Andrew T. **Tredennick**

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Education

Colorado State University — *Fort Collins, CO*

Ph.D. in Ecology — *2014*

Texas Tech University — *Lubbock, TX*

B.S. in Biology — *2006*

Professional Appointments

Odum School of Ecology, University of Georgia — *Athens, GA*

Postdoctoral Research Associate — *June 2018 - PRESENT*

Department of Wildland Resources, Utah State University — *Logan, UT*

Postdoctoral Fellow III ('17-'18) & NSF Postdoctoral Fellow ('15-'17) — *Aug. 2014 - May 2018*

Natural Resource Ecology Laboratory, Colorado State University — *Fort Collins, CO*

NASA Graduate Fellow ('11-'14), Graduate Research Assistant ('09-'11), & Graduate Teaching Assistant ('08-'09) — *Aug. 2008 - July 2014*

U.S. Forest Service Rocky Mountain Research Station — *Fort Collins, CO*

Research Assistant — *Jan. 2009 - Aug. 2009*

Publications

Tredennick, A.T.*, B.J. Teller*, P.B. Adler, G. Hooker, & S.P. Ellner. (2018). Size-by-environment interactions: a neglected dimension of species' responses to environmental variation. *Ecology Letters* 21(12):1757-1770.

**Authors contributed equally.*

Adler, P.B., D. Smull, K.H. Beard, R.T. Choi, T. Furniss, A. Kulmatiski, **A.T. Tredennick**, & K.E. Veblen. (2018). Competition and coexistence in plant communities: intraspecific competition is stronger than interspecific competition. *Ecology Letters* 21(9):1319-1329.

Tredennick, A.T.*, A.R Kleinhesselink*, J.B. Taylor, & P.B. Adler. (2018). Ecosystem functional response across precipitation extremes in a sagebrush steppe. *PeerJ* 6:e4485.

**Authors contributed equally.*

Dietze, M.C., A. Fox, L. Beck-Johnson, J.L. Betancourt, M.B. Hooten, C.S Jarnevich, T. Keitt, M.A. Kenney, C.M. Laney, L.G. Larsen, H.W. Loescher, C.K. Lunch, B. Pijanowski, J.T. Randerson, E.K. Read, **A.T. Tredennick**, R. Vargas, K.C. Weathers, & E.P. White. (2018). Iterative near-term ecological forecasting: Needs, opportunities, and challenges. *Proceedings of the National Academy of Sciences* 115(7):1424-1432.

Wilcox*, K.R., **A.T. Tredennick***, S. Koerner, E. Grman, L. Hallett, M. Avolio, K. La Pierre, G. Houseman, F. Isbell, D. Johnson, J. Alatalo, A. Baldwin, E. Bork, E. Boughton, W. Bowman, A. Britton, J. Cahill, S. Collins, G-Z. Du, A. Eskelinen, L. Gough, A. Jentsch, C. Kern, K. Klanderud, A. Knapp, J. Kreyling, Y. Luo, J. McLaren, P. Megonigal, V. Onipchenko, J. Prevéy, J. Price, C. Robinson, O. Sala, M. Smith, N. Soudzilovskaia, L. Souza, D. Tilman, S. White, Z. Xu, L. Yahdjian, Q. Yu, P. Zhang, Y, Zhang. (2017). Asynchrony among local communities stabilizes ecosystem function of metacommunities. *Ecology Letters* 20(12):1534–1545.

**Authors contributed equally.*

Tredennick, A.T., P.B. Adler, & F.R. Adler. (2017). The relationship between species richness and ecosystem variability is shaped by the mechanism of coexistence. *Ecology Letters* 20(8):958-968.

Tredennick, A.T., M.B. Hooten, & P.B. Adler. (2017). Do we need demographic data to forecast plant population dynamics? *Methods in Ecology & Evolution* 8(5):541-551.

Tredennick, A.T., C. de Mazancourt, M. Loreau, & P.B. Adler. (2017). Environmental responses, not species interactions, determine synchrony of dominant species in semiarid grasslands. *Ecology* 98(4):971-981.

Kulmatiski, A., P.B. Adler, J.M. Stark, & **A.T. Tredennick.** (2017). Water and nitrogen uptake are better associated with resource availability than root biomass. *Ecosphere* 8(3):e01738.

Tredennick, A.T., M.B. Hooten, C.L. Aldridge, C. Homer, A.R. Kleinhesselink, & P.B. Adler. (2016). Forecasting climate change impacts on plant populations over large spatial extents. *Ecosphere* 7(10):e01525.

Tredennick, A.T., P.B. Adler, J.B. Grace, W.S. Harpole, E.T. Borer, E.W. Seabloom, & 36 co-authors. (2016). Comment on "Worldwide evidence of a unimodal relationship between productivity and plant species richness." *Science* 35(6272):457a-457c.

Tredennick, A.T., M. Karembé, F. Dembélé, J. Dohn, & N.P Hanan. (2015). No effects of fire, large herbivores, and their interaction on regrowth of harvested trees in two West African savannas. *African Journal of Ecology* 53(4):487-495.

Hanan, N.P., **A.T. Tredennick**, L. Prihodko, G. Bucini, & J. Dohn. (2015). Analysis of stable states in global savannas – a response to Staver and Hansen. *Global Ecology and Biogeography* 24(8):988-989.

Tredennick, A.T. & N.P. Hanan. (2015). Effects of tree harvest on the stable-state dynamics of savanna and forest. *The American Naturalist* 5(185):E153-E165.

Hanan, N.P., **A.T. Tredennick**, L. Prihodko, G. Bucini, & J. Dohn. (2014). Analysis of stable states in global savannas: Is the CART pulling the horse? *Global Ecology and Biogeography* 23(3):259-263.

Tredennick, A.T., L.P. Bentley, & N.P. Hanan. (2013). Allometric convergence in savanna trees and implications for the use of plant scaling models in variable ecosystems. *PLoS One* 8(3):e58241.

Rice, J., **A.T. Tredennick**, & L. Joyce. (2011). The climate of the Shoshone National Forest: A synthesis of past changes, future projections, and ecosystem implications. USFS General Technical Report No. 264.

Sutton, A.E., J. Dohn, K. Loyd, **A.T. Tredennick**, G. Bucini, A. Solrzano, L. Prihodko, & N.P. Hanan. (2010). Letter: Does warming increase the risk of civil war in Africa? *Proceedings of the National Academy of Sciences* 107(25):E102.

Manuscripts in review

Clark, A.T., L.A. Turnbull, **A.T. Tredennick**, E. Allan, W.S. Harpole, M.M. Mayfield, S. Soliveres, K. Barry, N. Eisenhauer, H. de Kroon, B. Rosenbaum, C. Wagg, A. Weigelt, Y. Feng, C. Roscher, & B. Schmid. (In review). Predicting species abundances in a grassland biodiversity experiment: trade-offs between model complexity and generality.

Manuscripts in preparation

Available upon request

A.T. Tredennick, P.B. Adler, G. Hooker, & S.P. Ellner. (In preparation). A practical guide to selecting models for exploration, understanding, and prediction in ecology.

Bucini, G., N.P. Hanan, **A.T. Tredennick**, S. Saatchi, M.A. Lefsky, E. Mitchard, & L-J Theron. (In preparation). Woody cover mapping in Africa: combining optical and radar remote sensing for improved prediction in open savannas.