

## Amanda Lynn Buchanan

Department of Entomology  
Michigan State University  
1129 Farm Lane #349, East Lansing, MI 48824  
alynnbuchanan@gmail.com ▪ alynnbuchanan.com

### Appointments

---

- 2015-present** Postdoctoral Research Associate, Department of Entomology, Michigan State University. Supervisors: Zsafia Szendrei and Matthew Grieshop
- 2013-2015** Postdoctoral Research Associate, Department of Entomology, University of Maryland. Supervisor: Cerruti Hooks

### Education

---

- 2012 PhD** Biological Sciences: Ecology and Evolutionary Biology, Florida State University, Tallahassee FL. Advisers: Nora Underwood and Brian Inouye
- 2001 BA** Spanish/Exercise & Movement Science (Clark Honors College *cum laude*), University of Oregon, Eugene OR. Adviser: V. Pat Lombardi

### Peer-reviewed publications

---

- 2017** Buchanan, Gibbs, Komondy\*, and Szendrei. Bee community of commercial potato fields in Michigan and *Bombus impatiens* visitation to neonicotinoid-treated potato plants. *Insects* in press. <http://www.mdpi.com/2075-4450/8/1/30/pdf>
- 2016** Buchanan, Kolb, and Hooks. Can winter cover crops influence weed density and diversity in a reduced tillage vegetable system? *Crop Protection* 90:9-16
- 2015** Kim, Spiesman, Buchanan et al. Selective manipulation of a non-dominant plant and its herbivores affects an old-field plant community. *Plant Ecology* 216: 1029-1045
- Buchanan, Zobel, Hinds, Rosario-Lebron and Hooks. Can row spacing influence arthropod communities in soybean? Implications for early and late planting. *Environmental Entomology* 44(3): 557-561
  - Buchanan. Effects of damage and pollination on sexual and asexual reproduction in a flowering clonal plant. *Plant Ecology* 216: 273-282
- 2013** Buchanan and Underwood. Attracting pollinators and avoiding herbivores: insects influence plant traits within and across years. *Oecologia* 173: 473-482
- Buchanan. Damage by *Neochetina* weevils (Coleoptera: Curculionidae) induces resistance in *Eichhornia crassipes* (Commelinales: Pontederiaceae). *Florida Entomologist* 96(2): 458-462
- 2004** Holland, Buchanan and Loubeau. Oviposition choice and larval survival in an obligately pollinating granivorous moth. *Evolutionary Ecology Research* 6: 607-618

### In review

Buchanan, Hermann, Lund, and Szendrei. A meta-analysis of non-consumptive predator effects in arthropods: the influence of organismal and environmental characteristics. *Oikos*

\*undergraduate co-author

---

## Stakeholder publications

---

- 2017** Buchanan et al. Striped and spotted cucumber beetles as pests of cucurbits in Michigan.  
- Buchanan et al. Squash bugs as pests of cucurbits in Michigan.  
[http://msue.anr.msu.edu/news/squash\\_bugs\\_as\\_pests\\_of\\_cucurbits\\_in\\_michigan](http://msue.anr.msu.edu/news/squash_bugs_as_pests_of_cucurbits_in_michigan)
- 2016** Werling, Buchanan, and Szendrei. A tale of two cutworms: Cutworm control in asparagus. [http://msue.anr.msu.edu/news/a\\_tale\\_of\\_two\\_cutworms\\_cutworm\\_control\\_in\\_asparagus](http://msue.anr.msu.edu/news/a_tale_of_two_cutworms_cutworm_control_in_asparagus)
- 2015** Buchanan et al. Common and spotted asparagus beetle as pests of asparagus.  
[http://vegetable.ent.msu.edu/images/asparagus-beetle-factsheet-7\\_9\\_15.pdf](http://vegetable.ent.msu.edu/images/asparagus-beetle-factsheet-7_9_15.pdf)  
- Buchanan et al. Squash vine borer as a pest of cucurbits in Michigan.  
[http://msue.anr.msu.edu/uploads/files/AABI/factsheet\\_squash\\_vine\\_borer.pdf](http://msue.anr.msu.edu/uploads/files/AABI/factsheet_squash_vine_borer.pdf)  
- Phillips and Buchanan. Squash vine borer biology and management.  
[http://msue.anr.msu.edu/news/squash\\_vine\\_borer\\_biology\\_and\\_management](http://msue.anr.msu.edu/news/squash_vine_borer_biology_and_management)
- 2014** Buchanan and Hooks. Cover crops can improve soil quality and suppress weeds. University of Maryland Extension *Vegetable and Fruit Headline News* 5(7): 5-8  
- Hooks, Buchanan, Chen, and Rosario-Lebron. Offing cover crops for weed suppression: Featuring the roller-crimper and other mechanical contraptions. University of Maryland Extension *Vegetable and Fruit Headline News* 5(6): 4-8
- 2013** Buchanan, Chen, and Hooks. Managing the weed seedbank with cover crops and tillage. University of Maryland Extension *Vegetable and Fruit Headline News* 4(10): 4-6  
- Hooks, Buchanan, and Chen. The stale seedbed technique: a relatively underused alternative weed management tactic for vegetable production. University of Maryland Extension *Vegetable and Fruit Headline News* 4(5): 5-7  
- Chen, Buchanan, and Hooks. Using reduced tillage and cover crop residue to manage weeds in vegetable production. University of Maryland Extension *Vegetable and Fruit Headline News* 4(10): 1-4

