CURRICULUM VITAE: SCOTT L. NUISMER
April 2024

ADDRESS

Department of Biological Sciences
University of Idaho
Moscow, ID 83844

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EDUCATION

B.S. Biology 1996. University of Utah, Salt Lake City, UT, 84112
Ph.D. Biology 2000. Washington State University, Pullman, WA, 99164. Graduate Advisors: John N. Thompson and Richard Gomulkiewicz

APPOINTMENTS

Professor. Department of Mathematics (Affiliate). University of Idaho. Moscow, ID 83844. May 2014-Present.
Professor. Department of Biological Sciences. University of Idaho. Moscow, ID 83844. July 2013-Present.
Associate Professor. Department of Biological Sciences. University of Idaho. Moscow, ID 83844. June 2008-June 2013.
Assistant Professor. Department of Biological Sciences. University of Idaho. Moscow, ID 83844. June 2003-May 2008.
NIH Post-Doctoral Fellow with Mark Kirkpatrick. Section of Integrative Biology C0930, University of Texas, Austin, TX 78712. March 2002 – June 2003.
Post-Doctoral Associate with Mark Kirkpatrick. Section of Integrative Biology C0930, University of Texas, Austin, TX 78712. January 2001 – March 2002.

FEDERAL GRANTS/CONTRACTS

NIH 2R01GM122079-05A1. September 2023 – August 2027. A Mathematical Theory of Transmissible Vaccines. $1,300,974. PI Scott L. Nuismer.
NSF DEB 2314616. October 2023 – September 2026. Predicting the spread and impact of transmissible vaccines. $664,668. PI: Scott Nuismer.
DTRA. October 2021 – January 2025. Role of Camels in Transmission of Brucella spp and Middle East Respiratory Syndrome Coronavirus to Humans in Marsabit and Kajiado Counties, Kenya. $250,000. PI: Eric Osoro (Nuismer is the UI lead)
NSF DEB 2216790. June 2022 – May 2023. Conference: Coordinating the development of self-disseminating vaccines for spillover prevention. $71,669. PI: Scott Nuismer.
NSF DEB 2028162. April 2020- March 2021. EAGER: Evaluating the feasibility of a transmissible vaccine within bat populations. $56,420. PI: Scott Nuismer.
DARPA D18AC00028. October 2018-September 2022. Prediction of Spillover Potential and Interventional En Masse Animal Vaccination to Prevent Emerging Pathogen Threats in Current and Future Zones of US Military Operation. $9,669,372. Co-PI's (all equal): Peter Barry, Brian Bird, Michael Jarvis, and S.L. Nuismer.

NIH R01GM122079. August 2016-April 2021. Collaborative research: a mathematical theory of transmissible vaccines. $1,009,921.00. PI: Scott Nuismer.
NSF STC DBI 0939454. August 2015-July 2016. BEACON: An NSF Center for the Study of Evolution in Action. $20,862. PI: Jim Bull
NSF DEB 1450653. April 2015-March 2020. A Bayesian approach to inferring the strength of coevolution. $251,014. PI: Scott Nuismer.
NSF STC DBI 0939454. June 2014-June 2015. BEACON: An NSF Center for the Study of Evolution in Action. $12,000. PI: Jim Bull
NSF DEB 1118947. September 2011-August 2015. MPS BIO: Developing a multivariate theory of phenotypic coevolution. $246,717. PI: Scott Nuismer.
NSF DMS 0540392. July 2006-June 2014. Collaborative Research: A unified theoretical approach to community coevolution. $725,000. PI: Scott Nuismer.
NSF DEB 0343023. April 2004-March 2007. General genetic models of the geographic mosaic theory of coevolution. $236,601. PI: Scott Nuismer.
NSF DEB 0808281. April 2008-March 2010. Dissertation Research: The role of pathogen resistance in the establishment and persistence of polyploid lineages. $8,980. PI: Scott Nuismer.
NIH F32 GM65620-01. Gene flow and the coevolution of parasite range. March 2002-June 2003. $43,278.

