

NOELLE G. BECKMAN

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RESEARCH INTERESTS: SCALING FROM SEEDSCAPES TO ECOSYSTEMS

- *Theoretical, spatial, & empirical ecology of plants, particularly tropical trees*
- *Plant-animal/plant-microbe interactions, functional trait variation, and life history strategies*
- *Integrating empirical and quantitative approaches to investigate multi-scale processes*
- *Seed dispersal ecology under global change*

ACADEMIC APPOINTMENTS

- 2019 **Visiting Scholar Fellow**, Smithsonian Tropical Research Institute
- 2017 – present **Assistant Professor**, Biology Department and Ecology Center, College of Science
Affiliations: Climate Adaptation Science, Mathematical Biology Program
Utah State University
- 2017 – present **Graduate Faculty Scholar**, Biological Sciences, College of Science
University of Central Florida
- 2015 – 2017 **Postdoctoral Fellow**, National Socio-Environmental Synthesis Center (SESYNC)
University of Maryland
- 2012 – 2015 **Postdoctoral Fellow**, Mathematical Biosciences Institute (MBI)
The Ohio State University
- 2010 – 2012 **Postdoctoral Fellow**, Population Biology Program of Excellence
School of Biological Sciences, University of Nebraska-Lincoln

EDUCATION

- 2010 **Ph.D.** Ecology, Evolution, and Behavior, **Minor** Statistics
University of Minnesota-Twin Cities
Co-advisors: Dr. Helene C. Muller-Landau, Dr. Claudia Neuhauser
Committee: Dr. Linda L. Kinkel, Dr. David Tilman, Dr. Sanford Weisberg
Smithsonian Tropical Research Institute advisor: Dr. S. Joseph Wright
- 2002 **B.S.** Biology, *cum laude*
Washington and Lee University
Academic advisor: Dr. John S. Knox, *Honors advisor:* Dr. Lawrence E. Hurd

FELLOWSHIPS AND AWARDS

- 2015 – 2017 **Postdoctoral Fellowship**, National Science Foundation National Socio-Environmental
Synthesis Center
- 2012 – 2015 **Postdoctoral Fellowship**, National Science Foundation Mathematical Biosciences
Institute
- 2010 – 2012 **Postdoctoral Fellowship**, Program of Excellence in Population Biology,
University of Nebraska-Lincoln

2010 **Philip C. Hamm Memorial Scholarship**, University of Minnesota – Twin Cities
 2008 – 2009 **Doctoral Dissertation Fellowship**, University of Minnesota – Twin Cities
 2005 – 2008 **Graduate Research Fellowship**, National Science Foundation
 2004 – 2005 **Graduate Fellowship**, University of Minnesota – Twin Cities
 2004 **Graduate Research Fellowship Honorable Mention**, National Science Foundation
 2002 **Biology Research Award**, Washington and Lee University
 2000, 2001 **Christian A. Johnson Scholar**, Washington and Lee University
 1999 - 2000 **All-Conference Academic Award**, Old Dominion Athletic Conference
 Fall 1999 **Scholar-Athlete Academic Honor Roll**, Washington and Lee University
 1998 - 1999 **All-Conference Academic Award**, Old Dominion Athletic Conference
 1998 – 2002 **Robert E. Lee Scholarship**, Washington and Lee University
 1998 – 2002 **UNCA Fellows Award**, University of North Carolina - Asheville (declined)
 1998 – 2002 **Academic Scholarship**, University of North Carolina – Chapel Hill (declined)
 1998 – 2002 **Marquis Scholar**, Lafayette College (declined)

PUBLICATIONS (PEER-REVIEWED)

Publication Impact:

[Impact Story for altmetrics](#), [Google Scholar](#) (1267 citations, h-index=11 as of February 2019)

OA: The published paper is open access

FA: Link to a free version of the paper if not open access

^undergraduate, ~graduate student, †postdoc

- 2019 20. **Beckman, N. G.**, C. E. Aslan, H. R. Rogers, O. Kogan, J. L. Bronstein, J. M. Bullock, F. Hartig, J. HilleRisLambers, Y. Zhou, D. Zurell, J. F. Brodie, E. M. Bruna, R. S. Cantrell, R. Decker, E. O. Effiom, E. C. Fricke, K. Gurski, A. Hastings, J. Johnson, B. A. Loiselle, M. N. Miriti, M. G. Neubert, L. Pejchar, J. R. Poulsen, G. Pufal, O. H. Razafindratsima, M. Sandor, K. Shea, S. J. Schreiber, E. W. Schupp, R. S. Snell, C. Strickland, and J. Zambrano. *In press*. Advancing an interdisciplinary framework to study seed dispersal ecology. *AoB Plants*. [OA, Impact Factor: 2.24, CiteScore: 3.14]
19. Snell, R. S.*, **N. G. Beckman***, E. Fricke, B. A. Loiselle, C. S. Carvalho, L. R. Jones, N. I. Lichti, N. Lustenhouwer, S. Schreiber, C. Strickland, L. L. Sullivan, B. R. Cavazos, I. Giladi, A. Hastings, K. Holbrook, E. Jongejans, O. Kogan, F. Montaña-Centellas, J. Rudolph, H. S. Rogers, R. Zwolak, E. Schupp. *In press*. The consequences of individual variation in seed dispersal for recruitment, populations and communities. *AoB Plants* ***Authors contributed equally** [OA, Impact Factor: 2.24, CiteScore: 3.14]
18. Aslan, C. E., **N. G. Beckman**, H. R. Rogers, J. L. Bronstein, D. Zurell, F. Hartig, K. Shea, L. Pejchar, M. G. Neubert, J. R. Poulsen, J. HillRisLambers, M. N. Miriti, B. A. Loiselle, E. O. Effiom, J. Zambrano, E. W. Schupp, G. Pufal, J. Johnson, J. M. Bullock, J. F. Brodie, E. M. Bruna, R. S. Cantrell, R. Decker, E. C. Fricke, K. Gurski, A. Hastings, O. Kogan, O. H. Razafindratsima, M. Sandor, S. J. Schreiber, R. S. Snell, C. Strickland, and Y. Zhou. *In press*. Employing plant functional groups to advance seed dispersal ecology and conservation. *AoB Plants* DOI: <https://doi.org/10.1093/aobpla/plz006> [OA, Impact Factor: 2.24, CiteScore: 3.14]

