

NICOLE MILLETTE

College of William & Mary
Virginia Institute of Marine Science
1375 Greate Rd., Gloucester Pt., VA 23062

Phone: (804)-684-7985
nmillette@vims.edu

EDUCATION

- Ph.D. University of Maryland Center of Environmental Sciences, Marine, Estuarine, and Environmental Sciences, 2016
B.S. University of Rhode Island, College of Environmental and Life Sciences, *cum laude*, 2011

PROFESSIONAL EXPERIENCE

- Feb. 2020 Assistant Professor, Department of Biological Sciences, Virginia Institute of Marine Science
2018-2020 Woods Hole Sea Grant Postdoctoral Fellow in Marine Policy, Outreach, & Education, Woods Hole Oceanographic Institution, Woods Hole, MA
Project: The phytoplankton community and mixotrophic grazing response to changes in anthropogenic nutrients
Advisor: Dr. Rebecca Gast
2016-2018 Postdoctoral Researcher, Mississippi State University, Mississippi State, MS and NOAA Atlantic Oceanic and Meteorological Laboratory, Miami, FL
Work: Analyze historical monitoring data in Biscayne Bay to identify potential sources of high nutrient input.
Advisor: Dr. Anna Linhoss (MSU)
2011-2016 Graduate Research Assistant, Horn Point Laboratory, Cambridge, MD
Thesis title: Ecosystem Impact of Winter Dinoflagellate blooms in the Choptank River, MD
Advisors: Dr. James Pierson and Dr. Diane Stoecker

PEER-REVIEWED PUBLICATIONS

1. **Millette NC**, Gast RJ, Luo JY, Moeller, Stamieszkin K, Andersen KH, Brownlee EF, Cohen N, Duhamel S, Dutkiewicz S, Glibert PM, Johnson MD, Leles SG, Maloney AE, McManus G, Poulton N, Pinciotta SD, Sanders R, Wilken Susanne (2023) Mixotrophs and mixotrophy: Future research priorities. *Journal of Plankton Research*. 45: 576-596. <https://doi.org/10.1093/plankt/fbad020>
2. **Millette NC**, Clayton S, Mulholland MR, Gibala-Smith L, Lane M (2023) The importance of winter dinoflagellate blooms in Chesapeake Bay - a missing link in Bay productivity. *Estuaries and Coasts*. 46: 986-997. <https://doi.org/10.1007/s12237-023-01191-0>
3. **Millette NC**, Kelble C, Smith I, and Harvey E (2022) Spatial variability of microzooplankton grazing on phytoplankton in coastal southern Florida, USA. *PeerJ*. 10:e13291. <https://doi.org/10.7717/peerj.13291>
4. **Millette NC**, da Costa MD*, Mora JW, and Gast RJ (2021) Temporal and spatial variability of phytoplankton and mixotrophs in a temperate estuary. *Marine Ecology Progress Series*. 677: 17-31. <https://doi.org/10.3354/meps13850>

5. **Millette NC**, Pierson JJ, and North E (2020) Water temperature during winter may control striped bass recruitment during spring by affecting the development time of copepod nauplii. *ICES Journal of Marine Science*. 77: 300-314. <https://doi.org/10.1093/icesjms/fsz203>
6. **Millette NC**, Kelble C, Linhoss A, and Ashby S (2019) Using spatial variability in the rate of change of chlorophyll *a* to improve water quality management in a subtropical oligotrophic estuary. *Estuaries and Coasts*. 42: 1792-1803. <https://doi.org/10.1007/s12237-019-00610-5>
7. **Millette NC**, Grosse J, Johnson WM, Jungbluth MJ, Suter EA (2018) Hidden in plain sight: The importance of cryptic interactions in marine plankton. *Limnology and Oceanography Letters*. 3: 341-356. <https://doi.org/10.1002/lol2.10084>
8. **Millette NC**, Kelble C, Linhoss A, Ashby S, and Visser L (2017) Shift in baseline chlorophyll *a* concentrations following a three-year *Synechococcus* bloom in southeastern Florida. *Bulletin of Marine Science*. 94: 3-19. <https://doi.org/10.5343/bms.2017.1046>
9. Kelly PT, Bell T, Reisinger AJ, Spandbauer, TL, Bortolotti LE, Brentrup JA, ...**Millette NC** et al. (2017) Ecological Dissertations in Aquatic Science (Eco-DAS): An excellent networking opportunity for early career aquatic scientists. *Limnol. Oceanogr. Bulletin*. 26: 25-30. [doi:10.1002/lob.10180](https://doi.org/10.1002/lob.10180)
10. **Millette NC**, Aceves A*, Pierson JJ, Stoecker DK (2017) Mixotrophy in *Heterocapsa rotundata*: a mechanism for dominating the winter phytoplankton community. *Limnology and Oceanography*. 62: 836-845. [doi:10.1002/lno.10470](https://doi.org/10.1002/lno.10470)
11. **Millette NC**, King G*, Pierson JJ (2015) A note on the survival and feeding of copepod nauplii (*Eurytemora carolleeae*) on the dinoflagellate *Heterocapsa rotundata*. *Journal of Plankton Research*. [doi: 10.1093/plankt/fbv090](https://doi.org/10.1093/plankt/fbv090).
12. **Millette NC**, Stoecker DK, Pierson JJ (2015) Top-down control of micro- and mesozooplankton on winter dinoflagellate blooms of *Heterocapsa rotundata*. *Aquatic Microbial Ecology*. 76:15-25. [doi:10.3354/ame01763](https://doi.org/10.3354/ame01763).

