

Scott H. McArt

Department of Entomology
Cornell University
4132 Comstock Hall
Ithaca, NY 14853
shm33@cornell.edu

Phone: 607-255-1377 (lab)
blogs.cornell.edu/mcartlab/
pollinator.cals.cornell.edu/
blogs.cornell.edu/ccecf/
twitter.com/McArtLab/

EDUCATION

Postdoctoral, Entomology, 2014	UMass-Amherst
PhD, Entomology, 2012	Cornell University
MS, Biological Sciences, 2006	University of Alaska-Anchorage
BA, Environmental and Evolutionary Biology, 2001	Dartmouth College

PROFESSIONAL EXPERIENCE

2017-present	Assistant Professor (60% research, 40% extension), Department of Entomology, Cornell University
2017-present	Director, Cornell Chemical Ecology Core Facility
2017-present	Assistant Curator, Cornell University Insect Collection
2014-2017	Research Scientist, Department of Entomology, Cornell University
2012-2014	Postdoctoral Fellow, Department of Biology, University of Massachusetts, Amherst
2010-2011	Teaching Assistant, Department of Entomology, Cornell University
2009-2010	Research Assistant, Department of Entomology, Cornell University
2007-2009	Teaching Assistant, Department of Entomology, Cornell University
2006-2007	Teaching Assistant, Undergraduate Biology Program, Cornell University
2005-2006	Consultant, 3PP Natural Resource Consulting, Palmer, Alaska
2004-2005	Teaching Assistant, Department of Biology, University of Alaska, Anchorage
2003-2004	Adjunct Instructor, Department of Biology, University of Alaska, Anchorage
2001-2003	Technician, Department of Biology, University of Alaska, Anchorage

AREAS OF EXPERTISE

Pollinator health, ecotoxicology, disease ecology, community ecology, chemical ecology

AWARDS & FELLOWSHIPS

Cornell CALS Outstanding Accomplishments in Extension/Outreach (Pollinator Health Team), 2017
Atkinson Center for a Sustainable Future Faculty Fellow, 2016-2021
USDA NIFA Postdoctoral Fellowship, 2012-2014
Palmer Fellowship, Cornell Entomology, 2012
Wearers of the Green, Dartmouth College Hall of Fame, 2003

GRANT SUPPORT (\$9.9m total secured, \$3.9m to McArt program)

Pending Grants and Contracts

Rivera (PI), Cox & McArt (Co-PIs)	\$90,000
USDA NIFA Federal Capacity Funds	
“Understanding persistence of systemic and translaminar insecticides for refined implementation in New York apple”	
McArt (PI)	\$90,000
USDA NIFA Federal Capacity Funds	
“Assessing whether varroa-mediated virus spillover is a threat to native crop pollinators”	

Active Grants and Contracts

McArt (PI) , Adler, Ellner, Irwin, McFrederick, Napp & Myers (Co-PIs) USDA NIFA 2021-67015-35235, 06/01/21-05/31/26 Ecology and Evolution of Infectious Disease (EEID) Program <i>"It's about time: Multi-host parasite spillover in temporally dynamic communities"</i>	\$2,500,000
Jander (PI) & McArt (Co-PI) USDA NIFA REEU, 04/01/22-03/31/25 <i>"Undergraduate Research: Innovative Agricultural Technologies"</i>	\$747,485
McArt (PI) , Cox (Co-PI) USDA NIFA Federal Capacity Funds, 10/01/20-09/30/23 <i>"Identifying deterrent natural products that reduce pesticide exposure to bees"</i>	\$90,000
McArt (PI) & Mullen (Co-PI) NYS Pollinator Protection Plan, Cornell Appropriation, 08/01/21-07/31/22 NYS Environmental Protection Fund <i>"Assessing the importance of pesticides, pathogens, and beekeeper management practices to improve the health of wild and managed pollinators in New York"</i>	\$300,000
McArt (PI) NYS Dept. of Agriculture & Markets, 08/01/21-07/31/22 <i>"Assessing the importance of invasive plant species for honey bee health"</i>	\$150,000
McArt (PI) , Danforth (Co-PI) USDA NIFA Federal Capacity Funds, 10/01/19-09/30/22 <i>"Fungicides and pollinator health: Quantifying risk from microbial disruption"</i>	\$115,000
Petersen (PI), McArt (Co-PI) Cornell Institute for Digital Agriculture (CIDA), 09/01/19-08/31/22 <i>"Improving strawberry yield through native and robotic pollinators"</i>	\$225,000
McArt (PI) , Danforth, McFrederick & Baert (co-PIs) USDA NIFA 2018-08603, 04/01/19-03/31/22 <i>"Fungicides and pollinator health: Quantifying mechanisms of stress to inform real-world solutions"</i>	\$499,000
<u>Previous Grants and Contracts</u>	
McArt (PI) , Adler, Ellner, Irwin, McFrederick & Myers (Co-PIs) NIH R01 GM122062, 10/01/16-07/31/21	\$1,928,135
Jander (PI), McArt (Co-PI) USDA NIFA REEU 2017-06416, 02/05/18-02/04/21	\$272,719
McArt (PI) Cypress Creek Renewables, Inc., 08/01/18-07/31/21	\$99,998
Thonney (PI), Lehmann & McArt (co-PIs) Atkinson Center Academic Venture Fund, 07/01/19-06/30/21	\$124,236
McArt (PI) USDA NIFA Multi-State Federal Capacity Funds, 10/01/16-09/30/20	\$125,000
McArt (PI) New York Farm Viability Institute Specialty Crop Block, 10/01/17-09/30/19	\$99,635
McArt (PI) USDA NIFA Federal Capacity Funds, 10/01/16-09/30/19	\$90,000
Nault (PI), McArt (Co-PI) USDA NIFA Multi-State Federal Capacity Funds, 10/01/15-09/30/18	\$90,000
McArt (PI) NYS Dept. of Agriculture & Markets, 08/01/16-07/31/21	\$750,000
McArt (PI) , Mullen (Co-PI) NYS Pollinator Protection Plan, Cornell Appropriation, 08/01/16-07/31/21	\$1,500,000
McArt (PI)	\$119,999

New York Farm Viability Institute, 04/01/15-03/31/17	
Mullen (PI), McArt (Co-PI)	\$28,910
Northern New York Agriculture Development Program, 01/15/16-12/31/16	
McArt (PI)	\$10,000
North American Pollinator Protection Campaign, 04/01/15-03/31/16	
McArt (PI)	\$129,955
USDA NIFA Postdoctoral Fellowship, 09/01/12-08/31/14	

PEER-REVIEWED PUBLICATIONS (35 total, h-index:19, i-10 index:27, 1,463 citations as of 04/19/22)

In review

- Urban-Mead, K. R., P. Muñiz, M. Van Dyke, A. D. Young, S. H. McArt and B. N. Danforth. Early spring orchard pollinators spill over from resource-rich adjacent forest patches. *Submitted to Journal of Applied Ecology*.
- Urban-Mead, K. R., E. Walter, S. H. McArt and B. N. Danforth. Nearly half of spring-flying male *Andrena* bees consume pollen, but less than female conspecifics. *In revision at Apidologie*.

Published

2022

- Graham, K. K., M. O. Milbrath, Y. Zhang, N. Baert, S. H. McArt and R. Isaacs. Pesticide risk to managed bees during blueberry pollination is primarily driven by off-farm exposures. *In press at Scientific Reports*.
- Ng, W. H., S. H. McArt, C. R. Myers and S. P. Ellner. 2022. Pathogen transport amplifies or dilutes disease transmission depending on the host dose-response relationship. *Ecology Letters* 25:453-465. <https://doi.org/10.1111/ele.13932>

2021

- Graham, K. K., M. O. Milbrath, Y. Zhang, A. Soehnen, N. Baert, S. H. McArt and R. Isaacs. 2021. Identities, concentrations, and sources of pesticide exposure in pollen collected by managed bees during crop pollination. *Scientific Reports* 11:16857. <https://doi.org/10.1038/s41598-021-96249-z>
- Davis, A. E., K. R. Deutsch, M. J. Mata Loya, A. T. Gonzales, P. A. Muñiz, W. H. Ng and S. H. McArt. 2021. *Eristalis* flower flies can be mechanical vectors of the common trypanosome bee parasite, *Crithidia bombi*. *Scientific Reports* 11:15852. <https://doi.org/10.1038/s41598-021-95323-w>
- Newhouse, A. E., A. E. Allwine, A. D. Oakes, S. H. McArt and W. A. Powell. 2021. Bumble bee (*Bombus impatiens*) survival, pollen usage, and reproduction are not affected by oxalate oxidase at realistic concentrations in American chestnut (*Castanea dentata*) pollen. *Transgenic Research* 30:751-764. <https://doi.org/10.1007/s11248-021-00263-w>
- Chen, J., J. Webb, K. Shariati, S. Guo, J. K. Montclare, S. H. McArt and M. Ma. 2021. Pollen-inspired enzymatic microparticles to reduce organophosphate toxicity in managed pollinators. *Nature Food* 2:339-347. <https://doi.org/10.1038/s43016-021-00282-0>
- Figuroa, L. L., S. M. Compton, H. Grab and S. H. McArt. 2021. Functional traits linked to pathogen prevalence in wild bee communities. *Scientific Reports* 11:7529. <https://doi.org/10.1038/s41598-021-87103-3>
- Urban-Mead, K. R., P. A. Muñiz, J. Gillung, A. Espinoza, R. Fordyce, M. Van Dyke, S. H. McArt and B. N. Danforth. 2021. Bees in the trees: Diverse spring fauna in temperate forest edge canopies. *Forest Ecology & Management* 482:118903. <https://doi.org/10.1016/j.foreco.2020.118903>
- Adler, L. S., R.E. Irwin, S. H. McArt and R. L. Vannette. 2021. Floral traits affecting the transmission of beneficial and pathogenic pollinator-associated microbes. *Current Opinion in Insect Science* 44:1-7. <https://doi.org/10.1016/j.cois.2020.08.006>

Figueroa, L. L., C. Grincavitch and S. H. McArt. 2021. *Crithidia bombi* can infect two solitary bee species while host survivorship depends on diet. *Parasitology* 148:435-442. <https://doi.org/10.1017/S0031182020002218>

2020

Pinilla-Gallego, M. S., E. E. Williams, A. E. Davis, J. L. Fitzgerald, S. H. McArt and R. E. Irwin. 2020. Within-colony transmission of microsporidian and trypanosomatid parasites in honey bee and bumble bee colonies. *Environmental Entomology* 49:1393-1401. <https://doi.org/10.1093/ee/nvaa112>

Graystock, P., W. H. Ng, K. Parks, A. D. Tripodi, P. A. Muñiz, A. A. Fersch, C. R. Myers, Q. S. McFrederick and S. H. McArt. 2020. Dominant bee species and floral abundance drive parasite temporal dynamics in plant-pollinator communities. *Nature Ecology & Evolution* 4:1358-1367. <https://doi.org/10.1038/s41559-020-1247-x>
*Nature News & Views commentary: <https://www.nature.com/articles/s41559-020-1200-z>

Urbanowicz, C. M., P. A. Muñiz and S. H. McArt. 2020. Honey bees and wild pollinators differ in their preference for and use of introduced floral resources. *Ecology & Evolution* 10:6741-6751. <https://doi.org/10.1002/ece3.6417>

Figueroa, L. L., H. Grab, W. H. Ng, C. R. Myers, P. Graystock, Q. S. McFrederick and S. H. McArt. 2020. Landscape simplification shapes pathogen prevalence in plant-pollinator networks. *Ecology Letters* 23:1212-1222. <https://doi.org/10.1111/ele.13521>
*Figueroa awarded 2020 *Ecology Letters* Early Career Researcher award for this paper: [https://onlinelibrary.wiley.com/page/journal/homepage/14610248/ecologylettersaward?="](https://onlinelibrary.wiley.com/page/journal/homepage/14610248/ecologylettersaward?=)

Brochu, K. K., M. T. van Dyke, N. J. Milano, J. D. Petersen, S. H. McArt, B. A. Nault, A. Kessler and B. N. Danforth. 2020. Pollen defenses negatively impact foraging and fitness in a generalist bee (*Bombus impatiens*: Apidae). *Scientific Reports* 10:3112. <https://doi.org/10.1038/s41598-020-58274-2>

2019

Iverson, A. L., C. Hale, L. Richardson, O. Miller and S. H. McArt. 2019. Synergistic effects of three sterol biosynthesis inhibiting fungicides on the toxicity of a pyrethroid and neonicotinoid insecticide to bumble bees. *Apidologie* 50:733-744. <https://doi.org/10.1007/s13592-019-00681-0>

Milano, N. J., A. L. Iverson, B. A. Nault and S. H. McArt. 2019. Comparative survival and fitness of bumble bee colonies in natural, suburban, and agricultural landscapes. *Agriculture Ecosystems & Environment* 284:106594. <https://doi.org/10.1016/j.agee.2019.106594>

Urbanowicz, C. M., N. Baert, S. E. Blucher, M. Ramos, K. Böröczky and S. H. McArt. 2019. Low maize pollen collection and low pesticide risk to honey bees in heterogeneous agricultural landscapes. *Apidologie* 50:379-390. <https://doi.org/10.1007/s13592-019-00655-2>

Figueroa, L. L., M. Blinder, C. Grincavitch, A. Jelinek, E. Mann, L. Merva, L. Metz, A. Zhao, R. E. Irwin, S. H. McArt and L. S. Adler. 2019. Bee pathogen transmission dynamics: Deposition, persistence and acquisition on flowers. *Proceedings of the Royal Society of London B* 286: 20190603. <https://doi.org/10.1098/rspb.2019.0603>

Truitt, L. L., S. H. McArt, A. H. Vaughn and S. P. Ellner. 2019. Trait-based modeling of multi-host pathogen transmission: Plant-pollinator networks. *The American Naturalist* 193:149-167. <https://doi.org/10.1086/702959>

2018

Adler, L. S., K. Michaud, S. P. Ellner, S. H. McArt, P. C. Stevenson and R. E. Irwin. 2018. Disease where you dine: Plant species and floral trait variation in pathogen transmission to bumble bees. *Ecology* 99:2535-2545. <https://doi.org/10.1002/ecy.2503>

Tumminello, G., T. A. Volk, S. H. McArt and M. K. Fierke. 2018. Maximizing pollinator diversity in willow biomass plantings: A comparison among willow sex and pedigrees. *Biomass & Bioenergy* 117:124-130. <https://doi.org/10.1016/j.biombioe.2018.07.013>

2017

McArt, S. H., C. M. Urbanowicz, S. McCoshum, R. E. Irwin and L. S. Adler. 2017. Landscape predictors of pathogen prevalence and range contractions in United States bumblebees. *Proceedings of the Royal Society of London B* 284:20172181. <https://doi.org/10.1098/rspb.2017.2181>

McArt, S. H., A. A. Fersch, N. Milano, L. L. Truitt, and K. Böröczky. 2017. High pesticide risk to honey bees despite low focal crop pollen collection during pollination of a mass blooming crop. *Scientific Reports* 7:46554. <https://doi.org/10.1038/srep46554>

2016

McArt, S. H., T. Miles, C. Rodriguez-Saona, A. Schilder, L. S. Adler, and M. Grieshop. 2016. Floral scent mimicry and vector-pathogen associations in a pseudoflower-inducing plant pathogen system. *PLoS One* 11:e0165761. <https://doi.org/10.1371/journal.pone.0165761>

2014

Parachnowitsch, A. L., S. C. Cook-Patton and S. H. McArt. 2014. Neighbours matter: Natural selection on plant size depends on the identity and diversity of the surrounding community. *Evolutionary Ecology* 28:1139-1153. <https://doi.org/10.1007/s10682-014-9727-6>

Kaplan, I., S. H. McArt, and J. S. Thaler. 2014. Plant defenses and predation-risk differentially shape patterns of consumption, growth, and digestive efficiency in a guild of leaf-chewing insects. *PLoS One* 9:e93714. <https://doi.org/10.1371/journal.pone.0093714>