➤ **Editors' Choice** in *AoB Plants*

- 2018 17. Krishnadas, M., **N. G. Beckman**, J. C. Penagos Zuluaga, Y. Zhu, J. Whitacre, J. Wenzel, S. Queenborough, L. S. Comita. 2018. Environment and past land-use together predict functional diversity in a temperate forest. *Ecological Applications* 28: 2142-2152. DOI: [10.1002/eap.1802](https://doi.org/10.1002/eap.1802) [Impact Factor: 4.39, CiteScore: 4.64, 1 citations]
16. **Beckman, N. G.**, J. Bullock, R. Salguero-Gómez. 2018. High dispersal ability is related to fast life history strategies. *Journal of Ecology* 106 (4): 1349-1362. DOI: [10.1111/1365-2745.12989](https://doi.org/10.1111/1365-2745.12989) [OA, Impact Factor: 5.17, CiteScore: 6.08, 3 citations]
- 2017 15. Tiansawat, P., **N. G. Beckman**, and J.W. Dalling. 2017. Pre-dispersal seed predators and fungi differ in their effect on *Luehea seemannii* capsule development, seed germination, and dormancy across two Panamanian forests. *Biotropica* 49: 871–880. DOI: [10.1111/btp.12473](https://doi.org/10.1111/btp.12473) [Impact Factor: 2.28, CiteScore: 2.04, 2 citations]
- 2014 14. Comita, L. S., S. A. Queenborough, S. Murphy, J. L. Eck, K. Xu, M. Krishnadas, **N. G. Beckman**, and Y. Zhu. 2014. Testing predictions of the Janzen-Connell hypothesis: A meta-analysis of experimental evidence for distance- and density-dependent seed and seedling survival. *Journal of Ecology* 102 (4): 845-856. DOI: [10.1111/1365-2745.12232](https://doi.org/10.1111/1365-2745.12232) [OA, Impact Factor: 5.17, CiteScore: 6.09, 215 citations]
13. Stephenson, N. L., A. J. Das, R. Condit, S. E. Russo, P. Baker, **N. G. Beckman**, et al. 2014. Rate of tree carbon accumulation increases continuously with tree size. *Nature* 507: 90-93. DOI: [10.1038/nature12914](https://doi.org/10.1038/nature12914) [Impact Factor: 41.6, CiteScore: 13.33, 372 citations]
- **Recommended by Faculty of 1000**
12. **Beckman, N. G.**, R. Dybzinski, and D. Tilman. 2014. Neighborhoods have little effect on fungal attack or insect predation of developing seeds in a grassland biodiversity experiment. *Oecologia* 174 (2): 521-532. DOI: [10.1007/s00442-013-2788-3](https://doi.org/10.1007/s00442-013-2788-3) [Impact Factor: 3.13, CiteScore: 3.23, 1 citation]
- 2013 11. **Beckman, N. G.** and H. S. Rogers. 2013. Consequences of seed dispersal for plant recruitment in tropical forests: Interactions within the seedscape. *Biotropica* 45 (6): 666-681. DOI: [10.1111/btp.12071](https://doi.org/10.1111/btp.12071) [Impact Factor: 2.28, CiteScore: 2.04, 37 citations]
- Invited review for the 50th anniversary of *Biotropica*
10. **Beckman, N. G.** 2013. The distribution of fruit and seed toxicity during development for eleven Neotropical trees and vines. *PLoS ONE* 8 (7): e66764. DOI: <https://doi.org/10.1371/JOURNAL.PONE.0066764> [OA, Impact Factor: 2.77, CiteScore: 3.11, 10 citations]
- 2012 9. **Beckman, N. G.**, C. Neuhauser, and H. C. Muller-Landau. 2012. The interacting effects of clumped seed dispersal and distance- and density-dependent mortality on seedling recruitment patterns. *Journal of Ecology* 100 (4): 862-873. DOI: [10.1111/j.1365-2745.2012.01978.x](https://doi.org/10.1111/j.1365-2745.2012.01978.x) [FA, Impact Factor: 5.17, CiteScore: 6.09, 39 citations]
- 2011 8. **Beckman, N. G.** and H.C. Muller-Landau. 2011. Linking fruit traits to variation in pre-dispersal vertebrate seed predation, insect seed predation, and pathogen attack. *Ecology* 92: 2131-2140. DOI: [10.1890/10-2378.1](https://doi.org/10.1890/10-2378.1) [FA, , Impact Factor: 4.62, CiteScore: 4.80, 24 citations]
- 2007 7. **Beckman, N. G.** and H. C. Muller-Landau. 2007. Differential effects of hunting on pre-dispersal seed predation and primary and secondary seed removal of two Neotropical tree

species. *Biotropica* 39 (3): 328-339. DOI: [10.1111/j.1744-7429.2007.00273.x](https://doi.org/10.1111/j.1744-7429.2007.00273.x) [FA, Impact Factor: 2.28, CiteScore: 2.04, 83 citations]

➤ **Editors' Choice** in *Science* 316: 955

6. Wright, S. J., K. E. Stoner, **N. Beckman**, R. T. Corlett, R. Dirzo, H. C. Muller-Landau, G. Nuñez-Iturri, C. A. Peres, B. C. Wang. 2007. The plight of large animals in tropical forests and the consequences for plant regeneration. *Biotropica* 39 (3): 289-291. DOI: [10.1111/j.1744-7429.2007.00293.x](https://doi.org/10.1111/j.1744-7429.2007.00293.x) [FA, Impact Factor: 2.28, CiteScore: 2.04; 175 citations]

5. Mollov, D. S., M. C. Hayslett, K. A. Eichstaedt, **N. G. Beckman**, M. L. Daughtrey, B. E. Lockhart. 2007. Identification and characterization of a Carlavirus causing veinal necrosis of *Coleus*. *Plant Disease* 91 (6): 754-757. DOI: <https://doi.org/10.1094/PDIS-91-6-0754> [OA, Impact Factor: 2.94, CiteScore: 0.90, 9 citations]

4. Marsh, D.M., R.B. Page, T.J. Hanlon, H. Bareke, R. Corritone, N. Jetter, **N. G. Beckman**, K.J. Gardner, D.E. Seifert and P.R. Cabe. 2007. Ecological and genetic evidence that low-order streams inhibit dispersal by red-backed salamanders (*Plethodon cinereus*). *Canadian Journal of Zoology* 85 (3): 319-327. DOI: <https://doi.org/10.1139/Z07-008> [FA, Impact Factor: 1.18, CiteScore: 1.27; 35 citations]

2005 3. Marsh, D.M., G.S. Milam, N.P. Gorham and **N. G. Beckman**. 2005. Forest roads as partial barriers to terrestrial salamander movement. *Conservation Biology* 19 (6):2004-2008. DOI: [10.1111/j.1523-1739.2005.00238.x](https://doi.org/10.1111/j.1523-1739.2005.00238.x) [FA, Impact Factor: 5.89, CiteScore: 4.27; 130 citations]

2004 2. Marsh, D. M. and **N. G. Beckman**. 2004. Effects of forest roads on the abundance and activity of terrestrial salamanders. *Ecological Applications* 14 (6): 1882-1891. DOI: [10.1890/03-5179](https://doi.org/10.1890/03-5179) [FA, Impact Factor: 4.39, CiteScore: 4.40, 94 citations]

2003 1. **Beckman, N. G.** and L. E. Hurd. 2003. Pollen feeding and fitness in a praying mantis: the vegetarian side of a tritrophic carnivore. *Environmental Entomology* 32 (4): 881-885. DOI: <https://doi.org/10.1603/0046-225X-32.4.881> [OA, Impact Factor: 1.66, CiteScore: 1.61, 39 citations]

➤ cover story

OTHER PUBLICATIONS

2018 **Beckman, N. G.** 2018. Seedscapades in Seedscapes: The Arising Researcher. *Bulletin Ecological Society of America*. 99 (3): 311-312. DOI: [10.1002/bes2.1412](https://doi.org/10.1002/bes2.1412) [OA]

2017 Penner, J., P. Gess, and **N. G. Beckman**. 2017. [The Three-Wattled Bellbird: Corridor, Conservation, and Costa Rica \(2016-11\)](#). SESYNC Case Study Collection

2016 Burnside, W. R., H. Randell, **N. G. Beckman**, J. Zambrano, A. Howard. 25 July 2016. RE: [A socio-environmental perspective on international migration](#). *Science eLetter*.

2012 **Beckman, N. G.** 2012. [Modelling effects of seed dispersal patterns and natural enemy attack on seedling spatial patterns](#). *Journal of Ecology Blog*

2010 **Beckman, N. G.** 2010. Effects of vertebrates, insects, and pathogens on patterns of early plant recruitment in tropical forests. PhD Dissertation. University of Minnesota –Twin Cities

2002 **Beckman, N. G.** 2002. Pollen feeding and its effect on a generalist predator, the Chinese Praying Mantid, *Tenodera sinensis*. Honors thesis. Washington and Lee University

DATA PRODUCTS

2017 2. Pimonrat Tiansawat, James Dalling, and **Noelle Beckman**. 2017. Capsule development, seed germination and dormancy of *Luehea seemannii* (Tiliaceae) in two forests in Panama 2008. *Knowledge Network for Biocomplexity*. DOI:10.5063/F16D5QZK [OA, 29 downloads]

2013 1. **Beckman, N.G.** 2013. Data from: The distribution of fruit and seed toxicity during development for eleven Neotropical trees and vines in Central Panama. *Dryad Digital Repository*. DOI: <http://dx.doi.org/10.5061/dryad.b2c80> [OA, 171 downloads]

SPECIAL FEATURES (PEER-REVIEWED)

Noelle G. Beckman, C. Aslan, and H. Rogers. Seed Dispersal & Plant Populations. *AoB Plants*. In progress.

RESEARCH GRANTS & OTHER FUNDING (LEAD P.I. – UNLESS OTHERWISE NOTED)

2018 **Banff International Research Station: Novel mathematical and statistical approaches to predicting species' movement under climate change**. Supporting Organizer: M. Neubert. 7/2019.

2018 **Smithsonian ForestGEO: Adaptive Significance of Secondary Metabolites in Ripe, Fleshy Fruits**. Collaborators: S. Whitehead, G. Schneider, C. Ríos, S. J. Wright. \$8,000. 2/2019 – 11/2019.

