Lauren C. Ponisio

Contact Information

Department of Biology
Institute of Ecology and Evolution
University of Oregon, Eugene, OR

E-mail: lponisio@uoregon.edu
Google scholar Website / Github

Academic appointments

2024-current – Associate Professor, Department of Biology, University of Oregon
2020-2024 – Assistant Professor, Department of Biology, University of Oregon
2017-2020 – Assistant Professor, Department of Entomology, University of California Riverside
2016-2017 – Moore/Sloan Data Science Postdoctoral Fellow, Berkeley Institute for Data Science

Education

2016 – Doctorate of Philosophy, Department of Environmental Science Policy and Management, University of California Berkeley
2011 – Master of Science, Biology, Stanford University
2010 – Bachelor of Science, Biology, Honors in Ecology and Evolution, Stanford University

Research program

My research program focuses on understanding how species interactions maintain species diversity and on harnessing these processes to manage and restore diversity in human-modified habitats. Understanding the processes that maintain diversity can help to predict population and community vulnerability to global change.

Ecological themes: The first core theme of my work is to study community assembly through the lens of species interactions, examining how mutualistic and parasitic relationships shape and are shaped by community characteristics. The second core theme examines how species interactions affect the vulnerability of populations and communities to global change.

Data science themes: A new direction in my research focuses on developing non-lethal bee monitoring techniques using automated sensor systems and computer vision. A second major theme of my work is to develop accessible, user-friendly tools for practitioners, such as ecologists and wildlife managers. This includes developing methods for fitting and assessing population models, particularly through the open-source software NIMBLE, which facilitates flexible and efficient Bayesian modeling.

Fellowships & awards

2025 — NSF CAREER
2023 — Ecological Society of America Early Career Fellows
2016 — Global Food Initiative 30 Under 30 in Food Systems
2016 — Moore/Sloan Data Science Postdoctoral Fellowship
2014 — National Institute for Food and Agriculture Fellowship
2014 — Garden Club of America Centennial Pollinator Fellowship
2014 — National Geographic Society Early Career Award
2014 — NSF GROW fellowship for study at U. São Paulo with P. Guimaraes
2011 — National Science Foundation Graduate Fellowship
2010 — Stanford Firestone Medal (top 10% of honors theses)
2010 — Stanford Steven Fox Award ("the most outstanding undergraduate in Biology")

Grants (selected)

[1] 2025-2030 — NSF CAREER: Mutualistic network responses to half a century of global change, PI L.C. Ponisio $898,819 (current)

[2] 2025-2028 — CA Fish and Wildlife: Research and Innovation Funding Opportunity: Non-lethal monitoring methods to understand pollinator community diversity and rare species detection. PI L.C. Ponisio, co-PI T. Warren (OSU), K. Moriarty (NCASI), J. Riccio (CFC). 1.1 million (current)

[3] 2023-2027 — USDA National Institute for Food and Agriculture: Examining the potential of floral enhancements in harvested forests to promote bee populations. PI L.C. Ponisio, J. Rivers (OSU), L. Grand (OSU), K. Moriarty (NCASI) $750,000 (current)

[4] 2022-2027 — USDA National Institute for Food and Agriculture: A Holistic Approach To Determining The Impact Of An Established Exotic Pollinator On Bumble Bee Health In The Pacific Northwest. PI Looney, C. Co-PI Ponisio, L.C., Co-PI Koh, J., Co-PI Klinger, E.G., Co-PI Gillespie, S. 678, 880 (current)

[5] 2020-2026 — National Science Foundation: Reconciling the interaction patterns of highly functional and resistant ecological communities. PI L.C. Ponisio, Co-PI S. Jha. 1 million

[6] 2022-2025 — The U.S. Forest Service, Partners in Pollinator Pathways (PiPP) 1.4 million for pollinator restoration in the Coast Range. 266, 631 subcontract to UO

[7] 2022-2024 — U.S. Department of Fish and Wildlife: Evaluating pollinator plant associations, diversity, and abundance across a watershed-scale gradient of stand age in the Oregon Coast Range. 15, 000 subcontract to UO

[8] 2022-2023 — MillsDavis Foundation grant: Sustainable forestry and pollinator education with the Environmental Leadership Program at UO. PI L. Ponisio, and Co-PI P. Boulay $38,000

