

Liah McPherson
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EDUCATION

University of Hawai'i at Manoa, Honolulu, HI
Incoming MSc Student in Marine Biology

To begin Fall 2020

University of North Carolina at Chapel Hill, Chapel Hill, NC
B.A. with Honors, Biology
B.A., Animal Behavior (Interdisciplinary Studies)
Minor in Marine Science

2015-2019

RESEARCH EXPERIENCE

Wild Dolphin Project, Jupiter, FL

2017-present

Field Assistant with Dr. Denise Herzing

- Assists with research on the behavior and biology of Bahamian Atlantic spotted dolphins and bottlenose dolphins
- Work includes underwater and vessel-based photo-identification, underwater video and hydrophone use to record behavior and vocalizations, behavior and acoustic analysis, environmental data collection, fecal material collection for genetic analysis and drone video capture and analysis
- Trains interns and students on fieldwork techniques

Outer Banks Center for Dolphin Research, Kill Devil Hills, NC

2010-present

Research Assistant with Jessica Taylor

- Assists with population, ecology, and health assessment research on bottlenose dolphins in the Roanoke Sound
- Work includes vessel-based photo-identification, environmental and behavioral data collection, FinBase, data entry and skin lesion analysis
- Currently collaborating with Taylor on a publication examining the relationship between skin lesion prevalence and environmental factors (salinity, water temperature)
- Educates the public about bottlenose dolphins and research efforts to community events

Bermuda Institute of Ocean Sciences, St. George's Parish, Bermuda

Fall 2017

NSF-REU Intern

- Examined the mathematical relationship between light use efficiency and spectral reflectance of coral reef autotrophs as part of the NASA funded Coral Reef Airborne Laboratory project to assess reef health via remote sensing
- Work included reflectance, dissolved oxygen, downwelling irradiance, temperature, pH and salinity measurements, maintenance of a semi-natural reef environments in outdoor flumes, specimen collection and statistical analysis of spectral reflectance in MATLAB
- Assisted on Bermuda Atlantic Time-Series HS cruise aboard the R/V Atlantic Explorer

University of North Carolina at Chapel Hill, Chapel Hill, NC

2016-2017

Undergraduate Researcher (Marine Science) with Dr. Adrian Marchetti

- Examined physiological response of phytoplankton *Chaetoceros sp.*, *Emiliana huxleyi* and *Pseudo-nitzschia fraudulenta* to light exposure following variant periods of light deprivation in simulated upwelling experiments and determined maximum growth rate occurrence after 10-day light deprivation period
- Determined chlorophyll content per cell of *Chaetoceros sp.* cultures before, during, and after 10- day periods of light deprivation in simulated upwelling experiments
- Work included measurements of raw fluorescence with a 10-Au Fluorometer and Fv/Fm with a chlorophyll fluorometer, cell counts, and phytoplankton culture maintenance

CONFERENCE PRESENTATIONS

McPherson, L.L. and Herzing D.L. (March, 2019). *Examining the effectiveness of unmanned aerial systems for measuring delphinid behavior*. Poster presentation delivered at the Southeast and Mid Atlantic Marine Mammal Symposium at Georgetown University in Washington DC.

McPherson, L.L. and Herzing D.L. (December, 2019). *An assessment of UAS technology for studying Atlantic spotted dolphins*. Poster presentation delivered at the World Marine Mammal Conference in Barcelona.

GRANTS AND DISTINCTIONS

Carolina Research Scholar **2019**
UNC Office of Undergraduate Research

Conference Travel Award **2019**
UNC Office of Undergraduate Research

NSF-REU Grant **2017**
National Science Foundation and Bermuda Institute of Ocean Sciences

CERTIFICATIONS AND SKILLS

FAA Licensed UAS Pilot
Advanced Open Water Scuba Diver (NAUI/SSI)
Intermediate Freediver (PFI)
CPR Provider (AHA)

Skills:

Microsoft Office Suite
Photo-Identification field techniques and data entry
Basic statistical programming in R and Python

Adobe Creative Suite
Photography and videography
Boat operation

MEMBERSHIPS

Outer Banks Center for Dolphin Research, Kill Devil Hills, NC

2014-present

Board Member and Volunteer Coordinator

- Attends quarterly board meetings and votes on executive decisions for project direction
- Constructs and distributes monthly and annual newsletters
- Communicates information to volunteers and manages their participation in research, outreach and fundraising events

Society for Marine Mammalogy

Student Member