

Phoebe Lehmann Zarnetske

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Academic Appointments

- 2013- **Assistant Professor, Michigan State University** – East Lansing, MI
Department of Forestry, Department of Fisheries and Wildlife; Adjunct: Plant Biology
- 2011-2013 **Postdoctoral Fellow, Yale Climate and Energy Institute**
Yale University School of Forestry & Environmental Studies – New Haven, CT
Gratis Researcher, Ecology and Evolutionary Biology, University of Connecticut – Storrs, CT
Research: The community ecology of climate change: understanding and predicting changes in the composition and distribution of ecological communities during climate change.
Advisors: D.K. Skelly (Yale), M.C. Urban (UCONN)

Education

- 2011 **Ph.D. in Integrative Biology (Zoology), minors in Ecosystem Informatics, Statistics**
Dissertation: The influence of biophysical feedbacks and species interactions on grass invasions and coastal dune morphology in the Pacific Northwest, USA.
Oregon State University – Corvallis, OR (Advisors: S.D. Hacker, E.W. Seabloom)
- 2006 **M.S. in Ecology**
Thesis: Landscape scale habitat classification modeling with incomplete data: the generation of ecologically-based pseudo-absence points.
Utah State University, USGS Cooperative Unit – Logan, UT (Advisor: T.C. Edwards, Jr.)
- 2001 **B.A. in Biology, Environmental Science concentration**
Colby College – Waterville, ME
School for Field Studies, Center for Sustainable Development – Atenas, Costa Rica

Research & Work Experience

- 2011-2012 **Research Scientist, Aquatic & Reporting Unit, Science & Technical Group** Department of Conservation (DOC) – Christchurch, New Zealand
Research: Predicting current and future distributions of *Didymosphenia geminata* invasive diatom in New Zealand; modeling natural and human dispersal along stream networks
Principal Collaborators: P. Gerbeaux (DOC), C. Kilroy (National Institute of Water and Atmospheric Research, NIWA), J. Leathwick (DOC), M. Bothwell (Environment Canada).
- 2010 **Visiting Scientist, Ecological Modeling and Aquatic Biodiversity and Biosecurity Units**
National Institute of Water and Atmospheric Research (NIWA) – Christchurch, New Zealand.
Research: Developed models of *D. geminata* distributions in New Zealand rivers and streams; species distribution modeling with boosted regression trees.
Principal Collaborators: J. Leathwick (DOC), C. Kilroy (NIWA), P. Gerbeaux (DOC).

- 2010 **Visiting Scientist, Coastal Dune Research Group**
University of Otago – Dunedin, New Zealand.
Research: The influence of different vegetation species on dune geomorphology: integrating ecology and computational fluid dynamics modeling.
Principal Collaborators: W. Pattanapol, S. Wakes, M. Hilton, K. Dickinson.
- 2006-2011 **Graduate Fellow, NSF IGERT Ecosystem Informatics**
Oregon State University – Corvallis, OR
Research: Performed interdisciplinary and collaborative research across ecology, geosciences, mathematics, and engineering. Co-developed and completed innovative experimental and modeling research investigating the impact of invasive beach grasses on coastal dune ecology, geomorphology, and ecosystem services.
Principal Collaborators/Supervisors: S.D. Hacker (OSU), E.W. Seabloom (U. Minnesota), P. Ruggiero (OSU), J. Mull (OSU), V. Bokil (OSU), O.H. Hinsdale Wave Research Laboratory: J. Killian, T. B. Maddux, D. Cox
- 2006-2008 **Graduate Research Assistant, Department of Zoology**
Oregon State University – Corvallis, OR
Research: Performed field, experimental, and modeling research to assess the mechanisms and implications of beach grass invasions on coastal dune native and threatened species in the U.S. Pacific Northwest.
Principal Supervisors: S.D. Hacker (OSU), E.W. Seabloom (U. Minnesota), P. Ruggiero (OSU)
- 2003-2006 **Graduate Research Assistant, Department of Wildland Resources**
Utah State University – Logan, UT
Research: Developed new techniques for landscape scale species distribution modeling with presence-only data, tested FIA and Landfire map products for species distribution modeling.
Principal Collaborators/Supervisors: T.C. Edwards, Jr. (USGS Coop Unit), G.G. Moisen (USFS).
- 2001-2003 **Department and Faculty Assistant, Herpetology Department**
Harvard University Museum of Comparative Zoology – Cambridge, MA
Supervisor: J. Hanken
- 1999-2001 **Research Assistant, University of Connecticut-Patagonia Research Team**
Torres del Paine National Park – Patagonia, Chile
Research: Habitat and population studies of Patagonian wildlife and wetlands.
Principal Collaborators: I.M. Ortega (UCONN), Univ. Magallanes.
- 2000-2001 **Research Assistant, Department of Biology**
Colby College – Waterville, ME
Research: Sumatran tiger GIS conservation research. Designed GIS component for senior-level watershed course (BI493, Problems in Environmental Science). Performed landuse change analysis for Lake Wesserunsett watershed and GIS analysis for Sumatran tiger conservation research. Compiled life history and habitat data for the IUCN Red List mammal database.
Supervisors: P. Nyhus, F.R. Cole, D. Firmage
- 2000 **Student Researcher, Center for Sustainable Development**
School for Field Studies – Atenas, Costa Rica.
Research: Political, economic, ecological, and social issues associated with organic coffee production and certification in Costa Rica.
Supervisors: School for Field Studies Costa Rica, lead: H. Saez

Manuscripts in Review or Revision

***postdoc mentee **graduate mentee
*undergrad mentee *joint lead

2. Dahlin, K., **P.L. Zarnetske**, Q.D. Read^{***}, L. Twardochleb^{**}, A. Kamoske, K. Cheruvellil, and P. Soranno. In review. Interactions between biodiversity and ecosystem function among terrestrial and aquatic realms. *Frontiers in Ecology and the Environment*.
1. Record, S., K. Dahlin, **P.L. Zarnetske**, Q. Read^{***}, S.L. Malone, K. Gaddis, J.M. Grady^{***}, J. Costanza, M. Hobi, A. Latimer, S. Pau, A.M. Wilson, A. Finley, S. Ollinger. In review. Remote sensing of geodiversity and biodiversity. Chapter in: Remote Sensing of Biodiversity: Using spectral signals of to understand the biology and biodiversity of plants, communities, ecosystems and the tree of life. *Springer Remote Sensing/Photogrammetry Series*. Editors: J. Cavender-Bares, J. Gamon, P. Townsend.

