

# REBECCA L. MAHER

7601 Starnberg Lake Dr.  
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(361) 443-1386  
rlm6@rice.edu

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## Education

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Rice University, Houston, Texas  
Bachelor of Science Candidate, May 2016  
Major: Ecology and Evolutionary Biology  
GPA 3.78/4.0

School for International Learning  
Ecuador: Comparative Ecology and Conservation, Fall 2014  
GPA 3.47/4.0

GRE Verbal 164/94% Quantitative 163/86% Analytical Writing 4.0

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## Research Experience

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### Rice University

Houston, TX

*Senior Thesis Project, Adviser: Adrienne M.S. Correa*

*May 2015-present*

- Perform image analysis on NOAA long term monitoring photos of repetitive quadrats from the West and East Flower Garden Banks.
- Calculate density of barnacle *Lithotrya dorsalis* on colonies of *Orbicella franksi* and correlate to colony size, depth, color morph, and reef location.

*Research Assistant, Dunham Lab*

*Jan. 2015-present*

- Compile data on life history, dispersal, pollination, and morphological characteristics of plant species from TEAM sites for later analysis.
- Learned spatial distribution analysis of plant species within sites using Ripley's K in R studio.

*Research Assistant, Dunham Lab*

*Jan. - April 2014*

- Compiled data on mammalian body mass, activity rhythm, strata use, and diet for species within selected Smithsonian Tropical Forest.
- Used IUCN data, GIS mapping, and R studio to test for relationships between seed dispersal, compiled traits, and red list status.

*Lab Technician, Rudolf Lab*

*May - August 2013*

- Constructed and maintained pond systems in tanks with varying water temperature and nutrient, predation, and competition levels.
- Collected and weighed metamorphosed frog and toad species from tanks.
- Measured nutrient levels in tanks from algal concentrations.
- Collected, preserved, and logged snails, tadpoles, and dragonfly larvae from ponds in protected parks.

### Operation Wallacea

Honduras

*Research Assistant, Cusuco National Park*

*June 2014*

- Swabbed frogs and tadpoles along transects during the day and night for Chytrid fungus.

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- Dissected tadpoles to remove liver for toxin analysis.
- Set up camera traps within the park to monitor tapir movements.
- Used pit fall traps and light trapping to collect dung beetles and estimate species diversity.
- Mist netted for bats at night and birds during the morning.
- Handled and processed mist netted birds to band and collect biometrics.
- Measured tree density, soil composition, and leaf litter cover to estimate biomass for carbon storage analysis.

*Research Assistant, Utila*

*July 2014*

- Recorded presence and extent of Flamingo Tongue snails and disease on octocorals along a transect.
- Collected algae and set up GoPro videos of herbivore preferences at points along a reef.
- Looked for lionfish along the reef and assisted the trained spear holder to catch and dissect the lionfish.
- Performed underwater visual analysis of fish, coral, algae, and invertebrate species along a transect.
- Performed video analysis of reef transects.

### **SIT Study Abroad Independent Study Project**

Pichincha, Ecuador

*Researcher, La Hesperia Biological Station*

*Nov. - Dec. 2014*

- Designed and wrote a proposal for a study of seed dispersal by a troop of critically endangered White-fronted Capuchins on the reserve.
- Performed troop observation, GPS tree diversity and range mapping, and fruit morphology analysis.
- Wrote up and presented findings with conservation suggestions for the reserve and general primate population management.

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## **Work Experience**

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### **Rice Outdoor Programs and Education**

Houston, TX

*Trip Leader*

*Sept. 2012- present*

- Received outdoor activity training with a focus on leadership and Leave No Trace practices.
- Planned and lead trips of various activities, including rock climbing, canoeing, surfing, horseback riding, backpacking, and hiking.

*Outdoor Adventure Center Supervisor*

*Jan. 2015- present*

- Performed office duties of renting, staging, and cleaning gear.

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## **Extracurricular Activities and Service**

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**NOAA's Flower Garden Banks National Marine Sanctuary**

**Galveston, TX**

*4H Leadership Lab*

*June 25, 2015*

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- Lead an interactive workshop with high school 4H students on data collection with quadrats and transects while snorkeling on coral reef mats in a pool
- <https://www.facebook.com/FGBNMS?fref=ts>.

### **Houston Museum of Natural Science**

*Volunteer at World Oceans Day*

- Lead an interactive workshop with children and parents on data collection with quadrats and transects on coral reefs.
- <http://news.rice.edu/2015/06/09/biosciences-helps-celebrate-world-ocean-day-at-hmns/>

**Houston, TX**

*June 9, 2015*

### **Engineers Without Borders**

Nicaragua II Project Team

*Project Leader*

- Served as communication liaison between Rice engineering students, professional engineers, in-country NGOs, and local and community government.
- Wrote and facilitated approval of a project contract while in the community which defined the responsibilities of all parties to develop a water distribution system.
- Organized engineering students and professionals to meet system development deadlines.
- Presented the project to potential mentors, funders, and NGOs.

Houston, TX

Wisoyol, Nicaragua

*April 2013- April 2014*

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## **Certifications and Awards**

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Shell Center for Sustainability (SCS) Sustainable Development Award (\$500)	April 13, 2016
Julian Huxley Award for Excellence, Ecology and Evolutionary Biology, Biosciences at Rice University (\$150)	2015 - 2016
Distinction in Research, Ecology and Evolutionary Biology, Biosciences at Rice University	2015 – 2016
NSF Graduate Research Fellowship Program Honorable Mention	March 29, 2016
Rice University Undergraduate Conference Grant (\$500)	Feb. 22, 2016
Sigma Xi Grants-in-Aid of Research (\$500)	Dec. 24, 2015
PADI Advanced Open Water Diver	July 14, 2014
PADI Caribbean Reef Ecology	July 14, 2014
The Explorers Club Youth Activity Fund Grant (\$750)	March 21, 2014

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## **Presentations**

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- 13<sup>th</sup> International Coral Reef Symposium (poster, June 2016)
- Rice Undergraduate Research Symposium (poster, April 2014/2015/2016)
- SIT World Learning Study Abroad Research Symposium at Rice (oral presentation, Feb. 2015)