

SABRINA E. RUSSO

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EDUCATION

- 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

- Population and community ecology, particularly of plants and tropical trees
- Plant life-history, functional, and ecophysiological trait variation
- Models of seed dispersal and its consequences for plant populations and communities
- Incorporating phylogeny and evolutionary history in ecological studies

POSITIONS HELD

- 2013-present 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

- 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

In Review

- Jin Yi, S.E. Russo, M. Yu. Effects of light and topography on regeneration and coexistence of evergreen and deciduous tree species in a Chinese subtropical forest. (**Journal of Ecology**)
- Yue Bin, G. Lin, S.E. Russo, Y. Shen, J. Lian, H. Cao, W. Ye. Evidence for a colonization-competition trade-off correlated with functional trait variation among tree species in a subtropical forest. (**Scientific Reports**)
- Virlouvet, L., T.J. Avenson, Q. Du, C. Zhang, N. Liu, M. Fromm, Z. Avramova, S.E. Russo. Dehydration stress memory: Gene co-expression networks linked to physiological responses during successive dehydration stresses in *Zea mays*. (**Plant Cell and Environment**)

2017

- Fukami, T. M. Nakajima, C. Fortunel, P.V.A. Fine, C. Baraloto, S.E. Russo, K.G. Peay. Species pools and the emergence of tropical forest monodominance. **American Naturalist** 190: S105–S122

2016

- Russo, 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*.

- Russo, S.E. Seed Dispersal, in Fuentes *et al.* (eds) *International Encyclopedia of Primatology*.

2015

- 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.
- Heineman, 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.
- Heineman, 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.
- 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.*
- Roccaforte, 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.

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.

2014

Stephenson, N., A. Das, R. Condit, S.E. **Russo**, P. Becker, D.A. Coomes, *et al.* 2014. Rate of tree carbon accumulation increases continuously with tree size. **Nature** 507:90-93.

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(22):1-13.

2013

Russo, S.E., A. Kochsiek, *J. Olney, *L. Thompson, A.E. Miller, and S. Tan. 2013. Nitrogen uptake strategies of edaphically specialized Bornean tree species. **Plant Ecology** 214:1405–1416.

Kochsiek, S. Tan, and S.E. **Russo**. 2013. Fine root dynamics in relation to nutrients in oligotrophic Bornean forest soils. **Plant Ecology** 214: 869-882.

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.

2007-2012

Russo, S.E., R. Legge, 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.

Russo, S.E., L. Zhang, 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.

*Heineman, K., *E. Jensen, *B. Bogenrief, *A. Shapland, 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.

Russo, S.E., *W.L. Cannon, 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.

Russo, S.E., K. Jenkins, 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.

Russo, S.E. and C.A. Chapman. 2010. Primate seed dispersal: Consequences of behavior on 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, 2nd edition*. Oxford University Press.

Russo, 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.

- Russo**, S.E., S.W. Wiser, 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.
- Russo**, 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.
- 2006 and earlier**
- Russo**, 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.
- 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.
- 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.
- 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.
- Russo**, 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.
- Russo**, 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.
- Russo**, 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.
- 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.
- 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.
- Russo**, 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.

- Russo**, 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.
- Russo**, S.E. 2003. Responses of dispersal agents to tree and fruit traits in *Virola calophylla* (Myristicaceae): Implications for selection. **Oecologia** 136:80-87.
- 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.
- 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.

RESEARCH GRANTS

Choobineh, F. (PI) "EPSCoR RII Track 1: Center for Root and Rhizobiome Innovation (CRRRI)", Role: Senior Personnel/Co-PI, National Science Foundation – EPSCoR; Total Award Amount: \$10 million, 06/15/2016 – 05/31/2021

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, *Submitted Jan 2016. (awarded)*

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).

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).

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)

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; 1 July 2011 – 30 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; 1 January 2010 – 31 December 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

Russo, S.E. “Is there a functional basis for edaphically-associated floristic variation in a Bornean rain forest?” 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 SEMINARS

2017

Bosques y Conservación Ambiental, Universidad Nacional de Colombia - Sede Medellín

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

2007 – 2012

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, School of Biological Sciences, 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 (Department of Plant Biology), University of Illinois, Urbana-Champaign (2008)

Department of Biology, University of Miami, Miami (2008)

Ecology, Evolution, and Behavior Seminar, School of Biological Sciences, 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)

2006 and earlier

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)

