



Shannon Doherty

Rosenstiel School of Marine and Atmospheric Science

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EDUCATION

PhD, Ocean Sciences (in progress) University of Miami, FL June 2021

BS, Geology; Minor in English Allegheny College, PA May 2016

RESEARCH EXPERIENCE

Graduate Student Research Assistant University of Miami 2016-present

Advisor: Dr. Hilary Close

Dissertation topic: Identifying a stable isotope signature of zooplankton fecal pellets

Skills: shipboard fieldwork, elemental analyzer- and gas chromatograph-isotope ratio mass spectrometry, R and MATLAB statistical analysis, Ocean Data View

Senior Comprehensive Project & Undergraduate Intern

Intern U.S. Geological Survey, Santa Cruz, CA Summer 2015 & 2014

Supervisor: Dr. Nancy Prouty

Paid position. Sample preparation and analysis for government-funded projects detecting lipid biomarkers in marine particles and submarine canyon sediments.

Skills: Organic extraction and lipid biomarker analysis, Gas chromatography-mass spectrometry

Thesis project Allegheny College AY 2015-2016

Advisor: Dr. Rachel O'Brien

"Determining marine vs. terrestrial sources of organic matter in submarine canyon sediment using lipid biomarkers." Senior capstone project requiring a written thesis and an oral defense.

Skills: data analysis, scientific writing, and presentation

AWARDS AND HONORS

Second place, Best Student Seminar, RSMAS 2020

Mary Roche Fellowship 2020

Allegheny College Geology Graduation Honors 2016

Allegheny College Geology Department Senior Comprehensive Project Award 2016

Bonner Foundation Scholar 2012-2016

PUBLICATIONS

Doherty, S. C., A.E. Maas, D.K. Steinberg, B.N. Popp, and H.G. Close. In review. Distinguishing zooplankton fecal pellets as a component of the biological pump using compound-specific isotope analysis of amino acids. *Limnology and Oceanography*.

Doherty, S. C., C.A. Choy, and H.G. Close. Deciphering Organic Matter Sources and Food Web Interactions in a Near-shore Water Column Using Compound-specific Isotope Analysis. In preparation for *Geochemica Cosmochemica Acta*.

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Close HG, Grabb KC, Ka'apu-Lyons CA, Hannides CCS, Bour AL, **Doherty SC**, McCarthy MD, Drazen JC, Popp BN. Isotopes distinguish microbial and metazoan alteration of marine organic matter. In Preparation.

PRESENTATIONS

Doherty, S.C., A.E. Maas, D.K. Steinberg, B.N. Popp, and H.G. Close. 2020. Estimating the Contribution of Zooplankton Fecal Pellets to Marine Suspended Particle Pools. Poster, Ocean Sciences meeting.

Doherty, S.C., A.E. Maas, D.K. Steinberg, B.N. Popp, and H.G. Close. 2019. Compound-Specific Isotope Analysis of Zooplankton Fecal Pellets: Insights into Dietary and Trophic Processes and Characterization of Fecal Pellets as Organic Matter End-Member. E-lightening presentation, American Geophysical Union Fall meeting

Doherty, S.C., N. L. Paul, and H. G. Close. 2018. Deciphering Organic Matter Sources and Interactions in a Near-shore Water Column Using Compound-specific Isotope Analysis. Poster, Gordon Research Conference in Organic Geochemistry.

Doherty, S.C., N. G. Prouty, M. D. McCarthy, and H. G. Close. 2017. Probing sources of carbon and nitrogen to benthic communities at methane seeps. Poster, Chemical Oceanography Gordon Research Conference.

Doherty, S.C., H. G. Close, N. G. Prouty, and P. Campbell-Swarzenski. 2016. Determining Marine vs. Terrestrial Sources of Organic Matter (OM) within Submarine Canyon Sediment Using Lipid Biomarkers. Poster, Geological Society of America Northeastern Section Meeting.

TEACHING AND MENTORING EXPERIENCE

Undergraduate Mentoring

Training on organic geochemical protocols, supervising in lab, assisting with independent research

Suzanne Stremler	University of Miami	2018-present
Nicola Paul	University of Miami	2017-2019

Teaching

Teaching Assistant- Chemical Oceanography Lab	University of Miami	Spring 2019
Teaching Assistant-Introduction to Marine Science	University of Miami	Fall 2017
Geology Department Tutor	Allegheny College	2014-2015

SERVICE AND OUTREACH

Subtropical Experiments WDNA Radio, Miami Summer 2019

- Science, music, and art event series; free and open to the public; 4 events
- Cofounder and science coordinator; curated science content for series, supervised science presentations, introduced speakers, co-ran events

Women in Science Day University of Miami Nov. 2017, '18, '19, '20

- Developed and ran pigment chromatography activity for girls in 6th grade

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Bonner Scholar	Allegheny College	2012-2016
Senior Program Associate		(2015-2016)
-	Developed and facilitated training programs for other Bonner Scholars, served as Bonner program student representative	
Operation Read Coordinator		(2013-2015)
-	Ran elementary school literacy tutoring program and managed undergraduate student volunteer tutors	

PROFESSIONAL DEVELOPMENT AND MEMBERSHIPS

Statistics for Ecology & Conservation Biology Professional Training (SMSC)	Jan-March 2021
Miami SciComm Conference	October 2019
Inclusive SciComm Symposium	September 2019
Dallas Murphy writing workshop	January 2019
American Geophysical Union	2018-present
AAAS	2017-present
Geological Society of America	2015-present

FIELD EXPERIENCE

<i>R/V Ocean Explorer-Bermuda Atlantic Time Series</i>	May 2019
-	4 days
-	Particulate organic carbon and DNA seawater filtration for BIOSSCOPE project
-	Zooplankton incubation experiments
<i>R/V Oceanus-Newport Line, Oregon</i>	August 2018
-	12 days
-	Seawater filtration for particulate organic carbon
<i>R/V Paragon-MBARI Station MW-1</i>	August 2017
-	4 days (day trips only)
-	Water column particle collection with McLane pumps