McArt, S. H., H. Koch, R. E. Irwin, and L. S. Adler. 2014. Arranging the bouquet of disease: Floral traits and the transmission of plant and animal pathogens. *Ecology Letters* 17:624-636. <https://doi.org/10.1111/ele.12257>

2013

McArt, S. H. and J. S. Thaler. 2013. Plant genotypic diversity reduces the rate of consumer resource utilization. *Proceedings of the Royal Society of London B* 280:20130639. <https://doi.org/10.1098/rspb.2013.0639>

McArt, S. H., R. Halitschke, J-P. Salminen, and J. S. Thaler. 2013. Leaf herbivory increases plant fitness via induced resistance to seed predators. *Ecology* 94:966-975. <http://www.jstor.org/stable/23436308>

2012

Thaler, J. S., S. H. McArt, and I. Kaplan. 2012. Compensatory mechanisms for ameliorating the fundamental trade-off between predator avoidance and foraging. *Proceedings of the National Academy of Sciences* 109:12075-12080. <https://doi.org/10.1073/pnas.1208070109>

McArt, S. H., S. C. Cook-Patton, and J. S. Thaler. 2012. Relationships between arthropod richness, evenness, and diversity are altered by complementarity among plant genotypes. *Oecologia* 168:1013-1021. <https://doi.org/10.1007/s00442-011-2150-6>

2011 and earlier

Cook-Patton, S. C.*, S. H. McArt*, A. L. Parachnowitsch, J. S. Thaler, and A. A. Agrawal. 2011. A direct comparison of the consequences of plant genotypic and species diversity on arthropod communities and ecosystem function. *Ecology* 92:915-923. *Authors contributed equally. <https://www.jstor.org/stable/41151215>

McArt, S. H., D. E. Spalinger, W. B. Collins, E. R. Schoen, T. Stevenson, and M. Bucho. 2009. Summer dietary nitrogen availability as a potential bottom-up constraint on moose (*Alces alces*) in South-central Alaska. *Ecology* 90:1400-1411. <https://doi.org/10.1890/08-1435.1>

Capps, K. A., C. B. Turner, M. T. Booth, D. L. Lombardozzi, S. H. McArt, D. Chai, and N. G. Hairston, Jr. 2009. Behavioral responses of the endemic shrimp *Halocardina rubra* (Malacostraca: Atyidae) to an introduced fish, *Gambusia affinis* (Actinopterygii: Poeciliidae) and implications for the trophic structure of Hawaiian Anchialine ponds. *Pacific Science* 63:27-37. [https://doi.org/10.2984/1534-6188\(2009\)63\[27:BROTES\]2.0.CO;2](https://doi.org/10.2984/1534-6188(2009)63[27:BROTES]2.0.CO;2)

McArt, S. H., D. E. Spalinger, J. M. Kennish, and W. B. Collins. 2006. A modified method for determining tannin-protein precipitation capacity using accelerated solvent extraction (ASE) and

microplate gel filtration. *Journal of Chemical Ecology* 32:1367-1377.
<https://doi.org/10.1007/s10886-006-9089-9>

BOOK CHAPTERS

McArt, S. H. 2021. Parasite transmission between hives and spillover to non-*Apis* pollinators. Pages 219-228 in "*Honey Bee Medicine for the Veterinary Practitioner*", Eds. T. R. Kane and C. M. Faux, Wiley Blackwell Press. <https://doi.org/10.1002/9781119583417.ch18>

NON-REFEREED PUBLICATIONS

2022

McArt, S. H. 2022. Notes from the lab: The latest bee science distilled. Summary of Ropars et al. 2022 [*Oikos*]: "Seasonal dynamics of competition between honey bees and wild bees in a protected Mediterranean scrubland." *American Bee Journal* 162(3):325-327.
https://blogs.cornell.edu/mcartlab/files/2022/02/03-McArt-article_March2022.pdf

McArt, S. H. 2022. Notes from the lab: The latest bee science distilled. Summary of Dogantzis et al. 2021 [*Science Advances*]: "Thrice out of Asia and the adaptive radiation of the western honey bee." *American Bee Journal* 162(2):217-219. https://blogs.cornell.edu/mcartlab/files/2022/02/02-McArt-article_February2022.pdf

McArt, S. H. 2022. Notes from the lab: The latest bee science distilled. Summary of Pecenka et al. 2021 [*PNAS*]: "IPM reduces insecticide applications by 95% while maintaining or enhancing crop yields through wild pollinator conservation." *American Bee Journal* 162(1):65-69.
https://blogs.cornell.edu/mcartlab/files/2021/12/01-McArt-article_January2022.pdf

2021

McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Page et al. 2021 [*American Journal of Botany*]: "A meta-analysis of single visit pollination effectiveness comparing honeybees and other floral visitors." *American Bee Journal* 161(12):1317-1319.
https://blogs.cornell.edu/mcartlab/files/2021/12/12-McArt-article_December2021.pdf

McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Burnham et al. 2021 [*J. Applied Ecol.*]: "Flowers as dirty doorknobs: Deformed wing virus transmitted between *Apis mellifera* and *Bombus impatiens* through shared flowers." *American Bee Journal* 161(11):1225-1227. https://blogs.cornell.edu/mcartlab/files/2021/11/11-McArt-article_November2021.pdf

McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Smith et al. 2021 [*PNAS*]: "Imperfect comb construction reveals the architectural abilities of honeybees." *American Bee Journal* 161(10):1111-1113. https://blogs.cornell.edu/mcartlab/files/2021/10/10-McArt-article_October2021.pdf

McArt, S. H. 2021. Reprint of Notes from the lab: The latest bee science distilled. Summary of Gao et al. 2021 [*PLoS Pathogens*]: "*Tropilaelaps mercedesae* parasitism changes behavior and gene expression in honey bee workers." *Northern Bee Books* <https://www.northernbeebooks.co.uk/>

McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Gao et al. 2021 [*PLoS Pathogens*]: "*Tropilaelaps mercedesae* parasitism changes behavior and gene expression in honey bee workers." *American Bee Journal* 161(9):981-984.
https://blogs.cornell.edu/mcartlab/files/2021/09/09-McArt-article_September2021.pdf

McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Krishnan et al. 2021 [*PLoS One*]: "Evaluating toxicity of Varroa mite (*Varroa destructor*)-active dsRNA to monarch butterfly (*Danaus plexippus*) larvae." *American Bee Journal* 161(8):907-909.
https://blogs.cornell.edu/mcartlab/files/2021/08/08-McArt-article_August2021.pdf

McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Chen et al. 2021 [*Nature Food*]: "Pollen-inspired enzymatic microparticles to reduce organophosphate toxicity in managed pollinators." *American Bee Journal* 161(7):785-788.
https://blogs.cornell.edu/mcartlab/files/2021/06/07-McArt-article_July2021.pdf

- McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Harwood et al. 2021 [*Journal of Experimental Biology*]: “Social immunity in honey bees: Royal jelly as a vehicle in transferring bacterial pathogen fragments between nestmates.” *American Bee Journal* 161(6):659-660. https://blogs.cornell.edu/mcartlab/files/2021/05/06-McArt-article_June2021.pdf
- McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Traynor et al. 2021 [*Environmental Pollution*]: “Pesticides in Honey Bee Colonies: establishing a baseline for real world exposure over seven years in the USA.” *American Bee Journal* 161(5):501-503. https://blogs.cornell.edu/mcartlab/files/2021/05/05-McArt-article_May2021.pdf
- McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Carpenter & Harpur 2021 [*Apidologie*]: “Genetic past, present, and future of the honey bee (*Apis mellifera*) in the United States of America.” *American Bee Journal* 161(4):417-420. https://blogs.cornell.edu/mcartlab/files/2021/03/04-McArt-article_April2021.pdf
- McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Haas & Nauen 2021 [*Environment International* 147:106372]: “Pesticide risk assessment at the molecular level using honey bee cytochrome P450 enzymes: A complementary approach.” *American Bee Journal* 161(3):315-317. https://blogs.cornell.edu/mcartlab/files/2021/03/03-McArt-article_March2021.pdf
- McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Annoscia et al. 2020 [*Nature Communications* 11:5887]: “Neonicotinoid Clothianidin reduces honey bee immune response and contributes to *Varroa* mite proliferation.” *American Bee Journal* 161(2):211-213. https://blogs.cornell.edu/mcartlab/files/2021/02/02-McArt-article_February2021.pdf
- McArt, S. H. 2021. Notes from the lab: The latest bee science distilled. Summary of Bulson et al. 2020 [*Journal of Applied Ecology* 00:1-10]: “Long-term effects of antibiotic treatments on honeybee colony fitness: A modelling approach.” *American Bee Journal* 161(1):85-87. https://blogs.cornell.edu/mcartlab/files/2021/01/01-McArt-article_January2021.pdf

2020

- McArt, S. H. 2020. Notes from the lab: The latest bee science distilled. Summary of Vernier et al. 2020 [*Science Advances* 6:eabd3431]: “The gut microbiome defines social group membership in honey bee colonies.” *American Bee Journal* 160(12):1359-1361. https://blogs.cornell.edu/mcartlab/files/2020/11/12-McArt-article_December2020.pdf
- McArt, S. H. 2020. Notes from the lab: The latest bee science distilled. Summary of Lark et al. 2020 [*Nature Communications* 11:4295]: “Cropland expansion in the United States produces marginal yields at high costs to wildlife.” *American Bee Journal* 160(11):1237-1239. https://blogs.cornell.edu/mcartlab/files/2020/10/11-McArt-article_November2020.pdf
- McArt, S. H. 2020. Notes from the lab: The latest bee science distilled. Summary of Reilly et al. 2020 [*Proceedings of the Royal Society of London B* 287:20200922]: “Crop production in the USA is frequently limited by a lack of pollinators.” *American Bee Journal* 160(10):1135-1137. https://blogs.cornell.edu/mcartlab/files/2020/09/10-McArt-article_October2020.pdf
- McArt, S. H. 2020. Notes from the lab: The latest bee science distilled. Summary of Grout et al. 2020: “Neonicotinoid insecticides in New York: Economic benefits and risk to pollinators.” *American Bee Journal* 160(9):1019-1022. https://blogs.cornell.edu/mcartlab/files/2020/09/09-McArt-article_September2020.pdf
- McArt, S. H. 2020. Notes from the lab: The latest bee science distilled. Summary of Ricigliano et al. 2020 [*Apidologie*]: “Nutritional and prebiotic efficacy of the microalga *Arthrospira platensis* (spirulina) in honey bees.” *American Bee Journal* 160(8):891-893. https://blogs.cornell.edu/mcartlab/files/2020/08/08-McArt-article_August2020.pdf
- McArt, S. H. 2020. Notes from the lab: The latest bee science distilled. Summary of Heller et al. 2020 [*Environmental Pollution* 114589]: “Pollinator exposure to systemic insecticides and fungicides applied in the previous fall and pre-bloom period in apple orchards.” *American Bee Journal* 160(7):787-789. https://blogs.cornell.edu/mcartlab/files/2020/06/07-McArt-article_July2020.pdf

- Grout, T. A., P. A. Koenig, J. K. Kapuvári and S. H. McArt. 2020. Neonicotinoid insecticides in New York: Economic benefits and risk to pollinators. 432 pp.
<https://pollinator.cals.cornell.edu/pollinator-research-cornell/neonicotinoid-report/>
- McArt, S. H. 2020. Notes from the lab: The latest bee science distilled. Summary of Jack et al. 2020 [*Journal of Economic Entomology* 113:582-588]: "Evaluating the efficacy of oxalic acid vaporization and brood interruption in controlling the honey bee pest *Varroa destructor* (Acari: Varroidae)." *American Bee Journal* 160(6):691-693.
https://blogs.cornell.edu/mcartlab/files/2020/06/06-McArt-article_June2020.pdf
- Deutsch, K. R. and S. H. McArt. 2020. Notes from the lab: The latest bee science distilled. Summary of Leonard et al. 2020 [*Science* 367:573-576]: "Engineered symbionts activate honey bee immunity and limit pathogens." *American Bee Journal* 160(4):421-423.
https://blogs.cornell.edu/mcartlab/files/2020/03/04-McArt-article_April2020.pdf
- McArt, S. H. 2020. Notes from the lab: The latest bee science distilled. Summary of Main et al. 2019 [*Agriculture, Ecosystems and Environment* 287:106693]: "Reduced species richness of native bees in field margins associated with neonicotinoid concentrations in non-target soils." *American Bee Journal* 160(3):301-303. https://blogs.cornell.edu/mcartlab/files/2020/03/03-McArt-article_March2020.pdf
- McArt, S. H. 2020. Notes from the lab: The latest bee science distilled. Summary of Dolezal et al. 2019 [*Proceedings of the National Academy of Sciences of the United States*]: "Native habitat mitigates feast-famine conditions faced by honey bees in an agricultural landscape." *American Bee Journal* 160(2):199-201. https://blogs.cornell.edu/mcartlab/files/2020/02/02-McArt-article_February2020.pdf
- McArt, S. H. 2020. Notes from the lab: The latest bee science distilled. Summary of Daisley et al. 2019 [*ISME Journal*]: "Novel probiotic approach to counter *Paenibacillus larvae* infection in honey bees." *American Bee Journal* 160(1):71-73.
https://blogs.cornell.edu/mcartlab/files/2019/12/01-McArt-article_January2020.pdf
- 2019**
- McArt, S. H. 2019. Reprint of Notes from the lab: The latest bee science distilled. Summary of Traniello et al. 2019 [*Proceedings of the Royal Society of London B* 286:20190901]: "Valence of social information is encoded in different subpopulations of mushroom body Kenyon cells in the honeybee brain." *An Beachaire: The Irish Beekeeper* 74(12):731-734.
<https://irishbeekeeping.ie/an-beachaire-the-fibka-beekeeping-journal/>
- McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of DeGrandi-Hoffman et al. 2019 [*Journal of Economic Entomology* 113:213]: "The economics of honey bee (Hymenoptera: Apidae) management and overwintering strategies for colonies used to pollinate almonds." *American Bee Journal* 159(12):1325-1327.
https://blogs.cornell.edu/mcartlab/files/2019/11/12-McArt-article_December2019.pdf
- McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of Traniello et al. 2019 [*Proceedings of the Royal Society of London B* 286:20190901]: "Valence of social information is encoded in different subpopulations of mushroom body Kenyon cells in the honeybee brain." *American Bee Journal* 159(11):1241-1242.
https://blogs.cornell.edu/mcartlab/files/2019/10/11-McArt-article_November2019.pdf
- McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of Bartlett et al. 2019 [*Journal of Applied Ecology* 00:1-11]: "Industrial bees: The impact of apicultural intensification on local disease prevalence." *American Bee Journal* 159(10):1115-1117.
https://blogs.cornell.edu/mcartlab/files/2019/10/10-McArt-article_October2019.pdf
- McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of Alger et al. 2019 [*PLoS One* 14:e0217822]: "RNA virus spillover from managed honeybees (*Apis mellifera*) to wild bumblebees (*Bombus spp.*)." *American Bee Journal* 159(9):1009-1011.
https://blogs.cornell.edu/mcartlab/files/2019/08/09-McArt-article_September2019.pdf
- McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of Jactel et al. 2019 [*Environment International* 129:423-429]: "Alternatives to neonicotinoids." *American Bee Journal*

159(8):883-884. https://blogs.cornell.edu/mcartlab/files/2019/07/08-McArt-article_August2019.pdf

McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of Sponsler et al. 2019 [*Science of the Total Environment* 662:1012-1027]: "Pesticides and pollinators: A socioecological synthesis." *American Bee Journal* 159(7):791-793. https://blogs.cornell.edu/mcartlab/files/2019/06/07-McArt-article_July2019.pdf

