

Matthew Richard Helmus

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 Department of Biology
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EDUCATION

2008 PhD Zoology, University of Wisconsin Madison
 2001 BS Biology and Sociology, University of Central Arkansas

ACADEMIC POSITIONS

current

2016- Assistant Professor, Department of Biology, Temple University, Philadelphia

past

2012-16 Postdoctoral Fellow, Amsterdam Global Change Institute, Vrije Universiteit
 2010-11 Postdoctoral Fellow, Department of Ecology and Evolution, University of Chicago
 2009-10 Postdoctoral Fellow, Xishuangbanna Tropical Botanical Garden (XTBG), China
 2002-08 Graduate Student, Department of Zoology, University of Wisconsin, Madison

TEACHING EXPERIENCE

current

2018- *Global Change Science Analytics with R*, Temple University (designed course)
 2017- *Principles of Ecology*, Temple University (designed course)
 2020- *Foundations of Ecology*, graduate seminar (designed course)

past

2009 *Advanced Field Ecology and Conservation*, XTBG (co-instructor)
 2005-06 *Ecology and Evolution*, University of Wisconsin (TA, lecturer)
 2003-08 *Introduction to Biology II*, University of Wisconsin (TA)
 2002 *Introduction to Biology I*, University of Wisconsin (TA)
 2002 *Principles of Biology II*, University of Central Arkansas (TA)

PUBLICATIONS

[Google Scholar](#): Cited >8000 times, h-index = 26, 12 papers with >100 citations

† Indicates Undergraduate mentee

* Indicates Graduate or Postdoc mentee.

Submitted Preprints

61. *De Bona, S., L. Barringer, P. Kurtz, J. Losiewicz, G.R. Parra, & **M.R. Helmus**. Iydemapr: an R package to track the spread of the invasive Spotted Lanternfly (*Lycorma delicatula*, White 1845) (Hemiptera, Fulgoridae) in the United States. bioRxiv, 2023.01.27.525992.
60. *Gleditsch, J.M., J.E. Behm, & **M.R. Helmus**. The great acceleration of island saturation by species introductions in the Anthropocene has altered species-area relationships. bioRxiv. 2023.01.10.523426
59. *Jesse, W.A.M., J. Eilers, J.E. Behm, G.C. Costa, S.B. Hedges & **M.R. Helmus**. Elevated human footprint on islands promotes both introduction and extinction probability of

insular reptiles at opposite ends of geographic, evolutionary and ecological continua. bioRxiv. 2022.03.11.483632

58. *Huron, N.A., S.B. Hedges & **M.R. Helmus**. Detecting stabilizing, directional, and disruptive patterns of anthropogenic species loss with general models of nonrandom extinction. bioRxiv. 2022.09.11.507476.
57. *Huron, N.A. & **M.R. Helmus**. Predicting host associations of the invasive spotted lanternfly on trees across the USA. bioRxiv. 2022.09.12.507604.
56. J.E. Behm, J. Ellers, W.A.M. Jesse, T.J. Tran & **M.R. Helmus**. Predicting and quantifying coexistence outcomes between resident and invading species using trait and abundance data. bioRxiv. 2023.01.12.523647