2017 **National Science Foundation National Socio-Environmental Synthesis Center: Cross Disciplinary Statistical Applications in the Anthropocene**. PIs: C. Trisos, **N. G. Beckman**, J. Maher. \$30,000. 9/26/2017 – 9/29/2017

2015 **National Science Foundation (DEB- 1548194): Seed Dispersal Workshop**. \$49,939. 9/1/2015 – 8/31/2019.

2013 **Society for Industrial and Applied Mathematics: Early Career Travel Award** \$650

2012 **Mathematical Biosciences Institute: Workshop for Young Researchers in Mathematical Biology Travel Award** \$600

2009 **Smithsonian Tropical Research Institute: Supplementary Research Award** \$4117
Ecology, Evolution, and Behavior, UMN: Block Grant \$2763.21
Graduate and Professional Student Assembly, UMN: Travel Grant \$165
Ecology, Evolution, and Behavior Graduate Program, UMN: Travel Grant \$700

2008 **Ecological Society of America: Student Section Travel Award** \$195
Ecology, Evolution, and Behavior, UMN: Block Grant \$3718
Bell Museum of Natural History: Wilkie Research Fellowship Award \$1200
University of Minnesota: Thesis Research Grant \$5000

2006 **National Science Foundation: International Travel Award** \$1000
Bell Museum of Natural History: Wilkie Research Fellowship Award \$1200

2005 **Graduate and Professional Student Assembly, UMN: Travel Grant** \$250

Bell Museum of Natural History: Wilkie Research Fellowship Award \$900
Ecology, Evolution, and Behavior, UMN: Sigerfoos Fellowship \$3128

PENDING RESEARCH GRANTS & OTHER FUNDING (LEAD P.I. – UNLESS OTHERWISE NOTED)

National Science Foundation: *CNH2-L: The Long-term Stability of Agroecological Systems: Implications for Sustainable Agriculture*. PI: Freeman, Co-PIs: **Beckman**, Capriles, Latorre, Robinson. \$1,589,642. 9/1/2019 – 7/31/2023.

WORKSHOPS AND WORKING GROUPS

- July 2018 **Organizer**, [Novel mathematical and statistical approaches to predicting species' movement under climate change](#), Banff International Research Station (BIRS).
- Sept 2017 **Organizer**, [Cross-Disciplinary Statistical Applications in the Anthropocene](#), National Socio-Environmental Synthesis Center (SESYNC)
- Nov 2016 **Invited Participant**, [Population Models in the 21st Century](#), Mathematical Biosciences Institute, National Science Foundation
- Sept 2016 **Invited Participant**, [Integrodifference Equations in Ecology: 30 years and counting](#), Banff International Research Station for Mathematical Innovation and Discovery (BIRS)
- May 2016 **Organizer**, [Seed Dispersal Workshop](#), National Science Foundation
- April 2016 **Participant**, [Tropical Reforestation Pursuit](#), SESYNC
- Nov 2015 **Participant**, [Automated Forest Restoration Workshop](#), Forest Restoration Research Unit, Chiang Mai University

ORGANIZED SYMPOSIA AND ORAL SESSIONS

- 2017 **Beckman, Noelle G.**, A. Warwick, & F. R. Adler. October 2017. The Long Journey Home: Ecology and Evolution in the City. SACNAS National Conference in Salt Lake City, Utah.
- Beckman, Noelle G.**, R. Snell, B. Loiselle, E. Fricke, & G. Schupp. August 2017. OOS: Consequences of individual variation in dispersal for recruitment, populations, and communities. Ecological Society of America Meeting in Portland, Oregon.
- Schugart, R. and **Noelle G. Beckman**. July 2017. Minisymposium: Confronting Biological Models with Data: Dealing with Complexity and Sparsity I. Society for Mathematical Biology in Salt Lake City, Utah.
- Beckman, Noelle G.** and R. Schugart. July 2017. Minisymposium: Confronting Biological Models with Data: Dealing with Complexity and Sparsity II. Society for Mathematical Biology in Salt Lake City, Utah.
- 2016 Zambrano, J., **N. G. Beckman**, C. Garzon, and C. Fortunel. June 2016. Symposium: Is habitat fragmentation driving tropical forests towards functional homogenization? Annual Meeting of the Association of Tropical Biology and Conservation in Montpellier, France

INVITED CONFERENCE PRESENTATIONS

- 2018 **Beckman, Noelle G.**, [E. Sodja](#), R. Salguero-Gómez, S. White, T. Cornulier, and J. M. Bullock. Extinction Risk of Plant Species in a Warming Climate. June 2018. Boundary Spanning: Advances in in Socio-Environmental Systems Research. An International Symposium at SESYNC

in Annapolis, Maryland. *SESYNC Symposium Distinguished Presenter*.

2017 **Beckman, Noelle G.**, J. M. Bullock, M. A. Lewis, and M. G. Neubert. August 2017. Variation in dispersal, demography, and functional traits related to population spread. Ecological Society of America Annual Meeting in Portland, Oregon.

Beckman, Noelle G., R. Salguero-Gómez, T. Cornulier, and J. Bullock. Assessing species' risk under climate change. July 2017. Society for Mathematical Biology in Salt Lake City, Utah.

2013 **Beckman, N. G.** and F. R. Adler. November 2013. Dispersal disruption alters plant spatial patterns and decreases plant survivorship. Field of Dreams Conference. The National Alliance for Doctoral Studies in the Mathematical Sciences. Mesa, Arizona.

Beckman, N. G. and F. R. Adler. August 2013. Theory: impact of dispersal disruption on plant spatial patterns and implications for plant diversity. Ecological Society of America meeting in Minneapolis, Minnesota.

Beckman, N. G. and F. R. Adler. May 2013. The interacting effects of clumped seed deposition and insect seed predators on the spatial patterns of seedlings. The Society for Industrial and Applied Mathematics Conference on Dynamical Systems and its Application in Snowbird, Utah.

CONTRIBUTED CONFERENCE PRESENTATIONS

^undergraduate, ~graduate student, †postdoc

2018 J. Zambrano, N. J. Cordeiro, , C. Garzon-Lopez, L. Yeager, C. Fortunel, and **N. G. Beckman**. Multi-scale investigation on the effects of landscape fragmentation on plant functional diversity in an African forest. Ecological Society of America Meeting in New Orleans, LA (oral presentation)

Beckman, N. G., E. P. Sodja*~ , R. Salguero-Gómez, S.M. White, T. Cornulier, and J. Bullock. August 2018. Novel approaches to predicting plant species' movement under climate change. Ecological Society of America Meeting in New Orleans, LA (*poster presentation by ES~)

P. Marchand*, L. S. Comita, S. J. Wright, R. Condit, S. P. Hubbell, and **N. G. Beckman**. Seed to seedling transition shows distance-based mortality effects but no strong Janzen-Connell patterns for tree species at Barro Colorado Island (Panama). Ecological Society of America Meeting in New Orleans, LA (*oral presentation by PM)

2017 **Beckman, N. G.**, R. Salguero-Gómez, T. Cornulier, and J. Bullock*. December 2017. Novel approaches to predicting plant species' movement under climate change. Annual Meeting British Ecological Society in Ghent, Belgium (*oral presentation by JB)

Garcia-Barrios, L.* , **N. G. Beckman**, and E. Lazos-Chavero. July 2017. Deforestation-reforestation in Mesoamerican Mountains as rural livelihood response to Neoliberalism. Annual Meeting of the Association for Tropical Biology and Conservation in Merida, Yucatan, Mexico (*oral presentation by LGB)

2016 **Beckman, N. G.** and J. Bullock. August 2016. Seed dispersal helps explain variation in life history strategies. SACNAS conference in Long Beach, CA (oral presentation)

Beckman, N. G. and J. Bullock. August 2016. Seed dispersal helps explain variation in life history strategies. Ecological Society of America Meeting in Ft. Lauderdale, FL (oral

presentation)

Beckman, N. G., C. X. Garzon-Lopez, H. Muller-Landau, P. Jansen, S. J. Wright. June 2016. Spatial patterns of seed predation by a specialized invertebrate. Annual Meeting of the Association for Tropical Biology and Conservation in Montpellier, France (oral presentation)

