

# Nathan Smith

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## Education:

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### **Doctor of Philosophy in Ecology and Environmental Sciences**

August 2021 - Present

University of Maine – Orono, ME

*Areas of interest:*

- Land-based Recirculating Aquaculture Systems (RAS)
- Spatial Analysis
- Social License to Operate
- Social-Ecological Systems

### **Master of Science in Environmental Leadership**

December 2020

Colorado State University (CSU) – Fort Collins, CO

*Areas of interest:*

- Seafood and Aquaculture
- Invasive Marine Species
- Conservation Technology
- Coral Reef Conservation

### **Bachelor of Arts in Philosophy, *Cum Laude***

May 2013

St. Mary's College of Maryland – St. Mary's City, Maryland

*Minors:* Economics, Environmental Studies

- Conservation Ethics
- Food and Agriculture Systems
- Ancient Greek Philosophy

## Research Experience:

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### **Graduate Research Assistant**

August 2021 – Present

*University of Maine, Aquaculture Research Institute– Orono/Remote*

- Managing qualitative (70+ interview transcripts), quantitative, and spatial research projects to explore the human dimensions of land based recirculating aquaculture system (RAS) development within four U.S. states: Maine, Maryland, Florida, and California.
- Leading statistical analysis of NOAA funded survey data to understand risk perceptions and drivers of acceptance for RAS technology and development.
- Advising researchers at the University of Maryland Affiliated Institute of Marine and Environmental Technology on public engagement and communication strategies.
- Contributing to and advising multiple interdisciplinary projects at the Aquaculture Research Institute.
- Engaging with other Maine-based aquaculture institutions such as the Aquaculture Innovation Center and Center for Collaborative Aquaculture Research.

### **Economic Research Analyst**

May 2021-Present

*Ocean Associates, Inc*

- Conducted a systematic review of monetized coral reef ecosystem service valuations across nine globe-spanning NOAA Coral Reef Conservation Program jurisdictions, resulting in 150+ journal articles.

- Exploring the global scale coral reef ecosystem service literature to identify knowledge gaps within NOAA Jurisdictions.
- Analyzing and communicating findings for public, private sector, academic, and government audiences.
- Conducting a systematic review of cultural ecosystem services and relational values within a variety of ecosystems, culminating 900+ journal articles, to inform valuation methods and approaches for non-monetary ecosystem services.
- Collaborating with NOAA and contracting team partners to interface with stakeholders and advisors via research interviews and workshops.
- Leading the interview research program across all nine NOAA jurisdictions, including sensitive stakeholder and rightsholder communications.
- Contributing to data cleaning and analysis for a NOAA Office of Coastal Management project to conduct a network analysis of actors involved in managing and responding to coastal flood risks.

### **Research Assistant**

November 2020 – May 2021

#### *Conservation X Labs*

- Developed an [open-source toolkit](#) for academia or independent learners to apply Systems Thinking, Human Centered Design, Entrepreneurship, and Technology to conservation challenges.
- Organized resources on a wide array of topics such as Environmental Justice and Biomimicry
- Collaborated with CXL's team members, partners, and others to ensure toolkit success
- Built activities to challenge learners to apply the focus frameworks to conservation challenges

### **Sun Coast Marine Fellow**

August 2020 – January 2021

#### *National Parks Conservation Association – Hollywood, FL*

- Conducted research on tropical/subtropical coral reef marine reserve outcomes for an internal annotated bibliography and literature review to enhance policy briefs, comment letters, etc.
- Developed an ArcGIS StoryMap to communicate NPCA's impact and collaborations throughout the Florida Reef Tract
- Created fact sheets and policy briefs for Dry Tortugas National Parks coral reef conditions
- Participated in and facilitate internal and external meetings in support of NPCA's marine program objectives

### **PPSR Systematic Review Researcher**

May 2020 – October 2020

#### *Colorado State University – Fort Collins, CO*

- Complete title, abstract, and full reviews of relevant literature towards an ongoing systematic review to determine participant empowerment outcomes for public participation in scientific research(PPSR) projects.
- Coordinated with a diverse global team of reviewers and project leaders.

### **MSc**

August 2019 – December 2020

#### *Colorado State University – Fort Collins, CO*

- Conducted interviews and thematic analysis to deliver a Situation Assessment of internal and external perceptions about current initiatives for the Colorado Fire Restoration Institute
- Surveyed ranchers in Colorado to analyze (SPSS) their understanding about regenerative ranching practices and barriers to participation in regenerative ranching
- Used mixed methods to research perceptions of market-based options for invasive Lionfish management in the western Atlantic, including thematic analysis, descriptive, and comparative analysis in SPSS, and a literature review. Aiming for publication in 2021.