Refereed Publications

31. **Zarnetske, P.L.**, Q.D. Read^{***}, S. Record, K.D. Gaddis, S. Pau, M.L. Hobi, S.L. Malone, J. Costanza, K.M. Dahlin, A.M. Latimer, A.M. Wilson, J.M. Grady^{***}, S.V. Ollinger, A.O. Finley. 2019. Towards connecting biodiversity and geodiversity across scales with satellite remote sensing. *Global Ecology & Biogeography*. doi:10.1111/geb.12887
30. Grady, J.M.^{***}, B.S. Maitner, A.S. Winter, K. Kaschner, D.P. Tittensor, S. Record, F.A. Smith, A.M. Wilson, A.I. Dell, **P.L. Zarnetske**, H.J. Wearing, B. Alfaro, J.H. Brown. 2019. Metabolic asymmetry and the global diversity of marine predators. *Science*. 363:eaat4220. doi: 10.1126/science.aat4220
Media Coverage: [EurekaAlert](#), [The Atlantic](#), [Science](#)
29. Grady, J.M.^{***}, Q.D. Read^{***}, S.R. Record, **P.L. Zarnetske**, B. Baiser, K. Thorne, J. Belmaker. 2018. Size, Niches and the Latitudinal Diversity Gradient. *Teaching Issues and Experiments in Ecology*. 14:Set #1
28. Record, S., A. Strecker, M-N. Tuanmu, L. Beaudrot, **P.L. Zarnetske**, J. Belmaker, and B. Gerstner.^{**} 2018. Does Scale Matter? A systematic review of incorporating biological realism when predicting changes in species distributions. *PLoS ONE*. 13:4 e0194650. doi: 10.1371/journal.pone.0194650.
27. Welshofer, K.^{**}, **P.L. Zarnetske**, N.K. Lany^{***}, and Q.D. Read^{***}. 2018. Short-term responses to warming vary between native vs. exotic species and with latitude in an early successional plant community. *Oecologia*. 187:333-342. doi: 10.1007/s00442-018-4111-9.
26. Lany, N.K.^{***}, **P.L. Zarnetske**, E. M. Schliep, R. Schaeffer, C.M. Orians, D.A. Orwig, and E.L. Preisser. 2018. Asymmetric biotic interactions and abiotic niche differences revealed by a dynamic joint species distribution model. *Ecology*. 99:1018-1023. doi: 10.1002/ecy.2190.
Media coverage: [MSU AgBioResearch highlight](#)
25. Read, Q.D.^{***}, J. Grady^{***}, **P.L. Zarnetske**, S. Record, B. Baiser, J. Belmaker, M-N. Tuanmu, A. Strecker, L. Beaudrot, and K. Thibault. 2018a. Among-species overlap in rodent body size distributions predicts species richness along a temperature gradient. *Ecography*. doi:10.1111/ecog.03641
Media coverage: [Ecography blog feature](#)
24. Read, Q.D.^{***}, B. Baiser, J. Grady^{***}, **P.L. Zarnetske**, S. Record, J. Belmaker, and L. Beaudrot. 2018b. Tropical bird species have narrower body-size niches. *Biology Letters*. 14: 20170453.
Media coverage: [MSU AgBioResearch highlight](#), [Bryn Mawr College News](#)
23. Welshofer, K.^{**}, **P.L. Zarnetske**, N.K. Lany^{***}, and L. Thompson. 2018. Open-top chambers for temperature manipulation in taller-stature plant communities. *Methods in Ecology and Evolution*. 9:254–259. doi: 10.1111/2041-210X.12863
22. Schliep, E., N.K. Lany^{***}, **P.L. Zarnetske**, R. Schaeffer, C. Orians, D. Orwig, and E. Preisser. 2018. Joint species distribution modeling for spatio-temporal occurrence and ordinal abundance data. *Global Ecology and Biogeography*. 27:142–155. doi: 10.1111/geb.12666.
21. Ruggiero, P., S.D. Hacker, E.W. Seabloom, and **P.L. Zarnetske**. 2018. (invited). The role of vegetation in determining dune morphology, exposure to sea level rise, and storm-induced coastal hazards: A U.S.

- Pacific Northwest perspective. Chapter in: Barrier Dynamics and Response to Changing Climate, L. Moore, B. Murray, eds. Springer.
20. Urban, M., **P.L. Zarnetske**, D.K. Skelly. 2017. (invited). Searching for biotic multipliers of climate change. *Integrative and Comparative Biology*. 57:134–147. doi: 10.1093/icb/ix045.
 19. Lany, N.K. ^{***}, **P.L. Zarnetske**, T. Gouhier. T, and B.A. Menge. 2017. (invited). Incorporating context dependency of species interactions in species distribution models. *Integrative and Comparative Biology*. 57:159–167. doi: 10.1093/icb/ix057
 18. **Zarnetske, P.L.**, A. Strecker, S. Record, B. Baiser, J. Belmaker, and M-N. Tuanmu. 2017. (invited). The interplay between landscape structure and biotic interactions. *Current Landscape Ecology Reports*. 2(1), 12-29. doi:10.1007/s40823-017-0021-5
 17. **Zarnetske, P.L.**, P. Ruggiero, E.W. Seabloom, and S.D. Hacker. 2015. Coastal foredune evolution: the relative influence of vegetation and sand supply in the U.S. Pacific Northwest. *Journal of the Royal Society Interface*. DOI: 10.1098/rsif.2015.0017
 16. Belmaker, J.†, **P.L. Zarnetske**†, M-N. Tuanmu, S. Zonneveld, S. Record, S., A. Strecker, and L. Beaudrot. 2015. Empirical evidence for the scale-dependence of biotic interactions. *Global Ecology and Biogeography*. DOI:10.1111/geb.12311
Recommended to [Faculty of 1000](#)
 15. Zarnetske, J.P., and **P.L. Zarnetske**. 2015. Strategies for creating a conspicuous, effective, and memorable poster presentation. *GSA Today*. 25:66-68.
 14. David, A.S., **P.L. Zarnetske**, S.D. Hacker, P. Ruggiero, R. Biel, E.W. Seabloom. 2015. Invasive congeners differ in successional impacts across space and time. *PLoS ONE*. 10, e0117283. doi: 10.1371/journal.pone.0117283.
 13. Blois, J.L., **P.L. Zarnetske**, M.C. Fitzpatrick, and S. Finnegan. 2013. Climate Change and the Past, Present, and Future of Biotic Interactions. *Science* 341:499–504. doi: 10.1126/science.1237184 (*invited for special issue: "Natural Systems in Changing Climates"*)
Media Coverage: [Science Podcast](#), [EurekAlert](#), [ScienceDaily](#), [NSF](#), [Yale University](#), [UC Merced](#), [UMD Center for Environmental Science](#)
 12. Urban, M.C., **P.L. Zarnetske**, and D.K. Skelly. 2013. Moving forward: dispersal and species interactions determine biotic responses to climate change. *Annals of the New York Academy of Sciences*: 1297:440-60. DOI: 10.1111/nyas.12184.
 11. **Zarnetske, P.L.**, T.C. Gouhier, S.D. Hacker, E.W. Seabloom, and V. A. Bokil. 2013. Indirect effects and facilitation among native and non-native species promote invasion success along an environmental stress gradient. *Journal of Ecology*: 101:905-915 DOI: 10.1111/1365-2745.12093.
Highly Commended for Harper Prize Young Investigator Award:
Featured in [Virtual Issue](#) & [Journal of Ecology blog](#)
 10. Seabloom, E.W., P. Ruggiero, S.D. Hacker, J. Mull, and **P.L. Zarnetske**. 2013. Invasive grasses, climate change, and exposure to storm-wave overtopping in coastal dune ecosystems. *Global Change Biology* 19: 824–832.
 9. **Zarnetske, P.L.**, D.K. Skelly, and M.C. Urban. 2012b. Biotic multipliers of climate change. *Science* 336:1516-1518.
Media Coverage: 2012: [Yale Scientific](#), [ClimateWire](#), [ClimateNeeds](#) [YaleNews](#), [EurekAlert](#), [ScienceNewsline](#), [ScienceDaily](#), [NSF](#), [redOrbit](#); 2017: [bitsofscience.org](#)
 8. **Zarnetske, P.L.**, S.D. Hacker, E.W. Seabloom, P. Ruggiero, J.R. Killian, T.B. Maddux, and D. Cox. 2012a. Biophysical feedback mediates effects of invasive grasses on coastal dune shape. *Ecology* 93:1439-1450.
 7. Hacker, S.D., **P.L. Zarnetske**, E.W. Seabloom, P. Ruggiero, J. Mull, S. Gerrity, and C. Jones*. 2012. Subtle differences in two non-native congeneric beach grasses significantly affect their colonization, spread, and impact. *Oikos* 121:138-148.

