

CURRICULUM VITAE FOR DR. BENJAMIN RIDENHOUR

Name: Benjamin Jerry Ridenhour
Address: University of Idaho
Department of Biological Sciences
Moscow, ID 83844

E-mail: bridenhour@uidaho.edu
Phone: (208)885-7231
Fax: (208)885-7905
Web: <http://ridenhourlab.org>

Professional Experience

Associate Professor of Mathematics and Statistical Science, University of Idaho, 2023–
Current
Assistant Professor of Mathematics, University of Idaho, 2018–2023
Associate Editor, *Frontiers in Ecology and Evolution*, 2021–Current
Associate Editor, *PLoS One*, 2022–Current
Assistant Research Professor of Biological Sciences, University of Idaho, 2014–2018
Assistant Professor of Biological Sciences, University of Notre Dame, 2010–2014
Influenza Epidemiologist (Theoretical/Computational), U.S. Centers for Disease Control
and Prevention (CDC), Battelle subcontract, 2008–2010
Postdoctoral Researcher in Biological Sciences, University of Idaho, 2006–2008
Lecturer in Biological Sciences, Washington State University, 2006
Postdoctoral Researcher in Biological Sciences, Washington State University, 2004–2005
Associate Instructor (Teaching Assistant) of Biology, Indiana University, 1998–2003

Education

2004 PhD: Evolution, Ecology, and Behavior
Department of Biology, Indiana University, Bloomington
Title: **THE COEVOLUTIONARY PROCESS: THE EFFECTS OF POPULATION STRUC-
TURE ON A PREDATOR-PREY SYSTEM**

1998 Bachelor of Arts
Major: Environmental Biology
Minors: Mathematics, German
Utah State University

Honors and Fellowships

2021 2021 University of Idaho President's Medallion
2010 CDC Certificate of Appreciation: Response to 2009 H1N1 Influenza Pandemic
2003 NSF IGERT Research Fellowship
2001 George W. Brackenridge summer research fellowship, Indiana University
1998 Graduated Magna Cum Laude, Utah State University
1997 Dr. Joseph E. Greaves Memorial Scholarship, Utah State University

Peer Reviewed Publications (Journal impact factor denoted in superscript.)

- [1] Ferguson, J., A. González-González, J. Kaiser, S. Winzer, J. Anast, B.J. Ridenhour, T.A. Miura, and C. Parent. 2023. Hidden variable models reveal the effects of infection from changes in host survival. **PLoS Computational Biology**^{4.53} 19:e1010910.
- [2] Metzger, G., B. J. Ridenhour, M. France, K. Gliniewicz, J. Millstein, M. L. Settles, L. Forney, T. Stalder, and E. Top. 2022. Biofilms preserve the transmissibility of a multi-drug resistance plasmid. **npj Biofilms and Microbiomes**^{6.77} 8:95.
- [3] Slanzon, G. S., B. J. Ridenhour, L. M. Parrish, S. C. Trombetta, D. A. Moore, W. M. Sischo, and C. S. McConnel. 2022. Effects of a farm-specific fecal microbial transplant (FMT) product on clinical outcomes and fecal microbiome composition in preweaned dairy calves. **PLoS One**^{3.24} 17: e0276638.
- [4] Bayat-Mokhtari, E. and B. J. Ridenhour. 2022. Filtering ASVs/OTUs via mutual information-based microbiome network analysis. **BMC Bioinformatics**^{4.34} 23:380.
- [5] Ridenhour, B. J., D. Sarathchandra, E. Seamon, H. Brown, F.-Y. Leung, M. Johnson-Leon, M. Megheib, C. R. Miller, and J. Johnson-Leung. 2022. Effects of trust, risk perception, and health behavior on COVID-19 disease burden: Evidence from a multi-state US survey. **PLoS One**^{3.24} 17:e0268302.
- [6] Hsueh, B. Y., G. B. Severin, C. A. Elg, E. J. Waldron, A. Kant, A. J. Wessel, J. A. Dover, C. R. Rhoades, B. J. Ridenhour, K. N. Parent, M. B. Neiditch, J. Ravi, E. M. Top, and C. M. Waters. 2022. Phage defence by deaminase-mediated depletion of deoxynucleotides in bacteria. **Nature Microbiology**^{17.75} 7:1210-1220.
- [7] Slanzon, G. S., B. J. Ridenhour, D. A. Moore, W. M. Sischo, L. M. Parrish, S. C. Trombetta, and C. S. McConnel. 2022. Fecal microbiome profiles of neonatal dairy calves with varying severities of gastrointestinal disease. **PLoS One**^{3.24} 17: e0262317.
- [8] Van Leuven, J. T., A. J. Gonzalez, E. C. Ijezie, A. Q. Wixom, J. L. Clary, M. N., Naranjo, B. J. Ridenhour, C. R. Miller, and T. A. Miura. 2021. Rhinovirus reduces the severity of subsequent respiratory viral infections by interferon-dependent and -independent mechanisms. **mSphere**^{4.39} 6:e00479-21.
- [9] Remien, C. H., M. E. Eckwright, and B. J. Ridenhour. 2021. Parameter identifiability of the generalized Lotka-Volterra model for microbiome studies. **Royal Society Open Science**^{2.96} 8:201378.
- [10] Baumgaertner, B., B. J. Ridenhour, F. Justwan, J. E. Carlisle, and C. R. Miller. 2020. Risk of disease and willingness to vaccinate in the United States: A population-based survey. **PLoS Medicine**^{10.5} 17: e1003354.
- [11] Lee, J. A., S. Riazi, S. H. Nemati, J. V. Bazaruto, A. E. Vasdekis, B. J. Ridenhour, C. H. Remien, and C. J. Marx. 2019. Microbial phenotypic heterogeneity in response to a metabolic toxin: continuous, dynamically shifting distribution of formaldehyde tolerance in *Methylobacterium extorquens* populations. **PLoS Genetics**^{5.54} 15: e1008458.