PUBLICATIONS

1. E.A. Eskew, B.H. Bird, B.M. Ghersi, J. Bangura, A.J. Basinski, E. Amara, M.A. Bah, M.C. Kanu, O.T. Kanu, E.G. Lavalie, V. Lungay, W. Robert, M.A. Vandi, E. Fichet-Calvet, and S.L. Nuismer. 2024. Reservoir displacement by an invasive rodent reduces Lassa virus zoonotic spillover risk. ***Nature Communications.*** 15(3589).
2. Daniel G Streicker, Megan E Griffiths, Rustom Antia, Laura Bergner, Peter Bowman, Maria Vitoria dos Santos de Moraes, Kevin Esvelt, Mike Famulare, Amy Gilbert, Biao He, et al. 2024. Developing transmissible vaccines for animal infections. ***Science.*** 384(6693):275–277.
3. James J Bull, Scott L Nuismer, Christopher H Remien, Megan E Griffiths, and Rustom Antia. Recombinant transmissible vaccines will be intrinsically contained despite the ability to superinfect. ***Expert Review of Vaccines.*** 23:294-302. 2024.
4. Layman, N.C., A.J. Basinski, B. Zhang, E.A. Eskew, B.H. Bird, B.M. Ghersi, J. Bangura, E. Fichet-Calvet, C.H. Remien, M. Vandi, M. Bah, S.L. Nuismer. 2023. Predicting the fine-scale spatial distribution of zoonotic reservoirs using computer vision. ***Ecology Letters***. 26:1974-1986.
5. Schreiner, C., A. Basinski, C.H. Remien, and S.L. Nuismer. 2023. Optimizing the delivery of self-disseminating vaccines in fluctuating wildlife populations. ***PLOS Neglected Tropical Diseases.*** 17:e0011018.
6. Whitlock, A.B., B.H. Bird, B. Ghersi, A.J. Davison, J. Hughes, J. Nichols, M. Vucak, E. Amara, J. Bangura, E. Lavalie, M. Kanu, A. Sjodin, C.H. Remien, and S.L. Nuismer. 2023. Identifying the genetic basis of viral spillover using Lassa virus as a test case. ***Royal Society Open Science***. 10: 221503.
7. Nuismer, S.L., A.J. Basinski, C. Schreiner, A. Whitlock, and C.H. Remien. 2022. Reservoir population ecology, viral evolution, and the risk of emerging infectious disease. ***Proceedings of the Royal Society of London Series B-Biological Sciences.*** 289: 20221080.

