Melanie R. Kazenel

Department of Biology
MSC03 2020, 1 University of New Mexico
Albuquerque, NM 87131-0001, USA
mkazenel@unm.edu
https://melaniekazenel.weebly.com

EDUCATION

2018 – Present	Ph.D. Student in Biology, University of New Mexico, Albuquerque, NM Advisors: Jennifer A. Rudgers and Kenneth D. Whitney Candidacy achieved in November 2019. Degree anticipated in Spring 2022.
2016 – 2017	Ph.D. Student in Biology, University of Vermont, Burlington, VT Advisor: Alison K. Brody
2014 – 2016	M.Sc. in Biology, with distinction, University of New Mexico, Albuquerque, NM Advisor: Jennifer A. Rudgers
2013	Post-baccalaureate coursework in biostatistics, genetics, and chemistry Harvard University Extension School, Cambridge, MA and Tufts University, Medford, MA
2006 – 2010	B.A. in Environmental Studies & Spanish, *summa cum laude*, Wellesley College, Wellesley, MA Spanish immersion semester at Benemérita Universidad Autónoma de Puebla, Mexico Advisors: Daniel Brabander and Kristina Jones

RESEARCH AND TEACHING APPOINTMENTS

2021 – Present	Program Coordinator, Impact Leadership & Mentorship Program, Women's Resource Center, University of New Mexico
2018 – Present	Graduate Research & Teaching Assistant, Dept. of Biology, University of New Mexico
2018	Environmental Educator, Bosque Ecosystem Monitoring Program, Albuquerque, NM
2016 – 2017	Graduate Teaching Fellow, Dept. of Biology, University of Vermont
2014 – 2016	Graduate Research & Teaching Assistant, Dept. of Biology, University of New Mexico
2013 – 2014	Research Technician, Dept. of Biology, University of New Mexico (PIs: Rudgers & Whitney)
2013	Research Technician, Dept. of Forest Resources, University of Minnesota (PI: Reich)
2013	Field Ecology Research & Course Program, Rocky Mountain Biological Laboratory, Gothic, CO
2009 – 2010	Undergraduate Research Assistant, Biological Sciences and Geosciences, Wellesley College

PUBLICATIONS

Peer-Reviewed Publications

Kazenel, M.R.*, K.W. Wright*, J. Bettinelli, T.L. Griswold, K.D. Whitney, and J.A. Rudgers (2020) Predicting changes in bee assemblages following state transitions at North American dryland ecotones. *Scientific Reports* 10:708 (doi: 10.1038/s41598-020-57553-2). * co-first authors

Lynn, J.S., **M.R. Kazenel**, S.N. Kivlin, and J.A. Rudgers (2019) Context-dependent biotic interactions control plant abundance across steep environmental gradients. *Ecography* 00:1–13 (doi: 10.1111/ecog.04421).

Kazenel, M.R., S.N. Kivlin, D.L. Taylor, J.S. Lynn, and J.A. Rudgers (2019) Altitudinal gradients fail to predict fungal symbiont responses to warming. *Ecology* 0:e02740 (doi: 10.1002/ecy.2740).

Kivlin, S.N., **M.R. Kazenel**, J.S. Lynn, D.L. Taylor, and J.A. Rudgers (2019) Plant identity influences foliar fungal symbionts more than elevation in the Colorado Rocky Mountains. *Microbial Ecology* (doi: 10.1007/s00248-019-01336-4).

Kivlin, S.N., J.S. Lynn, **M.R. Kazenel,** K.K. Beals, and J.A. Rudgers (2017) Biogeography of plant-associated fungal symbionts in mountain ecosystems: a meta-analysis. *Diversity and Distributions* 23:1067–1077 (doi: 10.1111/ddi.12595).

Adams, A.E., **M.R. Kazenel**, and J.A. Rudgers (2017) Does a foliar endophyte improve plant fitness under flooding? *Plant Ecology* 218(6):711–723 (doi: 10.1007/s11258-017-0723-0).

Kazenel, M.R., C.L. Debban, L. Ranelli, W.Q. Hendricks, Y.A. Chung, T.H. Pendergast, N.D. Charlton, C.A. Young, and J.A. Rudgers (2015) A mutualistic endophyte alters the niche dimensions of its host plant. *AoB PLANTS* 7:plv005 (doi: 10.1093/aobpla/plv005).

Manuscripts in Preparation (available upon request)

Kazenel, M.R., K.W. Wright, T.L. Griswold, K.D. Whitney, and J.A. Rudgers (*in prep*) Heat and drought sensitivity predict desert bee population dynamics under escalating aridity.