- [12] Witkin S., A. Moron, B. J. Ridenhour, E. Minis, A. Hatanaka, S. Sarmento, M. Franca, F. Carvalho, T. Hamamoto, R. Mattar, E. Sabino, I. Linhares, M. Rudge, and L. J. Forney. 2019. Vaginal biomarkers that predict cervical length and dominant bacteria in the vaginal microbiome of pregnant women. **mBio**^{6.75} 10:e02242-19.
- [13] Nunn, K. L., B. J. Ridenhour, E. M. Chester, V. J. Vitzthum, J. D. Fortenberry, and L. J. Forney. 2019. Vaginal glycogen, not estradiol, is associated with vaginal bacterial community composition in black adolescent women. **Journal of Adolescent Health**^{4.1} 65:130–138.
- [14] Gliniewicz K., G. M. Schneider, B. J. Ridenhour, C. J. Williams, Y. Song, M. A. Farage, K. Miller, and L. J. Forney. 2019. Comparison of the vaginal microbiomes of premenopausal and postmenopausal women. **Frontier in Microbiology**^{4.1} 10:193.
- [15] France, M. T., B. J. Ridenhour, and L. J. Forney. 2018. Effects of spatial structure and reduced growth rates on evolution in bacterial populations. In *Grand Challenges in Biology and Biotechnology: Molecular Mechanisms of Microbial Evolution*. Ed: Pabulo H. Rampelotto. Springer International Publishing: Berlin. pp. 175—197.
- [16] Ridenhour, B. J. and J. R. Ridenhour. 2018. Stability of equilibria in quantitative genetic models based on modified-gradient systems. **Journal of Biological Dynamics**^{1.3} 12:39–50.
- [17] Ridenhour, B. J., S. L. Brooker, J. E. Williams, J. T. Van Leuven, A. W. Miller, M. D. Dearing, and C. H. Remien. 2017. Modeling time-series data from microbial communities. **ISME Journal**^{9.7} 11:2526–2537.
- [18] J. T. Van Leuven, B. J. Ridenhour, C.R. Miller, and T. A. Miura. 2017. Lung epithelial cells have virus-specific and shared gene expression responses to infection by diverse respiratory viruses. **PLoS One**^{4.1} 12:e0178408.
- [19] Ridenhour, B. J., G. A. Metzger, M. France, K. Gliniewicz, J. Millstein, L. J. Forney, and E. M. Top. 2017. Persistence of antibiotic resistance plasmids in bacterial biofilms. **Evolutionary Applications**^{4.6} 10:640–647.
- [20] Nardin, L. G., C. R. Miller, B. J. Ridenhour, S. M. Krone, P. Joyce, and B. O. Baumgaertner. 2016. Planning horizon affects prophylactic decision-making and epidemic dynamics. **PeerJ**^{2.2} 4:e2678.
- [21] Ridenhour, B. J. and M. J. Cramer. 2015. Differentiation of white-footed mice (*Peromyscus leucopus*) and deer mice (*Peromyscus maniculatus*) of the Upper Midwest using PCR melt curve analysis. **Conservation Genetics Resource**^{1.1} 7:29–31.
- [22] Turner, K. G., M. J. Smith, and B. J. Ridenhour. 2014. Whirling disease dynamics: an analysis of intervention strategies. **Preventive Veterinary Medicine**^{2.4} 113:457–468.
- [23] Ridenhour, B. J., J. M. Kowalik, and D. K. Shay. 2014. Unravelling R_0 : Considerations for public health applications. **American Journal of Public Health**^{3.9} 104:e32–e41.
- [24] Ridenhour, B. J. and S. L. Nuismer. 2014. A quantitative genetic approach to predicting change in biological communities. **Theoretical Ecology**^{2.1} 7:137–148.