Published

55. Ramirez, V.A., S. De Bona, **M.R. Helmus** & J.E. Behm. 2023. Multiscale assessment of oviposition habitat associations and implications for management in the spotted lanternfly (*Lycorma delicatula*), an emerging invasive pest. ***Journal of Applied Ecology***. 60(3):411-420
54. *Gleditsch, J.M., J.E. Behm, J. Ellers, *W.A.M. Jesse, **M.R. Helmus**. 2023. Contemporizing island biogeography theory with anthropogenic drivers of species richness. ***Global Ecology and Biogeography***. 32(2):233-249
53. *Lewkiewicz, S.M., *S. De Bona, **M.R. Helmus**, B. Seibold. 2022. Temperature sensitivity of pest reproductive numbers in age-structured PDE models, with a focus on the invasive spotted lanternfly. ***Journal of Mathematical Biology***. 85(3) 1-37
52. *Huron, N.A., J.E. Behm, **M.R. Helmus**. 2022. Paninvasion severity assessment of a US grape pest to disrupt the global wine market. ***Communications Biology***. 5(1):1-11
51. Li, D, S Record, E Sokol, ME Bitters, MY Chen, AY Chung, **MR Helmus**, R Jaimés, L Jansen, MA Jarzyna, MG Just, JM LaMontagne, B Melbourne, W Moss, K Norman, S Parker, N Robinson, B Seyednasrollah, C Smith, S Spaulding, T Surasinghe, S Thomsen, P Zarnetske. 2022. Standardized NEON organismal data for biodiversity research. ***Ecosphere***. 13(7):e4141
50. †Turner, D.B., J.E. Behm, P.M. Phillips, †V.A. Ramirez and **M.R. Helmus**. 2022. Coding for broader impact: leveraging coding skills for stakeholder communication. ***Frontiers in Ecology and the Environment***. 20(4):255-262
49. Cavender-Bares, J., E. Nelson, J.E. Meireles, J. Lasky, D.A. Miteva, D. Nowak, W. Pearse, **M.R. Helmus**, A.E. Zanne, W. Fagan, C. Mihari, N.Z. Muller, N. Kraft, S. Polasky. 2022. The hidden value of trees: quantifying the ecosystem services of tree lineages and their major threats across the continental US. ***PLOS Sustainability and Transformation***. 1(4):e0000010
48. Behm, J.E., G.M. Busala, & **M.R. Helmus**. 2022 First records of three new lizard species and a range expansion of a fourth lizard species introduced to Aruba. ***BiolInvasions Records*** 11(1):296-306
47. Jarzyna, M.A., K.E.A. Norman, J.M. LaMontagne, **M.R. Helmus**, D. Li, S.M. Parker, M.P. Rocha, S. Record, E.R. Sokol, P.L. Zarnetske, T.D. Surasinghe. 2022. Community stability is related to animal diversity change. ***Ecosphere*** 13(3) e3970
46. Nagy, RC, JK Balch, EK Bissell, ME Cattau, NF Glenn, BS Halpern,...**M.R. Helmus**...et al. 2021. Harnessing the NEON data revolution to advance open environmental science with a diverse and data-capable community. ***Ecosphere*** 12(12) e03833
45. Prinzing A, S. Pavoine, H Jactel, J Hortal, SM Hennekens, WA Ozinga, IV Bartish, **M.R. Helmus**, I Kühn, DS Moen, E Weiher, M Brändle, M Winter, C Violle, P Venail, O

- Purschke, B Yguel. 2021. Disturbed habitats locally reduce the signal of deep evolutionary history in functional traits of plants. *New Phytologist* 232(4) 1849-1862
44. Ordway, E.M., A.J. Elmore, S. Kolstoe, J.E. Quinn, R. Swanwick, M. Cattau, D. Taillie, S.M. Guinn, K.D. Chadwick, J.W. Atkins, R.E. Blake, M. Chapman, K. Cobourn, T. Goulden, **M.R. Helmus**, K Hondula, C Hritz, J Jensen, J.P Julian, Y Kuwayama, V. Lulla, D. O' Leary, D.R. Nelson, J.P. Ocón, S. Pau, G.E. Ponce - Campos, C. Portillo - Quintero, N.G. Pricope, R.G. Rivero, L. Schneider, M. Steele, M.G. Tulbure, M.A. Williamson, C. Wilson. 2021. Leveraging the NEON Airborne Observation Platform for socio-environmental systems research. *Ecosphere* 12(6):e03640.
43. Li, D., R. Dinnage, L. Neil, **M.R. Helmus** & A.R. Ives. 2020. phyr: An R package for phylogenetic species - distribution modelling in ecological communities. *Methods in Ecology and Evolution*. 11(11):1455-1463
42. Tran, T.J., **M.R. Helmus**, J.E. Behm. 2020. Green infrastructure space and traits (GIST) model: Integrating green infrastructure spatial placement and plant traits to maximize multifunctionality. *Urban Forestry & Urban Greening* 49:126635.
41. Jesse, W.A.M., J. Molleman, O. Franken, M. Lammers, M.P. Berg, J.E. Behm, **M.R. Helmus** & J. Ellers. 2020. Disentangling the effects of plant species invasion and urban development on arthropod community composition. *Global Change Biology* 26:3294–3306
40. **Helmus, M.R.** & J.E. Behm. 2020. Island Biogeography Revisited. In: *Earth Systems and Environmental Sciences*. Elsevier. Pp. 1-6.
39. **Helmus, M.R.** 2019. Book review of Phylogenetic Diversity Applications and Challenges in Biodiversity Science. *Quarterly Review of Biology*. 94(3):308-309.
38. Rapacciuolo, G., C.H. Graham, J. Marin, J.E. Behm, G.C. Costa, S.B. Hedges, **M.R. Helmus**, V.C. Radeloff, B.E. Young & T.M. Brooks. 2019. Species diversity as a surrogate for conservation of phylogenetic and functional diversity in terrestrial vertebrates across the Americas. *Nature Ecology & Evolution*. 3:53–61.
37. Behm, J.E., G. van Buurt, B.M. DiMarco, J. Ellers, C.G. Irian, K.E. Langhans, K. McGrath, T.J. Tran & **M.R. Helmus**. 2019. First records of the mourning gecko (*Lepidodactylus lugubris* Duméril and Bibron, 1836), common house gecko (*Hemidactylus frenatus* Schlegel, 1836), and Tokay gecko (*Gecko gecko* Linnaeus, 1758) on the island of Curaçao, Dutch Antilles, and remarks on their distributions in the Caribbean region. *BiolInvasion Records*. 8(1):34-44.
36. Jesse, W.A.M., J.E. Behm, **M.R. Helmus** & J. Ellers. 2018. Human land use promotes the abundance and diversity of exotic species on Caribbean islands. *Global Change Biology*. 24(10):4784-4796.
35. **Helmus, M.R.** & J.E. Behm. 2018. Anthropocene Island Biogeography. In: *Encyclopedia of the Anthropocene*. (eds. D. DellaSala, M. Goldstein). Elsevier. Pp. 37-43
34. Behm, J.E., B.R. Waite, S.T. Hsieh, **M.R. Helmus**. 2018. Benefits and limitations of three-dimensional printing technology for ecological research. *BMC Ecology*. 18(32):1-13.
33. Marin, J., G. Rapacciuolo, G.C. Costa, C.H. Graham, T.M. Brooks, B.E. Young, V.C. Radeloff, J.E. Behm, **M.R. Helmus**, S.B. Hedges. 2018. Evolutionary time drives global tetrapod diversity. *Proceedings of the Royal Society B*. 285:1-8.
32. Behm, J.E., C.F. Behm, G.M. Behm, M.C. Behm, S.P. Behm and **M.R. Helmus**. 2018. *Hemidactylus turcicus* (Mediterranean Gecko) Geographic Update. *Herpetological Review*. 49(1): 73. *Natural History Note*
31. Rapacciuolo, G., J. Marin, G.C. Costa, **M.R. Helmus**, J.E. Behm, T.M. Brooks, S.B. Hedges, V.C. Radeloff, B.E. Young, & C.H. Graham. 2017. The signature of human

