

Margaret (Maggie) Rose Douglas
Department of Environmental Studies & Environmental Science
Dickinson College
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EDUCATION

- Aug. 2016 Ph.D. Entomology/International Agriculture & Development
Pennsylvania State University, University Park, PA
Dissertation: Ecological trade-offs associated with insecticide use, from Pennsylvania to Bangladesh.
- Aug. 2012 M.S. Entomology
Pennsylvania State University, University Park, PA
Thesis: The influence of farming practices on slugs and their predators in reduced-tillage field crops in Pennsylvania.
- May 2004 B.A. Biology (minor Philosophy)
Oberlin College, Oberlin, OH

PROFESSIONAL EXPERIENCE

- 2018-
present Assistant Professor of Environmental Science, Department of Environmental Studies & Environmental Science, Dickinson College, Carlisle, PA
- 2016-2017 Postdoctoral Scholar, Center for Pollinator Research, Pennsylvania State University, University Park, PA
- 2012-2016 Graduate Research Assistant (Ph.D.), Department of Entomology, Pennsylvania State University, University Park, PA
- 2014-2015 U.S. Borlaug Fellow (Ph.D.), AVRDC – The World Vegetable Center, Shanhua, Taiwan and Bangladesh Agricultural Research Institute, Gazipur, Bangladesh
(Nov-Apr)
- 2010-2012 Graduate Research Assistant (M.S.), Sustainable Dairy Cropping Systems Project, Pennsylvania State University, University Park, PA
- 2007-2009 Research Technician, Department of Biology, Georgetown University, Washington, DC
- 2006-2007 After-school Teacher/Classroom Assistant, EL Haynes Public Charter School, Washington, DC
- Summer/Fall 2006 Research Assistant, Department of Entomology, University of Maryland, College Park, MD
- 2004-2005 Intern, then Executive Assistant, Center for Food Safety, Washington, DC

EXTERNAL GRANTS (PI OR CO-PI)

2018-2020	\$969,153	USDA Agriculture and Food Research Initiative C. Grozinger, D. Miller, H. Patch, E. Lonsdorf, and <u>M. Douglas</u> . “Context is key: Tools for adapting beekeeping practices to diverse landscapes.”
2018-2020	\$1,220,977	Foundation for Food & Agriculture Research C. Grozinger, D. Cariveau, <u>M. Douglas</u> , E. Lonsdorf, M. Lopez-Uribe, E. Nino, H. Patch, K. Ward, and N. Williams. “Location, location, location: Developing tools for selection and management of landscapes to promote healthy bee populations.”
2017-2019	~\$130,000	NSF National Socio-Environmental Synthesis Center <u>M. Douglas</u> , E. Lonsdorf, W. Thogmartin, D. Sponsler, and C. Grozinger. “Putting pesticides on the map to guide conservation of pollinators and their ecosystem services”
2017	\$9,777	North American Pollinator Protection Campaign T. Jones, E. Lonsdorf, <u>M. Douglas</u> , C. Grozinger, H. Patch, and D. Sponsler. “Location, location, location: developing tools for selection and management of landscapes to promote healthy bee populations”
2014-2015	\$17,336	USAID, U.S. Borlaug Fellowship in Global Food Security <u>M. Douglas</u> , S. Ramasamy, and J. Tooker. “Reversing the pesticide treadmill: Safe and effective management of key insect pests of lablab bean (<i>Lablab purpureus</i>) in Bangladesh using biopesticides and natural enemies.”
2014	\$15,000	Pennsylvania State University Sustainability Institute, Reinvention Fund K. Ayers, M. Dempsey, J. Diehl, <u>M. Douglas</u> , H. Easterling, E. Engle, T. Freehauf, G. Morrison, D. Mortensen, and S. Salesky. “People, plants, and pollinators: Enhancing the innovative living laboratory at the CfS Community Garden.”
2012	\$19,935	Pennsylvania Department of Agriculture J. Tooker and <u>M. Douglas</u> . “Investigating the consequences of neonicotinoid seed treatments for slugs, their predators, and integrated pest management in no-till cropping systems.”
2012	\$14,494	USDA, Northeast SARE Graduate Student Grant <u>M. Douglas</u> and J. Tooker. “Striving for sustainable pest management in no-till, field-crop systems: Understanding the role of insecticidal seed treatments.”
2010	\$400	Sigma Xi Grant in Aid <u>M. Douglas</u> . “Testing the Enemy Release Hypothesis with native and invasive slugs.”

