

Bill D. Wills

Department of Biological Sciences
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EDUCATION

Ph.D. in Biology, University of Illinois Urbana-Champaign 2013
Dissertation: "The Implications of Ecology on Body Size Distributions in Social Insects"
Advisor: Andrew V. Suarez

B.S. in Evolution, Ecology, and Biodiversity, University of California, Davis 2006
University Regents Scholar, High Honors

ACADEMIC APPOINTMENTS

Assistant Research Professor August 2018 - Present
Department of Biological Sciences
Auburn University

Assistant Professor August 2017 – July 2018
Department of Biology
DePauw University

Postdoctoral Research Associate October 2014 - August 2017
Michigan State University
Supervisor: Douglas A. Landis

Co-Instructor of Record January 2016 - May 2016
Lyman Briggs College – Michigan State University

Postdoctoral Research Associate December 2013 - September 2014
University of Illinois Urbana-Champaign
Supervisor: Andrew V. Suarez

PUBLICATIONS

9. Helms J, Haddad N, Ijelu S, **Wills B**, and Landis D. 2020. Ant biodiversity and ecosystem services in bioenergy landscapes. *Agriculture, Ecosystems, and Environment*. 290: doi.org/10.1016/j.agee.2019.106780
8. **Wills BD**, Kim TN, Fox AF, Gratton C. and Landis DA. 2019. Reducing native ant abundance decreases predation rates in Midwestern grasslands. *Environmental Entomology*. 48: 1360-1368. <https://doi.org/10.1093/ee/nvz127>
7. Kim TN, Bartel S, **Wills BD**, Landis DA, and Gratton C. 2018. Disturbance differentially affects alpha and beta diversity of ants in mixed prairie-grasslands. *Ecosphere*. 10.1002/ecs2.2399

6. **Wills BD**, Powell S, Rivera MD, and Suarez AV. 2018. Correlates and consequences of worker polymorphism in ants. *Annual Reviews of Entomology*. 63: 575-598.
5. **Wills BD** and Landis DA. 2018. The role of ants in north temperate grasslands: A review. *Oecologia*. 186: 323-338.
4. Kim TN, Fox AF, **Wills BD**, Meehan TD, Landis DA, and Gratton C. 2017. Harvesting biofuel grasslands has mixed effects on natural enemy communities and no effects on biocontrol services. *Journal of Applied Ecology*. 54: 1365-2664.
3. **Wills BD**, Chong CD*, Wilder SM, Eubanks MD, Holway DA, and Suarez AV. 2015. Influence of nutrition on investment in worker number, size, and condition in a polymorphic social insect. *PLoS one*. 10: e0132440.
2. **Wills BD**, Moreau CS, Wray BD, Hoffman B, and Suarez AV. 2014. Body size variation in geographically distinct populations of the invasive ant *Pheidole megacephala* (Hymenoptera: Formicidae). *Biological Journal of the Linnaean Society*. 113: 423-438.
1. Tillberg CV, Edmonds B, Freauff A, Hanisch P, Paris C, Smith CR, Tsutsui ND, **Wills BD**, Wittman SE, and Suarez AV. 2014. Foraging and nesting ecology of the giant, queen-less ant *Dinoponera australis* (Hymenoptera: Formicidae). *Biotropica*. 46: 229-237.

*undergraduate co-author

FORTHCOMING PUBLICATIONS

Wills BD, Hood N*, Wilder SM, Eubanks MD, Holway DA, and Suarez AV. Diet and investment in worker size, number, and condition of two ant species. (*In Preparation*)

*undergraduate co-author

TEACHING EXPERIENCE

Auburn University – Department of Biological Sciences

Biology (BIOL) 1030 Organismal Biology	Fall 2018, Spring 2019
BIOL 3060 Ecology	Spring 2020

DePauw University – Department of Biology

Biology (BIO) 102 Evolution, Organisms, and Ecology	Spring 2018
BIO 346 Plant-Animal Interactions	Spring 2018
BIO 290 Insect Ecology	Fall 2017
BIO 342 Ecology	Fall 2017

Michigan State University (MSU) – Lyman Briggs College

Lyman Briggs 144 Organismal Biology, Co-Instructor	Spring 2016
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University of Illinois Urbana-Champaign (UIUC) – School of Integrative Biology

