Ann E. Russell, Adjunct Associate Professor
Department of Natural Resource Ecology & Management
https://www.nrem.iastate.edu/people/ann-russell

Research Area: Ecosystem ecology, Tropical biology, Agroforestry

Teaching: Ecology, Agroforestry, Grant writing

Scholarly activities: I am an ecosystems ecologist whose research addresses the effects of plant traits on ecosystem processes. I use field and lab-based studies in conjunction with simulation modeling to explore complex interactions and to address 'what-if' questions regarding the effects of management and climate change on ecosystem processes in tropical forests and Midwestern U.S. agricultural systems. I translate research results into user-friendly, hands-on, interactive educational modeling tools. My studies are designed to provide insight into the mechanisms by which ecosystem management, and its improvements, have consequences from local to global scales.

Citation Metrics: H = 22; I_{10} = 28; citations = ~2700

Awards: Fulbright Scholar (2005)

Selected Recent Publications (from 39 total)

Russell, A.E., Aide, T.M., Braker, H.E., Ganong, C.N., Hardin, R.D., Holl, K.D., Hotchkiss, S.C., Klemens, J.A., Kuprewicz, E.K., McClearn, D. Middendorf G., R. Ostertag, J. S. Powers, S. E. Russo, J. L. Stynoski, U. Valdez and C.G. Willis. *In press*. Integrating tropical research into biology education is urgently needed. *PLOS Biology Perspectives*

Russell, A.E., Marek, R.F., and Olk, D.C. 2021. Tree species of wet tropical forests differ in their detrital biochemistry and effects on soil carbon dynamics. *Frontiers in Forests and Global Change* 4:44. https://doi.org/10.3389/ffgc.2021.674213.

Russell, A.E. and Parton, W.J. 2020. Modeling the effects of global change on ecosystem processes in a tropical rainforest. *Forests 11:* 213. doi.org/10.3390/f11020213.

Russell, A.E., Hall, S.J. and Raich, J.W. 2017. Tropical tree species traits drive cation dynamics via effects on soil pH: A proposed conceptual framework. *Ecological Monographs.* DOI: 10.1002/ecm.1274.

Russell, A.E., Cambardella, C.A., Laird, D.A., Jaynes, D.B., and Meek, D.W. 2009. Nitrogen fertilizer effects on soil carbon balances in Midwestern U.S. agricultural systems. *Ecological Applications* 19(5):1102-1113. DOI:10.1890/07-1919.1.

Selected Recent Research Suport: Total external funding = $5.5 Million ($1.9 Million to AER)

National Science Foundation – "*RCN-UBE: A Network for Facilitating Online Content for Experiential Learning of Tropical Systems*." Ann Russell, PI; Suzanne Macey, Co-PI. (DBI-2120141. $499,997; $427,177 to AER). 10/01/2021 – 09/30/2026.

National Science Foundation – "*RCN-UBE Incubator: Development of ALIVE, a platform for facilitating Authentic Learning In Virtual tropical Environments*." Ann Russell, PI; Ann Gansemer-Topf, co-PI; (DBI-1919640; $72,186; $72,186 to AER). 8/1/19 – 7/31/21.

National Science Foundation – "*Collaborative Research: Belowground drivers of aboveground nutrient cycling and productivity in growing forests*." Ann Russell, PI; Christine Hawkes, co-PI.; (DEB-1556379. $1,075,548; $323,502 to AER). 8/01/11 –7/30/15.

Recent Mentoring: Graduate students**:** B. Glass (EEB: 2016 – 2018); D. Ayala-Montejo (Universidad Autonóma de Chapingo, 2020-2021). Faculty advisor for the Fulbright Student and Scholar Student Organization (ISU).

Recent Professional Service/Outreach: Subject Editor (2005 – Present): *Biotropica*; Fulbright Association Iowa Chapter Board (2014-2021); Proposal editing: ISU Vice President for Research Grants Hub (2014 – present); National Science Foundation peer review (2006 – present)