INTERNAL GRANTS - DICKINSON COLLEGE (PI OR CO-PI, * = UNDERGRADUATE STUDENT)

Summer 2021	\$11,073	Student-Faculty Research Grant <u>M. Douglas</u> and N. Truong.* “Cover crops in a changing climate: Can mixtures reduce water stress?”
Spring 2021	\$785	Dana Research Assistantship <u>M. Douglas</u> . “Influence of the American toad on the insect community at Dickinson College Farm.”
Summer 2019	\$10,686	Student-Faculty Research Grant S. Boback and <u>M. Douglas</u> . “Impact of American toads on crops and dietary preferences of American toads.”
Spring 2019	\$656	Center for Sustainability Education, Student Research Assistantship <u>M. Douglas</u> and S. Soba.* “Code for communication: Visualizing trends in insecticide use and bee toxicity.”
2018	\$900	Center for Sustainability Education, Sustainability Education Fund Grant. K. Strock, <u>M. Douglas</u> , and M. Arashiro. “Developing pedagogy for ENST 162: Integrative Environmental Science, a new introductory, gateway course for environmental science and studies majors.”

EXTERNAL GRANTS (CONTRIBUTOR)

2013	\$60,000	USDA, Northeastern IPM Center J. Tooker. “Overcoming slugs in no-till crop fields with cover crops and arthropod predators.”
2013	\$159,632	US EPA, Regional IPM Grant J. Tooker. “Developing an IPM program against slug populations in Mid-Atlantic no-till grain fields.”

PEER-REVIEWED PUBLICATIONS

- Kammerer, M., S. Goslee, M. Douglas, J. Tooker, and C. Grozinger. 2021. Wild bees as winners and losers: relative impacts of landscape composition, quality, and climate. *Global Change Biology* 27(6): 1250-1265. <https://doi.org/10.1111/gcb.15485>
- McNeil, D., E. McCormick, A. Heimann, M. Kammerer, M. Douglas, S. Goslee, C. Grozinger, and H. Hines. 2020. Bumble bees in landscapes with abundant floral resources have lower pathogen loads. *Scientific Reports* 10: 22306. <https://doi.org/10.1038/s41598-020-78119-2>
- Hitaj, C., D. Smith, A. Code, S. Wechsler, P. Esker, M. Douglas. 2020. Sowing uncertainty: What we do and don't know about the planting of pesticide-treated seed. *BioScience* 70(5): 390-403.
- Douglas, M., D. Sponsler, E. Lonsdorf, and C. Grozinger. 2020. County-level analysis reveals a rapidly shifting landscape of insecticide hazard to honey bees (*Apis mellifera*) on US farmland. *Scientific Reports* 10: 797. <https://doi.org/10.1038/s41598-019-57225-w>

