

Andrew T. Tredennick

POSTDOCTORAL RESEARCH ASSOCIATE · QUANTITATIVE ECOLOGIST

Odum School of Ecology & Center for the Ecology of Infectious Diseases, University of Georgia, 140 East Green Street, Athens, GA 30602-2202 USA

☎ (+1) 970-443-1599 | ✉ atredenn@gmail.com | 🏠 atredennick.github.io/ | 📷 atredennick | 📧 atredennick

Education

Colorado State University

PH.D. IN ECOLOGY

Fort Collins, CO

2014

Texas Tech University

B.S. IN BIOLOGY

Lubbock, TX

2006

Professional Appointments

Odum School of Ecology, University of Georgia

POSTDOCTORAL RESEARCH ASSOCIATE

Athens, GA

June 2018 - PRESENT

Department of Wildland Resources, Utah State University

POSTDOCTORAL FELLOW III ('17-'18) & NSF POSTDOCTORAL FELLOW ('15-'17)

Logan, UT

Aug. 2014 - May 2018

Natural Resource Ecology Laboratory, Colorado State University

NASA GRADUATE FELLOW ('11-'14), GRADUATE RESEARCH ASSISTANT ('09-'11), & GRADUATE TEACHING ASSISTANT ('08-'09)

Fort Collins, CO

Aug. 2008 - July 2014

U.S. Forest Service Rocky Mountain Research Station

RESEARCH ASSISTANT

Fort Collins, CO

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. Loesch, 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* 185(5):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.