

Brianna Rock

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Education

University of Charleston-Charleston, West Virginia

Undergraduate B.S. in Biology

August 2015-May 2019

Athlete- Basketball (2015-2017) /Lacrosse (2017-2019)

Cumulative GPA: **3.9**

Texas A&M- Corpus Christi- Corpus Christi, Texas

August 2019- Expected: May 2021

Graduate M.S. in Marine Biology

Research Interests

- Understand the behavioral ecology and physiological adaptations of marine organisms in response to environmental stressors and anthropogenic influence
- Analyze and interpret the evolution of marine animal behavior and biodiversity
- Investigate the ecological roles /spatial distributions of marine populations
- Promote conservation efforts by studying the impacts of global climate change, ocean acidification, and the impacts of pollution and nutrient loading from waste on marine ecosystems

Research Experience

Dolphins Plus Oceanside- Key Largo, FL

Research Intern

May 2017-August 2017

- Recorded behavioral ethograms on offshore common bottlenose dolphin calves (*Tursiops truncatus*,) by quantitatively tabulating various swimming configurations and animal interactions (i.e. with environment, other dolphins, enrichment devices)
- Efficiently encoded data from previous research projects into Excel for statistical analyses
- Collected respiration rates of bottlenose dolphins by documenting the number of breaths per dolphin within a five minute period as well as notating their activity levels
- Recorded and analyzed dolphin calf vocalizations utilizing a PAM Guard hydrophone system
- Tabulated the daily breathing duration rates for each dolphin, twice each day

Clearwater Marine Aquarium- Clearwater Bay, FL

Research & Education Intern

May 2018-August 2018

- Recorded behavioral ethograms on inshore common bottlenose dolphins (*Tursiops truncatus*) during research boat surveys (i.e. foraging and social behaviors, traveling patterns, GPS locations, environmental conditions)
- Identified individual animals by performing comparative analyses of dorsal fin photographs obtained in the field and previously catalogued visual data
- Conducted water quality testing using YSI equipment to monitor water temperature (°C), salinity (ppt), pH, and DO

- Collected baseline data on the relative abundance and distributions of the marine fish and invertebrate populations of the bay by pulling otter trawl nets and identifying the species, number of individuals obtained, and their measurements

University of Charleston, West Virginia, BIOL
Senior Thesis

Through my affiliation with the Clearwater Marine Aquarium, I have developed a project to determine the spatial distribution of the common bottlenose dolphin population (*Tursiops truncatus*,) in response to prey availability in Clearwater Bay, FL. Using the ArcMap database, I conducted GIS spatial analysis using GPS coordinates from individual dolphin sightings as well as spatial coordinates of pinfish abundance (*Lagodon rhomboids*,) documented from predetermined net pull locations. I successfully developed a visual display of an orientation of the bottlenose dolphin population in relation to the locations found to have the highest abundance of pinfish. Statistically, I identified a significant correlational relationship between the distributions of each population.

Additional Skills

- Basic bioinformatics using GenBank
- Excel data analysis and statistics
- PCR/RFLPs and gel electrophoresis
- Basic microbiology culturing/laboratory procedures

Work Experience

Texas State Aquarium- Corpus Christi, TX July 2019- Present
Exhibit Host

- Provide aquarium guests with educational information about the facility’s marine life exhibits, research, conservation and sustainability practices
- Promote the aquarium’s mission to enhance conservation and marine animal rescue efforts

University of Charleston- Charleston, WV August 2018-May 2019
Teaching Assistant (TA)

- Microbiology
- Botany

Water Works Family Aquatic Center– Cuyahoga Falls, OH July 2014-August 2016
Lifeguard

- Monitor and assess surroundings to prevent dangerous situations
- Certified to perform CPR, distribute oxygen, utilize an automated external defibrillator (AED) and assist in shallow and deep water spinal emergency backboard extractions
- Utilized proficient communication skills to help guests understand safety precautions and park regulations

Dolphins Plus Oceanside- Key Largo, FL May 2017-August 2017
Animal Care

- Aided with hydrations for all eight Atlantic Bottlenose dolphins at the facility
- Assisted in voluntary animal beaching exercises for medical CT scans
- Sanitized fish kitchen, fish buckets, and nebulizers
- Prepared fish buckets with specific poundage of fish for each animal

Clearwater Marine Aquarium- Clearwater, FL

May 2018- August 2018

Animal Care

- Distribution of food to resident cownose stingrays in daily feedings; responsible for weighing remaining fish and documenting husbandry information into aquarium datasheet

Volunteer

Kanawha Humane Association- Charleston, WV

August 2017-May 2019

- Distribute fresh water, food, and bedding
- Provide enrichment through play and exercise

Organization Involvement

Chi Alpha Sigma

January 2016- May, 2019

- Active member (*Chi Alpha Sigma* National College Athlete Honor Society)

Chi Beta Phi

April 2018-May 2019

- Active member and Vice President (*Chi Beta Phi* National Science Honorary)

ACS

August 2017-May 2019

- Active member (American Chemical Society)