

## **Françoise Morison**

Postdoctoral Research Fellow

Menden-Deuer laboratory | <http://mendendeuerlab.com>

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### **EDUCATION**

PhD Oceanography, University of Rhode Island, 2016

M.S. Oceanography, University of Rhode Island, 2014

B.S. Marine and Freshwater Biology, University of New Hampshire, 2009

A.S. Biology, University of New Hampshire Manchester, 2007

### **RESEARCH INTERESTS**

- Plankton Ecology
- Microbial food web dynamics
- Plankton response to ocean physics
- Flow of carbon in the ocean
- Marine ecosystems response to climate change
- Linking empirical and remote sensing observations

### **RESEARCH EXPERIENCE**

2017 to present	Postdoctoral fellow – URI Graduate School of Oceanography (GSO)
2011-2017	Graduate Research Assistant – URI Graduate School of Oceanography
2009	Research apprentice – U. Washington Friday Harbor Laboratories
2008-2009	Undergraduate research – UNH (Dr. Haney's lab)
2008-2009	Undergraduate research – UNH (Dr. Watson's lab)
2007	Undergraduate research – UNH Manchester (Dr. Prescott's lab)

### **FIELD EXPERIENCE**

2018 – R/V Revelle RR1813, North Pacific, EXport Processes in the Ocean from Remote Sensing (EXPORTS) project (<https://oceanexports.org>).

2015, 2016, 2017 and 2018 – R/V Atlantis AT32, AT34, AT38, AT39-06, North Atlantic Aerosols and Marine Ecosystem (NAAMES) project (<https://naames.larc.nasa.gov>).

2018 – R/V Endeavor EN 608, North East US Shelf transect, NES-LTER (<https://nes-lter.who.edu>).

2015 – R/V Endeavor EN 553, Georges Bank, Gulf of Maine.

2013 and 2014 – R/V NB Palmer NBP1304 and NBP1410, Western Antarctic Peninsula, Seasonal Trophic Roles of *Euphausia superba* (STRES) project.

2012 – R/V Meteor M87, North Atlantic Deep Convection cruise, EUROBASIN project

2011 – R/V Endeavor EN 490, Georges Bank, Gulf of Maine.

2009 (Fall) – Friday Harbor Lab weekly cruise, Pelagic Ecosystem Function Apprenticeship, San Juan Archipelago.

## **PEER-REVIEWED PUBLICATIONS**

- Morison F.**, J. Pierson, A. Oikonomou, and S. Menden-Deur. 2020. Mesozooplankton grazing minimally impacts phytoplankton abundance during spring in the western North Atlantic. PeerJ 8:e9430 doi: 10.7717/peerj.9430
- Menden-Deur S., **F. Morison**, A. L. Montalbano, G. Franzè, J. Strock, E. Rubin, H. McNair, C. Mouw, and P. Marrec. 2020. Multi-instrument assessment of phytoplankton abundance and cell size in mono-specific laboratory cultures and whole plankton community composition in the North Atlantic. Front. Mar. Sci. 7:254. doi: 10.3389/fmars.2020.00254
- Morison F.**, G. Franzè, E. Harvey, and S. Menden-Deur. 2020. Light fluctuations are key in modulating plankton trophic dynamics and their impact on primary production. Limnol. Oceanogr. Letters. doi: 10.1002/lol2.10156
- Giovannoni S., L. Bolaños, L Karp-Boss, C. J. Choi, A. Worden, J. Graff, N. Haëntjens, A. Chase, A. Della Penna, P. Gaube, **F. Morison**, S. Menden-Deur, T. Westberry, E. Boss, M. Behrenfeld, and R. O'Malley. *In press* (ISME Journal). Small phytoplankton dominate western North Atlantic biomass.
- Morison F.**, E. Harvey, G. Franzè, and S. Menden-Deur. 2019. Storm-induced predator-prey decoupling promotes springtime accumulation of North Atlantic phytoplankton. Front. Mar. Sci. 6:608. doi:10.3389/fmars.2019.00608
- Behrenfeld M. J., R. H. Moore, C.A. Hostetler, J. Graff, P. Gaube, L. M. Russell, .../... **Morison F.**, et al. 2019. The North Atlantic Aerosol and Marine Ecosystem Study (NAAMES): Science motive and mission overview. Front. Mar. Sci. 6:122. doi: 10.3389/fmars.2019.00122
- Morison F.** and S. Menden-Deur. 2018. Seasonal similarity in rates of protistan herbivory in fjords along the Western Antarctic Peninsula. Limnol Oceanogr 9999 (1-19). doi: 10.1002/lno.11014
- Morison F.** and S. Menden-Deur. 2017. Doing more with less? Balancing sampling resolution and effort in measurements of protistan growth and grazing rates. Limnol Oceanogr Methods 15 (794-809). doi:10.1002/lom3.10200
- Morison F.** and S. Menden-Deur. 2015. Early spring phytoplankton dynamics in the subpolar North Atlantic: the influence of protistan herbivory. Limnol Oceanogr 60 (4): 1298-1313. doi:10.1002/lno.10099
- Ward D., **F. Morison**, E. Morrissey, K. Jenks, and W. Watson III. 2011. Evidence that potential fish predators elicit the production of carapace vibrations by the American lobster. J. Exp. Biol. 214: 2641-2648.
- Morison F.** 2008. Occurrence and distribution of cyanobacteria and their toxins in Silver Lake, New Hampshire. UNH Center for Freshwater Biology Research 10 (1).