6. **Zarnetske, P.L.**, E.W. Seabloom, and S.D. Hacker. 2010. Non-target effects of invasive species management: beachgrass, birds, and bulldozers in coastal dunes. *Ecosphere* 1(5):art13.
Media Coverage: [The Seattle Times](#), [Breaking Waves](#), [Oregon Sea Grant](#)
5. Menge, B.A., F. Chan, S. Dudas, D. Eerkes-Medrano, K. Grorud-Colvert, K. Heiman, M. Helsing-Lewis, A. Iles, R. Milston-Clements, M. Noble, K. Page-Albins, E. Richmond, G. Rilov, J. Rose, J. Tyburczy, L. Vinueza, **P.L. Zarnetske**. 2009. Terrestrial ecologists ignore aquatic literature: Asymmetry in citation breadth in ecological publications and implications for generality and progress in ecology. *Journal of Experimental Marine Biology and Ecology* 377:93-100.
4. Menge, B.A., F. Chan, S. Dudas, D. Eerkes-Medrano, K. Grorud-Colvert, K. Heiman, M. Helsing-Lewis, A. Iles, R. Milston-Clements, M. Noble, K. Page-Albins, E. Richmond, G. Rilov, J. Rose, J. Tyburczy, L. Vinueza, **P.L. Zarnetske**. 2009. Do terrestrial ecologists ignore aquatic literature? *Frontiers in Ecology and the Environment* 7:182-183.
3. **Zarnetske, P.L.**, T.C. Edwards, Jr., and G.G. Moisen. 2007. Habitat classification modeling with incomplete data: pushing the habitat envelope. *Ecological Applications* 17:1714–1726.
2. **Zarnetske, P.L.**, T.C. Edwards, Jr., and G.G. Moisen. 2006. Modeling forest bird species likelihood of occurrence in Utah with FIA and Landfire map products. Proceedings of the 7th Annual Forest Inventory and Analysis Symposium. October 3-6, 2005, Portland, ME. USDA GTR WO-77.
1. Nyhus, P.J., F.R. Cole, D.H. Firmage, and **P.S. Lehmann**. 2002. Enhancing education through research in the Environmental Science Laboratory: Integrating GIS and project-based learning at Colby College. *Council on Undergraduate Research Quarterly*. September: 34-40.

Theses & Non-Refereed Publications

7. **Zarnetske, P.L.** 2017. (Invited) Supertramps and checkerboards revisited: updating analyses of species co-occurrences and community assembly [Review of the Book *Patterns in nature: analysis of species co-occurrences*, by James Sanderson, Stuart Pimm]. In *Ecology*, 2169–2170.
6. **Zarnetske, P.L.** and A. Wilson. 2013. Sustaining ecological communities and their ecosystem services in an era of rapid global change. Yale Climate & Energy Institute. <http://climate.yale.edu/perspectives>
5. Wilson, A. and **P.L. Zarnetske**. 2013. Forecasting biodiversity: how confident should we be? Yale Climate & Energy Institute. <http://climate.yale.edu/perspectives>
4. **Zarnetske, P.L.** 2011. The influence of biophysical feedbacks and species interactions on grass invasions and coastal dune morphology in the Pacific Northwest, USA. Dissertation. Oregon State University, Corvallis, OR, USA. 178 pp.
3. Ruggiero, P., J. Mull, **P.L. Zarnetske**, S. Hacker, and E. Seabloom. 2011. Interannual to decadal foredune evolution, Proceedings Coastal Sediments 2011, ASCE, Miami, FL.
2. **Zarnetske, P.L.** 2006. Landscape-scale habitat classification modeling with incomplete data: the generation of ecologically-based pseudo-absence points. Thesis. Utah State University, Logan, UT, USA. 168 pp.
1. **Zarnetske, P.L.** 2006. Predicting habitat suitability with extant presence points and ecologically-based pseudo-absence points for a lesser-known species: the American Three-Toed Woodpecker (*Picoides dorsalis*). USFS unpublished report to accompany Zarnetske (2006). 94 pp.