- [25] Ridenhour, B. J. 2014. Coevolution. In *Oxford Bibliographies in Evolutionary Biology*. Ed: J. Losos. New York: Oxford University Press.
- [26] Ridenhour, B. J., M. A. Campitelli, J. C. Kwong, L. C. Rosella, B. G. Armstrong, P. Mangtani, A. J. Calzavara, and D. K. Shay. 2013. Effectiveness of inactivated influenza vaccines in preventing influenza-associated deaths and hospitalizations among Ontario residents aged ≥ 65 years: Estimates with generalized linear models accounting for healthy vaccinee effects. **PLoS One**^{4.1} 8:e76318.
- [27] Ridenhour, B. J. and S. L. Nuismer. BOOK CHAPTER. 2012. Trait-mediated indirect interactions and the coevolutionary process. In *Ecology and Evolution of Trait-mediated Indirect Interactions: Linking Evolution, Community, and Ecosystem*. Eds: T. Ohgushi, O. Schmitz, and R. Holt. New York: Cambridge University Press. pp. 207–220.
- [28] Thompson, W. W., B. J. Ridenhour, J. P. Barile, and D. K. Shay. 2012. Time-series analyses of count data to estimate the burden of infectious diseases. **Epidemiology**^{5.6} 23:839–842.
- [29] Burkhardt, A., B. J. Ridenhour, L. F. Delph, and G. Bernasconi. 2012. The contribution of a pollinating seed predator to selection on *Silene latifolia* females. **Journal of Evolutionary Biology**^{3.3} 25:461–472.
- [30] Ridenhour, B. J., A. Braun, T. Teyrasse, and D. Goldsman. 2011. Controlling the spread of disease in schools. **PLoS One**^{4.1} 6: e29640.
- [31] Nuismer, S. L., R. Gomulkiewicz, and B. J. Ridenhour. 2010. When is correlation coevolution? **American Naturalist**^{4.7} 175: 525–537.
- [32] Kölliker, M., B. J. Ridenhour, and S. Gaba. 2010. Antagonistic parent-offspring coadaptation. **PLoS One**^{4.1} 5: e8606.
- [33] Shay, D. K. and B. J. Ridenhour. 2009. Can we “hedge” against the development of antiviral resistance among pandemic influenza viruses? **PLoS Medicine**^{16.3} 6: e1000103.
- [34] Ridenhour, B. J. and A. T. Storfer. 2008. Geographically variable selection in *Ambystoma tigrinum* Virus (Iridoviridae) throughout the Western United States. **Journal of Evolutionary Biology**^{3.3} 21:958–965.
- [35] Nuismer, S. L. and B. J. Ridenhour. 2008. The contribution of parasitism to selection on floral traits in *Heuchera grossularifolia*. **Journal of Evolutionary Biology**^{3.3} 21:1151–1159.
- [36] Storfer, A., M. E. Alfaro, B. J. Ridenhour, J. K. Jancovich, S. G. Mech, M. J. Parris, and J. P. Collins. 2007. Phylogenetic concordance analysis shows an emerging pathogen is novel and endemic. **Ecology Letters**^{17.6} 10:1075–1083.
- [37] Nuismer, S. L., B. J. Ridenhour, and B. Oswald. 2007. Antagonistic coevolution mediated by phenotypic differences between quantitative traits. **Evolution**^{5.1} 61:1823–1834.
- [38] Ridenhour, B. J., E. D. Brodie, Jr., and E. D. Brodie III. 2007. Patterns of genetic differentiation in *Thamnophis* and *Taricha* from the Pacific Northwest. **Journal of Biogeography**^{4.5} 34:724–735.

