

Phoebe Lehmann Zarnetske

Department of Integrative Biology
Michigan State University
288 Farm Lane
East Lansing, MI 48824

phone: 517-355-7671
email: plz@msu.edu
web: www.communityecologylab.com
ORCID: 0000-0001-6257-6951

Academic Appointments

- 2024- **Professor, Michigan State University** – East Lansing, MI
Department of Integrative Biology
- 2020-2024 **Associate Professor, Michigan State University** – East Lansing, MI
Department of Integrative Biology; Adjunct: Plant Biology
- 2021-2022 **Visiting Researcher, Université Lyon 1, France** – Lyon, France [sabbatical]
Laboratoire de Biométrie et Biologie Évolutive
- 2013-2020 **Assistant Professor, Michigan State University** – East Lansing, MI
2019-2020: Department of Integrative Biology; Adjunct: Plant Biology
2013-2019: Departments of Forestry, Fisheries and Wildlife; Adjunct: Plant Biology
- 2011-2013 **Postdoctoral Fellow, Yale Climate and Energy Institute**
Yale School of the Environment – 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

Prior Research & Work Experience

- 2010-2012 **Research Scientist, Aquatic & Reporting, Science & Technical Group** Dept. of Conservation; National Institute of Water & Atmospheric Research – Christchurch, New Zealand.
- 2010 **Visiting Scientist, Coastal Dune Research Group** University of Otago – Dunedin, New Zealand.
- 2006-2011 **Graduate Fellow, NSF IGERT Ecosystem Informatics** Oregon State University – Corvallis, OR
- 2006-2008 **Graduate Research Assistant, Department of Zoology** Oregon State University – Corvallis, OR
- 2003-2006 **Graduate Research Assistant, Department of Wildland Resources**
Utah State University – Logan, UT
- 2001-2003 **Department Assistant, Herpetology Department**
Harvard University Museum of Comparative Zoology – Cambridge, MA
- 1999-2001 **Research Assistant, University of Connecticut-Patagonia Research Team**
Torres del Paine National Park – Patagonia, Chile
- 2000-2001 **Research Assistant, Department of Biology** Colby College – Waterville, ME

2000 **Student Researcher, Center for Sustainable Development**
School for Field Studies – Atenas, Costa Rica.

Manuscripts in Preprint, Review, Revision

PLZ is lead PI on papers led by mentees.

***postdoc mentee, **graduate mentee, *undergrad mentee, #lab staff, +joint lead, ++invited

1. McGrew, A., A. Strecker, C. Gantz, B. Wills, B. Baiser, S. Record, **P.L. Zarnetske**. *In Revision*. Climate, productivity, and intraspecific trait variation drive fish species richness across the continental United States. *Journal of Animal Ecology*.
2. Youngflesh, C. **, **K. Kapsar, A. Uscanga, P. J. Williams, J. W. Doser, **L. Kounta, **P.L. Zarnetske**. *In Revision*. Environmental variability shapes life history of the world's birds. *Ecology Letters*.
3. Gerstner, B.E. **, and **P.L. Zarnetske**. *In Revision* Evaluating the effectiveness of protected areas and community-managed lands in capturing multiple dimensions of frugivorous biodiversity in the Tropical Andes. *Biological Conservation*.

Refereed Publications

60. Fluck, I.E., S. Record, A. Strecker, **P.L. Zarnetske**, B. Baiser. *Accepted*. The influence of sample size and sampling design on estimating population-level intra specific trait variation (ITV) along environmental gradients. *Functional Ecology*.
59. **+Young, M., **K. Dobson, M. Hammond#, **P.L. Zarnetske**. *Accepted*. Plant community responses to direct and herbivore-mediated indirect effects of climate warming. *Ecology*.
58. ++Gerstner, B. E. **, M. E. Blair, P. Bills#, C. A. Cruz-Rodriguez, and **P.L. Zarnetske**. 2024. The influence of scale-dependent geodiversity on species distribution models in a biodiversity hotspot. Invited for Special Issue “Geodiversity Science for Society”: *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*. 382, no. 2269: 20230057. DOI:10.1098/rsta.2023.0057.
57. ++Schrodt, F., G. Vernham, J. Bailey, R. Field, J.E. Gordon, M. Gray, J. Hjort, C. Hoorn, M.L. Hunter, J. Larwood, A. Lausch, M.Monge-Ganuzas, S. miller, D. van Ree, A. C. Seijmonsbergen, **P.L. Zarnetske**, W.D. Kissling. 2024. The status and future of essential geodiversity variables. Invited for Special Issue “Geodiversity Science for Society”: *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*. 382, no. 2269: 20230052. DOI: 10.1098/rsta.2023.0052.
56. Grady, J. **, Q.D. Read, ** S. Record, N. Rüger, **P.L. Zarnetske**, A.I. Dell, S.P. Hubbell, S.T. Michaletz, and B.J. Enquist. 2024. Life history scaling in a tropical forest. *Journal of Ecology*. 112:3. 487-500. DOI: 10.1111/1365-2745.14245
55. THE HERBIVORY VARIABILITY NETWORK (*first author*: Robinson, M.L.; *corresponding author*: W.C. Wetzel. **P.L. Zarnetske** as co-author. 2023. Plant size, latitude, and phylogeny explain within-population variability in herbivory. *Science* 382:679–683. DOI:10.1126/science.adh8830.
Example Media Coverage: [MSU EEB News](#), [Science Research Highlights](#), [EurekAlert](#), [PhysOrg](#)
54. Wisnoski, N. I., R. Andrade, M. C. N. Castorani, C. P. Catano, A. Compagnoni, T. Lamy, N. K. Lany**, L. Marazzi, S. Record, A. C. Smith**, C. M. Swan, J. D. Tonkin, N. M. Voelker, **P. L. Zarnetske**, and E. R. Sokol. 2023. Diversity–stability relationships across organism groups and ecosystem types become decoupled across spatial scales. *Ecology*. DOI:10.1002/ecy.4136.
53. Gerstner, B. E. **, P. Bills #, and **P.L. Zarnetske**. 2023. Frugivoria: A trait database for birds and mammals exhibiting frugivory across contiguous Neotropical moist forests. *Global Ecology and Biogeography*. DOI: 10.1111/geb.13716.
Media Coverage: [MSU NatSci Press Release](#), [MSU Today](#)
52. Twardochleb, L.A. **, **P.L. Zarnetske**, C.A. Klausmeier. 2023. Life-history responses to temperature and seasonality mediate ectotherm consumer–resource dynamics under climate warming. *Proceedings of the Royal Society B: Biological Sciences* 290:20222377. DOI: 10.1098/rspb.2022.2377.
Media Coverage: [MSU NatSci Press Release](#), [MSU Today](#)
51. Liang, M., B. Baiser, L. M. Hallett, Y. Hautier, L. Jiang, M. Loreau, S. Record, E. R. Sokol, **P.L. Zarnetske**, S. Wang. 2022. Consistent stabilizing effects of biodiversity across spatial scales and environmental gradients. *Nature Ecology and Evolution*. DOI: 0.1038/s41559-022-01868-y.
Media Coverage: [Nature Ecology and Evolution Behind the Paper](#), [NEON Observatory Blog](#)
50. Kamoske, A., K. Dahlin, Q.D. Read**, S. Record, S. Stark, S. Serbin, **P.L. Zarnetske**. 2022. Towards