Research Grants

2019	National Science Foundation (Key Personnel/Steering Committee) <i>NEON Science Summit: Initiating grassroots research communities through an “unconference”</i> ; PI: J. Balch, Co-PI: C. Nagy	\$99,957
2019	Google Cloud Platform Research Credits (PI) <i>Climate change and biodiversity: Detecting resilient landscapes</i>	\$5,000
2018	Michigan State University Discretionary Funding Initiative (PI) <i>Interactive effects of climate change and biotic interactions on plant community resilience</i>	\$50,000
2018	National Science Foundation REU Supplement: Award# 1550765 (PI)	\$9,876
2017-2019	National Aeronautics and Space Administration NESSF (PI) Graduate Fellowship (L. Twardochleb): <i>Predicting freshwater biodiversity across scales using measures of land use, climate, and primary productivity</i>	\$89,107
2017-2019	Michigan Invasive Species Grant Program (Co-PI) (\$498,468 with match) <i>Projecting Hemlock Woolly Adelgid Distribution and Risk in Michigan</i>	\$314,453
2016-2017	Environmental Science and Policy Program (PI) VISTAS: <i>Linking Intraspecific Trait Variation with Ecosystem Function at a Continental Scale</i>	\$2,324
2016-2018	National Aeronautics and Space Administration (PI) NNH15ZDA001N-BIO. Biodiversity: <i>Connecting biodiversity, geodiversity, and remote sensing across scales</i>	\$150,441
2016-2017	MSU Environmental Science and Policy Program (Co-PI) Watercube: <i>Cross-scale interactions in freshwater ecosystems</i>	\$80,000
2016-2018	National Science Foundation , Emerging Frontiers (PI) <i>Collaborative Research: EAGER-NEON: Using intraspecific trait variation to understand processes structuring continental-scale biodiversity patterns</i> , Award# 1550765	\$300,000
2015-2018	Arnold and Mabel Beckman Foundation (PI) Postdoctoral Fellowship (N. Lany): <i>Improving predictions of climate change effects on ecological communities with ecological complexity.</i>	\$189,604
2011	Yale Climate and Energy Institute , YCEI Research Grant <i>The community ecology of climate change</i>	\$10,000
	New Zealand Department of Conservation , Science and Research Grant <i>Predicting invasion hotspots of Didymosphenia geminata in New Zealand</i>	\$14,500
2010	NSF IGERT Ecosystem Informatics , in cooperation with New Zealand Institute for Water and Atmospheric Research, and the University of Otago 1. <i>Invasive species distribution modeling with boosted regression trees</i> 2. <i>Bio-physical mechanisms & implications of beachgrass invasions on coastal dunes</i>	\$13,000
2007-2009	Hatfield Marine Science Center , Mamie Markham Award <i>What is the relative role of invasive vs. native species in building coastal dunes?</i>	\$10,000
2009	Oregon State University Zoology Department , Research Fund <i>Bio-physical mechanisms and implications of beachgrass (Ammophila spp.) invasions on coastal dunes</i>	
2006-2011	NSF IGERT Ecosystem Informatics , Fellowship Research Grant	\$10,000

Competitive Fellowships & Awards

2014	Highly Commended for Harper Prize (Journal of Ecology Young Investigator Award)
2013	ESA’s Scaling Up: Population and Community Ecology Workshop , travel & registration
2012	NSF RCN Forecast Conference , travel & registration
2011-2013	Yale University , Yale Climate and Energy Institute Postdoctoral Fellowship

- 2011 **Yale Institute for Biospheric Studies**, funding for 2012 AAAS Symposium
- 2006-2011 **NSF IGERT Ecosystem Informatics**, Graduate Fellowship
- 2011 **Oregon State University**, College of Science Travel Award
- 2010 **Strategic Environmental Research and Development Program**, ESA 2010 travel award
- 2007 **Hatfield Marine Science Center**, Best Poster at Markham Research Symposium
- 2006 **The Wildlife Society**, Utah Chapter Best Poster Award
- 2005 **Ecological Society of America (ESA)**, E. Lucy Braun Award, for the Joint 90th ESA and IX International Congress of Ecology (INTECOL) meeting, Montreal, Canada
- 2001 **Maine Water Conference**, Best Student Research Poster

Teaching Experience

- 2018 **Professor**, Forest Ecology & Lab (FOR440 & FOR440L; co-taught), Michigan State University
- 2015-2018 **Professor**, Spatial Ecology (FOR870/FW870), Michigan State University
- 2017 **Guest Lecturer**, FW Grad Seminar Principles and Perspectives in Fisheries and Wildlife, MSU
- 2017 **Professor**, Metacommunity Ecology (FW893; co-taught), Michigan State University
- 2015-2016 **Professor**, Introduction to Forestry (FOR202), Michigan State University
- 2013 **Guest Lecturer**, Forestry (FOR110), Michigan State University
- 2012 **Guest Lecturer**, Plant Form and Diversity (BIOL290), Wesleyan University
- 2011 **Mentor**, Environmental Analysis (ENSC520), Oregon State University
Guest Lecturer, Coastal Geomorphology (GEO433/533), Oregon State University
- 2008 **Guest Lecturer**, Principles of Fluid Mechanics (CE547), Oregon State University
- 2008-2010 **Guest Lecturer**, Ecosystem Informatics Colloquium (GEO507), Oregon State University
- 2008-2009 **Graduate Teaching Instructor**, Human Anatomy and Physiology Lab and Recitation (Z343, Z443), Oregon State University
- 2007 **Graduate Teaching Instructor and Guest Lecturer**, Marine Biology (BI450), Oregon State University Hatfield Marine Science Center
- 2000 **GIS Course Lead**; designed & taught GIS curriculum and lab for undergraduate senior-level watershed course, Problems in Environmental Science (BI493), Colby College.

Postdoctoral advising

- 2018- L. Annie Cooper Smith (Michigan State University)
- 2016-2018 Quentin Read (Michigan State University)
John Grady (Michigan State University)
- 2015- Nina Lany (Michigan State University)

Student research and training supervision

- 2015- 21 undergraduates including NSF REU, MSU URA, MSU PA, MSU SROP students
- 2017- Beth Gerstner: PhD student (MSU Fisheries & Wildlife, EEBB)
 - *recipient of MSU University Fellowship*
- 2015- Laura Twardochleb: PhD student (MSU Fisheries & Wildlife, EEBB)
 - *recipient of MSU University Fellowship, NASA NESSF Graduate Fellowship*
- 2014-2015 Danielle Miles: MS student (MSU Forestry)
 - *recipient of MSU Honor's College Scholarship*
- 2013-2017 Kileigh Welshofer: MS student (MSU Forestry, EEBB)
 - *recipient of MSU Plant Sciences Fellowship, National Science Foundation Graduate Research Fellowship*

- 2011-2013 Yale University, University of Connecticut: training and mentoring 10 graduate students, an undergraduate, an advanced math high school student (Intel prize honorable mention), a European Union Erasmus Mundus Masters Fellow in Evolutionary Biology
- 2006-2011 Oregon State University, training and mentoring of 18 undergraduate students

PhD Graduate Committees

- 2014- Claire Hoffman (MSU FW), Anna Groves (MSU Plant Biology), Malcolm Itter (MSU Forestry), Neil VerPlanck (MSU Forestry), Matthew Reid (Univ Louisville), Andrew Dennhardt (MSU Fisheries & Wildlife), Meredith Zettlemyer (MSU Plant Biology), Sean Sultaire (MSU Fisheries & Wildlife)

Teaching and mentoring training

- 2018 National Ecological Observatory Network (NEON) NEON Data Education Fellows
Faculty Mentoring Network, NSF QUBES.
Diversity & Inclusion in the classroom, Michigan State University
- 2013 Desire 2 Learn: Tips for Getting the Most out of the LMS, Michigan State University
Teaching Quantitative Reasoning. Yale Teaching Center Workshop, Yale University.
- 2012 Preparing future science faculty: teaching your own course. Yale Teaching Center Workshop.
- 2011 Success in the college classroom. (MB699) Oregon State University
- 2009 Discover your teaching philosophy. Center for Teaching and Learning, Oregon State University
- 2008 The future professoriate. (FE607) Oregon State University