## **MANUSCRIPTS IN PREPARATION**

Marrec P., H. McNair, G. Franzè, **F. Morison**, J. Strock, and S. Menden-Deur. *In review* (L&O). Plankton population dynamics and food web structure on the Northeast US Shelf - a new Long-Term Ecological Research site (NES-LTER): Early indication of seasonal shifts in production regimes.

## **FUNDING Award**

2013 - NSF EPSCoR Graduate Research Assistantship (Full tuition and stipend for 2 ½ years)

## **HONORS and Academic AWARDS**

2016 – T. & K. J. McNiff Graduate Student Endowment Award

2015 – GSO Ada L. Sawyer Endowment Award

2014 – Antarctic Service Medal, United States Antarctic Program, National Science Foundation, USA

2013/2014/2015/ – GSO Alumni Student Award (x3)

2013 – GSO Ann Durbin Memorial Endowment Award

Françoise Morison CV

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February 1, 2020

2015/2016 – NSF EPSCoR Student Travel Award (x2)  
2009 - Phi Beta Kappa Honor Society  
2009 - Phi Sigma Biological Sciences Honor Society  
2007 - Biology Department Award  
2007 - Undergraduate Research Conference Award of Excellence

## **TEACHING and MENTORING**

### **Teaching**

Spring 2013 - Teaching assistant (Oceanographic Science), University of Rhode Island, North Kingstown, RI  
August 2009 – Teaching assistant (Marine Immersion), Shoals Marine Laboratory, Appledore Island, Maine  
Fall 2008 – Teaching assistant (Field studies in lake ecology), University of New Hampshire

### **Mentoring**

Undergraduate Students  
2019 Sara Shapiro  
2015 & 2018 Caitlin Russell (NAAMES cruises 1 and 4)  
2015 Albert Good  
2013-2015 Emily Bernstein (EPSCoR)

## **PROFESSIONAL and VOLUNTEER ACTIVITIES**

**Scientific Peer Review** – Limnology & Oceanography; Estuaries & Coasts; ICES Journal of Marine Science; Frontiers in Marine Science

### **Science outreach**

2017 URI Graduate School of Oceanography Open House  
2016 R/V Endeavor 40<sup>th</sup> anniversary Open House  
2015 Volvo Ocean Race, Newport, RI, Ocean Exhibit  
2014 EPSCoR Hands on Science Experiences, Woonsocket High School, MA  
2014 Outreach scientist, Narragansett Bay classroom, University of Rhode Island Office of Marine Programs  
2013-2014 Science mentor, Rhode Island School of Design Studio, Studies in Plankton  
2012 EPSCoR Hands on Science Experiences, Sophia Academy  
2012 America's Cup Newport, RI – Ocean Exhibit  
2003-2011 Marine Docent, New Hampshire Sea Grant

**Membership** – Association for the Science of Limnology and Oceanography

## **PRESENTATIONS**

### **Oral presentations**

**Morison F.**, E. Harvey, G. Franzè, and S. Menden-Deuer. June 2019. Constraining biological rates governing the North Atlantic annual cycle in phytoplankton biomass. North Atlantic Aerosol and Marine Ecosystem Study (NAAMES) Science Meeting. NASA Langley Research Center. Langley, VA.  
**Morison F.**, G. Franzè, E. Harvey, and S. Menden-Deuer. February 2019. Shedding light on grazing: predator-prey processes in a dynamic mixed layer. ALSO Aquatic Sciences Meeting, San Juan, PR.

- Graff J., M. Behrenfeld, **F. Morison**, E. Harvey, S. Menden Deuer, and B. Verwey. February 2019. Photoacclimation Responses of Natural Phytoplankton Communities to Natural and Artificial Shifts in Growth Irradiance. ASLO Aquatic Sciences Meeting, San Juan, PR.
- Morison F.**, A. Oikonomou, and S. Menden-Deuer. August 2016. Plankton population dynamics in the context of the North Atlantic Aerosol and Marine Ecosystem Study (NAAMES). North Atlantic Aerosol and Marine Ecosystem Study (NAAMES) Science Meeting. Oregon State University, Corvallis, OR.
- Morison F.** and Menden-Deuer S. 2015. Protistan herbivory in fjords along the Western Antarctic Peninsula during late austral autumn. Oral presentation, ASLO meeting 2015, Granada, Spain.
- Morison F.** and Menden-Deuer S., 2014. Early spring phytoplankton dynamics in the subpolar North Atlantic: the influence of heterotrophic protist herbivory. Oral presentation, Ocean Sciences Meeting 2014, Honolulu, Hawaii.