- mapping biodiversity from above: Can fusing lidar and hyperspectral remote sensing predict taxonomic, functional, and phylogenetic tree diversity in temperate forests? *Global Ecology and Biogeography*. 31: 1440-1460. DOI: 10.1111/geb.13516.
 Media Coverage: [NEON Observatory Blog](#)
49. ++Li, D., S. Record, E. Sokol, M. E. Bitters, M. Y. Chen, A. Y. Chung, M. R. Helmus, R. Jaimes, L. Jansen, M. A. Jarzyna, M. G. Just, J. M. LaMontagne, B. Melbourne, W. Moss, K. Norman, S. Parker, N. Robinson, B. Seyednasrollah, C. Smith, S. Spaulding, T. Surasinghe, S. Thomsen, and **P.L. Zarnetske**. 2022. Standardized NEON organismal data for biodiversity research. *Invited for Special Issue on NEON Science Summit in Ecosphere*. 13:e4141. DOI: 10.1002/ecs2.4141.
48. ++Jarzyna, MA, KEA Norman, JM LaMontagne, MR Helmus, D Li, SM Parker, M Perez Rocha, S Record, ER Sokol, **PL Zarnetske** and TD Surasinghe. 2022. Community stability is related to animal diversity change. *Invited for Special Issue on NEON Science Summit in Ecosphere*. 13:e3970. DOI: 10.1002/ecs2.3970
47. Van doninck, J., A. C. Smith, J. Knott, S.Record, and **P.L. Zarnetske**. “Explaining Patterns of Biodiversity Across Neon Sites Using Landsat-Based Disturbance Metrics.” In *2021 IEEE International Geoscience and Remote Sensing Symposium IGARSS*, 6252–55, 2021. DOI: 10.1109/IGARSS47720.2021.9554859.
46. ++Nagy, R.C. ... **P.L. Zarnetske**, ... et al. 2021. Harnessing the NEON data revolution to advance open environmental science with a diverse and data-capable community. *Invited for Special Issue on NEON Science Summit in Ecosphere*. 12: e03833. DOI: 10.1002/ecs2.3833.
45. Lamy, T., N. I. Wisnoski, R. Andrade, M. C. N. Castorani, A. Compagnoni, N. Lany, L. Marazzi, S. Record, C. M. Swan, J. D. Tonkin, N. Voelker, S. Wang, **P.L. Zarnetske**, and E. R. Sokol. 2021. The dual nature of metacommunity variability. *Oikos* 130:2078–2092. DOI: 10.1111/oik.08517.
44. Dahlin, K. M., **P. L. Zarnetske**, Q. D. Read***, L. A. Twardochleb**, A. G. Kamoske, K. S. Cheruvilil, and P. A. Soranno. 2021. Linking Terrestrial and Aquatic Biodiversity to Ecosystem Function Across Scales, Trophic Levels, and Realms. *Frontiers in Environmental Science* 9. DOI: 10.3389/fenvs.2021.692401.
43. Charney, N.D., S. Record, B.E. Gerstner**, C. Merow, **P.L. Zarnetske**, and B.J. Enquist. 2021. A Test of Species Distribution Model Transferability Across Environmental and Geographic Space for 108 Western North American Tree Species. *Frontiers in Ecology and Evolution* 9. DOI: 10.3389/fevo.2021.689295.
42. Smith, A.C.***, K.M. Dahlin, S. Record, J.K. Costanza, A.M. Wilson, and **P.L. Zarnetske**. 2021. The geodiv R package: Tools for calculating gradient surface metrics. *Methods in Ecology and Evolution* 12:2094–2100. DOI: 10.1111/2041-210X.13677.
41. **Zarnetske, P.L.**, J. Gurevitch, J. Franklin, P. Groffman, C. Harrison, J. Hellmann, F. Hoffman, S. Kothari, A. Robock, S. Tilmes, J. Wu, D. Visioni, L. Xia, and C.-E. Yang. 2021. Potential ecological impacts of climate intervention by reflecting sunlight to cool Earth. *Proceedings of the National Academy of Sciences*. 118 (15) e1921854118. DOI: 10.1073/pnas.1921854118.
 Selected Media Coverage: [CBC Quirks & Quarks](#), [Popular Science](#), [Ars Technica](#), [Star Tribune](#), [Skeptical Science](#), [MSU Today](#), [MSU NatSci Press Release](#), [UC Riverside](#), [CUNY](#), [UMN](#), [Stony Brook University](#)
 High impact: [Altmetric](#); cited in the 2023 [White House Office of Science and Technology Policy \(OSTP\) Congressionally Mandated Research Plan and an Initial Research Governance Framework Related to Solar Radiation Modification](#)
40. Charbonneau, B.R., S.M. Dohner, J.P. Wnek, D. Barber, **P.L. Zarnetske**, and B.B. Casper. 2021. Vegetation effects on coastal foredune initiation: Wind tunnel experiments and field validation for three dune-building plants. *Geomorphology* 378:107594. DOI:10.1016/j.geomorph.2021.107594.
 Media Coverage: [Nature Reviews Earth & Environment](#)
39. Record, S., N.M. Voelker, **P.L. Zarnetske**, N. Wisnoski, J. Tonkin, C. Swan, L. Marazzi, N. Lany***, T. Lamy, A. Compagnoni, M. Castorani, R. Andrade, E. Sokol. 2021. Novel insights to be gained from applying metacommunity theory to long-term, spatially replicated biodiversity data. *Frontiers in Ecology and Evolution*. DOI: 10.3389/fevo.2020.612794
 Media Coverage: [LTER Network News](#)
38. Twardochleb, L.A.**, E. Hiltner*, M. Pyne, and **P.L. Zarnetske**. 2021. Freshwater insects CONUS: A database of freshwater insect occurrences and traits for the contiguous United States. *Global Ecology and Biogeography*. 00:1-16. DOI: 10.1111/geb.13257.
 Media Coverage: [MSU NatSci Press Release](#)
37. Twardochleb, L.T.**, T. Treacle*, **P.L. Zarnetske**. 2020. Foraging strategy mediates ectotherm predator-prey responses to climate warming. *Ecology*. DOI: 10.1002/ecy.3146.

- Media Coverage:* [MSU NatSci Press Release](#)
36. Read, Q.D.^{***}, **P.L. Zarnetske**, S. Record, K.M. Dahlin, A.O. Finley, J.M. Grady^{***}, M. L. Hobi, S.L. Malone, J. Costanza, A.M. Wilson, A.M. Latimer, K.D. Gaddis, S. Pau, and S.V. Ollinger. 2020. Beyond counts and averages: relating geodiversity to dimensions of biodiversity. *Global Ecology and Biogeography*. 29: 696-710. DOI: 10.1111/geb.13061
- Media Coverage:* [MSU Today](#)
35. Lany, N.^{**}, **P.L. Zarnetske**, A. Finley, D.G. McCullough. 2020. Complementary strengths of spatially-explicit versus multi-species distribution models. *Ecography*. 43: 456-466. DOI: 10.1111/ecog.04728.
34. Record, S., K.M. Dahlin, **P.L. Zarnetske**, Q.D. Read^{***}, S.L. Malone, K. Gaddis, J.M. Grady^{***}, J. Costanza, M. Hobi, A. Latimer, S. Pau, A.M. Wilson, A. Finley, S.V. Ollinger, and E. Hestir. (invited). 2020. Remote Sensing of Geodiversity as a Link to Biodiversity. Pages 225–253 in J. Cavender-Bares, J. A. Gamon, and P. A. Townsend, editors. Remote Sensing of Plant Biodiversity. Springer International Publishing, Cham. DOI:10.1007/978-3-030-33157-3_10.
33. Dahlin, K.M., **P.L. Zarnetske**, S. Record. 2019. Hear every voice — working groups that work. *Frontiers in Ecology and the Environment*. 17:493-494. DOI:10.1002/fee.2115
32. Schrodtt, F., J. J. Bailey, W. D. Kissling, K. F. Rijdsdijk, A. C. Seijmonsbergen, D. van Ree, J. Hjort, R. S. Lawley, C. N. Williams, M. G. Anderson, P. Beier, P. van Beukering, D. S. Boyd, J. Brilha, L. Carcavilla, K. M. Dahlin, J. C. Gill, J. E. Gordon, M. Gray, M. Grundy, M. L. Hunter, J. J. Lawler, M. Monge-Ganuzas, K. R. Royse, I. Stewart, S. Record, W. Turner, **P. L. Zarnetske**, and R. Field. 2019. Opinion: To advance sustainable stewardship, we must document not only biodiversity but geodiversity. *Proceedings of the National Academy of Sciences* 116:16155–16158. DOI:10.1073/pnas.1911799116.
- Media coverage:* [The Conversation](#)
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
- Example 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.
- Media Coverage:* [Phys.org](#)
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 International Publishing. pp 337-361.
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/icx045.
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/icx057
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. DOI: 10.1130/GSATG228GW.1.
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. 2012. 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. 2012. 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. Hesson-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. Hesson-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.

R packages, Data repositories

8. Youngflesh, C. **, K. Kapsar**, A. Uscanga, P.J. Williams, J.W. Doser, L. Kounta**, and **P.L. Zarnetske**. 2024. Inter- and intra-annual temperature and precipitation variability (1950-2022) across the ranges of non-migratory birds and their association with generation length ver 1. Environmental Data Initiative. <https://doi.org/10.6073/pasta/59fba1b7dfe96856b17143f8e50f5722>.
7. **Zarnetske, P.L.**, K.C. Dobson**, M. Hammond#, and M.L. Young**. 2023. warmXtrophic: plant community responses to direct and herbivore-mediated indirect effects of climate warming across multiple years at Kellogg Biological Station Long-Term Ecological Research Sites (KBS LTER), Michigan, USA, and University of Michigan Biological Station (UMBS), Michigan, USA. ver 1. Environmental Data Initiative. <https://doi.org/10.6073/pasta/a09100ccd11abc0fb43c3bdb27db93b6>.
6. Gerstner, B. **, P. Bills#, **P.L. Zarnetske**. 2023. Frugivoria: an open trait database of birds and mammals exhibiting frugivory in moist montane Neotropical forests ver 1. Environmental Data Initiative. <https://doi.org/10.6073/pasta/96cc979e502ee49affdd8acdb421545b>.
5. Li, D., S. Record, E. Sokol, M. E. Bitters, M. Y. Chen, A. Y. Chung, M. R. Helmus, R. Jaimes, L. Jansen, M. A. Jarzyna, M. G. Just, J. M. LaMontagne, B. Melbourne, W. Moss, K. Norman, S. Parker, N. Robinson, B. Seyednasrollah, C. Smith, S. Spaulding, T. Surasinghe, S. Thomsen, and **P.L. Zarnetske**. neonDivData v0.1.0. Standardized NEON Organismal Data for Biodiversity Research. (2022). <https://daijiang.github.io/neonDivData/>. <https://daijiang.github.io/neonDivData/>.
4. Smith, A.C. **, **P.L. Zarnetske**, K. Dahlin, A. Wilson, A. Latimer. 2022. CRAN. geodiv: Methods for Calculating Gradient Surface Metrics. R package version 1.0.5. <https://CRAN.R-project.org/package=geodiv>
3. Read, Q.D. **, A. Yue, I.E. Fluck, B. Baiser, J.M. Grady**, **P.L. Zarnetske**, and S. Record. 2022. Ostats: O-statistics, or pairwise community-level niche overlap statistics. R package version 0.2.0. <https://cran.r-project.org/package=Ostats>
2. Twardochleb, L.A.**, *E. Hiltner, M. Pyne, P. Bills#, and **P.L. Zarnetske**. 2020. Freshwater insect occurrences and traits for the contiguous United States, 2001 - 2018. Environmental Data Initiative. DOI:[10.6073/PASTA/8238EA9BC15840844B3A023B6B6ED158](https://doi.org/10.6073/PASTA/8238EA9BC15840844B3A023B6B6ED158).