Invited Seminar Presentations

- 2018 Michigan Natural Features Inventory, Lansing, MI; presenter: L. Twardochleb
- 2017 Lansing Wild Ones, Fenner Nature Center, Lansing, MI; presenter: N. Lany
Biology on Tap, MSU Science Festival (Midtown Brewing, Lansing, MI); presenter: Q. Read
MSU FW Grad Seminar: Principles and Perspectives in Fisheries and Wildlife
Department of Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI
- 2014 Kellogg Biological Station Seminar Series, Hickory Corners, MI
- 2013 Hanover Seminar Series, Michigan State University, East Lansing, MI
Michigan State University, East Lansing, MI
Department of Biology, University New Mexico, Albuquerque, NM
Department of Environmental Conservation, University of Massachusetts, Amherst, MA
USGS Cooperative Unit, Utah State University, Logan, UT
Greeley EcoLunch Seminar Series, Yale University, New Haven, CT
- 2012 Women in Science at Yale, Yale University, New Haven, CT
Greeley EcoLunch Seminar Series, Yale University, New Haven, CT
- 2010 Ecosystem Informatics IGERT, OSU, Corvallis, OR
- 2009 Chinese Delegation, Oregon Sea Grant, OSU, Corvallis, OR
New River Area of Critical Environmental Concern, BLM Coos Bay District, OR
Honeyman State Park Evening Program, Honeyman State Park, Florence, OR
O.H. Hinsdale Wave Research Laboratory, OSU, Corvallis, OR
Ecosystem Informatics IGERT Retreat, OSU, Corvallis, OR
Oregon Native Plant Society, Corvallis, OR
- 2008 O.H. Hinsdale Wave Research Laboratory, OSU, Corvallis, OR
Honeyman State Park Evening Program, Honeyman State Park, Florence, OR
Ecosystem Informatics IGERT Retreat, OSU, Corvallis, OR
Invasive Species Seminar, Department of Fisheries and Wildlife, OSU, Corvallis, OR
- 2007 Annual Snowy Plover Working Team Meeting, Eugene, OR
- 2005 Reaching the World: A Campaign for Colby. Colby College, Waterville, ME

Presentations at Scientific Conferences *student/postdoc mentee *award **invited
(selected presentations listed after 2013)

- Dahlin, K.M., **P.L. Zarnetske**, S. Record, *Q.D. Read, *L.A. Cooper, J.K. Costanza, A.O. Finley, K. Gaddis, *J. Grady, M.L. Hobi, A. Latimer, S.L. Malone, S.V. Ollinger, S. Pau, and A. Wilson. Remotely sensed geodiversity for identifying and predicting biodiverse landscapes. American Geophysical Union Meeting, Washington, D.C. December 2018
- *Chilcutt, C., *K. Hoerr, *H. Wei, *B. Gerstner, **P.L. Zarnetske**, S.R. Record, B. Baiser. Disturbance effects on species richness within and across co-located NEON-LTER sites: A Cross-site REU-Project. October 2018. LTER All Scientists Meeting, Asilomar, CA. Poster presentation
- ****Zarnetske, P.L.**, Record, S., Read, Q. D., Baiser, B., Strecker, A., Grady, J. M., Belmaker, J., Tuanmu, M.-N., Beaudrot, L., & Thibault, K.M. August 2018 (symposium). NEON's continental-scale biodiversity. Ecological Society of America Meeting, New Orleans, LA.
- **Record, S., *Q.D. Read, **P.L. Zarnetske**, K.M. Dahlin, J. Costanza, K. Gaddis, *J.M. Grady, A.O. Finley, A.M. Latimer, S. Malone, M.L. Hobi, S. Ollinger, S. Pau, A.M. Wilson. August 2018. The relationship between biodiversity and geodiversity along gradients of geodiversity and anthropogenic stress. Ecological Society of America Meeting, New Orleans, LA.
- **Hacker, S.D., P. Ruggiero, E.W. Seabloom, *R. Biel, **P.L. Zarnetske**. August 2018. Beachgrass invasions, climate change, and effects on dune ecosystem functions and services in the US Pacific Northwest. Ecological Society of America Meeting, New Orleans, LA.
- *Twardochleb, L. *T. Treakle, **P.L. Zarnetske**. August 2018. Predator-prey interactions in a warming world will depend on predator foraging strategy and thermal performance. Ecological Society of America Meeting, New Orleans, LA.
- *Treakle, T., *L. Twardochleb, **P.L. Zarnetske**. August 2018. Climate change, faster species, and food webs. Ecological Society of America Meeting, New Orleans, LA. Poster presentation.
- *Chilcutt, C., *B. Gerstner, **P.L. Zarnetske**. Disturbance effects on species richness within North American ecological observatory networks. July 2018. (1) Summer Research Opportunities Program (SROP) Symposium. East Lansing, MI. Oral presentation. (2) Mid-Michigan Symposium for Undergraduate Research Experiences (Mid-SURE). East Lansing, MI. Poster presentation.
- *Hernandez, K., *B. Gerstner, **P.L. Zarnetske**. July 2018. Can we identify regions that maximize conservation potential by aligning charismatic species' habitat with biodiversity hotspots? (1) Summer Research Opportunities Program (SROP) Symposium. East Lansing, MI. Oral presentation. (2) Mid-Michigan Symposium for Undergraduate Research Experiences (Mid-SURE). East Lansing, MI. Poster presentation.
- ****Zarnetske, P.L.** March 2018. (plenary symposium) Biotic interactions in the future. International Biogeography Society, Evora, Portugal.
- *Wroblewski, A., **Zarnetske, P. L.** October 2017. Effect of warming temperatures on flowering phenology. Kellogg Biological Station Long-Term Ecological Research All-Scientists Meeting, Kellogg Biological Station, Michigan State University, East Lansing, MI. Poster presentation.
- *Grady, J. M., **Zarnetske, P. L.**, *Read, Q. D., Record, S. October 2017. Size-energy rules in closed forests. Hanover Forest Science Seminar Series / ESPP, MSU.
- *Read, Q.D. *J.M. Grady, **P.L. Zarnetske**, S. Record, B. Baiser, J. Belmaker, M-N. Tuanmu, A.L. Strecker, L. Beaudrot, and K.M. Thibault. Intraspecific variation reflects drivers of rodent community assembly across the National Ecological Observatory Network. August 2017. Ecological Society of America Meeting, Portland, OR.
- Sokol, E.R. *N.I. Wisnoski, C.M. Swan, *R. Andrade, H.L. Bateman, A.G. Hope, J.S. Kominoski, N.K. Lany, L. Marazzi, S.J. Presley, A. Rassweiler, S. Record, M. Willig, **P.L. Zarnetske**. August 2017. The role of long-