- pressure history on the biogeography of body mass in tetrapods. *Global Ecology and Biogeography*. 26:1022-1034.
30. Tucker C.M., M.W. Cadotte, S.B. Carvalho, J. Davies, S. Ferrier, S.A. Fritz, R. Grenyer, **M.R. Helmus**, L.S. Jin, A.O. Mooers, S. Pavoine, O. Purschke, D.W. Redding, D.F. Rosauer, M. Winter & F. Mazel. 2017. A guide to phylogenetic metrics for conservation, community ecology and macroecology. *Biology Letters*. 92:698-715.
 29. **Helmus, M.R.**, J.E. Behm, W.A.M. Jesse, J.J. Kolbe, J. Ellers & J.B. Losos. 2017. Exotics exhibit more evolutionary history than natives: A comparison of the ecology and evolution of exotic and native anole lizards. In: *Invasion Genetics: The Baker and Stebbins Legacy*. (eds. S.C.H. Barrett, R.I. Colautti, K.M. Dlugosch, L.H. Rieseberg) John Wiley & Sons, Ltd, pp. 122-138.
 28. Behm, J.E., and **M.R. Helmus** 2016. *Microhyla butleri* (Tubercled Pygmy frog) predation. *Herpetological Review*. 47(4): 643-644. *Natural History Note*
 27. Mazel, F., Tucker C.M., M.W. Cadotte, S.B. Carvalho, J. Davies, S.A. Fritz, R. Grenyer, **M.R. Helmus**, A.O. Mooers, S. Pavoine, O. Purschke, D.F. Rosauer & M. Winter. 2016. The forest, the trees, and the phylo-diversity jungle. *bioRxiv*. (not peer reviewed)
 26. Nelson, E.J., **M.R. Helmus**, J. Cavender-Bares, S. Polasky, J.R. Lasky, A.E. Zanne, W.D. Pearse, N.J.B. Kraft, D.A. Miteva, W.F. Fagan. 2016. Commercial plant production and consumption still follow the latitudinal gradient in species diversity despite economic globalization. *PLOS ONE*. 11(10): e0163002
 25. Yguel B., H. Jactel, I.S. Pearse, D. Moen, M. Winter, J. Hortal, **M.R. Helmus**, I. Kühn, S. Pavoine, O. Purschke, E. Weiher, C. Violle, W. Ozinga, M. Brändle, I. Bartish, A. Prinzing. 2016. The evolutionary legacy of diversification predicts ecosystem function. *The American Naturalist*. 188:398-410
 24. Behm, J.E., and **M.R. Helmus**. 2016. *Microhyla butleri* (Tubercled Pygmy frog) predation. *Herpetological Review*, 47(4): 643-644. (*Natural History Note*)
 23. Pearse, W.D., M.W. Cadotte, J. Cavender-Bares, A.R. Ives, C.M. Tucker, S.C. Walker & **M.R. Helmus**. 2015. pez: Phylogenetics for the Environmental Sciences. *Bioinformatics*. 31:2888-2890
 22. Vermaat, J.E., J. Ellers & **M.R. Helmus**. 2015. The role of biodiversity in the provision of ecosystem services. In: *Ecosystem Services: From Concept to Practice*. (eds. J.A. Bouma, P.J.H. van Beukering) Cambridge University Press. pp 25-39.
 21. **Helmus, M.R.**, D.L. Mahler & J.B. Losos. 2014. Island biogeography of the Anthropocene. *Nature*. 513:543-546.
 20. Vasseur D.A., Fox J.W., Gonzalez A., Adrian R., Beisner B.E., **Helmus M.R.**, Johnson C., Kratina P., Kremer C., de Mazancourt C., Miller E., Nelson W.A., Paterson M., Rusak J.A., Shurin J.B. & Steiner C.F. 2014. Synchronous dynamics of zooplankton competitors prevail in temperate lake ecosystems. *Proceedings of the Royal Society B*, 281, 20140633.
 19. Pearse, W.D., A. Purvis, J. Cavender-Bares & **M.R. Helmus**. 2014. Metrics and models of community phylogenetics. In: *Modern Phylogenetic Comparative Methods and their Application in Evolutionary Biology - Concepts and Practice* (ed. L.Z. Garamszegi). Springer. pp 451-464.
 18. Blanchet, S., **M.R. Helmus**, B. Sébastien & G. Gael. 2014. Biogeographic vs. local drivers of phylogenetic and taxonomic diversity patterns in stream fish communities. *Freshwater Biology*, 59:450-462.
 17. **Helmus, M.R.**, N. Mercado Silva, & M.J. Vander Zanden. 2013. Subsidies to predators, apparent competition and the phylogenetic structure of prey communities. *Oecologia*. 173:997-1007

