

# *Amanda O. Shaver*

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## **EDUCATION**

2015-Current Ph.D. Student, Department of Genetics, University of Georgia, Athens, GA  
Advisor: Kelly Dyer, Ph.D.  
May 2011 B.S., Biology (emphasis in Cell Biology), The University of Kansas, Lawrence, KS  
Advisor: Paulyn Cartwright, Ph.D.

## **PUBLICATIONS**

Snyder-Mackler N., J. Sanz-Remón, J.N. Kohn, J.F. Brinkworth, S. Morrow, **A.O. Shaver**, J.C. Grenier, R. Pique-Regi, Z.P. Johnson, M.E. Wilson, L.B. Barreiro, and J. Tung. Social status alters immune regulation and response to infection. *Science*. (submitted)

Snyder-Mackler N., W.H. Majoros, M.L. Yuan, **A.O. Shaver**, J.B. Gordon, G.H. Kopp, S.A. Schlebusch, J.D. Wall, S.C. Alberts, S. Mukherjee, X. Zhou, and J. Tung. Efficient genome-wide sequencing and low coverage pedigree analysis from non-invasively collected samples. *Genetics*. 2016

Hamm, C.A., D.J. Begun, A. Vo, C.C.R. Smith, P. Saelao, **A.O. Shaver**, J. Jaenike, and M. Turelli. 2014. *Wolbachia* do not live by reproductive manipulation alone: infection polymorphism in *Drosophila suzukii*. *Molecular Ecology*. 2014

## **AWARDS / FUNDING**

2016 Robinson Hightower Genetics Graduate Support Fund (\$1,000)  
2016 *Honorable Mention*, National Science Foundation, Graduate Research Fellowship  
2016 UGA Graduate School Travel Award (\$250)

## **RESEARCH EXPERIENCE**

2015-Current University of Georgia, Department of Genetics  
Advisor: Kelly A. Dyer

- Graduate Student (Position)
- Graduate Rotation Student, Integrated Life Sciences (Position)
- Project: Characterizing the genetic basis of body size variation in *Drosophila subquinaria*

2015 University of Georgia, Department of Genetics  
Advisor: Michael A. White

- Graduate Rotation Student, Integrated Life Sciences (Position)
- Project: Developing Immunohistochemistry Staining Protocol(s) in threespine stickleback fish

2015 University of Georgia, Department of Entomology  
Advisor: Gaelen R. Burke

- Graduate Rotation Student, Integrated Life Sciences (Position)
- Project: Understanding Genes Involved in Initiation of Virus Replication of Parasitoid Wasps

- 2013–2015 Duke University, Dpt. of Biology & Dpt. of Evolutionary Anthropology  
Advisors: Susan Alberts, Ph.D. and Jenny Tung, Ph.D.
- Associate in Research (Position)
  - Optimized a protocol that enriches for baboon specific DNA in fecal-derived (fDNA) using a probe based method and next-generation sequencing (NGS)
  - Enter and manage behavioral data collected from the field into an SQL database
- 2012–2013 University of Rochester, Department of Biology  
Advisor: John Jaenike, Ph.D.
- Laboratory Technician III (Position)
  - Locating gene(s) present in a *Drosophila neotestacea*-infecting strain of *Spiroplasma* (endosymbiont) responsible for anti-nematode effects through Next-generation sequencing
  - Assembling 5 *Spiroplasma* bacterial genomes and the *Drosophila neotestacea* genome from Illumina and PacBio data
  - Assessing how *Wolbachia* and *Spiroplasma* (endosymbionts) affect male *D. neotestacea* hosts' fecundity
  - Screening monthly caught *Drosophila neotestacea* to record bacterial infections in the natural population
- 2011-2012 Auburn University, Department of Biological Sciences  
Advisors: Kenneth M. Halanych, Ph.D. and Scott R. Santos, Ph.D.
- Laboratory Technician II (Position)
  - Used metagenomics to analyze meiofaunal communities in the Gulf of Mexico looking at the effects of the Deepwater Horizon Oil Spill
  - Assisted in the NSF-AToL WormNet Grant – Assembling the Annelid Tree of Life Project through cDNA library preparation and Next-generation sequencing
  - Characterized Antarctic *Pycnogonid* species by looking at mitochondrial markers using Sanger Sequencing
- 2009-2011 The University of Kansas, Department of Ecology and Evolutionary Biology  
Advisor: Paulyn Cartwright, Ph.D.
- Undergraduate Research Assistant (Position)
  - REU project characterizing Hox genes in the enigmatic medusozoan parasite *Polypodium hydriforme*
  - Aligned DNA using secondary structure models for cnidarians utilizing various molecular software and PERL scripts
  - Independent research characterizing the hydrozoan fauna of New Caledonia for the NSF Cnidarian Tree of Life project

