

Kaitlyn R. Kowaleski

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EDUCATION

Virginia Institute of Marine Science—Gloucester Point, VA *August 2019–present*

Anticipated Graduation: August 2025

Ph.D. in Marine Science with a focus in Fisheries Science

Draft Dissertation Title: Impacts of reproductive and feeding ecology on the productivity of the Atlantic sea scallop (*Placopecten magellanicus*) resource

Research Advisors: David Rudders, Ph.D., and Roger Mann, Ph.D.

College of the Atlantic—Bar Harbor, ME

September 2015–June 2019

B.A. in Human Ecology with a focus in Marine Biology

Senior Project Title: Collecting oral histories of the marine worm industry in coastal Maine

Research Advisors: Chris Petersen, Ph.D., and Natalie Springuel

PROFESSIONAL EXPERIENCE

Research Assistant—Virginia Institute of Marine Science

July 2019–present

Serve on at-sea research team (commercial fishing vessels) to collect data on Atlantic sea scallop abundance, length distributions, bycatch rates, disease prevalence, product quality, and reproductive status. Served as night watch leader on six surveys: responsible for coordinating scientific crew and working with commercial fishing crew to ensure all data protocols are correctly implemented.

Intern—Smithsonian Environmental Research Center

June 2017–August 2017

Completed two experiments to assess the role of propagule pressure in the settlement and survival of eastern oysters as part of the Marine Invasions Lab.

Intern—Fund for Maine Islands

March 2017–June 2019

Conducted interviews at the 2018 Maine Fishermen's Forum and the 2018 National Working Waterfronts Symposium to document stories of fishing communities through periods of change. Transcribed and developed interviews into articles and presentations.

Research Assistant—College of the Atlantic

February 2017–June 2019

Collaborated with students and faculty to conduct surveys of fisheries species in Frenchman Bay, Maine, including blue mussels (February 2017–May 2017) and rockweed (June 2018–August 2018). Documented the local ecological knowledge of marine worm harvesters and dealers in Maine to compare their observations with the scientific literature. Recorded and investigated the social dynamics—particularly aspects of cooperation, competition, and information-sharing—at work within the marine worm fishery.

Writing Tutor—College of the Atlantic*September 2015–June 2019*

Worked one-on-one with undergraduate students on clarity, punctuation, and grammar at every stage of the writing process. Directed the editing team for the Human Ecology Essay Collection, a book of senior essays, for three years.

TEACHING EXPERIENCE

Graduate Teaching Fellow—William & Mary*Spring 2023*

Developed and served as instructor of record for a 1-credit seminar course for undergraduate students. The course, titled Fisheries and Fishing Communities of the Chesapeake Bay, covered the history, culture, and science of fisheries and fishing communities in the region.

Assistant Instructor—William & Mary Camp Launch*Summer 2022*

Collaborated with a four-person instructional team to prepare and present engaging marine science content for a two-week camp for high school students from underserved communities. Developed and directed hands-on activities in the classroom and the local environment.

Graduate Teaching Assistant—Virginia Institute of Marine Science*Fall 2020*

Served as the TA for Statistical Methods and Data Analysis. Taught the lab section (over Zoom due to the COVID-19 pandemic) and worked with students one-on-one to teach course concepts.

Undergraduate Teaching Assistant—College of the Atlantic *Fall 2016–Spring 2019*

Served as the TA for multiple undergraduate courses, with responsibilities ranging from providing one-on-one and small group support when learning course concepts to helping with field trips and class instruction.

Fisheries, Fishermen, and Fishing Communities: Spring 2019

Chemistry I: Fall 2018

Communicating Science: Spring 2018, Spring 2016

Chaos and Fractals: Winter 2018, Winter 2017

Marine Biology: Fall 2016

PUBLICATIONS and PRESENTATIONS

Journal Articles

Clark, K.R., S.A. Roman, R. Mann, D.B. Rudders. 2023. Extreme population densities reduce reproductive effort of Atlantic sea scallops in high-density recruitment events. *In prep.*

Technical Reports

Mann, R., D.B. Rudders, S.A. Roman, M. Southworth, and **K.R. Clark**. 2022. Age based assessment in the sea scallop *Placopecten magellanicus*: A pilot study. VIMS Marine Resource Report No. 2022-2.

