

# Zachary M. Portman

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## Education

- 2011–Present **Ph.D. Candidate in Ecology**  
*Dissertation:* Evolution and Coevolution of *Perdita* (Hymenoptera: Andrenidae)  
Research Adviser: Terry Griswold  
Utah State University, Logan, UT
- 2009 **B.S. with honors, Biology and Computer Science**  
*Thesis:* A 3-Dimensional Model of Bryophyte Canopy Light Interaction  
Union College, Schenectady, NY

## Publications

- Submitted **Portman, Z.M.** & Griswold T. Review of *Perdita* subgenus *Procockerellia* Timberlake (Hymenoptera: Andrenidae) and the first *Perdita* gynandromorph. *Zookeys*.
- Accepted **Portman, Z.M.**, Tepedino, V.J., Tripodi, A.D., Szalanski, A.L., & Durham, S.L. Local extinction of a rare plant pollinator in southern Utah (USA) associated with invasion by Africanized honey bees. *Biological Invasions*.
- 2017 **Portman, Z.M.** & Tepedino V.J. Convergent evolution of pollen transport mode in two distantly related bee genera (Hymenoptera: Andrenidae and Melittidae). *Apidologie*, 1–12. DOI: 10.1007/s13592-016-0489-8.
- 2016 **Portman, Z.M.**, Neff, J.L. & Griswold, T. Taxonomic revision of *Perdita* subgenus *Heteroperdita* Timberlake (Hymenoptera: Andrenidae), with descriptions of two ant-like males. *Zootaxa* 4213(1), 1–97.
- Portman, Z.M.** & Griswold, T. An anomalous specimen of *Perdita wasbaueri* Timberlake with only one antenna (Hymenoptera: Andrenidae). *Journal of the Kansas Entomological Society* 89(3), 1–3.
- Portman, Z.M.**, Griswold, T. & Pitts, J.P. Association of the female of *Perdita* (*Xeromacrotera*) *cephalotes* (Cresson), and a replacement name for *Perdita bohartorum* Parker (Hymenoptera: Andrenidae). *Zootaxa* 4097, 567–574.
- 2015 Orr, M.C., **Portman, Z.M.** & Griswold, T. *Megachile* (*Megachile*) *montivaga* (Hymenoptera: Megachilidae) nesting in live thistle (Asteraceae: *Cirsium*). *Journal of Melittology* 48, 1–6.
- 2014 Rice, S.K., Hanson, D.T. & **Portman, Z.** "Structural and functional analyses of bryophyte canopies." *Photosynthesis in Bryophytes and Early Land Plants*. Springer Netherlands. 173–185.

## Non Peer-Reviewed Publications

- 2016 Tepedino, V.J., **Portman, Z.M.**, Tripodi A.D., & Durham S.L. Local extinction of a specialized endangered plant pollinator inferred: *Perdita meconis* (Andrenidae) and its endangered host plant *Arctomecon humilis* (Papaveraceae). Report to the U.S. Fish & Wildlife Service.

## Grants, Fellowships, and Awards (\$174,169 Total)

- 2017 Utah State University Graduate Enhancement Scholarship – \$4,000.
- 2016 “Pollinators of the endangered dwarf bear poppy *Arctomecon humilis*: An intensive survey of four populations in Washington Co. UT,” US Fish and Wildlife Service. Co-PI with Vincent Tepedino (Utah State University) – \$18,500.
- 2015 Utah State University Ecology Center Research Award – \$3,000.
- 2015 “Mapping the evolution of pollen transport in *Perdita*,” Utah State University Doctoral Dissertation Enhancement Award – \$9,800.
- 2014 Utah State University USUSA Research and Project Grant – \$1,000.
- 2013 “A survey of endemic *Tiquilia*-specialist bee pollinators in California's dune systems,” Desert Legacy Fund Grant – \$2,869.
- 2011 NSF GRFP Fellowship – \$134,500 over three years.
- 2009 Union College Loughry Prize, Computer Science Thesis – \$500.

