contribution: Co-PI

## PUBLICATIONS

### Articles in Professional Journals \*student co-author

44. **Therrell**, M.D., B.S. Mozayan, and M.D. Gage. 2017. *The hunt for Ft. Armstrong: Dendroarchaeology at Snow Hill Plantation, Cherokee County, Alabama, U.S.A. Dendrochronologia* In press corrected proof. doi.org/10.1016/j.dendro.2017.02.001
43. Remane, \* I. and M.D. **Therrell**. 2015. Dendrochronological Potential of *Millettia stuhlmannii* in Mozambique. *Trees*. 29(3): 729-736. DOI: 10.1007/s00468-014-1150-7.
42. Stahle, D.W., J.R. Edmondson, J.N. Burns, D.K. Stahle, D.J. Burnette, E. Kvamme, C. Lequesne and M.D. **Therrell**. 2015. Bridging the gap with subfossil Douglas-fir at Mesa Verde, Colorado *Tree Ring Research*. 71(2): 53-66.
41. **Therrell**, M.D., and M.B. Bialecki. \* 2015. A multi century tree-ring record of spring flooding on the Mississippi River. *Journal of Hydrology* 529: 490-498. doi:10.1016/j.jhydrol.2014.11.005
40. Schoof, J.T., Z.A. Heern, \* M.D. **Therrell**, J.W.F. Remo. 2014. Assessing trends in lower tropospheric heat content in the Central USA using equivalent temperature. *Journal of Climatology*. doi:10.1002/joc.4175
39. Garstang, M, A. Coleman, and M. **Therrell** 2014. Climate and the Mfecane. *South African Journal of Science*. 110(5/6): 106-112. http://dx.doi.org/10.1590/sajs.2014/20130239.
38. Considine, \* C.D., J.W. Groninger, C.M. Ruffner, M.D. **Therrell**, and S.G. Baer. 2013. Black oak sand savanna stand structure as related to fire history. *Natural Areas Journal*. 33(1): 10-20.
37. Fisher, \* S.M., J.T. Schoof, C.L. Lant, and M.D. **Therrell**. 2013. The effect of geographical distribution on the reliability of wind energy. *Applied Geography*. 40: 83-89.
36. Romano, \* A.J., M.D. **Therrell**, J. Schoof and D.J. Gibson. 2013. Response of non-native invasive plants to large scale wind damage. *Natural Areas Journal*. 33(3): 307-315.
35. Stahle D.W., R.D. Griffin, M.D. **Therrell**, J.R. Edmondson, M.K. Cleaveland, L.N. Stahle, D.J. Burnette, J.T. Abatzoglou, K.T. Redmond, D.M. Meko, M.D. Dettinger, and D.R. Cayan. 2013. The Ancient Blue Oak Woodlands of California: Longevity and Hydro-Climatic History. *Earth Interactions*. Doi: http://dx.doi.org/10.1175/2013EI000518.1
34. **Therrell**, M.D., and D.W. Stahle, 2012. Tree-Ring Dating of an Arkansas Antebellum Plantation House. *Tree-Ring Research* 68(1): 59-68.
33. Stahle, D.W., J. Villanueva Diaz, D. Burnette, J. Cerano Paredes, R.R. Heim Jr., F. Fye, R. Acuna Soto, M. **Therrell**, M.K. Cleaveland, and D. Stahle, 2011. Major Mesoamerican Droughts of the Past Millennium. *Geophysical Research Letters* 38: L05703, doi:10.1029/2010GL046472.
32. **Therrell**, M.D., 2011. "Ancient Trees Reveal their Secrets" *Nature Climate Change* 1: 94-95. (News and Views).
31. **Therrell**, M.D., M. Trotter, \* 2011. Waniyetu Wówapi: Native American Records of Weather and Climate. *Bulletin of the American Meteorological Society* 92: 583-592.
30. 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, and M.D. **Therrell** 2011. A Tree Ring Reconstruction of the Salinity Gradient in the Northern Estuary of San

- Francisco Bay. *San Francisco Estuary & Watershed Science* 9(1). Retrieved from: <http://escholarship.ucop.edu/uc/item/5cz3q8v4>.
29. Stahle, D.W., M.K. Cleaveland, H.D. Grissno 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: 3729-3750.
  28. **Therrell**, M.D., D.W. Stahle, M. Mukelabai, and H.H. Shugart, 2007. Age, and radial growth dynamics of *Pterocarpus angolensis* in southern Africa. *Forest Ecology and Management* 244: 24-31.
  27. Villanueva Díaz, J., D.W. Stahle, B.H. Luckman, J. Cerano Paredes, M.D. **Therrell**, R. Morán Martínez, and M.K. Cleaveland, 2007. Potential for dendrochronology of *Taxodium mucronatum* Ten. and its conservation in Mexico. *Ciencia Forestal en Mexico* 32(101): 9-37.
  26. Villanueva-Diaz, J, D.W. Stahle, B.H. Luckman, · J. Cerano-Paredes, M.D. **Therrell**, M.K. Cleaveland, E. Cornejo-Oviedo, 2007. Winter-spring precipitation reconstructions from tree rings for northeast Mexico. *Climatic Change* 83: 117-131.
  25. Le Quesne, C., D.W. Stahle, M.K. Cleaveland, M.D. **Therrell**, J.C. Aravena, and J. Barichivich, 2006. Ancient *Austrocedrus* Tree-Ring Chronologies Used to Reconstruct Central Chile Precipitation Variability from a.d. 1200 to 2000. *Journal of Climate* 19: 5731-5744.
  24. **Therrell**, M.D., D.W. Stahle, L.P. Ries,\* and H.H. Shugart, 2006. Two Centuries of Tree-Ring Reconstructed Rainfall Variability in Zimbabwe. *Climate Dynamics* 26: 677-685.
  23. **Therrell**, M.D., D.W. Stahle, J. Villanueva Diaz, E.H. Cornejo Oviedo, and M.K. Cleaveland, 2006. Tree-ring reconstructed maize yield in central Mexico: 1474-2001. *Climatic Change* 74: 493-504.
  22. Acuña Soto, R., D.W. Stahle, M.D. **Therrell**, S. Gomez Chavez, and M.K. Cleaveland, 2005. Drought, epidemic disease, and the fall of classic period cultures in Mesoamerica (AD 750-950). *Medical Hypotheses* 65: 405-409.
  21. Griffin, R.D., D.W. Stahle, and M.D. **Therrell**, 2005. Repeat Photography in the Ancient Cross Timbers of Eastern Oklahoma. *Natural Areas Journal* 25: 176-182.
  20. **Therrell**, M.D., 2005. Tree-Rings and ‘El Año del Hambre’ in Mexico. *Dendrochronologia* 22: 203-207.
  19. Villanueva Diaz, J., B. Luckman, D.W. Stahle, M.D. **Therrell**, M.K. Cleaveland, J. Cerano Paredes, G. Gutierrez Garcia, J. Estrada Avalos, and R. Jasso Ibarra, 2005. Hydroclimatic variability of the upper Nazas basin: Water management, implications for the irrigated area of the Comarca Lagunera, Mexico. *Dendrochronologia* 22: 215-223.
  18. Acuña Soto, R., D.W. Stahle, M.D. **Therrell**, R.D. Griffin, and M.K. Cleaveland, 2004. When half the population died: the epidemic of hemorrhagic fevers of 1576 in Mexico. *FEMS Microbiology Letters* 240(1): 1-5.
  17. **Therrell**, M.D., D.W. Stahle, and R. Acuña Soto, 2004. Aztec drought and the ‘Curse of One Rabbit.’ *Bulletin of the American Meteorological Society* 85: 1263-1272.
  16. Cleaveland, M.K., D.W. Stahle, M.D. **Therrell**, J. Villanueva Diaz, and B.T. Burns, 2003. Tree-ring reconstructed winter precipitation and tropical teleconnections in Durango, Mexico. *Climatic Change* 59: 369-388.
  15. Druckenbrod D.L., M.E. Mann, D.W. Stahle, M.K. Cleaveland, M.D. **Therrell**, and H.H. Shugart, 2003. Late-Eighteenth-Century precipitation reconstructions from James

