

RACHEL B. STEARNS

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EDUCATION

- 2015 – present University of Rhode Island
M.S. in Biological and Environmental Sciences (candidate)
Environmental and Earth Sciences specialization
Advisor: Dr. Simon E. Engelhart
- 2012 – 2015 University of North Carolina Wilmington
B.S. in Oceanography
B.S. in Environmental Science – Biological Science concentration
Advisor: Dr. Andrea D. Hawkes
Dean's List

EMPLOYMENT

- 2015 – present **Graduate Research and Teaching Assistant**, Department of Geosciences
University of Rhode Island, Kingston, RI
- 2014 – 2015 **Research Assistant**, Sea Level Research Lab - Center for Marine Science
University of North Carolina Wilmington, Wilmington, NC

AWARDS

- 2016 **URI CELS Student Travel Award** – College of the Environment and
Life Sciences, *University of Rhode Island*
- 2016 **Joseph A. Cushman Award for Student Research**
- 2015 **Departmental Undergraduate Research Award** – Department of
Geography and Geology, *University of North Carolina Wilmington*

FIELDWORK EXPERIENCE

- Summer 2016 **Field Hand** – Washington, USA

Assisted in fieldwork as part of a PhD thesis. This involved coring, describing core and riverbank stratigraphy, sampling modern environments for foraminifera and diatoms, taking RTK measurements, and identifying native marsh vegetation.

- Summer 2016 **Project Leader and Teen Facilitator** - *Earthwatch Institute Organization*

- Summer 2015 **Project Leader** - *Earthwatch Institute Organization*

Supervised and helped students conduct scientific research in Rhode Island marshes over a two-week period. The collaboration between the University of Rhode Island, Rutgers University, and Earthwatch allowed students to participate in coring, modern transect sampling, mapping stratigraphy, microscopy, land surveying, and data collection and entry to be used in ongoing sea-level research studies.

TEACHING EXPERIENCE

Fall 2016 GEO103 – Understanding the Earth, *University of Rhode Island*

OTHER EXPERIENCE

Spring 2015 **Directed Independent Study**, Department of Chemistry and Biochemistry,
University of North Carolina Wilmington
Advisor: Bonnie Monteleone

Analyzing the sorption of Phosphate and the potential for chemical transport by polyethylene and polystyrene micro-plastics into the marine environment.

Fall 2014 **Individual Research Project**, Department of Geography and Geology,
University of North Carolina Wilmington
Advisor: Dr. Ai Ning Loh

Evaluating water quality conditions along a southeastern North Carolina watershed

2013 **Intern** for *North Carolina National Estuarine Research Reserve*

My internship at NCNERR involved identifying and marking sea turtle nesting areas on a North Carolina barrier island using Trimble GIS mapping tools. The nests were protected and used to determine hatchling success rates and sample for DNA analysis at the end of the hatching season. Additionally, I assisted in water quality fieldwork, island management, education outreach and awareness programs for the public, conducted fluorometric chlorophyll analysis, provided instrumentation data transfer and entry and participated in a sea turtle strand necropsy.

SKILLS

- Microscopy
- Foraminiferal sampling and taxonomy
- Radiocarbon and geochemical sampling and preparation
- Land surveying with RTK GPS and total station
- Sediment coring
- Describing marsh stratigraphy
- FE-SEM imaging
- Adobe® Illustrator
- SigmaPlot
- R and Rstudio
- Isotope preparation
- YSI, Van Dorn, Fluorometer, and Colorimeter instrumentation
- Fourier Transform Infrared Spectroscopy (FTIR) equipment
- Spectronic 20 equipment

CERTIFICATIONS

Open Water certified SCUBA Diver

First Aid & CPR AED

PUBLICATIONS

Stearns, R. B., Hawkes, A. D., Donnelly, J. P. (2015). Creating a Modern Foraminiferal dataset from South Africa for Reconstructing High-Resolution Late Holocene Sea Level [Abstract]. *GSA Abstracts with Programs*, 47(2). GSA Southeast, March 2015.

Stearns, R. B., Engelhart, S. E., Kemp, A. C., Corbett, D. R., and Hill, T. D. (2016). A High-Resolution Reconstruction of Late-Holocene Relative Sea Level in Rhode Island, USA [Abstract]. IGCP Project 639 1st Annual Meeting, November 9th to 14th 2016, Muscat, Oman.

MEMBERSHIPS

- Geological Society of America
- The Cushman Foundation