***Karen E. Bobier***

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**EDUCATION**

**University of Georgia, Athens, Georgia**

Graduate Student Research Assistant, Expected 2020 GPA 3.90

**University of California Santa Cruz, Santa Cruz, California**

B.S. in Marine Biology with Highest Honors, Summa Cum Laude, 2013 GPA 3.97

**Santa Rosa Junior College, Santa Rosa, California**

General Education with Dean’s Highest Honors, 2010 GPA 3.78

**PUBLICATIONS**

*Peer- Reviewed*

Correa, S., J. Arujo, J. Penha, **K. Bobier**, J. T. Anderson. Stability and generalization in seed dispersal networks: a case study of frugivorous fish in Neotropical wetlands. *Proceedings of the Royal Society B: Biological Sciences*. August 31, 2016.

*In Prep*

**Bobier, K**., A. J. Bewick, J. P. Wares. Evolution of the DNA methyltransferase gene family across vertebrates.

**Bobier, K**. The Complete Mitochondrial genome of *Notropis lutipinnis*.

*Reports*

Freeman, B., **K. Bobier**, K. Petersen, J. Wares. Status of *Nothonotus* darters in the Lower Etowah River and Raccoon Creek. May 26, 2016.

Robbins, K., **K. Bobier**, D. Hubacker. Petaluma Watershed Steelhead Monitoring Report: 2014/2015 Spawning Surveys. 2015.

Morrison, A., **K. Bobier**, B. Keimel. Petaluma Watershed Steelhead Monitoring Report: 2013-2014 Spawning Surveys. 2014.

*Blog Posts*

[Not so Flushable Wipes](https://athensscienceobserver.com/2019/03/21/not-so-flushable-wipes/), *Athens Science Observer*, March 21st, 2019.

[The last sandcastle](https://athensscienceobserver.com/2018/09/23/the-last-sandcastle/), *Athens Science Observer*, September 23rd, 2018.

[Major red tide hits Florida beaches](https://athensscienceobserver.com/2018/09/18/major-red-tide-hits-florida-beaches/), *Athens Science Observer*, September 18th, 2018.

[Science in your laundry detergent](https://athensscienceobserver.com/2018/04/26/science-in-your-laundry-detergent/), *Athens Science Observer*, April 26th, 2018.

[Plastic Waters](https://athensscienceobserver.com/2018/01/18/plastic-waters/), *Athens Science Observer*, January 18th, 2018.

**PRESENTATIONS**

*Presentations*

**Bobier K.**, J. Wares, B. Freeman. “Harnessing Genetics to evaluate stream capture as a contributor to freshwater biodiversity” American Fisheries Society & The Wildlife Society Annual Conference, Reno, Nevada, September 30th, 2019.

**Bobier K.,** K. Yamahara, J. Birch.“Establishinga baseline for monitoring fisheries stocks using environmental DNA” Monterey Bay Aquarium Intern Symposium, Moss Landing, California August 14th 2019.

**Bobier K.**, “Molecular Evolution of the DNA Methyltransferase Gene Family in Vertebrates” Enthusiasts of Diversity, Genetics, and Evolution Seminar, Athens, Georgia, January 19th 2018.

**Bobier, K.** “Investigating Nuclear and Mitochondrial Discordance in Yellowfin Shiners”, Evolution, Austin, TX, June 19th, 2016.

**Bobier, K**. Southeastern Fish Diversity. Genetics Student Seminar, Athens, Georgia, April 11th 2016.

**Bobier, K**. Biogeography of stream fishes in the southeast. Three Minute Thesis Preliminary, Athens, Georgia, March 21st 2016.

*Posters*

**Bobier, K.**, A. Bewick, J. Wares. “Molecular Evolution of the DNA Methyltransferase Gene Family in Vertebrates” Evolution, Montpellier, France, August 19th 2018.

**Bobier, K.** “DNA Methylation Inheritance in Fishes: A Proposal” Southeastern Population Ecology and Evolutionary Genetics Conference, October 2016, Madison Florida.

**Bobier, K**. Yellowfin shiner: Is there discordance between mitochondrial and nuclear markers? Southeastern Population Ecology and Evolutionary Genetics Conference, Eatonton, Georgia. October 2015.

**TEACHING**

2018 Graduate Teaching Assistant, Evolution (GENE 3000), 1 Semester

2017-2020 Graduate Teaching Assistant, Genetics (GENE 3200), 5 Semesters

**OUTREACH AND SERVICE**

2019 Assistant Associate Editor, Athens Science Observer.

2017-2019 Blog writer and reviewer, Athens Science Observer.

2017- 2018 WiSci Mentor. I mentored Brittany Magdovitz, a masters student in Food Sciences Department.

2017 Georgia Science and Engineering Fair, Judge for Special Award in Genetics.

2015-2016 Mentored undergraduate students while teaching them about fishes and stream ecology on field trips to local streams.

2015-Present Mentor undergraduate and graduate students working in the Wares/Freeman lab. This primarily consists of teaching laboratory techniques and analysis methodology, discussion of the primary literature for background information, and other any guidance they needed while working on independent projects in the lab.

2015 Mentored an intern to conduct and organize population surveys of steelhead.

2014 Insect Fest at the World of Wonders Science Museum, Lodi, Ca.

2013-2015 Mentored high school students while teaching them to conduct scientific field surveys.

2011-2012 Tutored university students for Genetics and Evolution classes.