1. Smith, A.C.**, A. Ballantyne, **P.L. Zarnetske**. 2019. *disturbr*: Disturbance detection and attribution in R. R package version 0.1.0. <https://github.com/AnnicCooper/disturbr-public>

Theses & Non-Refereed Publications

7. **Zarnetske, P.L.** 2017. (*Invited*) Supertraps 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 (Role)

Award Total

2024-2025	MSU EEB Seed Grant (PI) <i>Advancing understanding of ecological networks across space and time with open, accessible, and dynamic digital natural history of global bird interactions</i>	\$13,000
2023-2024	National Science Foundation Career-Life Balance Supplement (PI) <i>Supplement: Collaborative Research: MRA: Connecting local, regional, and continental scale drivers to biodiversity across NEON through the lens of intraspecific trait variation and disturbance.</i> Award# 1926567	\$46,466
2023-2024	Experiment.com Low-Cost Tools for Science Challenge Grant (Investigator) <i>Can automated moth diversity monitoring be used to measure habitat restoration success in tropical jungles?</i> Investigators: Y Sondhi, H Szczygiel, A Quitmeyer, PL Zarnetske	\$10,000
2023-2024	MSU EEB Seed Grant (PI) <i>Evaluation of risk to marine and terrestrial biodiversity from climate change and climate intervention</i>	\$20,000
2023-2024	MSU XPRIZE Rainforest Semifinals (PI & Science Team Lead) <i>MSU Funding for the team to compete in the XPRIZE Rainforest Semifinals competition</i>	\$300,000
2022-2028	National Science Foundation LTER (Co-PI) <i>LTER: KBS - Ecological and Social Mechanisms of Resilience in Agroecosystems</i> Investigators: N Haddad (PI), Co-PIs: JA Lau, ST Marquart-Pyatt, SE Evans, B Basso, PL Zarnetske, GP Robertson, CD Sprunger, D Landis, S Kravchenko	\$7,650,000
2022-2025	National Science Foundation REU Site (Senior Personnel) <i>REU Site: Understanding biological responses to global change in a field station community</i> Investigators: S Evans (PI), F Janzen (Co-PI); Senior Personnel: PL Zarnetske, A Shah, GP Robertson, E Litchman, C Klausmeier, N Haddad, KJ Gilbert, SW Fitzpatrick, JK Conner, AM Bronikowski	\$393,004
2022-2024	National Science Foundation CC* Compute (Co-PI) <i>CC* Compute: The MSU Data Machine - a high-memory, GPU-enabled compute cluster for data-intensive and AI applications</i> Investigators: B O'Shea (PI), Co-PIs: PL Zarnetske, A Ligmann-Zielinska, M Schrenk, J Yuan	\$399,864
2021-2024	MSU Strategic Partnership Grant (PI) <i>The Institute for Biodiversity, Ecology, Evolution, and MacroSystems (IBEEM)</i>	\$480,000

Investigators: PL Zarnetske (PI), E Zipkin (Co-PI), KS Cheruvellil (Co-PI), KM Dahlin (Co-PI), J Robinson (Co-PI), G Bradburd (Co-PI); Senior Personnel: N Haddad, J Liu, P-N Tan, J Zhou, S Stark, Y Pokhrel, M Weber, A Finley, B O'Shea, S Hamilton, L Luo, M Meek, W Wetzell, A Shade, S Evans, S Fitzpatrick, E Litchman, C Klausmeier, K Holekamp, P Robertson, C Ofria, F Janzen, L Brudvig, D Roy

2020-2023	National Science Foundation REU Site (Senior Personnel)	\$401,233
	<i>REU Site: ICER ACRES: ICER Advanced Computational Research Experience for Students</i>	
	Investigators: B O'Shea (PI), A Krishnan (Co-PI), Senior Personnel: PL Zarnetske, A Dickson, J Bazil, A Shade, A Finley, N Moore, H-C Yu, T Gao, J Perea, M Aktulga	
2020-2023	National Aeronautics and Space Administration FINESST (PI)	\$135,000
	<i>Using geodiversity and community ecology to improve species conservation assessments in biodiversity hotspots</i>	
	Investigators: PL Zarnetske (PI), B Gerstner (graduate student)	
2019-2025	National Science Foundation DEB Macrosystems Biology (Lead PI)	\$1,567,359
	<i>Collaborative Research: MRA: Connecting local, regional, and continental scale drivers to biodiversity across NEON through the lens of intraspecific trait variation and disturbance. Award# 1926567.</i>	
	Investigators: PL Zarnetske (Lead PI), S Record (PI), B Baiser (PI), A Strecker (PI)	
2019-2025	National Science Foundation Division of Environmental Biology (PI)	\$50,000
	<i>Collaborative Research: Workshop on the ecological impacts of solar radiation management Geoengineering. Award# 1937699.</i>	
	Investigators: P Zarnetske (PI), J Gurevitch (PI)	
2019	National Science Foundation DBI/BIO (Steering Committee)	
	<i>NEON Science Summit: Initiating grassroots research communities through an "unconference"</i>	
	Investigators: J Balch (PI), C. Nagy (Co-PI). \$99,957; included travel costs for Zarnetske.	
2019	Google Cloud Platform Research Credits (PI, sole investigator)	\$7,000
	<i>Climate change and biodiversity: Detecting resilient landscapes</i>	
2018	Michigan State University Discretionary Funding Initiative (PI, sole investigator)	\$50,000
	<i>Interactive effects of climate change and biotic interactions on plant community resilience</i>	
2018	National Science Foundation REU Supplement: Award#1550765 (PI, sole investigator)	\$9,876
2017-2021	Michigan Invasive Species Grant Program (Co-PI) (\$498,468 with match)	\$314,453
	<i>Projecting Hemlock Woolly Adelgid Distribution and Risk in Michigan.</i>	
	Investigators: D McCullough (PI), Co-PIs: PL Zarnetske, N Lany, J Andresen	
2017-2021	National Aeronautics and Space Administration NESSF (PI)	\$134,107
	<i>Predicting freshwater biodiversity across scales using measures of land use, climate, and primary productivity</i>	
	Investigators: PL Zarnetske (PI), L Twardochleb (graduate student)	
2016-2017	Environmental Science and Policy Program (PI, sole investigator)	\$2,324
	<i>VISTAS: Linking Intraspecific Trait Variation with Ecosystem Function at a Continental Scale</i>	
2016-2019	National Aeronautics and Space Administration (PI)	\$150,441
	<i>Biodiversity: Connecting biodiversity, geodiversity, and remote sensing across scales</i>	
	Award # NNH15ZDA001N-BIO.	
	Investigators: PL Zarnetske (PI), Co-Is: KM Dahlin, S Record	
2016-2017	MSU Environmental Science and Policy Program (Co-PI)	\$80,000
	<i>Watercube: Cross-scale interactions in freshwater ecosystems</i>	
	Investigators: KM Dahlin (PI), Co-PIs: PL Zarnetske, P Soranno, KS Cheruvellil, Lifeng Luo	
2016-2018	National Science Foundation , Emerging Frontiers (Lead PI)	\$300,000
	<i>Collaborative Research: EAGER-NEON: Using intraspecific trait variation to understand processes structuring continental-scale biodiversity patterns, Award# 1550765</i>	
	Investigators: PL Zarnetske (Lead PI), S Record (PI), B Baiser (PI), A Strecker (PI)	
2015-2018	Arnold and Mabel Beckman Foundation (PI)	\$189,604
	<i>Improving predictions of climate change effects on ecological communities with ecological complexity.</i>	
	Investigators: PL Zarnetske (PI); Nina Lany (Co-PI)	
<i>Sole Investigator for research grants and fellowships below:</i>		
2011	Yale Climate and Energy Institute , YCEI Research Grant	\$10,000