- Madison's Montpelier Plantation. *Bulletin of the American Meteorological Society* 84: 57-71.
14. Pohl, K., M. **Therrell**, J. Santiago Blay, N. Ayotte, S. Bernal Salazar, J. Cabrera Hernandez, S. Castro-Diaz, A. Elvir, M. Gonzales Elizondo, D. Opland, J. Park, G. Pederson, L. Vazquez Salem, and D. Stahle, 2003. A cool-season precipitation reconstruction for Saltillo, Mexico. *Tree-Ring Research* 59(1): 11-19.
  13. Villanueva Diaz, J., A. Hernandez Reyna, F. Garcia Sanchez, E.H. Cornejo Oviedo, D.W. Stahle, M.D. **Therrell** and, M.K. Cleaveland, 2003. Structural analysis of a baldcypress (*Taxodium mucronatum* Ten.) stand in Los peroles, San Luis Potosi, Mexico. *Ciencia Forestal* 28(94): 57-79.
  12. Villanueva Díaz, J., D.W. Stahle, M.D. **Therrell**, M.K. Cleaveland, F. Camacho Morfín, P. Núñez Díaz, J. Armando Ramírez Garcia, J. Sánchez Sesma, 2003. Registros climáticos de los ahuehuetes de Chapultepec en los últimos cuatro siglos. *Boletín Histórico del Agua* 23: 34-43.
  11. Acuña Soto, R., D.W. Stahle, M.K. Cleaveland, and M.D. **Therrell**, 2002. Megadrought and megadeath in 16th century Mexico. *Emerging Infectious Diseases* 8: 360-362.
  10. Díaz, S.C., M.D. **Therrell**, D.W. Stahle, and M.K. Cleaveland, 2002. Chihuahua winter-spring rainfall reconstructed from tree-rings: 1647-1992. *Climate Research* 22: 237-244.
  9. **Therrell**, M.D., D.W. Stahle, M.K. Cleaveland, and J. Villanueva Diaz, 2002. Warm season tree growth and precipitation over Mexico. *Journal of Geophysical Research* 107: 4205-4212.
  8. Meko, D.M., M.D. **Therrell**, C.H. Baisan, and M.K. Hughes, 2001. Sacramento River flow reconstructed to A.D. 869 from tree rings. *Journal of the American Water Resources Association* 37: 1029-1039.
  7. Stahle, D.W., M.D. **Therrell**, M.K. Cleaveland, D.R. Cayán, M.D. Dettinger, and N. Knowles, 2001. Ancient blue oak reveal human impact on San Francisco Bay salinity. *Eos* 82(12): 141, 144-145. Reprinted in *Earth in Space*, April 2001.
  6. Stahle, D.W., E.R. Cook, M.K. Cleaveland, M.D. **Therrell**, D.M. Meko, H.D. Grissino Mayer, E. Watson, and B.H., Luckman, 2000. Tree-ring data document 16th century megadrought over North America. *Eos* 81(12): 212, Reprinted in *Earth in Space*, March 2000.
  5. **Therrell**, M.D., 2000. The historic and paleoclimatic significance of log buildings in southcentral Texas. *Historical Archaeology* 34(2): 25-37.
  4. Villanueva Diaz, J., D.W. Stahle, M.K. Cleaveland, and M.D. **Therrell**, 2000. Estado actual de la dendrochronologia en Mexico. *Ciencia Forestal* 25(88): 5-36.
  3. Stahle, D.W., M.K. Cleaveland, D.B. Blanton, M.D. **Therrell**, and D.A. Gay, 1998. The Lost Colony and Jamestown Droughts. *Science* 280: 564-567.
  2. Stahle, D.W., R.D. D'Arrigo, M.K. Cleaveland, E.R. Cook, R.J. Allan, J.E. Cole, R.B. Dunbar, M.D. **Therrell**, D.A. Gay, M.D. Moore, M.A. Stokes, B.T. Burns, J. Villanueva Diaz, and L.G. Thompson, 1998. Experimental dendroclimatic reconstruction of the Southern Oscillation. *Bulletin of the American Meteorological Society* 79: 2137-2152.
  1. **Therrell**, M.D., and D.W. Stahle, 1998. A predictive model to locate ancient forests in the Cross Timbers of Osage County, Oklahoma. *Journal of Biogeography* 25: 847-854.



## Books/Technical bulletins

- Therrell**, M., Senkbeil, J. 2016. Lab manual for UA GY 101 *Atmospheric Process and Patterns*. 1<sup>st</sup> edition. Published by McGraw Hill. 69 pp. ISBN- 9781260040432.
- Villanueva Diaz, J., J. Cerano Paredes, B.H. Luckman, J. Estrada Avalos, D.W. Stahle, I. Sanchez Cohen, M.D. **Therrell**, R. Moran Martinez. 2006. *Precipitation y flujo historico de la Cuenca Nazas-Aguanaval e impacto en la agricultura*, Centro Nacional de Investigacion Disciplinaria en Relacion Agua-Suelo-Planta-Atmosfera, Folleto Cientifico 19.
- Villanueva Diaz, J., J. Cerano Paredes, D.W. Stahle, M.D. **Therrell**, L. Vazquez Selem, R. Moran Martinez, B.H. Luckman. 2006. *Arboles viejos del centro-norte de Mexico*, Centro Nacional de Investigacion Disciplinaria en Relacion Agua-Suelo-Planta-Atmosfera, Folleto Cientifico 20.
- Villanueva Diaz, J., J. Cerano Paredes, D.W. Stahle, M.D. **Therrell**, M.K. Cleaveland, and I. Sanchez Cohen. 2004. *Elementos Basicos de la Dendrochronologia y Sus Aplicaciones en Mexico*, Centro Nacional de Investigacion Disciplinaria en Relacion Agua-Suelo-Planta-Atmosfera.