*REU students

FUNDING ACQUISITION

Title: Collaborative Research: Investigating the relationship between size and the balance between carbon acquisition modes in mixotrophic protists

Award Term: 03/01/2023-2/28/2026 (**current**)

Agency: NSF OCE, 2230102

Amount: \$1,042,380 (\$506,276 to Millette, lead-PI)

Co-PIs: Karen Stamieszkin (Bieglow) and Nicole Poulton (Bigelow)

Title: Collaborative Research: Mixotrophic Grazing as a Strategy to meet Nutritional Requirements in the Iron and Manganese Deficient Southern Ocean

Award Term: 02/15/2023-02/14/2026 (**current**)

Agency: NSF OPP, 2240781

Amount: \$555,527 (\$175,853 to Millette, co-PI)

Lead-PI: Natalie Cohen (Skidaway)

CONFERENCE PRESENTATIONS

1. Estimating the proportion of mixotrophs in existing phytoplankton samples. Challenger Society Meeting. London: 2022
2. An overview of the Mixotrophs and Mixotrophy working group activities. Ocean Sciences Meeting. Virtual: 2022

3. Estimating the proportion of mixotrophs in existing phytoplankton samples. Coastal and Estuarine Research Federation National Meeting. Virtual: 2021
4. Using spatial variability in the rate of change of chlorophyll *a* to improve water quality management in a subtropical oligotrophic estuary. Greater Everglades Ecosystem Restoration (GEER). Virtual: 2021
5. Control of striped bass recruitment in spring by winter water temperature through the effect of temperature on development time of copepod prey. ICES Annual Science Conference. Virtual: 2021
6. Analysis of phytoplankton and mixotroph diversity and abundance in an estuarine system using complementary methods. Ocean Sciences Meeting. San Diego, CA: 2020
7. Conditions for Mixotrophy in the North Atlantic Ocean. Ocean Sciences Meeting. Portland, OR: 2018
8. Application of chlorophyll *a* as an indicator to analyze the current status of Biscayne Bay. CERF National Meeting. Providence, RI: 2017
9. Importance of including mixotrophs in models and studying mixotrophs as an assemblage. Eco-DAS Symposium XII. Honolulu, HI: 2016
10. Mixotrophy in *Heterocapsa rotundata*: A Mechanism for Dominating the Winter Phytoplankton Community. Ocean Sciences Meeting. New Orleans, LA: 2016
11. Importance of copepod grazing on *Heterocapsa rotundata* in winter blooms. CERF National Meeting. San Diego, CA: 2013
12. Linkages between microzooplankton grazing and winter dinoflagellate blooms in the Choptank River, Maryland. AERS Fall Meeting. Chincoteague, VA: 2012

STUDENTS MENTORED

Graduate

Mary Beth Armstrong (M.A., in progress, co-adviser w/Molly Mitchell)

Ima Hosseinzadeh (Ph.D., in progress, co-adviser w/Bill Walton)

Zabdiel Roldan Ayala (Ph.D., in progress)

Marcella da Costa (M.S., 2023)

Heather Corson (M.S., 2023)

Undergraduate

Leah Rechen, Chesapeake College, (Intern, 2013)

Alicia Klages, Chesapeake College, (Intern, 2014)

Gabrielle King, Waynesberg College, (Summer REU, 2014)

Greg Remesch, Chesapeake College, (Intern, 2015)

Alison Aceves, California State University, (Summer REU, 2015)

Maya Peterson, Falmouth Academy, (High School Intern, 2018-2019)

Marcella da Costa, St. Augustine's University, (Summer REU, 2019)

Victoria Moreira, Delaware Valley University (Summer REU, 2020)

Mason Trottier, Maine Maritime Academy (Summer REU, 2023)