GABRIELA M. QUINLAN

POSITIONS

Assistant Professor University of North Carolina Greensboro, Greensboro, NC 2026-Pres
Postdoctoral Scholar North Carolina State University, Raleigh, NC 2025-2026
Advisor: Rebecca Irwin
USDA-ARS Research Ecologist (Research Associate), Raleigh, NC 2024-2025
Advisor: Sarah Goslee
NSF Postdoctoral Fellow Pennsylvania State University, State College, PA 2020-2024
Advisor: Christina Grozinger

EDUCATION

PhD Michigan State University, East Lansing, MI 2016-2020
Influence of landscape composition, landscape diversity, and conservation management on bee health via a pollen nutrition mechanism
Advisor: Rufus Isaacs
Joint majors: *Entomology* and *Ecology, Evolutionary Biology, and Behavior*
Certificates: *Spatial Ecology* and *College Teaching*
BS North Carolina State University, Raleigh, NC 2011-2015
Major: *Biology*, Concentration: *Ecology, Evolution, and Conservation*
Minors: *Environmental Science, English*
Lancaster University – Lancaster, United Kingdom, January-July 2014
Course of Study: *Conservation Biology and Ecology*
NCSU Semester Exchange Program

PUBLICATIONS

Quinlan, G. & Irwin, R. Bees fail to shift their elevational niche despite climate warming in the Rocky Mountains, USA. *Ecology*. *In submission*.

Lohr, M.F. & **Quinlan, G.** Wetlands Abuzz: Bee Utilization of Wetland Habitats. *Ecological Applications. In review.*

Quinlan, G. & Irwin, R. Climate adaptation strategies for pollinators. *Journal of Applied Ecology*. *In revision.*

Quinlan, G., Kazenel, M. R., Stemkovski, M. & Irwin, R. E. Shorter seasonal snow cover poses a risk to solitary bee populations in a mountainous ecosystem. *Proceedings of the Royal Society B*. 292, (2025).

Bishop, G. A. *et al.* Critical habitat thresholds for effective pollinator conservation in agricultural landscapes. *Science* 389, 1314–1319 (2025).

Quinlan, G.M., Goslee S., 2025. The future of oilseeds: Climate change expected to negatively impact canola more than camelina. *Frontiers in Agronomy* 7:. https://doi.org/10.3389/fagro.2025.1498293

Quinlan, G.M., Hines, H.M., Grozinger, C.M., 2025. Leveraging transcriptional signatures of diverse stressors for bumble bee conservation. *Molecular Ecology* e 17626. https://doi.org/10.1111/mec.17626

Quinlan, G.M., Doser, J.W., Kammerer M., Grozinger, C. 2024. Estimating genus-specific effects of non-native honey bees and urbanization on wild bee communities in the Eastern United States. *Science of the Total Environment* 953:175783. https://doi.org/10.1016/j.scitotenv.2024.175783

Quinlan, G., Grozinger, C. 2024. Evaluating the role of social context and environmental factors in mediating overwintering physiology in honey bees (*Apis mellifera*). *Journal of Experimental Biology* 227 (8): jeb247314. https://doi.org/10.1242/jeb.247314

McMinn-Sauder, H., Colin, T., Gaines-Day, H. R., **Quinlan, G. M.**, Smart, A., Meikle, W. G., Johnson R.M., Sponsler, D. B. 2024. Next-generation colony weight monitoring: a review and prospectus. *Apidologie* 55 (1), 13.

Quinlan, G., Döke, M.A., Ortiz-Alvarado, Y, Rodriguez-Gomez N., Koru Y.B., Underwood R. 2023. Carbohydrate nutrition associated with health of overwintering honey bees. *Journal of Insect Science*. 23(6): 16; 1-8. https://doi.org/10.1093/jisesa/iead084

Feuerborn, C., **Quinlan, G.**, Shippee, R., Strausser, T.L., Terranova, T., Grozinger, C.M., Hines, H.M. 2023. Variance in heat tolerance in bumble bees correlates with species geographic range and is associated with several environmental and biological factors. *Ecology and Evolution* 13:e10730. https://doi.org/10.1002/ece3.10730

Quinlan, G.M., Miller, D., Grozinger, C.M., 2023. Spatial and temporal drivers of pollinator nutritional resources: Evidence from five decades of honey bee colony productivity data. *Environmental Research Letters*. 10.1088/1748-9326/acff0c

