

Postdoctoral Scholar, Department of Entomology and Nematology, University of California, Davis  
Rosenheim Laboratory, One Shields Avenue, Davis, CA 95616

### Education

- Ph.D. **Interdisciplinary Program in Entomology & Insect Science** (2008 – 2015)  
 Minor: **Ecology and Evolutionary Biology**, University of Arizona – **GPA 4.0**  
*Population dynamics and genomics of Rickettsia infecting the whitefly Bemisia tabaci*  
 Committee: Martha Hunter (supervisor), Wendy Moore, Diana Wheeler, Jeremiah Hackett
- BSc. Hons. **School of Integrative Biology**, now School of Life Sciences (2003 – 2006)  
 Major: **Genetics**, University of Queensland  
**Valedictorian** of the graduating class of ~ 300 students  
*Can Wolbachia mediate iron homeostasis in insects? Understanding the population invasion paradox*  
 Committee: Scott O'Neill (supervisor), Jeremy Brownlie, Karen Johnston, Sassan Asgari

### Awards

P.E.O. International Peace Scholarship (national competition; 2008 and 2009) .....	\$10,500
University of Queensland Academic Excellence Award (university-wide competition; 2006) .....	\$6,000
Arizona Board of Regents Doctoral Research Grant (2012) .....	\$5,000
Smart Women, Smart State Award Undergraduate Category (statewide competition; 2005) .....	\$2,500
Australian Students' Prize (one of 500 recipients nationwide; 2002) .....	\$2,000
R. F. Chapman Prize for Outstanding Graduate Student in Insect Science (2013) .....	\$1,500
Center for Insect Science Graduate Research Stipend (2009 and 2010) .....	\$1,000
H.E. Carter Travel Award for Graduate Interdisciplinary Program students (2012) .....	\$600
Carruth Scholarship for Outstanding Graduate Student in Entomology (2014) .....	\$500
University of Arizona Institute of the Environment Travel Grant (2012) .....	\$500
University of Arizona Graduate and Professional Student Council Travel Award (2012) .....	\$500
Center for Insect Science Travel Award (2011) .....	\$500
Arizona Student Union Textbook Scholarship (university-wide competition; 2010) .....	\$500

### Publications

- **Cass BN**, Himler AG, Bondy EC, Bergen JE, Fung SK, Kelly SE, Hunter MS. Conditional fitness benefits of a *Rickettsia* bacterial symbiont in an insect pest. *Oecologia*. 180(1):169-79. 2016.
- Gebiola M, White JA, **Cass BN**, Kozuch A, Harris LR, Kelly SE, Karimi J, Giorgini M, Perlman SJ, Hunter MS. Cryptic diversity, reproductive isolation and cytoplasmic incompatibility in a classic biological control success story. *Biological Journal of the Linnean Society*. 117(2):217-230. 2016.
- **Cass BN**, Yallouz R, Bondy EC, Mozes-Daube N, Horowitz AR, Kelly SE, Zchori-Fein E, Hunter MS. Dynamics of the endosymbiont *Rickettsia* in an insect pest. *Microbial Ecology*. 70(1):287–297. 2015.
- **Cass BN**, Mozes-Daube N, Iasur-Kruh L, Bondy EC, Kelly SE, Hunter MS, Zchori-Fein E. Bacterial endosymbionts in field-collected samples of *Trialeurodes* sp. nr. *abutiloneus* (Hemiptera: Aleyrodidae) *Research in Microbiology*. 165(2):77–81. 2014.
- Penz T, Schmitz-Esser S, Kelly SE, **Cass BN**, Müller A, Woyke T, Malfatti SA, Hunter MS and Horn M. Comparative genomics suggests an independent origin of cytoplasmic incompatibility in *Cardinium hertigii*. *PLoS Genetics*. 8(10):e1003012. 2012.
- Li X, Bai S and **Cass BN**. *Accord* insertion in the 5' flanking region of *CYP6G1* confers nicotine resistance in *Drosophila melanogaster*. *Gene*. 502(1):1–8. 2012.
- Degnan PH, Leonardo TE, **Cass BN**, Hurwitz B, Stern D, Gibbs RA, Richards S and Moran NA. Dynamics of genome evolution in facultative symbionts of aphids. *Environmental Microbiology*. 12:2060–2069. 2010.
- Brownlie JC, **Cass BN**, Riegler M, Witsenburg JJ, Iturbe-Ormaetxe I, McGraw EA and O'Neill SL. Evidence for metabolic provisioning by a common invertebrate endosymbiont, *Wolbachia pipientis*, during periods of nutritional stress. *PLoS Pathogens*. 5:e1000368. 2009.
- McMeniman CJ, Lane RV, **Cass BN**, Fong AWC, Sidhu M, Wang Y and O'Neill SL. Stable introduction of a life-shortening *Wolbachia* infection into the mosquito *Aedes aegypti*. *Science*. 323(5910):141–144. 2009.