- [39] Gomulkiewicz, R., D. M. Drown, M. F. Dybdahl, W. Godsoe, S. L. Nuismer, K. M. Pepin, B. J. Ridenhour, C. I. Smith, and J. B. Yoder. 2007. Dos and don'ts of testing the geographic mosaic theory of coevolution. **Heredity**^{4.6} 98:249–258.
- [40] Giordano, A. R., B. J. Ridenhour, and A. Storfer. 2007. Tests of the influences of altitude and topography on genetic structure in the long-toed salamander (*Ambystoma macrodactylum*). **Molecular Ecology**^{5.5} 16:1625–1637.
- [41] Ridenhour, B. J. and S. L. Nuismer. 2007. Polygenic traits and parasite local adaptation. **Evolution**^{5.1} 61:368–376.
- [42] Ridenhour, B. J. 2005. Identification of selective sources: partitioning selection based on interactions. **American Naturalist**^{4.7} 166:12–25.
- [43] Freedberg, S., M. A. Ewert, M. Neiman, B. Ridenhour, and C. E. Nelson. 2005. Nesting fidelity and molecular evidence for natal homing in the freshwater turtle, *Graptemys kohnii*. **Proceedings of the Royal Society: B**^{5.4} 272:1345–1350.
- [44] Ridenhour, B. J., E. D. Brodie, Jr., and E. D. Brodie III. 2004. Resistance of neonates and field-collected garter snakes (*Thamnophis spp.*) to tetrodotoxin. **Journal of Chemical Ecology**^{2.7} 30:143–154.
- [45] Brodie, E. D. III and B. J. Ridenhour. 2003. Reciprocal selection at the phenotypic interface of coevolution. **Integrative and Comparative Biology**^{2.4} 43:408–419.
- [46] Brodie, E. D., Jr., B. J. Ridenhour, and E. D. Brodie III. 2002. The evolutionary response of predators to dangerous prey: Hotspots and coldspots in the geographic mosaic of coevolution between garter snakes and newts. **Evolution**^{5.1} 56:2067–2082.
- [47] Ridenhour, B. J., E. D. Brodie, Jr., and E. D. Brodie III. 1999. Repeated injections of TTX do not affect TTX resistance or growth in the garter snake *Thamnophis sirtalis*. **Copeia**^{1.0} 1999:531–535.

Editor Reviewed Publications

- [1] Ridenhour, B. J. 2016. Coevolutionary fitness landscapes. In *The Encyclopedia of Evolutionary Biology*. Ed: Richard M. Kliman. Academic Press: Oxford. pp. 299–304.
- [2] Ridenhour, B. J. and E. M. Top. 2016. Plasmid driven evolution of bacteria. In *The Encyclopedia of Evolutionary Biology*. Ed: Richard M. Kliman. Academic Press: Oxford. pp. 301–306.

Papers Submitted or In Revision for Publication

- [1] Zhao, L., B.J. Ridenhour, and C.H. Remien. Trait evolution in microbial communities. *In revision*.

- [2] Ridenhour, B. J., P. Y. Cheng, K. A. Button-Simons, and D. K. Shay. Using mortality reports from 122 US cities to forecast complete US mortality data and estimate influenza-associated deaths: using sentinel surveillance data to predict population-level disease incidence. *In revision*.
- [3] Oswald, B. P. and B. J. Ridenhour. Impact and cost-effectiveness of influenza vaccination in the United States 2005-2010. *In revision*.
- [4] Kowalik, J. M. and B. J. Ridenhour. Epidemiological modeling of a bioterrorist attack on the I-95 corridor. *In revision*.

Extramural Funds

- 2022 (Intramural Pilot Grant) “*Modeling the chlamydial developmental cycle.*” (June 2022–June 2023) \$111,622. **Co-PI with S. Grieshaber**
- 2021 (Intramural Pilot Grant) “*Using wastewater to predict COVID-19 outbreaks in rural communities.*” (June 2021–June 2022) \$118,000 **Co-PI with E. Coats, T. Stalder, and E. Top**
- 2020 NIH 3P20GM104420-06A1S1 “*Center for Modeling Complex Interaction: COVID-19 Modeling Supplement*” (July 2020 – June 2021) \$636,933 **Project Director; PI: Wichman**
- 2020 NIH 1R01AG065546-01A1 “*Microbiome-mediated therapies for aging and healthspan in marmosets.*” (October 2020 – September 2025) \$431,630 **UI Subaward PI.**
- 2020 NIH 3P20GM104420-06A1S1 “*Center for Modeling Complex Interaction: Population Dynamic Models of Microbial Interactions (Sub-project 3)*” (July 2020 – June 2022) \$327,028 **Senior Personnel; Project Director: Remien; PI: Wichman**
- 2018 NIFA/USDA. 2018-67017-27630 “*Tracking the Spread of Antibiotic Resistance Genes and Plasmids in Agricultural Soils.*” (May 2018 – April 2021) \$499,999 **Co-PI with E. Top & T. Stalder**
- 2016 NIH R24OD020347 “*Research to Improve and Standardize Marmoset Nutrition and Dietary Husbandry.*” (March 2016–March 2021) \$496,153 **UI Subaward PI.**
- 2016 NIH 1R01NR015495. “*Elucidating causes of vaginal symptoms using a multi-omics approach.*” (March 2016 – March 2021) \$387,071 **Senior Personnel; UI Subaward PI: L. Forney**
- 2016 Johnson and Johnson. “*Best Practices in the Analysis of High-Throughput Data from the Human Microbiome.*” (June 2016 – Dec 2017) \$151,236 **Co-PI with L. Forney**
- 2015 NSF-BEACON 624. “*Use it and lose it: Alternating selection promotes horizontal gene transfer.*” (August 2015 – August 2016) \$85,337 **Co-PI with W. Loftie-Eaton, G. Metzger, E. Top, B. Kerr (U Washington), S. Estrella (U Washington), H. Jordt (U Washington)**
- 2012 CDC-IPA 1210407. “*CDC Detail via Intergovernmental Personnel Act.*” Research funds provided by the Influenza Division for biomathematical/biostatistical modeling of influenza related issues. (August 2012 – August 2013) ~\$11,000 **PI.**
- 2011 CDC-IPA 1110338. “*CDC Detail via Intergovernmental Personnel Act.*” Research funds provided by the Influenza Division for biomathematical/biostatistical modeling of influenza related issues. (August 2011 – August 2012) ~\$11,000 **PI.**
- 2008 Switzerland NSF, Ambizione Grant. “*Determining Selective Pressures in Simple Communities.*” *Awarded but not accepted.* 500,000 CHF (~ 459,000 USD) **PI.**
- 2001 NSF-DEB 0104995. “*Dissertation Research: The scale of predator-prey interactions: gene flow and the geographic mosaic.*” (May 2001 – September 2003) ~\$10,000 **PI; Advisor:**