Quinlan, G.M., Feuerborn, C., Hines, H.M., Grozinger, C.M., 2023. Beat the heat: Thermal respites and access to food associated with increased bumble bee heat tolerance. *Journal of Experimental Biology* 226 (17). jeb.245924. https://doi.org/10.1242/jeb.245924

Quinlan, G., Grozinger, C. 2023. Honey bee nutritional ecology: From physiology to landscapes. In J. Harrison (Ed.), *Environmental Threats to Pollinator Health and Fitness*. Academic Press Inc., pp 289-345

Quinlan, G.M., Milbrath, M.O., Otto, C.R.V., Smart, A.H., Isaacs, R., 2023. Association of excessive precipitation and agricultural land use with honey bee colony performance. *Landscape Ecology*. 38 (6), 1555-1569. https://doi.org/10.1007/s10980-023-01638-6

Quinlan, G.M., Sponsler, D.B., Gaines-Day, H., McMinn-Sauder, H., Otto, C.R.V., Smart, A., Colin, T., Gratton, C., Isaacs, R., Johnson, R., Milbrath, M.O., Grozinger, C.M., 2022. Grassy–herbaceous land moderates regional climate effects on honey bee colonies in the Northcentral U.S.. *Environmental Research Letters*. 17(6), 064036. https://doi.org/10.1088/1748-9326/ac7063

Bloom, E.H., Graham, K.K., Haan, N., Heck, A., Gut, L., Landis, D.A., Milbrath, M.O., **Quinlan, G.M.,** Wilson, J., Zhang, Y., Szendrei, Z., Isaacs, R., 2021. Responding to the US national pollinator plan: a case study in Michigan. *Frontiers in Ecology and the Environment*. https://doi.org/10.1002/fee.2430

Quinlan, G., Milbrath, M., Otto, C., Smart, A., Iwanowicz, D., Cornman, R.S., Isaacs, R., 2021. Honey bee foraged pollen reveals temporal changes in pollen protein content and changes in forager choice for abundant versus high protein flowers. *Agriculture, Ecosystems & Environment* 322, 107645. https://doi.org/10.1016/j.agee.2021.107645

Quinlan, G.M., Milbrath, M.O., Otto, C.R.V., Isaacs, R., 2021. Farmland in U.S. Conservation Reserve Program has unique floral composition that promotes bee summer foraging. *Basic and Applied Ecology*. https://doi.org/10.1016/j.baae.2021.08.011

Quinlan, G.M., Milbrath, M.O., Otto, C.R.V., Isaacs, R., 2021. Honey bee (*Apis mellifera*) colonies benefit from grassland/ pasture while bumble bee (*Bombus impatiens*) colonies in the same landscapes benefit from non-corn/soybean cropland. *PLOS ONE* 16, e0257701. https://doi.org/10.1371/journal.pone.0257701

Quinlan, G.M., 2020. Influence of landscape composition, landscape diversity, and conservation management on bee health via a pollen nutrition mechanism (Ph.D.). Michigan State University, United States -- Michigan.

FELLOWSHIPS, AWARDS, and RECOGNITION

National Science Foundation-Postdoctoral Research Fellowship in Biol	$111,000	2021
Rhodes (Gene) Thompson Endowed Fellowship in Entomology	$1,500	2019
Hoopingarner Endowed Graduate Fellowship in Entomology	$2,500	2018
Future Academic Scholars in Teaching		2018
National Science Foundation-Graduate Research Fellowship Program	$138,000	2016
Park Scholarship, North Carolina State University	$110,000	2011

GRANT SUPPORT

Dorthy Levis Munroe Student Research Award	$829	2026
UNCG Undergraduate Research and Creativity Award	$5,000	2026
Entomology Society Program Enhancement Funds	$480	2021
Hutson Travel Grant	$500	2019
MSU Graduate School Travel Grant	$350	2019
Hutson Travel Grant	$700	2018
North Central Region Sustainable Agricultural Research and Education	$11,995	2018
Hoopingarner Endowed Graduate Fellowship in Entomology	$10,000	2018
Hutson Endowment Research Proposal	$2,500	2018
McPherson Graduate Student Travel Award	$226	2018
Hutson Travel Grant	$500	2017
Undergraduate Research Grant	$750	2014
Park Enrichment Grant	$500	2013
Park Enrichment Grant	$1,000	2012
Harkema Award	$1,000	2012