- Roman, S.A., D.B. Rudders, R. Mann, and **K.R. Clark**. 2021. The effect of density on growth, yield, and reproduction of the sea scallop, *Placopecten magellanicus*. VIMS Marine Resource Report No. 2021-2.
- Rudders, D.B., S.A. Roman, E. Mohr, and **K. Clark**. 2019. Results for the 2019 VIMS Industry Cooperative Surveys of the Mid-Atlantic, Nantucket Lightship Closed Area, Closed Area I, and Closed Area II Resource Areas. VIMS Marine Resource Report No. 2019-7.

Oral Presentations (*denotes presenter)

- ***Clark, K.R.**, S. Roman, R. Mann, and D.B. Rudders. The effect of density on oocyte development in Atlantic sea scallops *Placopecten magellanicus*. National Shellfisheries Association Annual Meeting. Baltimore, MD, USA. 30 March 2023.
- *Roman, S., D. Rudders, **K. Clark**, M. Southworth, and R. Mann. How accurately can sea scallops be aged? National Shellfisheries Association Annual Meeting. Baltimore, MD, USA. 28 March 2023.
- ***Clark, K.R.**, S. Roman, R. Mann, and D.B. Rudders. The effect of density on oocyte development in Atlantic sea scallops *Placopecten magellanicus*. Annual Meeting of the Tidewater Chapter of the American Fisheries Society. Solomons, MD, USA. 24 March 2023.
- *Roman, S., D. Rudders, **K. Clark**, M. Southworth, and R. Mann. How accurately can sea scallops be aged? Southern Division of AFS Annual Meeting. Norfolk, VA, USA. 4 February 2023.
- ***Clark, K.R.**, R. Mann, and D.B. Rudders. Spatial variation in food utilization by Atlantic sea scallops (*Placopecten magellanicus*) using stable isotope analysis. Molluscan Forum. London, UK. 17 November 2022.
- ***Clark, K.R.**, S. Roman, R. Mann, and D.B. Rudders. The effect of density on reproductive activity in Atlantic sea scallops *Placopecten magellanicus*. Annual Meeting of the Tidewater Chapter of the American Fisheries Society. Nags Head, NC, USA. 25 March 2022.
- *Roman, S., D. Rudders, R. Mann, and **K. Clark**. Understanding how growth and yield vary with respect to density for the Atlantic sea scallop. Aquaculture 2022. San Diego, CA, USA. 4 March 2022.
- ***Clark, K.R.**, S. Roman, R. Mann, and D.B. Rudders. The effect of density on reproductive activity in Atlantic sea scallops *Placopecten magellanicus*. National Shellfisheries Association Annual Meeting. San Diego, CA, USA. 4 March 2022.
- *Rudders, D.B., R. Mann, S. Roman, **K. Clark**, and T. Redmond. The effect of density on growth, yield and reproduction of the Atlantic sea scallop, *Placopecten magellanicus*. Research Set-Aside Share Day Webinar, New England Fishery Management Council. 12 May 2021.
- ***Clark, K.R.**, S. Roman, R. Mann, and D.B. Rudders. The effect of density on reproductive effort in the Atlantic sea scallop, *Placopecten magellanicus*. Annual Meeting of the Tidewater Chapter of the American Fisheries Society (Virtual). 22 April 2021.
- ***Clark, K.R.**, S. Roman, R. Mann, and D.B. Rudders. The effect of density on reproductive effort in the Atlantic sea scallop, *Placopecten magellanicus*. National Shellfisheries Association Annual Meeting (Virtual). 24 March 2021.

Rudders, D., R. Mann, S. Roman, and ***K. Clark**. The effect of density on growth, yield and reproduction of the Atlantic sea scallop, *Placopecten magellanicus*. Research Set-Aside Share Day Webinar, New England Fishery Management Council. 19 May 2020.

***Clark, K.R.** Oral histories of the marine worm industry in coastal Maine. Intertidal Zone Workshop for Acadia National Park. Schoodic Institute, Acadia National Park, ME, USA. 20 May 2019.

Springuel, N., **K. Clark**, and C. Gribble [***All listed**]. Closing plenary: Collecting stories at the symposium. National Working Waterfronts and Waterways Symposium. Grand Rapids, MI, USA. 17 May 2018.