E. Brodie III

Advisee Theses and Dissertations

- [1] Moxley, T. 2022. MASTER OF SCIENCE THESIS. Application of elastic net regression for modeling COVID-19 sociodemographic risk factors.
- [2] Kowalik, J. 2014. MASTER OF SCIENCE THESIS. Epidemiological modeling of a bioterrorist attack on the I-95 corridor.
- [3] Cronin, I. 2014. HONORS THESIS. The prevalence of *Babesia* sp., *Rickettsia* sp., and *Ehrlichia* sp. in the Upper Midwestern United States.
- [4] Carmack, A. 2014. HONORS THESIS. Regional compartmental epidemiological modeling of influenza in the United States with wavelet analysis.

Teaching and Mentoring Experience

University of Idaho (2014–Present)

- Courses Taught
 - MATH 275 Calculus III (2020)
 - MATH 310 Differential Equations (2019)
 - STAT 427 R Programming (2022)
 - MATH 438 Mathematical Modeling (2019,2021)
 - MATH 452 Mathematical Statistics (2021,2022)
 - MATH 499 Directed Study: Math Modelling Research (2020)
 - BCB 508 Lab experience in Mathematics/Statistics (2016,2019)
 - BIOL 501 SEM: The Evolution of Infectious Diseases (2016)
- Post-doctoral Mentoring
 - Tyler Meadows (2019–2021)
 - Elham Bayat-Mokhtari (2019–2020)
- Graduate Mentoring
 - Tristan Moxley (**Advisor**, 2022–Current, PhD)
 - Tristan Moxley (**Advisor**,2021–2022, MSc awarded)
- Graduate Advisory Committees
 - Noha Aziz (Thesis Committee, Statistics Dept., 2014–2015, MSc awarded)
 - Genevieve Metzger (Doctoral Committee, BCB Program, 2014–2016, PhD awarded)
 - Kenetta Nunn (BCB Rotation, 2016)
 - Evan Martin (Doctoral Committee, BCB Program, 2019–2020, PhD awarded)
 - Mariah Eckwright (Thesis Committee, BCB Program, 2016–2021, MSc awarded)
 - Marc Wiseman (Thesis Committee, Mathematics and Statistical Sciences Dept., 2020–2021, MSc awarded)
 - Giovana Slanzon (Doctoral Committee, Veterinary Clinical Sciences, 2019–2022, PhD awarded)
 - Clinton Elg (Doctoral Committee, BCB Program, 2017–Current)
 - Salvador (Chava) Castaneda (Doctoral Committee, BCB Program, 2018–Current)
 - Ian Oiler (Doctoral Committee, BCB Program, 2019–Current)