PENDING SUPPORT

Faculty Research Grant (NC WRRI Preproposal; $120,000)
Compensatory Restoration Impacts on Plant-Pollinator Ecological Recovery
Mountains to Sea Graduate Research Fellowship for M.F. Lohr (NC WRRI; $10,000)
Phytoremediation and Pollinator Safety of Wetland Forbs in NC's Piedmont Region
Internal Research Award Program (UNCG; $10,000)
Multi Taxa Assessment of Compensatory Wetland Mitigation at Stinking Quarters
Dean's Undergraduate Scholars - Spring/ Summer 2027 Support (UNCG; $3,750)
Biotechnology Event Sponsorships & Biotechnology Meeting Grants (NC Biotech; $2,000)
Southern Appalachian Hymenoptera Research Consortium (SAHRC)

Conservation Innovation Grant (USDA-NRCS; $500,000)
Wetland Habitat for Pollinator Conservation
New Innovator in Food & Agriculture Research Award (FFAR; $391,302)
Designing microclimate refugia for enhanced pollination services

TEACHING

Teaching Positions

Instructor of Record at UNC Greensboro, Greensboro, NC 2026
Evolution (BIO 330)
Instructor of Record at UNC Greensboro, Greensboro, NC 2026
Landscape Ecology (BIO 427/627)
Teaching Assistant at Michigan State University, East Lansing, MI 2020
Introduction to Sustainable Agriculture and Food Systems (CSS 124)
Supervisor: Julie Cotton
Statistical Consultant at Michigan State University, East Lansing, MI 2019
College of Ag. and Nat. Resources Statistical Consulting Center
Supervisors: Robert Tempelman and Sasha Kravchenko

Guest Lectures

Honey Bees and Humans (ENT 222) 2023
Statistical Techniques in Entomology (ENT 535) 2023
Data Nugget: *Flower plantings on farms for bees* 2022
Introduction to Beekeeping (ENT 497) 2022
Honey Bees and Humans (ENT 222) 2022
Honey Bees and Humans (ENT 222) 2021
Honey Bees and Humans (ENT 222) 2021
Precision Biodiversity Seminar (ENT 530) 2021
Introduction to Sustainable Agriculture and Food Systems (CSS 124) 2020
Honey Bee Veterinary Rotation 2019
Apiculture and Pollination (ENT 410) 2019
Insects, Globalization and Sustainability (ISB 201) 2018

Teaching Professional Development

National Science Foundation Short Course on Bayesian Modeling for Ecologists 2022
Certificate in College Teaching Institute 2019
Scientific Teaching (PLB802) 2017
An Intro to Evidence-Based STEM Undergraduate Teaching (MOOC; CIRTL Network) 2017

MENTORING

Graduate Mentees

Micah Lohr (MS) 2026
Dorthy Levis Munroe Student Research Award
Lily Hutchison (MS) 2026

Undergraduate Mentees

Ayanna Hill 2026

Hayden Jenicek 2026
Undergraduate Research and Creativity Award
Ziyang Ni 2023
Elise Wang 2023
Alyssa Curry 2021 -2022
Erickson Discovery Grant, Penn State Undergraduate Research Grant, and Dutch Gold Scholarship recipient
Alexandrea Peake– Currently earning a Ph.D. in Nat Sci at University of Michigan-Flint 2019
Megan Andrews– Currently earning a M.S. in entomology at Michigan State University 2019
Grace Haynes 2019
Abigail Seeger– Currently earning a M.S. in statistics at University of Michigan 2017 - 2019
Caitlyn Horsch– Currently earning a M.S. in plant and soil ecology at McGill University 2017
Lidia Komondy– Currently earning a Ph.D. in entomology at Cornell University 2016 - 2017