16. Kua, C.S., J. Ruan, **M.R. Helmus**, D. Zhang, J. Yu & C.H. Cannon. 2012. Reference-free comparative genomics of 174 plastids. *PLOS ONE*. 7:e48995
15. **Helmus, M.R.** & Ives A.R. Phylogenetic diversity area curves. 2012. *Ecology*. 93:S31-S43.
14. Eklöf, A., **M.R. Helmus**, M. Moore & S. Allesina. 2012. Relevance of evolutionary history for food web structure. *Proceedings of the Royal Society B*. 279:1588-1596.
13. Ives, A.R. & **M.R. Helmus**. 2011. Generalized linear mixed models for phylogenetic analyses of community structure. *Ecological Monographs*. 81:511-525.
12. Scheiner, S.M., A. Chiarucci, G.A. Fox, **M.R. Helmus**, D.J. McGlenn & M.R. Willig. 2011. The underpinnings of the relationship between space, time, and species richness. *Ecological Monographs*. 81:195-213.
11. **Helmus, M.R.**, W. Keller, M.J. Paterson, N.D. Yan, C.H. Cannon & J.A. Rusak. 2010. Communities contain closely related species during ecosystem disturbance. *Ecology Letters*. 13:162-174.
10. Ives, A.R. & **M.R. Helmus**. 2010. Phylogenetic metrics of community similarity. *The American Naturalist*. 176:E128-E142.
9. Kembel, S.W., P.D. Cowan, **M.R. Helmus**, W.K. Cornwell, H. Morlon, D.D. Ackerly, S.P. Blomberg & C.O. Webb. 2010. Picante: R tools for integrating phylogenies and ecology. *Bioinformatics*. 26:1463-1464.
8. **Helmus, M.R.**, †L. Allen, O. Dominguez-Dominguez, E. Díaz Pardo, P. Gesundheit, J. Lyons & N. Mercado Silva. 2009. Threatened fishes of the world: *Allotoca goslinei* Smith and Miller, 1987 (Goodeidae). *Environmental Biology of Fishes*. 84:197-198.
7. Mercado Silva, N., **M.R. Helmus** & M.J. Vander Zanden. 2009. Food web structure of an impacted semi-desertic river in Mexico's central plateau. *River Research and Applications*. 25:1090-1108.
6. †Ahrenstorff, T.D., G.G. Sass & **M.R. Helmus**. 2009. The influence of littoral zone coarse woody habitat on the home range size, spatial distribution and feeding ecology of largemouth bass (*Micropterus salmoides*). *Hydrobiologia*. 623:223-233.
5. **Helmus, M.R.** & G.G. Sass. 2008. The rapid effects of a whole-lake reduction of coarse woody debris on fish and benthic macroinvertebrates. *Freshwater Biology*. 53:1423-1433.
4. **Helmus, M.R.**, †K. Savage, M.W. Diebel, J.T. Maxted & A.R. Ives. 2007. Separating the determinants of phylogenetic community structure. *Ecology Letters*. 10:917-925.
3. Newton, R.J., S.E. Jones, **M.R. Helmus** & K.D. McMahon. 2007. Phylogenetic ecology of the freshwater ael lineage. *Applied and Environmental Microbiology*. 73:7169-7176.
2. **Helmus, M.R.**, †T.J. Bland, C.K. Williams & A.R. Ives. 2007. Phylogenetic measures of biodiversity. *The American Naturalist*. 169:E68-E83.
1. **Helmus, M.R.** & D.E. Dussourd. 2005. Glues or poisons: which triggers vein cutting by monarch caterpillars? *Chemoecology*. 15:45-49.