- 2015 Dybzinski, R. **Beckman, N. G.** and D. Tilman. December 2015. Predictions of coexistence from short-term plant-soil feedback experiments fail to predict long-term observations from a controlled competition experiment. Annual Meeting British Ecological Society in Edinburgh, Scotland. (poster presentation)
- 2014 **Beckman, N. G.** and F. R. Adler. December 2015. Dispersal disruption alters plant spatial patterns and decreases plant survivorship. Annual Meeting British Ecological Society and Société Française d'Ecologie in Lille, France. (oral presentation)
- Beckman, N. G.** and F. R. Adler. August 2014. Dispersal disruption alters plant spatial patterns and decreases plant survivorship: Analytical approximations to individual-based models. Ecological Society of America Meeting in Sacramento, CA. (oral presentation)
- 2012 Tiansawat, P. *, **N. G. Beckman**, and J. W. Dalling. 2012. The effect of pre-dispersal seed predation and fungal infection on seed production and seed survival of *Luehea seemannii* in Panama. Ecological Society of America Meeting in Portland, OR. (*poster presentation by PT)
- 2010 **Beckman, N. G.** August 2010. Chemical defenses in tropical fruits: Quantifying variation in toxicity across fruit development and within fruit of vertebrate- and wind-dispersed canopy plants. Ecological Society of America Meeting in Pittsburgh, PA. (oral presentation)
- 2009 **Beckman, N. G.** and H. C. Muller-Landau. August 2009. Linking interspecific variation in vertebrate seed predation, insect seed predation, and pathogen attack to fruit traits in tropical woody plants. Ecological Society of America Meeting in Albuquerque, New Mexico. (oral presentation)
- Beckman, N. G.** and H. C. Muller-Landau. July 2009. Linking interspecific variation in vertebrate seed predation, insect seed predation, and pathogen attack to fruit traits in tropical woody plants. Association for Tropical Biology and Conservation Annual Meeting in Marburg, Germany. (oral presentation)
- 2008 **Beckman, N. G.** and H. C. Muller-Landau. August 2008. Effects of vertebrate seed dispersers, insect seed predators, and pathogens in seed survival at the pre-dispersal stage of several tropical woody plants. Ecological Society of America Meeting in Milwaukee, WI. (oral presentation)
- 2007 **Beckman, N. G.**, H. C. Muller-Landau, and C. Neuhauser. August 2007. How do different empirically derived patterns of natural enemy attack and seed dispersal affect patterns of seedling recruitment? Ecological Society of America Meeting in San Jose, CA. (oral presentation)
- 2005 **Beckman, N. G.** and H. C. Muller-Landau. July 2005. Implications of hunting for tropical plant community composition: Differential effects on seed removal. Association for Tropical Biology and Conservation Annual Meeting in Uberlandia, Brazil. (oral presentation)

- 2004 **Beckman, N. G.**, G. S. Milam, N. P. Gorham and D. M. Marsh. August 2004. Forest roads are partial barriers to dispersal of terrestrial salamanders. Ecological Society of America meeting in Portland, OR. (poster presentation)
- 2003 **Beckman, N. G.** and D. M. Marsh. June 2003. Detectability of *Plethodon cinereus* in disturbed and undisturbed habitats. Joint American Society of Ichthyologists and Herpetologists meeting in Manaus, Amazonia, Brazil. (poster presentation)
- 2002 Marsh, D. ^, **N. Beckman**, and B. Clarke. August 2002. Effects of forest roads on terrestrial salamanders in the Southern Appalachians. Ecological Society of America Meeting. (^poster presentation by DM)
- 2000 **Beckman, N. G.** and L. E. Hurd. December 2000. Fitness benefits of pollen-feeding in the Chinese Praying Mantid. Entomological Society of America Meeting in Montreal, Canada. (poster presentation)

SEMINARS

- 2018 **Beckman, N. G.** Nov 2018. Seed Dispersal Ecology Under Global Change. Applied Mathematics Seminar, Utah State University. (*Invited*)
- Beckman, N. G.** Oct 2018. Seed Dispersal Ecology Under Global Change. Women in Ecology and Natural Resources Seminar Series, School of Natural Resources and Environment, University of Arizona (*Invited*)
- Beckman, N. G.** Feb 2018. Extinction Risk of Plant Species under Global Change. WILD Seminar, Utah State University (*Invited*)
- 2017 **Beckman, N. G.** Dec 2017. Extinction Risk of Plant Species under Global Change. Biological Engineering Seminar, Utah State University (*Invited*)
- Beckman, N. G.** Nov 2017. Extinction Risk of Plant Species under Global Change. Biology Department Seminar, University of Connecticut (*Invited*)
- Beckman, N. G.** Feb 2017. Seed Dispersal under Global Change. National Socio-Environmental Synthesis Center (SESYNC)
- 2016 **Beckman, N. G.** Nov 2016. Assessing species' risk of extinction under climate change. Workshop 4: Population Models in the 21st Century. Mathematical Biosciences Institute (*Invited*)
- Beckman, N. G.** Nov 2016. Seed Dispersal Ecology Under Global Change. Biology Department Seminar, University of Central Florida (*Invited*)
- Beckman, N. G.** Oct 2016. Seed Dispersal Ecology Under Global Change. Behavior, Ecology, Evolution, and Systematics Seminar, University of Maryland (*Invited*)
- Beckman, N. G.** March 2016. Understanding the effects of seed dispersal strategies on life history of plants. Casual Seminar, National Institute for Mathematical and Biological Synthesis. (*Invited*)
- 2015 **Beckman, N. G.** December 2015. The consequences of disrupting seed dispersal for plant spatial patterns and survivorship. Applied Mathematics Colloquium, University of Maryland, Baltimore County. (*Invited*)

- Beckman, N. G.** November 2015. Scaling from Seascapes to Ecosystems. Department of Biology, Washington and Lee University. *(Invited)*
- Beckman, N. G.** October 2015. Scaling from Seascapes to Ecosystems. Environmental Sciences Seminar, Chiang Mai University. *(Invited)*
- Beckman, N. G.** March 2015. Scaling from Seascapes to Ecosystems. Department of Biology and Ecology Center, Utah State University. *(Invited)*
- Beckman, N. G.** March 2015. Scaling from Seascapes to Ecosystems. School of Life Sciences, Arizona State University. *(Invited)*
- Beckman, N. G.** February 2015. Scaling from Seascapes to Ecosystems. Postdoctoral Seminar, Mathematical Biosciences Institute.
- Beckman, N. G.** February 2015. Dispersal Ecology Under Global Change, SESYNC. *(Invited)*
- Beckman, N. G.** February 2015. The Influence of Vertebrates, Insects, and Pathogens on Plant Survival. Department of Biological Sciences, SUNY College at Old Westbury. *(Invited)*
- Beckman, N. G.** January 2015. Scaling from Seascapes to Ecosystems. Department of Environmental and Plant Biology, Ohio University. *(Invited)*
- 2014 **Beckman, N. G.** December 2014. Scaling from Seascapes to Ecosystems: The Influence of Vertebrates, Insects, and Pathogens on Plant Recruitment. Biology Department, Bates College. *(Invited)*
- Beckman, N. G.** November 2014. Movement: The Disruption of Seed Dispersal. STEAM Exchange, STEAM Factory, The Ohio State University.
- Beckman, N. G.** March 2014. Dispersal disruption alters plant spatial patterns and decreases plant survivorship. Postdoctoral Seminar, Mathematical Biosciences Institute.
- Beckman, N. G.** January 2014. Dispersal disruption alters plant spatial patterns and decreases plant survivorship. Mathematical Biology Seminar, The University of Utah. *(Invited)*
- 2013 **Beckman, N. G.** April 2013. The influence of vertebrates, insects, and pathogens on patterns of early plant recruitment in a Neotropical forest. Plant Ecology Seminar, The Ohio State University. *(Invited)*
- Beckman, N. G.** March 2013. The influence of vertebrates, insects, and pathogens on patterns of early plant recruitment in a Neotropical forest. Postdoctoral Seminar, Mathematical Biosciences Institute.
- 2011 **Beckman, N. G.** April 2011. Effects of vertebrates, insects, and pathogens on patterns of early plant recruitment in tropical forests. Forest Ecology Seminar, National University of Singapore. *(Invited)*
- 2010 **Beckman, N. G., C. Neuhauser, and H. C. Muller-Landau.** November 2010. The effect of insect seed predators, soil-borne pathogens, and clumped seed dispersal on seedling recruitment patterns in a simulated community. Mathematical Biology Seminar, UNL. *(Invited)*
- Beckman, N. G.** September 2010. Effects of vertebrates, insects, and pathogens on patterns of early plant recruitment in tropical forests. Ecology, Evolution, and Behavior Seminar, School of Biological Sciences, UNL.