Mentoring & DEI Professional Development
Understanding Civil Rights for the Penn State College of Agricultural Sciences 2023
Stories and Statistics: Unpacking the Stories We Tell Ourselves 2022
Recognizing the Importance of Inclusion in the Workplace 2022
Strategies to Promote Gender Equity in Academia: Views from Health Sciences 2021
Becoming an Active Witness Who Hears, Sees, Feels, and Does 2020
Anti-racism in Conservation 2020
Understanding Civil Rights for the Penn State College of Agricultural Sciences 2020
Discovering and Developing your Mentorship Philosophy 2019
Biology on Tap: Lessons from Plants with Dr. Beronda Montgomery 2019
Diversity, Equity, and Inclusion in Teaching Workshop 2019
Michigan State University Diversity Training 2019
National Research Mentoring Network: Research Mentor Training 2018

PRESENTATIONS and PROFESSIONAL CONFERENCES
Invited Presentations
Grozinger, C.M., Hill, E., **Quinlan, G.**, West, C., Cadwalader, E. 2025. AAAS Charles Valentine Riley Memorial Lecture. Panelist. Washington, DC.
Quinlan, G., 2025. From macroscales to genes: Pollinator responses to global change. University of North Carolina Greensboro Biology Department Seminar. Greensboro, NC.
Quinlan, G.M. 2024. Honey bee colonies as a sentinel of landscape-level nectar resources (use of hive scales). University of Idaho Extension Pollinator Summit. Virtual & Moscow, ID.
Quinlan, G., 2024. Bringing Statistical Training to Life. North Carolina State University College of Agriculture and Life Sciences Seminar. Raleigh, NC.
Quinlan, G., 2024. From macroscales to genes: Pollinator responses to global change. University of South Florida Biology Department. St. Petersburg, FL.
Quinlan, G., 2024. Promoting honey bee and pollinator health in Washington through research and extension. Washington State University Entomology Department Seminar, Pullman, WA.
Quinlan, G., 2024. Long and short-term goals for the conservation of pollinators in South Dakota. South Dakota State University Department of Agronomy, Horticulture and Plant Science. Brookings, SD.

Quinlan, G.M., Grozinger C.M., 2024 What causes the production of winter bees?: Role of seasonal pollen. American Bee Research Conference. New Orleans, LA.

Quinlan, G., 2023. From macroscales to genes: Pollinator responses to global change. Iowa State University Department of Natural Resource Ecology and Management & Department of Plant Pathology, Entomology, and Microbiology Seminar. Ames, IA.

Quinlan, G.M., Miller, D, D.B., Sponsler, Otto, C.R.V., Smart, A., Gaines-Day, H., McMinn-Sauder, H., M. William, Colin, T., Gratton, C., Milbrath, M.O., Isaacs, R., Johnson, R., Grozinger, C.M., 2023. Assessing the relative importance of environmental stressors on pollinator nutritional resources. International Conference on Pollinator Biology, Heath and Policy. State College, PA.

Quinlan, G., 2023. From landscapes to genes: Honey bee nutrition across scales. New Mexico State University Biology Department Seminar. Las Cruces, NM.

Quinlan, G. 2022. Setting the stage: Landscape level drivers of regional floral availability. USDA/EPA Pollinator State of the Science Workshop. Virtual.

Quinlan, G.M., Miller, D, Grozinger, C.M., 2022. Honey production in America: Trends and drivers from five decades of data. North Carolina State Beekeepers' Association Spring State Beekeeper Conference. New Bern, NC.

Quinlan, G.M., Sponsler, D.B., Gaines-Day, H., McMinn-Sauder, H., Otto, C.R.V., Smart, A., Colin, T., Gratton, C., Isaacs, R., Johnson, R., Milbrath, M.O., Grozinger, C.M., 2022. Interpreting hive scale data to determine drivers of honey flows. North Carolina State Beekeepers' Association Spring State Beekeeper Conference. New Bern, NC.

Quinlan, G.M., Sponsler, D.B., Gaines-Day, H., McMinn-Sauder, H., Otto, C.R.V., Smart, A., Colin, T., Gratton, C., Isaacs, R., Johnson, R., Milbrath, M.O., Grozinger, C.M., 2021. Drivers of honey bee hive flows using automated hive scales. Center for Pollinator Research Symposium. State College, PA.

Quinlan, G.M., Sponsler, D.B., Gaines-Day, H., McMinn-Sauder, H., Otto, C.R.V., Smart, A., Colin, T., Gratton, C., Isaacs, R., Johnson, R., Milbrath, M.O., Grozinger, C.M., 2021. Drivers of honey bee hive flows using automated hive scales. Entomology Society of America Annual Meeting. Denver, CO.

