

## SABRINA E. RUSSO

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<http://russolab.unl.edu/>

### EDUCATION

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- Ph.D. University of Illinois at Urbana-Champaign, Biology (2003). Advisors: Carol K. Augspurger and Scott K. Robinson  
A.B. Harvard University, Biology with honors (1992).

### *Specialized Training*

- 2006 Uncertainty and Variability in Ecological Inference: An Introduction to Modern Statistical Computation, Duke University, North Carolina  
2005 Likelihood Methods in Forest Ecology, Institute of Ecosystem Studies, New York  
2002 Applied Phylogenetics Workshop, University of California at Davis

### RESEARCH INTERESTS: INTEGRATIVE PLANT BIOLOGY

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- Population and community ecology, particularly of plants and tropical trees
- Plant life-history, functional, and ecophysiological variation in relation to demography, process models, and as determinants of plant species distributions
- Plant-microbial interactions in grasslands, agro-ecosystems, and forests

### POSITIONS HELD

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- 2020-present Professor, School of Biological Sciences, University of Nebraska-Lincoln  
2019-present Member, Center for Plant Science Innovation, University of Nebraska-Lincoln  
2013-2020 Associate Professor, School of Biological Sciences, University of Nebraska-Lincoln  
2007-2013 Assistant Professor, School of Biological Sciences, University of Nebraska-Lincoln  
2006-2007 Postdoctoral Fellow, University of Cambridge, UK (Dr. David A. Coomes)  
2003-2006 Postdoctoral Fellow, Center for Tropical Forest Research - Arnold Arboretum Asia Program, Harvard University (Dr. Stuart J. Davies)  
2002-2003 Research Assistant, Ecological Processes Branch, U.S. Army Corps of Engineers Research Laboratory, Illinois (Dr. Jeffrey S. Fehmi)  
1996-1999 Graduate Teaching Assistant, University of Illinois  
1997 Research Assistant, Smithsonian Tropical Research Institute, Panama (Dr. Jeff Brawn)

### AWARDS AND DISTINCTIONS

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- 2014 Short-term Fellowship, Japan Society for Promotion of Science  
2012, 2009 Certificate of Recognition for Contributions to Students  
2010 Harold & Esther Edgerton Junior Faculty Award, University of Nebraska-Lincoln  
2003 Robert Emerson Memorial Grant, University of Illinois (\$5,000 award)  
2002 Dissertation Completion Fellowship, University of Illinois  
1997 Incomplete List of Excellent Teachers, University of Illinois  
1997 National Science Foundation Pre-Doctoral Fellowship

***Manuscripts in Preparation***

Whitman<sup>S</sup>, W., R.S. Beaman, R. Repin, K. Kitayama, S.-I. Aiba, S.E. **Russo**. Edaphic specialization and vegetation zones define elevation range-sizes for Mt. Kinabalu regional flora. *Ecography*.

Yue, B., Y. Li, S.E. **Russo**, H. Cao, Y. Ni, W. Ye, J. Lian. Interspecific differences in leaf trait variation with respect to vertical environmental gradients in a subtropical forest. *Functional Ecology*

***Manuscripts in Revision or Review***

Gonzalez-Akre, E., including S.E. **Russo**. *In Review*. An R database for biomass estimation at globally distributed extratropical forest plots. **Methods in Ecology and Evolution**.

**2021**

50. Nuñez<sup>S</sup>, N.H., R.L. Chazdon, S.E. **Russo**. 2021. Seed rain-successional feedbacks in a wet tropical forest. **Ecology** *in press*. (also, **BioRxiv** doi: <https://doi.org/10.1101/791988>) [25% contribution]

**2020**

49. Davies, S.J., including S.E. **Russo**. 2020. ForestGEO: Understanding forest diversity and dynamics through a global observatory network. **Biological Conservation** *in press*, 10.1016/j.biocon.2020.108907

48. **Russo**<sup>C</sup>, S.E., S.M. McMahon, M. Detto, S.J. Wright, R.S. Condit, S.J. Davies, S. Bunyavejchewin, C.-H. Chang-Yang, C.E.N. Ewango, C. Fletcher, R.B. Foster, C.V.S. Gunatilleke, I.A.U.N. Gunatilleke, T. Hart, C.-F. Hsieh, S.P. Hubbell, A. Itoh, A.R. Kassim, Y.-C. Lin, J.-R. Makana, P. Ong, A. Sugiyama, I.-F. Sun, S. Tan, J. Thompson, T. Yamakura, S.L. Yap, J.K. Zimmerman. 2020. The interspecific growth-mortality trade-off is not a general framework for tropical forest community structure. **Nature Ecology and Evolution** *in press* [80% contribution]

47. Busta<sup>P</sup>, L., S.E. **Russo**. 2020. Integrating disciplines in a plant chemistry laboratory module to enhance interdisciplinary and scientific thinking in undergraduate students. **Journal of Chemical Education** 97:4406-4413 [40% contribution]

46. Ledger, G., S.E. **Russo**, E.B. Muller, A. Peace, R. Nisbet. 2020. Local control of resource allocation is sufficient to model optimal dynamics in stable, obligate syntrophic systems. **Theoretical Ecology** 13:481–501 [20% contribution]

45. Weemstra<sup>P</sup>, M., K.G. Peay, S. J. Davies, M. Mohamad, A. Itoh, S.E. **Russo**<sup>C</sup>. 2020. Lithological constraints on resource economies shape the mycorrhizal composition of a Bornean rain forest. **New Phytologist** 228: 253–268 [70% contribution]

44. Segnitz<sup>S</sup>, R.M., S.E. **Russo**, K.G. Peay. 2020. Ectomycorrhizal fungi drive positive phylogenetic plant-soil feedbacks in a regionally dominant tropical plant family. **Ecology** 101(8) e03083 <https://doi.org/10.1002/ecy.3083>

**2019**

43. Yue<sup>g</sup> B., G. Lin, S.E. **Russo**, Y. Shen, J. Lian, H. Cao, W. Ye. *In press*. Evidence for a colonization-competition trade-off correlated with functional trait variation among tree species in a subtropical forest. (**Scientific Reports**) [20% contribution]

### 2018

42. Zuleta<sup>g</sup>, D., S.E. **Russo**, M. Detto, A. Barona, D. Cardenas, N. Castaño, S.J. Davies, S. Sua, B.L. Turner, A. Duque. 2018. Importance of topography for tree species habitat distributions in a terra firme forest in the Colombian Amazon. **Plant and Soil**, 450:133–149 [2 citations; 20% contribution]
41. Couvreur<sup>p</sup>, V., G. Ledder, D.A. Way, E.B. Muller, S. Manzoni, S.E. **Russo**<sup>c</sup>. 2018. Water transport through tall trees: A vertically-explicit, analytical model of xylem hydraulic conductance. **Plant, Cell, and Environment** 41:1821–1839. [8 citations; 45% contribution]
40. Virilouvet<sup>p</sup>, L., T.J. Avenson, Q. Du<sup>g</sup>, C. Zhang, N. Liu, M. Fromm, Z. Avramova, S.E. **Russo**<sup>c</sup>. 2018. Dehydration stress memory: Gene co-expression networks linked to physiological responses during successive dehydration stresses in *Zea mays*. **Frontiers in Plant Science** 9, 24 July 2018, doi.org/10.3389/fpls.2018.01058. [6 citations; 40% contribution]
39. Jin<sup>p</sup> Y., S.E. **Russo**, M. Yu. 2018. Effects of light and topography on regeneration and coexistence of evergreen and deciduous tree species in a Chinese subtropical forest. **Journal of Ecology** 106:1634–1645. [5 citations; 35% contribution]

### 2017

38. Fukami, T. M. Nakajima, C. Fortunel, P.V.A. Fine, C. Baraloto, S.E. **Russo**, K.G. Peay. 2017. Geographical variation in community divergence: Insights from tropical forest monodominance by ectomycorrhizal trees. **American Naturalist** 190: S105–S122. [7 citations; 15% contribution]
37. **Russo**<sup>c</sup>, S.E. 2017. Seed Dispersal, *in* Fuentes *et al.* (eds) *International Encyclopedia of Primatology*.