- term ecological research programs for testing metacommunity theory and understanding biodiversity patterns. August 2017. Ecological Society of America Meeting, Portland, OR.
- Record, S., **P.L. Zarnetske**, K.M. Dahlin, J.K. Costanza, A.O. Finley, K. Gaddis, *J.M. Grady, *M.L. Hobi, A.M. Latimer, S. Malone, S. Ollinger, S. Pau, *Q.D. Read, W. Turner, A.M. Wilson. August 2017. Connecting biodiversity, geodiversity, and remote sensing across scales. Ecological Society of America Meeting, Portland, OR.
- *Postema, E., **P.L. Zarnetske**. August 2017. Do slugs (*Arion subfuscus*) have the hots for artificially warmed plant matter? Kellogg Biological Station Undergraduate Summer Research Symposium. KBS, MSU.
- *Jain, J. *Q. Read, **P.L. Zarnetske**. July 26, 2017. Predicting missing values in biodiversity datasets using phylogenetics and spatial mapping. Mid-Michigan Symposium for Undergraduate Research Experiences (Mid-SURE). East Lansing, MI. Poster presentation.
- *Oliphant, S., *Q. Read, and **P.L. Zarnetske**. July 24&26, 2017. Assessing the Relationship between Aquatic and Terrestrial Ecosystems: An Examination of the Spiders of the Continental United States. (1) Summer Research Opportunities Program (SROP) Symposium. East Lansing, MI. Oral presentation. (2) Mid-Michigan Symposium for Undergraduate Research Experiences (Mid-SURE). East Lansing, MI. Poster presentation.
- *Wroblewski, A., **P.L. Zarnetske**. August 2017. Effect of warming temperatures on flowering phenology. Kellogg Biological Station Undergraduate Summer Research Symposium.
- ++Lany, N., **P.L. Zarnetske**, T. Gouhier, and B. A. Menge. January 2017. Incorporating the effects of climate change on species interactions into species distribution models. Presented paper at Society of Integrative Biology, New Orleans, LA.
- Zarnetske, P. L.**, *Q.D. Read, *J. Grady, S. Record, B. Baiser, A. Strecker, J. Belmaker, L. Beaudrot, M.-N. Tuanmu. December 12, 2016. Climate and Biological Drivers of Biodiversity Across the National Ecological Observatory Network (NEON). Presented paper at American Geophysical Union, San Francisco, CA.
- *Niewohner, V., *K. Welshofer, K., **Zarnetske, P.L.** August 2016. Effects of warming and herbivory on maximum relative flower abundance. Presented poster at Undergraduate Research Summer Symposium, Kellogg Biological Station, Hickory Corners, MI.
- ++**Zarnetske, P.L.**, S. Record, *Q.D. Read, B. Baiser, A. Strecker, J. Belmaker, J., M-N. Tuanmu, L. Beaudrot. August 2016. Intraspecific trait variation at a continental scale. 101st ESA, Fort Lauderdale, FL.
- ++**Zarnetske, P.L.**, Belmaker, J., Tuanmu, M., *Zonneveld, S., Record, S., Strecker, A., L. Beaudrot. August 2015. Empirical evidence for the scale-dependence of biotic interactions. 100th ESA, Baltimore, MD.
- ++**Zarnetske, P.L.**, Belmaker, J., Tuanmu, M., *Zonneveld, S., Record, S., Strecker, A., L. Beaudrot. July 2015. Scale-dependence of biotic interactions: implications during climate change. International Association of Landscape Ecology 9th World Congress. Portland, OR.
- Record, S., J. Belmaker, **P.L. Zarnetske**, M.-N. Tuanmu, *S. Zonneveld, A. Strecker, L. Beaudrot, L. 2014. Empirical evidence for the scale-dependence of biotic interactions. Ecological Society of America Meeting, Sacramento, CA.
- Belmaker, J., **Zarnetske, P.L.**, J., Tuanmu, M.-N., Zonneveld, S., Record, S., Strecker, A., Beaudrot, L. 2014. Empirical evidence for the scale-dependence of biotic interactions. Gordon Research Conference: Unifying Ecology Across Scales, University of New England, Biddeford, ME.
- Zarnetske, P.L.**, C. Kilroy, P. Gerbeaux, and J. Leathwick. March 2013. Integrating invasion history with environment to model *Didymosphenia geminata* hotspots across New Zealand. Providence, RI.
- Jetz, W., P. Keil, M. Barbet-Massin, **P.L. Zarnetske**. October 2012. Integrating climate and land cover for cross-scale predictions of species distributions. Synergistic Effects of Climate and Land-Use Change Symposium, The Wildlife Society Conference. Portland, OR.

- Zarnetske, P.L.**, M.C. Urban, D.K. Skelly. October 2012. Predicting the effects of climate change on communities of species. RCN Conference: New perspectives on data assimilation in global change science. Woods Hole, MA.
- Zarnetske, P.L.**, M.C. Urban, D.K. Skelly. August 2012. Climate change effects on community composition and species distributions: the relative influence of species interactions. 97th Annual Ecological Society of America Meeting (ESA), Portland, OR.
- Hacker, S.D., E.W. Seabloom, P. Ruggiero, **P.L. Zarnetske**, J. Mull. November 2011. Invasive grasses, climate change, and effects on coastal dune ecosystem functions and services. 2nd World Conference of Biological Invasions and Ecosystem Functioning, Mar de Plata, Argentina.
- Zarnetske, P.L.**, S.D. Hacker, E.W. Seabloom, P. Ruggiero, J. Mull. August 2011. Connecting process with pattern: towards a mechanistic understanding of invasions' impacts on coastal dune ecology and geomorphology. 96th ESA, Austin, TX.
- David A.S., **Zarnetske P.L.**, Seabloom E.W., Hacker S.D. August 2011. Invasive congeners uniquely alter community succession of dunes. 96th ESA, Austin, TX.
- Ruggiero, P., J. Mull, E. Seabloom, S. Hacker and **P.L. Zarnetske**. May 2011. Interannual to decadal foredune evolution. Coastal Sediments Meeting, Miami, FL.
- Zarnetske, P.L.**, P. Ruggiero, J. Mull, S.D. Hacker, E.W. Seabloom. December 2010. Coastal foredune evolution: evidence for ecological control. American Geophysical Union Meeting, San Francisco, CA.
- Ruggiero, P., **P.L. Zarnetske**, J. Mull, S.D. Hacker, E.W. Seabloom. December 2010. Coastal foredune evolution: evidence for physical control. American Geophysical Union (AGU) Mtg., San Francisco, CA.
- Zarnetske, P.L.**, S.D. Hacker, E.W. Seabloom, P. Ruggiero. August 2010. Biotic or abiotic control? Assessing the mechanisms behind coastal dune-building plant distributions. 95th ESA, Pittsburgh, PA.
- Hacker, S.D., **P.L. Zarnetske**, E.W. Seabloom, and P. Ruggiero. November 2009. Importance of species identity: implications of two non-native congeneric beach grasses (*Ammophila arenaria* and *A. breviligulata*) on dune structure and coastal protection. Coastal and Estuarine Research Federation, Portland, OR.
- Zarnetske, P.L.**, E.W. Seabloom, S.D. Hacker, P. Ruggiero, J. Killian, T. Maddox. August 2009. Native and invasive species' influence on coastal dune geomorphology: results from a moveable bed wind tunnel experiment. 94th ESA, Albuquerque, NM.
- Zarnetske, P.L.**, S.D. Hacker, E.W. Seabloom, P. Ruggiero, D. Cox, J. Killian, T. Maddox, V. Bokil, W. Pattanapol. December 2008. Coastal dune building capabilities of native and exotic beach grasses: results from a moveable bed wind tunnel experiment. AGU Meeting, San Francisco, CA.
- Zarnetske, P.L.**, S.D. Hacker, and E.W. Seabloom. August 2008. Does removal of an invasive species restore the disturbance regime and native community on coastal dunes? 93rd ESA, Milwaukee, WI.
- *Gladics, A., **P.L. Zarnetske**, S.D. Hacker, E.W. Seabloom. February 2008. Habitat characteristics related to snowy plover reproductive success in coastal dune restoration areas in Oregon and Washington. The Wildlife Society Meeting, Lincoln City, OR.
- Zarnetske, P.L.**, E.W. Seabloom, and S.D. Hacker. August 2007. Effects of invasive beach grasses on the shape and composition of coastal dunes. 92nd ESA. San Jose, CA.
- [†]**Zarnetske, P.L.** 2007. Assessing beach grass invasions on the Pacific Northwest Coast: implications for dune morphology and coastal protection. Markham Research Symposium, HMSC, Newport, OR.
- Zarnetske, P.L.**, T.C. Edwards, Jr. and G.G. Moisen. August 2006. Pushing the envelope: habitat classification modeling with incomplete data. 91st ESA. Memphis, TN.
- Zarnetske, P.L.**, T.C. Edwards, Jr. and G.G. Moisen. March 2006. Bioregional species distribution modeling with pseudo-absence points. 21st Annual Symposium of the U.S. Regional Chapter of the International Association for Landscape Ecology. San Diego, CA.
- [†]**Zarnetske, P.L.**, T.C. Edwards, Jr. and G.G. Moisen. March 2006. Wildlife habitat suitability modeling with incomplete data: Incorporating ecological pseudo-absence points. Wildlife Society Meeting, Moab, UT.