- Busch, A., M. Douglas, G. Malcolm, H. Karsten, and J. Tooker. 2020. A high-diversity/IPM cropping system fosters beneficial arthropod populations, limits invertebrate pests, and produces competitive maize yields. *Agriculture, Ecosystems & Environment* 292: 106812.
- Sponsler, D., C. Grozinger, C. Hitaj, M. Rundlof, C. Botias, A. Code, E. Lonsdorf, A. Melathopoulos, D. Smith, S. Suryanarayanan, W. Thogmartin, N. Williams, M. Zhang, and M. Douglas. 2019. Pesticides and pollinators: a socioecological synthesis. *Science of the Total Environment* <https://doi.org/10.1016/j.scitotenv.2019.01.016>
- Douglas, M., J. Chang, K. Begum, S. Subramanian, J. Tooker, S. N. Alam, and S. Ramasamy. 2018. Biopesticides and DNA barcoding as tools to improve insect pest management in lablab bean (*Lablab purpureus*) in Bangladesh. *Journal of Asia-Pacific Entomology* 21(4): 1326-1336.
- Tooker, J., M. Douglas, and C. Krupke. 2017. Neonicotinoid seed treatments: limitations and compatibility with Integrated Pest Management. *Agricultural & Environmental Letters* 2: 170026.
- Douglas, M. and J. Tooker. 2016. Meta-analysis reveals that neonicotinoid seed treatments and pyrethroids have similar negative effects on abundance of arthropod natural enemies. *PeerJ* 4:e2776; DOI 10.7717/peerj.2776
- Douglas, M. and J. Tooker. 2015. Large-scale deployment of seed treatments has driven rapid increase in use of neonicotinoid insecticides and preemptive pest management in U.S. field crops. *Environmental Science & Technology* 49(8): 5088-5097.
- Douglas, M., J. Rohr, and J. Tooker. 2015. Neonicotinoid insecticide travels through a soil food chain, disrupting biological control of non-target pests and decreasing soya bean yield. *Journal of Applied Ecology* 52(1): 250-260. [**Editor's Choice/Cover**]
- Schipanski, M., S. Bailey, M. Barbercheck, M. Douglas, D. Finney, K. Haider, J. Kaye, A. Kemanian, D. Mortensen, M. Ryan, J. Tooker, and C. White. 2014. A conceptual framework for evaluating multifunctionality of cover crops in agroecosystems. *Agricultural Systems* 125: 12-22.
- Wimp, G., S. Murphy, D. Lewis, M. Douglas, R. Ambikapathi, L. Van Tull, C. Gratton, and R. Denno. 2013. Predator hunting mode influences patterns of prey use from grazing and detrital food webs. *Oecologia* 171(2): 505-515.
- Douglas, M. and J. Tooker. 2012. Slug (Mollusca: Agriolimacidae, Arionidae) ecology and management in no-till field crops, with an emphasis on the mid-Atlantic region. *Journal of Integrated Pest Management* 3(1): C1-C9.
- Bentley, T., M. Douglas, I. Grettenberger, E. Lastro, C. Sidhu, and J. Smith. 2012. Student Debate: Global climate change will have substantial long-term negative effects on arthropod diversity: Pro Position. *American Entomologist* 58(2): 99 - 100.
- Allainguillaume, J., et al. 2011. Permanent genetic resources added to Molecular Ecology resources database 1 August 2010 – September 2010. *Molecular Ecology Resources* 11: 219-222. [Bulk publication including details on the development of microsatellite primers for two planthopper species, contributed by Sheridan, C., M. Douglas, L. Power, G. Wimp, and M. Hamilton.]

PUBLICATIONS *IN PREP* (* = UNDERGRADUATE STUDENT)

Douglas, M., S. Soba*, P. Baisley*, M. Kammerer, E. Lonsdorf, and C. Grozinger. Putting pesticides on the map for pollinator research and conservation. (for *Scientific Data*)

RESEARCH-RELATED WEBSITES

Beescape (released March 2019): <https://beescape.org>

Beescape provides a tool for beekeepers, gardeners, growers and land managers to assess the quality of their landscapes for supporting managed honey bees and wild bees. It is a partnership of the Center for Pollinator Research at Penn State University, Dickinson College, Purdue University, University of Illinois, Urbana-Champaign, University of Minnesota, and University of California, Davis.

NON-PEER-REVIEWED PUBLICATIONS

Douglas, M. 2011. Organic no-till gains momentum in Pennsylvania. Penn State Sustainable Ag News. September 1, 2011. Available at: <http://extension.psu.edu/susag/news/2011/Sept-2011/4-org-no-till>

Douglas, M. and J. Tooker. 2010. Slugs as pests of field crops. Entomological Notes - Penn State Cooperative Extension. Available at: <http://ento.psu.edu/extension/factsheets/pdf/slugs.pdf>

INVITED PRESENTATIONS

Douglas, M. 2021. Life as an entomologist in the liberal arts. Presented at the Eastern Branch Meeting of the Entomological Society of America as part of the symposium: Exploring the Diversity of Entomologists' Careers. March 2021, Online.

