

# Andrew T. Tredennick

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CONTACT INFORMATION	Postdoctoral Fellow Department of Wildland Resources and The Ecology Center, Utah State University	mobile: (970) 443-1599 e-mail: atredenn@gmail.com website: atredennick.github.io
RESEARCH INTERESTS	stability of populations, communities, and ecosystems; data-model assimilation; ecology of savannas and forests; coexistence of species and functional groups; ecological forecasting	
EDUCATION	<b>Colorado State University</b> , Fort Collins, CO <i>Doctor of Philosophy</i> ECOLOGY	<b>2014</b>
	<b>Texas Tech University</b> , Lubbock, TX <i>Bachelor of Sciences</i> BIOLOGY	<b>2006</b>
PROFESSIONAL APPOINTMENTS	<b>Utah State University, Dept. of Wildland Resources</b> , Logan, UT <i>Postdoctoral Fellow</i>	<b>2014 – Pres.</b>
	<b>Colorado State University, Natural Resource Ecology Lab</b> , Ft. Collins, CO <i>Graduate Research Fellow</i>	<b>2011 – 2014</b>
	<b>Colorado State University, Natural Resource Ecology Lab</b> , Ft. Collins, CO <i>Graduate Research Assistant</i>	<b>2009 – 2011</b>
	<b>USFS Rocky Mountain Research Station</b> , Ft. Collins, CO <i>Research Assistant</i>	<b>2009</b>
	<b>Colorado State University, FRWS</b> , Ft. Collins, CO <i>Graduate Teaching Assistant</i>	<b>2008</b>
FELLOWSHIPS AND AWARDS	NSF Postdoctoral Research Fellowship in Biology	<b>2014</b>
	1 <sup>st</sup> Place Oral Presentation, Front Range Student Ecology Symp.	<b>2013</b>
	NSF FORECAST Research Coordination Network Travel Award	<b>2012</b>
	Sustainability Leadership Fellow, School of Global Environmental Sustainability, CSU	<b>2012</b>
	NASA Earth and Space Science Graduate Fellowship	<b>2011</b>
	James E. Ellis Memorial Scholarship, Natural Resource Ecology Lab	<b>2010</b>
	NSF Graduate K-12 Fellowship, Natural Resource Ecology Lab	<b>2009</b>
PUBLICATIONS	<b>Tredennick, A.T.</b> , Hanan, N.P. in press. Effects of tree harvest on the stable-state dynamics of savanna and forest. <i>American Naturalist</i> (open access)	
	Hanan, N. P., <b>Tredennick, A.T.</b> , Prihodko, L., Bucini, G., and Dohn, J.. 2014. Analysis of stable states in global savannas: Is the CART pulling the horse? <i>Global Ecology and Biogeography</i> (open access)	
	<b>Tredennick, A. T.</b> , L. P. Bentley, and N. P. Hanan. 2013. Allometric convergence in savanna trees and implications for the use of plant scaling models in variable ecosystems. <i>PLoS One</i> 8(3):e58241 (open access)	
	Rice, J., <b>Tredennick, A.T.</b> , and Joyce, L.. 2011. The climate of the Shoshone National Forest: A synthesis of past changes, future projections, and ecosystem implications. USDA National Forest Service General Technical Report 264	
	Sutton, A.E., Dohn, J., Loyd, K., <b>Tredennick, A.T.</b> , Bucini, G., Solrzano, A, Prihodko, L. and Hanan, N.P. 2010. Does warming increase the risk of civil war in Africa? <i>Proceedings of the National Academy of Sciences</i> 107(25):E102 (open access)	