Quinlan, G.M., Sponsler, D.B., Gaines-Day, H., McMinn-Sauder, H., Otto, C.R.V., Smart, A., Colin, T., Gratton, C., Isaacs, R., Johnson, R., Milbrath, M.O., Grozinger, C.M., 2021. Mapping honey flow rates and timing using automated hive scales from PA to ND. USDA-ARS Big Data in Agricultural and Pollinator Research Workshop. Virtual.

Quinlan, G.M., Sponsler, D.B., Darin J. McNeil, Gaines-Day, H., McMinn-Sauder, H., Otto, C.R.V., Smart, A., Colin, T., Gratton, C., Isaacs, R., Johnson, R., Milbrath, M.O., Grozinger, C.M., 2020. Mapping honey flow rates and timing using automated hive scales from PA to ND. American Honey Producers Association Conference. Virtual.

Quinlan, G., Milbrath, M., Otto, C., Smart, M., Iwanowicz, D., Cornman, S., Isaacs, R., 2018. How Michigan agricultural landscapes provide pollen and enhance honey bee colony Performance. Entomology Society of America International Meeting. Vancouver, BC.

Contributed Presentations

Quinlan, G.M., 2024. Beescape: Seeing the Landscape from a Bees Eye View. Project Director meeting of AFRI program A1541 Data Science for Food & Agriculture Systems. Manhattan, KS.

Quinlan, G.M., Msiller, D., Sponsler, D.B., Gaines-Day, H., McMinn-Sauder, H., Otto, C.R.V., Smart, A., Colin, T., Gratton, C., Isaacs, R., Johnson, R., Milbrath, M.O., Grozinger, C.M., 2022. Parsing the effects of anthropogenic stressors on pollinator nutritional resources through data integration. EurBee 9 Congress. Belgrade, Serbia.

Milbrath, M.O., Anderson, K., Evans, J., Graham, K., Kevill, J., Mott, B., **Quinlan, G.,** Schroeder, D., Isaacs, R., 2020. Factors for EFB Risk and Recovery. American Bee Research Conference, Schaumburg, IL.

Milbrath, M.O., Anderson, K., Evans, J., Graham, K., Kevill, J., Mott, B., **Quinlan, G.**, Schroeder, D., Isaacs, R.Honey bee health in blueberry pollination: European Foulbrood risks and recovery. 2019. Entomology Society of America, St. Louis, MO.

Quinlan, G., Isaacs, R., Milbrath, M., Otto, C., 2018. Understanding how landscape composition and complexity affect honey bee (*Apis mellifera*) growth and survival via a nutrition intake mechanism. North Central Branch Entomology Society of America. Madison, WI.

Poster Presentations

Jenicek, H.†, Lohr, M.†**, Quinlan, G.,** 2026. Bumblebee Population Changes Early Into Wetland Mitigation. UNCG Biology Celebration of Research. Greensboro, NC.

Lohr, M.†, Munzer, O., Zarecky, L., Petric, R., **Quinlan, G**., 2026 Impacts of Wetland Mitigation on Bee Community Composition. UNCG Biology Celebration of Research. Greensboro, NC.

Quinlan, G.M., Curry, A.B. †, Grozinger, C.M., 2021. Effects of brood and season on macronutrient foraging in honey bees (*Apis mellifera*). Cold Spring Harbor: Biology & Genomics of Social Insects. Virtual.

Curry, A.B.†, **Quinlan, G.M.,** Grozinger, C.M., 2021. Impact of brood quantity on protein and lipid foraging in honey bees. Penn State Undergraduate Research Exhibition. Virtual.

Milbrath, M.O., Anderson, K., Evans, J., Graham, K., Kevill, J., Mott, B., **Quinlan, G.**, Schroeder, D., Isaacs, R., 2019. Why are we seeing such high rates of European Foulbrood disease after blueberry pollination, and what can be done? Apimondia, Montreal, Quebec, Canada.

Quinlan, G., Milbrath, M., Isaacs, R., 2020. In-hive management for European Foulbrood. American Bee Research Conference. Schaumburg, IL.

Quinlan, G., Milbrath, M., Isaacs, R., 2019. In-hive management for European Foulbrood. Great Lakes EXPO. Grand Rapids, MI.

