

Jacob R. Pecenka

Email: jpecenka@purdue.edu

Cell: (605)-933-2246

Purdue University
901 W. State St
West Lafayette, IN 47907

Education

Doctor of Philosophy (Ph.D.), Entomology, Purdue University, May 2021 (Anticipated)

Advisor: Dr. Ian Kaplan

Masters of Science (M.S.) Biological Sciences, South Dakota State University May 2017

Advisor: Dr. Jonathan G. Lundgren

Thesis title: The Cattle Dung Arthropod Community in Eastern South Dakota: Colonization, Impact on Degradation, and Response to Rangeland Management

Bachelor of Science (B.S.), Biology and Biotechnology, South Dakota State University May 2014

Work/Research Experience

Graduate Research Fellow

Purdue University, West Lafayette, IN, 2017- present

Research highlights: As part of a multi-state initiative, I am assessing the efficacy of neonicotinoid insecticides to control pest insects in Indiana watermelon crop. Simultaneously determining any negative effects to native pollinators and commercially managed honeybees within watermelons.

Graduate Research Assistant

South Dakota State University/Ecdysis Foundation, Brookings, SD, 2014-2017

Research highlights: I performed experiments cataloging the Eastern South Dakota dung arthropod community and examined the effect of rangeland management on these communities. Additionally, I quantified ecosystem services provided by dung arthropods to ranchers with an emphasis on dung beetles (Scarabaeidae).

Biological Science Aid

North Central Agricultural Research Laboratory, Brookings, SD, 2012-2014

Research highlights: I conducted a risk assessment of clothianidin on monarch butterfly larvae involving lab toxicity assay in combination with sampling to identify what field levels are present.

Peer Reviewed Publications

Pecenka, J.R. and J.G. Lundgren. 2018. The importance of dung beetles and arthropod communities on degradation of cattle dung pats in eastern South Dakota. *PeerJ* 6:e5220; DOI 10.7717/peerj.5220

Pecenka, J.R. and J.G. Lundgren. 2015. Non-target effect of clothianidin on monarch butterflies. *Sci. Nat.* 102:19.

Pecenka, J.R. and J.G. Lundgren. Effects of Herd Management and the Use of Avermectin on Dung Arthropod Communities in Grasslands. *In review Basic and Applied Ecology*

Extension Publications

PollinNation Podcast. Watermelons, pests, and pollination.

<http://blogs.oregonstate.edu/pollinationpodcast/2019/06/30/102-jacob-pecenka-watermelons-pests-and-pollination/>

Pecenka, J.R. 2018. IPM Revisited: a cost-effective solution for balancing pest and pollinator management. Purdue University Vegetable Crops Hotline. Issue 652.

Pecenka, J.R. 2016. Understanding importance of dung beetles in cattle production systems. [Video File]. https://www.youtube.com/watch?v=a8QBC7_CA8I

Funding and Awards

GCA Pollinator Fellowship. “Assessing bumble bee health in Indiana agroecosystems” 2019 - \$4,000

Ross Fellowship. Purdue University, West Lafayette, IN, 2017-2019 - \$110,888

Andrews Environmental Travel Grant. Purdue University Graduate School, West Lafayette, IN, 2018 - \$1,500

2nd Place Graduate Student Paper Competition. ESA Annual Meeting, Vancouver, British Columbia, Canada, 2018 - \$75

1st Place M.S. Student Competition. ESA North Central Branch Meeting, Indianapolis, IN, 2017 - \$300

North-Central Branch ESA Travel Grant Award. 2017 - \$250

Sigma Xi Graduate Student Researcher Runner Up. South Dakota State University, 2017 - \$150

1st Place Graduate Student Competition. International Congress of Entomology, Orlando, FL, 2016 - \$250

Student Debate Competition: Overall Runner Up, International Congress of Entomology, Orlando, FL, 2016

USDA NCR-SARE “Contributions of Dung Arthropods to Sustainable Pest Management in Rangeland Systems of the Northern Great Plains”. 2015 - \$9,998

2nd Place Undergraduate Student Paper Competition. ESA Annual Meeting, Portland, OR, 2014 - \$100

William and Byrne Griffith Scholarship. South Dakota State University, Brookings, SD, 2013 - \$5,000

South Dakota Opportunity Scholarship. South Dakota State University 2010 - \$5,000

Invited Symposium Presentations

Pecenka, J.R., Ingwell, I., Foster, R., Krupke, C., Kaplan, I. 2019. Implementing IPM to improve pollinator health and profitability of Midwestern agroecosystems. Entomological Society of America North Central Branch Meeting. Cincinnati, OH.

Skidmore, A., **Pecenka, J.R.**, Grijalva, I., Krupke, C., Ingwell, L., Foster, R., and Kaplan, I. 2019. Ecosystem service bundling: Integrating predator and pollinator responses to insecticides in midwestern cropping systems. Entomological Society of America North Central Branch Meeting. Cincinnati, OH.

Kaplan, I., Ingerslew, K., and **Pecenka, J.R.** 2018. Phylogenetic farming: Can evolutionary history inform crop rotation? Invited Oral Presentation. Entomological Society of America Annual Meeting, Vancouver, BC, Canada

Invited Extension Presentations

Pecenka, J.R. and Ingwell, L. Using IPM principles in Indiana agroecosystems. Southwest Purdue Ag Center Field Day. Vincennes, IN. June 27, 2019.