COMPETITIVE RESEARCH FUNDS\$2.1 million – *Total external funding while an Assistant Professor*\$3.1 million – *Total career external funding****bold*** indicates current funding.*** indicates grants written with mentees

2023-25	(\$99,604)	<i>USDA-PPQ: Developing state risk map web applications to rapidly find and respond to properties with spotted lanternfly outbreaks. PI</i>
2022-26	(471,156)	<i>USDA-TSAB: Mapping and predicting the spread of the invasive Spotted Lanternfly (<i>Lycorma delicatula</i>) at local and landscape scales using satellite data. CoPI with PI Jocelyn Behm</i>
*2022-24	(112,852)	<i>USDA-PPQ: Mathematical modeling of spotted lanternfly population dynamics to enhance mitigation and optimize rapid response actions. PI with CoPIs Jocelyn Behm, Benjamin Seibold, Stephanie Lewkiewicz (Postdoc)</i>
*2022-24	(82,379)	<i>USDA-PPQ: Deployment of state interactive mapping applications for finding properties with new spotted lanternfly outbreaks. PI written with Victoria Ramirez (Tech)</i>
2021-23	(99,096)	<i>Pennsylvania Department of Agriculture: Furthering computational approaches to model the spotted lanternfly invasion and economic impacts. PI with CoPIs Jocelyn Behm, Benjamin Seibold.</i>
*2021-23	(39,807)	<i>Pennsylvania Department of Agriculture: Changes in wild pollinator populations with the availability of a spotted lanternfly honeydew. PI written with Stefani Cannon (PhD Student)</i>
2020-24	(426,702)	<i>USDA-Specialty Crop Research Initiative: Biology, Management and Reducing the Impact of the Spotted Lanternfly on Specialty Crops in the Eastern USA. PI with CoPIs Jocelyn Behm, Benjamin Seibold</i>
2021-22	(114,644)	<i>California Department of Food and Agriculture: Risk-Based Forecasts of Spotted Lanternfly Establishment Across California. PI with CoPI Jocelyn Behm.</i>
2020-21	(120,044)	<i>USDA-PPQ: Mathematical modeling of spotted lanternfly population dynamics to aide in spread prediction and control optimization. PI with CoPIs Jocelyn Behm, Benjamin Seibold.</i>
*2020-21	(76,890)	<i>USDA-PPQ: Predicting establishment and impact of spotted lanternfly on trees across the USA. PI written with Nick Huron (PhD Student)</i>
2019-20	(145,634)	<i>Pennsylvania Department of Agriculture: Integrated approach to understand spotted lanternfly population dynamics. PI with CoPIs Jocelyn Behm, Benjamin Seibold.</i>
2020	(185,070)	<i>USDA-APHIS: Linking field biology and mathematical modeling to predict spotted lanternfly spread and optimal control. PI with CoPIs Jocelyn Behm, Benjamin Seibold.</i>
2019-20	(75,000)	<i>Pennsylvania Department of Agriculture: Integrated approach to understand spotted lanternfly population dynamics. PI with CoPIs Jocelyn Behm, Benjamin Seibold.</i>
2018-19	(42,000)	<i>Pennsylvania Department of Agriculture: Spotted Lanternfly modeling and economics PI with CoPIs Jocelyn Behm, Benjamin Seibold.</i>
2014-18	(640,000)	<i>Dutch NSF: Caribbean Research Program. PI with CoPIs Jocelyn Behm, Jacintha Ellers (nominal PI).</i>

2012-14	(160,000)	<i>Amsterdam Global Change Institute</i> : Postdoctoral Fellowship. PI
2010-11	(120,000)	<i>National Science Foundation (U.S.A.)</i> : Postdoctoral Fellowship in Biological Informatics. PI
2009	(44,000)	<i>China NSF</i> : International Young Researchers Research Grant. PI
2009	(15,000)	<i>Chinese Academy of Sciences</i> : Postdoctoral Research Fellowship. PI
2008	(5,000)	<i>Google/National Evolutionary Synthesis Center</i> : Fellowship. PI
2005-06	(25,000)	<i>University of California / MEX NSF</i> : Research Grant. PI
2001	(600)	<i>Sigma Xi</i> : Research Grant PI