Quinlan, G., Otto, C., Milbrath, M., Isaacs, R., 2019. Use of Conservation Reserve Program land and other herbaceous land covers as bee forage. Fourth International Pollinator Conference. UC Davis, Davis, CA.

Seeger, A†, **Quinlan, G.**, Otto, C., Smart, M., Iwanowicz, D., Cornman, S., Isaacs, R., 2019. How similar are honey bee collected pollen communities as determined by molecular versus microscopic identification? 21st Annual University Undergraduate Research and Arts Forum. Michigan State University, East Lansing, MI.

Seeger, A†, **Quinlan, G.**, Milbrath, M., Isaacs, R., 2018. Does Conservation Reserve Program land support honey bee foraging through enhanced floral ability? 20th Annual University Undergraduate Research and Arts Forum. Michigan State University, East Lansing, MI.

Quinlan, G.*, Isaacs, R., Milbrath, M., Otto, C., 2017. Linking conservation reserve program land to honey bee (*Apis mellifera*) colony growth and survival. Entomology Society of America. Denver, CO.

Quinlan, G., Milbrath, M., Isaacs, R., Otto, C., 2016. Landscape effects on honeybee health. International Conference on Pollinator Biology, Health and Policy. State College, PA.

Gundersen, K., Gibbs, J., Kowitz, C., Odanaka, K., **Quinlan G**., R Isaacs., 2015. Foraging activity and pollination by managed colonies of *Bombus impatiens* (Hymenoptera: Apidae) in highbush blueberry (*Vaccinium corymbosum*). Entomology Society of America. Minneapolis, MN.

† Denotes mentored student * Denotes award winning presentation

PROFESSIONAL SERVICE

Peer Review Service

2026: 1 review - *Proceedings B*
2025: 1 review - *Proceedings B*
2024: 6 reviews - *Apidologie* (2), *Animal Behaviour*, *Proceedings B* (3)
2023: 10 reviews - *Animal Behaviour*, *Global Change Biology*, *Ecology & Evolution*, *PLoS ONE*, *Journal of Applied Ecology* (2), *Agriculture, Ecosystems & Environment* (3), *Journal of Experimental Biology*
2022: 5 reviews - *Applied Geography, Agriculture, Ecosystems & Environment, Apidologie*, *Integrative and Comparative Biology*, *iScience*
2021: 4 reviews - *Agriculture, Ecosystems & Environment, Apidologie, Journal of Economic Entomology, PeerJ*
2020: 3 reviews - *PLoS ONE* (2), *Basic and Applied Ecology*

Science Communication

2025: 1 hours total
- Susquehanna Beekeepers Association (20 attendees)

2024: 8 interviews
- *Nebraska Public Media* for *Harvest Public Media* Public Radio Interview
- *The Guardian* Interview
- *Technology Networks* Interview
- WESA 90.5 Pittsburgh's NPR News Station – Public Radio Interview
- National Science Foundation News Video
- Penn State News Interview
- Beekeeping Today Podcast Interview
- Two Bees in a Podcast Interview

2023: 2 hours total
- EPIQ Beekeeper Program – Guest Speaker (36 attendees)
- Two Bees in a Pod Podcast Interview

2022: 7 hours total
- PA State Beekeepers Association Annual Meeting and Conference (100 attendees)
- York County Beekeeper Club Meeting (30 attendees)
- PA Ag Progress Days: Impacts of Climate Change (40 attendees + virtual)
- PA Elementary School Teacher Curriculum Development Demo (2 teachers)

2021: 13 hours total
- Beekeepers of ABCI Mid-Winter Seminar (60 attendees)
- Growing Food for Fun and Profit: Beekeeping Demonstration (25 attendees)

- PA State Beekeepers Association Annual Meeting and Conference (100 attendees)

2020: 7 hours total
- Keynote Washtenaw Conservation District Annual Meeting (100 attendees)
- Marble Elementary STEM Night (250 attendees)
- Nebraska Beekeeper's Association 2nd Tuesday Webinar (30 attendees)
- Gerald E. Eddy Discovery Center Program on Bee Hotels
- Chelsea Garden Club Meeting