- Zarnetske, P.L.**, T.C. Edwards, Jr. and G.G. Moisen. October 2005. Modeling forest bird species likelihood of occurrence in Utah with FIA and Landfire vegetation models and generated pseudo-absence points. 7th Annual Forest Inventory and Analysis (FIA) Meeting, Portland, ME.
- [†]**Zarnetske, P.L.**, T.C. Edwards, Jr. and G.G. Moisen. August 2005. Modeling forest bird species' habitat with known presence points and generated pseudo-absence points in Utah. Joint 90th ESA and INTECOL Meeting, Montreal, Canada.
- Lehmann, P.S.**, A.M. Megquier, D.G. Thornton, D.H. Firmage, F.R. Cole, P.J. Nyhus. March 2001. Geographic Information Systems and integrated watershed research at Lake Wesserunsett, ME. National Conference on Undergraduate Research, University of Kentucky, Lexington, KY.
- [†]**Lehmann, P.S.** and A.M. Megquier. 2001. The use of geographic information systems to assess watershed qualities. Maine Water Conference, Augusta, ME, Colby College Research Symposium, Waterville, ME.

Other Conference Presentations

- Zarnetske, P.L.** 2009. Dune grasses: species interactions and dune building capabilities. Markham Research Symposium, Hatfield Marine Science Center (HMSC), Newport, OR.
- Zarnetske, P.L.** 2009. WindOverDunes. 22nd Annual Oregon State University Biology Graduate Student Symposium (BGSS), Newport, OR.
- Zarnetske, P.L.**, S.D. Hacker, E.W. Seabloom. 2008. Characteristics of coastal dunes with and without invasive beachgrass. Pacific Northwest Coastal Dunes Ecosystem Workshop 2008.
- Zarnetske, P.L.** 2007. Integrating invasion ecology and dune geomorphology to project coastal vulnerability in Oregon and Washington. 20th BGSS, Newport, OR.
- Zarnetske, P.L.** 2006. Modeling forest bird occurrence with FIA and Landfire vegetation models. 2006. FIA User Group Meeting, Ogden, UT.
- Lehmann, P.S.** 2002. Amphibian Declines: The importance of geographic information systems as a resource for conservation. Harvard GIS Day, Harvard University, Cambridge, MA.

Research Workshops & Symposia ¹participant ²organizer ³presenter

- 2018 - *Non-Climatic Dimensions of Climate Refugia Workshop*, Institut National de la Recherche Agronomique (INRA), Barsac, France.^{1,3}
- *Engaging LTER Scientists and Educators in Cross-Site Undergraduate Research*, LTER All Scientists Meeting, Asilomar, CA^{1,3}
- *LTER Metacommunities Synthesis Working Group*, NCEAS, Santa Barbara, CA¹
- *bioXgeo: Connecting Geodiversity and Biodiversity Across Scales*, NCEAS, Santa Barbara, CA^{1,2,3}
- 2017 - Ecological Society of America Meeting, Portland, OR²
1. Ignite Session: *Connecting Remote Sensing to Biodiversity Science in the Anthropocene*.
2. Special Session: *How Can Current and Future Satellite Missions Advance Biodiversity Science? a Discussion of Current Tools and Future Ideas*.
3. Organized Oral Session: *Challenges and Opportunities for Investigating Ecological Communities Across Space and Time: Insights from Coordinated Research Networks*.
- *Connecting Geodiversity and Biodiversity Across Scales*, NCEAS, Santa Barbara, CA^{1,2,3}
- 2016 - *Fate of the Earth: Climate-Food-Energy-Water Nexus*. East Lansing, MI^{1,2}
- 2015 - *Fate of the Earth: Tipping Points, Crises, and Solutions*. East Lansing, MI^{1,2}
- ESA Session: *The role of biotic interactions structuring species distributions*. Baltimore, MD³
- 2014 - *Climate Change in the Great Lakes Region and Beyond*. East Lansing, MI^{1,2}
- 2013 - *ESA's Scaling Up: Population and Community Ecology Workshop*. Baltimore, MD¹
- 2012 - *Climate Change & Species Interactions: Ways Forward*. Cary Institute of Ecosystem Studies, Millbrook, NY¹