## Book Chapters

- Therrell**, M.D., 2013. "Dendroecology". In *Oxford Bibliographies in Ecology*. Ed. David J. Gibson. New York: Oxford University Press. 2013. URL: <http://www.oxfordbibliographiesonline.com/obo/page/Ecology>.
- Villalba, R, et al., 2010. Dendroclimatology from Regional to Continental Scales: Understanding Regional Processes to Reconstruct Large-Scale Climatic Variations Across the Western Americas. In *Dendroclimatology Progress and Prospects Vol. 11*, ed. By M. Hughes, T. Swetnam, H. Diaz. Springer, 365 pp.
- Schoof J.T., and M.D., **Therrell**, 2009. "Climate Change" in *The Encyclopedia of Organic, Sustainable and Local Food*, ed. by L. Duram. Greenwood Press, 462 pp.
- Therrell**, M.D., 2009. "Biodiversity" in *The Encyclopedia of Organic, Sustainable and Local Food*, ed. by L. Duram. Greenwood Press, 462 pp.
- Acuña Soto, R., D.W. Stahle, M.D. **Therrell**, and J. Villanueva Diaz, 2008. Drought Epidemic Disease, and Massive Population Loss; 1,000 Years of record in Mexico. In: *Global Climate Change and extreme weather events: understanding the contributions to infectious disease emergence*. Washington DC: The National Academies Press.
- Stahle, D.W., F. Fye, and M.D. **Therrell**, 2003. Interannual to Decadal Environmental Variability Estimated from Tree Rings. In: *The Quaternary in the United States, 2003*, ed. by B. Atwater, A. Gillespe, and S. Porter. INQUA and University of Washington Press.
- Stahle, D.W., J. Villanueva Diaz, M.K. Cleaveland, M.D. **Therrell**, G.J. Paull, B.T. Burns, W. Salinas, H. Suzan, and P.Z. Fule, 2000. Recent tree-ring research in Mexico. In: *Dendrocronologia en America Latina*, ed. by Fidel Roig, Universidad Nacional de Cuyo, Mendoza, Argentina.

## Book Reviews

- "El Niño Catastrophism, and Culture Change in Ancient America" Sandweiss and Quilter, 2008. *Bulletin of the American Meteorological Society*, June, 2010.

## Conference Proceedings

- Villanueva Diaz J., J. Cerano Paredes, D.W. Stahle, B.H. Luckman, and M.D. **Therrell**. 2006. *Historical Droughts in North-Central Mexico*. North American Drought Monitor Workshop, Mexico City, Mexico October 18-19, 2006. **invited**.
- Villanueva Diaz J., J. Cerano Paredes, D.W. Stahle, B.H. Luckman, M.D. **Therrell**, M.K. Cleaveland, and G. Gutierrez-Garcia. 2006. *Historic Hydroclimatic Variability in Northern Mexico*. USDA Forest Service Proceedings RMRS-P-42CD.

## Refereed Abstracts

- McLeran, K., J. Schoof, L. Lefticariu, M. Therrell. 2015.  *$\delta^{18}O$  and  $\delta^{13}C$  Analysis in Tree Rings of *Pterocarpus angolensis* Growing in Zimbabwe*. Abstract PP51A-2250 presented at 2015 Fall Meeting, AGU. San Francisco, CA. December 14-18, 2015.
- Therrell, M.D., M. Meko, M. Bialecki, G. Harley. 2015. *Tree ring anatomical variability as an indicator for large-magnitude spring flooding in the Lower Mississippi Basin*. Abstract PP51A-2262 presented at 2015 Fall Meeting, AGU. San Francisco, CA. December 14-18, 2015.
- Tootle, G., M. Therrell, T. Moat, M. Meko. 2015. *Seasonal Streamflow Reconstructions of the Choctawhatchee River (AL-USA)*. Abstract PP51A-2256 presented at 2015 Fall Meeting, AGU. San Francisco, CA. December 14-18, 2015.
- Greer, A. G. Tootle, A. Oubeidillah and M.D. Therrell. 2014. *Hydrologic Drought Potential in the Southeast US*. Abstract H23N-1068 presented at 2014 Fall Meeting, AGU. San Francisco, CA. December 16, 2014.
- K. McLeran, M.D. Therrell, L. Lefticariu. 2012. *Oxygen Isotope Analysis in Tree-Rings of *Pterocarpus angolensis* in Zimbabwe*. Abstract B21B-0351 presented at 2012 Fall Meeting, AGU. San Francisco, CA. December 3-7, 2012.
- Therrell, M.D., M. Bialecki, C. Peters. 2012. *A dendrochronological analysis of Mississippi River flood events*. Abstract PP24A-06 presented at 2012 Fall Meeting, AGU. San Francisco, CA. December 3-7, 2012.
- Miller, G.R., J.T. Schoof, and M.D. Therrell. 2011. *Developing Curriculum to Help Students Explore the Geosciences' Cultural Relevance*. Abstract ED21A-0570 presented at 2011 Fall Meeting, AGU. San Francisco, CA. December 5-9, 2011.
- Intolubbe Chmil, L. M.D. Therrell, R.J. Swap, and N. Ribeiro. 2011. *Transformative Teaching, Learning & Research: Cultivating Pedagogy Through the Mashamba Model*. 2011 AERA Annual Meeting. New Orleans, LA. April 2011.
- Villanueva Diaz, J., J. Cerano Paredes, D.W. Stahle, M.D. Therrell, and B.H. Luckman. 2007. *Tree Ring Chronologies in Mexico and Dendroclimatic and Ecological Applications*. Eos Trans. AGU, 88(23), Jt. Assem. Suppl., Abstract U42B-08.
- Acuña Soto, R., D.W. Stahle, J. Villanueva Diaz, and M.D. Therrell. 2007. *Association of Drought with Typhus Epidemics in Central Mexico*. Eos Trans. AGU, 88(23), Jt. Assem. Suppl., Abstract B41C-03.
- Stahle, D.W., M.K. Cleaveland, M.D. Therrell, H.D. Grissino Mayer, R.D. Griffin, and F.K. Fye. 2007. *A 2100-Year Reconstruction of July Rainfall Over Westcentral New Mexico*. Eos Trans. AGU, 88(23), Jt. Assem. Suppl., Abstract U23A-02.