- Undergraduate Mentoring
Courtney Flynn (2016); Kellie Rich (2020); Leah Davidson (2020); Riley Kouns (2022)
University of Notre Dame (2010–2014)
- Courses Taught
BIOS 40427 Epidemiology and Ecology of Infectious Diseases (2011, 2012, 2013)
BIOS 60569 Evolution and Ecology of Infectious Diseases (2011)
BIOS 60578 Linear Algebra for Biologists (2011)
BIOS 60578 Computational Biology (2012)
- Post-doctoral Mentoring
Benjamin P. Oswald (2011–2012; currently at the Institute for Bioinformatics and Evolutionary Studies at University of Idaho.)
- Graduate Mentoring
Jessica Kowalik (**Advisor**, 2012–2014, MSc awarded)
Kimbra Turner (**Advisor**, 2010–2014)
Katerina Button-Simons (**(Co-)advisor**, 2012–2014)
- Graduate Advisory Committees
Marie Labouche (Doctoral Committee, University of Neuchatel, 2008–2011; PhD awarded)
Annette Ruth (Thesis Committee, 2011–2012; MSGH awarded)
Erica Kistner (Doctoral Committee, 2011–2014; PhD awarded)
Nolan Noble (Doctoral Committee, Economics Dept., 2012–2014; PhD awarded)
Sheri Sanders (Doctoral Committee, 2012–2014)
Kerry Regan (Doctoral Committee, 2012–2014)
Elizabeth Miller (Doctoral Committee, 2012–2014)
Nicholas Bonneau (Doctoral Committee, History Dept., 2012–2014)
- Undergraduate Mentoring
Annette Ruth (2010–2011); Matthew Smith (2011–2012); Dan Nelson (2010–2013);
Erin Jones (2010–2013); Philip Lettieri (2010–2013); Bethany Herila (2011–2012);
Ryan Lion (2012); David Willcutts (2012–2013); Anna Carmack (2010–2014); Ian
Cronin (2013–2014); Hillary Rolfs (2014)
University of Neuchatel (Switzerland), 2009
- SHORT COURSE: Analyzing and attributing natural selection to particular sources.
University of Idaho (2006–2008)
- Courses Taught
BIOL 504 Modeling Evolutionary Dynamics (2007)
Washington State University (2004–2006)
- Courses Taught
M BIOS 301 Genetics (2006)
- Undergraduate Mentoring
Jessica Zelnik (2 Semesters)
Indiana University (1998–2004)
- Courses Taught as Teaching Assistant
BIOL L319 Genetics, 7 Semesters
BIOL M215 Microbiology, 1 Semester
BIOL M255 Microbiology, 1 Semester
- Undergraduate Mentoring

Mike Weaver (1 Semester); Allison Klug (2 Semester); John Chuckalovcak (3 Semesters);
Nicole Combs (2 Semesters)

Society Memberships

Society of Industrial and Applied Mathematics
Society for Mathematical Biology
Mathematical Association of America
American Society of Ichthyologists and Herpetologists
Society for the Study of Evolution
American Society of Naturalists
Ecological Society of America
International Society for Influenza and other Respiratory Virus Diseases

Ad-Hoc Journal Reviews

<i>Am. J. Public Health</i>	<i>Lancet Infectious Diseases</i>
<i>American Naturalist</i>	<i>Molecular Ecology</i>
<i>American Zoologist</i>	<i>Nature Communications</i>
<i>Biol. J. of the Linnean Society</i>	<i>Nature Evolution & Ecology</i>
<i>BioScience</i>	<i>Nature Methods</i>
<i>Conservation Genetics</i>	<i>Parasites & Vectors</i>
<i>Diversity and Distributions</i>	<i>PeerJ</i>
<i>Ecology</i>	<i>PLoS Comp. Biol.</i>
<i>Ecology Letters</i>	<i>PLoS One</i>
<i>Evolution</i>	<i>P. Roy. Soc. B – Biol. Sci.</i>
<i>Evolutionary Applications</i>	<i>Roy. Soc. Open Sci.</i>
<i>Evolutionary Ecology</i>	<i>Science</i>
<i>Frontiers in Microbiology</i>	<i>Science Transl. Med.</i>
<i>Functional Ecology</i>	<i>Scientific Reports</i>
<i>Herpetologica</i>	<i>Stat. in Med.</i>
<i>Influenza and Other Respiratory Viruses</i>	<i>Theoretical Population Biology</i>
<i>J. Theoretical Biology</i>	<i>Trends in Ecol. & Evol.</i>
<i>J. Infectious Diseases</i>	<i>Vaccine</i>
<i>J. Ped. Inf. Dis. Soc.</i>	

Granting Agency Reviews

<i>British Columbia Forest Sci. Prog.</i>	<i>Czech Science Foundation</i>
<i>Medical Research Council (UK)</i>	<i>National Science Foundation (USA)</i>

Invited Seminars

Nov 2020 University of Idaho: *The spread of COVID-19 in Idaho*
Aug 2020 Invited panelist, webinar on “Battling Emerging & Re-emerging Epidemics & Designing Mitigating Strategies; Series II: Linking Quantitative Models to the Data” hosted by the Intercollegiate Biomathematics Alliance: *Modeling and Forecasting COVID-19 in Idaho and Beyond*