### Research Positions

**Postdoctoral Scholar:** J.A. Rosenheim Laboratory, Department of Entomology & Nematology, University of California, Davis (2016 – present)

**Research Assistant:** M.S. Hunter Laboratory, Department of Entomology, University of Arizona (2011 – 2015)

**Research Rotation:** N.A. Moran Laboratory, Department of Ecology & Evolutionary Biology, University of Arizona (2009)

**Research Rotation:** X. Li Laboratory, Department of Entomology, University of Arizona (2008 – 2009)

**Research Rotation:** M.S. Hunter Laboratory, Department of Entomology, University of Arizona (2008)

**Research Specialist:** S.L. O'Neill Laboratory, School of Integrative Biology, University of Queensland (2007)  
Physical (Biological) Containment Level 2 Certified.

**Research Assistant:** S.L. O'Neill Laboratory, School of Integrative Biology, University of Queensland (2003 – 2005)

**Advanced Studies Program in Science Rotation:** J.L. Martin Laboratory, Institute for Molecular Bioscience, University of Queensland (2005)

**Advanced Studies Program in Science Rotation:** S.L. O'Neill Laboratory, School of Integrative Biology, University of Queensland (2004)

### Conferences

- Entomological Society of America Annual Meeting (2015) Graduate Ten-Minute Paper  
SysEB Behavior, Coevolution, and Symbiotic Associations - **President's Prize (2<sup>nd</sup> Place)**
- International *Wolbachia* Meeting (2012) Poster presentation - **Communication Award (2<sup>nd</sup> Place)**
- Entomological Society of America Annual Meeting (2011) Oral presentation
- Center for Insect Science Hexapodium (2011) Oral presentation
- Institute of the Environment Environmental Research Grad Blitz (2011) Oral presentation
- Center for Insect Science Hexapodium (2009) Oral presentation
- The Department of Primary Industries Revolutionary Science Forum (2007) Invited participant
- Genetics Society of Australia (2006) Poster presentation
- The University of Queensland Undergraduate Research Conference (2005) Poster presentation
- The University of Queensland Undergraduate Research Conference (2004) Oral presentation

### Teaching Assistantships

**Insects and Culture:** Sole TA for class of 100 non-biology majors (ENTO160, Spring 2014)

Responsibilities included grading essays and short answer exams, weekly office hours, review sessions, and answer keys, for all students

**Introductory Biology:** Instructor of record for two classes of 25 students (BIOL181L Fall 2009, Fall 2010)

Responsibilities included running weekly 3 h laboratory sections including experiments, lecture and group activities, writing quizzes, and grading all assessment items

**Genetics:** One of two TAs for class of 100 biology majors (ECOL320 Spring 2010)

Responsibilities included leading weekly problem solving sessions for two classes of 25 students, review session lectures for all students, and grading short answer exams

### Community, Service and Outreach

- Philanthropic Education Organization State Convention (2009, 2010) Invited Speaker
- GIDP Entomology and Insect Science Executive Committee (2010 – 2012) Student Representative
- Arizona Insect Festival (2011, 2012, 2013, 2014) Life in Miniature booth
- Sonoran Desert Museum 'Meet the Beetles' (2010) *Zopherus* booth
- Conservation Volunteers Australia Yellow Crazy Ant Eradication Project (December 2008) Volunteer
- University of Arizona Insect Collection Sorting Event (2011) Volunteer
- Three Insect Discovery sessions at local schools and the BRAVO! student orientation (2010) Speaker
- Entomology Graduate Student Association (2009 – 2012) Meeting chair, directed major updates of the graduate student handbook, fundraising, organized a student table at the ESA meeting (2010, 2011)
- Science Works for the Smart State Conference (2002) Invited Speaker