	<i>The community ecology of climate change</i>	
	New Zealand Department of Conservation , Science and Research Grant	\$14,500
	<i>Predicting invasion hotspots of <i>Didymosphenia geminata</i> in New Zealand</i>	
2010	NSF IGERT Ecosystem Informatics , in cooperation with New Zealand Institute for Water and Atmospheric Research, and the University of Otago	\$13,000
	<i>Invasive species distribution modeling with boosted regression trees; Bio-physical mechanisms & implications of beachgrass invasions on coastal dunes</i>	
2007-2009	Hatfield Marine Science Center , Mamie Markham Award	\$10,000
	<i>What is the relative role of invasive vs. native species in building coastal dunes?</i>	
2009	Oregon State University Zoology Department , Research Fund	
	<i>Bio-physical mechanisms and implications of beachgrass (<i>Ammophila spp.</i>) invasions on coastal dunes</i>	
2006-2011	NSF IGERT Ecosystem Informatics , Fellowship Research Grant	\$10,000

Competitive Fellowships & Awards

2022	College of Natural Science Early Career Research Award
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 90 th ESA and IX International Congress of Ecology (INTECOL) meeting, Montreal, Canada
2001	Maine Water Conference , Best Student Research Poster

Teaching Experience

2023-	Instructor , Graduate Professional Development (IBIO801), Michigan State University
	Guest Lecturer , Career Pathways (PLB801), Michigan State University
2022	Instructor , Spatial Ecology (IBIO870/FOR870/FW870), Michigan State University
2022	Co-Instructor , Graduate Professional Development (IBIO801), Michigan State University
2015-2020	Instructor , Spatial Ecology (FOR870/FW870), Michigan State University
2020	Instructor , Graduate Professional Development (IBIO801), Michigan State University
2019	Co-Instructor , Graduate Professional Development (IBIO801), Michigan State University
2018	Co-Instructor , Forest Ecology & Lab (FOR440 & FOR440L), Michigan State University
2017	Guest Lecturer , FW Grad Seminar Principles and Perspectives in Fisheries and Wildlife, MSU
2017	Co-Instructor , Metacommunity Ecology (FW893), Michigan State University
2015-2016	Instructor , 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**, Problems in Environmental Science (BI493), Colby College.

Faculty mentoring

2021- Alisha Shah

Postdoctoral advising

2023- Kelly Kapsar
2022- Lala Kounta Diop
2022-2023 Casey Youngflesh
2020-2022 Jasper Van doninck
2020-2021 Jon Knott
2018-2019 L. Annie Cooper Smith
2016-2018 Quentin Read
John Grady
2015-2019 Nina Lany

Student research and training supervision

2015- 46 undergraduates including NSF KBS REU, NSF ICER ACRES REU, MSU URA, MSU Honors College PA, MSU SROP students
2020- Kara Dobson: PhD candidate (MSU IBIO & EEB)
Fellowships received: MSU CNS Fellowship, MSU NSF NRT IMPACTS Fellowship, MSU EEB Fellowship, KBS Graduate Research Fellowship, MSU Natural Science Collections Summer Internship
Moriah Young: PhD candidate (MSU IBIO & EEB)
Fellowships received: NSF Graduate Research Fellowship, KBS Graduate Research Fellowship (x3)
2021-2024 Hazel Anderson: MS (MSU IBIO & EEB)
Fellowships received: NSF Graduate Research Fellowship, MSU Plant Science Start Up Scholarship, MSU Natural Science Collections Summer Internship
2019-2020 Tori Donovan: PhD (University of Nebraska, Lincoln)
Preparing for Future Faculty Fellow mentor
2017-2023 Beth Gerstner: PhD (MSU Fisheries & Wildlife, EEB)
Fellowships received: MSU UEF, KBS Academic Programs, NASA FINESST, MSU EEB Fellowship
2015-2020 Laura Twardochleb: PhD candidate (MSU Fisheries & Wildlife, EEB)
Fellowships received: MSU UEF, 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, EEB)
Fellowships received: MSU Plant Sciences, NSF 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- Jana Woerner (MSU IBIO), Sydney Waloven (MSU FW), Armando Dans Chavarria (MSU FW), Sierra Perez (Indiana University), Hazel Anderson (MSU IBIO), Kara Dobson (MSU IBIO), Moriah Young (MSU IBIO), Stephanie Clark (MSU IBIO), Riley Pizza (MSU PLB), Alice Puchalsky (MSU IBIO), Pietro Sciusco (MSU GEOG), Lauren Koenig (MSU IBIO), Beth Gerstner (MSU FW), Laura Twardochleb (MSU FW), Sam Ayebare (MSU IBIO), Emily Conway (MSU PLB), Isabela Lima Borges (MSU IBIO), Kayla Davis (MSU IBIO), Claire Hoffman (MSU FW), Anna Groves (MSU PLB), Malcolm Itter (MSU Forestry), Neil VerPlanck (MSU Forestry), Matthew Reid (Univ Louisville), Andrew Dennhardt (MSU FW), Meredith Zettlemoyer (MSU MSU), Sean Sultaire (MSU FW)

Training

- 2020 Speaking Up to Bias Workshop Training, American Geophysical Union
MSU Academic Communications Fellowship (media training)
MSU Summer Online Instruction Readiness for Educational Excellence (SOIREE)
- 2018 National Ecological Observatory Network (NEON) Data Education Fellows
Faculty Mentoring Network, NSF QUBES.
Diversity & Inclusion in the classroom, Michigan State University
- 2018-2013 RVSM training (annual to present), 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

- 2023 Department of Integrative Biology, East Lansing, MI
Kellogg Biological Station Long Term Ecological Research All-Scientists Mtg., Hickory Corners, MI
Rights of Nature Conference, New Legal Perspectives: the synergy of law and science to protect the Rights of Nature, East Lansing, MI
Royal Society, Geodiversity for Society Meeting, Nottingham, UK
- 2022 EcoNet Meeting, Université Lyon 1, Lyon, France
Designing Scenarios for Climate Intervention Strategies, Community Climate Intervention Strategies (CCIS), NCAR, Boulder, CO
California Polytechnic, Humboldt (declined)
Purdue University (declined)
- 2021 Laboratoire de Biométrie et Biologie Évolutive, Université Lyon 1, France
Cary Institute of Ecosystem Studies, Millbrook, NY
Community Climate Intervention Strategies (CCIS), NCAR, Boulder, CO
Coffee with the Profs, MSU Alumni Association, East Lansing, MI
MSU Research Facilitation Network, East Lansing, MI
ICER ACRES REU Program, East Lansing, MI
- 2020 MSU College of Natural Science Alumni Association, East Lansing, MI
Dept. of Ecology & Evolution, Stony Brook University, Stony Brook, NY – *cancelled, COVID-19*
Kellogg Biological Station, Michigan State University, Hickory Corners, MI
- 2019 NSF Macrosystems Biology PI Symposium, Boulder, CO.
O'Neill School of Environmental and Public Affairs, Indiana University, Bloomington, IN
- 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 from SpaCE Lab
+award ++invited ^plenary*

- *Dobson, K. and **P.L. Zarnetske**. May 2024. A large-scale analysis of passive experimental warming effects on plant communities. MSU EEB Research Symposium, East Lansing, MI. Oral Presentation.
- *Kounta, L., G. Anil, D.M., Hueholt, C.S. Harrison, A.T. Gaye, and **P.L. Zarnetske**. May 2024. Can solar radiation modification mitigate future increases in marine heatwaves? MSU Organization for International and Students and Scholars, East Lansing, MI. Poster Presentation.
- *Parker, E.G., M. Hammond, *K. Dobson, *M. Young, **P.L. Zarnetske**. April 2024. How the overlap of abiotic and biotic stressors impact tall goldenrod (*Solidago altissima*) fitness. Ecological Society of America (ESA) Great Lakes Regional Conference, Kalamazoo, MI. Poster Presentation.
- *DePasquale, G., I. Hirschowitz, *C. Roche, *E.G. Parker, P. Bills, **P.L. Zarnetske**. April 2024. An exploration of interspecific avian interactions. Michigan State University Undergraduate Research and Arts Forum (UURAF). East Lansing, MI. Poster Presentation.
- *Kounta, L., G. Anil, D.M., Hueholt, C.S. Harrison, A.T. Gaye, and **P.L. Zarnetske**. February 2024. Can solar radiation modification mitigate future increases in marine heatwaves?. Ocean Sciences Meeting, AGU, New Orleans, LA. Poster Presentation.
- *Kapsar, K., *L. Kounta, P. Bills, and **P.L. Zarnetske**. February 2024. Data and Workflows for Macrosystems Biodiversity: Climate, Geodiversity, and Disturbance. Poster presented at NSF Macrosystems Biology Community Virtual Meeting. Oral Presentation.
- ++**Zarnetske, P.L.** September 2023. Rights of Nature in the context of climate change and biodiversity. Rights of Nature Conference, New Legal Perspectives: the synergy of law and science to protect the Rights of Nature, MSU College of Law, East Lansing, MI. Oral Presentation.
- ++**Zarnetske, P.L.** September 2023. Scaling LTER Science: Insights from Macrosystems Biology, NEON, and LTER synthesis. Kellogg Biological Station Long Term Ecological Research (KBS LTER) Site All Scientists Meeting. Hickory Corners, MI. Oral presentation.
- *Dobson, K. and **P.L. Zarnetske**. September 2023. Plant emissions of volatile organic compounds under stress. Kellogg Biological Station LTER All Scientists Meeting, Hickory Corners, MI. Oral Presentation.
- *Young, M., S. Evans, **P.L. Zarnetske**. September 2023. Towards understanding soil bacterial community responses to multiple climate stressors in an early successional field. KBS LTER All Scientist Meeting, Hickory Corners, MI. Poster Presentation.
- Shepard, I.D., A. Yue, L. Kounta*, B. Baiser, A. Strecker, **P.L. Zarnetske**, S. Record. August 2023. Effects of linear disturbance on biodiversity across multiple taxonomic groups. Ecological Society of America Meeting. Portland, OR. Oral presentation.
- *Gerstner, B. and **P.L. Zarnetske**. August 2023. Can scale-dependent geodiversity improve species distribution models in a montane biodiversity hotspot? Ecological Society of America Meeting. Portland, OR. Oral presentation.