## Presentations

- 11/2017 Portman, Z.M., Tepedino, V.J., Tripodi, A.D., Szalanski, A.L., & Durham, S.L. Oral presentation. Africanized bee invasion associated with the local demise of a rare plant pollinator in southwest Utah. Invited presentation in the symposium “Ecology in the sixth mass extinction: detecting and understanding rare biotic interactions. Entomological Society of America National Meeting, Denver, CO.
- 05/2017 Portman, Z.M. & Tepedino, V.J. Oral Presentation. A tale of two poppies: recent studies of the pollinators of *Arctomecon humilis* in Utah and *A. californica* in Nevada. Washington County Rare Plants Meeting, St. George, UT.
- 04/2017 Portman, Z.M. Oral Presentation. Specialization and pollen gathering behavior in bees. Entomological Society of America Pacific Branch Meeting, Portland, OR.
- 03/2017 Portman, Z.M., Tepedino, V.J., Tripodi A.D., Szalanski A.L. & Durham S.L. Oral presentation. Native pollinator apocalypse: The plight of the endangered Dwarf Bear-poppy (*Arctomecon humilis*). Annual Utah Rare Plant Meeting, Natural History Museum of Utah, Salt Lake City, UT.
- 09/2016 Portman, Z.M., Tepedino, V.J. & Griswold, T.L. Oral presentation. Bees specialize on the geometric and physical properties of their host pollen. Entomological Society of America National Meeting, Orlando, FL.
- 04/2015 Portman, Z.M. & Griswold, T.L. Oral presentation: Evolution of pollen transport of bees is influenced by pollen morphology. Entomological Society of America Pacific Branch Meeting. Coeur d’Alene, ID.
- 11/2014 Portman, Z.M. & Griswold, T.L. Oral presentation: Widespread modified hairs in bees: An explanation for floral specialization? Entomological Society of America National Meeting. Portland, OR.
- 04/2014 Portman, Z.M. & Griswold, T.L. Oral presentation: A taxonomic revision of *Perdita* subgenus *Heteroperdita* (Hymenoptera: Andrenidae): Implications for ecology and biogeography. Entomological Society of America Pacific Branch Meeting. Tucson, AZ.

- 11/2013 Portman, Z.M. Poster presentation: It isn't easy being yellow: Analysis of yellow coloration in *Perdita* (Hymenoptera: Apoidea: Andrenidae). Entomological Society of America National Meeting. Austin, TX.
- 04/2013 Portman, Z.M. Oral presentation: *Tiquilia* and its pollinators: a case study in reciprocal floral specialization. Entomological Society of America Pacific Branch Meeting. Lake Tahoe, CA.

## Professional Experience

- 2016–2017 Graduate Research Assistant, Pollinating Insects Research Unit, Utah State University, Logan, UT.
- 2015 Bee Identification Consultant, University of Wisconsin, Madison, WI.
- 2012–2015 NSF GRFP Fellow, Utah State University, Logan, UT.
- 2011–2012 Database Technician, USDA ARS Pollinating Insect Research Unit, Logan, UT.
  - Identified, organized, and databased over 25,000 historical insect specimens.
- 2011 Field Technician, Rutgers University, New Brunswick, NJ. PI: Dr. Rachel Winfree.
  - Surveyed and observed pollinators of blueberry, watermelon, and cranberry crops.
- 2010 Research Assistant, Washington University in St. Louis, St. Louis, MO. PI's: Dr. Tiffany Knight and Dr. Laura Burkle.
  - Responsible for day-to-day project management, planning, and record keeping of a plant-pollinator interaction study with over 140 plant species and over 6000 pollinator specimens.

## Teaching Experience

- 2017 Guest Instructor, Native American Bee Course, USDA ARS Pollinating Insects Research Unit, Logan, UT. June 12–16.
- 2017 Guest Lecture, "Biology and Conservation of Bees," Biology and the Citizen, Utah State University, Logan, UT. June 8th.
- 2015–2016 Graduate Teaching Assistant, Biology I Laboratory. Utah State University, Logan, UT.
- 2013 Teaching Assistant, Software Carpentry Programming Bootcamp, Utah State University, Logan, UT. March 23–24.
- 2007–2009 Computer Science Tutor, Union College Academic Opportunities Program, Schenectady, NY.

## Service and Outreach

- 2015–Present Scientific Contributor, Xerces Society for Invertebrate Conservation.
- 2013–Present Entomology outreach at USU Science Unwrapped events (6x yearly).
- 2012–Present NSF GRFP Experienced Resource Person.
- 2017 Volunteer, Gardeners Market Pollinator Booth, Logan, UT.
- 2017 Video Contributor, *A Growing Passion* public television show, episode 506: "Wild and Woolly – Native Bee Pollinators."

- 2016 Finalist, Utah State University Val R. Christensen Service Award.
- 2013–2016 Member, USU Graduate Student Advisory Council.
- 2013–2014 President, USU Entomology Club. Member, 2014–Present.
- 2012–2013 Graduate Representative, USU Student Association, Utah State University.
- 2012–2013 Chair, USU Student Health Advisory Committee.
- 2011–2013 Volunteer, USU Student Organic Farm.
- 2011–2012 Secretary, USU Biology Graduate Student Association.
- 2009 Americorps Volunteer, Rocky Mountain Youth Corps, Steamboat Springs, CO.

Reviewer for: Journal of Melittology, PLoS One, Zootaxa.