Integrative Biology (IB) 203 Ecology, Teaching Assistant	Fall 2009, Fall 2010*, Fall 2013*
IB 105 Environmental Biology, Teaching Assistant	Fall 2011, Spring 2012*
IB 496 Foundations in Ecology, Course Creator/Coordinator	Spring 2012
IB 202 Anatomy and Physiology, Teaching Assistant	Spring 2011*
IB 150 Organismal and Evolutionary Biology, Teaching Assistant	Fall 2007, Spring 2009*
IB 429 Animal Behavior, Teaching Assistant	Fall 2009

Guest Lecturer:

ENT 848 Biological Control, *MSU*
 LB 144 Organismal Biology *MSU*
 IB 105 Environmental Biology, *UIUC*

Spring 2017
 Fall 2016
 Spring 2012

**Listed: Teacher Ranked as Excellent by Their Students*

MENTORING**Undergraduate Independent Research Projects**

Joshua Semmes (Auburn University) Fall 2018-Present
 “Morphological Variation of Ants in Alabama”

Nadia Fields (Claflin University) Summer 2019
 Collaborative Approaches among Scientists and Engineers REU
 COSAM Office of Inclusion, Equity and Diversity

Corrine Fischer (Binghamton University) Summer 2017
 Summer Undergraduate Research Program Great Lakes Bioenergy Research Center

Newton Hood, Co-author on manuscript in preparation 2012-2014
 M.S. in Biological Science, California State Fullerton University 2019
 Ph.D. University of California, Irvine

Cody Chong, Co-author on manuscript 2010-2012

Amanda Robinson 2009-2010
 Graduated with Distinction
 Awarded: Harriet Long Research Award for Outstanding Research
 M.S. of Medicine: Physician’s Assistant Studies, Midwestern University 2016

Stephanie Tham, 2009-2010
 Awarded: Mildred Award for Outstanding Achievement
 M.S. in Human Resources, UIUC

Current Undergraduate Assistants (Auburn University)

Taylor Brawley
 Livia Coleman
 Thomas Holmes

Former Undergraduate Assistants (minimum two semesters):

Adam Skrekut
 Akins, Sam (M.S. in Statistics, University of Chicago 2014)
 Andy Wszalek
 Catherine Choi
 Chase Robinson
 Ellie Phillips (M.S. in Biology, Central Michigan University)
 Erin Forster
 Henry Zheng
 Jenifer Ferchau
 Jessica Kalin (Ph.D. in Entomology, University of Idaho)

Kristen. Wong (D.V.M. Ross University School of Veterinary Medicine 2019)
 Lindsey Hawkins
 Lisa Hannah (M.S. in Biology, Wayne State)
 Mallory Hinz
 Margaret Duffy (M.Ed. in Student Affairs in Higher Education, Marquette University 2019)
 Marisa Tucker (M.S. in Higher Education, Eastern Michigan University)
 Paige Welborn
 Samantha Hines
 Tyler DeAnda
 Zachary Budde
 Zachary Wolfe (Ph.D. in Entomology, Purdue University)

RESEARCH GRANTS, FELLOWSHIPS, AWARDS

COSAM – Faculty Travel Award, Auburn, University (\$750)	2019
AgBioResearch – Generating Research to meet Economic and Environmental Needs, <i>Michigan State University (MSU)</i> (Co-Author, \$30,000)	2016
International Union for the Study of Social Insects – North American Section Travel Award, <i>IUSSI</i> (\$1,500)	2014
Summer Research Grant, <i>Univ. of Illinois (UIUC), Dept. of Animal Biology</i> (\$1,000)	2008, 2011, & 2012
Edwin R. Banks Memorial Award, <i>UIUC, Dept. of Animal Biology</i> (\$500)	2009 & 2012
Tinker Fellowship, <i>UIUC, School of Latin American Studies</i> (\$1,450)	2009 & 2011
Dissertation Travel Grant Fall, <i>UIUC, Graduate College</i> (\$3,125)	2011
Clark Research Award, <i>UIUC, School of Integrative Biology</i> (\$1,250)	2009
Sigma Xi Grants-in-Aid of Research Program Grant, <i>Sigma Xi</i> (\$400)	2009
Phillip Smith Memorial Fund, <i>UIUC</i> , (\$750) <i>Dept. Natural Resources and Environmental Sciences</i>	2009
Organization for Tropical Studies Grant, <i>Universidad de Costa Rica</i> (\$1,500)	2008
Graduated with High Honors, University of California Davis (<i>UC Davis</i>)	2006
Departmental Citation for Outstanding Academic and Research Achievement, <i>UC Davis</i>	2006
Recipient of Regents Scholarship, <i>UC Davis</i> (\$15,000)	2004-2006