### 2016

36. **Russo**<sup>c</sup>, S.E. and K. Kitajima. 2016. The ecophysiology of leaf lifespan in tropical forests: adaptive and plastic responses to environmental heterogeneity, *in* Santiago, L. and G. Goldstein (eds) *Tropical Tree Physiology: Adaptations and Responses in a Changing Environment*. [18 citations; 75% contribution]

### 2015

35. Wilson, M.C., X.-Y. Chen, R.T. Corlett, R.K. Didham, P. Ding, R.D. Holt, M. Holyoak, L. Jiang, G. Hu, A.C. Hughes, W.F. Laurance, J. Liu, S.L. Pimm, S.K. Robinson, S.E. **Russo**, X. Si, D.S. Wilcove, J. Wu, and M. Yu. 2015. Habitat fragmentation and biodiversity conservation: Key findings and future challenges. **Landscape Ecology** 31:219–227. [141 citations; 10% contribution]
34. Heineman<sup>g</sup>, K.D., S.E. **Russo**, I.C. Baillie, J. D. Mamit, P. P-K. Chai, L. Chai, E. W. Hindley, L.B. Ting, S. Tan, P.S. Ashton. 2015. Evaluation of stem rot in 339 Bornean tree species: implications of size, taxonomy, and soil-related variation for aboveground biomass estimates. **Biogeosciences**, 12: 5735–5751. [8 citations; 40% contribution]
33. Heineman<sup>g</sup>, K.D., S.E. **Russo**, I.C. Baillie, J. D. Mamit, P. P-K. Chai, L. Chai, E. W. Hindley, L.B. Ting, S. Tan, P.S. Ashton. 2015. Influence of tree size, taxonomy, and edaphic conditions on

- heart rot in mixed-dipterocarp Bornean rainforests: implications for aboveground biomass estimates. **Biogeoscience Discussions**, 12 6821-6861. [2 citations; 40% contribution]
32. Peay\*, K.G., S.E. **Russo\***, K. Mcguire, Z. Lim, J.P. Chan, S. Tan, S.J. Davies. 2015. Lack of host specificity leads to independent assortment of dipterocarps and ectomycorrhizal fungi across a soil fertility gradient. **Ecology Letters** 18: 807-816. *\*First two authors contributed equally to this article.* [61 citations; 45% contribution]
31. Roccaforte<sup>g</sup>, K., D. Pilson, S.E. **Russo**. 2015. Hybridization and reproductive isolation between diploid *Erythronium mesochoreum* and its tetraploid congener *E. albidum* (Liliaceae). **Evolution** 69: 1375–1389. [11 citations; 30% contribution]
30. Paine, C.E.T., *et al.* including S.E. **Russo**. 2015. Globally, functional traits are weak predictors of juvenile tree growth, and we do not know why. **Journal of Ecology** 103: 978-989. [11 citations; 15% contribution]

#### 2014

29. Stephenson, N., A. Das, R. Condit, S.E. **Russo**, P. Becker, D. Coomes, *et al.*, including N. Beckman<sup>p</sup>. 2014. Rate of tree carbon accumulation increases continuously with tree size. **Nature** 507:90-93. [428 citations; 35% contribution] *\*Designated highly cited publication by Web of Science; Press articles in Lincoln Journal Star and Omaha World Herald*
28. Kenfack, D., G. Chuyong, R. Condit, S.E. **Russo**, D.W. Thomas. 2014. Demographic variation and habitat specialization of tree species in a diverse tropical forest of Cameroon **Forest Ecosystems** 1:1-13. [8 citations; 40% contribution]

#### 2013

27. **Russo**<sup>c</sup>, S.E., A. Kochsiek<sup>p</sup>, J. Olney<sup>u</sup>, L. Thompson<sup>u</sup>, A.E. Miller, and S. Tan. 2013. Nitrogen uptake strategies of edaphically specialized Bornean tree species. **Plant Ecology** 214:1405–1416. [11 citations; 70% contribution]
26. Kochsiek<sup>p</sup>, S. Tan, and S.E. **Russo**<sup>c</sup>. 2013. Fine root dynamics in relation to nutrients in oligotrophic Bornean forest soils. **Plant Ecology** 214: 869-882. [35 citations; 70% contribution]
25. Queenborough, S.A., Forget, P.M. and **Russo**, S.E. 2013. Adding spice to life: A special issue on the Myristicaceae. **Tropical Conservation Science** 6:592-594. [3 citations; 50% contribution]

#### 2012 and earlier

24. **Russo**<sup>c</sup>, S.E., R. Legge<sup>g</sup>, K. Weber, E. Brodie, K.C. Goldfarb, A. Benson, and S. Tan. 2012. Bacterial community structure of contrasting soils underlying Bornean rain forests: inferences from microarray and next-generation sequencing methods. **Soil Biology and Biochemistry** 55: 48-59. [31 citations; 80% contribution]
23. **Russo**<sup>c</sup>, S.E., L. Zhang<sup>g</sup>, and S. Tan. 2012. Covariation between understorey light environments and soil resources in Bornean mixed dipterocarp rain forest. **Journal of Tropical Ecology** 28:33–44. [17 citations; 90% contribution]
22. Heineman<sup>u</sup>, K., E. Jensen<sup>u</sup>, B. Bogenrief<sup>u</sup>, A. Shapland<sup>u</sup>, S. Tan, R. Rebarber, S.E. **Russo**. 2011. The effect of belowground resources on aboveground growth and allometry in six Bornean

- tree species. **Forest Ecology and Management** 261:1820-1832. [23 citations; 70% contribution]
21. **Russo**<sup>C</sup>, S.E. and C.A. Chapman. 2011. Primate seed dispersal: Consequences of behavior for forest communities and conservation. Pgs. 510-525. In C.J. Campbell, A.F. Fuentes, K.C. MacKinnon, M. Panger, and S. Bearder (Eds.). *Primates in Perspective, 2<sup>nd</sup> edition*. Oxford University Press. [36 citations; 70% contribution]
  20. **Russo**<sup>C</sup>, S.E., W.L. Cannon<sup>U</sup>, C. Elowsky, S. Tan, S.J. Davies. 2010. Variation in leaf stomatal traits of 28 tree species in relation to water-use efficiency along an edaphic gradient in Bornean rain forest. **American Journal of Botany** 97: 1109–1120. [40 citations; 80% contribution]
  19. **Russo**<sup>C</sup>, S.E., K. Jenkins<sup>g</sup>, S. Wisser, D.A. Coomes. 2010. Relationships between wood traits and growth and mortality rates of New Zealand tree species. **Functional Ecology** 24: 253–262. [79 citations; 85% contribution]
  18. **Russo**<sup>C</sup>, S.E., P. Brown, S. Tan, S.J. Davies. 2008. Interspecific demographic trade-offs and soil-related habitat associations of tree species along resource gradients. **Journal of Ecology** 96:192–203. [109 citations; 85% contribution]
  17. **Russo**<sup>C</sup>, S.E., S.W. Wisser, D.A. Coomes. 2008. (Russo et al. 2007): A re-analysis of growth–size scaling relationships of woody plant species. **Ecology Letters** 11: 311-312. [6 citations; 90% contribution]
  16. **Russo**<sup>C</sup>, S.E., S.W. Wisser, D.A. Coomes. 2007. Growth-size scaling relationships of woody plant species differ from predictions of the Metabolic Ecology Model. **Ecology Letters** 10: 889–901. [58 citations; 90% contribution]
  15. **Russo**<sup>C</sup>, S.E., M.D. Potts, S.J. Davies, and S. Tan. 2007. Determinants of tree species distributions: Comparing the roles of dispersal, seed size, and soil specialization in a Bornean rain forest. In A. Dennis, R. Green, E.W. Schupp, D. Wescott, (Eds.). *Seed Dispersal: Theory and its Application in a Changing World*. CAB International. [15 citations; 85% contribution]
  14. **Russo**<sup>C</sup>, S.E., S. Portnoy, C.K. Augspurger. 2006. Incorporating animal behavior into seed dispersal models: Implications for seed shadows and an example for a primate-dispersed tree. **Ecology** 87: 3160-3174. [258 citations; 85% contribution]
  13. Condit, R., P.S. Ashton, S. Bunyavejchewin, H.S. Dattaraja, S. Davies, S. Esufali, C. Ewango, R. Foster, I.A.U.N. Gunatilleke, C.V.S. Gunatilleke, P. Hall, K.E. Harms, T. Hart, C. Hernandez, S. Hubbell, A. Itoh, S. Kiratiprayoon, J. LaFrankie, S. Loo de Lao, J.-R. Makana, Md.N.S. Noor, A.R. Kassim, S.E. **Russo**, R. Sukumar, C. Samper, H.S. Suresh, S. Tan, S. Thomas, R. Valencia, M. Vallejo, G. Villa, T. Zillio. 2006. Importance of demographic niches to tree diversity. **Science** 313:98-101. [249 citations; 15% contribution]
  12. Baillie, I. C., P. S. Ashton, S. P. Chin, S. J. Davies, P. A. Palmiotto, S. E. **Russo**, and S. Tan. 2006. Spatial associations of humus, nutrients, and soils in mixed dipterocarp forest at Lambir, Sarawak, Malaysian Borneo. **Journal of Tropical Ecology** 22:543-553. [55 citations; 10% contribution]
  11. Chapman, C.A. and S.E. **Russo**. 2006. Primate seed dispersal: Linking behavioral ecology with forest community structure. Pgs. 510-525. In C.J. Campbell, A.F. Fuentes, K.C. MacKinnon, M. Panger, and S. Bearder (Eds.). *Primates in Perspective*. Oxford University Press. [108 citations; 70% contribution]