[9] 2017-2021 — Foundation for Food and Agricultural Research: The effect of floral foraging traits on exposure of crop pollinators to the multiple interacting stressors of pesticides, parasites and inadequate nutrition, PI L.C. Ponisio, Co-PI Q. McFrederick, Co-PI S.H. Woodard $993,594

[10] 2019-2021 — USDA National Institute for Food and Agriculture: Identifying Barriers And Incentives To Adopting Bee-Friendly Management Practices On Pollinator-Dependent Farms PI-Jennie Durant (postdoc) Co-PI L.C. Ponisio. $164,856

PEER-REVIEWED PUBLICATIONS

Ponisio lab: ⋆ Postdoc/gradstudent; ⋆⋆ undergraduate; † co-supervised graduate student/postdoc

In review/revision

[1] McDonald, R.⋆, Fan Brown, J.⋆, Martínez-Llaurador, N.⋆, Jha, S., Jones, J., Moriarty, K., **Ponisio, L.C.** No universal network predictor of disease risk in plant–pollinator communities (submitted, special issue on Applied Network Ecology in Scientific Reports).

[2] McDonald, R.⋆, Jackson, A., Humphreys, Moriarty, K., Rivers, J., **Ponisio, L.C.** From slash piles to pollinator patches: native forb seeding enhances floral resources and bee use in harvested forests (in review, *Ecological Applications*)

[3] Martínez-Llaurador, N⋆, Best, L, Jha, S., **Ponisio, L.C.** Host and parasite identity shape biodiversity dilution and amplification of wild bee parasite prevalence (in revision, *Ecology*)

[4] Hayes, R.⋆, Bohannan, B., Jha, S., **Ponisio, L.C.** Drivers of distance decay of host-associated microbiomes vary by host sociality and microbial association strength (in review, *Frontiers of Biogeography*)

Published/in press

[5] Hayes, R.⋆, Kern, A., **Ponisio, L.C.** Assessing the potential of bee-collected pollen sequence data to train machine learning models for geolocation of sample origin (in press, *Ecoinfomatics*). preprint doi:10.64898/2026.03.29.715128

[6] Lee, M., **Ponisio, L.C.**, Konicek, K., Ana Miller-ter Kuile A., Young, H.S. Island pollination networks are primarily shaped by habitat size (in press, *Diversity and Distributions*)

[7] Melanson, J.B.†, Kelly, T.T., Waters, S.M., Kremen, C., **Ponisio, L.C.** Invasive *Bombus impatiens* shapes parasite prevalence in wild bumblebees while landscape simplification modulates community composition. *Basic and Applied Ecology* doi:10.1016/j.baae.2026.06.008

[8] Jones, L.†, **Ponisio, L.C.**, Jha, S. Comparative population genomics reveal stark differences in the genomic structure and drivers of isolation for two sky island bumble bees. *Proceedings of the Royal Society B: Biological Sciences*) doi:10.1098/rspb.2026.1217

[9] Brito, E.L.S.⋆, McDonald, R.⋆, Almeida-Neto, M., **Ponisio, L.C.** 2026. Geographic biases and gaps in the sampling of plant–pollinator networks. *Ecography* 2026(7):e08368. doi:10.1002/ecog.08368

[10] Fan Brown, J.J.⋆, Moriarty, K., McDonald, R.⋆, Best, L.R., Zorn, J.F., **Ponisio, L.C.** 2026. Mid-seral thinned stands in Pacific Northwest coastal forests show enhanced floral and bee diversity without increased parasite prevalence in wild bees. *Journal of Forestry* 124(1):87–113. doi:10.1007/s44392-025-00033-0

[11] McDonald, R.⋆, Fan Brown, J.⋆, Hayes, R.A.⋆, Martínez-Llaurador, N.⋆, Boulay, P., Moriarty, K., **Ponisio, L.C.** 2026. Enhancing floral resources for pollinators in harvested conifer forests of the Pacific Northwest. *Journal of Forestry* 124(1):201–224. doi:10.1007/s44392-025-00025-0

[12] Plumanns-Pouton, E., Santos, J., Aponte, C., Brotons, L., Kelly, L., Mason, S., Parris, K., **Ponisio, L.C.**, Keith, D.A. 2025. The mechanisms through which fire drives population change in terrestrial biota. *Global Change Biology* 31(9):e70479. doi:10.1111/gcb.70479