**HONORS AND AWARDS**

2020 TAGC Travel Award ($425)

2019 Graduate Education Advancement Board Fellowship ($2500)

2019 Graduate School Travel Grant ($800)

2019 Summer Research Travel Award ($2000)

2019 Genetics Graduate Student Travel Award ($1000)

2019 MBARI Summer Internship ($6000)

2018 Genetics Graduate Student Travel Award ($1000)

2018 Foreign Travel Assistance ($1700)

2017 Genetics Graduate Student Travel Award ($579.50)

2017 Graduate School Travel Award ($250)

2016 Graduate School Travel Award ($250)

2016 Travel Stipend Society for the Study of Evolution ($500)

2015 Scholar of Excellence Assistantship – University of Georgia

2012 College Nine Distinction – University of California Santa Cruz

2012 University of California Education Abroad Scholarship

2011 Campus Merit Scholarship – University of California Santa Cruz

2010-2012 Cal Grant A – University of California Santa Cruz

2010 Federal Supplemental Education Opportunity Grant – University of California Santa Cruz

2010-2012 Federal Pell Grant – University of California Santa Cruz

2010-2012 UC Santa Cruz Grant – University of California Santa Cruz

2010-2012 Dean’s Honors – University of California Santa Cruz

2010 National SMART Grant – University of California Santa Cruz

2010 Foundation Transferring Student Scholarship – Santa Rosa Junior College

2010 Dean’s Highest Honors – Santa Rosa Junior College

**RESEARCH SUPPORT**

*Awarded*

2017 Robin Hightower Genetics Graduate Support Fund ($1000)

2016 NIH T32 Genetics Training Grant

2016 Robin Hightower Genetics Graduate Support Fund ($1000)

*Applied for but not awarded*

2019 DeLill Nasser Award

2019 Beverly Hirsh Frank Graduate Fellowship for Women

2019 USFWS Directorate Fellowship Program

2019 DOD SMART Scholarship – Finalist

2019 GSA Peer Review Training Program

2019 AAUW Dissertation Fellowship

2019 Ford Foundation Dissertation Fellowship

2018 DeLill Nasser Award

2017, 2018 Joshua Laerm Academic Support Award ($1000)

2017 American Society of Naturalists Travel Award ($500)

2017 NIH T32 Genetics Training Grant

2017 NSF Graduate Research Fellowship ($138,000)

2017 Society for the Study of Evolution, Rosemary Grant Award ($2500)

2016 NSF Graduate Research Fellowship – Honorable Mention ($138,000)

2016 Innovative and Interdisciplinary Research Grants for Doctoral Students ($1000)

2016 American Society of Naturalists Graduate Student Travel Grant ($500)

2016 National Geographic Young Explorers Grant, Pre-Application Approved ($5000)

**SCIENTIFIC SOCIETY MEMERSHIPS**

American Association for the Advancement of Science – Member since 2017

Society for the Study of Evolution – Member since 2016

American Society of Ichthyologists and Herpetologists – Member 2016-2017

American Fisheries Society – Member since 2015

American Society of Naturalists – Member since 2015

Southeastern Fisheries Council – Member since 2015

**WORK AND RESEARCH EXPERIENCE**

2015-Present **Graduate Research Assistant**, University of Georgia, Athens, Georgia

* Used reduce representation genotyping (3RAD) and Approximate Bayesian Computation to assess simultaneous divergence of freshwater fishes due to a geologic stream capture event
* Performed a genome wide scan to assess selection along a strong environmental gradient in the barnacle *Notochthamalus scabrosus* along the coast of Chile.
* Examined the Molecular Evolution of the DNA Methyltransferase gene family across vertebrates.
* Collaborated with the Glenn Lab and analyzed two datasets of RADseq data for ~300 individuals each.

2019 **Research Intern**, Monterey Bay Aquarium Research Institute, Moss Landing, California

* Collected and processed 200 water samples at 8 sites downstream of a fish hatchery in Scott Creek
* Quantified salmonid eDNA using qPCR to quantify DNA degradation in a stream habitat and assess variation collection and processing methods

2016-2017 **GGSA Treasurer**, University of Georgia, Athens, Georgia

2015 **Field/Hatchery Technician**, United Anglers Inc, Petaluma, California

2013-2015 **Production Technician I**, VenTek International, Petaluma, California

2015 **Biological Science Technician**, US Fish and Wildlife Service, Lodi, California

* Assisted with a tagging telemetry study to assess salmonid escarpment.

2013-2014 **Intern**, NOAA’s National Marine Fisheries Service, Santa Rosa, California

2012 **Undergraduate Researcher**, Marine Biology and Terrestrial Ecology Education Abroad Program, Queensland, Australia

2012 **Research Volunteer**, Sinervo Laboratory, UC Santa Cruz, California

2011-2012 **Tutor**, Learning Support Services, UC Santa Cruz, California

**ADDITIONAL TRAINING**

2019 Python Basics I and II, Georgia Advanced Computing Resource Center

2016 Sapelo Cluster Training, Georgia Advanced Computing Resource Center

2016 Linux Basics I and II, Georgia Advanced Computing Resource Center

**LABORATORY SKILLS**

DNA Isolation RNA Isolation Quantitative PCR Library Prep

Primer Design gRNA Design Tissue Dissection Fish Husbandry

**COMPUTER SKILLS**

Linux/UNIX Statistics Atom Transcriptome Assembly

Geneious PAUP\* ArcGIS R Studio

STRUCTURE Shell Scripting GenAlEx Microsoft Office

**OTHER SKILLS**

Soldering Gardening Mechanical Assembly