10. **Russo**<sup>C</sup>, S.E., S.J. Davies, D. King, and S. Tan. 2005. Soil-related performance variation and distributions of tree species in a Bornean rain forest. **Journal of Ecology** 93:879-889. [240 citations; 85% contribution]
9. **Russo**<sup>C</sup>, S.E. 2005. Linking seed fate to dispersal patterns: identifying factors affecting predation and scatter-hoarding of seeds of *Virola calophylla* in Peru. **Journal of Tropical Ecology** 21:243-253. [60 citations]
8. **Russo**<sup>C</sup>, S.E., C.J. Campbell, J.L. Dew, P.R. Stevenson, S. Suarez. 2005. A multi-site comparison of dietary preferences and seed dispersal by *Ateles* spp.. **International Journal of Primatology** 26:1017-1037. [104 citations; 75% contribution]
7. Campbell, C.J., F. Aureli, C.A. Chapman, G. Ramos-Fernandez, K. Matthews, S.E. **Russo**, S.A. Suarez, L. Vick. 2005. Terrestrial Behavior of Spider Monkeys (*Ateles* spp.): A Comparative Study. **International Journal of Primatology** 26:1039-1051. [105 citations; 10% contribution]
6. Fehmi, J.S., S.E. **Russo**, and J.W. Bartolome. 2005. The effects of livestock on California ground squirrels (*Spermophilus beecheyii*). **Rangeland Ecology and Management** 58:352-359. [19 citations; 30% contribution]
5. **Russo**<sup>C</sup>, S.E. and C.K. Augspurger. 2004. Aggregated seed dispersal by spider monkeys limits recruitment to clumped patterns in *Virola calophylla*. **Ecology Letters** 7:1058-1067. [203 citations; 90% contribution]
4. **Russo**<sup>C</sup>, S.E., S.K. Robinson, and J. Terborgh. 2003. Size-abundance relationships in an Amazonian bird community: Implications for the energetic equivalence rule. **The American Naturalist** 161: 267-283. [65 citations; 85% contribution]
3. **Russo**<sup>C</sup>, S.E. 2003. Responses of dispersal agents to tree and fruit traits in *Virola calophylla* (Myristicaceae): Implications for selection. **Oecologia** 136:80-87. [82 citations]
2. Near, T.J., S.E. **Russo**, C.D. Jones, A.L. DeVries. 2003. Ontogenetic shift in buoyancy and habitat in the Antarctic toothfish, *Dissostichus mawsoni* (Perciformes: Nototheniidae). **Polar Biology** 26:124-128. [49 citations; 10% contribution]
1. Schupp, E.W., T. Milleron, and S.E. **Russo**. 2002. Dissemination limitation and the origin and maintenance of species-rich tropical forests. Pgs. 19-34. In D.J. Levey, W.R. Silva, and M. Galetti (Eds.). *Seed Dispersal and Frugivory: Ecology, Evolution and Conservation*. CAB International. [291 citations; 15% contribution]

## RESEARCH GRANTS (\* indicates active grants)

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\*Davies, SJ (PI) and **Russo**, SE (Co-PI) AccelNet: International Tropical Forest Science Alliance (ITFSA): A multi-network science and training initiative to accelerate understanding of the role of tropical forests in the Anthropocene, \$1,999,818; National Science Foundation: AccelNet, 01/31/2020 - 01/01/2025

\***Russo**, S.E. (PI) "Forests on the Edge: The Forest-Prairie Transition in the US Midwest", Smithsonian Institution: \$215,000, 03/01/2018-02/28/2020. [100% contribution]

\*Choobineh, F. (PI), **Russo**, S.E. (and others), Role: Senior Personnel/Co-PI, "EPSCoR RII Track 1: Center for Root and Rhizobiome Innovation (CRRI)", National Science Foundation – EPSCoR; Total Award Amount: \$10,112,168, 06/15/2016 – 11/31/2021 [7% contribution]

**Russo**, S.E. (PI) and Ledder, G. (PI) UNL College of Arts and Sciences International Research Collaborations Grant: \$9,780, Hydraulic Model for Trees; to fund Working Group Meeting at UNL 12/2016 – 06/2017. [60% contribution]

**Russo**, S.E. (PI) “Physiological Basis of Climate-related Changes in Biomass and Composition in Nebraskan Boundary Forests.” UNL Layman New Directions Award, \$10,346. [100% contribution]

**Russo**, S.E. (Co-PI) with Chazdon, R. (PI) and Uriarte, M. (Co-PI). “Seedling regeneration and tree-frugivore interaction networks during tropical forest regeneration.” National Geographic Society (\$25,000; 12 Jan 2015 – 30 Aug 2016). [60% contribution]

**Russo**, S.E. with Ledder, G. and Nisbet, R. “A Mechanistic Dynamic Energy Budget Model of Tree Performance to Predict Functional Trait Drivers, Species Distributions, and Responses to Global Change” (Funded Working Group – National Institute for Mathematical and Biological Synthesis, University of Tennessee, Knoxville). [60% contribution]

**Russo**, S.E. (PI) with Peay, K. (PI). “RAPID: Collaborative Research: Do negative plant-soil feedbacks outweigh positive ectomycorrhizal mutualisms in dipterocarp rainforest?” National Science Foundation Population & Community Ecology Cluster (\$127,847; 1 Nov 2013 – 30 Oct 2015) [50% contribution]

### ***2012 and earlier***

**Russo**, S.E. (Co-PI) with Fromm, M.E. (PI), Avromova, Z. (Co-PI), Cahoon, E. (Co-PI), Riethoven, J.J. (Co-PI). “Memory of a drought: training plants to withstand dehydration stress” UNL Life Sciences Competitive Grants Program – Interdisciplinary Teams (\$200,000; July 2011 – June 2013)

**Russo**, S.E. “Mechanisms underlying the growth-survival trade-off among tree species in relation to edaphic specialization” National Science Foundation Population and Community Ecology Cluster (\$157,141; 1 August 2009 – 31 October 2012)

**Russo**, S.E. “Mechanisms underlying the growth-survival trade-off among tree species in relation to edaphic specialization (REU Supplement Funding)” National Science Foundation Population and Community Ecology Cluster (\$4,658; 31 May 2011 – 31 October 2012)

**Russo**, S.E. “Mechanisms underlying the growth-survival trade-off among tree species in relation to edaphic specialization (REU Supplement Funding)” National Science Foundation Population and Community Ecology Cluster (\$6,195; 31 May 2010 – 31 October 2012)

**Russo**, S.E. & D. Pilson. “Mechanisms of reproductive isolation between *Erythronium mesochoreum* and *E. albidum* (Liliaceae)” UNL Faculty Grant-In-Aid of Research (\$9,988; Jan 2010 – Dec 2010).

