

Rachel Decker

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EDUCATION

University of South Carolina

Thesis Advisor: Dr. Blaine Griffen

Columbia, SC

August 2009 – May 2011

Master of Science in Biology, Emphasis in Ecology

- Thesis: Correlating behavior and physiological condition of sand fiddler crabs, *Uca pugnator*
- Courses completed include Population Biology, Marine Ecology, Theoretical Ecology, Statistics for Marine Science, Animal Behavior and Invertebrate Zoology.

Oberlin College

Oberlin, OH

Bachelor of Arts in Biology, Minor in Rhetoric and Composition

2001-2005

- Science courses completed include Developmental Biology, Cell and Molecular Biology, Living Cell Activity, Organic Chemistry, Biological Anthropology, Vertebrate Zoology, Biological Statistics, and Writing in the Sciences. Additional subjects studied include Philosophy, Cinema, History, Politics, Religion and English Literature.
- Participated in Woods Hole Semester at Sea (Fall 2004). Courses completed include Oceanography, Maritime Studies and Nautical Science. Designed and executed an individual research project investigating the dynamics of dissolved oxygen along a cruise track from Boston, Massachusetts to St. Croix, U.S. Virgin Islands.

RESEARCH EXPERIENCE

Yale University Ecology and Evolutionary Biology Laboratory

New Haven, CT

Research Assistant to Dr. David Post

August 2013 – Present

- Lead bimonthly sampling of six local lakes for fish species *A. pseudoharengus* and a variety of zooplankton. Identify and quantify, as well as conduct stable isotope and nutrient analyses of these species for food web investigations.
- Other responsibilities include organizing and managing the dataset that results from this research, as well as maintaining the field gear and laboratory equipment associated with lake sampling.

Florida International University Seagrass Ecosystems Research Laboratory

Miami, FL

Laboratory Manager for Dr. James Fourqurean

May 2011 – June 2013

- Organized the preparation, set-up, and collection of data from laboratory and field-based experiments throughout South Florida, involving seagrass species *T. testudinum*, *S. filiforme* and *H. wrightii*.
- Additional responsibilities included ordering and ensuring proper installation, calibration, operation, and maintenance of laboratory and field research supplies and equipment.
- Analyzed animal and sediment samples for carbon and nitrogen content using a FlashEA 1112 elemental analyzer. Other analyses conducted regularly included measurement of phosphorous and complex carbohydrate content.
- Managed project databases and assisted with preliminary analyses and summaries of data.
- Recruited, hired and supervised undergraduate volunteers, as well as accounted for expenditures of grant funds.

National Audubon Society

Tavernier, FL

Research Technician

January 2009 – July 2009

- Collected and quantified the local fish species eaten by Roseate Spoonbill *A. ajaja* and other wading birds at 19 sites throughout the Florida Everglades and Biscayne Bay through use of extensive drop-net systems.
- Further duties included weekly sample processing and organization, bird and fish identification, data entry, boat driving and navigation, and maintenance of field equipment.

Shark Bay Ecosystem Research Project

Monkey Mia, Western Australia

Research Technician

March 2007-February 2008, September-December 2008

- Assisted PhD candidates in research on seagrass beds and local megafauna. Efforts focused on tiger shark *G. culvier*, sea turtles *C. caretta* and *C. mydas*, and a wide variety of local seagrass species.
- Responsibilities included collection and preparation of samples for stable isotope analysis, management of volunteers, boat driving and navigation, data entry, maintenance of equipment, and bi-weekly public outreach presentations.

Bimini Biological Field Station

Research Assistant

South Bimini, The Bahamas

January-February 2007

- Assisted international graduate students in the collection of data on lemon shark species *N. brevirostris*.
- Research methods included bi-monthly long-line fishing, acoustic tagging for identification purposes, hydrophone tracking of tagged individuals, gill-netting, and field observation.

PUBLICATIONS

- Decker R.A. and Griffen B.D. 2012. Correlating context-specific boldness and physiological condition of female sand fiddler crabs (*Uca pugilator*). *Journal of Ethology* 30:403-412.

TEACHING EXPERIENCE

University of South Carolina

Graduate Teaching Assistant

Columbia, SC

August 2009 – May 2011

- Taught weekly laboratory courses to two sections of 25 undergraduates associated with Biology 301: Ecology and Evolution. Lectured on relevant ecological concepts, demonstrated proper field and lab techniques, as well as graded quizzes and laboratory reports.

Sally Ride Science Camp

Lead Marine Science Instructor

California Institute of Technology

July 2008

- Designed, prepared and then taught a two-week introductory marine science course to young women, ages 10-15.

Newfound Harbor Marine Institute

Intern/Instructor

Big Pine Key, FL

January-May, September-December 2006

- Taught a variety of hands-on marine science programs to visiting students, grades 4-12.
- Oversaw safety during boat trips to local snorkel sites, and aided in the maintenance of lab/classroom facilities.

ADDITIONAL SKILLS

- American Academy of Underwater Sciences certified SCUBA Diver. Over 200 scientific dives completed.
- Proficient in statistical software program SPSS, as well as Microsoft Word, Access and Excel. Experience with R.