### **LABORATORY RESEARCH SKILLS**

- Perform molecular procedures (DNA/RNA extraction, cDNA/ DNA library construction, designing PCR primers, PCR, RT PCR, bioanalyzing, insitu hybridization, restriction digests, electrophoresis, gel purifications/extractions, tissue culture, molecular cloning, antibody design/staining, BLAST, and editing sequence data)
- Sequencing - MiSeq Personal Sequencer (Illumina) and Beckman CEQ 8000 (Sanger)

- Experience working in UNIX and LINUX
- Ability to work with an Access database
- Knowledge of molecular software (GeneDoc, Sequencher, Geneious, and Mesquite)
- Culturing various *Drosophila* species, *Symbiodinium* (endosymbiotic dinoflagellates), and marine invertebrates
- Assisted and trained 2 high school students, 5 undergraduates, 4 graduate students, and 3 postdoctoral fellows
- Hired and trained 3 undergraduate students
- Maintaining and purchasing laboratory supplies

### **TEACHING EXPERIENCE**

2016 Graduate Lab Assistant, University of Georgia, Concepts of Biology Lab  
 2013 Teaching Assistant, University of Rochester, Introduction to Biology Lab  
 2008-2011 UKanTeach Student, University of Kansas, Center for Science Education

### **PRESENTATIONS AND POSTERS**

June 2016 Society for the Study of Evolution, Austin, TX  
 • Poster Title: “Evolutionary Genetics of Body Size in *Drosophila subquinaria*”

March 2015 Three-Minute Thesis, The University of Georgia, Athens, GA  
 • Oral Presentation: “Does Size Really Matter?”

Oct. 2015 SouthEastern Ecology and Evolutionary Genetics (SEPEEG), Eaton, GA  
 • Poster Title: “Understanding Genes Involved in Initiation of Virus Replication of Parasitoid Wasps”

Sep. 2015 Big Data Symposium, The University of Georgia, Athens, GA  
 • Poster Title: “Understanding Genes Involved in Initiation of Virus Replication of Parasitoid Wasps”

Nov. 2012 Rochester Academy of Science, St. John Fisher College, Rochester, NY  
 • Oral Presentation: “Conferring Resistance Against Plant-Parasitic Nematodes”

July 2011 Society for the Study of Evolution, The University of Oklahoma, Norman, Oklahoma  
 • Poster Title: “Characterization of Hox genes in the parasitic cnidarian, *Polypodium hydriforme*”

### **WORKSHOPS ATTENDED**

Feb. 2013 Symposium & Workshop on New Methods for Phylogenomics and Metagenomics  
 • Tutorials attended: MetaPhlAn, Phylonet, SATe, STARBEAST, TreeFix

### **SELECTED OUTREACH AND SERVICE**

2016-Current Co-Representative, Genetics Graduate Student Association, Athens, GA  
 2015-Current Associate Editor in Chief, Athens Science Observer, Athens, GA  
 2015-Current Programming Board, Athens Science Café, Athens, GA  
 July 2012 Woman in Science Mentor, Rochester Museum and Science Center, Rochester NY  
 2011 Certificate in Service Learning, Center for Service Learning, The University of Kansas  
 2010-2011 Youth Corps Volunteer Coordinator, AmeriCorps, Roger Hill Volunteer Center, Douglas County, KS

## **FIELD EXPERIENCE**

2011-2012 Meiofaunal Intertidal and Deepwater Horizon Oil Spill collecting, Dauphin Island, Alabama

- Collected sediment samples to analyze meiofaunal communities pre and post Deepwater Horizon Oil Spill in the Gulf of Mexico

2011-2012 *Polypodium* collection, Paddlefish Research and Processing Center, Fairland, Oklahoma

- Collected the parasitic cnidarian, *Polypodium* from paddlefish eggs
- Cultured *Polypodium* upon spawning through the end its life cycle

Summer 2010 Tropical Marine Biology Course, Murdoch University, Perth, Western Australia

- Conducted research projects concentrated on “Intertidal Survey Studies” and “Fish Identification” in Coral Bay, Western Australia
- Presented collected data for review as part of the “Implications of the Monk Head Boating Facility study” through Mike vanKeulen, Ph.D.