- Beckman, N. G.** July 2010. Effects of vertebrates, insects, and pathogens on patterns of early plant recruitment in tropical forests. Defense seminar, Department of Ecology, Evolution, and Behavior, UMN.
- Beckman, N. G.** March 2010. Part I: Linking interspecific variation in vertebrate seed predation, insect seed predation, and pathogen attack to fruit traits in tropical woody plants; Part II: Are tropical fruits toxic? Quantifying variation in fruit toxicity of eleven tropical canopy plants. Center for Tropical Forest Science at STRI.
- 2009 **Beckman, N. G.** and H. C. Muller-Landau. November 2009. Linking interspecific variation in vertebrate seed predation, insect seed predation, and pathogen attack to fruit traits in tropical woody plants. Friday Noon Seminar, Department of Ecology Evolution, and Behavior, UMN.
- 2007 **Beckman, N. G.**, H. C. Muller-Landau, and C. Neuhauser. December 2007. The influence of seed dispersal and natural enemies on seedling recruitment patterns: A theoretical perspective. Friday Noon Seminar, Department of Ecology Evolution, and Behavior, UMN.
- Beckman, N. G.** and H. C. Muller-Landau. March 2007. Differential effects of hunting on pre-dispersal seed predation and primary and secondary seed removal of two Neotropical tree species. Augsburg College. (*Invited*)
- Beckman, N. G.** June 2007. How do mammals, insects, and pathogens affect patterns of early plant recruitment? Pre-thesis seminar, Department of Ecology, Evolution, and Behavior, UMN.
- 2005 **Beckman, N. G.** and H. C. Muller-Landau. August 2005. Implications of hunting for tropical plant community composition: Differential effects on seed removal. Bambi: Barro Colorado Research Symposium, Panama.

ACADEMIC ADVISING AND TRAINING

Graduate Students:

- F 2018 – *pres.* Sarah Bogen (PhD, College of Science, Mathematics & Statistics, USU)
- F 2018 – *pres.* Binod Borah (PhD, College of Science, Ecology, USU)
- Su 2018 – *pres.* Elsa Jos (PhD, College of Science, Ecology, USU)
- F 2017 – *pres.* Eric Sodja (MS, College of Science, Ecology, USU)

Graduate Student Committees:

Utah State University

- Sp 2018 – *pres.* Lainie Brice (PhD, Wildland Resources, Quinney College of Natural Resources)
- Fa 2018 – *pres.* John Draper (PhD, Watershed Sciences, Quinney College of Natural Resources)
- Sp 2018 – *pres.* Guen Grosklos (PhD, Mathematics & Statistics, College of Science)
- Sp 2018 – *pres.* Jessica Murray (PhD, Biology, College of Science)
- Sp 2018 – *pres.* Lauren Merchant (PhD, Environment & Society, Quinney College of Natural Resources)
- Sp 2018 – *pres.* Emily Martin (PhD, Watershed Sciences, Quinney College of Natural Resources)
- F 2017 – *pres.* Kaitlin Rim (MS, Biology, College of Science)
- F 2016 – *pres.* Gunbharpur Singh Gill (PhD, Biology, College of Science)

Elsewhere

- Su 2018 – *pres.* Samantha Hill (PhD, Mathematics, College of Science, University of Utah)
Fa 2018 – Sp 2019 Life Sciences Advisor on Hill's NSF Training Grant Fellowship
- F 2017 – *pres.* Federico Borghesi (PhD, Biology, College of Sciences, University of Central Florida)

Undergraduate Students Supervised:

- Sp 2018 – *pres.* Cole Carlson, Department of Biology, Utah State University
 Sp 2019: *Undergraduate Research* (BIOL 5800, 1 cr.): Fruit Defense Syndromes
 F 2018: *Undergraduate Research* (BIOL 5800, 1 cr.): Fruit Defense Syndromes
 Su 2018: *Field Assistant*: Fruit Defense Syndromes in Panama
 Sp 2018: *Undergraduate Research* (BIOL 5800, 1 cr.): Fruit Defense Syndromes
- Sp 2018 – *pres.* Justin Tirrell, Department of Biology, Utah State University
 Sp 2019: *Volunteer*: Generalist Seed Predation of Palm Seeds
 F 2018: *Honors Project*: Modeling Insect Seed Predation of Palm Seeds
 Sp 2018: *Undergraduate Research* (BIOL 5800, 2 cr.): Modeling Insect Seed Predation of Palm Seeds
- Su 2018 Daniela Cala, Department of Biology, Universidad del Rosario, Bogotá, Colombia
Volunteer, Smithsonian Tropical Research Institute
- Sp 2018 Kaylynn Ashby, Department of Biology, Utah State University
Undergraduate Teaching Fellow for BIOL 2220/WATS 2220: General Ecology
- Su 2014 Nathan Moos (from University of Michigan), University of Utah
- F 2013 I mentored undergraduate students in a group project on the mathematics of disease spread in the course Math 1156: *Calculus for Biological Sciences*
- Sp 2009 Rebeca Acosta, University of Panama
Volunteer, Smithsonian Tropical Research Institute, Panama
- F 2008 Julio Batista, University of Panama
Volunteer, Smithsonian Tropical Research Institute, Panama
- Sophia Christoforides, University of Minnesota
Intern, Smithsonian Tropical Research Institute, Panama
- Su 2008 Reina Heinz, University of California Santa Cruz
Volunteer, Smithsonian Tropical Research Institute, Panama
- Su 2006 Sonja Riddle-Ford, Science Education Partnership for Greater Minnesota, University of Minnesota
Directed Research: Insect seed predation in Central Panama

Volunteers & Interns:

- Su 2008 Matt Certo, M.S. student, Western Washington University
Intern, Smithsonian Tropical Research Institute, Panama
- Christopher Moore, M.S. Student, California State University-Fullerton
Intern, Smithsonian Tropical Research Institute, Panama
- Sp 2008 Amy Dickson, *Volunteer*, Smithsonian Tropical Research Institute, Panama
- Serica Zwack, *Volunteer*, Smithsonian Tropical Research Institute, Panama

F 2007 Bernardo Lopez, *Volunteer*, Smithsonian Tropical Research Institute, Panama
Su 2005 Michelle Stein, M.A. Student, University of Minnesota
Intern, Smithsonian Tropical Research Institute, Panama

TEACHING EXPERIENCE

University-level

Sp 2019 **Instructor**, BIOL 3200: *Advanced Ecology*
Biology, Utah State University

- Designed and taught ecology course for 4 undergraduates.
- The course involved lectures, problem sets, exams, weekly reflective notebooks, and the development of a research proposal and presentation

Nov. 2017, 2018 **Guest Lecturer**, BIOL 1050: *Biology Professions*
Instructor: Dennis Welker
Biology, Utah State University

- Discussed my career path and current research to ~20-40 biology undergraduates.
- In Fall 2017, recruited one undergraduate to pursue independent research in theoretical ecology

Nov. 2018 **Virtual Guest Lecturer**, CBIO 4122_01: *Spatial Ecology*
Instructors: Carol Garzon-Lopez
Biology, Universidad de los Andes

- Discussed spatial techniques to studying seed dispersal ecology to 19 graduate and 7 undergraduate students.

Nov. 2018 **Guest Lecturer**, BIOL 6750: *Intro to Grad Studies*
Instructors: Kim Sullivan, Paul Wolf
Biology, Utah State University

- Discussed preparing for the academic job market to ~20 biology graduate students.

Nov. 2018 **Guest Lecturer**, CAS 6750 *Climate Adaptation Sciences Interdisciplinary Research Colloquium*
Instructors: Luis Gordillo
Climate Adaptation Sciences, Utah State University

- Discussed quantitative approaches to examining seed dispersal ecology under global change to 11 graduate students.