8. Varrelman, T.J., C.H. Remien, A.J. Basinski, S. Gorman, A. Redwood, S.L. Nuismer. 2022. Quantifying the effectiveness of betaherpesvirus-vectored transmissible vaccines. ***PNAS*** 119: e2108610119.
9. Nuismer, S.L. 2022. One step closer to a transmissible vaccine for rabies virus. ***PLoS Biology*** 20 (4): e3001607.
10. Nuismer, S.L., B. Week, and L.J. Harmon. 2022. Uncovering cryptic coevolution. ***The American Naturalist***. 199 (6): 10.1086/717436.
11. Week, B. and S.L. Nuismer. 2021. Coevolutionary Arms Races and the Conditions for the Maintenance of Mutualism. ***The American Naturalist***. 198(2): 195-205.
12. B. Week, Nuismer S.L., Harmon, L.J. and Krone, S.M. 2021. A white noise approach to evolutionary ecology. ***Journal of Theoretical Biology***. 521:110660.
13. A.J. Basinski, Fichet-Calvet, E., Sjodin, A.R., Varrelman, T.J., Remien, C.H., Layman, N.C., Bird, B.H., Wolking, D.H., Monagin, C., Ghersi, B.M., Barry, P.A., Jarvis, M.A., Gessler, P.E., Nuismer, S.L. 2021. Bridging the gap: Using reservoir ecology and human serosurveys to estimate Lassa virus spillover in West Africa. ***PLoS Computational Biology***. 17: e1008811.
14. N.C. Layman, Tuschhoff, B.M., Basinski, A.J., Remien, C.H., Bull, J.J., Nuismer, S.L. Suppressing evolution in genetically engineered systems through repeated supplementation. ***Evolutionary Applications***. 14: 348-359.
15. S.L. Nuismer, Layman, N.C., Redwood, AJ, Chan, B., Bull, J.J. 2021. Methods for measuring the evolutionary stability of engineered genomes to improve their longevity. ***Synthetic Biology***. 6 (1), ysab018.
16. N.C. Layman, Tuschhoff, B.M., Nuismer, S.L. 2021. Designing transmissible viral vaccines for evolutionary robustness and maximum efficiency. ***Virus Evolution***. 7: veab002.
17. Nuismer, S.L., J.J. Bull. 2020. How to stop pandemics. ***New Scientist***. 247 (3296), 23.
18. Layman, N.C., B.M. Tuschhoff, A.J. Basinski, C.H. Remien, J.J. Bull, S.L. Nuismer 2020. Suppressing evolution in genetically engineered systems through repeated supplementation. ***Evolutionary Applications***. 00:1–12.
19. Nuismer S.L., C.H. Remien, A.J. Basinski, T. Varrelman, N. Layman, K. Rosenke, B. Bird, M. Jarvis, P. Barry, P.W. Hanley, and E. Fichet-Calvet. 2020. Bayesian estimation of Lassa virus epidemiological parameters: Implications for spillover prevention using wildlife vaccination. ***PLoS Neglected Tropical Diseases***. 14: e0007920.
20. Nuismer S.L., J.J. Bull. 2020. Self-disseminating vaccines to suppress zoonoses. ***Nature Ecology and Evolution***. 4 (9), 1168-1173.
21. Schreiner, C., S.L. Nuismer, A.J. Basinski. 2020. When to vaccinate a fluctuating wildlife population: is timing everything? ***Journal of Applied Ecology***. 57 (2), 307-319.
22. UK Weber, SL Nuismer, A Espíndola. 2019. Patterns of floral morphology in relation to climate and floral visitors. ***Annals of Botany***. 125 (3), 433-445.
23. Smithson, M.W., M.F. Dybdahl, S.L. Nuismer. 2019. The adaptive value of epigenetic mutation: limited in large but high in small peripheral populations. ***Journal of evolutionary biology***. 32 (12), 1391-1405.
24. Nuismer, S.L., A.J. Basinski, J.J. Bull. 2019. Evolution and containment of transmissible recombinant vector vaccines. ***Evolutionary Applications*** 12 (8), 1595-1609

25. Bull, J.J., S.L. Nuismer, R. Antia. 2019. Recombinant vector vaccine evolution. ***PLoS computational biology*** 15 (7), e1006857
26. Varrelman, T.J., A.J. Basinski, C.H. Remien, S.L. Nuismer. 2019. Transmissible vaccines in heterogeneous populations: Implications for vaccine design. ***One Health*** 7, 100084
27. Nuismer, S.L., B. Week. 2019. Approximate Bayesian estimation of coevolutionary arms races. ***PLoS computational biology*** 15 (4), e1006988
28. Harmon, L.J., C.S. Andreazzi, F. Débarre, J. Drury, E.E. Goldberg, A.B. Martins, C.J. Melián, A. Narwani, S.L. Nuismer, M.W. Pennell, S.M. Rudman, O. Seehausen, D. Silvestro, M. Weber, B. Matthews. 2019. Detecting the macroevolutionary signal of species interactions. ***Journal of evolutionary biology.*** In press.
29. Week, B., SL Nuismer. 2019. The measurement of coevolution in the wild. ***Ecology letters*** 22 (4), 717-725
30. Basinski, A.J., SL Nuismer, CH Remien. 2019. A little goes a long way: Weak vaccine transmission facilitates oral vaccination campaigns against zoonotic pathogens. ***PLoS neglected tropical diseases*** 13 (3), e0007251
31. Smithson, M.W., A.J. Basinski, S.L. Nuismer and J.J. Bull. 2019. Transmissible vaccines whose dissemination rates vary through time, with applications to wildlife. ***Vaccine*** 37 (9), 1153-1159
32. Nuismer, S.L., B. Week, M. Aizen. Coevolution slows the disassembly of mutualistic communities. ***The American Naturalist.*** 192 (4), 490-502
33. Nuismer, S.L., May R, Basinski A, Remien C.H. 2018. Controlling epidemics with transmissible vaccines. ***PLoS ONE*** 13(5): e0196978.
34. MacPherson, A., S.P. Otto, and S.L. Nuismer. 2018. Keeping pace with the Red Queen: identifying the genetic basis of susceptibility to infectious disease. ***Genetics***. 208:779-789.
35. Basinski, A.J. T.J. Varrelman, M.W. Smithson, R.H. May, C.H. Remien, and S.L. Nuismer. 2017. Evaluating the promise of recombinant transmissible vaccines. ***Vaccine***. 36:675-682.
36. Bull, J.J., M.W. Smithson, and S.L. Nuismer. 2017. Transmissible viral vaccines. ***Trends in Microbiology***. 26:6-15.
37. Nuismer, S.L. 2017. Rethinking conventional wisdom: are locally adapted parasites ahead in the coevolutionary race? ***The American Naturalist.*** 190:584-593.
38. Nuismer, S.L., C.E. Jenkins, and M.F. Dybdahl. 2017. Identifying coevolving loci using interspecific genetic correlations. ***Ecology and Evolution***. https://doi.org/10.1002/ece3.3107.
39. MacPherson, A. and S.L. Nuismer. 2017. The probability of parallel genetic evolution from standing genetic variation. ***Journal of Evolutionary Biology***. 30:326-337.
40. Nuismer S.L. 2016. Eradicating infectious disease using weakly transmissible vaccines. ***Proceedings of the Royal Society of London Series B-Biological Sciences.*** 283:20161903.
41. Paff, M.L., S.L. Nuismer, A.D. Ellington, I.J. Molineux, R. May, J.J. Bull. 2016. Design and engineering of a transmissible antiviral defense. ***Journal of Biological Engineering***. doi: 10.1186/s13036-016-0033-4