- Washington Allen, R.A., M.D. Therrell, and R.E. Emanuel. 2007. *Theory and Practice in Determining the Long-Term Spatial Productivity of Drylands: A California Blue Oak Case Study*. Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract B42B-03.
- Washington Allen, R.A., T.E. Fatoyinbo, N.S. Ribeiro, H.H. Shugart, M.D. Therrell, K.T. Vaz, and L. von Schill. 2006. *Environmental Remote Sensing for Natural Resources Management: A Workshop in Collaboration with Faculdade de Agronomia e Engenharia Florestal, Universidade Eduardo Mondlane*. Eos Trans. AGU 87(52), Fall Meet. Suppl., Abstract ED31A-1369.
- Redmond, K.T., D.W. Stahle, M.D. Therrell, D.R. Cayan, and M.D. Dettinger, 2002. 400 Years of California Central Valley precipitation reconstructed from blue oaks. Preprint, 13<sup>th</sup> AMS Symposium on Global Change and Climate Variations. Orlando FL. January 13-17, 2002. pp. 20-23.
- Stahle, D.W., M.D. Therrell, M.K. Cleaveland, F.K. Fye, E.R. Cook, H.D. Grissino Mayer, and R. Acuña Soto. 2002. *The 8th Century Megadrought across North America*. Eos Trans. AGU, 83(47), Fall Meet. Suppl., Abstract PP71C-04.
- Drukenbrod, D., M.E. Mann, D.W. Stahle, M.K. Cleaveland, M.D. Therrell, and H.H. Shugart. 2001. *James Madison and a Shift in Precipitation Seasonality*. Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract GC21A-03.
- Stahle, D.W., and M.D. Therrell. 2001. *Tree-Ring Reconstruction of San Francisco Bay Salinity: 1604-1997*. Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract PP32B-0519.
- Therrell, M.D., D.W. Stahle, M.K. Cleaveland, J. Villanueva Diaz, and D.M. Meko. *The tree-ring record of early summer precipitation over Mexico*. in West, G.J., and Buggaloe, L.D., eds, Proceedings of the 18th Annual Pacific Climate (PACLIM) Workshops: Technical Report 69 of the Interagency Ecological Program for the San Francisco Bay Estuary. March 18-21, 2001. **Invited.**
- Stahle D.W., M.K. Cleaveland, M.D. Therrell, and J. Villanueva Diaz. 1999. Tree-Ring reconstruction of winter and summer precipitation Durango, Mexico, for the past 600 years. In 10th Symposium on Global Change Studies, January 10–15, Dallas, TX. Karl TR (Program Chairman). American Meteorological Society: Boston, MA; 317–318.
- Stahle, D.W., M.K. Cleaveland, M.D. Therrell, R.D. D'Arrigo, P.J. Krusic and E.R. Cook. 1997. Experimental reconstruction of the Southern Oscillation. *Eos Transactions of the American Geophysical Union*, 78(46), Fall Meet. Suppl.

## PRESENTATIONS

### At Professional Meetings

- Davis, L., R. Lombardi, G. Stinchcomb, M. Therrell, M. Gage, S. Sherwood, C. Stewart. A regional paleoflood analysis for the eastern U.S., implications for extreme flood frequency. Poster Presentation, Association of American Geographers Annual Meeting, Boston, MA, April 5-9, 2017.
- Davis, L. G. Stinchcomb, M. Therrell, M.Gage, S. Driese, S. Forman, S. Sherwood, N. Dimova, R. Lombardi 2016. *Paleoflood reconstruction in the Tennessee River (USA): preliminary findings*. 5TH International Paleoflood Conference. Rapid City, South Dakota, USA. September 12-15, 2016.

- Therrell, M.D., J. Remo, M. Meko, M. Bialecki, G. Harley. 2016. *Tree-ring records of large-scale flooding on the Lower Mississippi River*. Geological Society of America. Annual Meeting. Denver, CO, September 25-28, 2016.
- Therrell, M.D., J. Remo, M. Meko, M. Bialecki, G. Harley. 2016. *Anatomical variability in tree-rings related to large-scale flooding*. PAGES-Cross-Community Workshop on past flood variability. Grenoble, France. June 27-30, 2016. **Invited.**
- Therrell, M.D. 2015. *Paleo-hydroclimate of the Southeastern United States*. Alabama Water Resources Conference. September 9-11, 2015. Orange Beach, Alabama.
- Therrell, M.D. 2015. *Potencial para realizar estudios dendrocronológicos en Cuba*. X Convencion Internacional sobre medio Ambiente y Desarrollo. July 6-10, Havana, Cuba. **Invited.**
- Trouet, V. Z. Hassan Khamisi and M. Therrell. 2015. *Climatic drivers of tree growth in the miombo woodland of southern Africa*. Wood science underpinning tropical forest ecology and management. Tervuren, Belgium, May 26-29, 2015.
- Meko, M., M Therrell and A. Greer. 2015. *Tree-ring anatomical variability and flooding near the White River-Mississippi River confluence*. 111<sup>th</sup> Annual meeting Association of American Geographers. Chicago, IL. April 23, 2015.
- Therrell, M.D., I. Remane, and K. McLeran. 2013. *Tree Ring Chronologies from Mozambique*. Ameridendro Conference Tucson, AZ, May 13-17, 2013.
- Peters, C. and M.D. Therrell. 2012. *Analysis of Paleoflood impacts along the Mississippi River using dendrochronological techniques*. National Conference on Undergraduate Research. Ogden UT. March 29-31, 2012.
- Therrell, M.D., I. Remane, and K. McLeran. 2012. *Recent Tree-Ring Research in Southern Africa*. 108<sup>th</sup> Annual meeting Association of American Geographers. New York, NY. February 28, 2012.
- Harris, J., C.M. Ruffner, M. Therrell, and C. Nielsen. 2012. *A Dendrochronological Determination of Historical Fire Occurrence and Recruitment in Southern Illinois Oak-Hickory Forests*. 108<sup>th</sup> Annual meeting Association of American Geographers. New York, NY. February 28, 2012.
- Harris, J., C.M. Ruffner, M. Therrell, and C. Nielsen. 2011. *A Dendrochronological Determination of Historical Fire Occurrence and Recruitment in Southern Illinois Oak-Hickory Forests*. 107<sup>th</sup> Annual meeting Association of American Geographers. Seattle, WA. April 15, 2011.
- Therrell, M.D., and R.J. Swap. 2011. *Dendrochronology in Mozambique*. 107<sup>th</sup> Annual meeting Association of American Geographers. Seattle, WA. April 15, 2011.
- Considine, C.D. J.W. Groninger, C.M. Ruffner, S.G. Baer, and M.D. Therrell. 2008. *Integrating fire history and stand structure: Implications for black oak sand savanna management and restoration*. 93rd ESA Annual Meeting. Milwaukee, WI. August 3-8, 2008.
- Therrell, M.D., D.W. Stahle, J. Villanueva Diaz, E. Cornejo Oviado, and M.K. Cleaveland. 2007. *Records of Drought and Famine in Mexico*. Multidisciplinary investigations of climate change in Mexico. Merida, Mexico. January 8-10, 2007. **Invited.**
- Therrell, M.D., 2006. *Tree-Ring Records of Extreme Climate in Mexican History*. Multidisciplinary investigations of climate change in Mexico. Nottingham, England, April 3rd-7<sup>th</sup>, 2006. **Invited.**
- Therrell, M.D., D.W. Stahle. L.P. Ries, and H.H Shugart. 2006. *Tree-Ring Reconstructed Rainfall Over Zimbabwe*. 102<sup>nd</sup> Annual meeting Association of American Geographers.