**Russo**, S.E. “An Integrated Ecosystems- and Community-level Approach to Explaining Habitat Specialization by Tropical Forest Tree Species,” University of Nebraska-Lincoln, Layman Trust Fund Award (\$9,970; 1 June 2008 – 31 May 2009)

**Russo**, S.E. “The Role of Habitat Specialization of Tropical Forest Trees in Patterns of Biodiversity,” University of Nebraska-Lincoln, Maude Hammond Fling Faculty Research Fellowship (\$9,847; 1 January 2008 – 31 December 2008)

### ***2006 and earlier***

Center for Tropical Forest Science Research Grant (\$11,000)

University of Illinois Clark Graduate Summer Grant (\$2,500; 2002)

Organization for Tropical Studies Graduate Research Fellowship (\$2,822; 2001)

University of Illinois Clark Memorial Graduate Research Fund Grant (\$2,000; 2001)  
University of Illinois Program in Ecology and Evolutionary Biology Research Grant (\$1,000; 2001)  
University of Illinois Clark Memorial Graduate Research Fund Grant (\$5,000; 2000)  
University of Illinois Graduate Dissertation Travel Grant (\$4,000; 2000)  
American Ornithologists' Union Dissertation Research Grant (\$1,427; 1999)  
University of Illinois Clark Memorial Graduate Research Fund Grant (\$700; 1999)  
University of Illinois Graduate College Enhancement Fund for outside curricula (\$626; 1997)

## **INVITED DEPARTMENTAL & WORKSHOP SEMINARS** (^ indicates international)

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### ***2020***

Complex Biosystems Program, UNL  
Center for Plant Science Innovation, UNL, Research Seminar  
School of Biological Sciences, UNL, Research Seminar

### ***2018***

Holden Arboretum, Ohio  
^Smithsonian ForestGEO Workshop, Czech Republic

### ***2017***

^Bosques y Conservación Ambiental, Universidad Nacional de Colombia - Sede Medellín  
Center for Plant Science Innovation, UNL, Research Seminar

### ***2016***

Dept. of Biodiversity, Earth, and Environmental Sciences, Drexel University, USA

### ***2015***

^Tupper Seminar, Smithsonian Tropical Research Institute, Panama  
^Invited Speaker, Workshop on Habitat Fragmentation & Biodiversity Conservation, Hangzhou, China

### ***2014***

^FEFCO Seminar, Kyoto University, Japan  
^Forestry Laboratory, Graduate School of Agriculture, Kyoto University, Japan  
^Tohoku University, Sendai, Japan  
^Division of Bio- and Geosciences, Osaka City University, Japan  
^Forestry and Forest Products Research Institute, Tsukuba, Japan  
^CTFS-SIGEO Workshop, Xishuangbanna Tropical Botanical Garden, China  
^Forest Department Sarawak, Malaysia

### ***2013***

^DANTA Field Course: Primate Behavior and Conservation, Osa Peninsula, Costa Rica  
^CTFS-SIGEO Workshop, Smithsonian Institution Front Royal, VA, USA

### ***2012 and earlier***

School of Biological Sciences Seminar, University of Nebraska – Lincoln (2012)  
Department of Biological Sciences, Kent State University (2012)  
Division of Biology, Kansas State University (2011)  
Department of Ecology and Environmental Biology, Iowa State University (2011)  
USGS Powell Center for Analysis and Synthesis: Working Group on Tree Biomass Growth (2011)  
Omaha's Henry Doorly Zoo (2010)  
Harvard University's Biodiversity of Borneo Field Course, Lambir Hills NP, Malaysia (2009)



Department of Biological Sciences, University of Nebraska – Omaha (2009)  
 Ecology, Evolution, & Behavior Seminar, SBS, University of Nebraska – Lincoln (2009)  
 School of Natural Resources, Applied Ecology Seminar, University of Nebraska, Lincoln (2009)  
 Center for Grassland Studies, University of Nebraska, Lincoln (2009)  
 Department of Organismic and Evolutionary Biology, Harvard University (2008)  
 Department of Ecology and Evolutionary Biology, University of Michigan - Ann Arbor (2008)  
 Program in Ecology, Evolution, and Conservation, University of Illinois, Urbana-Champaign (2008)  
 Department of Biology, University of Miami, Miami (2008)  
 Ecology, Evolution, and Behavior Seminar, SBS, University of Nebraska – Lincoln (2008)  
 Math-Biology Program, University of Nebraska – Lincoln (2007)  
 ^School of Biological Sciences, University of Aberdeen, Aberdeen, UK (2007)  
 Nebraska Citizens for Science, Lincoln (2007)  
 ^Department of Plant Sciences, University of Cambridge, Cambridge, UK (2006)  
 Department of Integrative Biology, University of California - Berkeley (2006)  
 Kellogg Biological Station & Michigan State University, East Lansing (2006)  
 School of Biological Sciences, University of Nebraska, Lincoln (2006)  
 ^Department of Botany, University of Toronto, Canada (2005)  
 ^Ecology Group, Macquarie University, Sydney, Australia (2005)  
 ^Department of Biological Sciences, National University of Singapore (2005)  
 Department of Biology, University of Washington, Seattle (2005)  
 Department of Zoology, University of Florida at Gainesville (2004)  
 Ecology Group, Tufts University, Massachusetts (2004)  
 Grinnell College, Iowa (2003)  
 Center for Tropical Research, University of California at Los Angeles (2002)  
 Department of Biological Sciences, University of Illinois - Chicago (2002)

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**PRESENTATIONS IN SYMPOSIA AT NATIONAL/INTERNATIONAL MEETINGS** (*Speaker underlined*)

***Invited Presentations***

- Russo, S.E. *et al.* 2018. Global patterns in the slow-fast continuum of tropical tree demography: the roles of tolerance and responsiveness, *Symposium 30: Tropical tree life-history strategies: Causes and consequences of demographic diversity*, Association for Tropical Biology and Conservation, Kuching, Malaysia
- Russo, S.E. and K. Kitajima. 2016. Ecophysiology of leaf lifespan in tropical forests: adaptive and plastic responses to environmental heterogeneity, *Organized Oral Session 11*, Association for Tropical Biology and Conservation, Montpellier, France
- Russo, S.E. *et al.* 2015. Demographic variation and tree species richness within tropical forests, *Organized Oral Session 10607: Functional, Phylogenetic and Genetic Dimensions of Forest Diversity and Change*, Ecological Society of America, Baltimore, USA.
- Whitman<sup>g</sup>, M and S.E. Russo 2015. Does Rapoport's rule apply to ultramafic flora of Sabah, Borneo? *Symposium 13 – Ecosystem Functions Along Elevation Gradients*. Association for Tropical Biology and Conservation, Hawaii, USA
- Russo, S.E. *et al.* 2014. A mechanistic dynamic energy budget model to predict tropical tree species distributions, 4th Taiwan-Japan Ecology Workshop, National Dong Hwa University, Taiwan.
- Russo, S.E. *et al.* 2014. A mechanistic dynamic energy budget model to predict tropical tree species distributions, International workshop on carbon cycling in the tropical and subtropical forests, Ryukyu University, Japan.

### ***Organized Oral Sessions/Symposia***

- Couvreur, V., G. Ledder, D.A. Way, E.B. Muller, S. Manzoni, S.E. Russo 2019. Water transport through tall trees: A vertically explicit, analytical model of xylem hydraulic conductance in stems, *Mini-Symposium: Mathematical models of Plants (Co-organized with G. Ledder)*, Society for Mathematical-Biology, Montreal, Canada.
- Russo, S.E. & S.J. Davies 2018. Introduction to the Symposium: Biodiversity and change: Comparative dynamics of southeast Asian forests, *Symposium 34: Changing environments & changing forests: spatial and temporal variation in the dynamics of Southeast Asian forests (Co-organized with S.J. Davies)*, Association for Tropical Biology and Conservation, Kuching, Malaysia
- Russo, S.E. & Kitajima, K. 2014. A mechanistic dynamic energy budget model to predict tropical tree species distributions, *Organized Oral Session: Trait-based trade-offs in tropical forests (Co-organized with K. Kitajima)*, Association for Tropical Biology and Conservation (ATBC), Cairns, Australia.

### ***2012 and earlier***

- Russo, S.E., Heineman<sup>U</sup>, K., Tan, S. 2010. Habitat-related variation in standing aboveground biomass in a Bornean rain forest. USGS Powell Center for Analysis and Synthesis Working Group on Tree Biomass Growth, Fort Collins, CO.
- Russo, S.E., Coomes, D.A., Duncan, R. Wiser, S., Barker, R. 2006. Trade-offs between growth and survival rates of New Zealand tree species. British Ecological Society, Oxford, UK.
- Russo, S.E., M.D. Potts, S.J. Davies, S. Tan. 2005. Determinants of tree species distributions: comparing the roles of dispersal, seed size and soil specialization in a Bornean rainforest. Fourth International Symposium/Workshop on Frugivory and Seed Dispersal. Brisbane, Australia.
- Russo, S.E., C.J. Campbell, J.L. Dew, and P.R. Stevenson. 2003. A multi-site comparison of dietary preferences and seed dispersal by spider monkeys (*Ateles spp.*). *Symposium* at the American Association of Physical Anthropologists, Tempe, Arizona, USA.

