

 **ZACHARY J. LAHEY**

August 2020

C.A. Triplehorn Insect Collection
Museum of Biological Diversity
The Ohio State University
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EDUCATION

Ph.D. Evolution, Ecology, & Organismal Biology, The Ohio State University, 2016–Present.

Dissertation Title: Taxonomy and Systematics of Platygastroidea (Hymenoptera, Proctotrupomorpha).

Committee: Norman F. Johnson (Advisor), Rachelle M.M. Adams, John Freudenstein, Megan Meuti.

M.S. Entomology & Nematology, University of Florida, 2014.

Thesis Title: Parasitoids of an Invasive *Bemisia tabaci* Species (Hemiptera: Aleyrodidae) in Southwest Florida: Faunal Composition, Host-Plant Associations, and Interspecific Competition.

Committee: Philip A. Stansly (Advisor), Heather J. McAuslane.

B.A. Biology, Florida Gulf Coast University, 2010.

B.A. Environmental Studies, Florida Gulf Coast University, 2010.

RESEARCH INTERESTS

Bioinformatics

Biological Control

Genome Evolution

Phylogenomics

Systematics and Taxonomy of Parasitic Hymenoptera

PROFESSIONAL APPOINTMENTS

The Ohio State University

Graduate Teaching Assistant (2016–Present)[†]

Biology 1113: Autumn 2016, Summer 2019.

Biology 1114: Spring 2017, Autumn 2018, Summer 2020.

Biology 1114 Honors: Autumn 2017, 2019; Spring 2018*, 2019*, 2020*.

Comparative Vertebrate Anatomy: Summer 2017, 2018.

[†] Total number of students taught: 378 (as of Summer 2020).

* Head Teaching Assistant.

University of Florida

Graduate Research Assistant (2012–2014)

Description: Assisted UF faculty and post-doctoral researchers with integrated pest management projects centered around major pests of citrus and vegetable crops in Southwest Florida.

Duties: Assisted in the collection and interpretation of demographic data for Asian citrus psyllid (ACP), citrus leafminer, and their natural enemies. Performed insecticide bioassays on susceptible (laboratory) and field-collected (wild) ACP populations. Identification of parasitoid wasp and phytoseiid mite genera collected in citrus orchards. Maintained laboratory colonies of ACP, citrus leafminer, silverleaf whitefly, and associated parasitoid wasps. Propagation, pruning, and recycling of orange jessamine (*Murraya paniculata*) for use in ACP and *Tamarixia radiata* (Hymenoptera: Eulophidae) colony rearing.

RESEARCH PUBLICATIONS

1. **Lahey, Z.**, L. Masner, N. F. Johnson (2019) *Calixomeria*, a new genus of Sceliotrachelinae (Hymenoptera, Platygastriidae) from Australia. *ZooKeys* 830: 63–73.
Impact Factor: 1.1
Author contributions: **Z. Lahey** (character coding, character definition, generic concept development, imaging, key development, species concept development, writing – original draft, writing – review and editing); L. Masner (character definition, generic concept development, provision of specimens, species concept development); N. F. Johnson (funding acquisition, project administration, supervision).
2. **Lahey, Z.**, L. Masner, N. F. Johnson, A. Polaszek (2019) Revision of *Aleyroctonus* Masner & Huggert (Hymenoptera, Platygastriidae, Sceliotrachelinae). In: Talamas, E. (Ed) Advances in the Systematics of Platygastroidea II. *Journal of Hymenoptera Research* 73: 73–93.
Impact Factor: 0.94
Author contributions: **Z. Lahey** (character coding, character definition, generic concept development, key development, species concept development, writing – original draft, writing – review and editing); L. Masner (provision of specimens); N. F. Johnson (funding acquisition, project administration, supervision); A. Polaszek (provision of specimens).
3. **Lahey, Z.**, S. van Noort, A. Polaszek, L. Masner, N. F. Johnson (2019) Revision of the Afrotropical genus *Pulchrisolia* Szabó (Hymenoptera, Platygastriidae, Sceliotrachelinae). In: Talamas, E. (Ed) Advances in the Systematics of Platygastroidea II. *Journal of Hymenoptera Research* 73: 39–71.
Impact Factor: 0.94
Author contributions: **Z. Lahey** (character coding, character definition, generic concept development, imaging, key development, species concept development, writing – original draft, writing – review and editing); S. van Noort (character definition, imaging, key development, provision of specimens); A. Polaszek (initial proposal for redefinition of the *Isolia*-cluster, provision of specimens); L. Masner (character definition, generic concept development, provision of specimens, species concept development); N. F. Johnson (character definition, funding acquisition, project administration, supervision).
4. **Lahey, Z. J.**, A. Polaszek (2017) *Baeoentedon balios* (Hymenoptera: Eulophidae): a parasitoid of ficus whitefly, *Singbiella simplex* (Singh) (Hemiptera: Aleyrodidae), new to the United States. *International Journal of Pest Management* 63: 349–351.
Impact Factor: 0.90
Author contributions: **Z. J. Lahey** (imaging, species identification, specimen collection, writing – original draft, writing – review and editing); A. Polaszek (imaging, writing – original draft, writing – review and editing).
5. **Lahey, Z. J.**, H. J. McAuslane, P. A. Stansly (2016) Interspecific competition between two exotic parasitoids (Hymenoptera: Aphelinidae) of an invasive *Bemisia tabaci* species (Hemiptera: Aleyrodidae). *Florida Entomologist* 99: 535–540.
Impact Factor: 0.97
Author contributions: **Z. J. Lahey** (conceptualization, investigation, formal analysis, methodology, visualization, writing – original draft, writing – review and editing); H. J. McAuslane (conceptualization, methodology, writing – review and editing); P. A. Stansly (conceptualization, funding acquisition, methodology, project administration, supervision, visualization, writing – review and editing).