Pecenka, J.R. Hidden costs of insecticide use to Indiana watermelons: a closer look at pests, pollinators, and yield. Indiana Horticulture Congress. Indianapolis, IN. Feb 13, 2019

Pecenka, J.R. Integrating pest and pollinator management into Midwest agroecosystems. West Central Indiana Beekeepers Winter Meeting. West Lafayette, IN. Jan 19, 2019

Pecenka, J.R., Ingwell, I., Foster, R., Krupke, C., Kaplan, I. IPM Revisited: balancing pests and pollinators in watermelons. Great Lakes EXPO. Grand Rapids, MI. Dec 4-6, 2018

Pecenka, J.R., Ternest, J., Ingwell, L. Field Tour of Indiana Cropping Systems and Challenges Faced by Pollinators. Wednesdays in the Wild Research Series. West Lafayette, IN. Aug 22, 2018

Beekeepers of Indiana Fall Meeting. Invited speaker. Bloomington, IN. Oct 28, 2017

SDSU Extension “Bugs and Grubs Road Show”. Invited speaker. Aberdeen, Chamberlin, and Rapid City SD. April 23-25, 2017

Contributed Presentations

Pecenka, J.R., Foster, R., Ingwell, L.L., Krupke, C. and Kaplan, I. 2018. Response of pests and pollinators to multiple routes of insecticide exposure across adjacent cropping systems. Oral Presentation. Entomological Society of America Annual Meeting, Vancouver, BC, Canada.

Pecenka, J.R. and Lundgren, J.G. 2017. Impact of Cattle Management System on Pest Maggot Populations. Oral Presentation. Entomological Society of America Annual Meeting, Denver, CO.

Pecenka, J.R. and Lundgren, J.G. 2017. Degradation of Cattle Dung Pats in Eastern South Dakota and Importance of Dung Beetles to Additional Arthropod Colonization Oral Presentation. Entomological Society of America North-Central Branch Annual Meeting, Indianapolis, IN.

Pecenka, J.R. and Lundgren, J.G. 2016. Connections Between the Dung Arthropod community and Cattle Management Practices in Eastern South Dakota. Oral Presentation. International Congress of Entomology Meeting, Orlando, FL.

Pecenka, J.R. and Lundgren, J.G. 2015. Analysis of Ivermectin on Cattle Dung Arthropod Communities. Oral Presentation. Entomological Society of America Annual Meeting, Minneapolis, MN.

Pecenka, J.R. and Lundgren, J.G. 2014. Non-target Effects of clothianidin on *Danaus plexippus*. Oral Presentation. Entomological Society of America Annual Meeting, Portland, OR.

Teaching Experience

Guest Lectures

Goshen College 2018

- Agroecology: Non-target effects of insecticides in agroecosystems

Supplemental Instruction Leader

South Dakota State University, Brookings, SD, 2012-2014

Outreach Experience

Purdue Undergraduate Research Poster Symposium Judge, West Lafayette, IN. April 9, 2019
Bug Bowl Pollination Session Organizer, West Lafayette IN. April 6-7, 2019
Cincinnati Bug Bash Volunteer, Cincinnati, OH. March 16, 2019
Purdue Ag Alumni Fish Fry, Indianapolis, IN. Feb 2, 2019
Purdue Pest Conference, West Lafayette, IN. Jan 7-9, 2019
Community Fair Entomology Experience Booth, Lafayette, IN. Sept 16, 2018
Wabash Riverfest Insect Booth, West Lafayette, IN. July 14, 2018
Ohio State University Insect Night Walk, Wooster, OH. June 30, 2018
Mind BOGgling, Invited Speaker, West Lafayette, IN. May 19, 2018
Bug Bowl Volunteer, West Lafayette, IN. April 14-15, 2018
SD Gardens Club Insect Presentation, Sioux Falls, SD. Feb 12, 2016
Insect presentation for Brookings Public Library, Brookings, SD. 2014-2017
Interviewed for Farm Forum Green Sheet, Aberdeen, SD. Sept 8, 2015
Entomological Society of America annual meeting volunteer, Annually 2014-2017
61st Annual Eastern South Dakota Science and Engineering Fair Project Judge, Brookings, SD.
Mar 24, 2015
USDA-ARS field day, Brookings, SD. 2013-2015
Brookings Public School Insect Presentation, Annually 2014-2017

Professional Service

Reviewer: *Environmental Entomology*

Entomology Graduate Organization (EGO) Secretary, 2018-2019
Entomology Graduate Organization (EGO), 2017-present
International Organization of Biological Control (IOBC), 2015-present
Entomological Society of America (ESA), 2014-present
Beta Beta Beta Biological Honor Society, South Dakota State University, 2011-2014

Short Courses

Good Agricultural Practices Grower Training, Produce Safety Alliance, Indianapolis, IN, 2018
Science Policy Field Tour: Balancing Pest Management and Pollinator Health, ESA-PIE, Jackson MS,
2017
Biological Symbioses in Agriculture, South Dakota State University, Brookings, SD, 2016
Biodiversity in Agroecosystems of Chile, Pontificia Universidad Católica de Chile, Santiago, Chile, 2015
Applied Integrated Pest Management, Online collaboration through SDSU, Univ. of Kentucky and Univ.
of Arkansas, 2015
Soil Biodiversity and Ecology, South Dakota State University, Brookings, SD, 2014