ORGANIZED SESSIONS AND PRESENTATIONS AT NATIONAL AND INTERNATIONAL MEETINGS

* *UNL undergraduate*

Organized Oral Sessions and Invited Presentations

- 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.
- Russo, S.E. 2015. Disrupting dispersal: the effects of fragmentation on the early demographic stages of forest trees, International Workshop of Habitat Fragmentation and Biodiversity Conservation in the Thousand Island Lake, Chuan'an, Zhejiang, China.
- M. Whitman and 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.
- 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 semi-open workshop on carbon cycling in the tropical and subtropical forests, Ryukyu University, Japan.
- Russo, S.E. & Kitajima, K. 2014. Organized Oral Session: Trait-based trade-offs in tropical forests, Association for Tropical Biology and Conservation (ATBC), Cairns, Australia.
- Russo, S.E. et al. 2014. A mechanistic dynamic energy budget model to predict tropical tree species distributions. In Organized Oral Session: ATBC, Cairns, Australia.
- Russo, S.E. 2014. Natural selection on resource allocation strategies of tropical trees. CTFS-SIGEO Workshop, Xishuangbanna Tropical Botanical Garden, China.
- Russo, S.E. 2013. What can the relationship between mortality and growth tell us about the life histories of tree species? CTFS-SIGEO Workshop, Smithsonian Institution, Front Royal, VA, USA.

2012 and earlier

- Russo, S.E., Heineman, 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 AND INTERNATIONAL MEETINGS

* *UNL undergraduate*

- S.E. Russo & J. Chan 2017. Variation in trait plasticity among Bornean tree species with contrasting ecological strategies Association for Tropical Biology and Conservation, Merida, Mexico.
- L. Virilouvet, Q. Du, 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, Q. Du, 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.
- M. Whitman and S.E. Russo, 2016. Testing Rapoport's rule for species-rich genera of the Malay Archipelago, Unifying Ecology Across Scales Gordon Conference, Maine, USA.
- M. Whitman and S.E. Russo, 2015. Testing Rapoport's rule for species-rich genera of the Malay Archipelago, EU Macroecology Conference, Copenhagen, DK.
- M. Whitman and 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.
- M. Whitman and 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, S. Tan. 2013. Trade-offs in carbohydrate allocation and the distributions of Bornean tree species along a soil gradient. Ecological Society of America, Minneapolis, MN.
- Whitman, M. and 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, 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, 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, J., A. Kochsiek, 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, K., D. Pilson, 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, K., D. Pilson, 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.
- *A. Koenig, *J. Comes, 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, B., *E. Price, 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, 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, K., *E. Jensen, *B. Bogenrief, *A. Shapland, 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, K., *E. Jensen, *B. Bogenrief, *A. Shapland, 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. ***Won 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. Wiser, 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 *Viola 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. 3rd 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, USA.
- 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.

PROFESSIONAL SERVICE AND OUTREACH

School of Biological Sciences Service and other Units

- Member: Search Committee, Root Biologist (Agronomy) 2017
- Member: Search Committee, Director of SBS (2015-2016 & 2016-2017)
- 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)
- Mentoring Task Force (2012 – 2013)
- Member: Web Page Task Force (Spring 2011 – 2012)
- Chair (2009 – 2012) & Member (Fall 2008 – 2012): 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; hire of Stacey Smith)

College of Arts and Sciences Service

- Member: Research Advisory Committee (2016 – present)
- Member: Committee on Student Academic Distinction, Awards and Appeals (2012 – 2014)

University Service

- UNL Center for Plant Science Innovation Retreat Organizing Committee (Fall 2016)
- Organization for Tropical Studies representative for UNL (2012 – present)
- Panelist: Annual Women in Science Conference (2015, 2016)
- Member: UNL Center for Grassland Studies Advisory Committee (2010 – present)
- Member: UNL Fulbright Fellowships Committee (2010 – 2015)
- Instructor: NE Upward Bound (Summer 2010, 2011)
- Environmental Studies Faculty Fellow (Spring 2011-present)

Reviewer: UNL Office of Research and Research Council Grant Proposals (Spring 2010, 2011)

Professional Service

OTS Board of Directors: Member at Large (elected; 2014 – present)

OTS Alternatives Committee Member (2015 – present)

OTS Alternatives Survey Committee Member (2016 – present)

Editorial Board Member, *Functional Ecology* (British Ecological Society Journals) (2014 – present)

Editorial Board Member, *Biotropica* (2016 – present)

Grant Proposal Review Panels:

NSF Population and Community Ecological Cluster (Spring 2010 & 2013)

NSF Doctoral Dissertation Improvement Grant, Ecological Biology Cluster (Spring 2009),

Ad-hoc Reviewer for NSF Population and Community Ecology Cluster (Fall 2009, 2010, 2011, 2012, 2014, 2015)

Ad-hoc Reviewer for NSF IOS Plant Genome Research (2013)

Ad-hoc Reviewer for Singapore Nanyang Technological University Tier 1 Grant (2016)

External Examiner for Promotion Review (1 review in 2013, 1 review in 2016)

External Examiner for PhD Thesis (Macquarie University, Australia; Advisor Ian Wright, 2013)

Judge: Graduate Student Oral Presentations, Ecological Society of America (2013)

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 & 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 Working Groups

2014-2016 Co-organizer of Three Workshops (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 Co-organizer of UNL Math-Biology Program Workshop (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).

2013-2017 Group leader and Mentor at Five CTFS-SIGEO Analytical Workshops, "Diversity and Forest Change: Characterizing functional, phylogenetic and genetic contributions to diversity gradients and dynamics in tree communities".