- *New perspectives on data assimilation in global change science*. RCN Forecast. Woods Hole, MA^{1,3}
- [The future of ecological communities under climate change: no analog?](#) Organized Symposium, AAAS 2012 Meeting, Vancouver, BC¹⁻³
- 2011 - *NSF Workshop*. National Science Foundation Day. Oregon State University, Corvallis, OR¹
- 2010 - *Modeling species responses to climate change and land use change: collaborations among ecologists and computer scientists*. H.J. Andrews Forest LTER, Blue River, OR^{1,3}
- 2008 - *Riederalp 2008: The utility of species distribution models as tools for assessing impacts of global change*. Riederalp, Switzerland¹⁻³
- *NSF IGERT Research Symposium*. Oregon State University, Corvallis, OR¹⁻³
- *Pacific Northwest coastal dunes ecosystem workshop*. Hatfield Marine Science Center, Newport, OR¹⁻³
- 2004 - *Mark-recapture workshop*. Utah State University, Logan, UT¹
- 2002 - *Harvard GIS Day*. Harvard University, Cambridge, MA¹⁻³

Service

Professional Service:

- 2018- **Associate Editor**, *Global Ecology and Biogeography*
- 2018- **Chair, Buell and Braun Awards Committee**, Ecological Society of America
- 2017-2018 **Subject Matter Guest Editor**, *Ecological Applications*
- 2018- **Member**, Ecosystem Function Working Group International Group on Earth Observations Biodiversity Observation Network (GEO BON)
- 2016- **Member**, Ecosystem Structure, Community Composition Working Groups, GEO BON
- 2016-2017 **Editorial Board**, *Axios*
- 2008- **Journal Referee**, *Nature Ecology & Evolution*, *Proceedings of the Royal Society B*, *Ecology*, *Ecology Letters*, *Ecography*, *Frontiers in Ecology and the Environment*, *Ecology and Evolution*, *Journal of Biogeography*, *Oecologia*, *Oikos*, *Plos ONE*, *Journal of Applied Ecology*, *Journal of Experimental Marine Biology and Ecology*, *American Journal of Botany*, *Journal of Experimental Marine Biology and Ecology*, *Environmental Management*, *Journal of Wildlife Biology*, *International Journal of Geographic Information Science*, *Solutions Journal*
- 2011-2019 **Proposal ad hoc Reviewer / Panelist** NSF (EAR, DEB)
- 2006-2011 **Award Judge**, Buell/Braun Award, Ecological Society of America annual meetings

University Service & Leadership:

- Michigan State University**
- 2018- Ecology, Evolutionary Biology, and Behavior (EEBB) Executive Committee, MSU
- 2018- Ecology, Evolutionary Biology, and Behavior (EEBB) Curriculum Committee, MSU
- 2017- Plant Sciences Fellowship Committee, MSU
- 2016- Forestry Committee on Diversity & Inclusion
- 2015-2016 Forest Biomaterials Search Committee
- 2015 Forestry committee on by-laws on tenure and promotion expectations
- 2014-2018 EEBB Seminar Series Committee Member
- Fate of the Earth Symposium Committee Member
- 2013-2017 Chair, Hanover Forest Science Seminar Committee
- Chair, Spatial Ecology Graduate Certificate Curriculum Committee
- 2013 Chief Organizer, Climate Change in the Great Lakes Region and Beyond: A Symposium
- 2011-2013 **Yale University**
- Women in Science at Yale (WISAY): graduate student mentor, seminar organizer

- 2006-2011 **Oregon State University**
OSU Women in Science (WIS)
Co-President, Zoology department graduate students
Bargaining Team, Coalition of Graduate Employees, OSU
Brown Bag Co-Organizer, invited speaker committee, Zoology department
Student representative, NSF IGERT Ecosystem Informatics
- 2004-2006 **Utah State University:** Co-Chair, Ecology Center Seminar Invited Speakers Committee
- 2001-2003 **Harvard University:** Co-organizer and committee member, Harvard University GIS Group

Media Coverage

- 2018 How climate impacts biodiversity, [MSU Today](#), Oct 10.
New research lends insight into the spread of invasive species, [AqBioResearch highlight](#), April 9.
Rodents overlap less in their body size distributions in more diverse communities – could this hold a clue to explaining diversity patterns? [Ecography blog feature](#), Mar. 12.
Less variation in sizes of birds in the tropics puts them at greater risk from climate change, [Bryn Mawr College News](#), Mar. 21
MSU research reveals new insights into species diversity, [AqBioResearch highlight](#), Jan 29.
- 2017 MSU Extension: National Invasive Species Awareness Week: [Hemlock woolly adelgid](#) Feb 26.
Twardochleb receives NASA fellowship, [KBS News](#) June 16.
Lansing Wild Ones October Newsletter.
- 2013 Scientists look into Earth's 'deep time' to predict future effects of climate change, [Eurekalert Science Podcast](#), Aug 2.
Looking to the Past to Predict the Future of Climate Change, [ScienceDaily](#) Aug 5.
Back to the future: scientists look into earth's "deep time" to predict future effects of climate change, [NSF](#) press release Aug 1.
Deep past offers clues into climate-driven biotic shifts, [Yale University](#) Aug 2.
Additional press: [UC Merced](#), [UMD Center for Environmental Science](#)
Indirect effects and facilitation among native and non-native species promote invasion success along an environmental stress gradient [Journal of Ecology blog](#), June 14.
Multiplying toward extinction: the effects of climate change on species. [Yale Scientific](#), Feb. 19.
- 2012 Climate models need to account for species interactions, researchers say. [ClimateWire](#), [ClimateNeeds](#) June 25.
Top predators key to extinctions as planet warms. [YaleNews](#), [EurekAlert](#), [ScienceNewsline](#), [ScienceDaily](#), [NSF](#) June 21.
Species interactions could be affected by global warming. [redOrbit](#), June 23.
- 2011 Invasive species: Are scientists fighting a losing battle? [The Seattle Times](#), April 24.
Removing invading plants can harm native ecology. [Breaking Waves](#), [Oregon Sea Grant: Coastal Science Serving Oregon](#) April 15.
Exploring the Oregon Dunes, [Oregon Field Guide](#) television feature, Mar.
- 2010 Incorporating computational modeling into interdisciplinary research, 2009 [OSU College of Engineering Annual Report](#)
- 2009 Line in the sand. [Colby](#) magazine, Spring.
- 2008 Invaders in the dunes. [Terra](#) magazine (OSU Research magazine) Winter.
- 2007 Invasion of beach grass could weaken shoreline protection. [ScienceDaily](#) Sep. 26.

Organizations and Affiliations

Ecological Society of America (ESA)
American Assoc. for the Advancement of Science (AAAS)
American Geophysical Union (AGU)
Yale Climate and Energy Institute (YCEI)
Yale Institute for Biospheric Studies (YIBS)
Women in Science at Yale (WISAY)
OSU Women in Science (WIS)
Women in Nature Network, MSU Chapter

LTERR Network (LTERR); H.J. Andrews Experimental Forest (HJA); Toolik Lake LTER (ARC); Kellogg Biological Station (KBS)
O.H. Hinsdale Wave Research Laboratory (HWRL)
Hatfield Marine Science Center (HMSC)
MSU Ecology, Evolutionary Biology, and Behavior Program (EEBB); Environmental Science & Policy Program (ESPP)