### **CONTRIBUTED PRESENTATIONS AT NATIONAL/INTERNATIONAL MEETINGS (Speaker underlined)**

- Yang, Y. and S.E. Russo. Covariation of root functional traits and community structure in grasslands along a water availability gradient, British Ecological Society - Festival of Ecology 2020, December 14-18 2020
- Quattrone, A. M. Weemstra, S. Antony-Babu, K.A. Weber, S.E. Russo. Phylogenetic Effects on the Phenotypic Variation and the Root-associated Microbiome of North American Prairie Grasses, British Ecological Society - Festival of Ecology 2020, December 14-18 2020
- Quattrone, A. M. Weemstra, S. Antony-Babu, K.A. Weber, S.E. Russo. Evolution of the holobiont—A phylogenetic test with 18 Nebraskan prairie grass species, American Society for Plant Biology 2020 Worldwide Summit, July 27-31 2020
- Quattrone, A., P. Miller, P. Yadav, M. Meier, T. Clemente, K.A. Weber, S.E. Russo. Evaluating the Roles of Root Hairs and Soil Microorganisms on the Growth of Maize, American Society for Plant Biology Phenome 2020 -Tucson, AZ, Feb 24-27 2020
- Quattrone, A. M. Weemstra, S. Antony-Babu, K.A. Weber, S.E. Russo. Evolution of the Holobiont in Nebraska prairie grasses, Collective Research Organization of Plant Scientists (CROPS) Summer Webinar Series, UNL, June 30 2020
- Huanca-Nunez, N., Chazdon, R., Russo, S.E. Seed rain-successional feedbacks. British Ecological Society Annual Meeting, December 14-17, 2020.

- McNichol, B., and Russo, S.E. August 2020. Environmental variables influence local distributions of woody species in a biogeographically unique plant community. Collective Research Organization of Plant Scientists (CROPS) Summer Webinar Series, University of Nebraska—Lincoln, Lincoln, NE.
- McNichol, B., and Russo, S.E. December 2020. Environmental gradients drive fine-scale turnover and distributions of woody species in a biogeographically unique plant community. British Ecological Society Meeting, London, UK. Virtual Meeting.
- Yadav, P., A. Quattrone, Y. Yang, J. Owens, R. Kiat, T. Kuppusamy, S. Moyer, S. Russo, K. A. Weber. Viruses Outnumbered Microbes in Abundance in Rhizosphere of *Zea mays* Genotype B73 and Close Relative *Zea mays* subsp. *parviglumis*. American Geophysical Union (AGU) Fall 2020 Meeting (Virtual Meeting). December 1-17, 2020.
- Ordway, E., S.J. Davies, S.E. Russo, P. Moorcroft. Parameterizing tropical forest diversity: integrating a terrestrial biosphere model with remotely sensed trait measurements. American Geophysical Union (AGU) Fall 2020 Meeting (Virtual Meeting). December 1-17, 2020.
- Qu, Suzanne X. S.E. Russo, S.J. Davies, K. Peay. Mycorrhizal Association Not Soil Specialisation Determines Spatial Aggregation of Tropical Trees, American Geophysical Union (AGU) Fall 2020 Meeting (Virtual Meeting). December 1-17, 2020.
- Whitman<sup>g</sup>, M. & S.E. Russo. 2018. How to play by a different set of rules: functional traits of Rhododendron species with a stress-tolerant ecological strategy along tropical elevation gradient, Association for Tropical Biology and Conservation, Kuching, Malaysia
- Whitman<sup>g</sup>, M. & S.E. Russo. 2018. Rhododendron: the genus that plays by a different set of rules (poster), Gordon Research Conference, Maine.
- Huanca-Nunez<sup>g</sup>, N., R. Chazdon, S.E. Russo. 2018. Seed rain variation across Costa Rican forests of different successional ages, Ecological Society of America, New Orleans.
- S.E. Russo & J. Chan<sup>g</sup> 2017. Variation in trait plasticity among Bornean tree species with contrasting ecological strategies Association for Tropical Biology and Conservation, Merida, Mexico.
- Whitman<sup>g</sup>, M. & S.E. Russo. 2017. Functional trait variation of stress-tolerant Rhododendron species along elevation gradients; Association for Tropical Biology and Conservation, Merida, Mexico.
- Whitman<sup>g</sup>, M. & S.E. Russo. 2017. Functional trait variation of stress-tolerant Rhododendron species along elevation gradients; Ecological Society of America, Portland, Oregon.
- L. Virilouvet<sup>p</sup>, Q. Du<sup>g</sup>, C. Zhang, N. Liu, T.J. Avenson, M. Fromm, Z. Avramova, & S.E. Russo, 2017. Dehydration stress memory: Gene co-expression networks linked to the physiological phenome during successive dehydration stresses in *Zea mays*, 2017 Nebraska Research and Innovation Conference on Predictive Crop Design: Genome to Phenome, Lincoln, NE, USA.
- L. Virilouvet<sup>p</sup>, Q. Du<sup>g</sup>, C. Zhang, N. Liu, T.J. Avenson, M. Fromm, Z. Avramova, & S.E. Russo, 2017. Dehydration stress memory: Gene co-expression networks linked to the physiological phenome during successive dehydration stresses in *Zea mays*, American Society of Plant Biology Phenome 2017, Tucson, AZ, USA.
- Whitman<sup>g</sup>, M. & S.E. Russo, 2016. Testing Rapoport's rule for species-rich genera of the Malay Archipelago, Unifying Ecology Across Scales Gordon Conference, Maine, USA.
- Whitman<sup>g</sup>, M. & S.E. Russo, 2015. Testing Rapoport's rule for species-rich genera of the Malay Archipelago, EU Macroecology Conference, Copenhagen, DK.
- Whitman<sup>g</sup>, M. & S.E. Russo 2015. Does Rapoport's Rule Apply to Ultramafic Flora of Sabah, Borneo? Association for Tropical Biology and Conservation, Hawaii, USA, Symposium 13 – Ecosystem Functions Along Elevation Gradients.

- Whitman<sup>g</sup>, M. & S.E. Russo, 2014. Testing Rapoport's rule for species-rich genera of the Malay Archipelago, Gordon Research Conference (Unifying Ecology Across Scales), Maine, USA.
- Russo, S.E., A. Kochsiek<sup>p</sup>, S. Tan. 2013. Trade-offs in carbohydrate allocation and distributions of Bornean tree species along a soil gradient. Ecological Society of America, Minneapolis, MN.
- Whitman<sup>g</sup>, M. & S.E. Russo. 2013. Tropical *Rhododendron* diversity and leaf traits along elevation gradients. Ecological Society of America, Minneapolis, MN, USA.
- Russo, S.E., A. Kochsiek<sup>p</sup>, S. Tan. 2013. Trade-offs in carbohydrate allocation and the distributions of Bornean tree species along a soil gradient. Association for Tropical Biology and Conservation, San Jose, Costa Rica.

### ***2012 and earlier***

- Russo, S.E., L. Zhang<sup>g</sup>, S. Tan, and S.J. Davies. 2011. Duration versus rate of return on investment: the importance of leaf lifespan to tree species distributions on edaphic gradients. Ecological Society of America, Austin, Texas, USA.
- Olney<sup>u</sup>, J., A. Kochsiek<sup>p</sup>, and S.E. Russo. 2011. Preferential uptake of different nitrogen forms by tree species in mixed dipterocarp forest. (poster presentation) Ecological Society of America, Austin, Texas, USA.
- Roccaforte<sup>g</sup>, K., D. Pilon, and S.E. Russo. 2011. Evaluating mechanisms of reproductive isolation between diploid *Erythronium mesochorium* (Liliaceae) and its tetraploid congener, *E. albidum*. (poster presentation) Society for the Study of Evolution, Oklahoma City, Oklahoma, USA.
- Roccaforte<sup>g</sup>, K., D. Pilon, and S.E. Russo. 2011. Evaluating mechanisms of reproductive isolation between diploid *Erythronium mesochorium* (Liliaceae) and its tetraploid congener, *E. albidum*. Ecological Society of America, Austin, Texas, USA.
- Koenig<sup>u</sup>, A., J. Comes<sup>u</sup>, S.E. Russo, G. Ledder. 2010. Effects of Nitrogen Concentration on Leaf Longevity and Senescence of Two Tropical Tree Species. Midwest Ecology and Evolution Conference, Iowa, USA.
- Hemen<sup>u</sup>, B., E. Price<sup>u</sup>, G. Ledder, S.E. Russo. 2010. A dynamic energy budget model of the determinants of leaf longevity in tropical trees. Midwest Ecology and Evolution Conference, Iowa, USA.
- Russo, S.E., W.L. Cannon<sup>u</sup>, C. Elowsky, S. Tan, S.J. Davies. 2009. Variation in leaf stomatal traits of 28 tree species in relation to water-use efficiency along an edaphic gradient in Bornean rain forest. Ecological Society of America, Albuquerque, New Mexico, USA.
- Heineman<sup>u</sup>, K., E. Jensen<sup>g</sup>, B. Bogenrief<sup>g</sup>, A. Shapland<sup>g</sup>, S.E. Russo. 2009. The effect of below-ground resources on above-ground allometric relationships in tropical tree species. Ecological Society of America, Albuquerque, New Mexico, USA.
- Heineman<sup>g</sup>, K., E. Jensen<sup>g</sup>, B. Bogenrief<sup>g</sup>, A. Shapland<sup>g</sup>, S.E. Russo. 2009. The effect of below-ground resources on above-ground allometric relationships in tropical tree species. Midwest Ecology and Evolution Conference, Lincoln, Nebraska, USA. ***\* Honorable Mention for Best Undergraduate Talk***
- Russo, S.E., S.J. Davies, S. Tan. 2008. Shifts in leaf functional traits of tropical tree species along an edaphic gradient. Ecological Society of America, Milwaukee, Wisconsin, USA.
- Russo, S.E., D.A. Coomes, R. Duncan, R., S.K. Wisser, and R. Barker. 2007. Trade-offs between tree growth and survival rates along elevation gradients in forests of New Zealand., Ecological Society of America, San Jose, California, USA.

