

Adam G. Dolezal, Ph.D.

Curriculum Vitae

Assistant Professor

Department of Entomology

University of Illinois Urbana-Champaign

320 Morrill Hall

505 S. Goodwin Ave.

Urbana, IL 61801

Email: adolezal@illinois.edu; phone: 1-217-300-6762**Education**

- Arizona State University** **2012**
Degree: Ph.D., Biology
- University of Illinois Urbana-Champaign** **2006**
Degree: BS, Integrative Biology, with distinction; minor in Chemistry

Professional Appointments

- Assistant Professor**, Department of Entomology, University of Illinois Urbana-Champaign **2017-present**
- Affiliate**, Program in Ecology, Evolution, and Conservation Biology, University of Illinois **2017-present**
- Postdoctoral Research Associate**, Iowa State University, Department of Ecology Evolution, and Organismal Biology **2012-2017**

Independent Consulting

- Technical Lead**, Soybean Pollinator Best Management Practices (BMP) Effort; working with Honey Bee Health Coalition through Keystone Policy Center. **2017**
Supervisory contacts: Stacey Smith (Keystone), Richard Joost (United Soybean Board)

Publications*Published or accepted peer-reviewed papers (22):*

- Rutter, L., Carrillo-Tripp, J., Bonning, B.C., Cook, D., Toth, A.L., **Dolezal, A.G.** 2019. Transcriptomic responses to diet quality and viral infection in *Apis mellifera*. *BMC Genomics* **20**(1): 412.; 10.1186/s12864-019-5767-1
- Dolezal, A. G.**, Carrillo-Tripp, J., Judd, T. M., Miller, W. A., Bonning, B. C., Toth, A. L. 2019 Interacting stressors matter: Diet quality and virus infection in honey bee health. *Royal Society Open Science*. 6: 181803; <http://dx.doi.org/10.1098/rsos.181803>
- Corby-Harris, V., Bowshers, J.H., Carr-Markell, M., Carroll, M. J., Centrall, M., Cook, S.C., Couvillon, M., Degrandi-Hoffman, G., **Dolezal, A. G.**, Jones, J. C., Mogren, C. L., Otto, C. R. V., Lau, P., Rangel, J., Schürch, R., St. Clair, A. 2018. Emerging themes from the ESA symposium entitled "Pollinator Nutrition: Lessons from bees at Individual to Landscape Levels." *Bee World* 1-15
- Walton, A., **Dolezal, A.G.**, Bakken, M., Toth, A. 2018. Hungry for the queen: honey bee nutritional environment affects worker pheromone response in a life-stage dependent manner. *Functional Ecology* 32(12): 2699-2706.
- Dolezal, A. G.** and Toth, A. L.. 2018. Feedbacks between nutrition and disease in honey bee health. *Curr Opin in Insect Science* **26**: 114-119.