2019: 25 hours total
- Buzzfeed quiz, "What kind of bee are you?" (3.3k people visited)
- Donley Elementary Science Night (50 attendees)
- Girls Math and Science Day (40 attendees)
- Center of Michigan Beekeepers Meeting (40 attendees)
- Adopt a River Event (855 attendees)
- Wild Ones Red Cedar Chapter Meeting (30 attendees)
- High School FFA Class (2 lectures, 30 attendees)
- BeePalooza (400 attendees)
- Livonia Library Lecture Series (10 attendees)
- Pinecrest Elementary STEM Night (200 attendees)
- Whitehills Elementary STEM Night (250 attendees)

2018: 21 hours total
- Blog posts for greatlakesgreatbees.com April 15: Honey Bees Swarming in Mid Spring,
- Blog posts for greatlakesgreatbees.com April 30: Spotted knapweed: balancing ecological conservation with economic investment
- Michigan State University Bug House (770 attendees)
- Ann Arbor Garden Club talk (50 attendees)
- Fairview Elementary Science Night (50 attendees)
- BeePalooza (400 attendees)
- Donley Elementary Science Night (50 attendees)
- Whitehills Elementary Science Night (50 attendees)
- Glencairn Elementary Science Night (50 attendees)

2017: 8 hours total
- USDA-FSA Webinar. Farm landscapes, CRP, and honey bee health in the Great Lakes region. **Quinlan G.**, Milbrath M., Isaacs R., USDA-FSA, Washington, DC. https://vimeo.com/226208958
- Donley Elementary Science Nights (200 attendees)
- Whitehills Elementary Science Nights (200 attendees)
- Glencairn Elementary Science Nights (200 attendees)
- DeGraaf Nature Center Earth Day talk (15 attendees)

2016: 15 hours total
- Beepalooza (150 attendees)
- Master Gardeners' Meeting (50 attendees)
- ICP Pollination Forum (75 attendees)
- Elementary Science Night (200 attendees)
- Autumn Fest (400 attendees)

Other Service

North Carolina Beekeeping Association Master Beekeeper Oral Exam Committee 2026
Entomology Society Annual Meeting Section Symposium Organizer 2021
Tradeoffs of Adapting to a Changing World: From Physiological to Behavioral Transformations
Park Scholarships Regional Selection Committee 2020, 2021, 2024
Graduate Women in Science Undergraduate Mentorship Committee 2016 – 2020
MSU Graduate Undergraduate Entomological Student Society President 2018 - 2019
MSU Undergraduate Research and Arts Forum, Graduate Poster Evaluator 2018
MSU Undergraduate Research and Arts Forum, Graduate Poster Evaluator 2019
MSU Grad Undergrad Entomological Student Society Awards Committee Chair 2017 - 2018

AFFILIATIONS

Entomology Society of America 2017 - Pres.
Eastern Branch Entomology Society of America 2021 - 2024
American Association for the Advancement of Science 2017 - 2021
North Central Branch Entomology Society of America 2017 - 2020
Michigan State University Graduate-Undergraduate Student Society 2016 - 2020
Michigan State University Graduate Women in Science 2016 - 2020

RESEARCH POSITIONS

Field Research Assistant — Michigan State University – East Lansing, MI 2015 - 2016
Project Integrated Crop Pollination: Agroecosystem schemes for wild pollinator conservation and crop productivity
Supervisor: Rufus Isaacs

Lab Research Assistant—North Carolina State University– Raleigh, NC 2014 - 2015
Pathogen prevalence among native bees in urban environments.
Supervisor: David Tarpy and Margarita López-Uribe

Independent Study —Lancaster University—Lancaster, UK 2014
Effects of tropical forest fires on dung beetle (Coleoptera: Scarabaeoidea) communities in the ground and understory
Supervisor: Jos Barlow

Field Research Assistant —Endangered Species Branch Fort Bragg and NCSU 2013
Endangered butterfly ecological restoration research
Supervisor: Nick Haddad

Research Assistant/ Docent—NC Museum of Natural Sciences—Raleigh, NC 2012 - 2013
Processes determining the abundance of terrestrial wildlife communities across large scales;
Kays, R. *Candid Creatures: How Camera Traps Reveal the Mysteries of Nature*. Johns Hopkins University Press, Baltimore, USA. 280 pp.
Docent for citizen science projects and Curiosity Classroom
Supervisor: Roland Kays