COMPETITIVE FUNDING <i>External: \$297,000</i> <i>Internal: \$16,000</i>	“Diversity-stability relationships and coexistence: new theory and empirical tests”, NSF Postdoctoral Research Fellowship in Biology, \$207,000 (2014-2017)	
	“Effective Science Communication and Public Relations at NREL through EcoPress,” Natural Resource Ecology Lab, \$6,000 (Co-I) (2013)	
	“NESSF: Fuelwood, Savannas, and Climate Change: Integrating Modeling, Field Experimentation, and Optical and Radar Remote Sensing,” NASA, \$90,000 (2011-2014)	
	“Building a WCNR ‘Partnership for International Research and Education’ in African Savannas: Undergraduate and Graduate Field-Based Education in Mali, West Africa,” Warner College of Natural Resources, \$10,000 (PI–Hanan; collaborative proposal of the Hanan lab group) (2010)	
DATA PRODUCTS	Tredennick AT, Bentley LP, Hanan NP (2013) Data from: Allometric convergence in savanna trees and implications for plant scaling models in variable ecosystems. Dryad Digital Repository. <a href="http://dx.doi.org/10.5061/dryad.4s1d2">http://dx.doi.org/10.5061/dryad.4s1d2</a>	
	Tredennick AT, Hanan NP, Martinez K, Keita, L (2014) Data from: Effects of tree harvest on the stable-state dynamics of savanna and forest. Dryad Digital Repository. <a href="http://dx.doi.org/10.5061/dryad.vg121">http://dx.doi.org/10.5061/dryad.vg121</a>	
TEACHING EXPERIENCE	<b>Colorado State University</b>	<b>2013</b>
	<i>Plant Ecology</i>	
	Guest Lecture on Tree-Grass Coexistence	
	<b>Colorado State University</b>	<b>2012</b>
	<i>NREL Skills for Undergraduate Participation in Ecological Research</i>	
	Data Analysis/Visualization Workshop Leader	
	<b>Colorado State University</b>	<b>2011</b>
	<i>RS 351, Ecosystem Processes in a Changing World</i>	
	Co-Instructor	
	<b>Colorado State University</b>	<b>2009, 2010, 2012</b>
	<i>RS 351, Wildland Ecosystems</i>	
	Guest Lecture on Ecosystem Modeling	
	<b>Irish Elementary School Ft. Collins, CO</b>	<b>2010-2011</b>
	<i>5th and 4th Grade Science and Advanced Science Program</i>	
	NSF GK-12 Fellow	
	<b>Colorado State University</b>	<b>2008</b>
	<i>RS 351, Wildland Ecosystems</i>	
	Graduate Teaching Assistant	
	<b>Reviewer</b>	
	<i>Proceedings of the National Academy of Sciences; Ecology; Ecological Applications; Forest Ecology and Management; PLoS One; Agriculture, Ecosystems, and Environment; Environmental Management; National Research Foundation, South Africa</i>	
	<b>University Service and Public Outreach</b>	
PROFESSIONAL SERVICE	Director of Social Media, <i>NREL EcoPress</i>	
	Student Review Committee, New Ecology Faculty Search, CSU	
	Organizing Committee, Global Savanna Workshop, CSU	
	Advertising and Outreach Committee, Front Range Student Ecology Symposium	
	Graduate Student Representative, Natural Resource Ecology Lab	

### **Professional Society Membership**

Ecological Society of America

American Society of Naturalists

### **Other Leadership Activities**

Co-organizer, *Data Visualization in R*, ESA 2013 and 2014 Workshop

#### SELECT PRESENTATIONS

“Forecasting climate change impacts on plant population dynamics at large spatial extents: a test case with sagebrush (*Artemisia*) species.” 2014 Annual Meetings of the Ecological Society of America.

“The sustainability and biome-level impacts of fuelwood harvesting in sub-Saharan Africa.” Invited seminar, Geospatial Science Center of Excellence, South Dakota State University.

“Tree harvest, fire, and drought can drive state transitions in savanna.” 2013 Annual Meetings of the Ecological Society of America.

“Using diverse multi-scale data to assess patterns and sustainability of fuelwood harvest in sub-Saharan Africa.” 2012 NSF FORECAST RCN Meeting.