- Toth, A. L., and **Dolezal, A. G.** Editorial overview: Social insects: Integrative approaches to understanding insect sociality: why physiology is still highly relevant. 2017. *Curr Opin Insect Sci* 22: viii-ix. <https://doi.org/10.1016/j.cois.2017.07.011>
- Dolezal, A. G.**, Hendrix, S. D., Scavo, N. A., Carrillo-Tripp, J., Harris, M. A., Wheelock, M. J., O'Neal, M. E., Toth, A. L. Honey bee viruses in wild bees: Viral prevalence, loads, and experimental inoculation. 2016. *Plos One*, DOI: 10.1371/journal.pone.0166190
- Zinna, R., Gotoh, H., Brent, C., **Dolezal A. G.**, Kraus, A., Niimi, T., Emlen, D., Lavine, L.C. Endocrine control of exaggerated traits in rhinoceros beetles. 2016. *Integrative & Comparative Biology*
- Dolezal, A. G.**, Carrillo-Tripp, J., Miller, W. A., Bonning, B.C., Toth, A.L. Intensively cultivated landscape and *Varroa* mite infestation are associated with reduced honey bee nutritional state. 2016 *Plos One*, DOI: 10.1371/journal.pone.0153531
- Carrillo-Tripp, J., **Dolezal, A. G.**, Goblirsch, M. J., Miller, W. A., Toth, A.L., Bonning, B.C., 2016. In vivo and in vitro infection dynamics of honey bee viruses. *Scientific Reports*. 6:22265, DOI: 10.1038/srep22265
- Dolezal, A. G.**, Carrillo-Tripp, J., Miller, W. A., Bonning, B.C., Toth, A.L. 2016. Honey bees preferentially reject pollen contaminated with field-relevant levels of an insecticide., *J. of Economic Entomology*. 109(1):41-48. <http://dx.doi.org/10.1101/025189>
- Ligon, R. A., **Dolezal, A. G.**, Hicks, M. R., Butler, M. W., Morehouse, N. I., Tirupalavanam, G. 2014. Territorial Ants: Using ant colonies and the scientific process to engage students in the study of animal behavior. *Am Bio Teach*. 76,8:525-534.
- Miller, W.A., Carrillo-Tripp, J., Bonning, B.C., **Dolezal, A.G.**, Toth, A.L., 2014. Conclusive evidence of replication of a plant virus in honeybees is lacking. *Mbio* 5.
- Dolezal, A.G.**, Toth, A.L., 2013. Honey bee sociogenomics: a genome-scale perspective on bee social behavior and health. *Apidologie* 45, 375-395
- Yamamoto, R., Bai, H., **Dolezal, A.G.**, Amdam, G., Tatar, M., 2013. Juvenile hormone regulation of *Drosophila* aging. *BMC Biol* 11.
- Dolezal, A.G.**, Johnson, J., Hoelldobler, B., Amdam, G.V., 2013. Division of labor is associated with age-independent changes in ovarian activity in *Pogonomyrmex californicus* harvester ants. *J Insect Physiol* 59, 519-524.
- Dolezal, A.G.**, Brent, C.S., Holldobler, B., Amdam, G.V., 2012. Worker division of labor and endocrine physiology are associated in the harvester ant, *Pogonomyrmex californicus*. *J Exp Biol* 215, 454-460.
- Mutti, N.S., **Dolezal, A.G.***, Wolschin, F., Mutti, J.S., Gill, K.S., Amdam, G.V., 2011. IRS and TOR nutrient-signaling pathways act via juvenile hormone to influence honey bee caste fate. *J Exp Biol* 214, 3977-3984. *co-lead author
- Blumstein, D.T., Ebersperger, L.A., Hayes, L.D., Vasquez, R.A., Ahern, T.H., Burger, J.R., **Dolezal, A.G.**, Dosmann, A., Gonzalez-Mariscal, G., Harris, B.N., Herrera, E.A., Lacey, E.A., Mateo, J., McGraw, L.A., Olazabal, D., Ramenofsky, M., Rubenstein, D.R., Sakhal, S.A., Saltzman, W., Sainz-Borgo, C., Soto-Gamboa, M., Stewart, M.L., Wey, T.W., Wingfield, J.C., Young, L.J., 2010. Toward an integrative understanding of social behavior: new models and new opportunities. *Front Behav Neurosci* 4.
- Wang, Y., Mutti, N.S., Ihle, K.E., Siegel, A., **Dolezal, A.G.**, Kaftanoglu, O., Amdam, G.V., 2010. Down-Regulation of honey bee IRS gene biases behavior toward food rich in protein. *Plos Genet* 6.
- Dolezal, A.G.**, Brent, C.S., Gadau, J., Holldobler, B., Amdam, G.V., 2009. Endocrine physiology of the division of labour in *Pogonomyrmex californicus* founding queens. *Anim Behav* 77, 1005-1010.
- Tillberg, C.V., McCarthy, D.P., **Dolezal, A.G.**, Suarez, A.V., 2006. Measuring the trophic ecology of ants using stable isotopes. *Insect Soc* 53, 65-69.