## Posters

- Morison F.**, G. Franzè, J. Graff, E. Harvey, and S. Menden-Deuer. April 2019. Constraining biological rates governing the North Atlantic annual cycle in phytoplankton biomass. EPSCoR Science Symposium, U. Rhode Island, Kingston, RI.
- Morison F.**, G. Franzè, J. Graff, E. Harvey, and S. Menden-Deuer. June 2018. Constraining biological rates governing the North Atlantic annual cycle in phytoplankton biomass. Ocean Carbon & Biogeochemistry (OCB) project annual workshop. Woods Hole, MA.
- Morison F.**, E. Harvey, J. Graff, and S. Menden-Deuer. June 2018. Linking North Atlantic physical conditions and plankton population dynamics. North Atlantic Aerosol and Marine Ecosystem Study (NAAMES) Science Meeting. Oregon State University, Corvallis, OR.
- Morison F.**, G. Franzè, E. Harvey, and S. Menden-Deuer. June 2018. Mixed signals in the mixing layer: Evidence of vertical variability in microzooplankton grazing rates. North Atlantic Aerosol and Marine Ecosystem Study (NAAMES) Science Meeting. Oregon State University, Corvallis, OR.
- Morison F.**, J. Graff, E. Harvey, and S. Menden-Deuer. June 2018. Characterizing North Atlantic plankton community composition and size distribution pairing multiple measurements. North Atlantic Aerosol and Marine Ecosystem Study (NAAMES) Science Meeting. Oregon State University, Corvallis, OR.
- Morison F.**, E. Harvey, J. Graff, and S. Menden-Deuer. February 2018. Linking North Atlantic physical conditions and plankton population dynamics. Ocean Sciences Meeting, Portland, OR.
- Morison F.**, E. Harvey, and S. Menden-Deuer. May 2017. Linking North Atlantic physical conditions and plankton population dynamics. North Atlantic Aerosol and Marine Ecosystem Study (NAAMES) Science Planning Meeting. NASA Langley Research Center. Langley, VA.
- Morison F.** and S. Menden-Deuer. May 2017. Characterizing North Atlantic plankton community composition using FlowCam, NAAMES II. North Atlantic Aerosol and Marine Ecosystem Study (NAAMES) Science Meeting. NASA Langley Research Center. Langley, VA.
- Menden-Deuer S., **F. Morison**, A. Oikonomou, and J. Pierson. May 2017. Minimal metazoan predation impact during NAAMES II. North Atlantic Aerosol and Marine Ecosystem Study (NAAMES) Science Meeting. NASA Langley Research Center. Langley, VA.
- Morison F.** and S. Menden-Deuer. April 2017. Seasonal similarity in rates of protistan herbivory in fjords along the Western Antarctic Peninsula. EPSCoR Science Symposium, RISD, Providence, RI.
- Morison F.**, A. Oikonomou, E. Harvey, and S. Menden-Deuer. August 2016. Phytoplankton abundance and diversity during NAAMES I & II. August 2016. North Atlantic Aerosol and Marine Ecosystem Study (NAAMES) Science Meeting. Oregon State University, Corvallis, OR.
- Morison F.** and Menden-Deuer S. August 2015. Measuring rates of phytoplankton growth and protistan grazing mortality. North Atlantic Aerosol and Marine Ecosystem Study (NAAMES) Science Planning Meeting. NASA Langley Research Center. Langley, VA.

Menden-Deuer S. and **F. Morison**. August 2015. Challenges and opportunities of measuring phytoplankton loss processes in the context of the North Atlantic Aerosol and Marine Ecosystem Study (NAAMES). Science Planning Meeting. NASA Langley Research Center. Langley, VA.

**Morison F.** 2007. Sponge squeeze. How sanitary can a stinky sponge be? An analysis of antimicrobial activity in Gulf of Maine specimen of the *Halichondria* sp. marine sponge. UNH Undergraduate Research Conference poster session.

Broadley H. and **Morison F.** 2007. ECHO BLAST. A Bioinformatics exploration of echolocation evolution. UNH Undergraduate Research Conference poster session.

### **PROFESSIONAL TRAINING**

July 2014 - International Phytoplankton Taxonomy workshop - Marine biological Laboratory, Plymouth, UK.

### **WORK EXPERIENCE**

August-December 2010 - Aquatic taxonomist, Normandeau Associates, Bedford, NH.

### **REFERENCES**

- Dr. Susanne Menden-Deueur, Graduate School of Oceanography, University of Rhode Island Bay Campus, Narragansett RI | smenden@uri.edu | 401-874-6013
- Dr. Elizabeth Harvey, Biological Sciences, University of New Hampshire, Durham NH  
Elizabeth.Harvey@unh.edu | 603-862-3418
- Dr. Jason Graff, Department of Botany and Plant Pathology, Oregon State University, Corvallis  
OR jrgraff@science.oregonstate.edu | 541-737-4090 x6204