Springuel, N., N. Battista, **K. Clark**, C. Gribble, and S. Train [***All listed**]. Mapping ocean stories at the National Working Waterfronts and Waterways Symposium. National Working Waterfronts and Waterways Symposium. Grand Rapids, MI, USA. 15 May 2018.

Poster Presentations (***denotes presenter**)

Rudders, D.B., R. Mann, S. Roman, ***K. Clark**, and T. Redmond. Cooperative research to determine the effect of density on growth, yield, and reproduction in Atlantic sea scallops. Mid-Atlantic Cooperative Research Summit. Newport News, VA, USA. 31 January 2023.

***Clark, K.R.**, S. Roman, R. Mann, and D.B. Rudders. The effect of density on reproductive effort in the Atlantic sea scallop, *Placopecten magellanicus*. National Shellfisheries Association Annual Meeting (Virtual). 22-25 March 2021.

***Clark, K.R.**, D. DenDanto, and C.W. Petersen. Relative frequencies of seal wounds: A case study on Mount Desert Rock, Maine. Acadia National Park Science Symposium. Schoodic Point, ME, USA. 5 October 2016.

Outreach Publications and Presentations

Clark, K., and A. Marquardt. Stories in shells [Exhibit]. Marine Science Day. Virginia Institute of Marine Science, Gloucester Point, VA, USA. 10 June 2023.

<https://www.flickr.com/photos/169812628@N08/sets/72177720309150612/>

Clark, K. 2022. Searching for sea scallops: The role of science in fisheries management. VA SEA 2022 Lesson Plans. Virginia Institute of Marine Science, William & Mary. <https://doi.org/10.25773/3mam-rs12>

Clark, K.R. Wild and shucked at sea: Sea scallops as a sustainable Virginia shellfish resource. Chefs' Seafood Symposium. Virginia Institute of Marine Science, Gloucester Point, VA, USA. 8 March 2022.

Clark, K., and A. Shatz. 2021. Where have the oysters gone? Exploring the effects of technology and disease on the oyster fishery [Video]. In: Indigenous Life on the Nansmond River [ESRI Story Map]. <https://storymaps.arcgis.com/stories/efa89a87874044328af43b7a4357bb04>

Clark., K. 2021. Fisheries now: Marine worms. Downeast Fisheries Trail. <http://www.downeastfisheriestrail.org/fisheries-now/marine-worms/>.

Clark., K. 2021. Fisheries then: Marine worms. Downeast Fisheries Trail. <http://www.downeastfisheriestrail.org/fisheries-then/marine-worms/>.

- Springuel, N., and **K.R. Clark**. Marine worms, ecology and economy of two little known species. Coastal Conversations, WERU 89.9 FM. 26 April 2019. <https://archives.weru.org/coastal-conversations/2019/04/coastal-conversations-4-26-19-marine-worms-economy-and-ecology-of-two-little-known-species/>.
- Clark, K.**, editor. 2019, March. Voices of the Maine Fishermen's Forum: Micah Woodcock. Series coordinated by N. Springuel. Landings 27(3): 4, 21. <http://mlcalliance.org/pdf/newsletter-march-2019.pdf>.
- Clark, K.**, editor. 2019, February. Voices of the Maine Fishermen's Forum: Marcia Beal Brazer. Series coordinated by N. Springuel. Landings 27(2): 4. <http://mlcalliance.org/pdf/newsletter-february-2019.pdf>.
- Clark, K.**, editor. 2019, January. Voices of the Maine Fishermen's Forum: Bruce Fernald. Series coordinated by N. Springuel. Landings 27(1): 1, 17. <http://mlcalliance.org/pdf/newsletter-january-2019.pdf>.
- Clark, K.**, editor. 2018, December. Voices of the Maine Fishermen's Forum: Dan Harriman. Series coordinated by N. Springuel. Landings 26(12): 12, 16. <http://mlcalliance.org/pdf/newsletter-december-2018.pdf>.
- Clark, K.**, editor. 2018, November. Voices of the Maine Fishermen's Forum: Krista Tripp. Series coordinated by N. Springuel. Landings 26(11): 1, 18. <http://mlcalliance.org/pdf/newsletter-november-2018.pdf>.