- Chicago, IL. March 31, 2006.
- Therrell, M.D., D.W. Stahle, R. Acuña Soto, M.K. Cleaveland, J. Villanueva Diaz, and E. Cornejo Oviedo. 2005. *The curse of climate: Records of drought and famine in Central Mexico*. Workshop on Climate and Cultural History in the Americas. Quintana Roo, Mexico. March 31-April 2, 2005. **Invited**.
- Villanueva Diaz J., B.H. Luckman, D.W. Stahle, M.D. Therrell, M.K. Cleaveland, J. Cerano Paredes, J. Estrada Avalos, and R. Jasso Ibarra. 2005. *Historical hydroclimate variability on the upper forested Nazas watershed Durango, Mexico* (Poster). Planning workshop to develop hydroclimatic reconstructions for decision support in the Colorado basin. Tucson, AZ. May 4-5, 2005.
- Villanueva Diaz, J., J. Cerano Paredes, D.W. Stahle, B.H. Luckman, M.D. Therrell, and M.K. Cleaveland, 2005. *Tree-ring chronologies and their hydroclimatic response in northern Mexico*. 5th Annual Science Meeting IAI CRN03. Akumal, Yucatan, Mexico. March 28- April 1<sup>st</sup> 2005.
- Villanueva Diaz J., J. Cerano Paredes, D.W. Stahle, M.D. Therrell, and M.K. Cleaveland. 2005. *New climate sensitive tree-ring chronologies for northern Mexico and the potential for longterm fire frequency studies*. Workshop on fire history and climate synthesis in western North America. Northern Arizona University, Flagstaff, AZ. April 30-May 3, 2005.
- Villanueva Diaz J., D.W. Stahle, M.D. Therrell, and J. Cerano Paredes. 2005. *Climate variability in central Mexico for the last 800 years*. Workshop on climate and cultural history in the Americas. Quintana Roo, Mexico, March 31-April 2, 2005.
- Therrell, M.D., D.W. Stahle, R. Acuña Soto, M.K. Cleaveland, J. Villanueva Diaz, and E.H. Cornejo Oviedo. 2004. *Tree Rings, Drought, and Famine, in Central Mexico*. 100<sup>th</sup> Annual meeting Association of American Geographers. Philadelphia, PA. March 5-8, 2004.
- Villanueva Diaz J., B.H. Luckman, D.W. Stahle, M.D. Therrell, M.K. Cleaveland, J. Cerano, G. Gutierrez, J. Estrada, and R. Jasso. 2004. *Variabilidad hidroclimática histórica en la cuenca alta del Río Nazas*. Memorias de la XVI Semana Internacional de Agronomía FAZ-UJED. 666 – 673 Pp.
- Cleaveland, M.K., D.W. Stahle, and M.D. Therrell. 2003. *A network of long tree-ring chronologies in Mexico and uses*. 99<sup>th</sup> Annual meeting Association of American Geographers. New Orleans, LA. March 5-8, 2003.
- Stahle, D.W., M.D. Therrell, M.K. Cleaveland, J. Villanueva Diaz, R. Acuña Soto, and E. Cornejo Oviedo. 2003. *Dendroclimatology in Mexico*. 4th Annual Science Meeting IAI CRN03. Mendoza, Argentina, October 10-16, 2003. p47-8.
- Therrell M.D., D.W. Stahle, M.K. Cleaveland J. Villanueva Diaz, R. Acuña Soto and E. Cornejo Oviedo. 2003. *Tree rings, climate and maize yields in Mexican History*. 4th Annual Science Meeting IAI CRN03. Mendoza, Argentina, October 10-16, 2003. p38-9. **Invited**.
- Villanueva Diaz, J., J. Cerano Paredes, D.W. Stahle, M.D. Therrell, and M.K. Cleaveland 2003. *Cronologías de anillos de árboles del norte de México y su potencial hidroclimático*. Pp. 71 – 76. XII Congreso Nacional de Irrigación (ANEI). Zacatecas, Mexico. August 13-15, 2003.
- Villanueva Diaz, J., J. Cerano Paredes, D.W. Stahle, M.D. Therrell, and M.K. Cleaveland. 2003. *A tree-ring precipitation reconstruction for northern Mexico and new tree-ring chronologies for the region*. 4th Annual Science Meeting IAI CRN03. Mendoza, Argentina. October 10-16, 2003.
- Villanueva Diaz, J., D.W. Stahle, M.D. Therrell, M.K. Cleaveland, and E.H. Cornejo Oviedo, E.H. 2003. *A tree-ring reconstruction of cool seasonal precipitation for northeast Mexico*.

- Abstracts of the workshop on Managing Water Resources Under Conditions of High Climatic Variability in the US-Mexico Border Region. La Paz, Baja California Sur, Mexico. January 14-16, 2003.
- Stahle, D.W., M.D. Therrell, M.K. Cleaveland, and J. Villanueva Diaz. 2002. *IAI- related tree-ring research in Mexico*. Program with Abstracts, Third Annual Science Meeting IAI CRN03. Oaxaca, Mexico. April 19-23, 2002.
- Villanueva Diaz, J., D.W. Stahle, M.D. Therrell, and M.K. Cleaveland. 2001. *Especies arbóreas y su potencial para estudios históricos de variabilidad climática en México*. Quinta Reunión Científica y Tecnológica del INIFAP. San Luis Potosí, Mexico. August 27, 2001. **invited**.
- Cleaveland, M.K., D.W. Stahle, and M.D. Therrell. 2000. *Winter and summer precipitation in Durango reconstructed from earlywood and latewood chronologies*. International Conference on Dendrochronology for the Third Millennium. Mendoza, Argentina. April 2-7, 2000.
- Stahle, D.W., R.D. D'Arrigo, P.J. Krusic, M.K. Cleaveland, E.R. Cook, M.D. Therrell, and J. Villanueva Diaz. 2000. *Experimental tree-ring reconstruction of past ENSO variability*. International Conference on Dendrochronology for the Third Millennium. Mendoza, Argentina. April 2-7, 2000.
- Therrell, M.D. and D.W. Stahle. 2000. *Dendrochronology of ancient blue oak woodlands in California*. International Conference on Dendrochronology for the Third Millennium. Mendoza, Argentina. April 2-7, 2000.
- Stahle, D.W., M.K. Cleaveland, and M.D. Therrell. 2000. *Tree-ring records of ENSO and monsoon variability over subtropical North America*. 16<sup>th</sup> Biennial Meeting of the American Quaternary Association. Fayetteville, AR. May 22-24, 2000.
- Therrell, M.D., and D.W. Stahle. 2000. *Paleoclimatic significance of ancient blue oak woodlands in California*. 16<sup>th</sup> Biennial Meeting of the American Quaternary Association. Fayetteville, AR. May 22-24, 2000.
- Villanueva Diaz, J., D.W. Stahle, M.K. Cleaveland, and M.D. Therrell. 2000. *Tree-ring chronologies and ENSO in northern Mexico*. 15<sup>th</sup> Biennial Meeting of the American Quaternary Association. Puerto Vallarta, Mexico. September 5-7, 2000.
- Therrell, M.D., and D.W. Stahle. 1999. NOAA/NASA Workshop: Assessing the full range of central North America droughts and associated landcover change. Boulder, CO. June 2-4, 1999. **Invited**.
- Therrell, M.D., and D.W. Stahle. 1995. *A Predictive Model to Locate Ancient Forests, Savannas, and Glades in the Cross Timbers*. Midwest Oak Savanna and Woodland Ecosystems Conferences, Springfield, Missouri. September 26-29, 1995.