- Russo, S.E., S.J. Davies, D.A. King, S. Tan. 2005. Soil-related performance variation and species' distribution patterns in a Bornean rain forest. Ecological Society of America, Montreal, Canada.
- Russo, S.E., S.J. Davies, D.A. King, S. Tan. 2004. Soil-related performance variation and species' distribution patterns in a Bornean rain forest. Gordon Research Conference on the Metabolic Basis of Ecology, Bates, College, Maine, USA (poster presentation).
- Russo, S.E. and C.K. Augspurger. 2003. Restricted dispersal limits recruitment to clumped patterns in *Virola calophylla*. Annual meeting of the Association for Tropical Biology and Conservation, Aberdeen, Scotland.
- Russo, S.E. and C.K. Augspurger. 2003. Evaluating dispersal limitation of a neotropical tree using a mechanistic model of vertebrate seed dispersal. Annual meeting of the Ecological Society of America, Georgia, USA.
- Russo, S.E. and C.K. Augspurger. 2002. Spatial patterns of seed dispersal by spider monkeys: Implications for understanding seed shadows generated by vertebrate dispersers. Annual meeting of the Association for Tropical Biology, Panama City, Panamá.
- Russo, S.E. and C.K. Augspurger. 2002. Spatial patterns of seed dispersal by spider monkeys: Evaluating disperser effectiveness. Annual meeting of the Ecological Society of America, Arizona, USA.
- Russo, S.E. 2000. Primate dispersal of a classically bird-dispersed fruiting tree: The case of *Virola calophylla* (Myristicaceae) in Perú. 3<sup>rd</sup> International Symposium-Workshop on Frugivores and Seed Dispersal, Sao Pablo, Brazil.
- Russo, S.E., S.K. Robinson, and J. Terborgh. 1999. Size-abundance relationships in a neotropical bird community. Annual meeting of the American Ornithologists' Union, Ithaca, New York.
- Russo, S.E., W.D. Robinson, J.D. Brawn, and S.K. Robinson. 1998. Distribution and abundance of Neotropical passage migrants along a moisture gradient in Central Panama's lowland forests. North American Ornithological Conference, St. Louis, Missouri, USA.
- Russo, S.E., J.B Mire, M. Gleason, L. Rose, and B. Smith. 1995. An approach for modeling chemical exposure to and effects on high trophic level receptors. Society of Environmental Toxicology and Chemistry Second World Congress, Vancouver, Canada.
- Mire, J.B., M. Gleason, B. Sootkoos, S. E. Russo. 1995. Combined post-remediation monitoring and baseline ecological risk assessment at an environmentally contaminated site. Society of Environmental Toxicology and Chemistry Second World Congress, Vancouver, Canada.

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**PROFESSIONAL SERVICE AND OUTREACH** (\* Indicates Current Appointments)

***School of Biological Sciences Service***

- \*P&T Research Advocate – 1 SBS faculty member (2020-present)
- \*Chair: SBS representative for Greenhouse Committee (2020-present)
- \*Member: SBS representative for Greenhouse Committee (2019-2020)
- \*Member: Research and Seminar Committee (2019-present)
- Member: Graduate Committee (2018-2020)
- Member: Search Committee, Director of SBS (2015-2016 & 2016-2017)
- Member: Search Committee, Root Biologist in Department of Agronomy and Horticulture (2017)
- Executive Committee (2013 – 2014, 2015-2017)
- Ecology, Evolution, Behavior Section Chair (2016-2017)
- Ecology, Evolution, Behavior Section Vice Chair (2015-2016)

Judge: BGSA Symposium talks and/or posters (2007, 2011, 2013, 2014, 2015, 2016, 2017, 2018, 2019)  
Mentoring Task Force (2012 – 2013)  
Member: Web Page Task Force (Spring 2011 – 2012)  
Chair (2009 – 2012) & Member (Fall 2008): Special Funds and Awards Committee  
Member: SBS Curriculum Committee (Fall 2009 – Fall 2011)  
Co-organizer of Math-Biology seminar series (Spring & Fall 2009)  
Member: POE Postdoctoral Fellowship Search Committee (Spring 2008, 2012, 2013)  
Member: Plant Organismal Biologist Search Committee (Fall 2008)

### **Center for Plant Science Innovation**

Member: CROPS Travel Award selection committee (2020)  
Member: Center for Plant Science Innovation Retreat Organizing Committee (Fall 2016, 2018)

### **College of Arts and Sciences Service**

\*Member: Executive Committee (2019 – present)  
Member: Research Advisory Committee (2016 – 2018)  
Member: Committee on Student Academic Distinction, Awards and Appeals (2012 – 2014)

### **University Service**

\*Plant Biology Major Steering Committee (2016-present)  
\*Fellow: Center for Great Plains Studies (2019-present)  
Organization for Tropical Studies representative for UNL (2012 – 2020)  
Member: Edgerton Award Selection Committee (2020)  
Environmental Studies Faculty Fellow (Spring 2011-2020)  
Member: UNL Center for Grassland Studies Advisory Committee (2010 – 2020)  
Member: Academic Rights and Responsibilities Committee (2017-2019)  
Member: Academic Rights and Responsibilities Special Grievance Committee (2017-2018)  
Panelist: Annual Women in Science Conference (2015, 2016)  
Member: UNL Fulbright Fellowships Committee (2010 – 2015)  
Instructor: NE Upward Bound (Summer 2010, 2011)  
Reviewer: UNL Office of Research and Research Council Grant Proposals (Spring 2010, 2011)

### **Professional Service**

\*Editorial Board Member, *Functional Ecology* (British Ecological Society Journals) (2014 – present)  
\*Editorial Board Member, *Biotropica* (2016 – present)  
\*Council Member of Association for Tropical Biology and Conservation (ATBC) (elected; 2018 – present)  
\*Chair of ATBC Grants and Awards Committee (2020 – present)  
Member of ATBC Grants and Awards Committee (2020)  
NSF Site Visit Team Member for review of EPSCoR Track I grant (Center for Root and Rhizobiome Innovation, 2018)  
Organization for Tropical Studies Board of Directors: Member at Large (elected; 2014 – 2019)  
Organization for Tropical Studies Alternatives Committee Member (2015 – 2017)  
Organization for Tropical Studies Alternatives Survey Committee Member (2016 – 2017)  
Grant Proposal Reviews:  
    *Ad-hoc* Reviewer for NSF Population and Community Ecology Cluster (2009, 2010, 2011, 2012, 2014, 2015, 2020)  
    *Ad-hoc* Reviewer for Singapore Nanyang Technological University Tier 1 Grant (2016)  
    Review Panel: Smithsonian ForestGEO Small Grants Program (2016)

