

# Rachael Winfree

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Department of Ecology, Evolution and Natural Resources  
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## ACADEMIC APPOINTMENTS

### Rutgers University

Professor, Ecology, Evolution and Natural Resources (2017-present)  
Associate Professor, Ecology, Evolution and Natural Resources (2013-2017)  
Assistant Professor, Entomology (2008-2013)

### University of California, Berkeley

Postdoctoral Associate, Environmental Science, Policy & Management (2006-2008)  
Advisor: Claire Kremen

### Princeton University

Postdoctoral Associate, Ecology and Evolutionary Biology (2004-2005)  
Advisor: Claire Kremen  
Postdoctoral Fellow, Ecology and Evolutionary Biology (2001-2004)

## EDUCATION

### Princeton University

PhD, Ecology and Evolutionary Biology, 2001  
Advisor: Andrew P. Dobson

### Dartmouth College

BA, Government, 1990

## PUBLICATIONS

Publication impact [Google Scholar](https://scholar.google.com/citations?user=...) (citations 18,060, h index 44)

[Highly Cited Researcher](https://www.cnr.it/en/who-we-are/highly-cited-researcher) in ecology/environment, 2015-2019

\* indicates work done while author was a lab undergraduate, graduate student, or postdoc

65 \*Smith, C, \*T Harrison, J Gardner, and **R Winfree**. In press. Forest-associated bees persist amid forest loss and regrowth in eastern North America. *Biological Conservation*

- 64 Allen-Perkins A, and 19 other authors including \*D Cariveau, \*F Benjamin, \*J Reilly, and R Winfree. In resubmission. CropPol: a dynamic, open and global database on crop pollination. Data paper, *Ecology*
- 63 Senapathi, D and 57 other authors including \*F Benjamin, \*D Cariveau, \*T Harrison, and **R Winfree**. 2021. Wild insect diversity increases inter-annual stability in global crop pollinator communities. *Proceedings of the Royal Society of London B* 288: 20210212 <https://doi.org/10.1098/rspb.2021.0212>
- 62 \*Roswell, M E, J Dushoff, and **R Winfree**. 2021. Forum: A conceptual guide to measuring species diversity. *Oikos* 130: 321-338 <https://doi.org/10.1111/oik.07202>  
*Featured in Oikos Editor's Choice*
- 61 Caradonna, P J, L A Burkle, B Schwarz, J Resasco, T M Knight, G Benadi, N Bluthgen, C F Dormann, Q Fang, J Frund, B Gauzens, C N Kaiser-Bunbury, **R Winfree**, and D P Vazquez. 2021. Seeing through the static: the temporal dimensions of plant-animal mutualistic interactions. *Ecology Letters* 24: 149-161 <https://doi.org/10.1111/ele.13623>
- 60 \*Reilly JR, Artz DR, Biddinger D, Bobiwash K, Boyle NK, Brittain C, Brokaw J, Campbell JW, Daniels J, Elle E, Ellis JD, Fleischer SJ, Gibbs J, Gillespie RL, Gundersen KB, Gut L, Hoffman G, Joshi N, Lundin O, Mason K, McGrady CM, Peterson SS, Pitts-Singer TL, Rao S, Rothwell N, Rowe L, Ward KL, Williams NM, Wilson JK, Isaacs R, and **Winfree R**. 2020. Crop production in the USA is frequently limited by a lack of pollinators. *Proceedings of the Royal Society of London B* 287: 20200922 [doi.org/10.1098/rspb.2020.0922](https://doi.org/10.1098/rspb.2020.0922)  
*Featured in The Guardian (USA), Forbes, Science News*
- 59 \*Genung, M A, J Fox, and **R Winfree**. 2020. Species richness drives ecosystem function in experiments, but in nature its importance varies with dominance. *Global Ecology and Biogeography* <https://doi.org/10.1111/geb.13137>
- 58 \*MacLeod, M, \*J Reilly, \*D Cariveau, \*M Genung, \*M Roswell, J Gibbs, and **R Winfree**. 2020. How much do rare and crop-pollinating bees overlap in identity and flower preferences? *Journal of Applied Ecology* 57: 413-423 <https://doi.org/10.1111/1365-2664.13543>
- 57 \*Smith, C, \*L Weinman, J Gibbs, and **R Winfree**. 2019. Specialist foragers in forest bee communities are small, social or emerge early. *Journal of Animal Ecology* 88: 1158-1167 <https://doi.org/10.1111/1365-2656.13003>
- 56 \*Roswell, M, J Dushoff, and **R Winfree**. 2019. Male and female bees show large differences in floral preference. *Plos One* 14(4), e0214909 <https://doi.org/10.1371/journal.pone.0217714>  
*Featured in Science*