Douglas, M. 2020. Putting pesticides on the map for pollinator conservation. Presented at the North American Congress for Conservation Biology as part of the symposium: Insect Declines: Case Studies, Probable Causes, and Solutions. July 2020, Online.

Douglas, M. 2019. Untangling patterns of pesticide use in U.S. agriculture and their effects on beneficial insects. Seminar for the Department of Entomology, University of Maryland, November 2019, College Park, MD.

Douglas, M. 2019. County-level analysis reveals a rapidly shifting landscape of bee toxic load on U.S. farmland. Presented at the annual meeting of the Entomological Society of Pennsylvania, October 2019, Carlisle, PA.

Douglas, M. 2019. Potency paradox: Patterns and drivers of insecticide use in U.S. agriculture. Presented at the International Conference on Pollinator Biology, Health, and Policy, July 2019, Davis, CA.

Douglas, M. 2018. Potency paradox: Changing patterns of insecticide use in U.S. corn production. Presented at the joint meeting of the Entomological Society of America and Entomological Society of Canada, November 2018, Vancouver, BC, Canada.

Douglas, M. 2017. Untangling the effects of changing patterns of insecticide use on beneficial insects. Seminar for the Department of Entomology, Purdue University, March 2017, West Lafayette, IN.

Douglas, M. & J. Tooker. 2016. Neonicotinoid seed treatments and natural enemies in perspective: Insights from a meta-analysis. Presented at the International Congress of Entomology as part of the symposium: Population Consequences of Pest Management Tactics on Non-target Species. September 2016, Orlando, FL.

- Douglas, M. & J. Tooker. 2016. Unexpected consequences of neonicotinoid seed treatments reveal opportunities for IPM. Presented at the International Conference on Pollinator Biology, Health & Policy as part of the symposium: Integrated Pest and Pollinator Management. July 2016, University Park, PA.
- Douglas, M. 2016. Toxic slugs and other adventures in applied ecology. Seminar for the Department of Biology, Muhlenberg College. March 2016, Allentown, PA.
- Douglas, M. 2016. Applying ecological principles to improve slug management in diverse cropping systems. Seminar for the Department of Crop & Soil Science, Oregon State University, February 2016, Corvallis, OR.
- Douglas, M. and J. Tooker. 2015. A slug in the system: Unintended effects of neonicotinoid seed treatments in no-till corn and soybeans. Presented at the Entomological Society of America Annual Meeting as part of the symposium: Applying a systems approach – emergent outcomes of multidimensional interactions in agroecosystems. November 2015, Minneapolis, MN.
- Douglas, M. and J. Tooker. 2015. Neonicotinoid seed treatments in American agriculture. Congressional briefing hosted by Congressmen Conyers and Blumenauer. July 2015, Washington, DC.
- Douglas, M. and S. Ramasamy. 2015. Challenges and opportunities for improving pest management of lablab bean in Bangladesh. Presented at the World Vegetable Center (AVRDC). April 2015, Shanhua, Taiwan.
- Douglas, M. and J. Tooker. 2013. Trophic transfer of insecticidal seed treatments: A threat to slug predators? Presented at the 4th International Symposium on Biological Control of Arthropods. March 2013, Pucón, Chile.
- Douglas, M. and J. Tooker. 2012. Prey-mediated effects on predators of seed-applied insecticides in no-till agroecosystems. Presented at the Entomological Society of America Annual Meeting as part of the symposium: Ecological considerations of the rising use of systemic insecticides. November 2012, Knoxville, TN.
- Douglas, M. and J. Tooker. 2012. Insights into the ecology and management of slugs in Pennsylvania no-till crop fields. Presented at the Annual Meeting of the American Malacological Society, as part of the symposium: Status, impacts, and management of invasive slugs and snails in North America. June 2012, Cherry Hill, NJ.
- Karsten, H., M. Douglas, and V. Ischler. 2012. Dairy cropping systems research: Diverse strategies for sustainability. Seminar for the Department of Crop & Soil Sciences, Pennsylvania State University. April 2012, University Park, PA.
- Douglas, M. and J. Tooker. 2012. Bottom-up and top-down influences on slugs in no-till field crops. Presented at the Annual Meeting of the Eastern Branch of the Entomological Society of America. March 2012, Hartford, CT.
- Douglas, M. and J. Tooker. 2011. Insights into slug ecology from Pennsylvania. Presented to the Northeastern IPM Center's High Residue Cropping Systems IPM Working Group. August 2011, Newark, DE.