Bruckner, S., N. Steinhauer, S. D. Aurell, D. M. Caron, J. D. Ellis, A. M. Fauvel, K. Kulhanek, S. H. McArt, E. K. Mullen, J. Rangel, R. Sagili, J. Tsuruda, J. T. Wilkes, M. E. Wilson, D. Wyns, K. Rennich, D. vanEngelsdorp and G. R. Williams. 2019. 2018-2019 Honey Bee Colony Losses in the United States: Preliminary Results. <https://beeinformed.org/results/2018-2019/>

McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of Powney et al. 2019 [*Nature Communications* 10:1038]: "Widespread losses of pollinating insects in Britain." *American Bee Journal* 159(6):683-685. https://blogs.cornell.edu/mcartlab/files/2019/05/06-McArt-article_June2019.pdf

McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of Wade et al. 2019 [*Insects* 10:20]: "Combined toxicity of insecticides and fungicides applied to California almond orchards to honey bee larvae and adults." *American Bee Journal* 159(5):561-562. https://blogs.cornell.edu/mcartlab/files/2022/02/05-McArt-article_May2019.pdf

Hinsley, C. A., C. M. Urbanowicz, T. Grout, P. Cappy, S. H. McArt and E. K. Mullen. 2019. 2018 New York State Beekeeper Tech Team Report, 29 pp. <https://pollinator.cals.cornell.edu/nys-beekeeper-tech-team/>

Van Dyke, M., E. Mullen, D. Wixted and S. H. McArt. 2019. A pesticide decision-making guide to protect pollinators in landscape, ornamental, and turf management. 36 pp. <https://pollinator.cals.cornell.edu/resources/grower-resources/>

McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of Ramsey et al. 2019 [*Proceedings of the National Academy of Sciences of the United States* 116:1792-1801]: "Varroa destructor feeds primarily on honey bee fat body tissue and not hemolymph." *American Bee Journal* 159(4):443-445. https://blogs.cornell.edu/mcartlab/files/2022/02/04-McArt-article_April2019.pdf

McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of Holder et al. 2018 [*Proceedings of the National Academy of Sciences of the United States* 115:13033-13038]: "Fipronil pesticide as a suspect in historical mass mortalities of honey bees." *American Bee Journal* 159(3):281-282. https://blogs.cornell.edu/mcartlab/files/2022/02/03-McArt-article_March2019.pdf

McArt, S. H. 2019. Notes from the lab: The latest bee science distilled. Summary of Evans et al. 2018 [*Agriculture, Ecosystems and Environment* 268:162-170]: "Wild, native bees and managed honey bees benefit from similar agricultural land uses." *American Bee Journal* 159(2):199-201. https://blogs.cornell.edu/mcartlab/files/2022/02/02-McArt-article_February2019.pdf

McArt, S. H. and D. Wixted. 2019. The "controversy" surrounding pesticide risk to bees. *American Bee Journal* 159(1):87-90. https://blogs.cornell.edu/mcartlab/files/2022/02/01-McArt-article_January2019.pdf

2018

Van Dyke, M., E. Mullen, D. Wixted and S. H. McArt. 2018. A pesticide decision-making guide to protect pollinators in tree fruit orchards. 31 pp. <https://pollinator.cals.cornell.edu/resources/grower-resources/>

Hinsley, C. A. and S. H. McArt. 2018. 2018 New York State Varroa survey results, 1 p. <https://pollinator.cals.cornell.edu/sites/pollinator.cals.cornell.edu/files/shared/2018%20NYS%20Varroa%20Survey%20Results.pdf>

McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Stamets et al. 2018 [*Scientific Reports* 8:13936]: "Extracts of polypore mushroom mycelia reduce viruses in honey bees." *American Bee Journal* 158(12):1383-1385. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_December_2018.pdf

- McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Nicholls et al. 2018 [*Environmental Science and Technology* 52:9391-9402]: “Monitoring neonicotinoid exposure for bees in rural and peri-urban areas of the U.K. during the transition from pre- to post-moratorium.” *American Bee Journal* 158(11):1279-1281. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_November_2018.pdf
- McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Kent et al. 2018 [*Frontiers in Genetics* 9:316]: “Conservation genomics of the declining North American bumblebee *Bombus terricola* reveals inbreeding and selection on immune genes.” *American Bee Journal* 158(10):1169-1170. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_October_2018.pdf
- McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Utzeri et al. 2018 [*Scientific Reports* 8:9996]: “Entomological signatures in honey: an environmental DNA metabarcoding approach can disclose information on plant-sucking insects in agricultural and forest landscapes.” *American Bee Journal* 158(9):1063-1064. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_September_2018.pdf
- McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Oddie et al. 2018 [*Scientific Reports* 8:7704]: “Rapid parallel evolution overcomes global honey bee parasite.” *American Bee Journal* 158(8):937-938. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_August_2018.pdf
- Urbanowicz, C. M. and S. H. McArt. 2018. 2017 New York State *Varroa* survey results, 1 p. <https://pollinator.cals.cornell.edu/sites/pollinator.cals.cornell.edu/files/shared/2017%20NYS%20Varroa%20survey%20results.pdf>
- Hinsley, C. A., P. Cappy, S. H. McArt and E. K. Mullen. 2018. 2018 New York State Beekeeper Tech Team Spring Honey Bee Health Report, 1 p. <https://pollinator.cals.cornell.edu/sites/pollinator.cals.cornell.edu/files/shared/Spring%202018%20OHoney%20Bee%20Health%20Report.pdf>
- McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Fisher et al. 2018 [*Journal of Economic Entomology* 111:510-516]: “The effects of the insect growth regulators methoxyfenozide and pyriproxyfen and the acaricide bifenthrin on honey bee (Hymenoptera: Apidae) forager survival.” *American Bee Journal* 158(7):821-822. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_July_2018.pdf
- McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Luchetti et al. 2018 [*Proceedings of the Royal Society of London B* 285:20172849]: “Nursing protects honey bee larvae from secondary metabolites of pollen.” *American Bee Journal* 158(6):701-702. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_June_2018.pdf
- Deutsch, K. R. and S. H. McArt. 2018. Notes from the lab: The latest bee science distilled. Summary of Bailes et al. 2018 [*Biology Letters* 14:20180001]: “First detection of bee viruses in hoverfly (syrphid) pollinators.” *American Bee Journal* 158(5):583-584. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_May_2018.pdf
- McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Ziegelmann et al. 2018 [*Scientific Reports* 8:363]: “Lithium chloride effectively kills the honey bee parasite *Varroa destructor* by a systemic mode of action.” *American Bee Journal* 158(4):461-462. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_April_2018.pdf
- Wheeler, M. K., P. Cappy, S. H. McArt and E. K. Mullen. 2018. 2017 New York State Beekeeper Tech Team Report, 29 pp. <https://pollinator.cals.cornell.edu/sites/pollinator.cals.cornell.edu/files/shared/2017%20Tech%20Team%20Report.pdf>
- McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Liao et al. 2017 [*Scientific Reports* 7:15924]: “Behavioral responses of honey bees (*Apis mellifera*) to natural and synthetic xenobiotics in food.” *American Bee Journal* 158(3):333-334. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_March_2018.pdf

McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Lopez-Urbe et al. 2017 [*Conservation Genetics* 18:659-666]: "Higher immunocompetence is associated with higher genetic diversity in feral honey bee colonies (*Apis mellifera*)." *American Bee Journal* 158(2):203-204. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_February_2018.pdf

McArt, S. H. 2018. Notes from the lab: The latest bee science distilled. Summary of Hallmann et al. 2017 [*Plos One* 12(10):e0185809]: "More than 75 percent decline over 27 years in total flying insect biomass in protected areas." *American Bee Journal* 158(1):53. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_January_2018.pdf

2017

McArt, S. H. 2017. Notes from the lab: The latest bee science distilled. Summary of Mitchell et al. 2017 [*Science* 358:109-111]: "A worldwide survey of neonicotinoids in honey." *American Bee Journal* 157(12):1283-1284. https://blogs.cornell.edu/mcartlab/files/2022/02/McArt-article_December_2017.pdf

Wheeler, M. K., P. Cappy, S. H. McArt and E. K. Mullen. 2017. 2017 New York State Beekeeper Tech Team Spring Honey Bee Health Report, 1 p. <https://pollinator.cals.cornell.edu/sites/pollinator.cals.cornell.edu/files/shared/spring%202017%20colony%20health%20report.pdf>

Wheeler, M. K., P. Cappy, S. H. McArt and E. K. Mullen. 2017. 2016 New York State Beekeeper Tech Team Pesticide Report, 21 pp. <https://pollinator.cals.cornell.edu/sites/pollinator.cals.cornell.edu/files/shared/2016%20NYS%20Tech%20Team%20Pesticide%20Report.pdf>

Wheeler, M. K., P. Cappy, S. H. McArt and E. K. Mullen. 2017. 2016 New York State Beekeeper Tech Team Report, 48 pp. <https://pollinator.cals.cornell.edu/sites/pollinator.cals.cornell.edu/files/shared/documents/2016%20Tech%20Team%20report.pdf>

2016 and earlier

Moylett, H., A. D. Tripodi, J. W. Smith, L. L. Figueroa, S. H. McArt, E. Evans, D. Lehmann, E. Spevak, W. Wheling and J. P. Strange. 2016. Bumble bee clean stock certification: A white paper of the Pollinator Partnership and the North American Pollinator Protection Campaign.

McArt, S. H. 2015. Pesticides and the threat to bees in New York. Empire State Honey Producers Association Fall Newsletter, Nov. 2015.

INVITED TALKS

Academic Venues

Department of Entomology and Nematology, University of California, Davis, CA, *scheduled for May 2022*

Department of Entomology, University of California, Riverside, CA, *scheduled for April 2022*

Center for Environmental Policy, Bard College, Annandale-on-Hudson, NY, April 2022 (via Zoom)

Department of Entomology, University of Illinois, Urbana-Champaign, IL, January 2022 (via Zoom)

Department of Applied Ecology, North Carolina State University, Raleigh, NC, November 2021
School of Biological Science & Technology, Yangzhou University, China, June 2021 (via Zoom)

Department of Biology, Delaware Valley University, Doylestown, PA, Oct. 2020 (via Zoom)

Department of Entomology & Nematology, University of Florida, Gainesville, FL, January 2020

International Conference for Pollinator Biology, Health, and Policy, Davis, CA, July 2019

Department of Entomology, Michigan State University, East Lansing, MI, March 2019

Sustainable Michigan Endowed Project, Michigan State University, East Lansing, MI, March 2019

Entomological Society of America Annual Meeting, Symposium: From Genes to Communities: Quantifying Diverse Responses of Pollinators to Multiple Anthropogenic Stressors. Vancouver, BC, Canada, November 2018

Department of Ecology, Evolution, and Natural Resources, Rutgers University, New Brunswick, NJ, October 2018

Penn State Center for Pollinator Research, Penn State University, State College, PA, April 2018

Fields Institute for Research in Mathematical Sciences, Toronto, Ontario, Canada. February 2018

Department of Environmental Conservation and Management, University of Wales, Trinity St David, Swansea, Wales, UK, November 2017

Department of Soil and Crop Sciences, Cornell University, Ithaca, NY, November 2016

International Congress of Entomology, Orlando, FL, September 2016

Department of Environmental & Forest Biology, SUNY ESF, Syracuse, NY, March 2016

Cornell Department of Entomology Jugatae Graduate Student Symposium, Ithaca, NY, January 2016

North American Pollinator Protection Campaign, Washington, DC, October 2015

Department of Entomology, Purdue University, West Lafayette, IN, September 2015

Department of Entomology, Cornell University, Ithaca, NY, January 2015

Department of Forestry and Rangeland Stewardship, Colorado State University, Fort Collins, CO, May 2014

Department of Entomology, Cornell University, Ithaca, NY, March 2014

Department of Entomology and Nematology, University of California, Davis, CA, March 2014

Department of Biology, University of Louisville, Louisville, KY, February 2014

Second International *Microbotryum* Meeting, Amherst College, Amherst, MA, May 2013

Department of Bioagricultural Sciences and Pest Management, Colorado State University, Fort Collins, CO, May 2012

Department of Entomology, Washington State University, Pullman, WA, April 2012

Patton Symposium on Insect Nutrition, Cornell University, Ithaca, NY, February 2011

Cornell Entomology Department Merger, Ithaca, NY, January 2010

Invited Extension Talks Outside of New York

Indiana State Beekeepers Association Annual Conference, Muncie, IN, *scheduled for February 2023*

Massachusetts State Beekeepers Association Annual Conference, Essex, MA, March 2022

American Beekeeping Federation Annual Conference, Las Vegas, NV, January 2022

Apiary Inspectors of America Annual Conference, January 2022 (via Zoom)

North Carolina State Beekeepers Association Annual Conference, Hickory, NC, November 2021

Northeastern IPM Center Advisory Council Annual Meeting, May 2021 (via Zoom)

Honey Bee Health Coalition (Keystone Group, Colorado), May 2021 (via Zoom)

Montgomery County Beekeeping Club (Pennsylvania), March 2021 (via Zoom)

Walworth County Beekeeping Club (Wisconsin), February 2021 (via Zoom)

American Beekeeping Federation Annual Conference, January 2021 (via Zoom)

American Honey Producers Association Annual Conference, December 2020 (via Zoom)

Inside The Hive TV, December 2020 (via Zoom)

York County Beekeepers Association (Pennsylvania), September 2020 (via Zoom)
Penn State Ag In-Service Day, State College, PA, July 2019
American Honey Producers Association Annual Conference, San Diego, CA, January 2019
Joint Ontario Beekeepers-Empire State Honey Producers Association Meeting, Niagara Falls,
Ontario, Canada, November 2017

RESEARCH AND ADVISING RESPONSIBILITIES

Current Responsibilities

Director, Cornell Chemical Ecology Core Facility (CCECF)

The CCECF (<https://blogs.cornell.edu/ccecf/>) is an analytical chemistry facility that specializes in quantification of small molecules via HPLC-MS/MS (e.g., plant/insect hormones, plant secondary metabolites, pesticide residues). The fee-based facility is open to internal Cornell users and external clients. I work closely with the CCECF manager (currently Dr. Wayne Anderson) to oversee all operations and budgetary considerations. The CCECF is physically housed in 4133 Comstock Hall in the Department of Entomology.