[13] Bishop, G. et al. (80 authors, including Ponisio) 2025. Critical habitat thresholds for effective pollinator conservation in agricultural landscapes. *Science* 389(6767):1314–1319. doi:10.1126/science.adr2146

[14] Gaiarsa, M.P.⋆, Mora, B.B., Kremen, C., **Ponisio, L.C.** 2025. Changes in species composition and community structure during plant–pollinator community assembly. *Ecology* 106(6):e70119. doi:10.1002/ecy.70119

[15] Haring, S., Aoyama, L., Lane-Massee, M., **Ponisio, L.C.**, Hallett, L.M. 2025. Agricultural sustainability requires multidimensional solutions that address environmental and financial benefits in the Oregon hazelnut industry. *Renewable Agriculture and Food Systems* 40:e10. doi:10.1017/S174217052500002X

[16] Tsang, Pak Nok Toby† (data contributing authors) **Ponisio, L. C.**; Bonebrake, Timothy. 2025. Land use change consistently reduces α- but not β- and γ-diversity of bees. *Global Change Biology* 31(1):e70006. doi:10.1111/gcb.70006

[17] Smith, G.P.⋆, Cohen, H.⋆, Zorn, J.†, McFrederick, Q.S., **Ponisio, L.C.** 2024. Plant–pollinator network architecture does not impact intraspecific microbiome variability. *Molecular Ecology* 33(7):e17306. doi:10.1111/mec.17306

[18] **Ponisio, L.C.**, Cohen, H.⋆, Galbraith, S.M., Zorn, J., Zitomer, R.A., Rivers, J.W. 2024. Host and floral communities shape parasite prevalence and reproduction in intensively managed forests. *Ecosphere* 15(1):e4709. doi:10.1002/ecs2.4709

[19] Hutchins, L., Guzman, A., **Ponisio, L.C.** 2024. Agricultural ecosystems. In *Encyclopedia of Biodiversity (Third Edition)*, 1–26. Elsevier. doi:10.1016/B978-0-12-822562-2.00125-0

[20] Steel, Z.L., Miller, J.E.D., **Ponisio, L.C.**, Tingley, M.W., Wilkin, K., Blakey, R., Hoffman, K.M., Jones, G. 2024. A roadmap for pyrodiversity science. *Journal of Biogeography* 51(2):280–293. doi:10.1111/jbi.14745

[21] Tsang, T.P.N.⋆, Bonebrake, T., **Ponisio, L.C.**, Cadotte, M. 2023. Controlling for the effects of environmental availability when testing how the environment determines community compositional uniqueness. *Methods in Ecology and Evolution* 14(12):3112–3122. doi:10.1111/2041-210X.14211

[22] Vendig, I.⋆⋆, Guzman, A., De La Cerda, G., Esquivel, K., Mayer, A.C., **Ponisio, L.C.**, Bowles, T.M. 2023. Quantifying direct yield benefits of soil carbon increases from cover cropping. *Nature Sustainability* 6:1125–1134. doi:10.1038/s41893-023-01131-7

[23] Tsang, T.P.N.⋆, **Ponisio, L.C.**, Bonebrake, T.C. 2023. Increasing synchrony opposes stabilizing effects of species richness on terrestrial communities. *Diversity and Distributions* 29(7):849–861. doi:10.1111/ddi.13696

[24] Halpern, B.S., et al. (160 authors including Ponisio) 2023. Priorities for synthesis research in ecology and environmental science. *Ecosphere* 14(1):e4342. doi:10.1002/ecs2.4342

[25] Cohen, H.⋆, **Ponisio, L.C.**, Russell, K.A., Philpott, S.M., McFrederick, Q.S. 2022. Floral resources shape parasite and pathogen dynamics in bees facing urbanization. *Molecular Ecology* 31(7):2157–2171. doi:10.1111/mec.16374

[26] Smith, G.P.⋆, Gardner, J., Gibbs, J., Griswold, T., Hauser, M., Yanega, D., **Ponisio, L.C.** 2021. Sex-associated differences in the network roles of pollinators. *Ecosphere* 12(12):e03863. doi:10.1002/ecs2.3863

[27] Wilkin, K., **Ponisio, L.C.**, Fry, D.L., Collins, B.M., Moody, T., Stephens, S.L. 2021. Drivers of understory plant communities in Sierra Nevada mixed conifer forests with pyrodiversity. *Fire Ecology* 17:30. doi:10.1186/s42408-021-00111-6