Submitted research or review papers

Book Chapters and Published Protocols (8):

- Dolezal, Adam G.** 2019. Caste Determination in Arthropods , In Choe, J.C. (eds) *Encyclopedia of Animal Behavior 2nd Edition*, vol. 4, pp 691-698, Elsevier: Academic Press, ISBN: 9780128132517
- Ihle, K. E., Amdam, G. V., **Dolezal, A. G.**, 2016. Evo-devo of Social Behavior. *In* Nuño de la Rosa, L. and G.B. Müller (eds.), *Evolutionary Developmental Biology - A Reference Guide*. doi:10.1007/978-3-319-33038-9_45-1
- Dolezal, A. G.**, Flores, K.B., Traynor, K.S., & Amdam, G.V. 2013. The Evolution and Development of Eusocial Insect Behavior, *In* Streelman, J.T. (ed.) *Advances in Evolution and Development*; Wiley-Blackwell, Hoboken, NJ, USA. ISBN: 978-1-118-13111-4
- Dolezal, Adam G.** 2010. Caste Determination in Arthropods (Chapter 334), In Breed, M. D. and Moore J. (eds.) *Encyclopedia of Animal Behavior*, pp 247-253, Oxford: Academic Press, **ISBN-13: 978-0080453330**
- Smith, C. R., **Dolezal, A. G.**, Eliyahu D., Holbrook C. T. & Gadau, J. 2009. Ants (Formicidae): Models for Social Complexity. *CSH Protocols*; doi:10.1101/pdb.emo125
- Dolezal, A. G.** , Brent, C. S. 2009. General Dissection of Female Ant Reproductive System and Brain. *CSH Protocols*; doi:10.1101/pdb.prot5244
- Brent, C. S., **Dolezal, A. G.** 2009. Juvenile Hormone Extraction, Purification, and Quantification in Ants. *CSH Protocols*; doi: 10.1101/pdb.prot5246
- Brent, C. S., **Dolezal, A. G.** 2009. Radiochemical Assay of Juvenile Hormone Biosynthesis Rate in Ants. *CSH Protocols*; doi: 10.1101/pdb.prot5248

Extension documents

- Dolezal, A. G.**, Honey bee health coalition technical committee. 2017. Best management practices (BMPs) to protect honey bees and other pollinators in soybean fields. Published by Honey bee health coalition, <https://honeybeehealthcoalition.org/soybmeps/>

Research Highlights (2)

- Inside Journal of Experimental Biology: Honey bee larvae need IRS and TOR to become queens. 2011. 214: i-ii
- Animal Behaviour: In Focus: Separate Spheres. 2009. Volume 77, Issue 5, Pages 981-982

Grants and Awards

Research Grants (\$2,451,736; with \$662,238 to Dolezal at UIUC)

- Penn State Extension Multistate & Integrated Program Grants, (2019-2020) Grozinger, C., **Dolezal, A.G.** (Lead of Illinois component), Harpur, B., Lopez-Uribe, M. M., Butzler, T. M. *Context is key: partnering with beekeepers to generate digital geospatial tools to support bee health*. \$24,583 (\$3960 to Dolezal lab, \$11,000 for collaborative training workshop).
- United States Department of Agriculture: Agriculture and Food Research Initiative (USDA-AFRI), (2019-2021) **Dolezal, A.G.** (Lead PI), Co-PIs: Bonning, B.C., Brent, C.S., Robinson, G.E. *Viral*

Hijackers: Can Viral Pathogens Manipulate Honey Bee Behavior to Increase Disease Transmission? \$499,900 (\$496,290 to UIUC).

Iowa Honey Producers Association Research Grant (2018-2019) St. Clair, A. L., **Dolezal, A.G.**, Cass, R., Zhang, G., Hendriksma, H., O'Neal, M.O., Toth, A.L. *Overwintering honey bee colonies in temperate climates: a management perspective* \$3,864.00

Foundation for Food and Agriculture Research: Pollinator Health Fund. (2018-2020) Schulte-Moore, L. Bradbury, S. P., **A. G. Dolezal**, M. O. O'Neal, , A.L. Toth, J. C. Tyndall. *Impact of Prairie on Reducing Interacting Stressors on Pollinator Health*. \$503,028 (\$165,948 to UIUC)

USDA-AFRI: Food Security Challenge Area: New Frontiers in Pollinator Health: From Research to Application. (2017-2019) Toth, A., M. O'Neal., E. Hodgson, **A. Dolezal**. *Combining crop production and conservation for improved bee health*. \$999,317