- Jul 2020 Invited panelist, presented online to Society of Actuaries: *Forecasting COVID-19 in 2020 and Beyond*
- May 2020 Presented online to Kennell and Associates, Inc.: *Early Prevention Efforts of COVID-19 Pandemic in Idaho*
- Feb 2017 University of Idaho: *Models of Evolution, Disease Spread, and Microbiomes*
- Jan 2016 University of Idaho: *Estimating influenza's impact in the US*
- Apr 2015 University of Idaho: *Effectiveness of influenza vaccination.*
- Jun 2013 Eastern Washington University: *Flu fighters: Is influenza vaccination successful?*
- Apr 2012 Illinois State University: *Understanding diseases and disease interventions in a complex world.*
- Apr 2011 Mathematical Biosciences Institute (MBI): *Estimating selection in interspecific interactions: theory and practice.* NB: MBI is an NSF funded institute located at Ohio State University.
- Dec 2010 Modeling for Public Health Action Conference: **Value of modeling during the national response to the 2009 H1N1 pandemic**, Panelist.
- Feb 2010 University of Notre Dame: *Predicting patterns of species interactions and disease.*
- Jan 2010 University of Florida: *Eco-evolutionary dynamics of diseases.*
- Feb 2010 University of Georgia: *Using population genetic techniques to understand the swine flu pandemic.*
- Nov 2008 Georgia Technical Institute: *A simple quantitative genetic model of parent-offspring interactions.*
- Oct 2008 Iowa State University: *Ecology and evolution of species interactions.*
- Sep 2008 MITACS-PHAC Workshop on Managing Public Health Crises: *Using individual based models to judge the impact of school closures.* NB: Workshop held at CDC British Columbia in Vancouver.
- Aug 2008 **ESA Conference Symposium, Evolution in a Community Context:** *The interplay between coevolution and communities.*
- Feb 2008 University of New Brunswick: *Influence of space and complexity on the Red Queen.*
- Nov 2007 Western Washington University: *Studies of coevolution at multiple levels.*
- Nov 2007 UCLA: *The context of coevolution.*
- Sep 2007 University of Lausanne, Switzerland: *Moving from genes to communities in coevolution.*
- Sep 2007 University of Basel, Switzerland: *Detecting selection in plant-parasite interactions.*
- Aug 2007 University of Fribourg, Switzerland: *Coevolution at multiple scales.*
- May 2007 University of Guelph, Canada: *Coevolution at multiple scales.*
- Dec 2005 University of Tübingen, Germany: *Coevolution: Theoretical and empirical exploration of antagonistic interactions.*

Professional / Contributed Presentations

- Jun 2013 Snowbird, UT. Joint Annual Meeting of SSE, ASN, and SSB: *The importance of non-random encounters in species interactions.*
- Sep 2010 HKCEC, Hong Kong. Options for the Control of Influenza VII. *Estimating influenza associated excess death during the 2009 H1N1 pandemic using cause-specific forecast data.*
- Jun 2008 Univeristy of Minnesota. Joint Annual Meeting of SSE, ASN, and SSB: *Correlated interactions in simple communities.*

- June 2006 SUNY at Stony Brook. Joint Annual Meeting of SSE, ASN, and SSB: *Polygenic traits and parasite local adaptation*.
- Nov 2004 Arizona State University. Integrative Research Challenge in Evolutionary Biology Annual Meeting: *Virus effects on host population dynamics*.
- Aug 2004 University of Idaho/Washington State University. Initiative in Organismal Interactions Meeting: *Effects of population structure on a predator-prey system*.

Student & Collaborator Contributions

Name of presenter indicated in **bold**.