[28] Cohen, H.⋆, Smith, G.P.⋆, Sardiñas, H., Zorn, J., McFrederick, Q.S., Woodard, S.H., **Ponisio, L.C.** 2021. Mass-flowering monoculture attracts bees, amplifying parasite prevalence. *Proceedings of the Royal Society B: Biological Sciences* 288(1960):20211369. doi:10.1098/rspb.2021.1369

[29] Mason, S.C. Jr., Shirey, V., **Ponisio, L.C.**, Gelhaus, J. 2021. Responses from bees, butterflies, and ground beetles to different fire and site characteristics: A global meta-analysis. *Biological Conservation* 261:109265. doi:10.1016/j.biocon.2021.109265

[30] Stephens, S., Thompson, S., Boisrame, G., Collins, B., **Ponisio, L.C.**, Rakhmatulina, K., Steel, Z., Stevens, J., van Wagtendonk, J., Wilkin, K. 2021. Fire, water, and biodiversity in the Sierra Nevada: A possible triple win. *Environmental Research Communications* 3(8):081004. doi:10.1088/2515-7620/ac17e2

[31] Durant, J.⋆ & **Ponisio, L.C.** 2021. A regional, honey bee-centered approach is needed to incentivize grower adoption of bee-friendly practices in the almond industry. *Frontiers in Sustainable Food Systems* 5:628802. doi:10.3389/fsufs.2021.628802

[32] Gaiarsa, M.P.⋆, Kremen, C., **Ponisio, L.C.** 2021. Pollinator interaction flexibility across scales affects patch colonization and occupancy. *Nature Ecology & Evolution* 5(6):787–793. doi:10.1038/s41559-021-01434-y (cover article)

[33] S.H. Woodard, S. Federman, R.R. James, B.N. Danforth, T.L. Griswold, D. Inouye, Q.S. McFrederick, L. Morandin, D.L. Paul, E. Sellers, J.P. Strange, M. Vaughan, N.M. Williams, M.G. Branstetter, C. Burns, J. Cane, A.B. Cariveau, D.P. Cariveau, A. Childers, C. Childers, D.L. Cox-Foster, E.C. Evans, K.K. Graham, K. Hackett, K.T. Huntzinger, R.E. Irwin, S. Jha, S.P. Lawson, C. Liang, M.M. López-Uribe, A. Melathopoulos, H.M.C. Moylett, C. Otto, **L.C. Ponisio**, L.L. Richardson, R. Rose, R. Singh, W. Wehling. 2020. Toward a U.S. national program for monitoring native bees. *Biological Conservation* 252:108821. doi:10.1016/j.biocon.2020.108821

[34] **Ponisio, L.C.** 2020. Pyrodiversity promotes interaction complementarity and population resistance. *Ecology and Evolution* 10(10):4431–4447. doi:10.1002/ece3.6210

[35] **Ponisio, L.C.**, de Valpine, P., Michaud, N., Turek, D. 2020. One size does not fit all: Customizing MCMC methods for hierarchical models using NIMBLE. *Ecology and Evolution* 10(5):2385–2416. doi:10.1002/ece3.6053

[36] **Ponisio, L.C.**, Valdovinos, F.S., Allhoff, K.T., Gaiarsa, M.P.⋆, Barner, A., Guimaraes, P.R. Jr., Hembry, D.H., Morrison, B., Gillespie, R. 2019. A network perspective for community assembly. *Frontiers in Ecology and Evolution* 7:103. doi:10.3389/fevo.2019.00103

[37] **Ponisio, L.C.**, de Valpine, P., M'Gonigle, L.K., Kremen, C. 2019. Proximity of restored hedgerows interacts with local floral diversity and species' traits to shape long-term pollinator metacommunity dynamics. *Ecology Letters* 22(7):1048–1060. doi:10.1111/ele.13257

[38] Kremen, C., M'Gonigle, L.K., **Ponisio, L.C.** 2018. Pollinator community assembly tracks changes in floral resources as restored hedgerows mature in agricultural landscapes. *Frontiers in Ecology and Evolution* 6:170. doi:10.3389/fevo.2018.00170

[39] **Ponisio, L.C.**, Gaiarsa, M.P.⋆, Kremen, C. 2017. Opportunistic attachment assembles plant–pollinator networks. *Ecology Letters* 20(10):1261–1272. doi:10.1111/ele.12821