North American Pollinator Protection Campaign (NAPPC; 2015). **Dolezal, A.** and A. Toth. *Do viruses manipulate honey bee behavior in ways that increase their transmission?* \$10,000

Center for Global and Regional Environmental Research (CGRER; 2015). Toth, A. and **A. Dolezal**. *Effects of larval nutritional stress on honey bee disease susceptibility and immunocompetence*, \$30,000

Leopold Center for Sustainable Agriculture, competitive grant program 2015-2017; Toth, A., **A. Dolezal**, M. O'Neal, E. Hodgson. *Impacts of landscape diversity and organic practices on the abundance and health of bee pollinators.*, \$103,626

United Soybean Board, (USB; 2014-2016); O'Neal, M., A. Toth, and **A. Dolezal**. *How much do soybeans benefit from honey bee pollination (and vice-versa)?*, \$300,665

Journal of Experimental Biology Travelling Fellowship (2012), \$3200

Research Grant, Graduate and Professional Students Association (2008), Arizona State University, \$2000

Travel Grants (\$11,490)

Professional Development Travel Grant (2011), Graduate Professional Students Association, ASU, \$950

Student Travel Grant (2010), Gordon Research Conferences, Genes and Behavior, \$890

Student Travel Grant (2009), Gordon Research Conferences, Ecological and Evolutionary Functional Genomics, \$500

Student Travel Grant (2008), International Union for the Study of Social Insects North American Section Meeting, \$200 + Registration

Conference Travel Grant (2006-2011, School of Life Sciences, ASU, awarded multiple times, totaling \$1950

Other Awards (\$7000)

Graduate Citizen Scholar Award, ASU Division of Graduate Studies (2011)

2nd Place, Competition for the President's Prize , 10-Minute papers, Meeting of the Entomological Society of America, San Diego, CA (2007)

Fellowship, Undergraduate Mentoring in Environmental Biology, University of Illinois Urbana-Champaign (2004-2005), \$7000

Scientific Presentations

Invited Symposium Presentations and Seminars (12)

- Invited symposium speaker, , Entomological Society of America North Central Branch meeting, Cincinnati, OH. In Program Symposium *Monitoring, miticide, and mitigation: What IPM strategies improve honey bee and native bee health*. "Honey bee health in Midwestern rowcrop agriculture" 2019
- Invited symposium speaker, Entomological Society of America National Meeting, Vancouver, BC, Canada. In Section Symposium *From Genes to Communities: Quantifying Diverse Responses of Pollinators to Multiple Anthropogenic Stressors*. "Understanding bee health in Midwestern row crop agriculture: Insights from an intensified landscape." 2018
- Invited Seminar, Pennsylvania State University, Department of Entomology "Effects of virus infection on honey bee behavior: adaptive host response vs. pathogen manipulation" 2018
- Plenary speaker, Integrative Pest Management for Early Season Pests Workshop, Ames, Iowa. "History of the development of BMP document to help soybean producers protect pollinators, highlighting role of IPM" 2018
- Invited symposium speaker, Entomological Society of America North Central Branch meeting, Madison, WI. Program symposium: Pollination research in the North Central Region, "The "where" and "when" of honey bee decline in an agricultural landscape" 2018
- Invited Seminar, Natural Sciences Colloquium, Illinois Wesleyan University, Bloomington, IL. "Interactive effects of environmental stressors on bees: nutritional physiology, disease, and landscape" 2018
- Invited Seminar, Social Insect Research Group, Arizona State University, Tempe, AZ. "Interactive effects of environmental stressors on bees: nutritional physiology, disease, and landscape" 2017
- Entomological Society of America National Meeting, Denver, CO. In Member Symposium *Pollinator Nutrition: Lessons from Bees at Individual to Landscape Levels*, "The "where" and "when" of honey bee decline in an agricultural landscape" 2017
- Invited Seminar, Dept. of Entomology, Iowa State University, Ames, IA. "Effects of environmental stressors on health and survival in honey bees and native bees" 2015
- Entomological Society of America National Meeting, Portland, OR . In Member Symposium *Nutrition and the Health and Behavior of Wild and Managed Bees* "Effects of pollen nutrition on virus susceptibility and survival in honey bees" 2014
- Invited Seminar, Dept of Entomology, Washington State University, Pullman, WA. "Effects of various stressors on health and survival in honey bees and native bees" 2014
- Entomological Society of America North Central Branch, Des Moines, IA. In Symposium *Protection our pollinators: Current pollinator health and conservation efforts in the Midwest* "Interaction of pollen diet and other stressors on honey bee health" 2014
- Entomological Society of America National Meeting, Reno, NV In Section Symposium *Social Insect Evolution Today*. "Reproductive physiology, behavior, and evolution in the ant, *Pogonomyrmex californicus*" 2011
- Other Scientific Presentations (15; Oral presentations unless noted otherwise)*
- International Congress of Entomology/Entomological Society of America, Orlando, FL. "Effects of larval nutritional stress on honey bee disease susceptibility" 2016
- International Conference in Pollinator Biology, Health and Policy, State College, PA. *Poster*: "Wild bees commonly harbor, but are not affected by honey bee viruses" 2016
- Entomological Society of America National Meeting, Minneapolis, MN. "Diversity of pollen diet and viral infection affect honey bee survival and physiology in honey bees" 2015