6. **Lahey, Z.**, P. Stansly (2015) An updated list of parasitoid Hymenoptera reared from the *Bemisia tabaci* species complex (Hemiptera: Aleyrodidae). *Florida Entomologist* 98: 456–463.
Impact Factor: 0.97
Author contributions: **Z. Lahey** (investigation, writing – original draft, writing – review and editing); P. A. Stansly (funding acquisition, project administration, supervision, writing – review and editing).
7. **Lahey Z. J.**, Gunnels, C. W. (2013) Effects of landscaping with *Sabal palmetto* on urban populations of arthropods. *Florida Scientist* 76: 363–377.
Impact Factor: N/A
Author contributions: **Z. J. Lahey** (conceptualization, formal analysis, investigation, methodology, visualization, writing – original draft, writing – review and editing); C. W. Gunnels (conceptualization, formal analysis, funding acquisition, methodology, project administration, supervision, visualization, writing – original draft, writing – review and editing).

HONORS & AWARDS

- 2020 Department of Evolution, Ecology, & Organismal Biology – Raymond C. Osburn Memorial Graduate Scholarship.
2020 OSU Council of Graduate Students – Career Development Grant.
2019 International Society of Hymenopterists – Student Travel Award.
2019 International Society of Hymenopterists – 2nd Place Student Presentation Competition.
2018 International Society of Hymenopterists – 1st Place Student Presentation Competition.
2014 Florida Entomological Society – 2nd Place MS Student Paper Competition.
2013 Dade County Agri-Council Scholarship – Research on *Bemisia* parasitoids in Florida.

EDITORIAL SERVICE

Deputy Editor, *Florida Entomologist* (2014–Present).

Referee for *Animal Behaviour* (1), *Biodiversity Data Journal* (1), *Florida Entomologist* (6), *Journal of Hymenoptera Research* (1), *Journal of Natural History* (1).

