



# Jill T. Oberski, Ph.D.

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## EDUCATION

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### Doctor of Philosophy, Entomology

September 2017 – July 2023

Advised by Dr. Philip S. Ward // University of California, Davis, CA

### Bachelor of Arts, Biology

### Bachelor of Arts, German Studies

Class of 2016 – *cum laude* // Macalester College, Saint Paul, MN

## RESEARCH EXPERIENCE

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### Graduate Student Researcher (GSR) | 2017 – 2023 | University of California Davis

- Curating, databasing, and imaging ant specimens for the UC Davis insect collection.
- Extracting DNA and preparing samples for high-throughput next-generation sequencing.
- Delimiting species by integrating traditional morphological taxonomy with phylogenomics.
- Manipulating genomic data, operating bioinformatics software, and running intensive phylogenetic analyses on remote servers.
- Writing and running code in Linux/Unix terminal, R, and Python.

### Research Intern | 2016 – 2017 | University of Wisconsin Madison

- Completed the first molecular phylogenetic analysis of Assamiidae harvesters (Opiliones).
- Implemented lab organization schemes and maintained arthropod colonies.

### Research Assistant | 2014 – 2016 | Macalester College

- Investigated the phylogeny and divergence dates of *Austropurcellia* mite harvestmen.
- Independently performed Sanger sequencing techniques including PCR, gel electrophoresis, and DNA quantification.
- Taught myself ML and Bayesian phylogenetics software including MrBayes and BEAST.

### Lab Inventory Assistant | 2014 – 2016 | Macalester College

- Performed curatorial work sprucing up Macalester College's neglected insect collection.
- Reorganized drawers, added student collections, and identified specimens to family.

## PUBLICATIONS

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- Oberski, J.T., et al.** In preparation: Systematics of Nearctic *Dorymyrmex* (Hymenoptera: Formicidae), including a new key to species and insights into their natural history.
- Oberski, J.T.** In preparation: UCE phylogenomics illuminate the evolutionary history and intercontinental range expansion of *Dorymyrmex* pyramid ants. *Systematic Entomology*.
- Oberski, J.T.** A first phylogenomic assessment of the amphitropical New World ant genus *Dorymyrmex* (Hymenoptera: Formicidae), a longstanding taxonomic puzzle. 2022, *Insect Systematics and Diversity* 6(1): 1-8. <https://doi.org/10.1093/isd/ixab022>
- Godfrey, R.K., T. Allmark, C. Givens, J. Hernandez-Rivera, **J.T. Oberski**, and W. Gronenberg. Olfactory system morphology suggests colony size drives trait evolution in odorous ants (Formicidae: Dolichoderinae). 2021, *Frontiers in Ecology and Evolution* 9:733023. <https://doi.org/10.3389/fevo.2021.733023>
- Oberski, J.T.** Translation from German of Remane, A. (1956), *Die Grundlagen des natürlichen Systems der vergleichende Anatomie und der Phylogenetik*. The fundamentals of the natural systems of comparative anatomy and phylogenetics, Chapter 2: The concept of homology and the criteria for homology. 2019, Available upon request.
- Oberski, J.T.**, S.L. Boyer, K.A. Lemon, J.R. Johnson, K.R. Jay, M.J. Coblens, and P.P. Sharma. A dated molecular phylogeny of mite harvestmen (Arachnida, Opiliones, Cyphophthalmi) from Queensland, Australia. 2018, *Molecular Phylogenetics and Evolution* 127: 813-822. <https://doi.org/10.1016/j.ympev.2018.06.029>
- Sharma, P.P., C.M. Baker, J.G. Cosgrove, J.E. Johnson, **J.T. Oberski**, R.J. Raven, M.S. Harvey, & S.L. Boyer. A revised dated phylogeny of scorpions: Phylogenomic support for ancient divergence of the temperate Gondwanan family Bothriuridae. 2018, *Molecular Phylogenetics and Evolution* 122: 37-45. <https://doi.org/10.1016/j.ympev.2018.01.003>
- Sharma, P.P., **J.T. Oberski**, M.A. Santiago, R. Kriebel, S.M. Lipps, P.A.C. Buenavente, A.C. Diesmos, M. Janda, S.L. Boyer, R.M. Clouse, and W.C. Wheeler. There is no evidence that Podoctidae carry eggs of their own species: Reply to Machado and Wolff. 2017, *Molecular Phylogenetics and Evolution* 129: 349-353. <https://doi.org/10.1016/j.ympev.2017.03.026>
- Jay, K.R., Z.R. Popkin-Hall, M.J. Coblens, **J.T. Oberski**, P.P. Sharma, and S.L. Boyer. New species of *Austropurcellia*, cryptic short-range endemic mite harvestmen (Arachnida, Opiliones, Cyphophthalmi) from Australia's Wet Tropics biodiversity hotspot. 2016, *ZooKeys* 586: 37-93. <https://doi.org/10.3897/zookeys.586.6774>