Symposium on Biodiversity Conservation for Food Security and Rural Development, Kunming, Yunnan Province, China. "Interaction of pollen diet and other stressors on honey bee health"	2014
Entomological Society of America National Meeting, Austin, TX. "Incidence of honey bee viruses in Iowa's native bees from different landscapes"	2013
International Union for the Study of Social Insects Meeting, North American Section, Greensboro, NC. "Oocyte number is linked to behavior, not age, in <i>Pogonomyrmex californicus</i> "	2012
Gordon Research Conference on Genes and Behavior, Ventura, CA (<i>poster and selected student talk</i>). "Reproductive physiology and division of labor in <i>Pogonomyrmex californicus</i> workers"	2010
Frontiers in Life Sciences Conference: Social Biomimicry, Tempe, AZ (<i>poster</i>). "Reproductive physiology and division of labor in <i>Pogonomyrmex californicus</i> workers"	2010
Gordon Research Conference on Ecological and Evolutionary Functional Genomics, Tilton, NH (<i>poster</i>). "Reproductive physiology and division of labor in the California harvester ant, <i>Pogonomyrmex californicus</i> "	2009
NSF Workshop: Intraspecific variation and social systems, Santiago, Chile. "Reproductive physiology and division of labor in the California harvester ant, <i>Pogonomyrmex californicus</i> "	2009
International Union for the Study of Social Insects Meeting, North American Section, Arecibo, Puerto Rico. "Endocrinological factors and division of labor in <i>Pogonomyrmex californicus</i> founding"	2008
Graduates in Earth, Life and Social Sciences Symposium, Tempe, AZ. "Endocrine correlates of division of labor within pleometrotic associations of <i>Pogonomyrmex californicus</i> queens"	2008
Entomological Society of America National Meeting, San Diego, CA. "Endocrine correlates of division of labor within pleometrotic associations of <i>Pogonomyrmex californicus</i> queens"	2007
Entomological Society of America National Meeting, Indianapolis, IN. "Understanding the link between physiological and behavioral changes in obligately foraging <i>Pogonomyrmex californicus</i> queens"	2006
Undergraduate Distinction Research Symposium, University of Illinois Urbana-Champaign. "Sexual Selection in the Florida Harvester Ant, <i>Pogonomyrmex badius</i> "	2006

University Teaching

Instructor , Genes and Behavior, IB 432, UIUC	Spring 2019
Instructor , Physiology, IB 202, UIUC	Spring 2018, 2019
Instructor , Bee Biology, Management, and Beekeeping, ENT 358X, Iowa State U.	Fall 2015
Instructor , Topics in Insect Physiology, EEB 590, Iowa State U.	Spring 2015
Instructor , Undergraduate Seminar, BIO 495, Iowa State U.	Spring 2015
Guest Lecturer	
Insect Ecology, ENT 471/571, Iowa State U.	Fall 2016
Pollinator Biology, NREM 505, Iowa State U.	Spring 2013, 2014; Fall 2015
Animal Behavior, BIO 354, Iowa State U.	Spring 2013, 2014, Fall 2016
Genes and Behavior, EEB 497, BIO 495, Iowa State U.	Spring 2014

