Amanda O. Shaver

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EDUCATION

2015-Current Ph.D. Student, Department of Genetics, University of Georgia, Athens, GA
Dissertation Project: Evolutionary Genetics of Body Size Variation in *D. subquinaria*
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.

AWARDS AND HONORS

2017 UGA Graduate School Travel Award ($250)
2016 UGA Graduate School Travel Award ($250)

PUBLICATIONS

Peer-Reviewed

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. 2016. Social status alters immune regulation and response to infection. *Science* 354, 1041-1045

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. 2016 Efficient genome-wide sequencing and low coverage pedigree analysis from non-invasively collected samples. *Genetics* 203 (2), 699-714

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* 23 (19), 4871-4885

RESEARCH SUPPORT

Awarded

2016 Robinson Hightower Genetics Graduate Support Fund ($1,000)
2015 Honorable Mention, National Science Foundation, Graduate Research Fellowship

Applied for but not awarded

2017 Society for the Study of Evolution, The Rosemary Grant Awards ($2,500)
2017 Graduate Women in Science National Fellowship Program ($6,496)
2017 GSA Delill Nasser Award for Professional Development in Genetics
2016 National Science Foundation, Graduate Research Fellowship ($138,000)
2016 NIH Training Grant
2016 Sigma Xi, Grants-in-Aid of Research ($1,000)
2016 Innovative and Interdisciplinary Research Grants for Doctoral Students ($1,000)
2016 Society for the Study of Evolution, The Rosemary Grant Awards ($2,500)
2015 Sigma Xi, Grants-in-Aid of Research ($1,000)
2015 National Science Foundation, Graduate Research Fellowship ($138,000)

PRESENTATIONS AND POSTERS

Presentations

2012 *Conferring Resistance Against Plant-Parasitic Nematodes*. Rochester Academy of Science, St. John Fisher College, Rochester, NY

Posters

2016 *Evolutionary Genetics of Body Size in* Drosophila subquinaria. Society for the Study of Evolution, Austin, TX

2015 *Understanding Genes Involved in Initiation of Virus Replication of Parasitoid Wasps*. SouthEastern Ecology and Evolutionary Genetics (SEPEEG), Eaton, GA

2015 *Understanding Genes Involved in Initiation of Virus Replication of Parasitoid Wasps*. Big Data Symposium, The University of Georgia, Athens, GA

2011 *Characterization of Hox genes in the parasitic cnidarian,* Polypodium hydriforme. Society for the Study of Evolution, The University of Oklahoma, Norman, Oklahoma

TEACHING AND MENTORING

2018 Spring semester. Teaching Assistant, Evolutionary Biology (GENE 3000)

2017-Current Supervised and mentored undergraduate student Taylor McClinchey

2017 Spring semester. Supervised CURO Honors Thesis research of Amy Nguyen. *Evolutionary Genetics of Body Size Variation in* Drosophila subquinaria

2017 Spring semester. Graduate Lab Assistant, Concepts of Biology Lab (BIO 1103L)

2016 Fall semester. Supervised CURO Honors Thesis research of Emily Clutter. *Mechanisms of Cell Number versus Cell Area Underlying Body Size Variation in* Drosophila subquinaria.

2016 Fall semester. Graduate Lab Assistant, Concepts of Biology Lab (BIO 1103L)

2013-2015 Hired & mentored 2 undergraduate students in the lab.

- DNA/RNA extractions, RNA Sequencing library preparation

2013 Spring semester. Teaching Assistant. University of Rochester, Introduction to Biology Lab

2012-2013 Hired & mentored 4 undergraduates in the lab.

- DNA extractions, mating trails, fly food preparation

OUTREACH AND SERVICE

2018 Editor-in Chief. Athens Science Observer, Athens, GA

2015-2017 Associate Editor-in Chief & Science Blogger. Athens Science Observer, Athens, GA

2015-2017 Athens Science Café Programming Board. Athens Science Café, Athens, GA

2016 Judge, Clarke County Science and Engineering Fair. Athens, GA

2015-2016 Volunteer, 21st Century Community Learning Centers Pathways to Success Program. Athens-Clarke County Schools, Athens, GA

2012 Woman in Science Mentor, Rochester Museum and Science Center, Rochester, NY

2010-2011 Youth Corps Volunteer Coordinator, AmeriCorps, Roger Hill Volunteer Center, Douglas County, KS

PRIOR RESEARCH EXPERIENCE

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

WORKSHOPS ATTENDED

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

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.