[40] Wilkin, K.M., **Ponisio, L.C.**, Fry, D.L., Tubbesing, C., Potts, J.B., Stephens, S.L. 2017. Decade-long plant community responses to shrubland fuel hazard reduction. *Fire Ecology* 13(2):105–136. doi:10.4996/fireecology.130210513

[41] **Ponisio, L.C.** and M'Gonigle, L.K. 2017. Coevolution leaves a weak signal on ecological networks. *Ecosphere* 8(4):e01798. doi:10.1002/ecs2.1798

[42] **Ponisio, L.C.** and Ehrlich, P.R. 2016. Diversification, yield and a new agricultural revolution: Problems and prospects. *Sustainability* 8(11):1118. doi:10.3390/su8111118

[43] Karp, D.S., Moses, R., Gennet, S., Jones, M.S., Joseph, S., M'Gonigle, L.K., **Ponisio, L.C.**, Snyder, W.E., Kremen, C. 2016. Agricultural practices for food safety threaten pest control services for fresh produce. *Journal of Applied Ecology* 53(5):1402–1412. doi:10.1111/1365-2664.12707

[44] Sardiñas, H.S., Tom, K.C.⋆⋆, **Ponisio, L.C.**, Rominger, A.J., Kremen, C. 2016. Sunflower (*Helianthus annuus*) pollination in California's Central Valley is limited by native bee nest site location. *Ecological Applications* 26(2):438–447. doi:10.1890/15-0033

[45] Sardiñas, H.S., **Ponisio, L.C.**, Kremen, C. 2016. Hedgerow presence does not enhance indicators of nest-site habitat quality or nesting rates of ground-nesting bees. *Restoration Ecology* 24(4):499–505. doi:10.1111/rec.12338

[46] **Ponisio, L.C.**, Wilkin, K., M'Gonigle, L.K., Kulhanek, K.⋆⋆, Cook, L.⋆⋆, Thorp, R., Griswold, T., Kremen, C. 2016. Pyrodiversity begets plant–pollinator community diversity. *Global Change Biology* 22(5):1794–1808. **(This publication received media attention from NBC)** doi:10.1111/gcb.13236

[47] **Ponisio, L.C.** and Kremen, C. 2016. System-level approach is needed to evaluate the transition to more sustainable agriculture. *Proceedings of the Royal Society B: Biological Sciences* 283(1824):20152913. doi:10.1098/rspb.2015.2913

[48] Leong, M., **Ponisio, L.C.**, Kremen, C., Thorp, R.W., Roderick, G.K. 2016. Temporal dynamics influenced by global change: bee community phenology in urban, agricultural, and natural landscapes. *Global Change Biology* 22(3):1046–1053. doi:10.1111/gcb.13141

[49] **Ponisio, L.C.**, M'Gonigle, L.K., Kremen, C. 2016. On-farm habitat restoration counters biotic homogenization in intensively managed agriculture. *Global Change Biology* 22(2):704–715. doi:10.1111/gcb.13117

[50] M'Gonigle, L.K., **Ponisio, L.C.**, Cutler, K., Kremen, C. 2015. Habitat restoration promotes pollinator persistence and colonization in intensively managed agriculture. *Ecological Applications* 25(6):1557–1565. doi:10.1890/14-1863.1

[51] **Ponisio, L.C.**, M'Gonigle, L.K., Mace, K.C., Palomino, J., de Valpine, P., Kremen, C. 2015. Diversification practices reduce organic to conventional yield gap. *Proceedings of the Royal Society B: Biological Sciences* 282(1799):20141396. **(This publication received media attention from outlets such as CNBC, Huffingtonpost and the Union of Concerned Scientists)** doi:10.1098/rspb.2014.1396

[52] Bonebrake, T.C., **Ponisio, L.C.**, Boggs, C.L., Ehrlich, P.R. 2010. More than just indicators: A review of tropical butterfly ecology and conservation. *Biological Conservation* 143(8):1831–1841. doi:10.1016/j.biocon.2010.04.044

Software

[53] Goldstein, B.R., Daniel Turek, D., **Ponisio, L.C.** and de Valpine, P. 2019. nimbleEcology: Distributions for Ecological Models in 'nimble'. R package version 0.1.0. https://CRAN.R-project.org/package=nimbleEcology