Intramural funds

2013	(6,500)	<i>Amsterdam Global Change Institute</i> : Business Outreach Grant
2007	(1,750)	<i>University of Wisconsin Madison Zoology</i> : Research Grant
2006	(1,500)	<i>UW Madison Zoology</i> : Research Grant
2004	(550)	<i>UW Madison Latin American, Caribbean & Iberian Studies</i>
2003	(1,400)	<i>UW Madison Department of Zoology</i> : Research Grant
2003	(950)	<i>UW Madison Latin American, Caribbean & Iberian Studies</i>
2003	(650)	<i>UW Madison Center for Limnology</i> : Research Grant
2002	(1,000)	<i>University of Central Arkansas Biology</i> : Research Grant
2001	(2,000)	<i>UCA Honors College</i> : Tropical Herpetology Education Grant
2000	(5,000)	<i>UCA Honors College</i> : Semester at Sea Education Grant

HONORS & AWARDS

- 2021 College of Science and Technology Dean's Distinguished Teaching Award
- 2020 Governor appointed voting member of the Governor's Invasive Species Council of Pennsylvania (PISC)
- 2019 Blavatnik National Award Nominee. University honor that recognized research and educational achievements in STEM.
- 2019 NEON Data Education Fellow. Selected as a fellow of the 2019 Faculty Mentoring Network by the National Ecological Observatory Network and Quantitative Undergraduate Biology Education and Synthesis
- 2009 Invited Speaker. Ecology and Evolutionary Biology Early Career Scientists Symposium. University of Michigan, Ann Arbor, MI, U.S.A.
- 2007 Outstanding Oral Presentation. Honorable Mention Murray F. Buell Award Ecological Society of America 92nd annual conference, San Jose, CA, U.S.A.
- 2006 Outstanding Oral Presentation. Pioneering Studies of Young Scientists on Chemical Pollution and Environmental Changes Symposium Center for Marine Environmental Studies, Ehime University, Japan.
- 2001 Outstanding Student Award. The highest student honor for excellence in academics and service to the University of Central Arkansas.

PRESS

- 2022 [The Hill](#). Could climate change mean the spotted lanternfly is here to stay?
- 2020 [Salon](#). The spotted lanternfly is invading the Northeast
- 2020 [New York Times](#). The Dreaded Lanternfly.
- 2020 [NBC 10 Philadelphia](#). Lanternflies Return to Our Area.
- 2020 [NBC 4 New York](#). Insect Infestation Puts Brooklyn Cargo Ship Under Quarantine
- 2019 [Temple Update](#) Spotted Lanternflies Invade Temple's Campus.
- 2019 [NBC 10 Philadelphia](#) Spotted Lanternflies Invade Philly.
- 2018 [The Temple News](#) Temple Is Researching Invasive Species.

- 2014 [New York Times](#) Overseas Trade Alters a Lizard's Stocks.
 2014 [Quanta Magazine](#) Lizard Stowaways Revise Principle of Ecology.
 2014 [National Geographic](#) The New Islands.

WORKSHOP PARTICIPATION

- 2020-22 TREETIME: Terrestrial Responses to Emerging Environments, Temporally Integrated from Moments to Eons. NSF BII. Morton Arboretum. Chicago IL.
 2019 NEON Science Summit. University of Colorado. Boulder CO. Earth Lab.
 2018 *ARGON – Augmenting research grounded on NEON*. Ecology Center. Utah State University. Will Pearse
 2017 *Characterizing landscape genomics and reconstructing pathways to plant ecological specialization and speciation*. USGS Powell Center. Fort Collins, CO. Elisabeth Bui, David Smith, Martin Goldhaber
 2013-17 *Macroevolution of ecosystem services of trees*. SESYNC Annapolis, MY. Jeannine Cavender-Bares & Stephen Polasky
 2015 *Phylogenetics and biodiversity*, Society for Molecular Biology satellite meeting, Temple University, Philadelphia PA, U.S.A. Blair Hedges (organizer)
 2013-14 *Synthesizing phylogenetic measures for ecology and conservation*. iDiv Leipzig, Germany. Marc W Cadotte & Dan F Rosauer.
 2013 *Species communities harboring the outcome of plant diversification*. iDiv Leipzig, Germany. Andreas Prinzing.
 2012 *Community assembly workshop*. Swiss National Science Foundation Swiss Federal Institute of Aquatic Science and Technology (EAWAG). Blake Matthews.
 2011 *Plankton dynamics working group*. Canadian Institute for Ecology and Evolution. Jeremy Fox, Jonathan Shurin, & Beatrix Beisner.
 2009-11 *Linking phylogenetic history, plant traits, and ecological processes at multiple scales*. NCEAS. Jeannine Cavender-Bares.
 2008 *Evolutionary and ecological sorting in space*. NCEAS. Mark Urban & Mathew Leibold.