- 55 \*T Harrison, J Gibbs, and **R Winfree**. 2019. Anthropogenic landscapes support fewer rare bee species. *Landscape Ecology* 34: 967-978 <https://doi.org/10.1007/s10980-017-0592-x>
- 54 \*T Harrison, J Gibbs, and **R Winfree**. 2018. Phylogenetic homogenization of bee communities across ecoregions. *Global Ecology and Biogeography* 27: 1457-1466 <https://doi.org/10.1111/geb.12822>
- 53 **R Winfree**, \*J R Reilly, \*I Bartomeus, N M Williams, \*D Cariveau, and J Gibbs. 2018. Species turnover promotes the importance of bee diversity for crop pollination at regional scales. *Science* 359: 791-793 doi: 10.1126/science.aa02117  
*Featured in a Science Perspective, Science* 359: 741-742; *F1000 recommendation*
- 52 Bartomeus, I, \*D Cariveau, \*T Harrison, **R Winfree**. 2018. On the inconsistency of pollinator species traits for predicting either response to land-use change or functional contribution. *Oikos* 127: 306-315 doi 10.1111/oik.04507
- 51 \*T Harrison, J Gibbs, and **R Winfree**. 2018. Forest bees are replaced in agricultural and urban landscapes by native species with different phenologies and life history traits. *Global Change Biology* 24: 287-296 doi: 10.1111/gcb.13921
- 50 \*Genung, M, J Fox, N Williams, C Kremen, J Ascher, J Gibbs, and **R Winfree**. 2017. Pollinator abundance, rather than species richness, drives the temporal variability of pollination services. *Ecology* 98:1807-1816 <https://doi.org/10.1002/ecy.1876>
- 49 Lichtenberg, E M and 63 others including **R Winfree** and \*F Benjamin. 2017. A global synthesis of the effects of diversified farming systems on arthropod diversity within fields and across agricultural landscapes. *Global Change Biology* 23: 4946-4957 doi: 10.1111/gcb.13714
- 48 \*Griffin, S R, \*B Bruninga-Socolar, M A Kerr, J Gibbs, and **R Winfree**. 2017. Wild bee community change over a 26-year chronosequence of restored tallgrass prairie. *Restoration Ecology* 25:650-660 <https://doi.org/10.1111/rec.12481>
- 47 \*MacLeod, M, \*Genung, M (co-first author), and **R Winfree**. 2016. Measuring partner choice in plant-pollinator networks: Using null models to separate rewiring and fidelity from chance. *Ecology* 97:2925-2931 DOI: 10.1002/ecy.1574
- 46 \*Cariveau, D \*G Nayak, \*I Bartomeus, \*J Zientek, J Ascher, J Gibbs, and **R Winfree**. 2016. The allometry of bee proboscis length and its uses in ecology. *PLoS ONE* 11:3 e0151482 <https://doi.org/10.1371/journal.pone.0151482>

