

Sara Michele Schaal

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Northeastern University Marine Science Center
430 Nahant Road, Nahant, MA 01908

EDUCATION

Ph.D. Candidate in Ecology, Evolution and Marine Biology, 2015 – Present
Department of Marine and Environmental Sciences, Northeastern University

Bachelor of Science in Biological Sciences, (Minor in Chemistry) 2009 - 2014
Department of Biological Sciences, University of Wisconsin-Milwaukee

PUBLICATIONS

Lotterhos, K. E., Card, D.C., **Schaal, S.M.**, Wang, L., Collins, C., & Verity, R. (2018) Composite measures of selection can improve the signal-to-noise ratio in genome scans. *Methods in Ecology and Evolution*.

Verity, R., Collins, C., Card, D.C., **Schaal, S.M.**, Wang, L. & Lotterhos, K. E. (2017) MINOTAUR: A platform for the analysis and visualization of multivariate results from genome scans with R Shiny. *Molecular Ecology Resources*.

Lotterhos, K. E. & **Schaal, S.M.** (2014) Genome scans for the contemporary response to selection in quantitative traits. *Molecular Ecology* 23: 4435-4437.

Schaal, S. M., Xie, Y., Yankey, F., & Zeidler, T. (2013) Changes in the Optical Properties of Lake Michigan by the Invasive Species *Dreissena bugensis* (Quagga Mussel). *NCUR Proceedings*.

AWARDS AND HONORS

\$250 Best Talk Award Marine and Environmental Sciences Graduate Student Symposium 2019

\$3,000 Graduate Thesis/Dissertation Research Grant 2018

\$25,000 Leifur Eiríksson Fellow February 2018

\$1,000 AFS Steven Berkeley Marine Conservation Fellowship Runner-Up 2017

Honorable Mention NSF Graduate Research Fellowship Program. 2015 & 2016

\$1,224 Vecellio Grant for Biological Research 2015

\$1,100 European Society of Evolutionary Biology Outreach Fund 2014

\$2,000 Support for Undergraduate Research Fellowship (SURF) Fellow 2014

\$2,500 SURF Fellow September 2013

\$3,500 SURF Fellow May 2013

\$10,400 Undergraduate Research Fellowship in Mathematics and Biology 2011

\$10,400 Northwestern Mutual Undergraduate Education Scholarship Foundation 2009

PRESENTATIONS

Oral Presentations: **1)** Benthic Ecology, Portland, ME March 2016. **2)** Western Society of Naturalists. Monterey, CA Nov 2016. **3-4)** National Conference for Undergraduate Research, Lexington, KY April 2014 & 2013 **5)** Undergraduate Research Conference at the Interface of Biology and Mathematics, Knoxville, TN Nov 2012

Poster Presentations: **1)** Evolution 2019 **2)** Marine Evolution 2018 **3-4)** University of Wisconsin-Milwaukee (UWM) Biological Sciences Research Symposium Nov 2014, 2013 & 2012 **5)** Riveredge Nature Center's Student Research Symposium, Saukville, WI Nov 2013. **6)** Association for the Sciences of Limnology and Oceanography Conference, New Orleans, LA Feb 2013 **7-9)** UWM Undergraduate Research Symposium, Milwaukee, WI Oct 2013, 2012 & 2011

RESEARCH PROJECTS

Ph.D. Dissertation 2015 – Present: ***Fine-scale genomic divergence of Atlantic cod ecotypes: a comparison study between the Gulf of Maine and Iceland.*** Supervisor Dr. Kathleen Lotterhos. Northeastern University Marine Science Center

Population Genetic Hackathon Participant March 2015: ***Development of a package in R to analyze and visualize multivariate genomic data.*** Supervisor Dr. Kathleen Lotterhos. Wake Forest University

Master's Thesis 2014-2015 (Not Completed Transferred to PhD): ***Performance variation in response to temperature stress in two species complexes of newly-settled Pacific Rockfishes*** Supervisor Dr. Kathleen Lotterhos. Wake Forest University

Undergraduate Research Assistant April 2013 – August 2014: ***Population genetic structure of the genus Cladophora in Lake Michigan and its tributaries.*** Supervisor Dr. Filipe Alberto. University of Wisconsin-Milwaukee

Undergraduate Research Fellow in Biology and Mathematics September 2011 – May 2013: ***Changes in the Optical Properties of Lake Michigan by the Invasive Species Dreissena bugensis (Quagga Mussel).*** Supervisors Drs. Carmen Aguilar, Russell Cuhel, Istvan Lauko and Gabriella Pinter. University of Wisconsin-Milwaukee

VOLUNTEER AND OUTREACH EXPERIENCE

Girls Inc. Guest Speaker (Jan 2018): Spoke to the 8th grade girls at Girls Inc, a program promoting female interest in STEM, about my science and experience working in STEM

Evolution and Adaptation Workshop Development and Leader for High School Students (May & August 2016): designed and implemented a four-day workshop on evolution and adaptations in marine organisms for high school students participating in Coastal Ocean Sciences Academy and with Essex Tech High School students

Northeastern University Marine Science Center (NUMSC) Open House (2015-2017)

High School Intern Supervisor: Mentored two students Julia Lane and Laura Long at NUMSC

Undergraduate Student Supervisor: Mentored Sandi Scripa and Jeanne Bloomberg at NUMSC and Stephanie Bilodeau at Wake Forest University

Assistant Organizer of PRO+TECT event: at Wake Forest University three female ocean scientists spent the day on campus talking with students and gave a panel discussion on the current and future state of the ocean

Conference Assistant: 9th Annual Great Lakes Restoration Conference

Adopt-A-Beach Volunteer: Participated with a team to clean and monitor water quality at South Shore Beach in Milwaukee, WI

TEACHING EXPERIENCES

Biostatistics (TA) – Northeastern University – ENVR 2500. Three semesters (2017 – Present)

Conservation & Ecological Genetics (TA) – Northeastern University – EEMB 3465. Guest lecturer on Supergenes and Inverted Genomic Regions (15 November 2017)

Oceanography (TA) – Northeastern University – EEMB 5516. One semester (2016)

Genetics (TA) – Wake Forest University – BIO 213. One semester (2015)

Comparative Physiology (TA) – Wake Forest University – BIO 114. One semester (2014)