Endocrinology, Biology 355, Colgate U.	Fall 2012, 2013
Teaching Assistant, Arizona State University	
Course curriculum design committee, Biology 181/182	Spring 2012
Animal Behavior Lecture, Biology 331	Fall 2011
Microbiology, Microbiology 206	Summer 2011
Animal Physiology, Biology 361	Fall 2009, 2010 Spring 2011
Animal Physiology Lecture, Biology 360	Fall 2008
The Living World, Biology 100	Fall 2006, Spring 2007, Spring 2009

Teach awards

List of teachers rated excellent by their students, Spring 2019 (IB 432: Genes and Behavior)

Mentoring/Student collaboration

Graduate Student Advising

Edward Hsieh (UIUC Entomology)	2017-Present
Jacob Torres (UIUC Entomology)	2018-Present

Undergraduates

Vincent Prayugo: Using inspector data to track honey bee health in Illinois	2019
Presentations:	
<ul style="list-style-type: none"> Graduates in Ecology and Evolutionary Biology Symposium, UIUC, 2019 (poster) 	
Celeste Thompson: Virus production in honey bee pupae	2018
Caitlin Price: Virus-effects on behavior in small bee hives	2015
Marit Bakken: Landscape effect on native pollinator diversity	2015
Giselle Narvaez (McNair Scholar, currently Anthropology Masters student at Iowa State): Effect of pollen nutritional diversity on honey bee colony-level foraging behavior, Effect of pollen nutritional diversity on honey bee virus-induced mortality	2013-2015
Presentations:	
<ul style="list-style-type: none"> National McNair Scholar Conference, University of Maryland, 2015 (Oral presentation) Research in the Capitol, Des Moines, IA, 2015 (Poster Presentation) Iowa State University Undergraduate Research Symposium, 2015 (Oral Presentation) McNair Research Symposium, Iowa State University, 2015 (Poster Presentation) 	
Amber Haritos (McNair Scholar): Virus-mediated changes in honey bee host behavior	2014-2015
Presentations:	
<ul style="list-style-type: none"> Iowa State University Undergraduate Research Symposium, 2014, 2015 (Oral Presentation) McNair Research Symposium, 2014, 2015 (Poster Presentation) 	

- Erin McCall:** Effect of pollen nutritional diversity on honey bee colony-level foraging behavior 2015
- Desirae Fontes:** Nutritional physiology differences due to pollen nutrition in honey bees 2014-2015
- Arthur Cheng:** Nutritional physiology differences due to pollen nutrition in honey bees 2014-2015
- Catie Steinfadt:** Effect of pollen nutritional diversity on honey bee colony-level foraging behavior 2014-2015
- Nicole Schubert:** Survey of Iowa honey bee hives kept in different landscapes 2014
- Mara Cuebas (George Washington Carver Scholar, currently Microbiology PhD student at Arizona State):** Determination of LD50 in adult honey bees orally infected with Israeli acute paralysis virus 2013
- Presentations:**
- Annual Biomedical Research Conference for Minority Students, Nashville, TN, 2013 (Poster Presentation)
 - George Washington Carver Research Symposium, Iowa State University, 2013 (Oral Presentation)
 - George Washington Carver Research Symposium, Iowa State University, 2013 (Poster Presentation)
- Nicole Scavo:** Incidence of honey bee viruses in Iowa's native bee population 2013
- Presentations:**
- Iowa State University Undergraduate Research Symposium, 2015 (Oral Presentation)
- Carlos Vega-Melendez (George Washington Carver Scholar, currently Biology PhD student at North Carolina State-Greensboro):** Screening of honey bee juvenile and adult stages for viral infection 2012
- Presentations:**
- George Washington Carver Research Symposium, Iowa State University 2012 (Oral Presentation)
 - George Washington Carver Research Symposium, Iowa State University, 2012 (Poster Presentation)

