

Rachel Fovargue

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EDUCATION

The University of Tennessee

Knoxville, TN

PhD, Expected 2017

The College of William and Mary

Williamsburg, VA

BS in Biology, with Honors, May 2009

BS in Chemistry, May 2009

3.87/4.0 overall GPA

Academic Honors: NSF GRFP – Fellowship Awardee, 2013

NSF GRFP – Honorable Mention, 2012

Australian Research Council - Centre of Excellence for Environmental Decisions Overseas

Visiting Fellowship, 2012

UTK EEB Summer Graduate Award, 2012, 2013, 2014

Monroe Scholar (for academic excellence; includes research grant), 2005-2009

Member of Phi Beta Kappa Honors Fraternity, 2009

Relevant Course Work:

- Game Theory/Evolution
- Optimal Control Theory
- Biometry
- Evolutionary Genetics
- Aquatic Ecology
- Conservation Biology
- Models in Biology
- Advanced Biochemistry
- Multivariable Calculus
- Differential Equations
- Env Models & Geospatial Analysis

SKILLS

- MATLAB
- R statistical software
- ArcGIS
- Wildlife Handling (Avian)

RESEARCH EXPERIENCE

SCALE-IT Fellow

University of Tennessee, Knoxville, TN

August 2011-August 2013

- NSF Integrative Graduate Education and Research Traineeship
- Active in Scientific Communication Workshops
- Developed and delivered curriculum material for a graduate level interdisciplinary course on biological topics for computer scientists

SCA Intern

National Conservation Training Center, Shepherdstown, WV

Jan 2010-March 2011

- Assisted with the development and implementation of USFWS training courses
- Constructed notebooks and class materials; inventoried and maintained equipment
- Participated in trainings (Wetland plant ID, Macro-invertebrate ID, Motorboat operation, GIS Introduction)

Population Dynamics Summer Workshop Intern

Virginia Tech - NMFS, Blacksburg, VA

June 2009-August 2009

- Researched social and scientific issues in the Gulf of Mexico fisheries through interviews with key figures in the region
- Developed materials for an educational website framing and discussing the issues behind an ecosystem based fisheries management system for the gulf

Honors Thesis Research

William and Mary Biology Department, Williamsburg, VA

Aug 2008-April 2009

- Developed original mathematical model in Matlab to reflect non-migratory species in a source-sink metapopulation
- Incorporated model into Natural Resource Damage Assessment's Habitat Equivalency Analysis to examine effects on cost estimations

Field Assistant

William and Mary Biology Department, Fishersville, VA

Summer 2006

- Collected data for avian study conducted along the Shenandoah River
- Developed wildlife handling, sample labeling, and data organization skills

OTHER TRAINING

- Decision Analysis: Elicitation and Facilitation, *USFWS National Cons. Training Center*, March 2014
- USGS Structured Decision Making Observation, *USFWS National Cons. Training Center*, Feb 2014
- Introduction to Structured Decision Making, *USFWS National Cons. Training Center*, August 2013
- ArcGIS Introduction, *USFWS National Cons. Training Center*, September 2010
- Department of Interior Motorboat Operator Certification Course, *Annapolis, MD*, June 2010

TEACHING AND OUTREACH

- **Teaching assistant** for USFWS/USGS: “**Adaptive Management: Structured Decision Making for Recurrent Decisions**”, Fall 2015
- **Teaching assistant** for USFWS/USGS: “**Decision Analysis for Climate Change**”, Spring 2015
- **Instructor** for “**LS 595: A Survey of Biology for Computational Researchers**”, Spring 2013
 - Developed materials for and led 12 class periods on EEB topics (including 8 lectures)
 - Mixed graduate and undergraduate class
- **Instructor** for **Kids U: “The Unseen World”**, Summer 2013
 - Developed and implemented week long curriculum on environmental microbiology
 - High-school level; active learning focus
- **Instructor** for educational **non-profit “Call of the Sea”**, Spring/Summer 2011
 - Developed ecology and hydrology lessons
 - Elementary to high-school level students
- Served on graduate student panel for NIMBioS REU students, July 2013
- EEB Faculty Search committee member, Conservation Biology search, 2015-2016
- Chancellor’s appointed Sexual Misconduct Task Force Member, 2015
- Graduate Student Senate EEB Representative, 2014-2015
- Graduate Student Senate Travel Awards Committee member, 2014-2015
- GREBE Vice-President (Departmental grad representation), 2014-2015
- Darwin Day volunteer, 2012-2015

PUBLICATIONS

Cristol DA, Brasso RL, Condon AM, **Fovargue** RE, Friedman SL, Hallinger KK, Monroe AP, White AE (2008) The movement of aquatic mercury through terrestrial food webs. *Science* 320(5874):335

Fovargue, Rachel. “A National Park for Blue Whales?” Web log. *Ocean View*. National Geographic News Watch. 31 July, 2013. <http://newswatch.nationalgeographic.com/2013/07/31/a-national-park-for-blue-whales/>

SELECTED PRESENTATIONS

Fovargue, Rachel; Armsworth, Paul R.; Fargione, Joseph E. August 2015. “What is the real cost of conservation investments? Calculating the conservation opportunity cost of financing land protection” Poster. *International Congress for Conservation Biology*. Montpellier, France.

Fovargue, Rachel; Armsworth, Paul R.; Fargione, Joseph E. Aug 2015. “The true cost of conservation investments: Opportunity cost of financing land protection”. *Ecological Society of America*. Baltimore, Maryland.

Fovargue, Rachel; Armsworth, Paul R.; Bode, Michael. "Size and Spacing of Marine Protected Areas Under Realistic Dispersal Conditions" *Institute for Marine and Antarctic Studies*. 2012.

Fovargue, Rachel; Armsworth, Paul R.; Bode, Michael. "Managing Reef Fish under Stochastic Dispersal Conditions." *Society for Mathematical Biology Annual Meeting*. 2012.

Fovargue, Rachel. “The Integration of Metapopulation Dynamics into Habitat Equivalency Analysis." *National Institute for Mathematical and Biological Synthesis Undergraduate Research Conference*. 2009.