- *Anderson, H.J., B.E. Gerstner*, **P.L. Zarnetske**. August 2023. Plant-frugivore taxonomic and functional diversity relationships in the Tropical Andes. Ecological Society of America Meeting. Portland, OR. Poster presentation.
- McGrew, A., C. Ganz, L. Kounta*, A. Strecker, B. Baiser, S. Record, **P.L. Zarnetske**. August 2023. Size-based intraspecific trait variation-diversity relationships in freshwater fish across National Ecological Observatory Network (NEON) streams and lakes. Ecological Society of America Meeting. Portland, OR. Oral presentation.
- McGrew, A., A. Strecker, D. Monahan, C. Ganz, B. Baiser, S. Record, **P.L. Zarnetske**. August 2023. Everything you need to know about using National Ecological Observatory Network (NEON) fish data: Guidelines for prospective and new users. Ecological Society of America Meeting. Portland, OR. Oral presentation.
- **Baiser, B., I. Fluck-Essig, S. LeClare, D. Li, T.J. Matthews, S. Record, A. Strecker, and **P.L. Zarnetske**. August 2023. Continental-scale drivers of species-area relationships across the National Ecological Observatory Network (NEON). Ecological Society of America Meeting. Portland, OR. Oral presentation.
- ***Youngflesh, C., **P.L. Zarnetske**, K.M. Dahlin. August 2023. Avian morphoscapes: A framework for characterizing the drivers of intraspecific trait variation in North American birds. Ecological Society of America Meeting. Portland, OR. Oral presentation.
- *Young, M., S. Evans, **P.L. Zarnetske**. August 2023. Towards understanding soil bacterial community responses to multiple climate stressors in an early successional field. Ecological Society of America Meeting. Portland, OR. Oral presentation.
- *Noecker, A., M. Young, M. Hammond, **P.L. Zarnetske**. July 2023. Investigating the climate warming and drought soil legacy effects on red clover (*Trifolium pratense*). Kellogg Biological Station Undergraduate Research Symposium. Hickory Corners, MI. Poster presentation.
- *Gerstner, B., and **P.L. Zarnetske**. July 2023. Exploring geodiversity as a tool to enhance species distribution models for mammals in the Northern Andes. 13th International Mammalogical Congress. Anchorage, AK. Oral Presentation.
- Miele, V., M. Ohlman, S. Dray, **P.L. Zarnetske**. July 2023. Exploring the multiplex metanetwork of North American bird interactions. Multi-interaction socio-ecological networks; a satellite symposium of the Network Science Society Meeting, Vienna, Austria. Oral presentation.
- *Dobson, K. and **P.L. Zarnetske**. May 2023. Warming and drought effects on volatile emissions of *Solidago canadensis*. MSU EEB Research Symposium, East Lansing, MI. Poster Presentation.
- *Young, M., S. Evans, **P.L. Zarnetske**. May 2023. Soil bacterial community responses to multiple climate stressors in an early successional plant community. MSU EEB Research Symposium. Poster Presentation.
- *Anderson, H.J., *B.E. Gerstner, and **P.L. Zarnetske**. May 2023. Investigating plant-frugivore taxonomic and functional diversity relationships in the Tropical Andes. MSU EEB Research Symposium, East Lansing, MI. Poster Presentation.
- *Young, M., S. Evans, **P.L. Zarnetske**. April 2023. Understanding soil bacterial community responses to multiple climate stressors in an early successional field. MSU EEB Colloquium, East Lansing, MI. Oral Presentation.
- *Anderson H, *B.E. Gerstner, and **P.L. Zarnetske**. April 2023. Plant-frugivore taxonomic and functional diversity spatial relationships in the Tropical Andes. MSU EEB Colloquium, East Lansing, MI. Oral Presentation.
- *Dobson, K. and **P.L. Zarnetske**. April 2023. A large-scale analysis of passive experimental warming effects on plant communities. MSU EEB Colloquium, East Lansing, MI. Oral Presentation.
- *Anderson H, *B.E. Gerstner, and **P.L. Zarnetske**. April 2023. Investigating plant-frugivore taxonomic and functional diversity relationships in the Tropical Andes. MSU Plant Science Grad Student Research Symposium, East Lansing, MI. Poster Presentation.
- *Anderson, H.J., *B.E. Gerstner, and **P.L. Zarnetske**. March 2023. Plant-frugivore taxonomic and functional diversity relationships in the Northern Andes. University of Michigan Early Career Scientist Symposium. Poster Presentation.
- ++**Zarnetske, P.L.**, B. Gerstner, S. Record, B. Baiser, A. Strecker, A. Smith, Q.D. Read, K. Dahlin, A. Latimer, A. Wilson, J. Costanza. January 2023. Can geodiversity improve models of biodiversity and species?

- distributions? The Royal Society: Geodiversity Science for Society Meeting, Nottingham, UK – Virtual. Oral presentation.
- ++**Zarnetske, P.L.** 2022. Ecological Impacts & Research Priorities: Climate Intervention & Solar Radiation Modification. Designing Scenarios for Climate Intervention Strategies, Community Climate Intervention Strategies (CCIS), NCAR, Boulder, CO – Virtual. Oral Presentation.
- ++Record, S., S. Olivares-Mejia, F. Romero, D. Vilsaint, K. Hoerr, *C. Chillcutt, H. Wei, J. Toman, T. Perez, B. Baiser, **P.L. Zarnetske.** 2022. A forthcoming database of past and current land use data for the National Ecological Observatory Network. Ecological Society of America and Canadian Society for Ecology and Evolution Joint Meeting, Montréal, Canada – Oral presentation.
- +++Van doninck, J., *A. Smith, S. Record, P. Bills, *C. Hart, and **P.L. Zarnetske.** 2022. Uncovering high resolution disturbance history across the United States. 2022. Ecological Society of America and Canadian Society for Ecology and Evolution Joint Meeting, Montréal, Canada – Oral presentation.
- *Young, M., *K. Dobson, M. Hammond, **P.L. Zarnetske.** 2022. Towards linking the soil microbiome with plant responses to climate change in an early successional plant community. Ecological Society of America and Canadian Society for Ecology and Evolution Joint Meeting, Montréal, Canada – Poster Presentation.
- *Dobson, K. and **P.L. Zarnetske.** 2022. Warming and drought effects on volatile emissions of *Solidago canadensis*. Ecological Society of America and Canadian Society for Ecology and Evolution Joint Meeting, Montréal, Canada – Poster Presentation.
- *Leonard, L., *M. Young, **P.L. Zarnetske.** 2022. Does a drought legacy affect *Triticum aestivum* growth? Kellogg Biological Station Undergraduate Internship and Research Symposium, Hickory Corners, MI – Poster Presentation.
- *Zapata, J., *K. Dobson, M. Hammond, and **P.L. Zarnetske.** 2022. The effects of climate change treatments on the biomass of plant communities. Kellogg Biological Station Undergraduate Internship and Research Symposium, Hickory Corners, MI – Poster Presentation.
- *Gerstner, B. and **P.L. Zarnetske.** 2022. Can scale-dependent geodiversity improve species distribution models in a montane biodiversity hotspot? 6th North American Congress for Conservation Biology, Reno, NV – Oral Presentation.
- *Parker, E., *K. Dobson, *M. Young, M. Hammond, **P.L. Zarnetske.** 2022. The impacts of climate change on goldenrod-gall midge interactions. MSU University Undergraduate Research and Arts Forum (UURAF), East Lansing, MI – Poster Presentation.
- *Hart, C.A., *J. Van doninck, **P.L. Zarnetske.** 2022. Implementing Landsat time series clustering across NEON sites for improved disturbance detection. UURAF –Virtual Oral Presentation.
- ++**Zarnetske, P.L.,** S Dray, V. Miele. 2022. EcoNet Meeting. Interactions entre oiseaux aux USA: metaweb multiplexe, temps et espace (Interactions among birds in the USA: multiplex metaweb, time and space), Université Lyon 1, Lyon, France – Oral presentation.
- ++**Zarnetske, P.L.,** J. Gurevitch, J. Franklin, A. Robock, J. Hellmann, L. Xia, S. Kothari, D. Visioni, C.S. Harrison, C-En Yang, J. Wu, P.M. Groffman, S. Tilmes, F.M. Hoffman, B. Clark, *J. Knott, K. Scherrer. 2021. Potential Ecological Impacts of Climate Intervention with Solar Radiation Modification. American Geophysical Union Meeting – Virtual. Oral Presentation.
- Xia, L., A. Robock, S. Tilmes, D. Visioni, B. Kravitz, J. Wu, S. Kothari, C-En Yang, F.M. Hoffman, **P.L. Zarnetske,** J. Franklin, J. Gurevitch, B. Clark, J. Singh. 2021. Natural Vegetation Responses in Geoenvironmental Model Intercomparison Project (GeoMIP) G6 Experiments. American Geophysical Union Meeting – Virtual. Poster Presentation.
- *Van doninck, *C. Hart, *A.C. Smith, P. Bills, S. Olivares-Mejia, J. Toman, A. Yue, S. Record, **P.L. Zarnetske.** 2021. Improving disturbance detection over NEON sites based on Landsat time series clustering. American Geophysical Union Meeting – Virtual. Oral Presentation.
- Record, S., *J. Van doninck, *A. Smith, *J. Knott, P. Bills, S. Olivares-Mejia, J. Toman, A. Yue, B. Baiser, A. Strecker, **P.L. Zarnetske.** Impacts of disturbance regime on biodiversity varies by taxa: Insights from Landsat, NEON, and historical records. 2021. American Geophysical Union Annual Meeting. Virtual - Oral presentation.