42. Paff, M.L., S.L. Nuismer, A. Ellington, I.J. Molineux, J.J. Bull. 2016. Virus wars: using one virus to block the spread of another. ***PeerJ*****.** 4:e2166 https://doi.org/10.7717/peerj.2166
43. Nuismer S.L. and M.F. Dybdahl. 2016. Quantifying the coevolutionary potential of multi-step immune defenses. ***Evolution***. 70: 282-295.
44. MacPherson, A., P.A. Hohenlohe, and S.L. Nuismer. 2015. Trait dimensionality explains widespread variation in local adaptation. ***Proceedings of the Royal Society of London Series B-Biological Sciences.*** Volume 282. doi: 10.1098/rspb.2014.1570
45. Nuismer, S.L. and L.J. Harmon. 2015. Predicting rates of interspecific interactions from phylogenetic trees. ***Ecology Letters***. 18:17-27.
46. Heath, K. and S.L. Nuismer. 2014. Connecting functional and statistical definitions of genotype by genotype interactions in coevolutionary studies. ***Frontiers in genetics.*** 7:77
47. Dybdahl, M.F., C.E. Jenkins, and S.L. Nuismer. 2014. Identifying the molecular basis of host-parasite coevolution: merging models and mechanisms. ***The American Naturalist***. 184:1-13.
48. Debarre, F., S.L. Nuismer, and M. Doebeli. 2014. Multidimensional (Co)evolutionary stability. ***The American Naturalist***. 184:158-171.
49. Ridenhour, B.J. and S.L. Nuismer. 2014. A quantitative genetic approach for predicting ecological change in biological communities. ***Theoretical Ecology***. 7:137-148.
50. Jones, E., S.L. Nuismer, and R. Gomulkiewicz. 2013. Revisiting Darwin's conundrum reveals a twist on the relationship between phylogenetic distance and invasibility. ***PNAS.*** 110:20627-20632.
51. Blanquart, F., O. Kaltz, S.L. Nuismer, and S. Gandon. 2013. A practical guide to measuring local adaptation. ***Ecology Letters***. 16:1195-1205.
52. Nuismer, S.L., Bascompte, J., and Jordano, P. 2013. Coevolution and the architecture of mutualistic networks. ***Evolution***. 67:338-354.
53. Nuismer, S.L., A. MacPherson, and E.B. Rosenblum, 2012. Crossing the threshold: gene flow, dominance, and the critical level of standing genetic variation required for adaptation to novel environments. ***Journal of Evolutionary Biology***. 25:2665-2671.
54. Poullain, V. and S.L. Nuismer. 2012. Infection genetics and the likelihood of host shifts in coevolving host-parasite interactions. ***The American Naturalist***. 180: 618-628.
55. Blanquart, F., S. Gandon, and S.L. Nuismer. 2012. The effects of migration and drift on local adaptation to a heterogeneous environment. ***Journal of Evolutionary Biology***. 25:1351-1363.
56. Gilman, RT, and D.C. Jhwueng, and S.L. Nuismer. 2012. Coevolution in multidimensional trait space favors escape from parasites and pathogens. ***Nature***. 483:328-330
57. Oswald, B. and S.L. Nuismer. 2011. A unified model of autopolyploid establishment and evolution. ***The American Naturalist***. 178: 687-700.
58. Oswald, B. and S.L. Nuismer. 2011. Neopolyploidy and diversification in *Heuchera grossulariifolia*. ***Evolution***. 65:1667-1679.
59. Yoder J.B. and S.L. Nuismer. 2010. When does coevolution promote diversification? ***The American Naturalist***. 176: 802-817.