Fa 2018 **Instructor**, BIOL 4270/6270: *Theoretical Ecology*
Biology, Utah State University

- Designed and taught theoretical ecology course for 9 graduate and 2 undergraduate students.
- The course involved lectures, problem sets, development of a research proposal, research project focused on theory, and presentations

July 2018 **Virtual Seminar**, [Summer Undergraduate Research Program](#)
Mathematical Biosciences Institute, The Ohio State University

- The Mathematical Biosciences Institute (MBI) hosted a multi-institution REU program in the mathematical biosciences (NSF-funded Research Experience for Undergraduates)
- I was invited to give a virtual research/expository talk to discuss my career path and research program

- Sp 2018 **Instructor**, BIOL 2220 / WATS 2220: *General Ecology*
Biology, Utah State University
- Designed and taught ecology course for 24 undergraduates.
 - The course involved lectures, problem sets, exams, weekly reflective notebooks, and the development of a research proposal and presentation
- Oct. 2017 **Guest Lecturer**, Math 6910: *Math Bio Lab*
Instructors: Michael Cortez, Luis Gordillo
Mathematics & Statistics, Utah State University
- Discussed quantitative approaches to examining consequences of disrupting seed dispersal for plant spatial patterns and survivorship.
- April 2016 **Guest Lecturer**, *Socio-Environmental Synthesis & Sustainability Research*
Instructors: David Hawthorne, Jampel Dell'Angelo, Matthew LaFavor
SESYNC, University of Maryland, College Park;
- I taught a class on dispersal ecology and conservation including an overview of mathematical models to address spatial questions in dispersal ecology in this graduate-level course.
- June 2015 **Resource Faculty**, *Tropical Biology: An Ecological Approach*
Organization of Tropical Studies
- I led a group research project on the influence of light microenvironments on functional traits related to defense and herbivory of seedlings in Cabo Blanco Absolute Reserve, Costa Rica in this graduate-level course.
- F 2014 **Instructor**, EEOB 5450: *Quantitative Population Ecology*
Ecology, Evolution, and Organismal Behavior, Ohio State University
- This course covered modeling approaches in population ecology, including demography, competition, predation, epidemiology, and metapopulation models. Students developed independent projects related to population demography. I co-taught with Drs. Maria Miriti and Elizabeth Marschall and taught the final segment of the course covering interactions among species.
- May 2014 **Resident Director**, *EEOB 4420H: Tropical Ecology in Panama*
Ecology, Evolution, and Organismal Behavior, The Ohio State University
- I co-designed a study-abroad undergraduate course, in which students gained first-hand knowledge of tropical biology and conservation. Students explored the diversity of forest types in Panama, interacted with scientists at internationally renowned research stations, and gained experience conducting independent field research. Students communicated their learning experiences to the public through the maintenance of a student blog and brief video summaries of their projects.
- Oct. 2013 **Guest Lecturer**. EEOB 4990/MATH 4990: *Undergraduate Seminar in Mathematical*

Biology Research

Ecology, Evolution, and Organismal Behavior, Mathematics, The Ohio State University

- Discussed theoretical implications of seed dispersal and natural enemies for forest spatial patterns and diversity

Sp 2012

Guest Instructor, BIOS 454/854: *Ecological Interactions*, Instructor: S.E. Russo
School of Biological Sciences, UNL

- I taught a weeklong section on the influence of herbivory on plant communities, with a focus on population regulation, species coexistence, and evolution of plant defenses in this undergraduate- and graduate-level course.

F 2011

Instructor, BIOS 497/897: *The Ecological Role of Secondary Compounds in Plant Communities*, School of Biological Sciences, UNL

- I designed a 2-credit seminar for advanced undergraduate and graduate students. To provide a historical context, the course reviewed seminal papers on coevolution between plants and herbivores, the controversy regarding the adaptive value of secondary metabolites in plants, hypotheses of their allocation in plants, and support for alternative hypotheses. The course included a discussion of the more recent controversy of the function of secondary compounds in ripe fruit and how this differs from their function in vegetative plant parts.

F 2010

Guest Instructor, BIOS 109: *Introductory Botany*, Instructor: S.E. Russo
School of Biological Sciences, UNL

- I taught a class on plant population dynamics with an overview of population growth models in this undergraduate course.

Sp 2007

Guest Instructor, Science 111: *Introductory Science*, Instructor: R. Butkowski
Biology Department, Augsburg College

- Science 111 is an undergraduate course for primary and secondary educators
- I designed the ecology section of this course.

Su 2006

Guest Instructor, *Introduction to Field Biology*
Smithsonian Tropical Research Institute/ University of Panama

- This is a field course for Panamanian undergraduate students to gain experience conducting biological research.
- I co-taught a two-day session, leading students through the development of a hypothesis-driven question, as well as collecting and analyzing data.

Sp 2006

Teaching Assistant, BIOL 1001: *Introductory Biology I: Evolutionary & Ecological Perspectives*, Biology Program, University of Minnesota

- I taught two laboratory sections of approximately twenty students each in which students were introduced to fundamental principles of ecology and evolution.
- My responsibilities included grading quizzes, homework, and written assignments as well as strengthening students' problem solving, critical thinking, and writing skills.

K-12

Su 2011

Instructor, *Ecology*
Northeast Upward Bound (NEUB), Lincoln, Nebraska

- I co-organized and co-taught a three-hour lab session introducing ecological concepts to high school students in the NEUB program.
- NEUB's mission is to retain students of families with low income or no post-secondary education in secondary education and increase enrollment in post-secondary education (<http://www.unl.edu/trioprog/neub>).

Su 2002

Instructor, Ornithology

Nature Camp, Vesuvius, VA; Directed by Dr. Paul Cabe

- I designed and taught four two-week field courses in ornithology for middle and high school students. In my courses, I encouraged students to enjoy nature and practice conservation techniques, such as recycling and composting.

2000-2002

Instructor, Ornithology & Ecology

Boxerwood Gardens, Lexington, VA

- Boxerwood Gardens is an arboretum, nature center and non-profit educational organization.
- During the fall and spring, I led outdoor ornithology and ecology classes of visiting elementary and middle school students.

PEDAGOGICAL DEVELOPMENT

- 2018 *Revamp Your Research Assignment: An Interdisciplinary Faculty Workshop*, USU Libraries, USU
- 2018 *Active Learning Workshop*, USU
- 2018 *Inclusive Excellence Symposium*, USU
- 2018 *ETE Conference*, Empowering Teaching Excellence, USU
- 2018 *Inclusive Communication to Promote Diversity, Excellence, and Equity*, Ecological Society of America in New Orleans, LA
- 2017 *ETE Conference*, Empowering Teaching Excellence, USU
- 2017 *Foundations of USU Teaching Workshop*, Empowering Teaching Excellence, USU
- 2016 *Instructor Training Workshop*, Software Carpentry Foundation
- 2016 *Teaching Socio-Environmental Synthesis with Case Studies*, SESYNC
- 2006 - 2007 *Preparing Future Faculty Sequence*, University of Minnesota – Twin Cities
Practicum for Future Faculty (2007)
- Explored faculty roles in academia
- Teaching in Higher Education* (2006)
- Learned a variety of teaching and learning strategies
 - Designed a course syllabus, several assignments, and active learning activities
- 2007 *Teaching with Writing in the Biological Sciences Seminar*
 University of Minnesota – Twin Cities
- Learned how to effectively teach writing in the sciences to diverse students

PROFESSIONAL DEVELOPMENT

- 2015 - *Socio-Environmental Immersion Program*, SESYNC, University of Maryland
- 2017 • 2016-2017 Environmental History, Environmental Policy, Behavioral Economics, Network

- Science and Ecology
 - 2015-2016 Ecology, Anthropology, Economics, Sociology, Change in Socio-Environmental Systems
- 2017 *Phylogenetic and Functional Trait Analyses for Ecology in R*, SESYNC, University of Maryland, taught by Dr. Nathan Swenson
- 2015 *Bayesian Modeling for Ecological & Social Scientists*, SESYNC, University of Maryland
Computational Summer Institute, SESYNC, University of Maryland
Spatially-varying Stochastic Differential Equations with Applications to the Biological Sciences, Mathematical Biosciences Institute, The Ohio State University
- 2014 *Software Carpentry Workshop*
Postdoc Course on Statistical Learning, Mathematical Biosciences Institute, The Ohio State University
Workshop for Young Researchers in Mathematical Biology. Mathematical Biosciences Institute, Ohio State University (poster presentation)
- 2013 *Workshop 3: Sustainable Management of Living Natural Resources*. Mathematical Biosciences Institute, Ohio State University.
Workshop 2: Rapid Evolution and Sustainability. Mathematical Biosciences Institute, The Ohio State University.
Workshop 1: Sustainability and Complex Systems. Mathematical Biosciences Institute, The Ohio State University.
The Keyfitz Centennial Symposium on Mathematical Demography. Mathematical Biosciences Institute, The Ohio State University.
Workshop for Young Researchers in Mathematical Biology. Mathematical Biosciences Institute, The Ohio State University. (poster presentation)
- 2012 *Workshop for Young Researchers in Mathematical Biology*. Mathematical Biosciences Institute, The Ohio State University (poster presentation)
Transitioning to Faculty Life: A Conference for Postdocs Underrepresented in STEM Committee on Institutional Cooperation at The Ohio State University
- 2010 - *Workshops provided by ADVANCE-Nebraska and the Postdoctoral Advisory Council*
- 2012 University of Nebraska-Lincoln
 - 'Making a Successful Transition to an Academic Career' led by Dr. Kamau Siwatu
 - 'Teamwork and Leadership Skills for Postdocs' led by Dr. Sharon Milgram
 - 'Interrupting Bias in the Faculty Search Process' led by Dr. Joyce Yen
- 2009 *Likelihood Methods in Ecology*
 - Taught by Dr. Charles Canham, Cary Institute of Ecosystem Studies, and Dr. Maria Uriarte, Columbia University
- 2005 *Tropical Biology: An Ecological Approach*, Organization of Tropical Studies
 - A 6-week field course in Costa Rica with a focus on hypothesis-driven questions