Academic Editor

Plos One (2018-present)

Journal and Proposal Peer Reviewer (20+)

Apidologie, Agricultural Science Research Journal, Behavioral Ecology, Biotechnologia, Czech J. of Animal Science, J. Economic Entomology, Environmental Entomology, Insect Biochem. And Mol. Bio., Insectes Sociaux, Insects, J. Insect Mol. Bio., J. Insect Physiology, J. Invertebrate Pathology, Molecular Ecology, Naturwissenschaften, Physiology and Behavior, Plos ONE, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society B., Insects, J. Urban Ecology, J. Visualized Experiments, Scientific Reports, J. Ecological Entomology

Ad hoc peer reviewed for state and federal funding agencies:

USDA NIFA Exploratory Research Program, NSF Division of Environmental Biology, US-Israel Agricultural Research and Development Fund, US-Israel Binational Science Foundation, Research Foundation of Flanders, USDA Small Business Innovation Research Grant,

Outreach and Extension

Outreach and Extension Newsletters or Articles

- “Do bees get the flu?”, **Dolezal, A. G.**, Hendrix, S. D., Scavo, N. A., Carrillo-Tripp, J., Harris, M. A., Wheelock, M. J., O’Neal, M. E., Toth, A. L. Environmental Science Journal for Teens; Ed. Panayotova, E. Outreach journal for kids and teens highlighting and summarizing research articles with associated educational materials. 2017
- “Iowa State University’s Iowa Bee Virus Survey: Results Are In!”, *in* Iowa Honey Producers Association Buzz Newsletter. Newsletter explaining results of ISU research project where I collaborated with >40 Iowa Beekeepers. 2014
<http://www.abuzzaboutbees.com/beehive/buzz/2014/pdf/2014-November-Buzz-Newsletter-Digital-Copy.pdf>
- “True Bugs”, online article for ASU Ask A Biologist Program. Extension/Outreach article explaining the definition of true bugs (i.e., Hemiptera) to a general audience; 2010
<https://askabiologist.asu.edu/explore/true-bugs>

Selected Outreach and Extension Presentations

- “Pollinator-Friendly Solar: Setting State Standards” . Webinar hosted by UI Chicago for several hundred nationwide utilities organizers and similar about the IL Pollinator standard. One of three presenters. For Energy Resources Center, <http://erc.uic.edu/> 2018
- Central Eastern Illinois Beekeeping Association, Urbana, IL. “Illinois mite monitoring and state of honey bee health” 2018
- Illinois State beekeepers Association, Edwardsville, IL “ Illinois mite and hive monitoring project” 2018
- UIUC Short course – Bees and Beekeeping, Urbana, IL. Hands-on instructor in bee biology to 50 participants. 2018
- Illinois State Beekeepers Association, Springfield, IL “New Bee Research at UIUC” 2017
- Illinois Certified Crop Advisers Association, Ag-Masters, “Combining Crop Production and Conservation for Improved Bee Health”. Presentation to certified crop advisors for continuing education 2017
- Girl Scouts of America, Altoona, IA. “Bees in agriculture and conservation”. Outreach/mentoring event to help girl scouts produce bee conservation project 2016
- Iowa Honey Producers Association yearly meeting, Cedar Rapids, IA. “Effects of pollen nutrition, viral stress, and landscape use on honey bees”, attendance ~200 2015
- Field Day for Practical Farmers of Iowa and Iowa Fruit and Vegetable Growers Association, ISU Horticulture Station, Ames, IA. “Honey Bee Health and Research”. Field day presentation to two professional associations consisting of farmers and vegetable growers interested in innovative farming approaches, attendance ~150 2015
- Pollinator Fest, “Honey bee biology”, Reiman Gardens, Ames, IA. Public event highlighting pollinator biology; my presentation used hands on materials, including an observation hive, to explain honey bee biology and pollination importance. Attendance several hundred 2015
- Field Day for Iowa State University Agricultural Recruitment, ISU Horticulture Station, Ames, IA. “Honey Bee Health Research at ISU”. Field day event for FFA students from 5 local high schools, intended to recruit students to College of Agriculture. Attendance ~80 2014