Research Associates

Dr. Wayne Anderson, Cornell Chemical Ecology Core Facility manager (2021-present)

Lab Manager

Paige Muñiz (2017-present)

Extension Professionals

Maria Van Dyke, NYS Beekeeper Tech Team Extension (2018-present)

Postdoctoral Scholars

Dr. Maureen Page (*starting June 2022*)

Dr. Angélica Bianchini Sanchez (2022-present)

Dr. Kate LeCroy (2021-present)

- Awarded USDA NIFA Postdoctoral Fellowship (2022-2024)

Dr. Wee Hao Ng (2019-present)

Technicians

Christina Zhao (2021-present)

David Sossa (2019-present)

Graduate Students (Major Advisor)

Tobias Mueller, PhD student, Cornell Entomology (2021-present) *Co-advised with Dr. Bryan Danforth*

- Awarded NSF Graduate Research Fellowship (2022-2025)

Timothy Salazar, PhD student, Cornell Ecology and Evolutionary Biology (2017-present) *Co-advised with Dr. Stephen Ellner*

- Awarded NSF Graduate Research Fellowship (2018-2021)
- Awarded Cornell Fellowship (2017-2018)

Kaitlin Deutsch, PhD student, Cornell Entomology (2017-present, anticipated defense Spring 2023)

- Awarded NSF Graduate Research Fellowship (2018-2021)
- Awarded Cornell Fellowship (2017-2018)

Katherine Urban-Mead, PhD student, Cornell Entomology (2016-present, anticipated defense Spring 2022) *Co-advised with Dr. Bryan Danforth*

- Awarded NSF Graduate Research Fellowship (2016-2019)
- Started job with Xerces Society for Invertebrate Conservation in January 2022

Graduate Students (Minor Committee Member)

Julie Caserto, PhD student with Dr. Minglin Ma, Cornell Biological & Environmental Engineering (2022-present)

Leah Valdes, PhD student with Dr. Rob Raguso, Cornell Neurobiology & Behavior (2021-present)

Sadie Cutler, PhD student with Dr. Kirstin Petersen, Cornell Engineering (2020-present)
Chelsea Abegg, PhD student with Dr. Cesar Rodriguez-Saona, Rutgers University (2020-present)
Vivianna Sanchez, PhD student with Dr. Tory Hendry, Cornell Microbiology (2019-present)
Diana Obregon, PhD student with Dr. Katja Poveda, Cornell Entomology (2018-present)
Kara Fikrig, PhD student with Dr. Laura Harrington, Cornell Entomology (2018-present)

Undergraduate Researchers

Angela Yuan, Biology (2022-present)
Talli Weiss, Biology (2022-present)
Ben DeMoras, Biology (2021-present)
Max Cantelmo, Entomology (2021-present)
Savannah Figueroa, Biology (2020-present)
Emma Harte, Ecology & Evolutionary Biology (2020-present, Honors thesis student)
Jeremy Gutierrez, Biology (2019-present)
Catherine Crosier, Environment & Sustainability (2018-present)

Undergraduate Advisees

Monty Hamm, Environment & Sustainability (2021-present)
Emily Cavanaugh, Entomology (2021-present)
Natalie Brennan, Entomology (2021-present)
Audrey Su, Environment & Sustainability (2021-present)
Victoria (V) Smith, Environment & Sustainability (2020-present)
Catherine Crosier, Environment & Sustainability (2018-present)

Past Responsibilities

Research Associates

Dr. Nicolas Baert, Cornell Chemical Ecology Core Facility manager (2017-2021). Currently Analytical Chemist at FILAB SAS, Dijon, France.

Extension Professionals

Travis Grout, Agricultural Economic Analyst, NYS Beekeeper Tech Team, Cornell University (2018-2020). *Co-advised with Emma Walters*. Currently Natural Resource Economist at ERT, Inc., Washington, D.C.
Mary Kate Wheeler, Agricultural Economic Analyst, NYS Beekeeper Tech Team, Cornell University (2017-2018). *Co-advised with Emma Walters*. Currently Farm Business Management with CCE Cortland County, NY.

Postdoctoral Scholars

Dr. Daiana De Souza (2019-2021). Currently Ecotoxicologist at BASF, Raleigh, NC.
Dr. Aaron Iverson (2017-2019). Currently Assistant Professor at St. Lawrence University, Canton, NY.
Dr. Christine Urbanowicz (2018-2019). Currently Analyst at USAID in Washington, D.C.
Dr. Peter Graystock (2017-2018). Currently Independent Research Fellow, Imperial College, London.

Graduate Students (Major Advisor)

Hailey Scofield, Cornell Neurobiology & Behavior PhD student (2019-2021). *Co-advised with Dr. Cole Gilbert*. Currently CEO of the company she founded, Combplex: <https://www.beecombplex.com/>
Laura Figueroa, PhD (2015-2020). Dissertation: "*Bee pathogen transmission in plant-pollinator networks*." Currently NSF Postdoctoral Fellow in the Dept. of Environmental Conservation at UMass-Amherst.
Nelson Milano, MS (2016-2018). *Co-advised with Dr. Brian Nault*. Thesis: "*Comparative survival and fitness of bumble bee colonies in natural, suburban, and agricultural landscapes*." Currently math and science teacher at the Holy Family Institute, Pittsburgh, PA.

Graduate Students (Minor Committee Member)

James Webb, Masters student with Dr. Minglin Ma, Cornell Biological and Environmental Engineering (2019-2020)
Matt Boucher, PhD student with Dr. Greg Loeb, Cornell Entomology (2015-2020)

Talya Shragai, PhD student with Dr. Laura Harrington, Cornell Entomology (2016-2020)
 Erica McPhail, MS student with Dr. Melissa Fierke, SUNY ESF (2017-2018)
 Giuseppe Tumminello, MS student with Dr. Melissa Fierke, SUNY ESF (2015-2016)
 Mary Centrella, PhD student with Drs. Bryan Danforth and Katja Poveda, Cornell Entomology (2015-2019)

Technicians

Fiona Marks (2021)
 Dr. Marie Russell (2021). Currently Research Scientist at Iowa State University, Ames, IA.
 Phoebe Koenig (2018-2020). Currently Masters student with Dr. Corrie Moreau, Cornell Entomology.
 Jeffrey Teague (2017-2018)
 Ashley Fersch (2015-2018). Currently Intermediate School Personal Care Assistant, Environmental Charter School, Pittsburgh, PA.
 Sarah Blucher (2015-2016)

Undergraduate Researchers

Lauren Cody, Biology (2020-2021)
 Mikayla Zarr, Biology (2021)
 Michelle Hassan, Biology (2021)
 Christina Zhao, Biology (2019-2021, Honors thesis: "A look into exposure and risk from pesticides to bees in apple orchards")
 Elena Suarez, Biology (2019-2020)
 Abby Davis, Entomology (2017-2020, Honors thesis: "Thinking beyond bees to inform pollinator disease transmission dynamics: *Eristalis flower flies* (Diptera: Syrphidae) are non-host vectors of the common bee parasite, *Crithidia bombi*")
 Leeah Richardson, Entomology (2018-2019)
 Olivia Miller, Biology (2018-2019)
 Alondra Torres, summer REU student from University of Puerto Rico (2019)
 Mesly Mata, summer REU student from Oklahoma State University (2019)
 Jiawen Yang, Biology (2018-2019)
 Casey Hale, Entomology (2017-2019, Honors thesis: "Pesticide risk predicts bee visitation and richness within conventionally and organically managed strawberry systems")
 Emma Williams, Biology (2017-2019)
 Julie Kapuvári, Biology (2016-2019, Honors thesis: "A systematic review on the risk of neonicotinoid insecticides to wild bees")
 Blyssalyn Bieber, summer REU student from Misericordia University (2018)
 Annika Salzberg, Entomology (2018)
 David Lewis, Biology (2016-2018)
 Mahilet Kebede, Biology (2017)
 Lauren Truitt, Biology and Mathematics (2014-2017, Honors thesis: "A trait-based model of disease transmission in plant-pollinator networks")
 Sally Compton, Biology (2014-2017, Honors thesis: "Functional traits of wild bees predict pathogen prevalence")
 Marcel Ramos, Biology (2016-2017)
 Trebor Hall, Entomology (2016-2017)
 Joshua Roberts, Biology (2015-2016)
 Nolan Amon, Entomology (2016)
 Emily Wafler, Environmental Science and Sustainability (2014-2015)
 Rosie Nagele, Biology (2015)
 Carlee Roberts, Environmental Science and Sustainability (2015)
 Timothy Jalbert, Biology (2015)

Undergraduate Advisees

William Kandalajt, Entomology (2017-2021)
 Sean Lee, Entomology (2019-2020)
 Fiona MacNeill, Entomology (2018-2019)

Annika Salzberg, Entomology (2017-2019)

High School Research Interns

Lillian McCormick (summer 2019)

Elena Suarez (summer 2018)

Shuyun (Alina) Xiao (summer 2016)

Ben Losey (summer 2015)

EXTENSION/OUTREACH RESPONSIBILITIES

Extension Programs

"Notes from the Lab: The Latest Bee Science Distilled"

I write a monthly column in *American Bee Journal*, which reaches ~15,000 subscribers. Each month, I summarize a recent pollinator health paper from the primary literature for a non-scientific audience. The goal is to make the emerging pollinator health science more approachable and relevant to beekeepers and the public. Most beekeepers throughout North America know me as the author of this column, not from my scientific work.

Column preview: <http://americanbeejournal.com/category/columns/notes-from-the-lab/>

PDFs of each article: <http://blogs.cornell.edu/mcartlab/notes-from-the-lab/>

Columns published to date: 53

Pesticide Risk to Pollinators

Stakeholders lack up-to-date information on how to reduce pesticide risk to non-target organisms, regulatory agencies in New York and elsewhere are currently considering restrictions on various pesticides to protect pollinators, and New York does not have an affordable service that provides pesticide quantification for beekeepers, farmers, and other stakeholders. To provide this information, my lab operates a multi-residue pesticide analysis that is open to the public, we synthesize up-to-date science in extension booklets and reports, and I give talks to beekeepers, farmers, legislators, regulatory agencies, and the public within and beyond New York.

Multi-residue pesticide analysis at the Cornell Chemical Ecology Core Facility (CCECF; <https://blogs.cornell.edu/ccecf/>): 2,575 samples processed in the past 2 years.

Extension talks to date: 96 (~5,600 stakeholders reached)

Neonicotinoid insecticides in New York: Economic benefits and risk to pollinators. 432 pages. <https://pollinator.cals.cornell.edu/pollinator-research-cornell/neonicotinoid-report/>

A pesticide decision-making guide to protect pollinators in tree fruit orchards. 31 pages. <https://pollinator.cals.cornell.edu/resources/grower-resources/>

A pesticide decision-making guide to protect pollinators in landscape, ornamental, and turf management. 36 pages. <https://pollinator.cals.cornell.edu/resources/grower-resources/>

Veterinarian Education: The Honey Bee

Most veterinarians in the US are not familiar with honey bees because they're not included in veterinary curriculum, but the 2017 FDA Veterinary Feed Directive requires that antibiotic prescriptions for honey bees be issued by a veterinarian. To remedy this situation, I work with instructors in the Cornell Vet School to teach new curriculum, coordinate and teach continuing education workshops for current veterinarians in New York, and I wrote a chapter in the first US-relevant book on this topic.

August 2021: *Honey Bee Health and Conservation* course (VTMED 6698: 12 veterinary students). Role: Lecturer and lab instructor.

January 2021: *Book chapter in "Honey Bee Medicine for the Veterinary Practitioner,"* Eds. T. R. Kane and C. M. Faux, Wiley Blackwell Press.

September 2020: *Veterinary Conservation Medicine* (30 veterinary students). Role: Lecturer.

July 2020: *Honey Bee Health and Conservation* course (VTMED 6698: 28 veterinary students). Role: Lecturer and virtual lab instructor.

October 2019: *NYS Veterinary Conference Honey Bee Track* (45 veterinarians). Role: Lecturer and lab coordinator.

September 2019: NYS Department of Agriculture and Markets, Division of Animal Industry, "Veterinarians and honey bee health in New York" (35 people). Role: Speaker.

August 2019: *Honey Bee Health and Conservation* course (VTMED 6698: 24 veterinary students). Role: Lecturer.

June 2019: *Honey Bee Health for the Veterinarian* 1-day workshop, Greenwich, NY (24 veterinarians). Role: Course coordinator and speaker.

March 2019: Cornell Veterinary School Special Species Symposium: *Honey Bee Biology and Health* (29 veterinary students). Role: Course coordinator and speaker.

<http://blogs.cornell.edu/specialspeciessymposium/>

August 2018: *Honey Bee Health and Conservation* course (VTMED 6698: 16 veterinary students). Role: Lecturer. <http://news.cornell.edu/stories/2018/08/new-course-trains-veterinary-students-protect-pollinators>

October 2017: NYS Veterinary Conference *Honey Bee Track* (53 veterinarians). Role: Speaker.

Introduction to Honey Bee Queen Rearing Workshop

Poor genetics is a major problem for honey bee health. I coordinate and co-instruct a workshop that teaches students how to rear locally adapted disease-resistant honey bee queens. Emphasis is placed on learning multiple techniques, ranging from small-scale backyard production to larger-scale commercial production. <https://pollinator.cals.cornell.edu/resources/beekeeping-workshops>

August 2022 (*scheduled during the Eastern Apiculture Society Annual Conference*)

June 2022 (*scheduled*)

June 2021 (*no workshop due to COVID*)

June 2020 (*no workshop due to COVID*)

June 2019 participants: 22 people, 115 queens distributed from local Northeast *Varroa*-resistant genetic stock.

June 2018 participants: 21 people, 45 queens distributed from local Northeast *Varroa*-resistant genetic stock.

June 2017 participants: 24 people, >200 queens distributed from local Northeast *Varroa*-resistant genetic stock.

Extension & Outreach Talks within New York

NY Beekeeping Club President's Roundtable, "Research in the McArt lab and how to use the Cornell pesticide testing facility" Zoom presentation, March 2022 (15 people, 20 min talk)

NY Cut Flower Growers Association, "Pesticides and bees: How to minimize risk to non-target organisms" Zoom presentation, January 2022 (32 people, 60 min talk)

Empire State Honey Producers Association, "Update on what we know about pesticide exposure and risk to bees", "Varroa-mediated virus spillover from managed honey bees to wild bumble bees," Syracuse, NY, October 2021 (75 people, 2 x 60 min talks)

NY Apiary Industry Advisory Committee, "Research update from Cornell" Zoom presentation, October 2021 (25 people, 30 min talk)

NY Corn & Soybean Growers Association Board, "Neonicotinoid insecticides in field crops: Benefits to farmers and risk to bees" Zoom presentation, September 2021 (18 people, 45 min talk)

New York Farm Bureau Advisory Board, "Neonicotinoid insecticides: When there are benefits to users and when there's risk to bees" Zoom presentation, August 2021 (18 people, 45 min talk)

Honey Bee Health and Conservation course, "American and European Foulbrood: Identification and control in New York," Cornell Vet School and Dyce Lab for Honey Bee Studies, Ithaca, NY, August 2020 (14 undergraduates, 60 min lecture, 120 min in bee yard and lab)

Boyce Thompson Institute Summer REU program, "Pesticides, pathogens, and pollinator declines: What we know and what YOU can do," Boyce Thompson Institute and Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2021 (35 undergraduates and high school students, 60 min lecture, 90 min in bee yard and lab)