### **Other venues**

- Guest on local FOX affiliate morning program discussing climate change. May 29<sup>th</sup>, 2014.
- Guest on WVUA local radio program discussing climate change. February 12<sup>th</sup>, 2014.
- Guest on local FOX affiliate morning program discussing climate change. February 6<sup>th</sup>, 2014.
- Panel discussant on "From Antarctica to Climate Change Policies: Roles of Scientists and Media in Policymaking and Legislation" panel, part of SIU "Antarctica: Imagined Geographies Initiative", April 25, 2012.
- Southern Illinois Science Center "Science Café", *The Curse of Climate: Tree Rings, Drought, and Disaster*, March 22, 2012.
- Guest on WSIU public radio program "Morning Conversation" discussing tree rings and climate change.

Southern Illinois University, Department of Forestry colloquium, *Sustainable Forestry in Mozambique*, November 3, 2009.

Southern Illinois University, Center for Ecology, *Tropical Forest Management in Mozambique*, October 14, 2009.

The Illinois State Water Survey Center for Atmospheric Science, *Tree Rings, Climate, and History in Mexico*, September 22, 2009.

Southern Illinois University, Center for Ecology, *Tree-Ring Research in Southern Africa*, October 8, 2008.

Southern Illinois University, Center for Delta Studies, Climate Change Forum, *Tree-Ring Records of Climate*, September 26, 2008.

Keynote: John A. Logan College, International High School Conference, *Climate Change and Sustainability*, April 29, 2008.

University of Virginia, Department of Environmental Science, *Undergraduate Student Research in Southern Africa*, January 2, 2008.

Southern Illinois University, Department of Forestry, *Recent Tree-Ring Research in Southern Africa*, November 8, 2007.

University of Virginia, Department of Biology, *Recent Tree-Ring Research in Southern Africa*, April 19, 2006.

University of Virginia, Department of Environmental Science, Undergraduate Seminar: *Ancient Forests and Ancient Climates*, April 11, 2006.

University of Arkansas, Department of Geography, *Recent Tree-Ring Research in Southern Africa*, March 3, 2006.

University of Missouri, Department of Geography, *Tree-Rings, Climate, and History in Mexico*, January 24, 2006.

University of Virginia, Center for Regional Environmental Science, *Potential Tree-Ring Research in Africa*, September 14, 2004.

University of Wisconsin, Department of Geography, *Tree-Rings, Climate, and History in Mexico*, December 12, 2003.

California State University Long Beach Department of Geography, *Tree Rings; Climate, and History in Mexico*, February 19, 2003.

## **Other Publications**

D.W. Stahle, M.D. Therrell, J. Villanueva Diaz, and E. Cornejo Olviedo. 2003. "The Ancient Douglas-fir (*Pseudotsuga menziesii*) Forest near Cuauhtemoc la Fragua, Puebla, Mexico" A proposal for land conservation. Published by University of Arkansas Tree-Ring Laboratory. Climate Reconstruction Group, 13<sup>th</sup> North American Dendroecology Fieldweek, Lubrecht Experimental Forest, Missoula, Montana. 2003. *A Hydroclimatic Analysis of Ancient Douglas-fir, Clearwater River, Montana* (unpublished manuscript).

SIU Campus Sustainability Project website ([sustainability.siu.edu](http://sustainability.siu.edu))

## **PROFESSIONAL SERVICE**

### **Membership in Professional Associations**

Association of American Geographers  
 American Geophysical Union

American Meteorological Society  
American Quaternary Association  
Sigma Xi  
Tree-Ring Society

## **Evaluation of Manuscripts for Journals and Book Publishers and of Grant Proposals for Agencies**

### **2017**

Reviewed grant proposal for Natural Sciences and Engineering Research Council of Canada  
Reviewed article for *Canadian Journal of Forest Resources*  
Reviewed article for *Geophysical Research Letters*

### **2016**

Reviewed article for *Advances in Water Resources*  
Reviewed article for *Dendrochronologia* (2)  
Reviewed article for *Forest Ecology and Management*  
Reviewed article for *Geomorphology*  
*Reviewed article for Journal of Hydrology*  
Reviewed article for *Wetlands*  
Reviewed grant proposal for National Science Foundation; EAR-Global Change  
Reviewed grant proposal for National Science Foundation; EAR-Post Doctoral Fellowships  
Reviewed grant proposal for National Science Foundation; GSS  
Research Reviewer for South African National Research Foundation

### **2015**

Reviewed article for *Dendrochronologia*  
Reviewed article for *Wetlands*  
Reviewed article for *Trees*  
Reviewed article for *Tree-Ring Research* (2)

### **2014**

Reviewed article for *Agricultural and Forest Meteorology*  
Reviewed article for *Australian Journal of Grape and Wine Research*  
Reviewed article for *Climate Dynamics*  
Reviewed article for *Dendrochronologia*  
Reviewed article for *Journal of Atmospheric Science*  
Reviewed article for *Journal of Geophysical Research – Biogeosciences*  
Reviewed grant proposal for SNSF, Swiss National Science Foundation  
Reviewed grant proposal for National Science Foundation; Paleoclimate Program

### **2013**

Reviewed article for *Dendrochronologia*  
Reviewed article for *Holocene* (2)  
Reviewed article for *Journal of Geophysical Research – Atmospheres*  
Reviewed article *Nature Communications*  
Reviewed article *Theoretical and Applied Climatology*  
Reviewed article for *Tree-Ring Research* (2)  
Reviewed article *Water Resources Research*

### **2012**

Reviewed article for *African Journal of Agricultural Research*



Reviewed article for *Journal of Geophysical Research - Atmospheres*  
Reviewed article for *Tree-Ring Research* (2)  
Reviewed article for *Journal of Archaeological Science*  
Reviewed article for *Ecology and Evolution*  
Reviewed article for *Forest Ecology and Management*  
Reviewed article for *Geophysical Research Letters*  
Reviewed article for Proceedings of the National Conferences on Undergraduate Research (2)  
Reviewed grant proposal for DFG, German Research Foundation  
Reviewed grant proposal for NSF; Geography and Spatial Sciences Program  
Member NSF Review Panel, Decision, Risk and Management Sciences Program