Book chapters

[54] Kremen, C., Albrecht, M., **Ponisio, L.C.** 2019. Restoring pollinator communities and pollination services in hedgerows in intensively managed agricultural landscapes. In *The Ecology of Hedgerows and Field Margins*, ed. J.W. Dover, 163–185. Routledge. doi:10.4324/9781315121413-9

[55] Kulhanek, K.A., **Ponisio, L.C.**, Schneider, A.S., Walsh, R.E. 2017. Strategic Conversation: Mission and Relevance of National Parks. In *Science, Conservation, and National Parks*, 64–72. University of Chicago Press. doi:10.7208/chicago/9780226423142.003.0004

Popular Science Publications

[56] Cannot see the forest for the bees, *National Geographic*

[57] Organic farming techniques are closing gap on conventional yields, *The Conservation*

[58] Changing the face of agriculture, *Landscapes for People, Food and Nature*

Media coverage

Ponisio lab research has been highlighted in various national and international media outlets, showcasing our lab's contributions to pollinator conservation, wildfire recovery, and sustainable agriculture. Coverage spans television, radio, podcasts, and print.

High-Profile Features and Podcasts:

[1] 2025 - Bees wearing QR codes tracked by AI cameras to help researchers save them in the wild

[2] 2022- Biographic: Making Nature Less Predictable, picked up by The Atlantic

[3] 2022- Reach Out WorldWide (The Weather Channel) episode on the Holiday Farm Fire and planning pollinator gardens for the homes being rebuilt after the fire.

[4] 2021- Curious: Improving conditions for hardworking pollinators-Jefferson Public Radio

[5] 2021-Curious: Bees in the trees, and everywhere else-Jefferson Public Radio

[6] 2021-Wildfires Open Forests for Wildlife and Research – NPR All Things Considered

[7] 2020-Bee biologist can't stop buzzing about her work – CBS Los Angeles

[8] 2019-People behind the science podcast: 563: Dr. Lauren Ponisio: Working to Preserve and Restore Populations of Bees and Other Pollinators

[9] 2019-PolliNation podcast: 124 – Lauren Ponisio, Pollinator Hedgerows

Regional Media:

[10] New AI cameras are watching the outdoors to spot endangered, rare bees

[11] KEZI Oregon News, one year anniversary of the Holiday Farm Fire special including a segment on pollinator populations.

[12] 2022- Oregon Quarterly: Queen of the bees

Selected Invited presentations

Academic

Delivered ∼50 invited talks (since 2017). Highlights include:

[1] 2025 - Ecological Networks, Newcastle, UK

[2] 2025 - Joint Statistical Association Conference, Nashville TN.

[3] 2025 - Entomological Society of America, organized symposium on Bee restoration in harvested forests

[4] 2025 - International Congress of Conseration Biology, organized a symposium "A Decade of Progress: Success Stories in pollinator conservation since IPBES"

[5] 2023 - University of British Columbia, Biodiversity seminar series, Vancouver, BC

[6] 2022 - ESA Statistics Chapter, virtual

[7] 2021 - Yale Biodiversity and Global Change Center Seminar, virtual

[8] 2019 - Half Earth Day Workshop and Symposium, E.O. Wilson Foundation, Berkeley, CA

[9] 2019 - Latin American Pollinator Conference, Buenos Aires, Argentina

[10] 2019 - University of Michigan Center for Complex Systems, Ann Arbor, MI

[11] 2019 - Chicago Botanical Garden, Chicago, IL

[12] 2018 - The Fields Institute Workshop on Pollinators and Pollination Modeling, Toronto, Canada

[13] 2017 - Santa Fe Institute Complex Systems Seminar

Land manager-focused

Delivered targeted presentations to land managers, conservationists, and policy stakeholders, emphasizing pollinator conservation and ecosystem management. Highlights include:

[1] Forest Wildlife Research Summit, OSU (2025)

[2] Bees, Fire, and Harvested Forests: Presented at the Oregon Society of Foresters Annual Meeting, U.S. Fish and Wildlife Service, and NCASI Annual Meeting (2022, 2023).

[3] Society of American Foresters webinar series, co-organized series on bees in harvested forests (2024)

[4] Wild Bee Conservation and Habitat Restoration: Featured in webinars and workshops for California Research Conservation Districts, Pacific Forest Trust, and the Environment for the Americas (2021-2023).

[5] Engagement with Growers: Conducted workshops with the Xerces Society, General Mills, and Organic Valley, focusing on pollinator-friendly practices (2014-2017).