PRESENTATIONS

15. The effects of grassland reintegration on ant community structure and pest control services. Entomological Society of America. St. Louis, MO. November 17-20, 2019
14. The ecology of ants in a changing landscape. Department of Entomology and Plant Pathology Seminar. Auburn, AL. November 4, 2019.
13. The response of ants to ecological disturbance. Department of Biological Sciences Seminar Series. Auburn, AL September 5, 2019.
12. Ant suppression reduced biological control potential in grasslands. Entomological Society of America. Denver, CO. November 5-8, 2017.
11. The response and implications of ants to ecological disturbance. Earlham College (*Liberal Arts College*) Invited speaker. Richmond, IN. October 26, 2017.
10. Ants in restored grasslands. Stewardship Network Conference. East Lansing, MI. January 15, 2016.
9. The role of ants in temperate managed grasslands. Great Lakes Bioenergy Research Center Symposium. South Bend, IN. May 19, 2015.
8. Nutrition and colony investment in *Solenopsis invicta* workers. International Union for the Study of Social Insects, International Congress. Cairns, Australia. July 14, 2014
7. The causes and consequences in body size variation in ants. Saint Mary's University (*Liberal Arts College*) Invited Speaker. Winona, MN. March 13, 2014.
6. The influence of ecology on body size variation in ants. University of Illinois, Program in Ecology, Evolution and Conservation Biology Seminar. Urbana, IL. September 25, 2013.
5. Testing Lanchester's laws with a continuously polymorphic ant species. Entomological Society of America. Austin, TX. November 10-13, 2013.
4. The role nutrition on worker demography in an invasive social insect: *Solenopsis invicta*. Entomological Society of America. Knoxville, TN. November 11-14, 2012.
3. Considerations and preparation for graduate school: Where to start and how to move forward. School of Integrative Biology Career Development Series. Urbana, IL. October 11, 2012
2. Ecological influences on body size distribution in ants. International Union for the Study of Social Insects-North American Branch Meeting. Greensboro, NC. October 5-7, 2012.
1. Geographical variation in body size of the dimorphic invasive species: *Pheidole megacephala*. Entomological Society of America. San Diego, CA. December 12-15, 2011.

SERVICE

Journal Reviewer

Biological Invasions (2012)
Ecological Entomology (2015, 2018)
Insectes Sociaux (2016, 2018 x2, 2019)
Biological Control (2017)
Scientific Reports (2017)
Nature (2018)
Environmental Entomology (2018 x2, 2019)
Oecologia (2018)
Arthropod-Plant Interactions (2019)
Myrmecological News (2019)
Bulletin of Entomological Research (2019)

Board Member, Provost and Graduate College Advisory Board, *UIUC* 2012-2013

Member

International Union for the Study of Social Insects 2010-Present
Entomological Society of America 2009-Present

PROFESSIONAL DEVELOPMENT

New Faculty Scholars Program 2018-2019

Auburn University – Biggio Center

Teaching Certificates:

Pathways to Scientific Teaching (Instructor: Diane Ebert-May), *MSU* 2015
Teacher Scholar Certificate, *UIUC* 2012
Graduate Student Certificate, *UIUC* 2011

ADDITIONAL TRAINING

Ant Course – California Academy of Sciences 2009

Portal, Arizona

Organization for Tropical Studies 2007

Tropical Biology: An Ecological Approach

OTHER PROFESSIONAL EXPERIENCE

Laboratory Assistant 2007

West Valley Mosquito and Vector Control, Ontario, CA

Entomology Intern 2006

USGS-BRD, Volcanoes National Park, HI

Endangered Species Intern 2005-2006

Fish and Wildlife Service, Sacramento, CA

Wildlife Biology Intern 2005

Santa Monica National Recreational Area, Thousand Oaks, CA