- 45 \*Bruninga-Socolar, B, E Crone, and **R Winfree**. 2016. The role of floral density in determining bee foraging behavior: a natural experiment. *Natural Areas Journal* 36: 392-399
- 44 Rader, R, I Bartomeus, L Garibaldi, M Garratt, B Howlett, **R Winfree**, and 46 other authors including \*S Griffin. 2016. Non-bee insects are important contributors to global crop pollination. *PNAS* 113:146-151 *Featured in Nature as a Research Highlight, ISI Highly Cited Paper*
- 43 Kleijn, D, **Winfree, R**, and 56 other authors including \*F Benjamin, \*D Cariveau, \*I Bartomeus. 2015. Delivery of crop pollination services is an insufficient argument for wild pollinator conservation. *Nature Communications* 6:7414 DOI: 10.1038/ncomms8414 *F1000 recommendation* *Featured in The Guardian (UK), The Independent (UK), Wired, LA Times, Washington Post, Conservation magazine; ISI Highly Cited Paper*
- 42 \*Cariveau, D, and **R Winfree**. 2015. Causes of variation in wild bee responses to anthropogenic drivers. *Current Opinion in Insect Science* 10: 104-109.
- 41 \*Harrison, T, and **R Winfree**. 2015. Urban drivers of plant-pollinator interactions. *Functional Ecology* 29: 879-888.
- 40 **Winfree, R**, J Fox, N Williams, \*J Reilly, and \*D Cariveau. 2015. Abundance of common species, not species richness, drives delivery of a real-world ecosystem service. *Ecology Letters* 18: 626-635 *Featured in Nature as a Research Highlight, ISI Highly Cited Paper*
- 39 \*Benjamin, F and **R Winfree**. 2014. Lack of pollinators limits fruit production in commercial blueberry (*Vaccinium corymbosum*). *Environmental Entomology* 43: 1574-1583
- 38 Garibaldi, L A, L G Carvalheiro, S D Leonhardt, M A Aizen, B R Blaauw, R Isaacs, M Kuhlmann, D Kleijn, A M Klein, C Kremen, L Morandin, J Scheper, and **R Winfree**. 2014. From research to action: practices to enhance crop yield through wild pollinators. *Frontiers in Ecology and the Environment* 12: 439-447 *Cover article, ISI Highly Cited Paper*
- 37 **Winfree, R**, J Dushoff, N Williams, and C Kremen. 2014. Species abundance, not diet breadth, drives the persistence of the most linked pollinators as plant-pollinator networks disassemble. *American Naturalist* 183: 600-611
- 36 \*Cariveau, D P, J E Powell, H Koche, **R Winfree**, and N A Moran. 2014. Variation in gut microbial communities and its association with pathogen infection in wild bumble bees (*Bombus*). *ISME Journal* 8: 2369-2379
- 35 \*Benjamin, F, \*J Reilly and **R Winfree**. 2014. Pollinator body size mediates the scale at which land use drives crop pollination services. *Journal of Applied Ecology* 51: 440-449

- 34 Garibaldi, L, I Steffan-Dewenter, **R Winfree**, and 44 other authors including \*I Bartomeus, \*D Cariveau, and \*F Benjamin. 2013. Wild pollinators enhance fruit set of crops regardless of honey bee abundance. *Science* 339: 1608-1611 *Covered by National Public Radio (NPR) program 'The Salt' ISI Highly Cited Paper*
- 33 \*Bartomeus, I, J Ascher, J Gibbs, B Danforth, D Wagner, S Hedtke, and **R Winfree**. 2013. Lack of a general decline among northeastern US bee pollinators over a century of global change. *PNAS* 110(12): 4656-4660 *Cover article Covered by National Public Radio (NPR) program 'Science Friday' ISI Highly Cited Paper*
- 32 \*Cariveau, D, NM Williams, \*F Benjamin, and **R Winfree**. 2013. Response diversity to land use occurs but does not consistently stabilize ecosystem services provided by native pollinators. *Ecology Letters* 16: 903-911 *Cover article Interview with National Public Radio (NPR) station WHYY Philadelphia*
- 31 \*Bartomeus, I, M Park, J Gibbs, B Danforth, A Lasko, and **R Winfree**. 2013. Biodiversity ensures plant-pollinator phenological asynchrony against climate change. *Ecology Letters* 16:1331-1338 *Cover article*
- 30 **Winfree, R**. 2013. Invited View: Global environmental change, biodiversity, and ecosystem services: what can we learn from studies of pollination? *Basic and Applied Ecology* 14: 453-460
- 29 \*Rader, R, \*J Reilly, \*I Bartomeus and **R Winfree**. 2013. Native bees buffer the negative impact of climate warming on honey bee pollination of watermelon crops. *Global Change Biology* 19: 3103-3110
- 28 Kennedy, C., E Lonsdorf, M C Neel, N M Williams, T H Ricketts, **R Winfree**, and 22 other authors including \*D Cariveau. 2013. A global quantitative synthesis of local and landscape effects on native bee pollinators in heterogeneous agricultural systems. *Ecology Letters* 16: 584-599 *ISI Highly Cited Paper*
- 27 Williams, N M and **R Winfree**. 2013. Local habitat characteristics but not landscape urbanization drive pollinator visitation and native plant pollination in forest remnants. *Biological Conservation* 160: 10-18
- 26 Mandelik, Y, **R Winfree**, T Neeson and C Kremen. 2012. Complementary habitat use by wild bees in agro-natural landscapes. *Ecological Applications* 22: 1535-1546
- 25 \*Bartomeus, I , J Ascher, S Colla, D Wagner, B Danforth, S Kornbluth, and **R Winfree**. 2011. Climate-associated phenological advances in bee pollinators and bee-pollinated plants. *PNAS* 108: 20645-20649