Pollinator conservation outreach

Engaged diverse audiences through public lectures and events focused on pollinator conservation, education, and advocacy. Highlights include:

[1] SciWri 2026 Wildfire Panelist, Corvalis OR

[2] Eugene Natural History Museum public talk and native bee museum exhibition consultant (2026)

[3] Pisgah Wildflower Festival (2025) From the Cascades to the Valley: Emerging Local Plant and Pollinator Research from the University of Oregon, booth

[4] Pollinators and Fire, Eugene North American Butterfly Alliance Chapter (2025)

[5] Bees and Fire!: Delivered at the Eugene Natural History Society (2022).

[6] The Wild World of Bees: The wild bees of agriculture, Oregon Bee Project

[7] Native Bee Awareness: Featured at Descanso Gardens Native Bee Day (2020) and the Pollinator Festival hosted by the Resource Conservation District (2019).

[8] Policy Advocacy: Presented "How Science is Saving Bees" to Congressional representatives (2018).

Promoting diversity in the sciences

Actively engaged in guest lectures and panels to promote diversity, equity, and inclusion in STEM, focusing on mentorship, representation, and inspiring future scientists. Notable contributions include:

[1] Presentations for Students of Color Opportunities for Research Enrichment (SCORE) and Women in STEM at the University of Oregon (2022).

[2] Talks for the Promoting engagement, retention and success in STEM (PERSIST) program at UC Riverside (2018, 2019).

[3] Speaker for the California Alliance for Minority Participation (CAMP) program (2018)

[4] Panelist for the Women in Science Panel (2017, 2018, 2019) and 7th Grade Girls in STEM (2020).

Professional courses

- 2016 - Software Carpentry Instructor Certification
- 2016 - Santa Fe Institute Complex Systems Summer School
- 2013 - The Bee Course, American Museum of Natural History
- 2011 - São Paulo Advanced Science School on Ecological Networks

Working groups

- 2021 - NCEAS The future of synthesis science
- 2019 - Modeling bee and ant global distributions, E.O. Wilson Foundation
- 2018-current: Santa Fe Institute Workshop on Next Generation of Ecological Networks
- 2018-current: USDA National Native Bee Monitoring RCN

Academic service

University/department Service

- 2024-2025 – Data Science Hiring Committee (Tenure track faculty)
- 2022-present – UO Envs and Biology Curriculum Committees
- 2022-present – UO Environmental Studies Interdisciplinary Grants Committee
- 2021-2024 – UO Biology Executive Committee
- 2022 – UO Data Science Visioning Committee
- 2020-2022 – UO Data Science Curriculum Committee
- 2021, 2022 – UO Data Science Hiring Committee (Career Faculty)
- 2021-present – UO IE^2 Space Committee
- 2020-2021 – UO Biology Admissions Committee
- 2019-2020 – UCR Undergraduate Awards Committee
- 2018– UCR Department of Evolution, Ecology and Organismal Biology Admissions Committee
- 2017-2020 – UCR Undergraduate Grants Committee
- 2017-2020 – UCR Entomology Outreach Departmental Committee
- 2017-2020 – UCR Entomology Museum Departmental Committee
- 2017-2019 – UCR Entomology Seminar Departmental Committee

Reviewing

- **Editorial activities**: Review Editor for Frontiers in Sustainable Food Systems (2018-2022)
- **Peer review**: manuscripts for *Science*, *PNAS*, *Ecology Letters*, *Ecology*, *Ecology Letters*, *Annuals of Botany*, *Proceedings of the Royal Society B*, *Oecologia*, *Conservation Letters*, *Biological Conservation*, *Conservation Biology*, *Global Change Biology* and *Biodiversity and Conservation*, *New Phytologist*, *Plos one*, *Ecological Monographs*, *Nature Communications*.
- **Grants**:
  - ad hoc grants for the NSF (PCE) (2018, 2019, 2020, 2021, 2022, 2025)
  - NSF PCE panel (2019, 2020, 2021, 2022)
  - USDA Pollinator Health panel (2023)
  - JRS Biodiversity Foundation Foundation (2017)
- **Awards Committees**:
  - ESA Sustainability Awards Committee (2017–2025; chair 2021-2025)

Advisory

- Advisory board of the Career Development Network of Academic Data Science Alliance (ADSA) (2020-2022)