60. Gomulkiewicz, R., R. Holt, M. Barfield, S.L. Nuismer. 2010. ***Evolutionary Applications***. 3:97-108.
61. Nuismer, S.L., R. Gomulkiewicz, and B.J. Ridenhour. 2010. When is correlation coevolution? ***The American Naturalist***. 175: 525-537.
62. Gandon, S. and S.L. Nuismer. 2009. Interactions between genetic drift, gene flow and selection mosaics drive parasite local adaptation. ***The American Naturalist***. 173: 212-224
63. Nuismer, S. L., S. P. Otto, and F. Blanquart. 2008. When do host-parasite interactions drive the evolution of non-random mating? ***Ecology Letters.*** 11:937-946.
64. Nuismer, S.L. and S. Gandon. 2008. Moving beyond common garden and transplant designs: insights into the causes of local adaptation in species interactions. ***The American Naturalist***. 171:658-668.
65. Nuismer, S.L. and B.J. Ridenhour. 2008. The contribution of parasitism on floral traits in *Heuchera grossulariifolia*. ***Journal of Evolutionary Biology***. 21:958-965.
66. Otto, S.P., M.R. Servedio, S.L. Nuismer. 2008. Frequency-dependent selection and the evolution of assortative mating. ***Genetics***. 179:2091-2112.
67. Oswald, B. and S.L. Nuismer. 2007. Neopolyploidy and pathogen resistance. 2007. ***Proceedings of the Royal Society of London Series B-Biological Sciences.*** 274:2393-2397
68. Nuismer, S.L., B.J. Ridenhour, B. Oswald. 2007. Antagonistic coevolution mediated by phenotypic differences between quantitative traits. ***Evolution***. 61:1823-1834.
69. Ridenhour, B.J. and S.L. Nuismer. 2007. Polygenic traits and parasite local adaptation. ***Evolution***. 61:368-376.
70. Gomulkiewicz, R., D.M. Drown, M.E. Dybdahl, W. Godsoe, S.L. Nuismer, K.M. Pepin, B.J. Ridenhour, C.I. Smith, J.B. Yoder. 2007. Dos and don'ts of testing the geographic mosaic theory of coevolution. ***Heredity***. 98(5):249
71. Nuismer, S.L. and J.N. Thompson. 2006. Coevolutionary alternation in antagonistic interactions. ***Evolution***. 60:2207-2217.
72. Nuismer, S.L. 2006. Parasite local adaptation in a geographic mosaic. ***Evolution***. 60:24-30.
73. Nuismer, S.L., and S.P. Otto. 2005. Host-parasite interactions and the evolution of gene expression. ***PLoS Biology***. 3(7):1283-1288.
74. Nuismer, S.L. and B.M. Cunningham. 2005. Selection for phenotypic divergence between diploid and autotetraploid Heuchera grossulariifolia. ***Evolution***. 59:1928-1935.
75. Nuismer, S.L., M. Doebeli, and D. Browning. 2005. The coevolutionary dynamics of antagonistic interactions mediated by quantitative traits with evolving variances. ***Evolution***. 59:2073-2082.
76. Nuismer, S. L., and S. P. Otto. 2004. Host-parasite interactions and the evolution of ploidy. ***PNAS*** 101:11036-11039. (Editor's choice; Science)
77. Otto, S. P., and S. L. Nuismer. 2004. Species interactions and the evolution of sex. ***Science.*** 304:1018-1020.
78. Nuismer, S. L., and M. Doebeli. 2004. Genetic correlations and the coevolution of three species systems. ***Evolution*** 58:1165-1177.
79. Kirkpatrick, M., and S. L. Nuismer. 2004. Sexual selection can constrain sympatric speciation. ***Proceedings of the Royal Society of London Series B-Biological Sciences*** 271:687-693.