CONFERENCE PRESENTATIONS

- 2019 Johnson, N. F.[†], A. Austin, L. Musetti, **Z. Lahey**, H. Chen. Return on investment: systematics and evolution of Platygastridae in the 21st century. Entomological Society of America Meeting. St. Louis, Missouri, USA. November 17–20.
- 2019 Johnson, N. F.[†], L. Musetti[†], **Z. Lahey**[†]. New generic concepts in the Platygastridae pipeline (Hymenoptera). Entomological Society of America Meeting. St. Louis, Missouri, USA. November 17–20.
- 2019 **Lahey, Z.**[†], H. Chen, N. F. Johnson. Phylogenomics of Platygastridae (Hymenoptera: Proctotrupomorpha). Entomological Society of America Meeting. St. Louis, Missouri, USA. November 17–20.
- 2019 **Lahey, Z.**[†], H. Chen, N. F. Johnson. Phylogenomics of Platygastridae (Hymenoptera: Proctotrupomorpha). Graduate Student Darwin Series. Columbus, Ohio, USA. January 31.
- 2018 **Lahey, Z.**[†], H. Chen, N. F. Johnson. Phylogenomics of Platygastridae (Hymenoptera: Proctotrupomorpha). Entomological Society of America Meeting. Vancouver, British Columbia, Canada. November 11–14.
- 2017 Chen, H.[†], E. Talamas, **Z. Lahey**, N. F. Johnson. Chemosensory receptor evolution in the parasitic wasp *Trissolcus basalis* (Hymenoptera: Platygasteridae) and its implications for speciation. Entomological Society of America Meeting. Denver, Colorado, USA. November 5–8.
- 2017 **Lahey, Z.**[†], H. Chen, N. F. Johnson. Phylogenomics of Platygastridae (Hymenoptera: Proctotrupomorpha). Entomological Society of America Meeting. Denver, Colorado, USA. November 5–8.

- 2017 Calvert, E.[†], N. F. Johnson, H. Chen, **Z. Lahey**. Genome sequencing of the mitochondrial CO-1 gene in Platygastroidea Telenominae. Denman Undergraduate Research Forum. Columbus, Ohio, USA. March 29.
- 2014 **Lahey, Z. J.[†]**, P. A. Stansly. Parasitoids of *Bemisia tabaci* in southwest Florida: Faunal composition, host plant associations, and non-target hosts. 97th Annual Meeting of the Florida Entomological Society. Jupiter, Florida, USA. August 3–6.
- 2013 **Lahey, Z.[†]**, P. Stansly. *Bemisia tabaci* parasitoids in southwest Florida: faunal flux over recent years with implications for whitefly management. 1st International Whitefly Symposium. Kolymbari, Crete, Greece. May 20–24.

[†] Presenting author(s).

SERVICE TO PROFESSION, UNIVERSITY, & COMMUNITY

Professional Memberships

- Entomological Society of America (2010–Present)
- Florida Entomological Society (2011–Present)
- International Society of Hymenopterists (2012–Present)
- The Society for Systematic Biologists (2019–Present)
- The Society for the Study of Evolution (2019–Present)

Undergraduate Mentoring

Ellen Dunkle (Spring 2018)

Project: Identification of putative sex-determination genes in *Trissolcus basalis* (Wollaston) (Hymenoptera: Scelionidae).
 Contribution: Project coordination; provision of genetic sequence data in the form of genome assemblies for *T. basalis* and other species of platygastroid wasps; held weekly to biweekly meetings to assess progress, pitfalls, and discuss results in the broader context of entomology.

Martha Drake (Autumn 2018 & Spring 2019)

Project: DNA barcoding the *Pyrolyga* fireflies (Coleoptera: Lampyridae) of Ohio.
 Contribution: Provided training in DNA extraction, PCR, gel electrophoresis, sequence manipulation, multiple sequence alignment, and phylogenetic analysis; attended lab meetings to discuss progress, results, and future directions.

Danny Phillips (Autumn 2018 & Spring 2019)

Project: *Lucidota* (Coleoptera: Lampyridae) of Ohio: generation of COI barcodes.
 Contribution: Provided training in DNA extraction, PCR, gel electrophoresis, sequence manipulation, multiple sequence alignment, and phylogenetic analysis; attended lab meetings to discuss progress, results, and future directions.

Outreach & Public Service

Tutor & Social Coach – Transition Options in Postsecondary Settings (TOPS) (Spring 2020)

Duties: Assist TOPS students (individuals with intellectual and developmental disabilities) with homework, test taking, and other assessments including searching for and completing job applications. Attend and participate in social activities coordinated by the TOPS program.

Volunteer – Museum of Biological Diversity Open House (2017–Present)

Duties: Discuss entomology, research, and the importance of science and nature with visitors to the C.A. Triplehorn Insect Collection during the annual Museum of Biological Diversity Open House.

Camp Counselor – Engaging with Insects Day Camp (June 26–30, 2017)

Duties: Aided campers (ages 6–10) in the collection, identification, and curation of insects.