- ++*Van doninck, *J. Knott, **P.L. Zarnetske**, *A.C. Smith, P. Bills, S. Record, B. Baiser, and A.L. Strecker. August 2021. Combining open NEON and Landsat data to connect biodiversity and disturbance regime. Ecological Society of America Meeting – Virtual. Oral presentation.
- ++Li, D., S. Record, E. Sokol, M. E. Bitters, M. Y. Chen, A. Y. Chung, M. R. Helmus, R. Jaimes, L. Jansen, M. A. Jarzyna, M. G. Just, J. M. LaMontagne, B. Melbourne, W. Moss, K. Norman, S. Parker, N. Robinson, B. Seyednasrollah, C. Smith, S. Spaulding, T. Surasinghe, S. Thomsen, and **P.L. Zarnetske**. 2021. Tidy NEON data for biodiversity research. Ecological Society of America Meeting – Virtual. Oral presentation.
- ++Jarzyna, M.A., K.E.A. Norman, J. LaMontagne, M.R. Helmus, D. Li, S. Parker, S. Record, E.R. Sokol, **P.L. Zarnetske**, and T. Surasinghe. August 2021. Ecosystem stability is related to animal community dynamics at a continental scale. Ecological Society of America Meeting – Virtual. Oral presentation.
- Baiser, B., *Q.D. Read, S. Record, A.L. Strecker, M.W. Tingley, and **P.L. Zarnetske**. August 2021. The relationship between intraspecific variation in body size and diversity for three vertebrate taxa across North America. Ecological Society of America Meeting – Virtual. Oral presentation.
- ++Hellmann, J., J. Franklin, J. Gurevitch, C. Harrison, *J. Knott, **P.L. Zarnetske**, A. Robock, L. Xia, S. Tilmes, D. Visioni. August 2021. Beyond impact: Ecology helping to guide scenarios of climate intervention. Ecological Society of America Meeting – Virtual. Oral presentation.
- *Gerstner, B.E., P. Bills, **P.L. Zarnetske**. August 2021. Frugivoria: An open trait database of birds and mammals exhibiting frugivory in the montane Neotropics. Ecological Society of America Meeting – Virtual. Oral presentation.
- *Hart, C., *J. Van doninck, **P.L. Zarnetske**. Improving Current Environmental Disturbance Detection Models with Region-Growing Clustering. July 2021. Mid-Michigan Symposium for Undergraduate Research Experiences (Mid-SURE). Virtual - Poster Presentation; Institute for Cyber-Enabled Research ACRES REU Symposium. Virtual - Oral Presentation.
- ++**Zarnetske, P.L.** 2021. Potential Ecological Impacts of Climate Intervention. NCAR's Community Climate Intervention Strategies (CCIS). Virtual – Oral Presentation.
- *Van doninck, J., *A. Smith, *J. Knott, S. Record, and **P.L. Zarnetske**. Explaining patterns of biodiversity across NEON sites using Landsat-based disturbance metrics. June 2021. International Geoscience and Remote Sensing Symposium – Virtual. Oral presentation.
- ++**Zarnetske, P.L.** Explaining Patterns of Biodiversity Across Spatial Scales with Traits, Geodiversity, and Disturbance. Cary Institute of Ecosystem Studies. April 2021. Virtual - Oral Presentation.
- S. Record, **P.L. Zarnetske**, B. Baiser, *K. Hoerr, *C. Chillcut, *H. Wei, *B. Gerstner, A.L. Strecker, K.M. Thibault, J. Knott, and *J. Van donink. The importance of ecological memory: Insights from LTER-NEON data synergies. 2020. British Ecological Society Annual Meeting – Virtual. Oral presentation.
- *Van doninck, J., *A Smith, *J Knott, *QD Read, S Record, B Baiser, AL Strecker, K Thibault, **Zarnetske, P.L.** December 2020. Explaining patterns of biodiversity across spatial scales with improved detection and attribution of disturbances. American Geophysical Union Meeting – Virtual. Oral Presentation.
- Dahlin, K., A Kamoske, *QD Read, S Record, S Serbin, SC Stark and **PL Zarnetske**. December 2020. Mapping dimensions of biodiversity in forested ecosystems with lidar and imaging spectroscopy fusion. American Geophysical Union Meeting – Virtual. Oral Presentation.
- Record, S., **P.L. Zarnetske**, B. Baiser, K. Hoerr, *C. Chillcut, H. Wei, *B. Gerstner, A.L. Strecker, K.M. Thibault, J. Knott, and J. Van donink. The importance of ecological memory: Insights from LTER-NEON data synergies. 2020. British Ecological Society Meeting – Virtual. Oral presentation.
- ++**Zarnetske, P.L.** S Record, B Baiser, AL Strecker, *J Van doninck, *J Knott, *A Smith, *Q Read, K Dahlin, A Latimer, A Wilson, K Thibault. August 2020. "Local- to continental-scale drivers of biodiversity across NEON" in special session: Revolutionizing Our Understanding of Scale: How the NEON Network Enables Innovative Research into the Complexities of Ecological Phenomena Across Spatio-Temporal Scales. Ecological Society of America Annual Meeting – Virtual Oral Presentation.
- Record, S., P.L. Zarnetske, B. Baiser, K. Hoerr, C. Chilcut, H. Wei, B. Gerstner, A.L. Strecker, K.M. Thibault, J. Knott, and J. Van donink. The importance of ecological memory: Insights from LTER-NEON data synergies. 2020. Ecological Society of America Annual Meeting – Virtual. Oral presentation.
- Gurevitch, J., **P.L. Zarnetske**, J. Franklin, P. Groffman, C. Harrison, J. Hellmann, F. Hoffman, S. Kothari, A. Robock, S. Tilmes, J. Wu, D. Visioni, L. Xia, and C.-E. Yang. August 2020. Potential ecological impacts of