- I was involved in five faculty-led projects and two independent research projects. Each project consisted of developing a hypothesis, designing an experiment, and presenting results and conclusions through an oral presentation and a written research article.

2004 *A Workshop on Seed Ecology: Dormancy and Germination*, University of Minnesota

- Drs. Carol and Jerry Baskin, University of Kentucky

PROFESSIONAL EXPERIENCE

March 2016 **Short-Term Visitor**, National Institute for Mathematical and Biological Synthesis

- Collaborating on a project with NIMBioS postdoctoral fellow [Caroline Farrior](#).

2010-2012 **Postdoctoral Fellow**, Population Biology Program of Excellence

School of Biological Sciences, University of Nebraska-Lincoln

Advisor: Dr. Sabrina Russo

Project description: Understanding Litter Decomposition: The relative importance of Leaf Functional Traits, Edaphic Factors, and Precipitation

- I designed and set-up a leaf litter decomposition experiment to investigate the influence of leaf functional traits of trees on leaf litter decomposition through interactions with microbial decomposers and the soil environment in a hyper-diverse rain forest in Lambir Hills National Park, Malaysia, Borneo.

Summer 2010 **Graduate Research Associate**, Dialogue Earth, Institute on the Environment

Supervisor: Dr. Kent Cavender-Bares

Project description: Quantifying environment-related assertions made in the social media that will help direct the development of new content aimed to increase communication and understanding of climate change

- Using generalized linear mixed models and information criteria for model selection, I analyzed how local weather influences the frequency of dialogue on climate change in the social media using available data
- I helped develop criteria for characterizing assertions made in on-line news media

2003 - 2004 **Lab manager**, University of Washington, Seattle, WA

Supervisors: Dr. Josh Tewksbury and Dr. Doug Levey

Project description: Evolution and function of secondary metabolites that mediate many plant-animal interactions, specifically studying capsaicin, a secondary metabolite renowned for its pungency, in chilies (*Capsicum chacoense*, *C. annuum*).

- In lab: I set-up and organized Dr. Tewksbury's new lab, prepared for field seasons, and ran experiments in the greenhouse and growth chambers
- In field (Patagonia, AZ): I helped construct a research hut, used mist-nets to catch curve-billed thrashers (*Toxostoma curvirostre*), measured gut retention time of thrashers in a controlled environment, and manipulated capsaicin concentrations in non-pungent *C. chacoense*.

2001 - 2004 Washington and Lee University, Mountain Lake Biological Station, VA

Advisor: Dr. David Marsh

- **Head technician** (Summer 2003, 2004): I supervised two undergraduates on Dr. Marsh's research projects focused on homing behavior of red-backed salamanders

(*Plethodon cinereus*) across clearings, roads and streams as well as dispersal into forest patches.

- **Field assistant** (Summer 2002)
- **Christian A. Johnson Scholar** (Summer 2001): I designed an experiment testing differences in detectability of *P. cinereus* at road edges and forest interior.

March 2003 **Intern**, Baños, Ecuador

Advisor: Lou Jost

- I collected orchids in the genus *Teagueia* thought to be climatically isolated in Ecuador.
- I found one rare *Teagueia* species and one species new to this area of the Llanganates mountain range.

Fall 2002 **Research Assistant**, Wallaby Creek, NSW, Australia

Supervisor: Dr. Gerald Borgia, University of Maryland

Project description: Sexual selection in satin bowerbirds (*Ptilonorhynchus violaceus*).

- I banded birds, recorded morphological and physiological measurements, and observed mating behavior of satin bowerbirds
- I searched for bowers and assembled and set up microphones, infrared sensors, and video cameras at each bower.

Summer 2000 **Christian A. Johnson Scholar**, Washington and Lee University, Lexington, VA

Advisor: Dr. Lawrence E. Hurd

- I designed several laboratory experiments testing the significance of pollen feeding for the fitness of a food-limited generalist predator, the praying mantid *Tenodera sinensis*.

Summer 1998,1999 **Field Assistant**, United States Forest Service, Asheville, NC

Supervisor: Dr. David Danley

- I was involved in a project to restore roadsides along the Blue Ridge Parkway with native plants. I collected seeds from native grasses and flowers that were later planted along the Parkway in place of introduced species.

MENTORING, SERVICE, & OUTREACH

Mentoring

2017 - present Math Alliance Mentor

Oct. 2017 [The National Diversity in STEM Conference](#) organized by the [Society of Advancement of Chicanos/Hispanics and Native Americans in Science \(SACNAS\)](#) in Salt Lake City, UT:

- 1-on-1 Mentoring Workshop (2 undergraduate students)
- “Conversations with a Scientist” Mentor in Ecology

July 2017 Graduate Student Mentor at the Society for Mathematical Biology conference in Salt Lake City, UT (Shahzad Gholami, Ph.D. Student in Computer Science)

April 2017 [Make for the Planet](#), Earth Optimism Summit, Washington, D.C.

- Mentor to 18 teams participating in a competition/hackathon to create hardware and/or software solutions to specific conservation challenges organized by Conservation X Labs

- Oct. 2016 [The National Diversity in STEM Conference](#) organized by the [Society of Advancement of Chicanos/Hispanics and Native Americans in Science \(SACNAS\)](#) in Long Beach, CA:
- Undergraduate Student Mentor (3 students)
 - “Conversations with a Scientist” Mentor in Ecology
 - Mentor Judge for undergraduate and graduate presentations
- July 2016 [SEEDS](#) (Strategies for Ecology Education, Diversity and Sustainability: Diverse People for a Diverse Science) Undergraduate Student Mentor (1 student) at Ecological Society of America meeting in Fort Lauderdale, FL
- June 2016 Graduate Student Mentor (2 students) at the Annual Meeting of the Association of Tropical Biology and Conservation in Montpellier, France

Public Service

- 2012-present **Editor, [Verde Elemental](#)**
- Verde Elemental is a digital publication dedicated to promoting and disseminating knowledge in ecology and conservation in Latin America.
 - I report on relevant events and research in Latin America.
 - In collaboration with SESYNC, I began a new education initiative and am co-coordinating translating relevant [case studies in SESYNC’s collection](#) to Spanish.
- June 2018 **Ask-a-Scientist**, Pollinator’s Day, Cache Valley Gardener’s Market
- April 2017 **Speaker**, The Journey of a Seed in a Changing World, Café Scientifique, Annapolis, MD
- Oct. 2016 **SESYNC Representative**, The National Diversity in STEM Conference
- Organized by [SACNAS – Society of Advancement of Chicanos/Hispanics & Native Americans in Science](#)
- 2012-2015 **Core Member, [STEAM Factory](#)**, The Ohio State University
- STEAM Factory promotes interdisciplinary collaboration and research dissemination to the public
 - I presented my research at 400 West Rich Street’s Market, a gathering of farmers, artists, and entrepreneurs that share their products with the local community.
- Nov. 2013 **MBI Representative**, Seventh Annual Mathematical Field of Dreams Conference
- Organized by the [National Alliance for Doctoral Studies in the Mathematical Sciences](#)
 - I discussed opportunities in mathematical biology with underrepresented minority students in the mathematical sciences.
- July 2007 **Scientist on the Spot**, MN Science Museum’s online community ‘Science Buzz’
- I discussed the fate of tropical rain forests and the implications of hunting for forest communities by answering online questions from the community.
- 2007 **Guest Speaker** for 2 Honors Biology classrooms, A.C. Reynolds High School, Asheville, NC
- I discussed the consequences of hunting for plant communities and my experiences leading up to and in graduate school.
- 2007 **Moderator/ Judge**, 14th Annual Regional Science Bowl, MN Academy of Science
- 2006 **Moderator/ Judge**, 13th Annual Regional Science Bowl, MN Academy of Science
- 2006 **Grand Awards Judge**, Annual Minnesota Academy of Science State Fair
- 2005 **Judge**, Science Fair at the School for Environmental Studies, MN