## FELLOWSHIPS & GRANTS

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2022	\$ 3,000	Professors For The Future Fellowship	UC Davis Grad. Studies
2022	\$ 250	Graduate Student Assoc. Travel Grant	UC Davis GSA
2019	\$ 3,000	George H. Vansell Scholarship	UC Davis Entomology
2019	\$ 1,250	Ernst Mayr Grant in Insect Taxonomy	Harvard MCZ
2019	\$ 250	Graduate Student Assoc. Travel Grant	UC Davis GSA

2017-20	\$ 90,000	<b>Dean's Distinguished Graduate Fellowship</b>	UC Davis Grad. Studies
2012-16	\$ 60,000	DeWitt Wallace Merit Scholarship	Macalester College
2013	\$ 500	Language Learning Video Contest	Vista Higher Learning
<b>\$158,250</b>		<b>Sum Total 2012–2023</b>	

## NSF CONTRIBUTING PROJECTS

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- AToL: Collaborative Research on Ant Phylogeny: A Comprehensive Evolutionary Tree for the World's Premier Social Organisms (2004). #DEB-0431330. Philip Ward, Brian Fisher, Ted Schultz, Sean Brady
- Collaborative Research: Camponotine Ants and their Little Helpers: Phylogenomics of a Hyperdiverse Insect Clade and its Bacterial Endosymbionts (CAnBE) (2019). #DEB-1856539. Philip Ward, Jennifer Wernegreen, Bonnie Blaimer, Brian Fisher
- Collaborative Research: Ants of the World (2019). #DEB-1932062. Philip Ward, Bonnie Blaimer, Brian Fisher, John Longino, Michael Branstetter

## MAJOR FIELD WORK

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August 2021	USA: Utah and Nevada: Swasey Peak, Crystal Peak, Pine Valley	2 weeks
February 2020	Brazil: São Paulo, SP and Curitiba, PR	2 weeks
July 2019	USA: Nevada and California: White Mts, Esmeralda County	2 weeks
July 2018	USA: California and Nevada, broadly (Sagehen Field Station)	5 weeks
August 2018	French Guiana: Nouragues Field Station, Inselberg Camp	2 weeks

## TEACHING EXPERIENCE

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### **Training: Seminar on College Teaching** | 2022 | University of California Davis

- Learned how to implement evidence-based, DEI-infused teaching practices.
- Applied integrated course design and active learning principles to traditional lessons.
- Created essential elements of a teaching portfolio, including a course syllabus.

### **Instructor, Vineyard Ant Identification** | 2022 | UC Cooperative Extension, Sonoma & Napa Co.

- Led six workshops in Sonoma and Napa counties for vineyard managers, growers, and integrated pest management specialists.
- Introduced students to technical taxonomic information at an accessible level.
- Emphasized cooperative, hands-on practice using dissecting microscopes and an ID key.

### **Teaching Assistant, Intro Bio: The Tree of Life** | 2021 – present | University of California Davis

- Independently teaching two lab sections per quarter of BIS 002C introductory biology.
- Leading students through lab manual activities and teaching presentation skills.
- Coordinating Zoom meetings with many participants, breakout rooms, and screen sharing.
- Gently evaluating student mental health and barriers to learning during the COVID-19 pandemic and responding appropriately.