*Ad-hoc* Reviewer for NSF IOS Plant Genome Research (2013)  
 NSF Population and Community Ecological Cluster Panel (Spring 2010 & 2013)  
 NSF Doctoral Dissertation Improvement Grant, Ecological Biology Panel (Spring 2009)  
 External Examiner for Promotion Review (1 review in 2013, 1 review in 2016, 1 review in 2018)  
 External Examiner for PhD Thesis (Macquarie University, Australia; Advisor Ian Wright, 2013)  
 Judge: Graduate Student Oral Presentations, Ecological Society of America and Association for  
 Tropical Biology and Conservation meetings (2013, 2017, 2018)  
 Judge: Graduate Student Talks, Midwest Ecology and Evolution Meeting at UNL (Spring 2009)  
 Presenter: Nebraska Citizens for Science (2008)  
 Guest-editor, *Tropical Conservation Science*: Special Issue on Myristicaceae (2011 – 2013)  
 Journal Reviewer: *American Journal of Botany*, *The American Naturalist*, *Behavioral Ecology*, *Biotropica*, *Ecology*,  
*Ecology Letters*, *Evolutionary Ecology*, *Forest Ecology and Management*, *Functional Ecology*, *Global Change*  
*Biology*, *Journal of Biogeography*, *Journal of Ecology*, *Journal of Plant Research*, *Journal of Tropical Ecology*,  
*Journal of Tropical Forest Science*, *Journal of Vegetation Science*, *New Phytologist*, *Oecologia*, *Oikos*, *Plant*  
*Biology*, *Plant Cell and Environment*, *Plant Ecology*, *Plant Ecology & Diversity*, *Proceedings of the National*  
*Academy of Sciences*, *Proceedings of the Royal Society*, *PLoS ONE*, *Scientific Reports (Nature)*, *Tree*  
*Physiology*  
 Textbook reviewer: *Community Ecology*, G. Mittelbach (Sinauer) (three chapters)  
 Textbook proposal reviewer: *Community Ecology* (Jones & Bartlett Learning)  
 Membership in Professional Organizations: *American Botanical Society*, *Association for Tropical Biology and*  
*Conservation*, *Ecological Society of America*, *Organization for Tropical Studies*, *Sigma Xi*

### **Co-organized and Invited National and International Working Groups**

- 2013-2019 Demography Group leader and mentor at Six Smithsonian ForestGEO International Analytical Workshops for NSF RCN, "Diversity and Forest Change: Characterizing functional, phylogenetic and genetic contributions to diversity gradients and dynamics in tree communities". 2013: Smithsonian Conservation Biology Institute, VA, USA; 2014: Xishuangbanna Tropical Botanical Garden, China; 2015: Smithsonian Tropical Research Institute, Panama; 2016: Hainan Island, China; 2017: Luquillo LTER Plot, Puerto Rico; 2018: Czech Republic; 2019: Singapore
- 2017 Math-Biology Program Workshop: Co-organizer with G. Ledder (UNL, Dept. of Mathematics): Model of Tree Hydraulics at UNL for 5 participants, March 2017.
- 2014-2016 NSF-NIMBioS: Co-organizer of 3 working group meetings with G. Ledder (UNL, Dept. of Mathematics) and R. Nisbet (UCSB) (October 2014, June 2015, May 2016) at the NSF National Institute for Mathematical and Biological Synthesis Working Group, "A Mechanistic Dynamic Energy Budget Model of Tree Performance to Predict Functional Trait Drivers, Species Distributions, and Responses to Global Change" (University of Tennessee, USA).
- 2014 Math-Biology Program Workshop: Co-organizer of UNL Math-Biology Program Workshop with G. Ledder (UNL, Dept. of Mathematics) (January 2014), "A Mechanistic Dynamic Energy Budget Model of Tree Performance to Predict Functional Trait Drivers, Species Distributions, and Responses to Global Change" (University of Nebraska, USA).
- 2010-2011 USGS Powell Center for Analysis and Synthesis: Characterizing a link in the terrestrial carbon cycle: A global overview of individual tree mass growth. (30 August – 1 September 2010 and 29 May – 1 June 2011)

- 2006-2007 Plant Population Dynamics along Physical-geography Gradients, Australian Research Council and Landcare Research, New Zealand
- 2005-2006 U.K. Population Biology Network Growth-survival Models Working Group

### ***Outreach***

- EPSCoR Young Nebraska Scientists High School Student Research Mentor (Summer 2017, 2018, 2020)
- Spirit of Nebraska Girl Scout Troup – led group meeting to earn the Flower Badge (2020)
- Undergraduate Research at the Capitol (2018)
- Presenter at Science Connector: Lincoln Public Schools & Nebraska State Museum (Summer 2017)
- Plant Biology Major Recruiting Event (Jan 2017)
- Education Outreach: Conservation Awareness Interactive Discovery Centre at Lambir Hills National Park, Ford Motor Company Conservation Grant (with PI Januarie Kulis, Park Warden, Lambir NP, Sarawak, Malaysia, 2015)
- Presentation on Tropical Diversity and Careers in Ecology (Lincoln Public Schools, Spring 2014)
- Co-organizer & Presenter: Sunday with a Scientist at Nebraska State Museum: “The Fascinating World of Fruit”, with Dr. Stacey Smith (Fall 2011)
- Co-organizer & Presenter: Apple Jack Festival and the UNL Kimmel Education and Research Center: “Be Fruity”, with Dr. Stacey Smith (Fall 2012)

### **COURSE INSTRUCTION**

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- Plants in Human Medicine, BIOS 368 (Fall 2018, 2019, 2020)
- Ecological Interactions, BIOS 454/854 (ACE-10) (Spring 2012, 2013, 2016; Fall 2016, 2017, 2018, 2019, 2020)
- Biology of Plants, BIOS 317 with lab (Fall 2016)
- Statistical Workshop using R software, Kyoto University (Fall 2014)
- Principles of Ecology, BIOS 805 (Spring 2014)
- Introductory Botany, BIOS 109 (Fall 2008, 2009, 2010, 2011, 2012, 2013)
- Advanced Community Ecology, BIOS 959 (Spring 2008, 2010)
- Research for Undergraduates in Theoretical Biology, BIOS 316 (Spring, Summer, Fall 2008 & 2009; Summers of 2008 & 2009 were a field research course in Borneo)

### **WORKSHOPS AND TRAINING ON INSTRUCTIONAL METHODS**

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- Attended FABUS Scientific Teaching Workshop (Couch Lab, SBS) (1 day, Spring 2018)
- Biology Teaching Circle Journal Club (Couch Lab; 2017-2018)
- Participated in FABUS Scientific Teaching Data Collection (Couch Lab, SBS) (Fall 2017)
- Participated in COPUS and Scientific Teaching Observation Study (Couch Lab, SBS) (Spring 2016)
- Faculty Learning Community (Couch & Brassil Labs, SBS) (Spring 2016)
- ARISE Scientific Teaching Workshop (Marylin Staines, Chemistry) (Spring, 2015)

### **MENTORSHIP**

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#### ***Postdoctoral Fellows***

- Thirumurugan Kuppasamy Plant microbial interactions in agricultural systems (2019-2020)
- Monique Weemstra Plant-microbe feedbacks (2017-2018) [postdoc – U. Montpellier, France]



Jin Yi	Coexistence between evergreen and deciduous tree species, Visiting Postdoctoral Fellow—Zhejiang University, China (Aug 2016-Jan 2017) [postdoc – Zhejiang U., China]
Laetitia Virilouvet	Water stress memory physiology in corn (co-supervised with M. Fromm and Z. Avramova; 2012-2014) [R&D researcher at UV Boosting Co., France]
Noelle Beckman	Neighborhood competition of trees in relation to soil resources (UNL Program of Excellence Fellow, 2010 –2012) [Faculty: Utah State U.]
Amy Kochsiek	Trade-offs in allocation to growth, defense, and storage among Bornean tree species (Jan 2010 – Dec 2011) [Faculty: Gustavus-Adolphus College]

### ***Graduate Thesis Advisees***

Bailey McNichol	Biodiversity and change in Nebraskan forests (PhD, July 2019-present)
Yuguo Yang	Plant-microbe interactions (PhD, July 2018-present)
Amanda Quattrone	Plant-microbe interactions (PhD, Complex Biosystems, Mar 2018-present)
Nohemi Huanca Nunez	Regeneration in tropical secondary forests, Fulbright Fellow (PhD, Aug 2014-present)
Melissa Whitman	Patterns of diversity along elevation gradients, NSF Graduate Research Fellow (PhD, graduated Aug 2018)
Caicai Zhang	Growth-survival trade-offs, Visiting PhD Scholar, Chinese Academy of Sciences (Nov 2016-Nov 2017) [Faculty: Dali U., China]
Bin Yue	Competition-colonization trade-off, Visiting PhD Scholar, Chinese Academy of Sciences (Nov 2016) [Postdoc – Chinese Academy of Sciences]
JuPing Chan	Trait plasticity of Bornean tree species (MSc, graduated Dec 2016) [IT Consultant, Malaysia]
Kathy Roccaforte	Mechanisms of reproductive isolation in plants, M.Sc., Co-advised with D. Pilson (graduated May 2012) [PhD – U. Kansas]