- climate intervention by solar radiation management. Ecological Society of America Meeting, Poster presentation.
- *Ralston, E., *M. Bhatt, *B. Gerstner, **P.L. Zarnetske**. Planned April 2020. Using species' traits to improve extinction risk assessments. University Undergraduate Research Arts Forum (UURAF). Michigan State University – *Cancelled, COVID-19*.
- *Blommel, C., *B. Gerstner, **P.L. Zarnetske**. Planned March 2020. Modeling Species Distributions with Geodiversity in Biodiversity Hotspots. National Council for Undergraduate Research (NCUR). Montana State University – *Cancelled, COVID-19*.
- ^**Zarnetske, P.L.** Advancing biodiversity science and education with NEON's organismal data. October 2019. NEON Science Summit (plenary). Boulder, CO.
- ++*Lany, N.K., **Zarnetske, P.L.** A.O. Finley, D.G. McCullough. August 2019. Complementary strengths of spatially-explicit vs. multi-species distribution models. Ecological Society of America Meeting, Louisville, KY.
- *Read, Q.D., **P.L. Zarnetske**, S. Record, K.M. Dahlin, A.O. Finley, *J.M. Grady, M. L. Hobi, S.L. Malone, J. Costanza, A.M. Wilson, A.M. Latimer, K.D. Gaddis, S. Pau, and S.V. Ollinger. August 2019. Beyond counts and averages: relating geodiversity to dimensions of biodiversity. Ecological Society of America Meeting, Louisville, KY.
- ++Record, S., *Q.D. Read, *J.M. Grady, **P.L. Zarnetske**, K. Thorne, B. Baiser, J. Belmaker, M.-N. Tuanmu, A.L. Strecker, L. Beaudrot, K.M. Thibault, Integrated research and teaching with NEON organismal data to understand drivers of community assembly. August 2019. Ecological Society of America Meeting, Louisville, KY.
- ++*Smith, A.C., A.P. Ballantyne, Z. Liu, **P.L. Zarnetske**. August 2019. Detecting and characterizing forest disturbance across ecosystems. Ecological Society of America Meeting, Louisville, KY.
- Wisnoski, N.I., E.R. Sokol, R. Andrade, M.C.N. Castorani, C.P. Catano, A. Compagnoni, T. Lamy, *N.K. Lany, L. Marazzi, S. Record, *A.C. Smith, C.M. Swan, J.D. Tonkin, N.M. Voelker, **P.L. Zarnetske**. August 2019. Patterns and drivers of stability in long-term metacommunity data. Ecological Society of America Meeting, Louisville, KY.
- Zarnetske, P.L.**, A.C. Smith, Q.D. Read, S. Record, K.M. Dahlin, A. Latimer, J.K. Costanza, S.Pau, K. Gaddis, M.L. Hobi, A.M. Wilson. August 2019. Dimensions of biodiversity and geodiversity across scales. International Biogeography Society Meeting. Quito, Ecuador.
- * Smith, A.C., K.M. Dahlin, **P.L. Zarnetske**, A. Latimer, S. Record, J.K. Costanza, S. Pau, K. Gaddis, M.L. Hobi, A.M. Wilson. August 2019. Using gradient metrics to determine landscape traits that enhance biodiversity. International Biogeography Society Meeting. Quito, Ecuador.
- ++**Zarnetske, P.L.** May 2019. EAGER-NEON: Using intraspecific trait variation to understand processes structuring continental-scale biodiversity patterns. National Science Foundation Macrosystems Biology PI Meeting, Boulder, CO.
- *Twardochleb, L.T., *E. Hiltner, M. Pyne, **P.L. Zarnetske**. May 2019. A freshwater insect occurrence and trait dataset for the continental United States. Society for Freshwater Science. Salt Lake City, UT.
- 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. December 2018. Remotely sensed geodiversity for identifying and predicting biodiverse landscapes. American Geophysical Union Meeting, Washington, D.C.
- *Chilcutt, C., *K. Hoerr, *H. Wei, *B. Gerstner, **P.L. Zarnetske**, S.R. Record, B. Baiser. October 2018. Disturbance effects on species richness within and across co-located NEON-LTER sites: A Cross-site REU-Project. 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.
- *Hiltner, E., *L. Twardochleb, **P.L. Zarnetske**. April 2019. An ecological trait database of North American freshwater invertebrates for the assessment of climate change effects on streams. MSU UURAF. East Lansing, MI.
- ^**Zarnetske, P.L.** March 2018. Biotic interactions in the future. International Biogeography Society (plenary). 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 / Vistas ESPP. Michigan State University, East Lansing, MI.
- *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). 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.** 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, 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.
- 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.
- *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. Integrating invasion ecology and dune geomorphology to project coastal vulnerability in Oregon and Washington. 20th BGSS, Newport, OR.
- +**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.** 2006. Modeling forest bird occurrence with FIA and Landfire vegetation models. FIA User Group Meeting, Ogden, 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.** 2002. Amphibian Declines: The importance of geographic information systems as a resource for conservation. Harvard GIS Day, Harvard University, Cambridge, MA.
- 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.

Research Workshops, Sessions, Symposia

¹participant ²organizer ³presenter

- 2024 *MSU Institute for Biodiversity, Ecology, Evolution, and Macrosystems (IBEEM)*, East Lansing, MI, April 16, 2024
[Collaborative Coding for Scientific Research: Git, GitHub, and open science](#) ²
- 2023 *Ecological Society of America Meeting*, Portland, OR, August 6-11
[OOS 18 - The Role of Intraspecific Trait Variation \(ITV\) in Ecological Communities](#) ²

- [Research at Multiple Scales: A Vision for Continental Scale Biology](#) (multiple closed meetings, 2 multi-day webinars), National Academies of Sciences, Engineering, Medicine (NASEM) ^{1,2,3}
- [Climate Intervention in an Earth Systems Science Framework Workshop](#) (multiple closed meetings, 1 multi-day workshop), National Academies of Sciences, Engineering, Medicine (NASEM) ^{1,2,3}
- [ESIII Innovation Summit](#) ¹
- 2022 *Biotic Modulators Workshop*, Oulu Finland, May 8-12 (remote participation) ¹
- NCAR/NOAA/NSF [Second Community Climate Interventions Strategies Workshop](#).^{1,3}
- NSF [Climate Intervention Biology Working Group](#); co-lead, multiple online sessions ^{1,2,3}
- NSF [Climate Intervention Biology Working Group Meeting](#); Sunday River, Maine; co-lead ^{1,2,3}
- 2021 NEON-LTAR *Complex Landscapes Workshop*.^{1,3}
- AGU 2021 Meeting: presenter & panelist, [GC33B - Climate Intervention, Mitigation, Adaptation, and Restoration Solutions: Interdisciplinary Development and Evaluation of Safety and Efficacy](#).^{1,3}
- ESA 2021 Meeting, moderator and co-organizer, [Climate Intervention: Risks, Effects and Predicted Impacts for Biodiversity and Ecological Systems](#).^{1,3} *featured as a “highlight” of the ESA meeting
- AAAS 2021 Meeting, moderator, [Biosphere Responses to Geoengineering](#).^{1,3}
- [Climate Intervention Biology Working Group](#); co-lead, multiple online workshop sessions ^{1,2,3}
- 2020 [Climate Intervention Biology Working Group](#); co-lead, multiple online workshop sessions ^{1,2,3}
- 2019 NEON *Science Summit*. University of Colorado, Boulder, CO ^{1,2,3}
- 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, OR ²
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*.
- bioXgeo: 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 Meeting Session: [The role of biotic interactions structuring species distributions](#). Baltimore, MD ³
- 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, MD ¹
- 2012 *Climate Change & Species Interactions: Ways Forward*. Cary Institute of Ecosystem Studies, Millbrook, NY ¹
- 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, BC ¹⁻³
- 2011 *NSF Workshop*. National Science Foundation Day. Oregon State University, Corvallis, OR ¹
- 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, Switzerland ¹⁻³
- NSF IGERT *Research Symposium*. Oregon State University, Corvallis, OR ¹⁻³
- Pacific Northwest coastal dunes ecosystem workshop*. Hatfield Marine Science Ctr, Newport, OR¹⁻³
- 2004 *Mark-recapture workshop*. Utah State University, Logan, UT ¹
- 2002 *Harvard GIS Day*. Harvard University, Cambridge, MA ¹⁻³

Service

Professional Service (National/International):

- 2023- **Member, Research at Multiple Scales: A Vision for Continental Scale Biology**, National Academies of Sciences, Engineering, Medicine (NASEM)
Lead Scientist, organizer, director of science & engineering. ANAAA Team, XPRIZE Rainforest international competition (engages 60 MSU faculty, staff, students; 30 national & international team members)
- 2022- **Member, Climate Intervention in an Earth Systems Science Framework: A Workshop**, National Academies of Sciences, Engineering, Medicine (NASEM)
- 2021- **Member, Buell and Braun Student Awards Committee**, Ecological Society of America
- 2018-2021 **Chair, Buell and Braun Student Awards Committee**, Ecological Society of America
- 2018- **Associate Editor**, *Global Ecology and Biogeography*
- 2018- **Member**, Ecosystem Structure, Ecosystem Function, Community Composition Working Groups, Intergovernmental Group on Earth Observations Biodiversity Observation Network (GEO BON)
- 2017-2018 **Subject Matter Guest Editor**, *Ecological Applications*
- 2016-2017 **Editorial Board**, *Axios*
- 2011- **Proposal ad hoc Reviewer / Panelist** NSF (EAR, DEB, GSS)
- 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*
- 2006-2011 **Award Judge**, Buell/Braun Award, Ecological Society of America annual meetings

University Service & Leadership:

- 2023- Member, Department of Integrative Biology Graduate Affairs Committee
- 2022- Director, Institute for Biodiversity, Ecology, Evolution, and Macrosystems (IBEEM)
KBS LTER Executive Committee
User Advisory Board Member, Institute for Cyber-Enabled Research (ICER)
Member, Ecology, Evolution, and Behavior (EEB) Presidential Postdoc Committee
Mentor Participant, Envision EEB Graduate Preview Weekend
- 2022-2023 Mentor, MSU Alliance of African Partnerships, African Future Leadership Program
- 2021- MSU Climate Change Task Force
- 2020-2021 Award Judge, University Undergraduate Research and Arts Forum (UURAF)
- 2020-2021 Member, KBS Ecology/Evolution Faculty Search Committee
Member, EEB Awards Committee
Chair, EEB Space Committee
Member, MSU Research Data/Cyber Infrastructure Task Force
- 2019-2020 Chair, EEB Director Search Committee
- 2019-2022 Member, ICER Scientific Advisory Board
Member, Spatial Ecology Graduate Certificate Committee
- 2018-2020 Member, EEB Executive Committee
- 2018-2020 Member, EEB Curriculum Committee
- 2017-2019 Member, Plant Sciences Fellowship Committee
- 2016-2019 Member, Forestry Committee on Diversity, Equity & Inclusion
- 2015-2016 Affirmative Action Member, Forest Biomaterials Search Committee
- 2015 Member, Forestry committee on by-laws on tenure and promotion expectations
- 2014-2020 Member, EEB Seminar Series Committee
- 2014-2016 Member, Fate of the Earth Symposium Committee
- 2013-2019 Chair, Spatial Ecology Graduate Certificate Committee
- 2013-2017 Chair, Hanover Forest Science Seminar 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

Outreach

- 2022-2023 Scientist, *Falling Tree Collaborative* concert series. Collaboration with composer Lyn Goeringer. We produced “Potentialities”, a piece in 2 movements illustrating two contrasting futures of climate change impacts on biodiversity and ecosystems. [MSU Science Festival](#) & broadcast on PBS WKAR. April 10, 2023. <https://livestream.com/wkar/ftc>.
- 2021 Expert Speaker, *CBC Radio's Quirks & Quarks* Episode: [Understanding geoengineering - why we need to investigate last resort to tackle climate change](#).
- 2018 Organizer, Science Pub Night: *Citizen Science and Biodiversity*. MSU Science Festival. April 2018.
- 2017 Biology on Tap. “*Our Climate is Changing*”.
- 2014 Co-organized annual MSU ESPP *Fate of the Earth Symposium*.
Lead symposium organizer & moderator: MSU Science Festival “*Climate Change in the Great Lakes and Beyond: A Symposium*”.

Research & Teaching Websites Maintained

Institute for Biodiversity, Ecology, Evolution, and Macrosystems: <https://ibeem.msu.edu/>
MSU Spatial and Community Ecology Lab: <http://www.communityecologylab.com/>
MSU Spatial Ecology (IBIO 870): <https://space-lab-msu.github.io/MSUGradSpatialEcology/>
Climate Intervention Biology Working Group: <https://www.climateinterventionbiology.org/>
Macrosystems Biodiversity: <https://neon-biodiversity.github.io/>

Media Coverage

- 2024 Nine seed grants set to sprout collaborative EEB efforts. [MSU EEB](#). April 29, 2024.
- 2023 Supersized fruitedater database on the climate change front lines. *Biodiversity: Biodiversity news*. R.J. Trueman, S. Nichols. Oct. 17, 2023 DOI: <https://doi.org/10.1080/14888386.2023.2257460>
NEON Women in Ecology – Phoebe Lehmann Zarnetske. [NEON Spotlight](#); Sep 27, 2023.
Supersized fruit eater database on climate change frontline. June 28, 2023. [MSU Today](#). [MSU EEB](#).
Spartans join indigenous forest protectors on XPRIZE Rainforest biodiversity quest. June 5, 2023. [MSU NatSci](#) & [MSU Today](#).
Mixing theory, observation to envision adaptations in a warmer world. April 26, 2023. [MSU Today](#).
Falling Tree Collaborative. PBS WKAR. April 10, 2023. <https://livestream.com/wkar/ftc>
Falling Tree Collaborative. MSU Science Festival. <https://sciencefestival.msu.edu/Event/View/32>
Two to serve on prestigious National Academies committee. [MSU EEB](#) & [MSU CSIS](#) Feb. 27, 2023.
Zarnetske to serve on National Academies committee. [MSU EEB](#). Jan. 13, 2023.
MSU’s Long-Term Ecological Research program awarded \$7.65 million NSF grant. [MSU NatSci](#) & [MSU EEB](#) Jan. 10, 2023.
- 2022 MSU experts on COP27 climate change conference. [MSU Today](#). Nov. 9, 2022.
MSU lands NSF grant to create an accessible supercomputer. [MSU NatSci](#). April 25, 2022.
Spartan research addresses 5 big climate change questions. [MSU Today](#). Feb. 23, 2022.
A little taste of everything: summer classes and field research at KBS. Feb. 2, 2022 [KBS Blog](#).
Disentangling the complex effects of climate change on above and belowground communities: Reflections from an LTER Fellow. [KBS LTER Blog](#). Jan. 24., 2023

- 2021 Protecting Biodiversity: The Science Behind Resilience. [2021 Connections Magazine](#). College of Natural Science, MSU. Dec. 2021.
Studying climate change effects on plant traits: Reflections from an LTER Fellow. [KBS LTER Blog](#). Dec. 6, 2021
Media Coverage on Zarnetske et al. *PNAS* 2021: [CBC Quirks & Quarks](#), [Popular Science](#), [Ars Technica](#), [Star Tribune](#), [Skeptical Science](#), [MSU Today](#), [MSU NatSci Press Release](#), [UC Riverside](#), [CUNY](#), [UMN](#), [Stony Brook University](#)
My Spartan Summer: By land, air and water, Michigan State researchers chronicle their summer research in the field. [MSU Today](#). Aug. 27, 2021.
LTER Metacommunity Synthesis Working Group provides roadmap for synthesizing long-term and large-scale data. Feb. 25 [LTER Network News](#)
MSU scientists conduct largest freshwater insect census in U.S. Jan. 26 [MSU NatSci Press Release](#)
Plants and dune dynamics. Jan. 15. [Nature Reviews Earth & Environment](#)
- 2020 Under climate change, good things come to bugs who wait. Aug. 6 [NatSci Press Release](#)
MSU Integrative Biologist Utilizes NEON to Illuminate Biodiversity. Jun 12. [MSU NatSci](#); [MSU Today](#) Also featured as an MSU Pride Point.
Kellogg Biological Station researchers earn coveted NSF fellowships. April 15, 2020. [MSU Today](#).
MSU Institute for Cyber-Enabled Research video on research in the MSU SpaCE Lab. Feb 19 [ICER Video](#)
The birds and the trees: scientists use remote sensing data to help explain patterns of life. [MSU Today](#) Feb. 3 [Newsbreak.com](#)
Mapping Patterns of Biodiversity. [NEON Observatory Blog](#). Jan. 29
- 2019 Where to find fantastic beasts at sea. [Science](#). Jan. 25
In polar regions, warm-blooded marine predators rule. [EurekaAlert](#). Jan. 24
Why Whales, Seals, and Penguins Like Their Food Cold. [The Atlantic](#). Jan. 24
- 2018 How climate impacts biodiversity, [MSU Today](#), Oct 10.
Better species mapping can improve conservation efforts. [ScienceDaily](#). April 18.
New research lends insight into the spread of invasive species, [AgBioResearch highlight](#), April 9.
Less variation in sizes of birds in the tropics puts them at greater risk from climate change, [Bryn Mawr College News](#), Mar. 21
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.
MSU research reveals new insights into species diversity, [AgBioResearch 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.
- 2015 NSF awards \$4.8 million to enable creative, collaborative use of ecological data. [NSF Press Release](#). Aug 20.
- 2013 Scientists look into Earth's past to predict future effects of climate change, [EarthSky](#) Aug 13
Scientists look into Earth's 'deep time' to predict future effects of climate change, [EurekaAlert](#) [Science Podcast](#), [Phys.Org](#) 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](#), [EurekaAlert](#), [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

Institute for Biodiversity, Ecology, Evolution, and
Macrosystems (IBEEM) (Director & PI)
Institute for Cyber-Enabled Research (ICER) (User Adv. Bd.)
Ecological Society of America (ESA)
American Assoc. for the Advancement of Science (AAAS)
American Geophysical Union (AGU)
International Biogeography Society (IBS)
National Ecological Observatory Network (NEON)
Faculty Mentoring Network
Kellogg Biological Station (KBS) & KBS LTER
Toolik Lake LTER (ARC)

Ecology, Evolution, and Behavior Program (EEB)
Environmental Science & Policy Program (ESPP)

Past Institution Affiliations

Yale Climate and Energy Institute (YCEI)
Yale Institute for Biospheric Studies (YIBS)
Women in Science at Yale (WISAY)
OSU Women in Science (WIS)
O.H. Hinsdale Wave Research Laboratory (HWRL)
Hatfield Marine Science Center (HMSC)
H.J. Andrews Experimental Forest (HJA)