CONTRIBUTED PRESENTATIONS (* = UNDERGRADUATE STUDENT, ** = GRADUATE STUDENT)

- Kuppek, V.,* DuBoyce, M.*, Marich, A.*, Boback, S., and M. Douglas. 2021. Influence of the American toad (*Anaxyrus americanus*) on the insect community at Dickinson College Farm. Presented at the Lehigh Valley Ecology and Evolution Symposium. April 2021, Online.

- Kammerer, M.,** E. Lonsdorf, M. Douglas, J. Tooker, and C. Grozinger. 2019. Landscape resources and risks mediate wild bee richness and abundance. Presented at the Annual Meeting of the North American Regional Association of the International Association of Landscape Ecology. April 2019, Fort Collins, CO.
- Shakya, K.,* W. Thogmartin, E. Lonsdorf, and M. Douglas. 2018. Threats to monarch migration: A look into changes in herbicide use and land cover. Presented at the Annual Meeting of the Entomological Society of Pennsylvania. November 2018, Millersville, PA. **[First Place, Undergraduate Presentation Competition]**
- Douglas, M., T. Jones, H. Patch, E. Lonsdorf, A. Davis, D. Hellerstein, and C. Grozinger. 2017. Putting pesticides on the map for pollinator conservation. Presented at the Center for Pollinator Research Symposium. May 2017, University Park, PA.
- Douglas, M. and J. Tooker. 2013. Are neonicotinoid seed treatments friendly to natural enemies? A meta-analysis. Presented at the Entomological Society of America Annual Meeting. November 2013, Austin, TX.
- Douglas, M. and J. Tooker. 2011. Toxic slugs? Neonicotinoid seed treatments in tri-trophic perspective. Presented at the Entomological Society of America Annual Meeting. November 2011, Reno, NV.
- Douglas M. and G. Wimp. 2009. Refugia and spiders on a Virginia vegetable farm: If you build it, will they come? Presented at the Georgetown University Work in Progress Symposium. February 2009, Washington, D.C.

CONTRIBUTED POSTERS (* = UNDERGRADUATE STUDENT, ** = GRADUATE STUDENT)

- Baisley, P.* and M. Douglas. 2021. Earthworm cover crop habitat preference. Presented at the Eastern Branch Meeting of the Entomological Society of America. March 2021, Online.
- Soba, S.* and M. Douglas. 2018. Code for communication: Visualizing trends in insecticide use and bee toxicity. Presented at the Annual Meeting of the Entomological Society of Pennsylvania. November 2018, Millersville, PA. **[First Place, Undergraduate Poster Competition]**
- Jones, T.,** M. Douglas, E. Lonsdorf, D. Miller, M. Frazier, H. Patch, and C. Grozinger. Landscapes for honey bees: Identifying landscape features that promote honey bee health through a citizen science partnership. Presented at the Entomological Society of America Annual Meeting, November 2017, Denver, CO.
- Douglas, M. and J. Tooker. 2014. Are neonicotinoid seed treatments friendly to natural enemies? A meta-analysis. Presented at the Triad Symposium for Sustainable Agriculture, Pennsylvania State University. March 2014, University Park, PA.
- Baluch, K.*, P. Patterson, A. Mayer, M. Alp, H. Burley, J. Tooker, and M. Douglas. 2014. Feed intake and performance of pastured laying hens. Presented at the Poultry Science Association Annual Meeting. July 2014, Corpus Christi, Texas.
- Speicher, K.*, I. Grettenberger, M. Douglas, A. Aschwanden, and J. Tooker. 2014. Ant diversity, abundance, and predation in the NESARE Rock Springs Research Site. Presented at the Penn State Undergraduate Research Expo. Pennsylvania State University, University Park, PA.
- Douglas, M. and J. Tooker. 2013. Toxic slugs update: Exploring trophic transfer of insecticidal seed treatments in the field. Presented at the Triad Symposium for Sustainable Agriculture. Pennsylvania State University, March 2013, University Park, PA.