- 24 **Winfree, R**, \*I Bartomeus, and \*D Cariveau. 2011. Native pollinators in anthropogenic habitats. *Annual Review of Ecology, Evolution and Systematics* 42: 1-22
- 23 **Winfree, R**, B Gross (co-first author) and C Kremen. 2011. Valuing pollination services to agriculture. *Ecological Economics* 71: 80-88
- 22 Garibaldi, L, I Steffan-Dewenter, C Kremen, J Morales, R Bommarco, S Cunningham, L Carvalheiro, N Chacoff, J Dudenhöffer, S Greenleaf, A Holzschuh, R Isaacs, K Krewenka, Y Mandelik, M Mayfield, L Morandin, S Potts, T Ricketts, H Szentgyörgyi, C Westphal, **R Winfree**, A Klein. 2011. Stability of pollination services decreases with isolation from natural areas despite frequent honey bee visits. *Ecology Letters* 14: 1062-1072 *ISI Highly Cited Paper*
- 21 \*Bartomeus, I and **R Winfree**. 2011. The Circe principle: Are pollinators waylaid by attractive habitats? *Current Biology* 21: R652-R654
- 20 Ollerton, J, **R Winfree**, and S Tarrant. 2011. How many flowering plants are pollinated by animals? *Oikos* 120: 321-326 *ISI Highly Cited Paper*
- 19 Williams, NM, \*D Cariveau, **R Winfree**, and C Kremen. 2011. Bees in disturbed habitats use, but do not prefer, alien plants. *Basic and Applied Ecology* 12: 332-341
- 18 Menz, M, RD Phillips, **R Winfree**, C Kremen, MA Aizen, SD Johnson, and KW Dixon. 2011. Reconnecting plants and pollinators: challenges in the ecological restoration of pollination mutualisms. *Trends in Plant Science* 16: 4-12 *Cover article F1000 recommendation ISI Highly Cited Paper*
- 17 \*Fiorella, KA, A Cameron, W Sechrest, **R Winfree**, and C Kremen. 2010. Methodological considerations in reserve system selection: a case study of Malagasy lemurs. *Biological Conservation* 143: 963-973
- 16 **Winfree, R**. The conservation and restoration of wild bees. 2010. Pages 169-197 in R Ostfeld and W Schlesinger, eds, *The Year in Ecology and Conservation Biology*. The New York Academy of Sciences: New York
- 15 **Winfree, R**, R Aguilar, DP Vázquez, G LeBuhn, and MA Aizen. 2009. A meta-analysis of bees' responses to anthropogenic disturbance. *Ecology* 90: 2068-2076 *Cover article ISI Highly Cited Paper*
- 14 **Winfree, R** and C Kremen. 2009. Are ecosystem services stabilized by differences among species? A test using crop pollination. *Proceedings of the Royal Society of London* 276: 229-237 *F1000 recommendation*
- 13 Lonsdorf, E, C Kremen, TH Ricketts, **R Winfree**, S Greenleaf, and NM Williams. 2009. Modeling pollination services across agricultural landscapes. *Annals of Botany* 103: 1589-1600