### **Teaching Assistant, Natural History of Insects** | 2018 – present | University of California Davis

- Helping facilitate Natural History of Insects, an entomology course **taught by grad students.**

- Integrating classroom technologies such as TopHat and remote access.
- Lecturing 1-2 times per quarter on the following topics:
  - o Cultural Entomology (2018, 2019, 2020)
  - o Insects of Davis / Household and Garden Arthropods (2019, 2020)

**Course Development, Natural History of Insects** | 2017 – 2018 | University of California Davis

- Reviewed pedagogical techniques with other graduate students and a faculty advisor.
- Worked together to bring ENT 010 from course concept to syllabus to fruition.
- ENT 010, Natural History of Insects, was first offered Winter Quarter 2018.

**Teaching Assistant, Biodiversity and Evolution** | 2015 – 2016 | Macalester College

- Guided students through complex material in BIOL 270.
- Led exam review sessions, recorded video tutorial screencasts, and graded assignments.

**Training: Education & Emerging Technologies** | 2015 | Macalester College

- Learned to use 15+ classroom and learning technologies, e.g. Kurzweil and OCR
- Course content emphasized accessibility aids for students with disabilities

**Student Manager, Digital Resource Center** | 2014 – 2016 | Macalester College

- Trained faculty and students to use and troubleshoot creative media software, e.g. the Adobe suite, SketchUp, Final Cut Pro, iMovie, Audacity, GarageBand, and input from MIDI devices.

**HONORS & CERTIFICATES**

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2023	National Champion, Entomology Games	Entomological Society of America
2022	Nominated: John Henry Comstock Award	Pacific Branch Ent. Soc. Amer.
2022	Branch Champion, Entomology Games	Pacific Branch Ent. Soc. Amer.
2020	President's Prize, First Place: Infographic	Entomological Society of America
2019	President's Prize, Second Place: Seminar	Entomological Society of America
2019	President's Prize, Second Place: Infographic	Entomological Society of America
2019	GRFP (Graduate Research Fellowship): Hon. Mention	Natl. Science Foundation (NSF)
2018	National Champion, Entomology Games	Entomological Society of America
2018	Graduate of the 17 <sup>th</sup> Ant Course	California Academy of Sciences
2016	Induction into Delta Phi Alpha	National German Honor Society
2016	Virginia McKnight Binger Prize for Excellence	Macalester Coll. German Studies
2014	<b>German Fluency Goethe-Zertifikat C1</b>	Goethe Institut Berlin

**GUEST AND INVITED SEMINARS**

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2023	Professors for the Future – 4 panels on Mental Illness	UC Davis Grad. Studies
2023	ENT 010: Nat. Hist. of Insects – 2 lectures	UC Davis Ento. & Nem.
2022	ENT 010: Nat. Hist. of Insects – 2 lectures	UC Davis Ento. & Nem.
2022	BIOL 476: Research in Biodiversity and Evolution	Macalester College Biology
2021	ENT 010: Nat. Hist. of Insects – 2 lectures	UC Davis Ento. & Nem.
2020	ENT 010: Nat. Hist. of Insects – 2 lectures	UC Davis Ento. & Nem.
2020	<b>Symposium: Global Advances in Ant Phylogenomics</b>	Entomology 2020
2019	ENT 010: Nat. Hist. of Insects – 2 lectures	UC Davis Ento. & Nem.
2018	ENT 010: Nat. Hist. of Insects – "Insects in Culture"	UC Davis Ento. & Nem.

2018 **Q&A Panelist: Mental Illness and Disability**  
2016 BIOL 476: Research in Biodiversity & Evolution

UC Davis Mental Health Conf.  
Macalester College Biology

## SERVICE & PROFESSIONAL DEVELOPMENT

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2021 – 2023 Graduate Student Advisor, Transfer Research Society  
2022 Faculty Hiring Committee, Agricultural Nematologist, UCD Ento. & Nem.  
2020 – 2022 **President**, UCD Entomology Graduate Student Association (EGSA)  
*Liaison to faculty and hiring committees; coordinating events incl. Picnic Day*  
2021 Mentor, Ecology and Evolutionary Biology (EEB) Mentor Match  
2019 – 2020 Graduate Admissions Committee, UCD Ento. & Nem.  
2018 – 2020 Treasurer, UCD Entomology Graduate Student Association (EGSA)  
2018 – 2019 Dept. Retreat Committee, UCD Ento. & Nem.  
2018 California Academy of Sciences Ant Course, French Guiana