80. Thompson, J.N., S.L. Nuismer, K.F. Merg. 2004. Plant polyploidy and the evolutionary ecology of plant/animal interactions. ***Biological Journal of the Linnean Society***. 82:511-519.
81. Gomulkiewicz, R., Nuismer, S.L., and J.N. Thompson. 2003. Coevolution when a mutualism is not always a mutualism. ***The American Naturalist***. 162: S80-S93
82. Nuismer, S. L., J. N. Thompson, and R. Gomulkiewicz. 2003. Coevolution between hosts and parasites with partially overlapping geographic ranges. ***Journal of Evolutionary Biology***. 16: 1337-1345
83. Nuismer, S.L., R. Gomulkiewicz, and M. Morgan. 2003. Coevolution in temporally variable environments. ***The American Naturalist***. 162: 195-204.
84. Nuismer, S. L., and M. Kirkpatrick. 2003. Gene flow and the coevolution of parasite range. ***Evolution***. 57:746-754.
85. Thompson, J. N., S. L. Nuismer, and R. Gomulkiewicz. 2002. Coevolution and maladaptation. ***Integrative and Comparative Biology*** 42:381-387.
86. Nuismer, S.L. and J.N. Thompson. 2001. Plant polyploidy and non-uniform effects on insect herbivores. ***Proceedings of the Royal Society of London B***. 268: 1937-1940.
87. Gomulkiewicz, R., J.N. Thompson, R.D. Holt, S.L. Nuismer and M.E. Hochberg. 2000. Hot spots, cold spots, and the geographic mosaic theory of coevolution. ***The American Naturalist***. 156: 156-174.
88. Nuismer, S.L., J.N. Thompson and R. Gomulkiewicz. 2000. Coevolutionary clines across selection mosaics. ***Evolution*** 54: 1102-1115.
89. Nuismer, S. L., J. N. Thompson and R. Gomulkiewicz. 1999. Gene flow and geographically structured coevolution. ***Proceedings of the Royal Society of London B***. 266: 605-609.
90. Alder, N. N., W. T. Pockman, J. S. Sperry and S. Nuismer. 1997. Use of centrifugal force in the study of xylem cavitation. ***Journal of Experimental Botany*** 48: 665-674.

BOOKS

Introduction to Coevolutionary Theory. 2017. W.H. Freeman and Company. New York.

BOOK CHAPTERS

Ridenhour, B.J. and S.L. Nuismer. Trait-mediated indirect interactions and the coevolutionary process. In Ohgushi, T., Schmitz, O.J. & Holt, R.D. 2013. Trait-Mediated Indirect Interactions: Ecological and Evolutionary Perspectives, Cambridge University Press, Cambridge, UK.

INVITED TALKS

Penn St. University. April 2024. Stopping spillover before it occurs: insights from mathematical models and Lassa virus.

NIH Rocky Mountain Laboratories. January 2024. Stopping spillover before it occurs: insights from mathematical models and Lassa virus.