- Finger Lakes Native Plant Society, "Pesticides, pathogens, and pollinator-friendly plantings: What YOU can do to 'save the bees'," Zoom presentation, October 2020 (27 people, 45 min talk)
- Cornell College of Veterinary Medicine Conservation Medicine Club, "Pollinator health: What do veterinarians need to know?" Zoom presentation, September 2020 (25 people, 45 min talk)
- NYS Apiary Industry Advisory Committee, Zoom presentation, July 2020 (32 people, 25 min talk)
- NYS regulatory agency, legislator, public, and NYS IPM briefings regarding our report on "Neonicotinoid insecticides in New York: Economic benefits and risk to pollinators." 8 Zoom presentations total, May-August 2020 (~220 people total, 45 min talk on each occasion)
- Greater New York Bee Conference, "Flowers: Watering holes where bee diseases are spread," Geneva, NY, March 2020 **cancelled due to COVID-19*
- Empire State Honey Producers Association, "Fungicides: Quantifying exposure and risk during pollination," Syracuse, NY, Nov. 2019 (80 people, 60 min talk)
- Cornell Ag In-service day, "Pesticides and pollinators: A new tool for reducing risk," Ithaca, NY, Nov. 2019 (50 people, 45 min talk)
- Mid-York Beekeepers Association, "How to improve pollinator health in New York," Oriskany, NY, Oct. 2019 (45 people, 45 min talk)
- NYS Veterinary Conference Honey Bee Track. "American and European Foulbrood: Identification and control in New York," Dyce Lab for Honey Bee Studies, Ithaca, NY, Oct. 2019 (39 people, 60 min talk, 60 min lab)
- NYS Department of Agriculture and Markets, Division of Animal Industry, "Veterinarians and honey bee health in New York," Albany, NY, Sept. 2019 (35 people, 45 min talk)
- Cornell Summer College Research Apprenticeship in Biological Sciences Program, "Pollinator health: What do we know and what can we do," Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2019 (37 high school students, 45 min talk, 45 min in bee yard and lab)
- Empire State Honey Producers Association Summer Picnic, "Habitat and invasive plant species: What do we know," Kutik's Honey Farm, Oxford, NY, July 2019 (90 people, 60 min talk)
- Conservation Medicine One Health Summer program, "Pollinator health of wild bees and honey bees," Cornell Vet School and Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2019 (44 undergraduates, 45 min lecture, 120 min in bee yard and lab)
- Cornell Institute for Host-Microbe Interactions and Disease Summer REU program, "Pollinator health of wild bees and honey bees," Ithaca, NY, July 2019 (30 undergraduate students, 45 min lecture)
- Boyce Thompson Institute Summer REU program, "Pollinator health of wild bees and honey bees," Boyce Thompson Institute and Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2019 (50 undergraduates and high school students, 45 min lecture, 75 min in bee yard and lab)
- Mann Library Chats in the Stacks, Cornell Reunion Weekend, "Improving pollinator health: What we know and what YOU can do," Ithaca, NY, June 2019 (50 people, 45 min talk). Video: <https://youtu.be/Kfo7RWXYjuo>
- Honey Bee Health for the Veterinarian 1-day workshop, "Honey bee biology 101 with a focus on disease management" and "American and European Foulbrood: Identification and control in New York," Greenwich, NY, June 2019 (24 people, 2 x 60 min talks, 2 x 60 min talks in the bee yard)
- American Wildlife Conservation Foundation, "Stressors associated with worldwide insect declines," Hector, NY, May 2019 (45 people, 45 min talk)
- Caroline Elementary School, "Bees!" Caroline, NY, May 2019 (64 people, 3 x 30 min talks)
- Cornell College of Veterinary Medicine Special Species Symposium, "Pollinator health: What do veterinarians need to know?" Dyce Lab for Honey Bee Studies, Ithaca, NY, March 2019 (29 people, 2 x 60 min talks, 2 x 60 min wet labs)
- Statewide IPM Grower Advisory Committee, "Pesticides and pollinators in New York: Current research and recommendations for growers," Geneva, NY, March 2019 (30 people, 90 min talk/discussion)
- Empire State Producers Expo, "Pesticides and pollinators in New York: Current research and recommendations for growers," Syracuse, NY, Jan. 2019 (75 people, 45 min talk)
- Western New York Corn Congresses, "Pollinators and neonics in corn: What do we know?" Batavia, NY, Jan. 2019 (360 people, 30 min talk), Waterloo, NY, Jan. 2019 (230 people, 30 min talk)

- Empire State Honey Producers Association Annual Meeting, "A brief history of the Dyce Lab: 50 years of research and extension in New York," Syracuse, NY, Nov. 2018 (125 people, 45 min talk), A discussion of beekeeper registration in New York." (75 people, 30 min talk)
- Wyoming County Beekeepers Association annual honey feast, "How to improve pollinator health in New York," Perry, NY, Sept. 2018 (45 people, 45 min talk)
- Cornell College of Veterinary Medicine, "American and European Foulbrood: Everything veterinarians need to know," Cornell Vet School and Dyce Lab for Honey Bee Studies, Ithaca, NY, Aug. 2018 (16 people, 60 min talk, 120 min in bee yard)
- Cornell Floriculture Field Day, "Creating a pollinator-friendly wildflower and ornamentals garden," Cornell Ornamentals Garden, Ithaca, NY, Aug. 2018 (40 people, 30 min talk)
- Empire State Honey Producers Association Summer Picnic, "Research update from the Dyce Lab: Improving pollinator health in New York," Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2018 (120 people, 60 min talk, 75 min in bee yard)
- Boyce Thompson Institute Summer REU program, "Pollinator health of wild bees and honey bees," Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2018 (20 undergraduates and high school students, 75 min in bee yard and lab)
- Cornell Summer College One Health Program, "Pollinator health: What do we know and what can we do," Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2018 (42 high school students, 60 min talk, 90 min in bee yard and lab)
- Cornell Summer College Research Apprenticeship in Biological Sciences Program, "Pollinator health: What do we know and what can we do," Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2018 (37 high school students, 45 min talk, 45 min in bee yard and lab)
- Liberty Hyde Bailey Lecture, Cornell CALS Reunion, "The Buzz About Bees: Understanding and Improving Pollinator Health," Ithaca, NY June 2018 (~100 people, 20 min talk). Video: <https://livestream.com/accounts/2125927/events/8226737/videos/176196487>
- Annual Bounty of New York Reception & Dinner, Cornell Alumni Association, "Improving pollinator health in New York," Schenectady, NY, April 2018 (80 people, 45 min talk)
- Cornell Pesticide Applicator update, "Pesticides and pollinators in New York: Current research and recommendations for applicators," Geneva, NY, April 2018 (50 people, 60 min talk)
- Cornell Pesticide Applicator update, "Pesticides and pollinators in New York: Current research and recommendations for applicators," Ithaca, NY, April 2018 (80 people, 60 min talk)
- Southern Adirondack Beekeepers Association annual conference, "How to improve pollinator health in New York," Malta, NY, March 2018 (210 people, 50 min talk)
- American Honey Producers Association, "Multiple stresses meet multiple solutions: New York as an emerging pollinator health success story," San Diego, CA, Jan. 2018 (170 people, 30 min talk)
- NYS Invasive Species Advisory Committee, "Data on bees and invasive plant species in New York," Albany, NY, Dec. 2017 (40 people, 30 min talk)
- NYS IPM Board of Directors meeting, "Research update from the Dyce lab: Progress on pollinator health in New York," Geneva, NY, Nov. 2017 (30 people, 60 min talk)
- NYS Department of Environmental Conservation, "Progress on pollinator health in New York," Albany, NY, Nov. 2017 (40 people, 60 min talk)
- New York State Turfgrass Association, "How to make pollinator-friendly areas on NYS golf courses." Rochester, NY, Nov. 2017 (60 people, 60 min talk)
- Narrowsburg Honey Bee Festival, "How to improve pollinator health in New York," Narrowsburg, NY, Sept. 2017 (100 people, 60 min panel discussion and 45 min talk)
- Cornell Entomology Undergraduate Club (Snodwiggs), "What we do at the Dyce lab," Dyce Lab for Honey Bee Studies, Ithaca, NY, Sept. 2017 (12 people, 30 min talk and 30 min in bee yard)
- Integrated Pest Management and Pollinator Protection Conference, Saint Regis Mohawk Tribe, "What can we do as ordinary citizens to improve pollinator health in New York?" Akwesasne, NY, Aug. 2017 (15 people, 60 min talk)
- Cornell Master Beekeeper Program, "Parasite spillover between managed honey bees and wild bees," Dyce Lab for Honey Bee Studies, Ithaca, NY, Aug. 2017 (video recorded for online learning module, 50 students per year)
- Cornell Floriculture Field Day, "Creating a pollinator-friendly wildflower and ornamentals garden," Cornell Ornamentals Garden, Ithaca, NY, Aug. 2017 (65 people, 2 x 30 min talks)

- Cornell Summer College Research Apprenticeship in Biological Sciences Program, "Pollinator health: What do we know and what can we do," Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2017 (30 high school students, 30 min talk and 30 min in bee yard)
- TC3 Sustainable Agriculture class, "Pollinators and NYS agriculture: How can IPM help?" Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2017 (15 people, 30 min talk and 30 min in bee yard)
- Northeastern Association of State Departments of Agriculture (NEASDA) annual meeting, "Pollinators and agriculture: Progress on a sensitive topic in New York." Cooperstown, NY, June 2017 (35 people, 30 min talk)
- Varna Community Center, "Beautiful bees!" Varna, NY, April 2017 (15 people, 45 min talk)
- NYS IPM Pollinator Meeting, "Pollinators and agriculture in New York: How IPM can help." Syracuse, NY, March 2017 (30 people, 45 min talk)
- Empire State Honey Producers Association Annual Meeting, "Cornell honey bee research update." Syracuse, NY, Nov. 2016 (125 people, 45 min talk)
- Finger Lakes Beekeeping Club, "Minimizing pathogen spillover from your backyard hive to wild bee communities," Ithaca, NY, Nov. 2016 (20 people, 60 min talk)
- New York Farm Viability Institute Pollinator Symposium, "The Cornell pollinator network: research and extension on pollinators among 9 labs at Cornell." Syracuse, NY, Nov. 2016 (35 people, 25 min talk)
- NY Farm Bureau and Audubon Society, "Bees and New York agriculture," Dyce Lab for Honey Bee Studies, Ithaca, NY, Sept. 2016 (12 people, 30 min talk and 30 min in bee yard)
- Future Farmers Association of New York, "Pollinator health and its importance to New York agriculture," Dyce Lab for Honey Bee Studies, Ithaca, NY, Aug. 2016 (65 high school students)
- Cornell Summer College Research Apprenticeship in Biological Sciences Program, "Pollinator health: What do we know and what can we do," Dyce Lab for Honey Bee Studies, Ithaca, NY, Aug. 2016 (30 high school students, 30 min talk and 30 min in bee yard)
- Empire State Honey Producers Association Summer Picnic, "The NYS Pollinator Protection Plan: How Cornell researchers can help NYS beekeepers," Dyce Lab for Honey Bee Studies, Ithaca, NY, July 2016 (75 people, 45 min talk)
- Empire State Honey Producers Association Board of Directors Annual Meeting, "Benefits of beekeeper registration in New York: A research and extension perspective." Syracuse, NY, Feb. 2016 (19 people, 60 min talk)
- Empire State Honey Producers Association Annual Meeting, "Meeting NYS beekeeper needs via research and extension at Cornell." Albany, NY, Nov. 2015 (125 people, 45 min talk)
- NYS IPM Pollinator Meeting, "Synopsis of Cornell research on pollinators." Albany, NY, Oct. 2015 (110 people, 30 min talk)
- NYS Apiary Industry Advisory Committee, "Project update on 'Assessing the impact of pesticides on honey bee health in NY.'" Albany, NY, July 2015 (18 people, 30 min talk)
- Empire State Honey Producers Association Annual Meeting, "The need for research on factors contributing to honey bee losses in New York." Syracuse, NY, Nov. 2014 (115 people, 45 min talk)

Other Relevant Extension/Outreach Activities

- Science advisor to NYS Assembly members Anna Kelles and Rachel May regarding proposed legislation to expand pollinator-friendly management of roadways in New York (February 18, 2022)
- Public testimony to the NYS Assembly regarding proposed legislation to restrict neonicotinoid insecticides in New York (September 20, 2021)
- Science advisor to 12 NYS Senate and Assembly members, the NY Farm Bureau, NY Corn & Soybean Growers Association, NYS IPM program, Empire State Honey Producers Association, NYS Apiary Industry Advisory Council, Apiary Inspectors of America, American Honey Producers Association, American Beekeeping Federation, Honey Bee Health Coalition (Keystone Group), and numerous environmental groups regarding proposed legislation to restrict neonicotinoid insecticides in New York (August 2020 – August 2021).
- Science advisor to the Massachusetts office of the Attorney General regarding their request to have our report, "Neonicotinoid insecticides: Benefits to growers and risk to pollinators," be considered by the United States Environmental Protection Agency (EPA) in its "Proposed Interim Registration

- Review Decisions for the Neonicotinoid Pesticides Imidacloprid, Clothianidin, Dinotefuran, Thiamethoxam, and Acetamiprid: 85 Fed. Reg. 5,953." (July 21, 2020)
- Science advisor to Natural Resources Defense Council regarding risk from neonicotinoid insecticides to pollinators (5 conference calls total, June-October, 2020)
- Resource for Katie Tharrett (University of Rochester) regarding a summer course module for high school students on pollinators and creating pollinator-friendly habitat (June 10, 2020)
- Science advisor to NYSDAM, DEC and the Governor's office regarding the main results from our 432-page cost-benefit analysis for neonicotinoid insecticides in New York (June 4, 2020)
- Science advisor to Natural Resources Defense Council regarding risk from neonicotinoid insecticides to pollinators (Nov. 1, 2019)
- Science advisor to Columbia University environmental policy working group on neonicotinoid insecticide benefits and risks (Sept. 30, 2019)
- Honey extraction outreach event at the Dyce lab (Sept. 28, 2019)
- Outreach (full day) at Empire Farms Days (Aug. 6, 2019)
- Science advisor to Natural Resources Defense Council regarding risk from neonicotinoid insecticides to pollinators in New York (May 16, 2019)
- Host of "PolliNation: Artists and Scientists Crossing Borders to Explore the Value of Pollinator Health," an exhibit showcasing my lab's collaboration with Welsh artists on the topic of pollinator health. Exhibit shown from May-September 2019 in Mann Library on the Cornell campus (April 10, 2019): https://events.cornell.edu/event/artists_scientists_pollinator_health
- Visit with 6 NYS Legislators, the Deputy Secretary for Agriculture, Deputy Secretary for Energy and the Environment, and Lobbyists for the Natural Resources Defense Council, NY Farm Bureau, Citizens Campaign for the Environment, Northeast Agribusiness and Feed Alliance, American Farmland Trust, and NYS Nursery and Landscape Association in Albany, NY regarding pollinator health research findings and funding for CALS honey bee research and extension (March 13, 2019)
- Tour of the Dyce Lab for Honey Bee Studies with NYS Senate Ag Committee Chair Jennifer Metzger and NYS Assembly Ag Committee Chair Donna Lupardo (Feb. 22, 2019)
- Science advisor to Natural Resources Defense Council regarding neonicotinoid risk to pollinators in New York (Jan. 25, 2019)
- Science advisor to Jacqueline Czub and Chris Logue (NYS Department of Agriculture & Markets) regarding neonicotinoid risk assessment in New York (Nov. 5, 2018)
- Science advisor to Scott Menrath (NYS Department of Environmental Conservation) regarding neonicotinoid risk assessment in New York (Nov. 1, 2018)
- Science advisor to Natural Resources Defense Council regarding neonicotinoid risk to pollinators in New York (Oct. 25, 2018)
- Science advisor to Venetia Lannon (NYS Deputy Secretary for the Environment) and Pat Hooker (Deputy Secretary for Agriculture) regarding neonicotinoid risk assessment in New York (Oct. 22, 2018)
- Science advisor to Natural Resources Defense Council regarding pesticide risk to honey bees and wild bees (July 1, 2018)
- Advisor to NYSDAM regarding implementation of a honey bee training program for NYS veterinarians and future NYS apiary inspectors (July 3, 2018)
- Science advisor to NYSDAM regarding the status of research on pollinator health stressors in NYS and more broadly (May 1, 2018)
- Science advisor to NYS Invasive Species Advisory Committee regarding limiting the release of spotted knapweed (*Centaurea maculosa*) biocontrol due to reliance of bees on the plant for nectar and pollen (Dec. 19, 2017)
- Visit with Venetia Lannon (NYS Deputy Secretary for the Environment) and 6 NYS Legislators and Senators in Albany, NY regarding funding for CALS honey bee research and extension (Nov. 28, 2017)
- Testimony to the NYS Assembly regarding pollinator declines, the value of bees to NYS, and Cornell's role in providing research and extension to beekeepers, growers and the public (Nov. 28, 2017): http://nystateassembly.granicus.com/MediaPlayer.php?view_id=8&clip_id=4401
- Science advisor to NYSDEC conference call regarding possible legislation to allow honey bees to forage on state lands (May 26, 2017)