Undergraduate Capstone and Independent Work

Kazenel, M.R., L. Fink, S. Kho, K. McFadden, C. McGlynn, S. Meyer, A. Nelson, L. Reed, T.D. Shafer, K. Wingate, and J. Zhou (2010) Making the grade: an analysis of sustainability ratings in higher education. Capstone Environmental Studies Project, Wellesley College, Wellesley, MA.

Kazenel, M.R. (2009) Characterizing a meadow ecosystem: soil composition and plant communities. Advanced Independent Study in the Biological Sciences (BISC 350), Wellesley College, Wellesley, MA.

Kazenel, M.R., T.D. Shafer, E.R. Estes, and D. Haffner (2008) The rise and continued rise of climate change: environmental issue attention-cycling across multiple sectors. Independent Study in Environmental Studies (ES 250), Wellesley College, Wellesley, MA.

PROFESSIONAL PRESENTATIONS

2021 **Kazenel, M.R.**, P.A. Cárdenas, K.W. Wright, K.D. Whitney, D.C. Lightfoot, T.L. Griswold, E. Christensen, S.K.M. Ernest, R.L. Schooley, P. Stapp and J.A. Rudgers. Desert bee and rodent assemblages track climate variability. Ecological Society of America Annual Meeting, held virtually. *Contributed talk.*

Kazenel, M.R. Plant-pollinator interaction networks & pollen metabarcoding at the Sevilleta. Sevilleta Long-Term Ecological Research Program (LTER) Brown Bag Seminar Series, University of New Mexico, Albuquerque, NM. *Contributed talk.*

2020 **Kazenel, M.R.**, K.W. Wright, T.L. Griswold, K.D. Whitney, and J.A. Rudgers. Body size-mediated responses to climate change in a desert bee assemblage.

1. Ecological Society of America Annual Meeting, held virtually. *Contributed talk.*
2. Sevilleta LTER Brown Bag Seminar Series, University of New Mexico, Albuquerque, NM. *Contributed talk.*
3. Brown Bag Seminar Series, Dept. of Biology, University of New Mexico, Albuquerque, NM. *Contributed talk.*

Kazenel, M.R., K.W. Wright, T.L. Griswold, K.D. Whitney, and J.A. Rudgers. Assemblage-level increases in bee body size in concert with increasing aridity over 13 years in the southwestern US. Sevilleta LTER All Scientists Meeting, University of New Mexico, Albuquerque, NM. *Contributed poster.*

2019 **Kazenel, M.R.**, K.W. Wright, T.L. Griswold, J. Bettinelli, J.A. Rudgers, and K.D. Whitney. Native bees exhibit species- and ecosystem-specific changes in abundance with aridity.

1. Annual Meeting of the Guild of Rocky Mountain Ecologists and Evolutional Biologists, Gothic, CO. *Contributed talk.*
2. International Pollinator Conference, University of California, Davis, CA. *Contributed poster.*
3. Dept. of Biology Research Day, University of New Mexico, Albuquerque, NM. *Contributed poster.*

4. Desert Ecology Short Course, Jornada LTER, New Mexico State University, Las Cruces, NM. *Invited poster.*
5. Central Arizona-Phoenix LTER All Scientists Meeting, Arizona State University, Tempe, AZ. *Invited poster.*
6. Sevilleta LTER All Scientists Meeting, University of New Mexico, Albuquerque, NM. *Contributed poster.*

Kazenel, M.R., K.W. Wright, T.L. Griswold, J. Bettinelli, K.D. Whitney, and J.A. Rudgers. Predicting changes in bee communities following state transitions in dryland ecosystems. Sevilleta LTER Brown Bag Seminar Series, University of New Mexico, Albuquerque, NM. *Contributed talk.*

2018 **Kazenel, M.R.**, K.W. Wright, K.D. Whitney, and J.A. Rudgers (2018) Climate sensitivity functions for native bees. Sevilleta LTER Science Symposium, Sevilleta Field Station, University of New Mexico, San Acacia, NM. *Contributed talk.*

2017 **Kazenel, M.R.**, and A.K. Brody. Assessing the consequences of bumblebee declines for native plants and pollinators. Ecology, Evolution, and Environmental Biology Seminar, University of Vermont, Burlington, VT. *Contributed talk.*

2016 **Kazenel, M.R.**, S.N. Kivlin, D.L. Taylor, and J.A. Rudgers. Altitudinal gradients do not predict plant-symbiont responses to experimental warming. Graduate Seminar Series, Dept. of Biology, University of Vermont, Burlington, VT. *Contributed talk.*

Kazenel, M.R., S.N. Kivlin, D.L. Taylor, and J.A. Rudgers. Assessing the potential for climate-induced disruption of plant-microbe symbioses in the Rocky Mountains.
1. Ecological Society of America Annual Meeting, Ft. Lauderdale, FL. *Contributed poster.*
2. Brown Bag Seminar Series, Dept. of Biology, University of New Mexico, Albuquerque, NM. *Contributed talk.*