University of Western Australia. December 2023. Stopping spillover before it occurs: insights from mathematical models and Lassa virus.
Washington St. University (Nairobi, Kenya). November 2023. Stopping spillover before it occurs: insights from mathematical models and Lassa virus.
Washington St. University. May 2022. Stopping spillover before it occurs: insights from mathematical models and Lassa virus.
University of Zurich. Transmissible vaccines: epidemiological and evolutionary perspectives. November 2021.
Ecology and Evolution of Infectious Disease keynote address. Transmissible vaccines: epidemiological and evolutionary perspectives. June 2021.
Auburn University. From tales of coevolution to a coevolutionary synthesis. April 2019.
Evo WIBO plenary address. From tales of coevolution to a coevolutionary synthesis. April 2018.
University of Tennessee. Evaluating the promise of a transmissible vaccine. November 2017.
University of Toronto. Evaluating the promise of a transmissible vaccine. October 2017.
Canadian Ecology and Evolution meetings. May 2017.
Ohio St. University. November 2015. Integrating coevolution into the tree of life.
CNRS, Montpellier, France. June 2014. Coevolution in two-step systems.
University of Illinois, Champagne, Illinois. May 2013. Coevolution and the architecture of mutualistic networks.
Portland State University, Portland, Oregon. November 2012. The dimensionality of local adaptation
University of Arizona. Tucson, Arizona. February 2012. Plant polyploidy and species interactions
Indiana University. Bloomington, Indiana. November 2011. The coevolution of mutualistic networks.
Ohio St. University. Mathematical Biosciences Institute. April 2011. What can studies of local adaptation and trait matching tell us about coevolution?
CNRS. Montpellier, France. January, 2010. When is correlation coevolution?
University of Fribourg. Fribourg, Switzerland. September 2009. Plant polyploidy and the evolutionary ecology of inerspecific interactions.
University of Fribourg. Fribourg, Switzerland. September 2009. Interspecific interactions and the diversification of polyploidy lineages.
University of Utah. Department of Mathematics. April 2009. When is correlation coevolution?
University of California, Davis. Population Biology Program. April 2008. Do we need a geographic mosaic theory to understand species interactions?
Cornell University. Department of Biology. March 2007. Host-parasite interactions and the evolution of ploidy.
New Mexico St. University. Department of Biology. February 2007. Host-parasite interactions and the evolution of ploidy.
Society for the Study of Evolution Symposium. June 2006. Alternative perspectives on evolutionary dynamics. Stony Brook University.
Ohio St. University. Mathematical Biosciences Institute. February 2006. Polygenic traits and parasite local adaptation.
Washington St. University. Plant Pathology. Fall 2005. Host parasite interactions and the evolution of ploidy

Washington St. University. Entomology. Fall 2004. Plant-insect interactions and the diversification of polyploid lineages.
University of Minnesota. Community Genetics. Fall 2003. Host parasite interactions and the evolution of ploidy.
Washington St. University. Biological Sciences. Fall 2003. Host parasite interactions and the evolution of ploidy.
Colorado St. University. Department of Biology. Coevolution in geographically structured interactions. Spring 2002.

EXTRAMURAL SERVICE

Organized international workshop on transmissible vaccines "Coordinating the development of self-disseminating vaccines for spillover prevention". March 2023.
Associate Editor, ***The American Naturalist***. January 2013-2021.
Associate Editor, ***Evolution***. January 2009-December 2012.
Organizer for the EVO-WIBO meetings 2010.
Organizer for Mathematical Biosciences Institute workshop "Coevolution and the Ecological Structure of Plant-insect Communities". April 2011.
Panelist for NSF Mathematical Biology Program
Panelist for NSF Dissertation Improvement Grants
Panelist for NSF Evolutionary Processes Cluster
Reviewer for *Science, Nature, PNAS, PLoS Biology, Evolution, American Naturalist, Genetics, Proceedings of the Royal Society of London, Series B., Ecology Letters,* and others.
PEES (Palouse Ecology, Evolution, and Systematics) organizer (Fall 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2014, 2015)
Local organizer for EVO-WIBO (Spring 2004, 2006, 2008, 2012, 2014, 2016)

INTRAMURAL SERVICE

Scientific Lead for Computational One Health (IIDS) (2022-2023).
REIC Committee (2014-present)
BCB Curriculum committee (2017-2018)
BCB Board (2015-2022)
Seed grant review panel (University). Spring 2012
Research Council (University). 2006-2008
Stillinger committee (College). 2011-2015
Vision committee (Department). 2012-present

FELLOWSHIPS AND AWARDS

Research and Creative Activity Excellence Award, University of Idaho, 2016
Early Career Faculty Award, University of Idaho, College of Science, 2008
James King Graduate Fellowship, Washington State University, Department of Biological Sciences, 2000
Abelson Graduate Fellowship, Washington State University, Department of Zoology, 1996

TEACHING

Professional Development: 2022
Ecology and Population Biology: 2004, 2005, 2006, 2007, 2008, 2009, 2011, 2012, 2013, 2015, 2016, 2018, 2019, 2020, 2021, 2022
Evolutionary Ecology: 2005, 2007, 2009, 2011, 2013, 2015
Modeling Evolutionary Dynamics: 2007
The Evolution of Infectious Disease: 2016
Epidemiological Modeling: 2018