- Oct 2016 POSTER: *Effects of environmental factors on the abundance of introduced rough-skinned newt populations in Moscow, ID* by **C. K. Flynn** and B. J. Ridenhour. Presented at The Wildlife Society Annual Conference, Raleigh, NC.
- Aug 2016 TALK: *Estimating interactions from microbial time-series data* by **C. Remien**, S. Brooker, J. Williams, J. Van Leuven, and B. Ridenhour. Presented at: Symposium on host-microbe systems biology: From models to medicine, Eugene, OR.
- Apr 2016 TALK: *Plasmid persistence in Acinetobacter baumannii in biofilms and liquid cultures* by **G. Metzger**, J. Millstein, M. France, K. Gliniewicz, T. Stalder, M. Settles, B. Ridenhour, L. Forney, and E. Top. Presented at: EVO-WIBO, Port Townsend, WA.
- Mar 2016 TALK: *Biofilm growth and the evolution of plasmid persistence* by **G. Metzger**, J. Millstein, M. France, K. Gliniewicz, T. Stalder, M. Settles, B. Ridenhour, L. Forney, and E. Top. Presented at: University of Oregon.
- Mar 2016 TALK: *Biofilm growth and the evolution of plasmid persistence* by **G. Metzger**, J. Millstein, M. France, K. Gliniewicz, T. Stalder, M. Settles, B. Ridenhour, L. Forney, and E. Top. Presented at: Oregon State University.
- Oct 2015 POSTER: *Persistence of an antibiotic resistance plasmid in Acinetobacter baumannii in both biofilms and liquid cultures* by **S. West**, G. Metzger, J. Millstein, M. France, K. Gliniewicz, M. Settles, B. Ridenhour, L. Forney, and E. Top. Presented at: Western Regional IDeA Conference, Coeur d'Alene, ID.
- Oct 2015 POSTER: *Evolution of persistence of a multidrug resistance plasmid in Acinetobacter baumannii liquid cultures and biofilms* by **G. Metzger**, J. Millstein, M. France, K. Gliniewicz, T. Stalder, M. Settles, B. Ridenhour, L. Forney, and E. Top. Presented at: IBEST Science Expo, University of Idaho.
- Aug 2015 POSTER: *Persistence of an antibiotic resistance plasmid in Acinetobacter baumannii in both biofilms and liquid cultures* by **S. West**, G. Metzger, J. Millstein, M. France, K. Gliniewicz, M. Settles, B. Ridenhour, L. Forney, and E. Top. Presented at: Western Regional IDeA Conference, Coeur d'Alene, ID. Presented at: INBRE Poster session, University of Idaho.
- Jul 2015 POSTER: *Persistence of plasmid-encoded drug resistance in Acinetobacter baumannii in liquid culture and biofilms* by **G. Metzger**, J. Millstein, M. France, K. Gliniewicz, M. Settles, B. Ridenhour, L. Forney, and E. Top. Presented at: Gordon Research Conference on Microbial Population Biology, Andover, MA.
- May 2015 POSTER: *Plasmid maintenance in Acinetobacter baumannii in biofilms and liquid cultures* by **T. Wilkinson**, G. Metzger, B. Ridenhour, M. France, T. Stalder, K. Gliniewicz, M. Settles, J. Millstein, L. Forney, and E. Top. Presented at: Undergraduate Poster Session, Department of Biological Sciences, University of Idaho.

- Oct 2014 POSTER: *Maintenance of plasmid-encoded drug resistance in Acinetobacter baumannii in liquid culture and biofilms* by **G. Metzger**, J. Millstein, T. Stalder, K. Gliniewicz, M. Settles, B. Ridenhour, L. Forney, and E. Top. Presented at: 10th Annual College of Science Student Research Expo, University of Idaho. WINNER OF BEST GRADUATE STUDENT POSTER.
- May 2014 POSTER: *Regional Compartmental Epidemiological Modeling of Influenza in the United States with Wavelet Analysis* by **A. Carmack**. Presented at: Notre Dame College of Science Joint Annual Meeting (COS JAM).
- Oct 2013 POSTER: *The Incidence Rate of Several Tick-borne Diseases within Potential Hosts in the Midwestern United States* by **I. Cronin**. Presented at: Notre Dame College of Science Joint Annual Meeting (COS JAM).
- Mar 2013 TALK: *Whirling ouse Dynamics: An Analysis of Intervention Strategies* by **K. Turner**, M. Smith, and B. Ridenhour. Presented at: Midwest Evolution and Ecology Conference.
- Feb 2012 POSTER: *Silent All These Years: Mapping Mortality in the Atlantic World* by **N. Bonneau**. Presented at: Notre Dame Graduate Research Symposium. WON FIRST PRIZE IN THE HUMANITIES DIVISION.
- Apr 2012 POSTER: *Digging Past Epidemics: Coupling Archaeology to Epidemiology to Solve Current Disease Problems* by **P. Lettieri**, I. Kuijt and B. Ridenhour. Presented at: Council for Undergraduate Research Posters on the Hill, Washington, DC.
- May 2012 POSTER: *Modeling Seasonal Influenza in Indiana with an Age-Stratified SEIR Model* by **M. Smith** and B. Ridenhour. Presented at: Notre Dame College of Science Joint Annual Meeting (COS JAM).
- Nov 2012 POSTER: *Heavy metal (cadmium) adaptation in Daphnia magna : A model organism for ecotoxicology* by **S. Roy**, B. Ridenhour and M. Pfrender. Presented at: Society of Environmental Toxicology and Chemistry Annual Meeting.