- Douglas, M. and J. Tooker. 2012. Trophic transfer of insecticidal seed treatments poses a risk to slug natural enemies. Presented at the Gamma Sigma Delta Research Expo, Pennsylvania State University. March 2012, University Park, PA.
- Douglas, M. and J. Tooker. 2011. Slugs and bugs in the Sustainable Dairy Cropping Systems Project. Presented at the Triad Symposium for Sustainable Agriculture, Pennsylvania State University. February 2011, University Park, PA.
- Douglas, M. and G. Wimp. 2009. Spiders in crop and refuge habitats on a Virginia vegetable farm. Presented at the Ecological Society of America Meeting. August 2010, Pittsburgh, PA.

EDUCATIONAL/OUTREACH PRESENTATIONS (* = PRESENTERS CONTRIBUTED EQUALLY)

- Douglas, M. 2021. The cicadas are coming! Get to know Brood X. Webinar for Dickinson College Alumni. Online. May 2021.
- Douglas, M. 2019. Adventures in sustainability-related careers, growing food, and car-free living. ‘Soup & Bread’ event, organized by students at the Dickinson College Treehouse (Center for Sustainable Living). Carlisle, PA. October 2019.
- Douglas, M. 2019. What does it mean for food to be sustainable? Dickinson College ‘Sustain-IT’ event on sustainable food. Carlisle, PA. February 2019.
- Douglas, M. 2018. GE crops and pesticide use: What is the relationship? Dickinson College ‘Rush Hour’ seminar series. Carlisle, PA. October 2018.
- Douglas, M. 2018. Clues to bee health from reading the landscape and beekeeper data. York County Beekeepers Association. York, PA. August 2018.
- Douglas, M. 2018. An introduction to insect identification. Dickinson College Farm. Boiling Springs, PA, July 2018.
- Douglas, M. 2018. Putting pesticides on the map for honey bee health. Lancaster County Beekeepers Society. Lancaster, PA. May 2018.
- *Beatty, T., Douglas, M., and Hughes, D. 2017. A panel discussion on science and community. Hosted by Penn State Science Policy Society and the Union of Concerned Scientists. State College, PA, September 2017.
- Douglas, M. 2017. Neonicotinoid seed treatments and natural enemies in ecological perspective. Presentation for the National Pesticide Forum, University of Minnesota, Minneapolis, MN, April 2017.
- Douglas, M. Research Update: Pollinators and Pesticides. Pennsylvania Farm Bureau, Camp Hill, PA. March 2017.
- Douglas, M. and P. Moore. Neonics & Bees: The State of the Science. Central Counties Beekeepers’ Association. Huntington, PA. June 2016.
- *Douglas, M. and J. Tooker. Neonicotinoids: Fact & Fiction. Pennsylvania Association for Sustainable Agriculture Annual Conference, University Park, PA. February 2016.
- Douglas, M. Gardening for pollinators. Penn State Community Garden, University Park, PA. September 2015.
- *Douglas, M. and J. Lilley. Introduction to organic pest management. Penn State Community Garden, University Park, PA. May 2014.
- *Mortensen, D., M. Douglas, J. Hinds, M. Kammerer, and J. Tooker. Habitat is home: Creating spaces for pollinators, predators, & parasitoids. Pennsylvania Association for Sustainable Agriculture Annual Conference, University Park, PA. February 2014.