- 12 **Winfree, R.** 2008. Pollinator-dependent crops: An increasingly risky business. *Current Biology* 18: R968-R969
- 11 **Winfree, R,** NM Williams, H Gaines, J Ascher, and C Kremen. 2008. Wild bee pollinators provide majority of crop visitation across land use gradients in New Jersey and Pennsylvania, USA. *Journal of Applied Ecology* 45: 793-802
- 10 **Winfree, R,** NM Williams, J Dushoff, and C Kremen. 2007. Native bees provide insurance against ongoing honey bee losses. *Ecology Letters* 10: 1105-1113
- 9 Greenleaf, S, NM Williams, **R Winfree** and C Kremen. 2007. Bee foraging ranges and their relationship to body size. *Oecologia* 153: 589-596 *ISI Highly Cited Paper*
- 8 **Winfree, R,** T Griswold and C Kremen. 2007. Effect of human disturbance on bee communities in a forested ecosystem. *Conservation Biology* 21: 213-223
- 7 Kremen, C, NM Williams, MA Aizen, B Gemmill-Herren, G LeBuhn, R Minckley, L Packer, SG Potts, T Roulston, I Steffan-Dewenter, D Vazquez, **R Winfree**, L Adams, E E Crone, S Greenleaf, TH Keitt, AM Klein, J Regetz, TH Ricketts. 2007. Pollination and other ecosystem services produced by mobile organisms: a conceptual framework for the effects of land-use change. *Ecology Letters* 10: 299-314 *Cover article ISI Highly Cited Paper*
- 6 **Winfree, R,** SK Robinson, D Bengali and J Dushoff. 2006. A Monte Carlo model for estimating the reproduction of a generalist brood parasite across multiple host species. *Evolutionary Ecology Research* 8: 213-236
- 5 Dobson, AP, D Lodge, J Alder, G Cumming, J Keymer, J McGlade, H Mooney, JA Rusak, O Sala, V Wolters, D Wall, **R Winfree**, and M Xenopoulos. 2006. Habitat loss, trophic collapse, and the decline of ecosystem services. *Ecology* 87: 1915-1924
- 4 **Winfree, R,** J Dushoff, EE Crone, C Schultz, R Budny, NM Williams and C Kremen. 2005. Testing simple indices of habitat proximity. *American Naturalist* 165: 707-717
- 3 Chace, J, C Farmer, **R Winfree**, D Curson, W Jensen, C Goguen, and SK Robinson. 2005. Cowbird (*Molothrus*) ecology: a review of factors influencing distribution and abundance of cowbirds across spatial scales. *Ornithological Monographs* 57: 45-70
- 2 **Winfree, R.** 2004. High offspring survival of the brown-headed cowbird in an invaded habitat. *Animal Conservation* 7: 445-453
- 1 **Winfree, R.** 1999. Cuckoos, cowbirds and the persistence of brood parasitism. *Trends in Ecology and Evolution* 14: 338-343 *Cover article*

## Book chapters and reviews

**Winfree, R.** 2020. How does biodiversity relate to ecosystem functioning in real-world systems? Pages 338-353 in R Holt, D Tilman and A Dobson, eds, *Unsolved Problems in Ecology*. Princeton University Press

**Winfree, R.** 2018. To be a bee. *Science* 361: 137. Review of *Buzz* by Thor Hanson. 10.1126/science.aat9250

**Winfree, R,** \*M MacLeod, \*T Harrison, and \*D Cariveau. 2015. Conserving and restoring mutualisms. Pages 265-286 in Bronstein, J, ed, *Mutualism*. Oxford University Press

Lonsdorf, E, TH Ricketts, C Kremen, **R Winfree**, S Greenleaf, and NM Williams. 2011. Crop pollination services. Pages 168-187 in P Kareiva et al., eds, *Natural Capital: Theory & Practice of Mapping Ecosystem Services*. Oxford University Press

## **HONORS, AWARDS, FELLOWSHIPS**

Fellow of the Ecological Society of America, 2021

Web of Science [Highly Cited Researcher](#) in ecology/environment, 2015-2019

- One of ~120 researchers globally with most papers in top 1% of citations for field

Board of Directors, Xerces Society for Invertebrate Conservation, 2015-present

Scientific Advisory Board, Duke Farms of Doris Duke Charitable Foundation, 2018-present

Advisory Board, Bee Better pollinator-friendly product certification, 2016-present

Associate editor, *Global Ecology and Biogeography*, 2016-2019

Subject editor, *Ecological Applications*, 2012-2015

Board of scientific advisors, The Xerces Society for Invertebrate Conservation, 2012-2015

Faculty member, Faculty of 1000, 2011-2015

Rutgers University Board of Governors Research Award for Scholarly Excellence, 2013

Postdoctoral Fellowship, Princeton University Council on Science and Technology, 2001-2004

National Science Foundation Graduate Research Fellowship, 1995-1998

## **GRANTS**

National Science Foundation, Division of Environmental Biology. SG: Broadening biodiversity-ecosystem functioning research to include mutualist networks. R Winfree (PI). \$199,998, 2020-2022