## Research presentations (t = talk, p = poster, \* = invited talk)

---

- 2017** *Integrated pest management in specialty crops: controlling key pests of asparagus (t\*)* Entomological Society of America, Denver CO (scheduled)
- 2016** *Alternative pest management strategies in specialty crops (t)* International Congress of Entomology, Orlando FL  
- *Pest management strategies for asparagus (t\*)* Entomological Society of America, North Central Branch. Cleveland OH
- 2015** *Cover crop diversity and management for weed control in organic agro-ecosystems (t\*)* Entomological Society of America/American Society of Agronomy/Crop Science Society of America/Soil Science Society of America, Minneapolis MN  
- *Developing innovative tactics for pest management in asparagus (p)* Entomological Society of America, Minneapolis MN
- 2014** *Soil disturbance and ground cover: How weed communities and weed seed predators respond to tillage and cover crop residue in organic agricultural systems (t)* Ecological Society of America, Sacramento CA

- *Induced resistance in invasive plants: Implications for biocontrol* **(t\*)** Entomological Society of America, Portland OR
- 2013** *Plant responses to the joint effects of herbivores and pollinators* **(t)** University of Maryland, College Park MD
- 2012** *Allocation shifts favor asexual reproduction: response to damage and pollination in a clonal flowering plant (Eichhornia crassipes)* **(t)** Ecological Society of America, Portland OR
- 2011** *Attracting pollinators and avoiding herbivores: Resource allocation in a perennial plant* **(t)** Ecological Society of America, Austin TX
- *Insect foragers and plant allocation pattern: Within- and among-year effects in *Chamerion angustifolium** **(p)** Bucknell University, Lewisburg PA
- 2009** *A dynamic optimization model of the influence of allocation pattern and herbivore and pollinator environments on plant fitness* **(p)** Ecological Society of America, Albuquerque NM
- *Evolutionary consequences of plant phenology, herbivory, and pollination* **(t)** Southeastern Ecology and Evolution Conference, Gainesville FL
- 2006** *Do magnet species, floral diversity and fire management influence pollination success in the rewardless orchid *Calopogon barbatus*?* **(p)** Ecological Society of America, Memphis TN