2013 **Kazenel, M.R.** Can fungal symbionts shift host niche dimensions to alter species coexistence? Summer Research Symposium, Rocky Mountain Biological Laboratory, Gothic, CO. *Contributed talk.*

2010 **Kazenel, M.R.**, L. Fink, S. Kho, K. McFadden, C. McGlynn, S. Meyer, A. Nelson, L. Reed, T.D. Shafer, K. Wingate, and J. Zhou. Making the grade: an analysis of sustainability rankings in higher education. Ruhlman Conference, Wellesley College, Wellesley, MA. *Contributed talk.*

Kazenel, M.R., L. Chilson, C. Ferris, C. Gayle, A. French, H. Mok, H. Rainey, B. Schindler, and C. Whitlock. Designing an edible ecosystem garden at Wellesley College. Ruhlman Conference, Wellesley College, Wellesley, MA. *Contributed talk.*

2009 **Kazenel, M.R.,** K. Jones, and D. Brabander. Characterizing a meadow ecosystem: soil composition and plant communities. Research Symposium, Summer Research in the Sciences, Wellesley College, Wellesley, MA. *Contributed poster.*

2008 **Kazenel, M.R.**, T.D. Shafer, E.R. Estes, and D. Haffner. The climate monster and the fate of environmentalism: analyzing trends in national environmental discourse. Ruhlman Conference, Wellesley College, Wellesley, MA. *Contributed poster.*

Bisno, A., E.R. Estes, T. Harvey, S. Hurley, **M.R. Kazenel**, T.D. Shafer, H. Sholder, and S. Xi. Analyzing industrial contamination as recorded in sediments from Memorial Pond, Walpole, MA. Ruhlman Conference, Wellesley College, Wellesley, MA. *Contributed poster.*

AWARDS, HONORS, AND GRANTS

2021	Caughran Scholarship, Department of Biology, University of New Mexico ($1,000)
2015, 2019, 2021	Grove Scholarship, Department of Biology, University of New Mexico ($4,000 total)
2020, 2021	Student Research Grant, Graduate and Professional Student Association, University of New Mexico ($1,000 total)

2020	Springfield Fellowship for excellence in research and academic record, Department of Biology, University of New Mexico (5-month research assistantship totaling $13,500)
2019	Doctoral Conference Presentation Award, University of New Mexico ($726)
2019	Howard McCarley Student Research Award, Southwestern Association of Naturalists ($1,000)
2018, 2019	Sevilleta LTER Summer Graduate Student Fellowship ($8,000 total)
2017	Botanical Society of America Graduate Student Research Award ($500)
2016	Plant Population Ecology Travel Award, Ecological Society of America ($250)
2015, 2016	Honorable Mention, NSF Graduate Research Fellowship Program
2015	Springfield Scholarship, Department of Biology, University of New Mexico ($2,000)
2015	Rocky Mountain Biological Laboratory Graduate Fellowship ($150)
2010	Justina Ruiz-de-Conde Prize in Spanish, Wellesley College
2010	Community Service Travel Grant, Wellesley College, for environmental education work in Peru ($750)
2009	Phi Beta Kappa (Junior Year), Wellesley College
2008	Lumpkin Family Internships for the Environment Stipend, Wellesley College ($3,500)

TEACHING AND MENTORING

Teaching

2018 – 2020	Graduate Teaching Assistant, Department of Biology, University of New Mexico Virology (BIOL 450), Fall 2020 Biology of Infectious Organisms (BIOL 490), Spring 2020 Plant and Animal Form and Function Laboratory (BIOL 304L), Spring 2019
2019	Guest Lecturer, Department of Biology, University of New Mexico Principles of Ecology (BIOL 310), Spring 2019. Lectured on the ecology of mutualisms.
2016 – 2017	Graduate Teaching Fellow, Department of Biology, University of Vermont Ecology and Evolution (BCOR 102), Fall 2016 and Fall 2017 Principles of Biology (BIOL 002), Spring 2017
2016	Graduate Teaching Assistant, Department of Biology, University of New Mexico Principles of Ecology (BIOL 310), Spring 2016. Guest lectured on conservation biology.