National Science Foundation / Belmont Forum-BiodivERsA: OBServ: Open Library of Pollinator Biodiversity and Ecosystem Services. N Bartomeus (lead PI), R Winfree (USA PI), L Garibaldi (Argentina PI), D Kleijn (Netherlands PI). Rutgers amount \$180,000, 2019-2021

National Science Foundation, Division of Environmental Biology. SG: Synthetic analysis of the importance of species richness to ecosystem services in natural systems. \*M Genung (PI), R Winfree (CoPI). Rutgers amount \$150,000, 2018-2021



National Park Service. Forest bee-plant network assessment in Great Lakes National Parks. R Winfree (PI). Rutgers amount \$98,992, 2017-2021

National Science Foundation, Division of Environmental Biology. The role of species dominance in mediating biodiversity-ecosystem function relationships across spatial scales. R Winfree (PI), NM Williams (CoPI). Rutgers amount \$445,386 including two REU and one CLB supplement, 2016-2020

United States Fish and Wildlife Service. Comprehensively evaluating New Jersey's bee pollinators for the State Wildlife Action Plan. D Jenkins (project manager), T Harrison (PI), R Winfree (PI), and others. Rutgers amount \$75,000, 2015-2017

United States Department of Agriculture NIFA SCRI. Developing sustainable pollination strategies for US specialty crops. R Isaacs (lead PI), R Winfree (lead senior investigator). Rutgers amount \$187,186, 2012-2017

United States Department of Agriculture, Federal Conservation Innovation Grant. Next steps in pollinator conservation: operations and maintenance, organic habitat restoration, seed mix choices, and assessing conservation effectiveness. M Vaughn (PI), R Winfree (CoPI) and others. Rutgers amount \$175,402, 2012-2016

National Science Foundation, Dimensions of Biodiversity (DEB 1046153). Dimensions: Genomics, functional roles, and diversity of the symbiotic gut microbiotae of honey bees and bumble bees. N Moran (PI), R Winfree (lead senior investigator). Rutgers amount \$97,528, 2011-2013

United States Department of Agriculture, Federal Conservation Innovation Grant. Development and validation of protocols for assessing functioning of pollinator plantings for agricultural settings. NM Williams (PI), R Winfree (CoPI), R Isaacs (CoPI). Rutgers amount \$87,468, 2010-2013

United States Department of Agriculture, NIFA AFRI. Strategies for promoting reliable crop pollination by native bees. R Winfree (PI), NM Williams (CoPI). Rutgers amount \$400,000, 2009-2013

National Science Foundation, Division of Environmental Biology. Community disassembly and ecosystem function: pollination services across agro-natural landscapes. \$427,810, C Kremen (PI), NM Williams (PI), R Winfree (CoPI), 2005-2008

## **INVITED TALKS AND WORKSHOPS**

Colorado State University, Distinguished Ecologist Lecture Series (Apr 2021)

University of Alberta, Strickland Lecture (Mar 2021)  
University of Calgary, Department of Ecology & Evolution (Sept 2020)  
Ecological Society of America, INSPIRE session on network analysis (Aug 2020)  
University of California, Davis, Department of Evolution & Ecology (May 2020)  
World Biodiversity Forum, Davos, Switzerland (Feb 2020)  
University of Michigan, Department of Ecology & Evolutionary Biology (Nov 2019)  
Keynote speaker, Scandinavian Society for Pollination Ecology, Sweden (Oct 2019)  
Temple University, Department of Biology (Apr 2019)  
Stony Brook University, Department of Ecology & Evolution (Mar 2019)  
Fields Institute, Canada, Emerging challenges in mathematical biology workshop (Feb 2018)  
Freiburg Institute for Advanced Studies, Germany, Workshop on temporal networks (Nov 2017)  
Ecological Society of America, Symposium on dominant species and function (Aug 2017)  
University of Zurich, Müller seminar (May 2017)  
Connecticut College, Frederick Henry Sykes Memorial Lecture (Feb 2017)  
University of Georgia, Institute for Ecology (Nov 2016)  
Princeton University, Department of Ecology & Evolutionary Biology (Oct 2016)  
Columbia University, Department of Ecology, Evolution and Environmental Biology (Oct 2016)  
Keynote speaker, International Conference on Pollinator Biology, Health, and Policy (Jul 2016)  
University of Idaho / Washington State University joint seminar (May 2014)  
University of Pittsburgh, Department of Biology (Apr 2014)  
Harvard Forest, Harvard University (Oct 2013)  
Dartmouth College, Department of Biology (Sep 2013)  
University of Michigan, Department of Ecology & Evolutionary Biology (Dec 2012)  
Ecological Society of America, Pollination in a changing world, session organizer (Aug 2012)  
Status and Trends in European Pollinators, Netherlands, working group member (Feb 2012)  
Entomological Society of America, Biodiversity and ecosystem services, session organizer (2011)  
International Union for the Conservation of Nature, Bumble bee conservation workshop (2010)  
Cornell University, Department of Entomology, Jugatae Seminar (2009)  
Princeton University, Woodrow Wilson School of Public Policy (2008)  
University of California Davis, Department of Entomology (2008)  
University of Wisconsin, Department of Geography (2007)  
NCEAS working group, Restoring an ecosystem service to degraded landscapes (2008-2011)