- 2013: Smithsonian Institution's 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
- 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

- Presenter at Science Connector: Lincoln Public Schools & Nebraska State Museum, Summer 2017
 Young Nebraska Scientists Research Mentor Summer 2017: LPS High School student Nicole Fintel
 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, Marcela Cantarero, 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)

COURSES TAUGHT

- Biology of Plants (Fall 2016)
 Ecological Interactions, BIOS 454/854 - ACE-10 Certified (Spring 2012, 2013, 2016; 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
 (<http://www.math.unl.edu/programs/rute/>) (Spring, Summer, Fall 2008, Spring, Summer, Fall 2009; Summers of 2008 & 2009 were a field research course in Borneo)

MENTORSHIP

Postdoctoral Fellows

- Monique Weemstra Plant soil-microbe feedbacks in grassland and agricultural systems (Jan 2017-present)
- Jin Yi Coexistence between evergreen and deciduous tree species, Visiting Postdoctoral Fellow–Zhejiang University, China (Aug 2016-Jan 2017)

Laetitia Virilouvet	Genetic control of drought hardening physiology in corn (co-supervised with M. Fromm and Z. Avramova; 2012-2014)
Noelle Beckman	Neighborhood competition of trees in relation to soil resources (UNL Program of Excellence Fellow, August 2010 – August 2012)
Amy Kochsiek	Trade-offs in allocation to growth, defense, and storage among Bornean tree species (National Science Foundation Fellow, January 2010 – December 2011)

Graduate Thesis Advisees

Caicai Zhang	Growth-survival trade-offs, Visiting PhD Scholar, Chinese Academy of Sciences (Nov 2016-Nov 2017)
Bin Yue	Competition-colonization trade-off, Visiting PhD Scholar, Chinese Academy of Sciences (Nov 2016)
Nohemi Huanca	Regeneration in tropical secondary forests, Ph.D., Fulbright Fellow
Melissa Whitman	Patterns of diversity along elevation gradients, Ph.D., NSF Graduate Research Fellow
JuPing Chan	Trait plasticity of Bornean tree species, M.Sc. (Dec 2016)
Kathy Roccaforte	Mechanisms of reproductive isolation in two <i>Erythronium</i> species (Liliaceae), M.Sc., Co-advised with Diana Pilson (May 2012)

Graduate Committee Membership

Laura VanderMeiden	Avian mixed species flocks (SBS: Dai Shizuka, PhD)
Nadejda Mirochnitchenko	Nebraska bird communities (SNR: TJ Fontaine, MSc)
Daniel Zuleta	Diversity of Columbian tropical forests (Universidad Nacional de Colombia, Alvaro Duque, PhD)
Anna Tatarko	Plant species traits and abundance (SBS: J. Knops, MSc)
Kyle Funk	Demographic trade-offs in California oaks (SBS, J. Knops, Ph.D.)
Dan Gates	Hybrid origins of species in <i>Iochroma</i> (Diana Pilson, Ph.D.; Dec 2016)
Max Segnitz	Plant-pathogen interactions in Bornean trees (Stanford, K. Peay, PhD)
Bethany Teeters	Prairie pollinator diversity and services (SNR, C. Allen, Ph.D., spring 2015)
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

Hamilton Hasty	UCARE: Plant-microbial interactions in grasses (2017)
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Willem Roper	UCARE: Plant-microbial interactions in grasses (2017)
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: adaptive variation and phenotypic plasticity with respect to soil resources: Undergraduate Thesis for Distinction (Summer 2009- Spring 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 Logan 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)

Undergraduate Student Research Advisees

Alexa Davis	Plant-microbial interactions in grasses (2017)
Sakia Fields	Plant-microbial interactions in grasses (2017)
Samuel Johnson	Plant-soil-microbe feedbacks (Spring 2017)
Joseph Eastman	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)
Jake Arneson	UCARE: Sex ratio and gender allocation in red cedar (Co-advisor with Advisor J. Knops, Summer 2009-Fall 2010)
Jeffrey Jensen	Leaf venation of Bornean tree species (Spring 2009)

Work-Study Lab Assistants

Zoe Masterpole, Itahi Sanchez, Jonathan Wang, Grant Harrison, Dylan Dingbaum, Trang Huang

Graduate and Undergraduate Advisees – Research Grants and Awards

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) SBS Special Funds Graduate Research Award (\$1500; 2010) NSF Graduate Research Fellowship Honorable Mention (2010)
Jocelyn Olney	NSF Graduate Research Fellowship (awarded in 2011) Sigma Xi Grant-in-Aid of Undergraduate Research (\$700; 2010) SBS Special Funds Undergraduate Research Award (\$780; 2010) “Spotlight on the Student” (Fall 2011)
Katherine Heineman	NSF Graduate Research Fellowship (awarded in 2010) Sigma Xi Grant-in-Aid of Undergraduate Research (\$700; 2009) SBS Special Funds Undergraduate Research Award (\$1,500; 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)