**Stakeholder presentations** (m = grower's meeting, f = field demonstration)

---

- 2017** *Asparagus insect management update* **(m)** Oceana Asparagus Day, New Era MI
- *Asparagus insect pest management* **(m)** Asparagus Advisory Council, Dewitt MI
- 2016** *Habitat management for insect control* **(f)** Zilke Vegetable Farm Field Day, Milan MI
- *Asparagus research update* **(f)** Oceana Research Tour, Oceana County MI
- *Asparagus insect pest management* **(m)** Oceana Asparagus Day, New Era MI
- *Managing Japanese beetle and asparagus miner in asparagus* **(m)** Great Lakes Expo, Grand Rapids MI
- 2015** *Asparagus research update* **(f)** Oceana Research Tour, Oceana County MI
- 2014** *Ecological effects of winter cover crops on organic vegetable production* **(m)** USDA-ARS-UMD Annual Trends in Agriculture Fall Symposium, Beltsville MD
- *Native bees as crop pollinators* **(m)** MD Agricultural Pesticide Conference, Denton MD
- *Using cover crops for pest suppression in crookneck squash* **(m)** MD Organic Food and Farming Association, Annapolis MD
- *Sustainable pest control: Using cover crops and tillage in vegetable crops* **(m)** Eastern Shore Vegetable Meeting, Cambridge MD
- *Winter cover crops influence soil quality, pest suppression, and crop yield* **(m)** Southern Maryland Vegetable and Fruit Meeting, Gambrills MD
- 2013** *Organic vegetable planting systems, cover crops and greenhouse gas emissions* **(f)** Central Maryland Research and Education Center Field Day, Upper Marlboro MD
- *Using winter cover crops to enhance organic vegetable industry* **(f)** Central Maryland Research and Education Center Field Day, Upper Marlboro MD

## Grants and awards

---

- 2016** Buchanan, Grieshop and Szendrei. *Developing novel pest management tactics for asparagus and cherry*. Project GREEN Michigan State University, \$80,000
- Szendrei, Buchanan and Grieshop. *Developing novel pest management tactics for asparagus*. Michigan Asparagus Research Committee, \$5,000
- 2013** Hooks, Chen and Buchanan. *Developing economic and ecological sustainable pest management practices for growers of leguminous and solanaceous crops*. USDA-NIFA Northeastern IPM Competitive Grants Program, \$83,058
- Chen, Hooks and Buchanan. *Evaluation of cover crop mixtures on soil fertility and quality, insect and pest management, crop yield and profitability for corn production*. USDA-OREI Integrated Agriculture and Natural Resources Extension and Research Competitive Grants Program, \$32,000
- 2011** *Growth, reproduction, and herbivore resistance in water hyacinth (Eichhornia crassipes)*. Julia Morton Invasive Plant Research Grant, Florida Exotic Pest Plant Council, \$1,612
- Robert K. Godfrey Endowment for Botany, Florida State University, \$1000
- 2009** Dissertation Research Grant, Florida State University, \$750
- 2007** *Mechanisms of spatial and temporal variability in pollinating bee guilds*. NSF Graduate Research Fellowship, Honorable Mention
- 2006** Robert B. Short Scholarship in Zoology, Florida State University, \$1000
- 2005-2010** Presidential Fellowship, Florida State University

## University level teaching (\*primary instructor)

---

- 2012** General Biology for Non-Majors\* (lecture) BSC1005
- Experimental Biology: Pollination Biology (lab) BSC3402L
- 2011** Plant Biology (lab) BOT3015L
- Anatomy & Physiology II (lab) BSC2086L
- 2010** Plant Biology (lecture) BOT3015
- Research Methods (lecture + lab) ISC3523C
- 2009** Experimental Biology: Foraging Ecology (lab) BSC3402L
- 2008** General Ecology (lecture) PCB3043
- 2007** General Ecology (lecture) PCB3043
- 2006** Anatomy & Physiology I (lab) BSC2085L

## Undergraduate mentoring

---

- 2016** Lidia Komondy, Michigan State University
- 2014** Hawi Itana, University of Maryland
- Katie Judd, University of Maryland
- 2013** Hannah Weiss, University of Maryland
- Gil Hasty, University of Maryland
- 2011** Kerri Brinegar, Florida State University
- 2009** Rachel Atchison, Florida State University
- Hannah Carey, Rocky Mountain Biological Lab and St. Edwards University

## **Professional references**

---

Zsofia Szendrei, Associate Professor  
Michigan State University Department of Entomology  
Tel: 517-974-8610  
Email: szendrei@msu.edu

Matthew Grieshop, Associate Professor  
Michigan State University Department of Entomology  
Tel: 517-432-8034  
Email: grieshop@msu.edu

Nora Underwood & Brian Inouye, Associate Professors  
Florida State University Department of Biological Sciences  
Tel: 850-644-4167  
Email: nunderwood@bio.fsu.edu