**2011**

Reviewed article for *Agriculture, Ecosystems and Environment*  
Reviewed article for *Canadian Journal of Forest Resources*  
Reviewed article for *International Journal of Climate*  
Reviewed article for *Journal of Quaternary Science*  
Reviewed article for *Nature Climate Change* (2)  
Reviewed article for *Progress in Physical Geography*  
Reviewed article for *Tree-Ring Research*  
Reviewed grant proposal for NSF; Office of International Science and Engineering  
Reviewed grant proposal for NSF; Geography and Spatial Sciences Program

**2010**

Reviewed article for *Journal of Climate*  
Reviewed article for *Journal of Hydrometeorology*  
Reviewed article for *Water Resources Research*

**2009**

Reviewed article for *Canadian Journal of Forest Resources*  
Reviewed article for *Climatic Change*  
Reviewed article for *Global and Planetary Change*  
Reviewed article for *International Journal of Climate*

**2008**

Reviewed article for *Geophysical Research Letters*  
Reviewed article for *International Journal of Climate*  
Review of book chapter in "Tidal salt marshes of the San Francisco Bay Estuary: ecology, restoration, preservation. Published by San Francisco Bay National Estuary Research Reserve  
Reviewed grant proposal for NSF; Geography and Regional Science Program

**2007**

Reviewed article for *Global and Planetary Change*  
Reviewed article for *Journal of Arid Environments*  
Reviewed article for *Journal of Vegetation Science*  
Reviewed article for *Tree-Ring Research*

**2006**

Reviewed article for *Climatic Change*  
Reviewed article for *Journal of Vegetation Science*  
Reviewed grant proposal for NSF; Geography and Regional Science Program

**2005**

Reviewed article for *Geophysical Research Letters*

Reviewed article for *Northwest Science*

Reviewed grant proposal for National Science Foundation; Paleoclimate Program.

Reviewed grant proposal for NSF; International Research Fellowship Program

## **OTHER PROFESSIONAL ACTIVITIES**

GSA 2016 Conference Session. Organizers: Matthew Therrell, Lisa Davis and Samuel Munoz  
Title: (T59). *Paleofloods and Related Fluvial Processes during the Late Quaternary: Reconstructions and Causes* at the Geological Society of America (GSA) Annual Meeting 2016. Denver, Colorado, USA September 25-28

AAG 2006 Conference Session. Organizers: Matthew Therrell and Valerie Trouet  
Title: Dendrochronology VI: Tropical Dendrochronology I; Dendrochronology VII: Tropical Dendrochronology II at the 102nd annual meeting in Chicago, IL

AAG 2012 Conference Session. Organizers: Matthew Therrell and Valerie Trouet (U. Arizona)  
Title: Dendrochronology VI: Tropical Dendrochronology at the 108th annual meeting in New York, NY

Field trip co/organizer:

The American Quaternary Association, biennial meeting, 2000

The Natural Areas Association, annual meeting, 1995

Co-founder of The Ancient Cross Timbers Consortium See: [www.uark.edu/xtimber](http://www.uark.edu/xtimber)

Co-founder of The Eastern Native Tree Society See: [www.nativetreesociety.org/](http://www.nativetreesociety.org/)

Contributor to the IGBP PAGES/World Data Center for Paleoclimatology (40+ tree-ring, climate reconstructions)

Member "Mexico Climate Change Network"

Participant, Inter-American Institute, Tree Lines Project, 1998-2004

Consultant for Illinois Department of Natural Resources, 2012

Consultant for Shawnee Resource Conservation and Development Area, 2012

Consultant for UA Office of Archaeological Research 2014-2016

## **TEACHING EXPERIENCE**

### **Courses Taught**

University of Alabama

*Atmospheric Processes and Patterns* (GY 101) each semester Fall 2013-present (150-350 students/semester)

*Global Environmental Change* (GY 470/570) Fall 2014, 2016

*Hydroclimatology* (GY 412/512) Fall 2015

*Physical Geography of the Southeastern U.S.* (GY 404/504) Spring 2015, 2016

*Directed Research in Physical Geography* (GY 405) Spring 2015 (2 students), Spring 2016 (1 student)

Southern Illinois University

*Environmental Management* (GENV 320), Spring 2008

*Field Methods in Geography* (GENV 433), Spring 2009-2013

*Global Climate Change* (GENV 439/539) Fall 2007-present

Sustainability in Higher Education (Honors 351) Fall 2010  
*Weather, Climate and Society* (GENV 104) Spring and Fall 2007-2013 (~250 students/semester)  
*Independent Studies* (GENV 591-701) Spring 2009 (1 student)  
*Independent Studies* (GENV 591-701) Spring 2010 (1 student)  
*Independent Studies* (GENV 591-701) Summer 2011 (1 student)  
*Readings in Geography* (GENV 490 Sec. 701) Summer 2008 (1 student)  
*Readings in Geography* (GENV 490 Sec. 701) Summer 2009 (2 students)  
*Readings in Geography* (GENV 490 Sec. 701) Fall 2009 (2 students)  
*Readings in Geography* (GENV 490 Sec. 701) Spring 2011 (2 students)

The University of Iowa

*Climatology* Spring 2004  
*Consequences of Global Environmental Change* Fall 2003  
*Contemporary Environmental Issues* Fall 2004  
*Earth Systems Science* Fall 2003, Spring 2004, Fall 2004  
*Field Methods in Physical Geography* Spring 2004  
*Remote Sensing and GIS in Environmental Conservation*, Spring 2004  
*Water Resources Management*, Fall 2003

The University of Arkansas

*Physical Geography* Fall 1997

### Teaching and Training Awards

Faculty Research Mentor for Illinois Department of Natural Resources Summer Intern (Kimberly Elsenbroek). 2009  
 Faculty Research Mentor for SIU “Research Rookie” Program (Kimberly Elsenbroek). 2008-2009  
 Faculty Mentor for SIU Undergraduate Assistantships Program. Title of position: *Research in Environmental Management Systems* (Jonathon Dyer). 2008-2009  
 Faculty Mentor for SIU Undergraduate Assistantships Program. Title of position: *Research in Environmental Management Systems* (Jon Dyer). 2009-2010  
 Faculty Mentor for SIU Undergraduate Assistantships Program. Title of position: *Research in Dendrochronology* (Christopher Peters). 2010-2011  
 Successful Proposal for Honors Seminar “Sustainability in Higher Education: Making it Happen” SIU ‘University Honors Program’, Fall 2010, Spring 2013

### Completed Master’s Theses and Doctoral Dissertations

#### 2016

Christine Basset	MS	Geological Sciences, U. Alabama	Member
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#### 2015