## **TEACHING AND ADVISING**

### Courses

Instructor for Conservation Ecology (undergraduate, Rutgers), 2018-present  
Co-Instructor for Advanced Ecological Data Analysis (graduate, Rutgers), 2017-present  
Instructor for Foundations of Ecology (graduate, Rutgers), 2013-2018  
Co-Instructor for Principles of Ecology (undergraduate, Rutgers), 2014-2017  
Instructor for Conserving and Restoring Mutualisms (graduate, Rutgers), 2012  
Instructor for Insect Ecology (graduate, Rutgers), 2012-2013  
Instructor for Pollination Ecology (graduate, Rutgers), 2010-2011

Instructor for Conservation Biology (undergraduate, Princeton), 2005  
Instructor for Biostatistics tutorial (undergraduate, Princeton), 2001

#### Postdoc Advisor

Dr. Katie Turo (2021-present)  
Dr. Natalie Lemanski (2020-present)  
Dr. Tina Harrison (2016-2017), *Postdoc, University of California, Davis*  
Dr. Mark Genung (2014-2018), *Assistant Professor, University of Louisiana*  
Dr. James Reilly (2011-present)  
Dr. Geetha Nayak, Fulbright Postdoctoral Fellow (2011-2012)  
Dr. Romina Rader (2011), *Lecturer, University of New England, Australia*  
Dr. Ignasi Bartomeus (2010-2012), *Tenured Researcher, EBD-CSIC, Spain*  
Dr. Daniel P. Cariveau (2009-2015), *Assistant Professor, University of Minnesota*

#### Ph.D Primary Advisor

Joanna Gunther (2021-present), BS George Fox University  
Andrew Aldercotte (2020-present), BS University of California, Santa Cruz  
Max McCarthy (2020-present), BS Tufts  
Dylan Simpson (2018-present), MS William & Mary  
Lucia Weinman (2017-present), BS Columbia  
Michael Roswell (2014-2020), BS Swarthmore, *Postdoc, Univ of California, Davis* and SESYNC  
Colleen Smith (2014-2020), BS University of Michigan, *Postdoc, Ottawa University*  
Bethanne Bruninga-Socolar (2012-2018), BS Swarthmore, *Postdoc, University of Minnesota*  
Tina Harrison (2011-2016), BS Dartmouth, *Postdoc, University of California, Davis*  
Molly MacLeod (2010-2015), BS Marlboro, *Director of Science Content, Pfizer Pharmaceuticals*  
Faye Benjamin (2009-2015), BS Brown, *Adjunct Professor, Hofstra University*

#### Undergraduate Independent Research Advisor

A Scheiner (2019-present)  
K Londono (2018-2020)  
A Matthews (2017-2020) *Research intern, Dept of Molecular Biology, Princeton University*  
C Hamilton (2017-2019) *MS student, Pennsylvania State University*  
R Tucker (2014-2017) *Graduate School of Education, University of Virginia*  
J Zientek (2013-2016) *Lab manager, Oakland University*  
A Cohen (2014) *Ph.D student, University of Washington*  
S Hauser (2012) *Ph.D student, University of Louisiana*

#### **SERVICE**

Grant panelist, National Science Foundation (NSF) DEB, Washington DC (2013, 2016, 2018)  
Grant reviewer for NSF, MacArthur Fellowship 'genius award', and many others  
Reviewer for *Nature*, *Science*, *PNAS*, *Ecology Letters*, *Ecology* and many others