- Hooks, C. R. R., M. Douglas, J. Tooker, J. Whalen, and B. Cissel. Slimy thugs research update. Maryland Agricultural Pesticide Conference. Frederick, MD. February 2013.
- Tooker, J. and M. Douglas. Slugs and their predators in no-till cropping systems. Pennsylvania No-till Alliance: Maintaining Soil Health Field Day, Loganton, PA. October 2012.
- *Douglas, M. and J. Tooker. Slugs and bugs in the Sustainable Dairy Cropping Systems Project. USDA-Northeast SARE Coordinating Committee visit, Russell E. Larson Agricultural Research Farm, July 2012.
- Douglas, M. Understanding slug-predator interactions in Pennsylvania crop fields. Penn State Agronomic Weed and Entomology Field Day, Russell E. Larson Agricultural Research Farm, July 2012.
- *Barbercheck, M., M. Douglas, A. Rivers, and J. Tooker. The power of predators. Strategies for Soil Health & Nutrient Conservation Research Tour, Russell E. Larson Agricultural Research Farm, June 2012.
- Douglas, M. Understanding slugs and their natural enemies. Ag Progress Days, Russell E. Larson Agricultural Research Farm, August 2011.
- *Douglas, M. and J. Tooker. Using crop diversity to conserve beneficial insects and manage pests. Sustainable Dairy Cropping Systems Field Day, Russell E. Larson Agricultural Research Farm, June 2011.

TEACHING EXPERIENCE

Assistant Professor, Dickinson College (2018 – Present)

Instructor of record

- Spring 2018-2021 ENST 162: Integrative Environmental Science
 Fall 2018-2020 ENST 345: Agroecology
 Fall 2020 FYS 100: How much is enough? Experiments in living with less

Guest lectures

- Fall 2018-2019 “Introduction to agroecology as a science” (with lab)
 (FDST 201: Introduction to Food Studies)

Mentorship of undergraduate researchers

- Spring 2021 Valerie Kuppek ('21, Biology)
 Summer 2020 Zoe Muller ('22, Environmental Science & Biology)
 Spring 2020 Paige Baisley ('20, Environmental Science)
 Fall 2019 Abby Marich ('20, Environmental Studies, w/ Scott Boback)
 Maddie DuBoyce ('20, Environmental Science)
 Summer 2019 Paige Baisley ('20, Environmental Science)
 Abby Marich ('20, Environmental Studies, w/ Scott Boback)
 Spring 2019 Sara Soba ('21, Environmental Science)
 Summer 2018 Sara Soba ('21, Environmental Science)
 Karan Shakya ('20, Environmental Studies)

Graduate Teaching Assistant, Pennsylvania State University (2010 – 2016)

Teaching Assistant

- Spring 2014 AGECO 201: Introductory Agroecology
- Spring 2011, 2013 ENT 313: Introduction to Entomology
- Spring 2013 ENT 314: Management of Insect Pests of Ornamentals
- Spring 2011 ENT 316: Field Crops Entomology

Guest lectures

- 2017 “Neonicotinoid seed treatments: Trends & controversies”
(PLANT 461: Emerging Issues in Plant Science)
- 2016 “Sustainability of Genetically Engineered Crops”
(AGECO 134: Sustainable Agriculture Science & Policy)
- 2016 “Biological Control” (ENT 457: Principles of IPM)
- 2015 “Insect sampling methods” (HORT 445: Plant Ecology)

Case studies

- 2014 “Energy flow in corn agroecosystems”
(AGECO 201: Introduction to Agroecology)
- 2012 “Food security of indigenous people in Costa Rica”
(INTAG 100: Introduction to International Agriculture)

Mentorship of undergraduate researchers

- Spring 2017 Sara McTish (‘17, Agricultural Sciences)
- 2013/2014 Katie Speicher (‘14, Environmental Resource Management, w/ Ian Grettenberger)
Katie Baluch (Poultry Science, ‘14, w/ Paul Patterson)
- 2012/2013 Sherry Zhao (‘13, Biology, w/ John Tooker)

PEDAGOGICAL TRAINING

- Summer 2020 Camp Operation Online Learning (6 weeks)
Online Learning Toolkit
- Summer 2019 Faculty study group, “Ethics across the curriculum”
Dickinson College
- Fall 2016 Essentials of Online Teaching (5 weeks)
Penn State, World Campus (online)
- Fall 2011 Course in College Teaching (8 weeks)
Penn State, Schreyer Institute for Teaching Excellence

PROFESSIONAL SERVICE (DICKINSON COLLEGE)