- 2004 **Guest speaker**, Flora & Fauna of Wallaby Creek, Australia, Nature Camp (6th-8th grade), Vesuvius, VA
- 2002 **Guest speaker**, Conducting Ecological Research: Pollen feeding and fitness in a Praying Mantis, Nature Camp (6th-8th grade), Vesuvius, VA
Animal Department Volunteer, Nature Center, Asheville, NC

University Service

- F 2018 – *pres.* **Committee Member**, Biology Curriculum Reform and Assessment Working Group, USU
- F 2017 – *pres.* **Committee Member**, Long-Range Planning Committee, Department of Biology, USU
- 2018 – 2019 **Faculty Advisor**, Ecology Center Graduate Student Seminar Committee, USU
- F2018–Sp2019 **Chair**, Department of Biology Seminar Committee, USU
- F 2018 **Committee Member**, Evolutionary Developmental Biologist Search Committee, USU
- 2016 – 2017 **Organizer**, SESYNC Postdoctoral Professional Development Lunches
- 2016 **Review Panel**, Postdoctoral Socio-Environmental Immersion Program Proposals
- 2013-2014 **Organizing Committee**, Workshop for Young Researchers in Mathematical Biology, Mathematical Biosciences Institute
- 2013 **Colloquium Committee**, Mathematical Biosciences Institute
Poster Judge, The Ohio State University Natural and Mathematical Sciences Undergraduate Research Forum
- F 2010-Sp 2012 **Postdoc Advisory Council (PAC) Member**, Office of Postdoctoral Studies, UNL
PAC Postdoctoral Travel Grant Committee, Office of Postdoctoral Studies, UNL
PAC Postdoctoral Minimum Wage Committee, Office of Postdoctoral Studies, UNL
- 2012 **Strategic Hiring Task Force Committee**, School of Biological Sciences, UNL.
Poster Judge, University of Nebraska-Lincoln Undergraduate Research Conference
- Sp 2012 **Organizer**, Theoretical Ecology Journal Club, UNL
- F 2010 **Organizer**, EcoChat Seminar, School of Biological Sciences, UNL
- 2007-2008 **Student Academic Grievance Committee**, Ecology, Evolution, and Behavior, UMN
- 2005-2007 **Graduate Student Peer Mentor**, Ecology, Evolution, and Behavior, UMN
- 2006-2007 **Teaching Assistant Liaison**, Ecology, Evolution, and Behavior, UMN
- 2005-2006 **Friday Noon Seminar Committee**, Ecology, Evolution, and Behavior, UMN
- 2004-2005 **Audio-Visual Committee**, Ecology, Evolution, and Behavior, UMN

Professional Service

- 2018 **Ad hoc Reviewer** for the *National Science Foundation* (2010, 2014, 2017)
Judge for Lotka-Volterra Student Awards, Theoretical Ecology Section, Ecological Society of America
- 2016 **Judge** for Lotka-Volterra Student Awards, Theoretical Ecology Section, Ecological Society of America
- 2016 **President**, Ecological Society of America
- 2009-2015 **Associate Faculty Member** of *Faculty of 1000* in Theoretical Ecology

Editorial Service

- 2019–*pres.* **Associate Editor**, *Journal of Ecology*
- 2018–2019 **Guest Associate Editor**, *AoB Plants*

2018–pres. **Recommender**, *Peer Community in Ecology*

Ad hoc Reviewer for the following journals:

Austral Ecology, Australian Journal of Botany, Biotropica, Ecological Modelling, Ecology, Ecology Letters, European Journal of Forest Research, Global Ecology & Biogeography, Israel Journal of Ecology & Evolution, Journal of Ecology, Journal of Theoretical Biology, Journal of Tropical Ecology, Nature Ecology & Evolution, Oecologia, Oikos, Perspectives in Plant Ecology, Plant Ecology and Evolution, Evolution, and Systematics, Plant Ecology, PLOS ONE, Scientific Reports, Theoretical Ecology, Theoretical Population Biology

MEDIA

- 2018 [How A Plant Disperses Seeds Impacts Its Future Growth, Study Shows](#) by Rachel Hager. Interview with Utah Public Radio.
- 2015 [Seeds of Change: Climate change could disrupt plants' dispersal of seeds](#) by Lisa Palmer. Interview with Yale Climate Connections.
- 2014 *Nature* article on tree carbon accumulation [recommended by Faculty of 1000](#)
- 2007 *Biotropica* article on hunting highlighted as [Editor's Choice in Science 316: 955](#)

PROFESSIONAL SOCIETIES

American Association for the Advancement of Science, Association for Tropical Biology and Conservation, British Ecological Society, Ecological Society of America, Society of Mathematical Biology, Society for Advancement of Chicanos/Hispanics and Native Americans in Science

OTHER EXPERIENCE

Long-form Improvisational Comedy

- 2016 Level 3: Character, Washington Improv Theater, Washington D.C.
Level 2: Foundations of Scenework, Washington Improv Theater, Washington D.C.
- 2014-2015 Player in the Revelators, Harold House Team at First Beat Theatre, Columbus, Ohio
- 2013-2015 Player in Game, Set, Match; Performances at Strongwater, Columbus, Ohio
- 2014 Harold Workshop with Tara Defrancisco (iO, Second City, ComedySportz)
Intro to Long-Form Improvisation, Make a Scene Improv, Columbus, Ohio
- 2012-2013 Player in See You Thursday; Performances at Wild Goose Creative, Columbus, Ohio
- 2013 Performed with See You Thursday at Chicago Improv Festival
Improv Workshop at the Annoyance Theatre, Chicago, IL
- 2012 Improv Workshop with Mega Grano (iO, Second City, Annoyance Theatre)
Level 2 Improv: Callbacks and Connections, Backline Improv Theatre, Omaha, NE
Level 1 Improv: Intro to Improv, Backline Improv Theatre, Omaha, NE
- 2007 Level 1 Everyday Improv, Brave New Workshop, Minneapolis, MN

Music

- 2018 – pres Cellist, Cache Symphony Orchestra, Logan, Utah
- 2018 – pres KBLU-LP Aggie Radio DJ
- 2012 - 2015 Cellist, Metropolitan Chamber Orchestra, Columbus, Ohio
- 2010 - 2012 Cellist, Lincoln Civic Orchestra, Lincoln, Nebraska
- 2009 - 2010 Cellist, University of Panama Orchestra, Panama City, Panama

1998 - 2002 Cellist and Violinist, University-Shenandoah Symphony Orchestra, Washington and Lee University
 Winter 2002 Cello Recital, Washington and Lee University
 Winter 2001 Cellist in production of *The Elephant Man*, Washington and Lee University
 2001 WLUR Radio DJ
 Winter 2000 Cello Recital, Washington and Lee University
 1999 WLUR Radio DJ
 Fall 1999 Cello Recital, Washington and Lee University
 1994 - 1998 Cellist, Asheville Youth Orchestra
 1994 - 1998 Cellist, Jubilee Summer Orchestra, Asheville, NC
 1995 North Carolina All State Orchestra
 1995 Furman Music Camp

Soccer

1998 - 1999 Women's Varsity Soccer, Washington and Lee University
 1994 - 1998 Women's Varsity Soccer, A. C. Reynolds High School
 1998 Women's Varsity Soccer Captain, A. C. Reynolds High School
 1997 - 1998 Mountain Athletic Conference Women's Soccer All-Conference
 1997 North Carolina All Region Honorable Mention
 1997 Women's Varsity Soccer Most Dedicated Player, A. C. Reynolds High School
 1996 - 1998 United States Soccer Federation Referee
 1995 - 1998 Soccer Camp Counselor, A. C. Reynolds High School
 1995, 1997 UNCA Soccer Camp