### ***Graduate Committee Membership***

Alexandra Shupinski	Paleomammal diversity (SBS: S. Lyons, PhD)
David Nguyen	Host-parasite interactions (SBS: Clay Cressler, PhD)
Gabriela Palomo	Coexistence of tropical carnivores and humans (SNR: Drew Tyre, PhD)
George Wheeler	Coexistence among prairie grass species (SBS: Jean Knops, PhD)
Laura VanderMeiden	Avian mixed species flocks (SBS: Dai Shizuka, PhD)
Mohizah Mohammad	Community change in a Bornean forest (Universiti Malaysia – Kuching (UNIMAS); Tawan Checksum, PhD)
Elizabeth Chambers	Plant demography in thistles (SBS: Tenhumburg, MSc, left program in 2020)
Maria Goller	Song learning and mimicry in starlings (SBS: Dai Shizuka, PhD, spring 2020)
Daniel Zuleta	Diversity of Columbian tropical forests (Universidad Nacional de Colombia, Alvaro Duque, PhD, summer 2019)
Max Segnitz	Plant-soil feedbacks in Bornean trees (Stanford, K. Peay, PhD, spring 2019)
Nadejda Mirochnitchenko	Nebraskan bird communities (SNR: TJ Fontaine, MSc, 2018)

Anna Tatarko	Plant species traits and abundance (SBS: J. Knops, MSc, spring 2017)
Kyle Funk	Demographic trade-offs in California oaks (SBS, J. Knops, Ph.D., spring 2016)
Dan Gates	Hybrid origins of species in <i>Iochroma</i> (Diana Pilson, Ph.D.; Dec 2016)
Bethany Teeters	Prairie pollinator diversity and services (SNR, C. Allen, Ph.D., spring 2019)
Dakota Ahrendsen	Phylogenetic diversity of prairie plants (UNO, R. Kellar, M.Sc., spring 2014)
Ben Nolting	Temporal variability and trophic interactions (SBS, C. Brassil, Ph.D., fall 2013)
Mario Pesendorfer	Influence of island scrub jay's caching behavior on seed dispersal of oaks (SBS, A. Kamil, Ph.D., Spring 2014)
Ramesh Laugani	Plant species impacts on nitrogen cycling in grassland ecosystems (SBS, J. Knops; Ph.D., Spring 2010)
T.J. Bliss	Nematode community structure in relation to plant diversity (SBS, C. Brassil, T. Powers, M.Sc., Spring 2010)
Michael Mellon	Tri-trophic interactions among spiders, herbivores, and thistles (SBS, S. Louda; M.Sc., Fall 2009)

### ***Undergraduate Thesis/UCARE/NSF REU Advisees***

Susana Moyer	UCARE: Biodiversity along an elevation gradient in a Nebraskan forest (2019)
Hamilton Hasty	UCARE: Plant-microbial interactions in grasses (2017-2018)
Willem Roper	UCARE: Plant-microbial interactions in grasses (2017-2018; SBS Undergraduate Research Fair 2019)
Amanda Gangwish	Top-down control marine food webs; Environmental Studies Thesis Advisee (Spring -Fall 2016)
Rachel Pahlke	UCARE Student: Leaf-to-leaf variation in protein concentration (Summer 2013)
Lauren Thompson	NSF REU and UCARE Student: Functional traits of canopy leaves of Bornean tree species; Undergraduate Thesis for Distinction (Summer 2011-Spring 2012; graduated Spring 2012)
Jocelyn Olney	NSF REU and UCARE Student: Nitrogen-form preference of Bornean tree species; Undergraduate Thesis for Distinction (Fall 2009-Spring 2012; graduated Spring 2012; NSF Graduate Research Fellowship awarded in 2012)
Katherine Heineman	UCARE Student: Tree crown and height growth allometries of Bornean species: Undergraduate Thesis for Distinction (2009- 2010; graduated Spring 2010; NSF Graduate Research Fellowship awarded in 2010)
Taylor Sloey	UCARE Student: Distribution of Dioecious Eastern Red Cedar ( <i>Juniperus virginiana</i> ) along an Environmental Gradient in Ogallala, NE; Environmental Studies Thesis (Co-advisor with D. Pilson; graduated Spring 2010; PhD student at Louisiana State Univ.)
Deidra Jacobsen	Herbivory on Platte Thistle: Honors Thesis in Environmental Studies and Thesis for Distinction (Environmental Studies Thesis; Co-advisor with Svata Louda; graduated Spring 2009)
Whitney L. Cannon	Variation in leaf stomatal traits in relation to water use efficiency among Bornean tree species: Honors Thesis in Environmental Studies & Thesis for Distinction (graduated Fall 2008)

Jake Arneson UCARE: Sex ratio and gender allocation in red cedar (Co-advisor with Advisor J. Knops, Summer 2009-Fall 2010)

***Undergraduate and High School Student Research Advisees***

Sheridan Wilson Young Nebraska Scientists High School Researcher: Grassland diversity on a sand hills dune gradient (2020)

Carly Trebac Plant-soil feedback in agroecosystems (2019-present)

Payton Knutzen-Young Plant-soil feedback in agroecosystems (2019-present)

Susana Moyer Plant-microbial interactions in agroecosystems (2019-present)

Ashley Newman Plant-microbial interactions in agroecosystems (2018-2019)

Porsche Miller Young Nebraska Scientists High School Researcher: Plant-microbial interactions in maize (Summer 2018)

Alexa Davis Plant-microbial interactions in grasses (2017-2018)

Sakia Fields Plant-microbial interactions in grasses (2017-2018); Niobrara forest ecology (Summer 2018)

Jennifer Foster Niobrara forest ecology (Summer 2018)

Nicole Fintel Young Nebraska Scientists High School Researcher: Plant-microbial interactions in wild grasses (Summer 2017)

Joseph Eastman Plant-soil-microbe feedbacks (Spring 2017)

Samuel Johnson Plant-soil-microbe feedbacks (Spring 2017)

Itahi Sanchez Plant-pathogen interactions in Bornean trees (Summer 2014)

Aimee Koenig Leaf longevity of two Bornean tree species (Spring 2009-2011)

Jenna Jo Comes Interspecific variation in leaf functional traits (Spring -Fall 2009)

Taylor Sloey Leaf venation of Bornean tree species (Spring 2009)

Jeffrey Jensen Leaf venation of Bornean tree species (Spring 2009)

***Field & Lab Assistants (since 2013)***

Cooper Steffen, Jack Luth, Ashley Newman, Patrick Wilson, Townson Lemansky, Salan Preet Kuar, Henry Ngo, Zoe Masterpole, Jonathan Wang, Grant Harrison, Dylan Dingbaum, Trang Huang

***Graduate & Undergraduate Advisees – Research Grants & Awards (non-SBS Special Funds)***

Nohemi Huanca Nunez Sigma Xi Grant-in-Aid of Research (\$820; 2018)  
OTS Fellowship (The Christiane & Christopher Tyson Fellowship and The F. Christian & Betty Thompson Fellowship (\$4,550; 2016)

JuPing Chan University of Nebraska Chancellor's Fellowship (\$4,000 per year; 2012-2013)

Melissa Whitman NSF Graduate Research Fellowship (\$98,000; 2011-2014)  
American Rhododendron Society (\$5,000, 2013-2014)

Kathy Roccaforte University of Nebraska Chancellor's Fellowship (\$4,000 per year; 2009-2011)  
University of Nebraska Arthur William Sampson Fellowship: (\$20,400 plus tuition reimbursement; 2010-2011)  
University of Nebraska Center for Great Plains Studies Research Grant in Aid (\$350)  
NSF Graduate Research Fellowship Honorable Mention (2010)

Jocelyn Olney NSF Graduate Research Fellowship (awarded in 2011)

Katherine Heineman	Sigma Xi Grant-in-Aid of Undergraduate Research (\$700; 2010) “Spotlight on the Student” (Fall 2011) NSF Graduate Research Fellowship (awarded in 2010) Sigma Xi Grant-in-Aid of Undergraduate Research (\$700; 2009) RUTE Extended Research Award (\$200; Spring 2009) Upperclass Fellowship (\$2000; Spring 2009), “Spotlight on the Student” (Fall 2009)
Taylor Sloey	Cedar Point Biological Station Undergraduate Research Award (2009)
Jake Arneson	Cedar Point Biological Station Undergraduate Research Award (2009)