Matthew Meko	MS	Geography, U. of Alabama	Chair
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#### 2014

Astika Bhugaloo	MS	Geography, U. of Kwazulu Natal	Member
Makala Bonney	MS	Geography, SIU,	Member
Zakia Hassan Khamisi	MS	Watershed Management, U. of Arizona	Member

Brooke Lopeman	MS	Geography, SIU	Chair
Plaxedes Makweche	PhD	Environmental Resources and Policy, SIU,	Member

### 2013

Zachary Heern	MS	Geography, SIU,	Member
Johannes Mack	MS	Geography, SIU,	Member
Kerry McLeran	MS	Geography, SIU,	Chair
Melva B. Trevino-Pena	MS	Geography, SIU,	Member
Ivan Remane	MS	Geography, SIU,	Chair
Anthony Romano	MS	Geography, SIU,	Chair
Adam Shaffner	MS	Geography, SIU,	Member

### 2012

Timothy Bannon	MPA	Political Science, SIU	Member
William Barrett	MS	Geography, SIU,	Member
Samuel Fisher	MS	Geography, SIU,	Member
Michael Holst	MS	Geography, SIU,	Member
Abu Khan	PhD	Environmental Resources and Policy, SIU,	Member
Laura Williams	MS	Geography, SIU,	Member

### 2011

Andrew Fleming	MS	Geography, SIU,	Member
Jeffry Harris,	MS	Forestry, SIU	Member
Sharon Hayden	PhD	Curriculum and Instruction, SIU	Member
Brendan Lutz	PhD	Environmental Resources and Policy, SIU,	Member
John Magill,	MS	Plant, Soil and Ag Systems, SIU	Member
Audrey Wagner	MS	Geography, SIU,	Member

### 2009

Margaret Bialecki	MS	Geography, SIU,	Chair
Alison Fisher	PhD	Speech Communication, SIU,	Member

### 2008

Cody Considine	MS	Forestry, SIU,	Member
Jeremy Suprenant	MS	Geography, SIU,	Member

### Ongoing Master's Theses and Doctoral Dissertations

Kerry McLeran	PhD	Environmental Resources and Policy, SIU,	Member (former Chair)
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### Other Teaching and Training Activities

#### Supervised Senior Thesis

- C. Christianson, BA Geography, The University of Iowa, 2004
- C. Friewald, Honors, Southern Illinois University, 2012

B. Mayberry, BA Geography, The University of Iowa, 2004  
N. Perry, BA Geography, The University of Iowa, 2004

Faculty advisor for program for Egyptian High School Summer Enrichment Program Funded by:  
SIU College of Education and Human Services July 2011, 2012, 2013  
Developed and advised SIU 'Going Green' 'Living Learning Community' Fall 2009-2012  
Developed and led USAID-funded, multi-day workshop on tropical dendrochronology at Eduardo  
Mondlane University, Machipanda Forestry Research Center July 3-5, 2007  
Supervised student field research in South Africa and Mozambique, as part of the National Science  
Foundation, International Experience for Students Program. The primary focus of the research was the  
investigation of below ground biomass and carbon stocks. 2007-09  
Instructor, University of Virginia study abroad course "People, Environments and Culture" May 23-June  
18<sup>th</sup> 2007 South Africa and Mozambique  
Instructor, USAID-funded Environmental Remote Sensing Workshop, Eduardo Mondlane  
University, Maputo, Mozambique, June 12-23, 2006  
Group co/leader North American Dendroecology Fieldweek  
Lubrecht Experimental Forest, Montana, 2003  
Rapide Danseur, Canada, 2002  
Saltillo, Mexico, 2001

#### **Advised on field research design and laboratory analysis**

H. Dunderdale, Noyce Summer Research Experience for Teachers, 2013  
T. Fatoyinbo, PhD Environmental Sciences, University of Virginia, 2005-2007  
A. Hildt, PhD Environmental Sciences, University of Virginia, 2005-2007  
L. Ries, PhD Environmental Sciences, University of Virginia, 2005-2007  
K. Burke PhD Biology, University of Virginia, 2005-2007  
J. Bell, BS Geology, James Madison University, 2006  
J. Edmundson, BS Geology University of Arkansas, 2005-2006  
M. Mangione, MA Geography, University of Arkansas, 2000-2001  
D. Griffin, MA Geosciences, University of Arkansas, 2003-2006  
A. Dunn, BS Geology, University of Arkansas, 2000-2002  
A. Bayard, MA Geography, University of Arkansas, 1999-2001

#### **UNIVERSITY SERVICE**

##### **Department**

UA Awards Committee, 2013-present  
UA Search Committee Chair, 2013-2014  
UA Search Committee Chair, 2016-2017  
UA Search Committee Member, 2014-2016  
UA PhD Proposal Committee Chair 2015-2016

SIU Graduate Program Director, 2008-2013  
SIU Departmental Library Liaison Fall 2008-2013  
SIU Merit Pay Committee 2007-2008

### **College and University Committees and Councils**

UA Research Advisory Committee (RAC), NSM Representative 2015-2018, Chair Elect 2016-2017  
UA CARSCA Committee, 2014-2016, Chair NSM subcommittee 2015-2016  
UA CoAS Undergraduate Curriculum Committee, 2014-2015  
UA CoAS Diversity Committee, 2013-2015, Chair 2014-2016

SIU REACH Awards Committee Member, 2012-2013  
SIU Chancellor's Sustainability Council, 2009-2013  
    Green Fund Committee, Member, 2010-2013  
    Treasurer, Finance Committee, Chair, 2011-2013  
SIU Tree and Landscape Task Force, 2009-2013  
SIU Research Rookies Advisory Board, 2009-2010  
SIU College of Liberal Arts (CoLA) Council, Fall 2008-Spring 2013  
    Academic Policy Committee, 2008-2009  
    Campus Sustainability Committee, 2008-2010

### **Other University Service**

Evaluator for UA *3 Minute Thesis* competition  
Session Organizer for 2009, SIU Center for Ecology Speakers Series  
Served as SIU Faculty Associate for 9<sup>th</sup> floor of Neely Hall 2009-2012  
Served as Faculty Advisor for SIU 'Eco Dawgs' student RSO, Fall 2009-2012  
Served as Faculty Advisor for SIU 'LOGIC' student RSO, Fall 2009-2011  
Submission of Proposal for Honors Seminar "Environmental Change and Sustainability: Rebuilding the Ship as We Sail" SIU Honors Program, Fall 2008, 2009, 2012  
Departmental Reader at SIU CoLA Undergraduate Commencement Ceremony, May 2008  
Departmental Reader at SIU Honors Awards Ceremony, May 2011, 2013  
Evaluator for SIU Undergraduate Research Forum 2009  
Evaluator for SIU Undergraduate Research Forum 2011  
Evaluator for St. Louis Area Undergraduate Research Symposium, 2011.

## REFERENCES

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