## OUTREACH, EQUITY, & #SciComm

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2022 – 2023 Dept. Committee on Faculty Mentorship, UCD Ento. & Nem.  
2018 – 2023 Picnic Day, UC Davis  
*Campus-wide annual event drawing thousands of people to our exhibits.  
In 2021 (virtual), created [“Ants of Davis” YouTube video](#).*  
2017 – 2023 Maintaining a "survival guide" for new Ento. graduate students in Davis  
2020 – 2022 Dept. Committee on Diversity, Equity, Inclusion, and Belonging, UCD Ento. & Nem.  
2020 – 2022 Graduate Committee on Diversity, Equity, and Inclusion, UCD Ento. Graduate Group  
2017 – 2022 **Girls’ Outdoor Adventure in Leadership and Science (GOALS) @ UC Davis**  
*yearly, immersive, FREE summer science backpacking trip for diverse high school girls and non-binary youth. Personally developed the public website and design.*  
2021 **Program Leader**, GOALS @ UC Davis  
*citizen science projects, birds and pollinators, data analysis, outdoor experiences and privileges to access, indigenous history, college apps and financial aid*  
2021 UC Davis Envision program  
*meeting with first-generation / underrepresented minority prospective students*  
2021 Podcast guest: "Ant-Man" subject expert on "The Marvels of Science"  
2020 – 2021 Skype A Scientist: 10 presentations to a wide variety of audiences  
2019 California Honey Festival

## CONFERENCE PRESENTATIONS

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\* *President's Prize recognition*

2022 **Seminar:** "Intercontinental range expansion in the arid-adapted pyramid ants (Formicidae: *Dorymyrmex*)." *Entomology, Vancouver, BC, Canada*.  
2022 **Seminar:** "UCE phylogenomics clarifies classical taxonomy in the pyramid ants, genus *Dorymyrmex* (Hymenoptera: Formicidae)." *Pacific Branch Ent. Soc. Amer., Santa Rosa, CA*.  
2021 **Seminar:** "Arid-adapted pyramid ants (Formicidae: *Dorymyrmex*) show an amphitropical distribution and an ongoing radiation." *Entomology, Denver, CO*.  
\*2020 **Infographic Poster:** "Why do Museum Collections Matter?" *Entomology (virtual)*.

- \*2019 **Seminar:** "Unraveling the Phylogeny and Biogeography of *Dorymyrmex*, a New World Amphitropical Disjunct." *Entomology, St. Louis, MO.*
- \*2019 **Infographic Poster:** "Discovery and Diversity: The Importance of Systematic Entomology in Today's World." *Entomology, St. Louis, MO.*
- 2017 **Seminar:** "India as a 'Biotic Ferry': Systematics and Biogeography of the Harvestman Family Assamiidae." Oberski, J.T., P.P. Sharma, and S.L. Boyer. *Society for Integrative and Comparative Biology, New Orleans, LA.*
- 2016 **Group Poster:** "A dated molecular phylogeny for *Austropurcellia*, short-range endemic mite harvestmen (Cyphophthalmi, Pettalidae) from the Australian Wet Tropics." *Int'l Congress on Arachnology, Golden, CO.*
- 2016 **Group Poster:** "Systematics and Biogeography of Mite Harvestmen from Australia's Wet Tropics." *Society for Integrative and Comparative Biology, Portland, OR.*

## SOCIETIES & PEER REVIEWS

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Entomological Society of America (ESA)  
 International Union for the Study of Social Insects (IUSSI)  
 International Society of Hymenopterists (ISH)  
 Entomological Collections Network (ECN)  
 American Association of University Women (AAUW)  
 American Association for the Advancement of Science (AAAS)  
 PeerJ – Reviewer (2021)