Iowa Back-to-Basics Bee Club, Oskaloosa, IA . “Honey Bee Viral Infection and Landscape” . Invited regional beekeeping club presentation on habitat loss and virus infection of honey bees. Attendance ~50	2014
Jefferson Garden Club, Jefferson, IA. “Honey bee and native bee pollination and health” . Invited regional gardening club presentation on bee pollinators. Attendance ~40	2014
Field Day for Iowa Master Gardeners, ISU Horticulture Station, Ames, IA. “Honey Bee Health Research at ISU” . Field day event for state Master Gardeners. Attendance ~100	2014
Iowa Honey Producers Association yearly meeting, Marshalltown, IA. “Virus dynamics in our hives, and how we can test virus effects in our bees” . Invited presentation to state beekeeping association meeting. Attendance ~200	2013
Portal to the Public Presentations, Science Center of Iowa, Des Moines, IA. “You are what you eat – how honey bees develop” . Table and oral presentation to public at Science Center on all things honey bee, with a focus on queen/worker development. Repeated multiple times, Attendance 30-75.	2013-2015
Central Iowa Beekeeping Association, Des Moines, IA. “Virus detection in Iowa honey bee hives” . Invited presentation to regional beekeeping club. Attendance ~25	2013
Iowa Fruit and Vegetable Growers Association Meeting, Ankeny, IA. “Interactions Between Honey Bee Nutritional Stress and Viruses: Implications for Bee Health and Colony Collapse” . Invited presentation to state fruit and vegetable growers’ professional association annual meeting. Attendance ~30	2013
Center for Honeybee Research, Asheville, NC. “What turns bees on to sociality?” . Presentation to natural beekeeping organization on physiological regulation of social behavior in honey bees. Attendance ~300	2011
Audubon Society of Arizona Migration Celebration, Phoenix, AZ. “Insect Pollinators” . Public presentation on bee and other insect pollinators. Attendance ~40.	2011
Summer Program for Early Literacy and Language (SPELL), Tempe, AZ. “Ants and bees” . Children’s presentation on ants, bees, and other insects. Attendance ~30.	2010
Social Insect Science Expo, Phoenix, AZ. “Harvester Ant Research” . Public exposition table on social insect biology and research. Attendance ~ 200	2010

Other Outreach and Extension Activities

Developed Illinois Pollinator Friendly Solar scorecard for use by solar developers to mandate minimum requirements for pollinator habitat in ‘pollinator friendly’ solar arrays	2018
Reviewed language for Illinois State Bill SB3215 “Solar Site Pollinator Friendly), unanimously passed by IL state house and senate, May 2018	2018
Interviewed for Agribusiness Report on WHO-TV (Des Moines, IA NBC affiliate) to discuss pollinator habitat (http://whotv.com/2016/05/26/investments-into-pollinator-research/)	2016
Interviewed by Harvest Public Media/National Public Radio to discuss Varroa mites and honey bee viruses	2016
Portal to the Public Scientist (science communicator to Science Center visitors), Science Center of Iowa, Des Moines, IA	2013-2015
Judge; Arizona Junior Science and Humanities Symposium, Tempe, AZ	2010, 2011
Volunteer Scientist and Author of online outreach articles; ASU Ask a Biologist Program, http://askabiologist.asu.edu/	2009-present

Graduate Mentor: Graduate Partners in Science Education (GPSE), 2010-2011
<http://gpse.asu.edu/>, Arizona State

Society Membership and Service

Entomological Society of America
 2014 – Co-organizer of symposium at national meeting
 2014 – Co-organizer of symposium at North Central Branch meeting
 2013 – Judge for student poster competition
 International Union for the Study of Social Insects
 2018 – Member, nominations committee

Service

Faculty Sponsor , UIUC Beekeeping Club	2017-present
Advisory member , Student Sustainability Committee	2018-present
Hiring committee, School of Integrative Biology, UIUC	2018
Introductory Biology Course Redesign Committee, Arizona State U.	2011
School of Life Sciences Facilities Committee, Arizona State U.	2009-2011
Graduate-invited seminar speaker nominator and host, Arizona State U.	2011