- 2018-Present Member, Campus Pollinator Committee (associated with Bee City USA)
- 2020-Present Member, Research & Development Committee
- 2020-2021 Search Committee Member, Assistant Professor of Environmental Health
- 2020 Revolutionary Challenge Teams: Data Science Initiative + FARM Lab
- 2019-2020 Search Committee Member, Assistant Professor of Environmental Science

Spring 2019 Participant, 10-year external review for ALLARM
Participant, 10-year external review for the Center for Sustainability Education
Participant, 10-year external review for the Dickinson College Farm
Fall 2018 Search Committee Member, Vegetable Farm Manager, Dickinson College Farm

PROFESSIONAL SERVICE (OTHER)

2019 Co-organized session entitled, “Causes and consequences of pesticide use: from use patterns to pollination services” (International Conference on Pollinator Biology, Health, and Policy, July 17-20, Davis, CA)
2019 Presented at a career day for graduate students in entomology and related sciences (Pennsylvania State University, April 26, University Park, PA)
2014-Present Journal reviewer: *Science of the Total Environment, Ecological Applications, Trends in Plant Science, Journal of Applied Ecology (x2), Environmental Entomology (x2), Global Ecology & Biogeography, Journal of Agricultural & Food Chemistry, Journal of Chemical Ecology, PLoS One, Pest Management Science, Crop Protection (x2), Dendrobiology, Environmental Toxicology & Chemistry*
2015-2016 Instruction Committee, Penn. State University, Dept. of Entomology
2013-2014 Outreach Coordinator, Penn. State University, Entomology Grad Students Assoc.
2012-2014 Outreach Committee, Penn. State University, Dept. of Entomology
2011-2012 Outreach Committee, Northeast Sustainable Dairy Cropping Systems Project
2011-2012 Libraries Committee, Penn. State University Graduate Student Association

PROFESSIONAL MEMBERSHIPS

2021-Present Sustainable Agriculture Education Association
2012-Present International Organization for Biological Control
2010-Present Pennsylvania Association for Sustainable Agriculture
2010-Present Entomological Society of America
2009-Present Ecological Society of America

AWARDS & HONORS

2015 Ralph O. Mumma Award for Outstanding Achievement
Department of Entomology, Pennsylvania State University
2013 Evans Family Award for Graduate Student Extension Achievement
College of Agricultural Sciences, Pennsylvania State University
2012 USDA/AFRI Student Travel Grant
2012 Legends of Entomology Award for M.S. Student Achievement
Plant-Insect Ecosystems Section, Entomological Society of America
2012 Outstanding M.S. Student in Biological Control
Nearctic Section, International Organization for Biological Control

- 2012 Asa Fitch Memorial Award for an Outstanding M.S. Student
Eastern Branch, Entomological Society of America
- 2012 Michael E. Duke Memorial Award
Department of Entomology, Pennsylvania State University
- 2012 Third place, Student competition for best poster
Pennsylvania State University, Gamma Sigma Delta Research Expo, Environment & Natural Resources Division
- 2011 First place, Student competition for best oral presentation
Entomology Society of American Annual Meeting – Plant-Insect Ecosystems section 2
- 2003 NSF Research Experiences for Undergraduates participant
- 2000- John Frederick Oberlin Scholarship
2004

INTENSIVE RESEARCH TRAINING

- 2018 Summer Institute on Cyberinfrastructure for Socio-Environmental Synthesis, National Socio-Environmental Synthesis Center, Annapolis, MD, 1 wk.
- 2014 The HYM Course (parasitoid identification), Eagle Hill Institute, Steuben, ME. August, 1 wk.
- 2010 Multivariate Data Analysis/PC-ORD, Pennsylvania State University, University Park, PA. October, 1 wk.

MEDIA COVERAGE OF RESEARCH ACTIVITY (* = FEATURES UNDERGRADUATE STUDENT)

- LaJeunesse, S. “Climate change reduces abundance, diversity of wild bees, study finds.” (13 Jan 2021) [PA Environment Digest Blog](#)
- “Dickinson College professor publishes study on pesticide-coated seeds.” (16 Mar 2020) [Dickinson News](#)
- McCall, R. “Insecticides have become more toxic to bees over the last 20 years.” (22 Jan 2020) [Newsweek](#) (online)
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