RESEARCH PRESENTATIONS

invited

- 2021 USDA, Center for Plant Health Science and Technology (Virtual)
 2019 Universidad Autónoma del Estado de Morelos, Centro de Investigación en Biotecnología, Cuernavaca, Mor., Mexico (Plenary)
 2019 USDA, Center for Plant Health Science and Technology Raleigh, NC, U.S.A.
 2017 Ecological Society of America, Organized Oral Session, Portland OR, U.S.A.
 2016 Academy of Natural Sciences, Philadelphia PA, U.S.A.
 2015 Imperial College London, Department of Life Sciences, U.K.
 2015 Villanova University, Department of Biology, Villanova PA, U.S.A.
 2015 Utah State University, Department of Biology, Logan UT, U.S.A.
 2015 Georgetown University, Department of Biology, Washington DC, U.S.A.
 2015 University of Oklahoma, Department of Biology, Norman OK, U.S.A.
 2015 Temple University, Department of Biology, Philadelphia PA, U.S.A.
 2014 Ursinus College, Biology Department, Collegeville PA, U.S.A.
 2014 Purdue University, Biology Department, West Bend IN, U.S.A.
 2012 University of Amsterdam, Theoretical Ecology, The Netherlands.
 2011 University of California, Ecology and Evolution, Davis, U.S.A.
 2011 Netherlands Institute of Ecology, Wageningen, Netherlands.

- 2011 The Field Museum, Chicago, IL U.S.A.
 2010 Kellogg Biological Station, Hickory Corners, MI U.S.A.
 2009 University of Michigan, Ecology and Evolutionary Biology, Ann Arbor, U.S.A.
 2007 Instituto de Ecología, Xalapa, Ver. México.
 2007 University of California, Ecology Evolution and Marine Biology, Santa Barbara, U.S.A.
 2007 Ehime University, Center for Marine Environmental Studies, Matsuyama Japan.
submitted
 2012 Center for interdisciplinary research in biology (CIRB) – Collège de France, Paris
 2011 Ecological Society of America annual conference, Austin, TX U.S.A.
 2010 The American Genetics Association. Conservation genomics conference, Hilo, HI USA.
 2009 Association for Tropical Biology & Conservation conference, Chiang Mai Thailand.
 2007 Ecological Society of America annual conference, San Jose, CA U.S.A.
 2006 Ecological Society of America international conference, Mérida, Yuc. México
 2005 Ecological Society of America annual conference, Montréal, QC Canada.
 2004 Ecological Society of America annual conference, Portland, OR U.S.A.
 2003 Ecological Society of America annual conference, Savannah, GA U.S.A.
 2001 Entomological Society of America annual conference, San Diego, CA U.S.A.

SUPPLEMENTAL EDUCATION

- 2020 Foundational Open Science Skills - Online course through CyVerse
 2014 Data Science Specialization - MOOC through Johns Hopkins
 2011 Next Generation Sequencing - Vienna Graduate School of Population Genetics
 2009 Ecological Genomics - Centro Residenziale Universitario di Bertinoro, Italy
 2002 Mathematics in Biology - University of Tennessee, Knoxville TN
 2001 Tropical Herpetology - Maderas Rainforest Conservation, Costa Rica/Nicaragua
 2000 Semester at Sea - University of Pittsburgh, 10 counties around the world

PROFESSIONAL AFFILIATIONS

current

- 2006- Member, Ecological Society of America

past

- 2009 Member, Association for Tropical Biology and Conservation
 2001 Member, Entomological Society of America

SERVICE

external

- 2022- Associate Editor: *Frontiers in Ecology and the Environment*

internal

- 2017- Biology Department Graduate Student Committee
 2017- Environmental Science Program Committee
 2022 Ecology and Evolution Job Search Committee
 2021 Development of new course: *Foundations of Ecology*
 2019 Organized meet the faculty event for the Undergraduate Biology Society
 2018 Development of new course: *Global Change Science Analytics with R*

PhD committee member for:

- | | | | |
|-------|-----------------|---------|---------------|
| 2020- | Ryan Gasbarro | 2019-20 | Amanda Wilson |
| 2019- | Molly Schools | 2019-20 | Mark Walker |
| 2019- | Chris Carnivale | 2019-22 | J.J. Smith |