Mentoring and Research Supervision

2018 – 2021	Mentor, Sevilleta Research Experience for Undergraduates (REU) Program, San Acacia, NM 2021: Eduardo Barragan, California State Polytechnic Institute at Pomona, *Variation in diet breadth within and among bee species, and its consequences for bee population persistence.* 2020: Ianellie Munguia, University of Texas at El Paso, *Bee foraging and pollination activity in relation to body size.* 2019: Benjamin Turnley, Central College, *Bee body size and climate change.* 2018: Jennifer Schlauch, University of Texas at Austin, *Bee community variation among ecosystem types and sampling dates over the pre-monsoon summer growing season at the Sevilleta National Wildlife Refuge.*
2016, 2021	Co-mentor to University of New Mexico Biology Honors Thesis and Independent Study students 2021: Shelby Showalter, *Nutritional content of key pollen resources for dryland bee communities* 2016: Amy Adams, *Does a foliar endophyte improve plant fitness under flooding?*
2021	Mentor to two high school students completing senior capstone research on native bee communities of the Valle de Oro National Wildlife Refuge, Albuquerque, NM
2014 – 2016 & 2018 –Present	Mentor and supervisor to undergraduate and postbaccalaureate research assistants (n=18), Rudgers and Whitney Labs, Department of Biology, University of New Mexico
2017	Field research supervisor to two South Burlington, VT high school student field research volunteers

2014 – 2015	Co-mentor to undergraduate student researchers, Rocky Mountain Biological Laboratory 2015: KariAnna Clausen (Western Washington University), Nisreen Abo-Sido (Wellesley College), Liana Edwards (University of Vermont), Lea Milando (Oberlin College) 2014: Ian Spellman (Bridgewater State University), Chiara Forrester (Hampshire College), Samuel Canfield (Glenville State College)
2007 – 2008	Peer Tutor, Spanish and Astronomy Departments, Wellesley College

LEADERSHIP, SERVICE, AND TRAINING

Science Outreach and Communication

2021	Curated a display highlighting New Mexico's native bee diversity for the New Mexico Museum of Natural History and Science's "What's the buzz?" bee exhibit. Public talk planned for 26 October 2021.
2021 – Present	Skype a Scientist presenter for K-12 classrooms, held virtually
2020	Interviewed by *New Mexico Magazine* regarding native bee biology, conservation, and research (published in March 2020 at https://www.newmexico.org/nmmagazine/articles/post/bees/)
2019, 2020	Volunteer, Museum of Southwestern Biology Open Collections Events, Albuquerque, NM
2019, 2020	Science Fair Judge, Jefferson Middle School, Albuquerque, NM
2019	Public workshops and presentations on bee ecology, identification, and conservation 1. Sevilleta National Wildlife Refuge, in partnership with New Mexico State University 2. Environment New Mexico
2016 – 2017	Working Group Contributing Member, Pollinator-Friendly Solar Initiative of Vermont
2015	Science Fair Mentor, Amy Biehl High School, Albuquerque, NM
2015	Presenter, Science in the Community Day, Wilson Middle School, Albuquerque, NM
2014	Guest Scientist, Kids Nature Camp, Rocky Mountain Biological Laboratory
2010	Co-organizer, Communicating Science Symposium, Wellesley College
2009 – 2010	Treasurer, Publicity Chair, and Lecture Organizer, Wellesley Energy and Environmental Defense, Wellesley College

Professional Service

2020 – Present	Contributing Member, Diversity, Equity, & Inclusion Committees of the University of New Mexico Biology Department, Biology Graduate Student Association, & Sevilleta Long-Term Ecological Research Program
2018 – Present	University of New Mexico Biology Graduate Student Association Co-president (2018–20), Secretary (2020–21), and Treasurer (2021 – Present)
2018	Research Day Committee, Department of Biology, University of New Mexico
2014 – 2016 & 2018 – Present	Travel and Research Grant Reviewer, Graduate Research Allocations Committee, Department of Biology, University of New Mexico
2015, 2016	Session Moderator and Poster Judge, Department of Biology Research Day, University of New Mexico

Manuscript Review

Ecology (2), *Insect Conservation and Diversity* (1), *Journal of Animal Ecology* (1), *Journal of Vegetation Science* (2), *Microbial Ecology* (1), *Scientific Reports* (4), and *Southwestern Naturalist* (1)

Professional Memberships

Ecological Society of America, Entomological Society of America

Professional Courses and Trainings

2021	Story Collider science communication training, held virtually
2018	Science Writing Workshop, University of New Mexico
2017	The Bee Course (competitive-admissions training in bee identification and natural history), Southwestern Research Station of the American Museum of Natural History, Portal, AZ

OTHER PROFESSIONAL EXPERIENCE

2010 – 2012	Immigration Law Paralegal and Senior Paralegal, Chin & Curtis, LLP, Boston, MA
2010	Sustainable Agriculture Intern, Nanoose Edibles Organic Farm, Nanoose Bay, BC, Canada
2009 – 2010	Intern, Immigration & Asylum Services, International Institute of New England, Boston, MA
2008	Outreach and Programming Intern, Boston Natural Areas Network, Boston, MA
2007	Environmental Educator, Massachusetts Audubon Society, Milton, MA