- Science advisor to NYS Agribusiness Roundtable conference call regarding recent Cornell research related to pesticide risk to bees (May 26, 2017)
- Science advisor to Rob Davis at Fresh Energy Solar regarding designation of “pollinator-friendly solar” in proposed New York legislative bill (May 8, 2017)
- Science advisor to NYS Golf Association regarding best management practices for pesticide use and habitat management to promote bees on NYS golf courses (April 14, 2017)
- Science advisor to NYS governor’s office regarding the status of research on neonicotinoid and other pesticides and bees (Feb. 7, 2017)
- Visit with 8 NYS Legislators and Senators in Albany, NY regarding funding for CALS honey bee research and extension (Feb. 7, 2017)
- Science advisor to conference call with NYSDAM, NYSDEC and NYS governor’s office regarding the status of research on neonicotinoid insecticides and bees (Aug. 18, 2016)
- Host of “NYS Pollinator Protection Plan Announcement” at Dyce Lab for Honey Bee Studies, Cornell University, Ithaca, NY. Speakers: Richard Ball, NYS Commissioner of Ag & Markets; Kenneth Lynch, Deputy Commissioner of the NYS Department of Environmental Conservation; Ron Rausch, Director of the Environmental Management Bureau of the NYS Office of Parks, Recreation and Historic Preservation; Bill Magee, Chairman of the Agriculture Committee in the NYS Assembly; Tom O’Mara, State Senator and Chairman of the Senate Environmental Conservation Committee. (June 24, 2016). Video showing highlights of event:
<http://www.twcnews.com/nys/central-ny/news/2016/06/24/recommendations-to-reduce-pollinator-population-decline-introduced.html>
- Science advisor to “Honey bees and native pollinators” Roundtable with Senator O’Mara, Albany, NY (May 24, 2016) <https://www.nysenate.gov/newsroom/press-releases/thomas-f-omara/omara-hosts-honeybees-native-pollinators-roundtable-albany>
- Visit with 9 NYS Legislators and Senators in Albany, NY regarding funding for CALS honey bee research and extension (Jan. 16, 2016)
- Host of “Pollinator Research at Cornell” during CALS visit by 12 NYS Legislators, Senators and staff (Nov. 5, 2015)
- Host of “Pollinator Research at Cornell” during CALS visit by NYS Comptroller Thomas DiNapoli and staff (April 17, 2015)
- Annual participant in Entomology Department’s “Insectapalooza” (2014-present)
- Answering phone calls/email requests for information from citizens (~100 individual responses in 2018-2019)
- Occasional editor and contributor to Cornell Pollinator Network extension website (2015-present):
<http://pollinator.cals.cornell.edu/> and Dyce Lab Facebook page (2017-present):
<https://www.facebook.com/DyceLab/>

*Contributed Academic Talks and Posters (*presenter)*

- Mueller, T. *, P. A. Muñoz, D. Sossa, N. Baert and S. H. McArt. Pesticide exposure during apple bloom differs between managed honey bees and wild native bees. American Bee Research Conference, Jan. 2022 (via Zoom).
- Deutsch, K. R. *, P. A. Muñoz, H. Bonchristiani and S. H. McArt. Small but Mite-y: Investigating the role of the Varroa mite in driving virus patterns in bumble bee communities. American Bee Research Conference, Jan. 2022 (via Zoom).
- McArt, S. H. * and K. Petersen. Improving strawberry yield through native and robotic pollinators. Cornell Institute for Digital Agriculture meeting, Oct. 2021.
- McArt, S. H. * Who’s using the Cornell Chemical Ecology Core Facility (CCECF), what they’re using it for, and how we’re trying to expand resources for you! USDA Multi-state Hatch in Chemical Ecology virtual meeting, Feb. 2021.
- Mata Loya, M. J., C. Hale, A. Iverson, H. Grab, D. Sossa, N. Baert, K. Poveda, and *S. H. McArt. Pesticide exposure reduces bumble bee colony performance at organic and conventional strawberry farms. Jugatae virtual symposium, Feb. 2021.
- Davis, A. E. *, K. R. Deutsch, W. H. Ng, A. Torres, M. Mata Loya, P. A. Muniz and S. H. McArt. *Eristalis* (Diptera: Syrphidae) flower flies are potential non-host vectors of the common

- trypanosome bee parasite, *Crithidia bombi*. Entomological Society of America online meeting, Nov. 2020.
- Graham, K. K.*, M. Milbrath, Y. Zhang, A. Soehnen, N. Baert, S. H. McArt and R. Isaacs. Variable pesticide exposure in pollen collected by honey bees and bumble bees during blueberry bloom: risk from crop and non-crop sources. Entomological Society of America online meeting, Nov. 2020.
- De Souza, D.*, C. Urbanowicz, W. H. Ng, N. Baert, M. Smith and S. H. McArt. Effects of the fungicide captan and insecticide thiamethoxam on honey bee (*Apis mellifera* L.) larval development and colony survival. Entomological Society of America online meeting, Nov. 2020.
- McArt, S. H.*, T. Grout and P. Koenig. Neonicotinoid seed treatments in U.S. field crops: Inconsistent benefits for users and risk to pollinators. Entomological Society of America online meeting, Nov. 2020.
- Grab, H.*, A. Iverson, O. Miller, L. Richardson, D. Obregon, N. Baert, C. Hale, B. N. Danforth, S. H. McArt and K. Poveda. Potential for economic and ecological tradeoffs when managing bumble bees for crop pollination. Entomological Society of America, St. Louis, MO, Nov. 2019.
- Pinilla, M.*, J. Fitzgerald, E. Williams, A. Davis, S. H. McArt and R. E. Irwin. Within-colony transmission of bumble bee and honey bee pathogens. Entomological Society of America, St. Louis, MO, Nov. 2019.
- Davis, A.*, K. R. Deutsch and S. H. McArt. Pollinator disease transmission dynamics: effects of a common bee parasite on a hoverfly (Diptera: Syrphidae) host. 4th International Conference for Pollinator Biology, Health, and Policy, Davis, CA, July 2019.
- Deutsch, K. R.*, M. Kebede, A. Iverson, P. A. Muñiz and S. H. McArt. The effect of landscape context on hoverfly communities. 4th International Conference for Pollinator Biology, Health, and Policy, Davis, CA, July 2019.
- Urban-Mead, K. R.*, P. A. Muñiz, S. H. McArt and B. N. Danforth. Bees in the trees: forest canopy resources for orchard pollinators. 4th International Conference for Pollinator Biology, Health, and Policy, Davis, CA, July 2019.
- Grout, T.* and S. H. McArt. A risk assessment for neonicotinoid insecticides in New York. 4th International Conference for Pollinator Biology, Health, and Policy, Davis, CA, July 2019.
- Iverson, A.*, A. Evans, H. Grab, A. Power and S. H. McArt. Impacts of landscape-scale floral resource availability on pollinator communities. 4th International Conference for Pollinator Biology, Health, and Policy, Davis, CA, July 2019.
- Salazar, T.*, S. P. Ellner and S. H. McArt. The consequences of worker size variation on demography in bumble bees. 4th International Conference for Pollinator Biology, Health, and Policy, Davis, CA, July 2019.
- Figuroa, L. L.*, M. Blinder, C. Grincavitch, A. Jelinek, E. Mann, L. Merva, L. Metz, A. Zhao, R. E. Irwin, S. H. McArt and L. S. Adler. Mechanisms mediating bee pathogen transmission: deposition, persistence and acquisition on flowers. 4th International Conference for Pollinator Biology, Health, and Policy, Davis, CA, July 2019.
- Truitt, L., S. H. McArt*, A. Vaughn and S. P. Ellner. Trait-based modeling of multi-host pathogen transmission: Plant-pollinator networks. Ecology and Evolution of Infectious Disease Conference, Princeton, NJ, June 2019.
- Urbanowicz, C. M.*, N. Baert, S. Bluher, M. Ramos, K. Böröczky and S. H. McArt. Low maize pollen collection and low pesticide risk to honey bees in heterogeneous agricultural landscapes. Eastern Branch of the Entomological Society of America, Blacksburg, VA, March 2019.
- Centrella, M.*, K. Poveda, B. N. Danforth, A. Fersch, N. Baert, B. D. Eitzer, M. Van Dyke, K. Böröczky and S. H. McArt. Do solitary and social bees respond in the same way to stressors

- in agroecosystems? Joint Entomological Society of America and Entomology Society of Canada Annual Meeting, Vancouver, BC, Canada, Nov. 2018.
- Iverson, A.* , A. Evans, H. Grab, R. Perez-Alvarez, S. H. McArt, J. Fisher and A. Power. Landscape-scale floral resources: Implications for natural enemies, pests and pollinators. Joint Entomological Society of America and Entomology Society of Canada Annual Meeting, Vancouver, BC, Canada, Nov. 2018.
- Deutsch, K.* , M. Kebede, A. Iverson and S. H. McArt. Contrasting effects of landscape context on bee and hover fly pollinator populations. Joint Entomological Society of America and Entomology Society of Canada Annual Meeting, Vancouver, BC, Canada, Nov. 2018.
- Urban-Mead, K.* , S. H. McArt and B. N. Danforth. Bees in the trees: Early spring forest canopy resources support orchard pollinators. Joint Entomological Society of America and Entomology Society of Canada Annual Meeting, Vancouver, BC, Canada, Nov. 2018.
- Figuroa, L. L.* , S. Compton, H. Grab and S. H. McArt. Functional traits of wild bees predict pathogen prevalence. Joint Entomological Society of America and Entomology Society of Canada Annual Meeting, Vancouver, BC, Canada, Nov. 2018.
- Suarez, E.* , N. J. Baert, D. Lewis, A. A. Fersch and S. H. McArt. Pesticide risk to bees from apple blossoms and wildflowers at 28 New York apple orchards. Cornell-Boyce Thompson Institute High School Internship Summer Symposium, Ithaca, NY, Aug. 2018.
- Bieber, B.* , P. Graystock, P. A. Muñiz and S. H. McArt. Infection dynamics for *Nosema ceranae* among eight genera of wild bees. Cornell-Boyce Thompson Institute Research Experience for Undergraduates Summer Symposium, Ithaca, NY, Aug. 2018.
- Davis, A. E.* , B. Bieber, P. Graystock, P. A. Muñiz and S. H. McArt. Effects of honey bee parasites on North American hoverfly (Diptera: Syrphidae) pollinators. Cornell Summer Institute for Life Sciences Undergraduate Research Symposium, Ithaca, NY, Aug. 2018.
- Milano, N. J.* , B. A. Nault and S. H. McArt. The effects of landscape and farm practices on performance of the common eastern bumble bee, *Bombus impatiens*. Entomological Society of America Eastern Branch Meeting, Baltimore, MD, March 2018.
- McPhail, E. S.* , M. K. Fierke, C. A. Nowak and S. H. McArt. Influences of invasive plant management on pollinator assemblages on powerline rights-of-way in New York and Ohio. New York Society of American Foresters Annual Meeting, Syracuse, NY, Jan. 2018.
- Urban-Mead, K. R.* , S. H. McArt and B. N. Danforth. Bees in the treetops: A new spatial dimension to pollinator visitation networks. Cornell Department of Entomology Jugatae Graduate Student Symposium, Geneva, NY, Jan. 2018.
- Milano, N. J.* , B. A. Nault and S. H. McArt. The effects of landscape and farm practices on performance of the common eastern bumble bee, *Bombus impatiens*. Cornell Department of Entomology Jugatae Graduate Student Symposium, Geneva, NY, Jan. 2018.
- Hale, C.* , A. Iverson and S. H. McArt. Synergisms between insecticides and fungicides impact mortality of the common eastern bumble bee (*Bombus impatiens*). Cornell Department of Entomology Jugatae Graduate Student Symposium, Geneva, NY, Jan. 2018.
- Urban-Mead, K. R.* , S. H. McArt and B. N. Danforth. Bees in the treetops: A new spatial dimension to pollinator visitation networks. Entomological Society of America, Denver, CO, Nov. 2017.
- Figuroa L. L.* , L. S. Adler, R. E. Irwin, C. Grincavitch, E. Mann, L. Metz, A. Zhao and S. H. McArt. Pathogen transmission among bees through shared floral resources: The role of flower species and pathogen placement. Entomological Society of America, Denver, CO, Nov. 2017.
- Milano, N. J.* , B. A. Nault and S. H. McArt. The effects of landscape and farm practices on performance of the common eastern bumble bee, *Bombus impatiens*. Entomological Society of America, Denver, CO, Nov. 2017.

- McArt, S. H.*, A. A. Fersch, N. J. Milano, L. L. Truitt and K. Boroczky. Pesticide risk to honey bees during pollination of a mass blooming crop. Entomological Society of America, Denver, CO, Nov. 2017.
- McPhail, E. S.*, M. K. Fierke, C. A. Nowak and S. H. McArt. Influences of chemical, mechanical, and integrative vegetation management strategies on pollinator assemblage on powerline rights-of-way in New York and Ohio. Entomological Society of America, Denver, CO, Nov. 2017.
- Fersch, A. A.*, L. L. Truitt, N. J. Milano and S. H. McArt. Effect of landscape complexity on diversity of pollen collected by *Apis mellifera*. Entomological Society of America, Denver, CO, Nov. 2017.
- S. H. McArt*. Why we need more physiologists and toxicologists looking into the impact of fungicides on pollinator health. Sarkaria Institute of Physiology and Toxicology Pollinator Symposium, Cornell Entomology, Ithaca, NY, Oct. 2017.
- Tumminello, G.*, T. A. Volk, S. H. McArt, and M. K. Fierke. Pollinator diversity associated with willow biomass crops. International Congress of Entomology, Orlando, FL, Sept. 2016.
- Figuroa, L. L.*, P. Graystock, H. Connelly, Q. McFrederick and S. H. McArt. Pathogen prevalence in plant-pollinator networks. International Congress of Entomology, Orlando, FL, Sept. 2016.
- Figuroa, L. L.*, P. Graystock, H. Connelly, Q. McFrederick and S. H. McArt. Pathogen prevalence in plant-pollinator networks. Third International Conference on Pollinator Biology, Health and Policy. State College, PA, July 2016.
- McArt, S. H., T. Miles, C. Rodriguez-Saona*, A. Schilder, L. S. Adler and M. Grieshop. Floral scent mimicry and transmission of a pollinator-vectoried plant pathogen. Gordon Conference for Plant Volatiles. Ventura, CA, Jan. 2016.
- Figuroa, L. L.*, H. Connelly and S. H. McArt. Pathogen prevalence in plant-pollinator networks. Cornell Department of Entomology Jugatae Graduate Student Symposium, Ithaca, NY, Jan. 2016.
- Tumminello, G.*, T. A. Volk, S. H. McArt, and M. K. Fierke. Pollinator diversity associated with willow biomass crops. Entomological Society of America, Portland, OR, Nov. 2015.
- Giacomini, J.*, R. E. Irwin, S. H. McArt, and L. S. Adler. Influence of pollen diet on parasite infection in bumble bees. Ecological Society of America, Baltimore, MD, Aug. 2015.
- Connon, S. J.*, S. H. McArt, R. E. Irwin and L. S. Adler. Fungicide impacts on the pathogen load of a bumble bee gut parasite. Ecological Society of America, Baltimore, MD, Aug. 2015.
- McArt, S. H.*, C. Urbanowicz, R. E. Irwin, and L. S. Adler. Landscape predictors of pathogen prevalence in bumble bees. Ecological Society of America, Baltimore, MD, Aug. 2015.
- McArt, S. H.* and L. S. Adler. Chemical ecology of a pollinator-vectoried plant pathogen. Ecological Society of America, Sacramento, CA, Aug. 2014.
- McArt, S. H.*, R. Halitschke, J-P. Salminen and J. S. Thaler. Leaf herbivory increases plant fitness via induced resistance to seed predators. Gordon Conference for Plant-Herbivore Interactions, Ventura, CA, Jan. 2013.
- McArt, S. H.* Mummy berry disease of blueberry. 'Twilight' Local Growers Meeting, UMass Cold Spring Orchard, Belchertown, MA, July 2012.
- McArt, S. H.*, R. Halitschke, J-P. Salminen and J. S. Thaler. Leaf herbivory increases plant fitness via induced resistance to seed predators. Cornell Frontiers in the Life Sciences Symposium, Ithaca, NY, March 2012.
- McArt, S. H.*, R. Halitschke, J-P. Salminen and J. S. Thaler. Induced resistance to seed predators via leaf herbivory: Implications for individual plants and genotypically diverse patches. Ecological Society of America, Austin, TX, Aug. 2011.
- McArt, S. H.* Plant genotypic diversity and its influence on arthropod communities. Cornell Entomology Undergraduate Club, Ithaca, NY, Feb. 2011.