2018	Caryn Babaian	2017-21	Steven Auscavitch
2018-21	Diana Paola Lopez	2017-18	Mariana Bonfim
2017-18	Carlos Gomez		

OUTREACH

2017-	<i>Governance</i> : Member of the Governor's Invasive Species Council of Pennsylvania (PISC) with purpose to develop action plans and advise on policy.
2018	<i>Cross-disciplinarity</i> : Climate, Sustainability and the Arts working group member and presenter at the 2018 Festival at Temple University
2013-14	<i>Sustainability</i> : worked with the Roggebot Estate in the Netherlands to devise strategies for biodiversity-friendly economic development of their landscape
2013	<i>Business</i> : participated in a workshop to promote collaborative ties between the Dutch business community and the Amsterdam Global Change Institute
2010-11	<i>International Relations</i> : developed and co-taught an English as a Second Language night course focused on scientific terminology to XTBG Chinese staff
2002-08	<i>Science Promotion</i> : mentor for Ways of Knowing Biology, an organization that promoted biology to the undergraduate freshman of underrepresented groups
2003-05	<i>Public Relations</i> : presenter at lake association meetings where I described how research at the University of Wisconsin LTER Field Station benefits their lakes
2003-04	<i>Science Promotion</i> : volunteer for Science is Fun with Bassam Shakhshiri, an interactive program that promoted science to elementary school children
2002	<i>Science Promotion</i> : exhibitor at the Arkansas Museum of Discovery, coordinated hands-on exhibit for children

PEER REVIEWER

-Nature	-Diversity and Distributions
-PNAS	-PLOS ONE
-US NSF	-Ecography
-UK NERC	-Perspectives in Plant Ecology, Evolution and Systematics
-Ecology Letters	-Methods in Ecology and Evolution
-Nature Communications	-Journal of Vegetation Science
-The American Naturalist	-Functional Ecology
-Ecology	-Trends in Ecology and Evolution
-Evolution	-Global Ecology and Geography
-Ecological Monographs	-Ecology and Evolution
-Molecular Ecology	-Biological Reviews
-PROC B	-Systematic Biology
-Oikos	-Ecological Informatics
-Oecologia	-BioScience
-Hydrobiologia	-The Quarterly Review of Biology
-Global Change Biology	-Pest Management Science
-Journal of Ecology	-Israel Science Foundation
-Environmental Biology of Fishes	-Czech Science Foundation
-Journal of Biogeography	

MENTORSHIP*Total >50 Mentored: 3 PhD, 5 Master, 3 Postdoc*While at Temple University**Postdoc Advisor:**

2020- Seba Debona
 2020- Jason Gleditsch (co-advisor)
 2020- Stephanie Lewkiewicz (co-advisor)

PhD Advisor:

2020- Stefani Cannon
 2017-22 Nick Huron

MS Advisor:

2022- Sam Owens

Bachelor Advisor:

2022- Cameron Mann
 2022- Sharlet Abraham
 2022- Delaney Hampton
 2022- Arun Agarwal
 2022- Abdullah Alkurdi
 2022- Emily Scott
 2022- Zbair Abaidullah
 2022- Adam Kadi
 2022- Salvin Kabir
 2022 Brittney Flinn
 2021-22 Isabella Smith
 2021-22 Hajra Sohail
 2021-22 Emma Lazar
 2021 Abir Islam
 2021 Tony Tran
 2021-22 Russell Abernethy
 2021 Meagan Mendoza
 2021-22 Sydney Reid
 2021 Annabelle Horton
 2020 Margaret Hanley
 2020-21 Lilly Zimmerman
 2020 Bradley Allen
 2019- Rabbika Rafiu
 2019 Adam Gasiewski
 2019-20 Jeff Stuart
 2019 Renee Johnson (co-advisor)
 2019-20 Cat Olson
 2019-20 Ben Gress (co-advisor)
 2018- Victoria Ramirez (co-advisor)
 2018 Alex Greenwood
 2018-20 Evan Zangakis
 2017-19 Alexa Gordon

2017-20 Hannah Assour (co-advisor)
 2018 Ryan Thompson
 2017-18 Thomas Thompson
 2016 Nikhil Patel
 2016 Aquila Choi
 2016 Isabel Liston
 2016-17 Brenna Waite (co-advisor)

Bachelor Drexel Co-Op Advisor:

2021 Artem Yakupov
 2020 Sai Media
 2018 Henry Williams
 2018 Briana DiMarco (co-advisor)

Outside of Temple University**PhD VU Amsterdam**

2015-22 Wendy Jesse (co-advisor)

Master VU Amsterdam

2013-14 Ben Hearn
 2012-14 Wendy Jesse
 2013 Martin Ruijter
 2012-13 Rebecca Reurslag

Bachelor VU Amsterdam

2013 Elisabeth Barmentlo

Bachelor University of Chicago

2011 Don Ho
 2011 Alaina Valenzuela

Bachelor University of Wisconsin

2007-08 Lauren Allen
 2007 Kristina Savage
 2007 Tom Bland
 2006-07 Tyler Ahrenstorff
 2005 Lindsay Focht
 2004 Sara Green
 2003 Adrienne Tandberg