

MEREDITH K. JENNINGS (nee Miles)

Ph.D. Candidate

Dept. of Ocean Sciences

University of Miami

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EDUCATION

2017 (anticipated) Ph.D. in Marine and Atmospheric Chemistry, University of Miami, Miami, FL
2012 B.A. Chemistry, Hendrix College, Conway, AR

AWARDS AND HONORS

2015 RSMAS Teaching Assistant Excellence Award
2013 Antarctica Service Medal, civilian honor for research in Antarctica
2013 Elsevier Research Scholarship in Organic Geochemistry
2012 Hendrix College Dept. of Chemistry Award in Analytical Chemistry
2011 Hendrix College Odyssey Undergraduate Research Grant

RESEARCH EXPERIENCE

Graduate Research Assistant, University of Miami, RSMAS, 2012-present

Dissertation: "Analytical improvements for assessing dissolved organic carbon concentrations and dynamics in the ocean", Dr. Dennis Hansell, advisor

Undergraduate Research Assistant, Hendrix College, Conway, AR 2009-2012

Senior Capstone: Mineral aerosol effects on phytoplankton growth rates, Dr. Courtney Hatch, advisor

Project: Scientific literacy for nonscientists, Dr. Liz Gron, advisor

Project: Quantifying cytotoxicity in liver cells, Dr. Andres Caro, advisor

PUBLICATIONS

Jennings, M.K., Passow, U., Wozniak, A.S., Hansell, D.A., 2017. Distribution of transparent exopolymer particles (TEP) across an organic carbon gradient in the western North Atlantic Ocean. *Marine Chemistry* 190, 1-12. doi:10.1016/j.marchem.2017.01.002

MANUSCRIPTS IN PREPARATION

Jennings, M.K., Abdulla, H., Stubbins, A., Sun, L., Wang, R., Mopper, K. "A dissolved organic carbon (DOC) analyzer capable of detecting low nM DOC differences in natural fresh waters: a proof of concept study." In prep. for *Analytical Chemistry*. 2017

Jennings, M.K., Orellana, M., Lee, A., Hansell, D. "An examination of current methods for quantifying marine gels" In prep. for *Marine Chemistry*. 2017

TEACHING EXPERIENCE

Guest Lecturer, University of Miami, 2015-2016

Courses (3): Chemical Oceanography, Marine Biota and Biogeochemical Cycles, and Ocean Biogeochemistry

Trainer and Workshop Organizer for new Graduate Teaching Assistants, RSMAS, Fall 2015

Graduate Teaching Assistant, University of Miami, Spring and Fall 2014

Courses (2): Chemical Oceanography Laboratory and Lecture

Undergraduate Tutor, Hendrix College, 2010-2012

Courses (3), General Chemistry I, II, and Concepts of Chemistry (for non-science majors)

Undergraduate Teaching and Laboratory Assistant, Hendrix College, 2009-2012

Courses (3): General Chemistry Laboratory I, II, and Organic Chemistry II Laboratory (Spring 2011 only)

Undergraduate Stockroom Assistant, Hendrix College, 2012

FIELD WORK EXPERIENCE (95 days at sea, total)

South Florida Nitrogen Cycling Study, Water and plant sampling for nitrogen concentration and isotope composition in Miami-Dade canals, 2013 and 2016

Seawater Reference Program Cruise, *RV F.G. Walton Smith*, 2 day, FL Straits, 2015

Collected seawater for Dissolved Organic Carbon Consensus Reference Materials Program (D.A. Hansell)

Western North Atlantic Climate Study, *RV Knorr*, 16 days, North Atlantic to Sargasso Sea, 2014

Student Cruise for Chemical Oceanography Lab, Instructor, *RV F.G. Walton Smith*, 1 day, 2014

North Pacific Refractory Carbon Study, *RV Melville*, 21 days, Gulf of Alaska, 2013

Ross Sea Algal Carbon Study, *RVIB Nathaniel B. Palmer*, 53 days, Ross Sea, Antarctica, 2013

NOAA Quarterly Calibration FL Straits 27N Cruise *RV F.G. Walton Smith*, 2 day, 2012

WORKSHOP PARTICIPATION

AMS Summer Policy Colloquium, Washington D.C., 2016, NSF funding recipient

SEEDS Workshop on Advancing Mentor/Mentee Relationships, RSMAS, Miami, FL, 2016

Western Atlantic Climate Study Data Workshop, Duke Marine Lab, Beaufort, NC, 2015, Talk

AAAS Communicating Climate Science Workshop, RSMAS, Miami, FL, 2015

Ocean Carbon and Biogeochemistry Summer Workshop, Woods Hole, MA (WHOI), 2014, Poster

Ross Sea Cruise Data Workshop, Ocean Science Meeting, Hawaii, 2014 **1st Working Group Meeting “Marine Oil Snow Sedimentation and Flocculent Accumulation” (MOSSFA)**, Florida State University, Tallahassee, FL, 2013

SCIENTIFIC OUTREACH, COMMUNITY SERVICE, AND LEADERSHIP

Student Travel Fund Committee, RSMAS, January 2016-present

NSF Science Communication Fellow, Patricia and Phillip Frost Museum of Science, 2014-2015

Outreach Demonstration Leader and Organizer:

Annual “Women in Science Day: Exploring Marine Science for 6th-7th grade girls”, RSMAS, 2014-2015

“Ocean Kids” outreach event for 3rd graders, University of Miami, 2014

Event Volunteer:

Miami Senior High Science Fair, Judge (invited), 2017

Elementary Science Fair at the Miami-Dade STEM Expo, Judge, 2015-2017

The City of Miami Gardens Science and Engineering Fair, Judge, 2015

“Wild Vizcaya Bioblitz”, citizen science event, Miami, 2016

“Women in Science Day” outreach event, RSMAS, 2013

“Oceanography in the Antarctic”, outreach talk, North Heights Elementary School, Little Rock, AR, 2013

President, Hendrix College Student Affiliates of the American Chemical Society 2010-2012

Organized events for National Chemistry Week, Earth Day, EcoFest and more; Hosted and introduced visiting speakers for biweekly meetings

CONFERENCE PRESENTATIONS

Jennings, M.K., Passow, U., Wozniak, A., Hansell, D. “Distribution of transparent exopolymer particles (TEP) across an organic carbon gradient in the western North Atlantic Ocean”, Aquatic Sciences Meeting, Honolulu, February 2017 (talk; accepted)

Orellana, M. V.; Lopez-Garca de Lomana, A.; **Jennings, M. K.**; Lee, A.; Hansman, R. L.; Thompson, A. W.; Bercovici, S.; Bochdansky, A. B.; Baliga, N. S.; Hansell, D. A.; “On the Influence of Diatom Programmed Cell Death on Carbon Export in the Ross Sea”, Aquatic Sciences Meeting, Honolulu, February 2017 (talk; accepted)

P. K. Swart, **M. Jennings**, S. Bercovici, and A. Carter, “The Wild Nitrogen Isotope Story of Southern Dade County: Possible Implications for Nitrogen Cycling”, Annual Meeting of the South Florida Caribbean Cooperative Ecosystem Studies Unit (SFC CESU), Homestead, FL, 2016 (talk)

M. K. Jennings, K. Mopper, H. Abdulla, L. Sun, R. Wang, A. Stubbins, and D.A. Hansell, “Optimization of a dissolved organic carbon analyzer with nM precision”, Ocean Sciences Meeting, New Orleans, 2016 (poster)

M. K. Jennings “Distribution of Transparent Exopolymer Particles (TEP) Across Multi-parameter Gradients in the Western North Atlantic”, KN219 Cruise Data Workshop, Beaufort, NC, 2015 (talk)

M. K. Jennings and D. A. Hansell, “Enhancement of deep equatorial Pacific dissolved organic carbon: allochthonous or autochthonous source?”, Aquatic Sciences Meeting, Granada, Spain, 2015 (poster)

M. V. Orellana, A. Lee, A. L. Garcia de Lomana, **M. Jennings**, S. Bercovici, and D. A. Hansell, “Programmed Cell Death in the Ross Sea” Aquatic Sciences Meeting, Granada, Spain, 2015 (talk)

M. K. Jennings, D. Hansell, U. Passow, R. Vaillancourt, T. Wilson, “Distribution of Transparent Exopolymer Particles (TEP) Across an Organic Carbon Gradient from a North Atlantic Bloom to the Sargasso Sea”, Ocean Carbon Biogeochemistry Summer Workshop, Woods Hole, MA, 2014 (poster)

S. Bercovici, D. Hansell, **M. Jennings**, H. DeJong, “Biogeochemical modifications of water masses on the Ross Sea Shelf”, Ocean Carbon Biogeochemistry Summer Workshop, Woods Hole, MA, 2014 (poster)

M. K. Jennings, M.V. Orellana, D. Hansell, “Assessment of carbon content in fluorescently labeled microgels”, Goldschmidt, Sacramento, CA, 2014 (poster)

M. Keller, **M. Miles**, M. J. Christie, C. D. Hatch, “Impacts of Aeolian Dust on Phytoplankton Growth Rates” 245th American Chemical Society National Meeting and Exposition, New Orleans, LA, 2013 (poster)

M. K. Miles, C. C. Crane, T. Bucuti, and C. D. Hatch, “Mineral aerosol effects on phytoplankton growth rates: A biomarker study of mineral aerosol deposition” 243rd American Chemical Society Nat’l Meeting and Expo, San Diego, CA, 2012 (poster)

M. K. Miles, C. C. Crane, T. Bucuti, and C. D. Hatch, “Mineral aerosol effects on phytoplankton growth rates: A biomarker study of mineral aerosol deposition”, Annual Arkansas STEM Posters-at-the-Capitol Event, Arkansas State Capitol, 2012 (poster)

C. D. Hatch, C. C. Crane, K. J. Harris, C. E. Thompson, **M. K. Miles**, R. M. Weingold, and T. Bucuti, “Clays as mineral dust aerosol: An integrated approach to studying climate, atmospheric chemistry, and biogeochemical effects of atmospheric clay minerals in an undergraduate research laboratory” Geophysical Union (AGU) National Meeting, San Francisco, CA, (invited talk)

UNDERGRADUATE STUDENTS MENTORED

Leah Chomiak, Pacific biogeochemistry and organic carbon analyses for senior research thesis, 2015-present

Benjamin Granzow, Organic carbon and polymer gel analyses, cruise data compilation, 2015-present

Yishen Li, nutrient analyses for undergraduate senior research thesis, 2015

Maria Arroyo and Justine Zoe Gapayao, nutrient analyses for Western Atlantic Climate Study, 2014

PROFESSIONAL MEMBERSHIPS

American Geophysical Union (AGU), Association for the Science of Limnology and Oceanography (ASLO), American Meteorological Society (AMS)