- McArt, S. H.* and J. S. Thaler. Plant genotypic richness decreases arthropod evenness. Ecological Society of America, Pittsburgh, PA, Aug. 2010.
- McArt, S. H.*, R. Halitschke and J. S. Thaler. Jasmonate-mediated induced resistance to seed predators via leaf herbivory. Gordon Conference for Plant-Herbivore Interactions, Galveston, TX, Jan. 2010.
- McArt, S. H.*, R. Halitschke and J. S. Thaler. Jasmonate-mediated induced resistance to seed predators via leaf herbivory. Cornell - Penn State Chemical Ecology Symposium, Ithaca, NY, Oct. 2009.
- McArt, S. H.*, S. C. Cook and J. S. Thaler. Contrasting mechanisms for how plant genotypic and species diversity increase arthropod diversity. Ecological Society of America, Albuquerque, NM, Aug. 2009.
- Cook, S. C.*, S. H. McArt, J. S. Thaler, and A. Agrawal. A direct comparison between plant genotypic and species diversity on ecosystem functioning. Ecological Society of America, Albuquerque, NM, Aug. 2009.
- McArt, S. H.*, Cook, S. C. and J. S. Thaler. Contrasting mechanisms for how plant genotypic and species diversity increase arthropod diversity. Biogeochemistry and Environmental Biocomplexity Symposium, Ithaca, NY, Jan. 2009.
- McArt, S. H.* and J. S. Thaler. Plant phytochemical variation impacts plant-mediated interactions between herbivores. Cornell Ecology and Evolutionary Biology Symposium, Ithaca, NY, Jan. 2009.
- McArt, S. H.* and J. S. Thaler. Intraspecific plant chemical diversity and its influence on arthropod communities. Ecological Society of America, Milwaukee, WI, Aug. 2008.
- McArt, S. H.*, D. E. Spalinger, W. B. Collins, E. R. Schoen. 2009. Summer dietary nitrogen availability as a potential bottom-up constraint on moose (*Alces alces*) in South-central Alaska. Ecological Society of America, San Jose, CA, Aug. 2007.

PRESS AND RESOURCE FOR MEDIA

2022

- Interview with Abbe Hamilton from *US Right To Know* about tactics used by the pesticide industry to cast doubt on pesticide research by academics (March 2022):
- Interview on *Two Bees in a Podcast* about new technologies that can make managed honey bees immune to pesticides (January 2022):
<https://podcasts.apple.com/us/podcast/two-bees-in-a-podcast/id1494010558>

2021

- Coverage of our new \$2.5m USDA grant that will investigate how to limit parasite spillover in species-rich bee communities (November 2021):
<https://research.cornell.edu/research/pollinators-and-parasites-impeding-cross-species-spillover>
- Coverage on NPR affiliate *WBFO* and the *Albany Times Union* regarding testimony to NY legislature regarding economic benefits and risk to pollinators from neonicotinoid insecticides (September 2021): <https://www.wbfo.org/local/2021-09-20/new-york-state-assembly-considers-limiting-a-pesticide-linked-to-bee-deaths>
<https://www.timesunion.com/news/article/Birds-and-Bees-create-debate-at-Capitol-16473665.php>
- Interview with Julia Jacobo, reporter for *ABC News*, regarding National Honey Bee Day and crops that would be in most peril if the bee population were to continue to dwindle (August 2021): <https://abcnews.go.com/US/national-honey-bee-day-foods-disappear-pollinator-populations/story?id=79545939>
- Interview with Tammy Webber, reporter for the *Associated Press*, regarding co-benefits for sheep and bees at utility-scale solar array sites (August 2021):
<https://www.miamiherald.com/news/business/article255536026.html>

<https://toronto.citynews.ca/2021/11/04/bees-sheep-crops-solar-developers-tout-multiple-benefits/>

- Interview with Erik Stokstad, reporter for *Science* magazine, regarding a new paper showing that entomopathogenic fungi can be used to control varroa mites (June 2021): <https://www.sciencemag.org/news/2021/06/scientists-evolve-fungus-battle-deadly-honey-bee-parasite>
- Press on *NPR's Here and Now* regarding our new publication showing we can make bees immune to organophosphate insecticides by feeding them enzyme-loaded microparticles (June 2021): <https://www.wbur.org/hereandnow/2021/06/08/bees-pesticide-immunity>
- Press in *Chemistry World* magazine regarding our new publication showing we can make bees immune to organophosphate insecticides by feeding them enzyme-loaded microparticles (May 2021): <https://www.chemistryworld.com/news/pollen-mimicking-antidote-saves-bees-after-pesticide-exposure/4013733.article>
- *Cornell Chronicle* article regarding our new publication showing we can make bees immune to organophosphate insecticides by feeding them enzyme-loaded microparticles (May 2021): <https://news.cornell.edu/stories/2021/05/pollen-sized-technology-protects-bees-deadly-insecticides>
- Interview with Lee Harris, managing editor for *New York Focus*, regarding new proposed legislation to restrict usage of neonicotinoid insecticides in New York (May 2021)
- Interview with Ryan Book, writer for the *New York Times*, regarding how golf courses can become more pollinator friendly (April 2021)
- Reprint and press regarding our neonicotinoid cost-benefit analysis in the *Renewable Resources Journal* (April 2021): <https://mrf.org/wp-content/uploads/2021/04/RRJV35N4.pdf>
- Press from the *Natural Resources Defense Council* regarding how our neonicotinoid cost-benefit analysis is shaping New York policy regarding usage of neonicotinoid insecticides (March 2021): <https://www.nrdc.org/experts/daniel-raichel/science-polling-support-renewed-ny-bill-save-bees>

2020

- Interview with Arleigh Rodgers, editor for *The Ithacan*, regarding how beekeepers and the Dyce lab have been impacted by COVID (September 2020): <https://theithacan.org/life-culture/while-classes-are-online-professor-cares-for-apiary-alone/>
- Interview with Krishna Ramanujan, staff writer for the *Cornell Chronicle*, regarding our new publication showing that flowers are bee transmission hubs (July 2020): <https://news.cornell.edu/stories/2020/07/study-identifies-spread-bee-disease-flowers>
- Commentary in *Nature Ecology & Evolution* regarding our new publication showing that flowers are bee transmission hubs (July 2020): <https://www.nature.com/articles/s41559-020-1200-z>
- Press regarding our new publication showing that flowers are bee transmission hubs (July 2020): <https://www.sciencedaily.com/releases/2020/07/200723172212.htm>
<https://www.news10.com/news/local-news/study-identifies-spread-of-bee-disease-via-flowers/>
- Press regarding our new publication showing that landscape simplification shapes plant-pollinator networks (June 2020): <https://news.cornell.edu/stories/2020/05/study-traces-how-farmlands-affect-bee-disease-spread>
- Interview with Emma Rosenbaum, writer for the *Cornell Daily Sun*, regarding the non-native Giant Asian Hornet (June 2020): <https://cornellsun.com/2020/06/15/murder-hornets-bigger-threat-to-bees-than-to-humans-experts-say/>
- Press regarding our neonicotinoid cost-benefit analysis (June 2020): <https://www.nrdc.org/experts/daniel-raichel/report-finds-neonics-pose-major-risks-bees-losses-moun>
- Resource for Brennan Somers, host of “Good Question” segment on *NBC Rochester News*, regarding the possibility of seeing non-native Giant Asian Hornets in New York (May 2020): <https://www.whec.com/rochester-new-york-news/good-question-are-quotmurder-hornetsquot-in-local-neighborhoods/5743370/?cat=10853>
- Resource for Erik Baard, writer for *The Economist*, on how COVID lockdown has impacted floral resources for pollinators during “No Mow May” (May 2019)

- Interview with Adam Allington, reporter for *Bloomberg News*, regarding the threat posed by the non-native Giant Asian Hornet (May 2020): <https://news.bloomberglaw.com/environment-and-energy/grijalva-seeks-4-million-annually-to-fight-murder-hornets>
- TV interview with Jayne Chacko, co-host of *WHAM Channel 13 News*, regarding the threat posed by the non-native Giant Asian Hornet in New York (May 2020): <https://13wham.com/news/local/murder-hornets-pose-threat-to-bee-colonies>
- Interview with Kate Sheehy, science writer for the *New York Post*, regarding the threat posed by the non-native Giant Asian Hornet (May 2020): <https://nypost.com/2020/05/04/asian-murder-hornet-reported-locally-but-experts-swat-back-claims/>
- Podcast interview with Matt Kelly, coordinator of *The Bee Report*, on recent pesticide-related stories in the news regarding pollinator health (April 2020): <https://thebeereport.buzzsprout.com/819424/3220117-scott-mcart-a-discussion-of-recent-news-stories-about-pesticides-and-bee-health>

2019

- Interview with Kevin Lam, writer for the *Cornell Chronicle*, regarding the 2019 Insectapalooza (Sept. 2019): <http://news.cornell.edu/stories/2019/10/insectapalooza-2019-will-be-bigger-and-buggier-and-free>
- Interview with Julia Jacobo, science writer for *ABC News*, regarding decision by USDA to stop monitoring honey bees and colony losses in the United States (July 2019): <https://abcnews.go.com/US/40-decline-honey-bee-population-winter-unsustainable-experts/story?id=64191609>
- Interview with Liz Kineke, science writer for *CBS News*, regarding how climate change is impacting pollinator health (June 2019)
- Interview with Kimberly McCoy, science writer for *PBS NewsHour*, regarding new research showing pathogen spillover between managed honey bees and native wild bees (June 2019): <https://www.pbs.org/newshour/science/are-commercial-honeybees-making-wild-bees-sick>
- Press regarding our science-art collaboration with artists from Wales on the topic of pollinator health (June 2019): <http://www.newyorkagconnection.com/story-state.php?id=570&yr=2019&fbclid=IwAR1t43k9kGnFZE-hdclqWqAQz7jIjDslZDIFszq8fA3jzDcpt6KDUKbr3WKI>
- Press regarding our new Atkinson Center for a Sustainable Future project on using solar farm sites to graze sheep, maintain flowers for pollinators, and sequester soil C: <http://news.cornell.edu/stories/2019/05/atkinson-academic-venture-fund-awards-13m-10-projects>
- Press via the *BBC program Countryfile* regarding our science-art collaboration with artists from Wales on the topic of pollinator health (May 2019): <https://www.bbc.co.uk/iplayer/episode/m0005qbm/countryfile-south-wales>
- Resource for Nathan Rott, writer for *NPR*, on IPBES' report indicating that one million species are threatened with extinction from human activity (May 2019): <https://www.npr.org/2019/05/06/720654249/1-million-animal-and-plant-species-face-extinction-risk-u-n-report-says>
- Live radio interview with Alex Jensen, host of "This Morning" in Seoul, South Korea, regarding IPBES' report on one million species being threatened with extinction from human activity (May 2019): <https://podcasts.apple.com/kr/podcast/0513-news-focus-1-prof-jack-liu-scott-mcart-global/id1038822609?i=1000437925222&l=en>
- Interview with Beth Saulnier, Senior Editor for the *Cornell Alumni Magazine*, regarding the reinvigoration of the Dyce Lab and research on pollinator health (May 2019)
- Interview with Jose Beduya, staff writer for the *Cornell Chronicle*, regarding PolliNation, the exhibit documenting our science-art collaboration with artists from Wales on the topic of pollinator health (May 2019): <http://news.cornell.edu/stories/2019/05/art-science-collaboration-spotlights-pollinator-health>
- Interview with Erik Stokstad, writer for *Science* magazine, regarding research efforts to improve honey bee genetics for parasite and pathogen resistance (May 2019)

- Tip sheet for CALS media on the new IPBES report that 1 million species face extinction due to human activity (May 2019): <http://news.cornell.edu/media-relations/tip-sheets/windshield-effect-taken-new-extremes-un-biodiversity-report>
- Interview with Jenny Leijonhufvud, Gallery & Outreach Spaces Coordinator for Mann Library, regarding PolliNation, the exhibit documenting our science-art collaboration with artists from Wales on the topic of pollinator health (May 2019): https://events.cornell.edu/event/artists_scientists_pollinator_health
- Interview with Anyi Cheng, assistant editor at the *Cornell Daily Sun*, regarding research and extension at the Dyce Lab (April 2019): <https://cornellsun.com/2019/04/19/through-research-and-outreach-cornell-lab-confronts-declining-bee-population/>
- Interview with Jason Koski, media coordinator for Cornell CALS, regarding how our research is relevant to Earth Day (April 2019). 1-minute video: <http://www.cornell.edu/video/buzz-about-pollinators-entomologist-scott-mcart>
- Interview with Tammy Webber, writer for the *Associated Press*, regarding pollinator-friendly solar in the United States (April 2019)
- Press in *The Guardian* regarding how our publication on risk from chlorothalonil to US bumble bees (McArt et al. 2017 *Proceedings B*) supported EU decision to ban chlorothalonil (March 2019): <https://www.theguardian.com/environment/2019/mar/29/eu-bans-widely-used-pesticide-over-safety-concerns>

2018

- Interview with Jodi Helmer, writer for *Scientific American*, regarding pollinator-friendly solar in the United States (Nov. 2018): <https://www.scientificamerican.com/article/solar-farms-shine-a-ray-of-hope-on-bees-and-butterflies/>
- Interview with Krishna Ramanujan, staff writer for the *Cornell Chronicle*, regarding 2018 Insectapalooza, the Dept. of Entomology open house (Oct. 2018): <http://news.cornell.edu/stories/2018/10/educational-fun-insects-insectapalooza-oct-20>
- Press regarding the NYS Beekeeper Tech Team (Sept. 2018): <http://www.cornell.edu/video/protecting-bees-boosting-ny-economy-beekeeper-tech-team>
- Press regarding our new “Honey Bee Biology and Disease Management” course for veterinary students (Aug. 2018): <http://news.cornell.edu/stories/2018/08/new-course-trains-veterinary-students-protect-pollinators>
- Interview with Weng Cheong, writer for the *Syracuse Post-Standard*, regarding the use of drones for crop pollination (Aug. 2018)
- Interview with Aristos Georgiou, science reporter for *Newsweek*, regarding the global state of pollinator health and factors causing declines (Aug. 2018)
- Resource for C. Claiborne Ray, columnist for the *New York Times*, on environmental threats to bees in New York City (July 2018): <https://www.nytimes.com/2018/07/27/science/honey-hives-pollutants.html>
- *Rochester Democrat & Chronicle* story regarding our new research on pollinator friendly solar farms (July 2018): rochesterdemocrat.ny.newsmemory.com/publink.php?shareid=0d312576d
- *Cornell Chronicle* story regarding our new research on pollinator friendly solar farms (July 2018): <http://news.cornell.edu/stories/2018/07/partnership-assess-pollinator-friendly-solar-farms>
- Interview with Matt Steecker, writer for the *Ithaca Journal*, regarding our new research on pollinator-friendly solar farms in New York (July 2018): <https://www.ithacajournal.com/story/news/local/2018/07/08/cornell-university-and-solar-developer-do-100-000-pollinator-study/760461002/>
- Interview with Chelsea Whyte, writer for *New Scientist* magazine, regarding a new publication in *Proceedings B* showing that bees perform well in urban vs. rural areas in England (July 2018): <https://www.newscientist.com/article/2172755-bumblebees-in-cities-are-healthier-than-those-in-the-countryside/>
- Interview with Brian Nearing, writer for the *Albany Times Union*, regarding the NYS Pollinator Protection Plan update and possible legislation regarding pesticide restrictions (June 2018):

<https://www.timesunion.com/business/article/Common-chemicals-in-fruit-orchard-industry-13014584.php>