GRANTS and FELLOWSHIPS

- Clark, K.R.** Investigating the effect of population density on oocyte development in Atlantic sea scallops (*Placopecten magellanicus*) using histological techniques. VIMS Student Research Grant, 2023. \$2,488.
- Clark, K.R.** Investigating the effect of population density on oocyte development in Atlantic sea scallops (*Placopecten magellanicus*) using histological techniques. VIMS Graduate Student Association Research Grant, 2023. \$611.
- Clark, K.R.** Investigating spatial variation in food utilization by Atlantic sea scallops (*Placopecten magellanicus*) through stable isotope ratios ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) of adductor muscle tissue. VIMS Student Research Grant, 2021. \$1,800.
- Clark, K.R.** The effect of density on the reproductive output of the sea scallop, *Placopecten magellanicus*. Virginia Sea Grant Graduate Research Fellowship, 2020. \$80,000.
- Clark, K.R.** Collecting oral histories of marine worm harvesters in coastal Maine. Maine Space Grant, 2018. \$2,000.
- Clark, K.R.** Toward the sustainable management of mussel beds in Frenchman Bay. Maine Space Grant, 2017. \$750.
- Clark, K.R.** The wounded seal project. Maine Space Grant, 2016. \$1,000.

AWARDS and SCHOLARSHIPS

- Student Travel Award, National Shellfisheries Association: 2023
- Suntrust Fellowship, VIMS Foundation: 2022
- R. Gordon & Catherine B. Smith Fellowship, VIMS Foundation: 2021
- Student Travel Award, National Shellfisheries Association: 2021

William J. Hargis, Jr. Fellowship, VIMS Foundation: 2020
Brenton S. Halsey Fellowship, VIMS Foundation: 2020
Ferguson Enterprise Fellowship, VIMS Foundation: 2019
Rebecca Clark Memorial Scholarship in Marine Sciences, COA: 2018
Alice Blum Yoakum Scholarship, COA: 2017
Undergraduate Scholarship in Marine Sciences, Maine Sea Grant: 2017
Presidential Scholarship, COA: 2015–2019

SERVICE and OUTREACH

Administrative Service and Involvement

Academic Council Student Representative [elected 2-year position]: 2021–present
Queer Grads Co-coordinator [LGBTQ+ graduate student group]: 2021–present
Writing Sub-committee Co-lead: 2020–present
Graduate Student Association Treasurer [elected 1-year position]: 2020–2021
Scientist Walks into a Bar Sub-committee Co-lead: 2020–2021
Awards Committee Member: 2019–2021

Workshops

Innovative, Affirming, and Effective Mentoring: October 2023
Integrating DEI in the Classroom: April 2022
Story Collider (Storytelling in Science Communication): April 2022
Sea Grant Fundamentals: April 2022
Antiracist Pedagogy: March 2022
Unlearning Racism in the Geosciences (URGE): January–May 2021

K-12 Outreach Activities

Skype-a-Scientist: 2021–present, lead sessions with K-12 classrooms and community libraries about fisheries science and marine molluscs
Virginia Science and Educators Alliance (VA SEA): 2021, designed a lesson plan for 7th grade classrooms about the science and management of the Atlantic sea scallop fishery
Hampton University ETS STEM Innovation Virtual Academy: 2021, developed and co-taught a workshop on the history of harvesting methods in the eastern oyster fishery

Volunteer Activities

Symbiotic Inc. Treasurer and Board Member [animal rescue group]: 2021–present
Chesapeake Bay Governor's School Science Symposium Judge: 2021
National Ocean Sciences Blue Crab Bowl Volunteer: 2020–2022
VIMS Marine Science Day Session Moderator: 2020
River Herring Ladder Restoration on Mount Desert Island, ME: 2016–2019

Professional Memberships

National Shellfisheries Association: 2019–present
American Fisheries Society: 2019–present

Tidewater Chapter of the American Fisheries Society: 2019–present
American Institute of Fishery Research Biologists: 2019–present

REFERENCES

David Rudders, Ph.D.

Associate Director of the Marine Advisory Program
Virginia Institute of Marine Science, Gloucester Point, VA

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