- Interview with Rob Davis, Director of Fresh Energy, regarding legislation for the creation of “pollinator-friendly solar” label in New York (June 2018): <http://nylcv.org/press-item/5128/>
- Resource for Matt Kelly, freelance writer for *The Bee Report*, regarding the use of drones for crop pollination (June 2018): <https://thebeereport.com/2018/07/03/drone-pollinates-apples-maybe/>
- Resource for Matt Kelly, freelance writer for *Penn Yan Chronicle* (New York), regarding competition for resources among bees (May 2018): <https://thebeereport.com/2018/05/25/bees-can-be-aggressive-but-its-a-waste-of-time/>
- Interview with Kara Dunn, writer for *American Agriculturist*, regarding emerging research regarding pesticide impacts on bees (March 2018): <http://www.americanagriculturist.com/bees-go-easy-fungicide-threatened-bees>

2017

- Interview with Angela Lovell, writer for *Grainews* (Manitoba), regarding fungicides, bee health and what growers can do to reduce risk to non-target organisms (Dec 2017)
- Interview with Damian Carrington, environment editor for *The Guardian*, regarding our publication on factors associated with United States bumble bee declines (Dec 2017): https://www.theguardian.com/environment/2017/dec/29/alarmed-link-between-fungicides-and-bee-declines-revealed?CMP=share_btn_tw
- Interview with Peter Reschke, writer for *Ontario Farmer Magazine*, regarding our publication on factors associated with United States bumble bee declines (Dec 2017)
- Interview with Erik Stokstad, writer for *Science* magazine, regarding our publication on factors associated with United States bumble bee declines (Dec 2017)
- Interview with Dana Kobilinsky, science writer for *The Wildlife Society*, regarding our publication on factors associated with United States bumble bee declines (Dec 2017): <http://wildlife.org/study-links-fungicides-to-bee-colony-declines/>
- Interview with Rebecca Williams, *NPR affiliate Michigan Radio* in Ann Arbor, MI, regarding our publication on factors associated with United States bumble bee declines (Nov 2017): <http://michiganradio.org/post/investigators-point-fungicides-one-reason-bumblebee-declines>
- Interview with Blaine Friedlander, staff writer for the *Cornell Chronicle*, regarding our publication on factors associated with United States bumble bee declines (Nov 2017): <http://news.cornell.edu/stories/2017/11/bee-decline-fungicides-emerge-improbable-villain>
- Some additional press regarding our publication on factors associated with United States bumble bee declines (Nov 2017)
<https://www.sciencedaily.com/releases/2017/11/171114195041.htm>
<https://www.manitobacooperator.ca/daily/u-s-study-links-bumblebee-declines-to-fungicide-use>
<https://www.agcanada.com/daily/u-s-study-links-bumblebee-declines-to-fungicide-use>
<http://growingfruit.org/t/fungicides-bumblebee-decline/13268>
<https://utahpests.usu.edu/news/bee-fungicides>
<http://americanlaboratory.com/344453-Fungicides-Have-Negative-Impact-on-Bee-Health/>
<http://www.umass.edu/newsoffice/article/researchers-link-fungicides-bumblebee>
<https://umdrighnow.umd.edu/researchers-find-another-suspect-bee-decline-fungicides-business-mirror>
- Resource for Matt Kelly, freelance writer for *Penn Yan Chronicle* (New York), regarding factors that can cause aggressive honey bee behavior (Sept 2017)
- Resource for Arielle Tuzon, researcher for *ABC News*, regarding bumble bee buzz pollination (July 2017)
- Interview with Thomas Hill, freelance writer for *Growing Magazine*, regarding plants used by managed and wild bees (July 2017): <https://www.growingmagazine.com/education/creating-permanent-habitat-pollinators/>
- Letter to the Editor of the *Albany Times Union* outlining inaccurate and incomplete information regarding our research on pesticide risk to honey bees (July 2017):

<http://www.timesunion.com/opinion/article/Letter-Significant-findings-about-health-of-bees-11732643.php>

- Interview with Matthew Weinstein, staff writer for the Ithaca Journal, regarding Dyce lab research showing that *Varroa* mites are major threat to NYS honey bees (July 2017): <http://www.ithacajournal.com/story/news/local/2017/07/13/buzz-off-varroa-mite-hurting-ny-honeybee-colonies/475227001/>
- Press regarding NYS policy and our research related to pesticide risk to honey bees (June 2017): <http://www.timesunion.com/allwcm/article/State-pushes-bee-health-week-amid-pesticide-11233551.php>
- Interview with Anthony King, staff writer for *Chemistry & Industry*, a UK scientific society magazine, regarding the recently announced 2016-17 United States honey bee loss estimate and factors that may be contributing to losses (June 2017)
- Interview with Matt Kelly, freelance writer for *Penn Yan Chronicle* (New York), regarding pollinator declines (May 2017): <http://www.chronicle-express.com/news/20170518/plant-wildflowers-because-bee-lives-matter>
- Some press regarding our publication on pesticide risk to honey bees in NYS apple (April 2017):
<http://www.futurity.org/pesticides-bee-bread-1409092/>
<http://www.sciencenewsline.com/news/2017042115330015.html>
<https://phys.org/news/2017-04-bees-heavy-pesticide-peril-drawn-out.html>
https://www.eurekalert.org/pub_releases/2017-04/cu-ndu042017.php
<http://www.newswise.com/articles/view/673390/?sc=rsla>
<http://healthmedicinet.com/i/new-data-unearts-pesticide-peril-in-beehives/>
- Interview with Blaine Friedlander, staff writer for the *Cornell Chronicle*, regarding our publication on pesticide risk to honey bees in NYS apple (April 2017): <http://www.news.cornell.edu/stories/2017/04/bees-face-heavy-pesticide-peril-drawn-out-sources>
- Interview with Dave Weinstock, reporter for *Growing* magazine, regarding factors contributing to pollinator declines and current research on pesticides and pathogens (Jan. 2017)
- Interview with Ben Henry, reporter for *The Scientist Magazine*, regarding mummy berry disease and other plant pathogens vectored by pollinators (Jan. 2017): <http://www.the-scientist.com/?articles.view/articleNo/48063/title/The-Fungus-that-Poses-as-a-Flower/>

2016

- Interview with Matt Hayes, staff writer for *PeriodiCALS* magazine, regarding research and extension related to declining NY bee populations (Sept. 2016): <https://cals.cornell.edu/news/periodicals/pollinator-protectors>
- Interview with Alex Dunbar, producer for *CNY news (ABC and NBC affiliate)*, regarding pollinator health in New York (Sept. 2016): <http://cnycentral.com/news/local/cornell-researchers-looking-for-answers-after-54-of-bees-in-new-york-state-died-last-year>
- Interview with Kelly Harold, producer for *ABC News*, regarding pollinator declines and the threat to US agriculture (July 2016): http://abcnews.go.com/video/food_forecast
- Interview with Jenna Flanagan, correspondent for *NY NOW*, regarding the NYS Pollinator Protection Plan (July 2016): <http://nynow.org/post/rnc-analysis-lack-buzz-hurting-farmers>
- Interview with *WHCU radio* regarding the NYS Pollinator Protection Plan (June 2016): <http://whcuradio.com/news/025520-state-cornell-protect-bees-pollinators/>
- Interview with Krishna Ramanujan, staff writer for the *Cornell Chronicle*, regarding new NIH grant to study pathogen transmission among bees (June 2016): <http://news.cornell.edu/stories/2016/06/scientists-examine-spread-disease-bees-nih-grant>
- Interview with Krishna Ramanujan and Matt Hayes, staff writers for the *Cornell Chronicle*, regarding Cornell pollinator research/extension and the New York State Pollinator Protection Plan (June 2016): <http://www.news.cornell.edu/stories/2016/06/new-state-pollinator-protection-plan-announced-cornell>
- Resource for Taylor Watson, staff writer for *The Daily Orange*, Syracuse University, regarding factors contributing to pollinator declines (March 2016):

<http://dailyorange.com/2016/03/researcher-explains-decline-in-bee-population-at-suny-esf-lecture>

- Interview with Ivy Reynolds, Assistant Director of Public Policy for NY Farm Bureau, for Farm Bureau 'Grassroots' April newsletter featuring New York's pollinators (March 2016): http://www.nyfb.org/img/uploads/file/0416_grassroots_for_web.pdf
- Resource for Sue Garing, writer for the Empire State Honey Producers newsletter, regarding the benefits of registration for New York beekeepers (Jan. 2016)

2015

- Interview with Brian Nearing, staff writer for the *Albany Times Union*, on the NYS Pollinator Protection Plan (Nov. 2015)
- Resource for Sue Garing, writer for the Empire State Honey Producers newsletter, regarding pesticide threats to bees in New York (Oct. 2015)
- Interview with Azure Gilman, staff writer for *Al Jazeera America*, on the growing number of hobby beekeepers in New York (Aug. 2015)
- Interview with C. Claiborne Ray, columnist for the *New York Times*, on how bees survive the winter (Jan. 2015): http://www.nytimes.com/2015/01/27/science/earth/27qna.html?_r=0

2014

- Interview with *CBS Boston* radio on pathogen transmission by and among bees (June 2014)
- Interview with UMass media relations on pathogen transmission and bees (June 2014): <http://www.umass.edu/researchnext/floral-transmitters>

TEACHING (no formal teaching responsibilities)

Organizer, Pollinator Reading Group, Cornell University (Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022)

Guest Lecturer

Insect Biology (ENTOM 2120): *Pollinators and Pollination*, Cornell University (Fall 2021), 30 students.

Professional Development (ENTOM 7670): *Pollinator Health Research in the McArt Lab*, Cornell University (Fall 2021), 10 students.

Writing for Environmental & Science Professionals (EWP 407): *Neonicotinoids and bees: A story that's consistently exaggerated by the popular press* (lecture), SUNY ESF (Spring 2020, Spring 2021, Spring 2022), 20 students.

Robots, Wine & Food (ECE 6970): *Digital agriculture for pollinators and pollination – a brave new world?* (lecture), Cornell University (Spring 2020), 25 students.

Applied Entomology (ENTOM 3410): *How to improve pollinator health* (lecture and lab), Cornell University (Fall 2017, Fall 2018, Fall 2020), ~15 students per class.

Integrated Pest Management (ENTOM 4440): *Bee biology and health* (lecture and lab), Cornell University (Spring 2016, Spring 2017, Spring 2018, Spring 2019), ~35 students per class.

Honey Bee Biology (ENTOM 2030): *Steps that New York is taking to improve pollinator health* (lecture), *Pesticides, pathogens and pollinator health* (lecture), Cornell University (Fall 2016, Fall 2017, Fall 2018), ~90-120 students per class.

Insect Conservation Biology (ENTOM 3440): *How to improve pollinator health* (lecture), Cornell University (Fall 2017, Fall 2019, Fall 2021), ~20 students per class.

Experimental Design in Ecology: *Common gardens, randomized blocks and observer bias* (lecture), UMass-Amherst (Spring 2014), 30 students.

Chemical Ecology: *Plant phenolics* (lecture), Colorado State University (Spring 2014), 15 students.

Tutorial Instructor, Introduction to modern meta-analysis using MetaWin, Colorado State University (Spring 2014), 10 students.

COMMITTEE ASSIGNMENTS

National

American Beekeeping Federation Foundation for the Preservation of Honey Bees Trustee (2022-2024)

State

NYS Apiary Industry Advisory Committee Science Advisor (2015-present)
NYS Pollinator Protection Plan Task Force Science Advisor (2015-present)

University

Cornell Bee Campus Faculty Advisor (2020-present)
Pesticide Management Education Program (PMEP) Director Search Committee (2019)
Cornell Undergraduate Beekeeping Club Faculty Advisor (2016-present)

Department

Jugatae Grad Student Organization Faculty Advisor (2021-2023)
Tree Fruit Entomologist Search Committee (2021)
Rogoff Endowment Committee Chair (2019-2021)
Entomology Department Seminar Series Coordinator (2018-2021)
Department Open House (“Insectapalooza”) Committee (2017-2019)
Honey Bee Extension Associate Advisory Committee (2015-2019)
Griswold Endowment Committee Chair (2015-2020)
Entomology Space Committee (2015)
Honey Bee Extension Associate Search Committee (2014-2015)

Community

Varna Community Association Board Member (2017-2019)

PROFESSIONAL ACTIVITIES

Diversity/Inclusion: Fellowship Panelist for Cornell Grad School Diversity Preview Weekend (Spring 2021). Participant in ENTOM 4040: Diversity, Equity, & Inclusion in STEM: The Science Behind Bias Seminar (Fall 2020). Participant in Cornell Entomology Racial Justice Book Club (Fall 2020, Spring 2021).

Peer Reviewer: *Austral Ecology* (1 manuscript), *Basic and Applied Ecology* (1), *Biological Invasions* (1), *Canadian Journal of Zoology* (1), *Chemosphere* (1), *Ecological Entomology* (3), *Ecological Applications* (2), *Ecology* (6), *Ecology Letters* (4), *Environment International* (1), *Frontiers in Microbiology* (1), *Functional Ecology* (2), *Insects* (1), *Journal of Applied Ecology* (3), *Oecologia* (2), *Oikos* (1), *Parasitology* (1), *Plant Ecology & Diversity* (1), *PLoS One* (2), *Proceedings of the Royal Society of London B* (4), *Proceedings of the National Academy of Sciences* (2)

Grant Reviewer: Ontario Agri-Food Innovation Alliance Research Program (Nov. 2021), The Ohio State University College of Food, Agricultural, and Environmental Sciences Immediate Needs Program (Nov. 2021), USDA NIFA Pollinator Health Program (Aug. 2020, Sept. 2019), Cornell Institute for Digital Agriculture (July 2020), USDA ARS Baton Rouge Bee Lab Review (April 2019), NSF Graduate Research Fellowship Program (Jan. 2019), NSF Division of Environmental Biology Program (Oct. 2017), Foundation for Food and Agricultural Research (FFAR) Pollinator Health Fund (Sept. 2017), USDA Federal Capacity Funds (Cornell, July 2017), David R. Atkinson Sustainable Biodiversity Fund (Cornell, Feb. 2011), NSF IGERT in Biogeochemistry and Biocomplexity Training Grants Program (Cornell, Jan. 2009, Jan. 2010)

Symposium Co-organizer (with Quinn McFrederick, UC Riverside): “Drivers of host-pathogen interactions” session of the 4th International Conference on Pollinator Biology, Health and Policy (Davis, CA, July 2019). Co-organizer (with Margarita Lopez-Urbe, Penn State): Penn State-Cornell Pollinator Symposium (State College, PA, April 2018). Organizer: “Probing the microbial world of flowers: Impacts on plants and animals,” Ecological Society of America (Sacramento, CA, Aug. 2014)

Student Presentation Judge: Jugatae Graduate Student Symposium (Cornell Entomology via Zoom, Jan. 2022), Jugatae Graduate Student Symposium (Cornell Entomology, Jan. 2020), Entomological Society of America Annual Meeting (Vancouver, BC, Nov. 2018), Entomological Society of America Annual Meeting (Denver, CO, Nov. 2017), Poster Presentation Judge: Front Range Student Ecology Symposium (Colorado State University, 2013)

Invited Speaker Host: Dr. Rachel Mallinger, University of Florida (2021), Dr. Jacob Peters, Cornell University (2021), Dr. Quinn McFrederick, University of California, Riverside (2019), Dr. Rebecca Irwin, North Carolina State University (2018), Dr. Peter Graystock, Cornell University (2017), Dr. Nigel Raine, Guelph University (2016), Dr. Douglas Futuyma, SUNY Stony Brook (2010), Dr. Jason Fridley, Syracuse University (2010), Dr. Gina Wimp, Georgetown University (2008)
Administrator: Cornell pollinator list serve (POLLINATOR-L@cornell.edu)

PROFESSIONAL AFFILIATIONS

Member, Entomological Society of America (2010-present)
Member, Ecological Society of America (2004-present)
Member, International Society for Chemical Ecology (2004-present)