**Reviewer**  
*Ecological Applications*

September 2020

**Other Work Experience:**

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**Owner** December 2017 – Present

*Great Bear Woodworking – Fort Collins, CO*

- Custom cabinet and furniture design, building, and installation
- Historic furniture restoration and repair
- Client and sub-contractor management including custom quotes, contracts, and plans
- Quickbooks, Sketch Up Pro

**Educator** September 2018 – August 2019

*My Own Two Hands Makerspace – Littleton, CO*

- Taught skills in basic woodworking, woodturning, and tool operation
- Supervised amateurs, students, and professionals on the woodshop floor

**Operations and Procurement Manager** February 2014 – October 2015

*Friends & Farms LLC – Columbia, MD*

- Managed \$2m annual procurement program and budget for a wide variety of products, including meat, poultry, dairy, fish and shellfish, produce, and dry goods
- Supervised warehouse operations and back-of-house team around the clock
- Made long-term and short-term product planning decisions, effectively meal planning for 1000+ individuals on a weekly basis with a high level of customization
- Solved complex logistical problems with warehouse, delivery team, carriers, and vendors
- Implemented a broad error tracking system, product compatibility system, food safety check procedures, and seasonal procurement program resulting in increased efficiency and profits

**Meat/Seafood/Deli Procurement Dept. Specialist** November 2016 – December 2017

*Safeway Inc. – Denver, CO*

- Improved claims tracking process
- Optimized corporate warehouse surplus shipping and sales
- Managed weekly store orders for meat, seafood, deli products for all regional stores
- Organized holiday procurement data and built SQL queries to streamline processes

**Chancellor's Point Research Fellow** September 2012 – May 2013

*Historic St. Mary's City – St. Mary's City, MD*

- Maintained and made improvements to the Nature Center, wildlife areas, grounds and general facilities on the Chancellor's Point property
- Completed ground truthing and facilities planning for a \$116,000 National Parks Service grant awarded to Historic St. Mary's City to develop the Chancellor's Point property
- Coordinated with St. Mary's College of Maryland and local communities to organize and manage bi-weekly volunteer programs

**St Mary's College of Maryland Bike Shop Manager** September 2012 – May 2013

*St Mary's College of Maryland – St. Mary's City, MD*

- Managed a team of nine mechanics
- Initiated a bike rental program for students, faculty, and staff
- Secured permanent Bike Shop funding in the Student Government Association Charter

- Created and coordinated the first annual Du-the-Point Duathlon to benefit a local charity

### **Achievements & Awards:**

- St. Mary's College of Maryland Student Service Award 2012-2013
- Warner College of Natural Resources Graduate Scholarship (\$2,500) 2019,2020
- Warner College of Natural Resources Award for Graduate Student Achievement 2020
- University of Maine Flagship Research Fellowship (\$20,000) 2021-2023
- Northeastern University Roux Institute Innovation in Coastal Communities Start Summit – 2<sup>nd</sup> place (\$2000) 2023

### **Technical Skills and Competencies:**

- Project Management
- Spanish Language (Latin America) – Intermediate
- Italian Language – Intermediate
- Leadership + Adaptive Management
- Communications and writing (Academic and Technical Writing, Grant Writing, Policy Brief, Digital)
- Conflict Resolution
- Research (SPSS/AMOS, Dedoose, ArcGIS, Qualtrics, WoS, Google Scholar, FishBase)
- Collaborative (Limnu, Miro, Slack, Zoom, Teams, Sharepoint)
- Microsoft Office: Proficient in Word, PowerPoint, Outlook, Teams  
Advanced skills in Excel

### **Leadership Roles**

- Member, Board of Advisors – Scrap Dogs Community Compost January 2023-Present
- Co-Chair, City of Rockland Sustainability Advisory Council June 2023-Present

### **Certifications and Memberships:**

- Open Water Diver – SSI Scuba Schools International (*Current*)
- Open Standards for the Practice of Conservation – The Nature Conservancy(*Current*)
- Conflict Management in Practice – Mind the Gap (*Current*)
- Certified Interpretive Guide (*Current*)
- Society for Conservation Biology (SCB) - Marine Section, SSWG (*Current*)
- International Association for Society & Natural Resources (IASNR) (*Current*)
- Society for Risk Analysis (SRA) (*Current*)
- Scientific Diver – American Academy of Underwater Sciences (AAUS) (*Current*)
- Advanced Open Water Diver – PADI (*Current*)
- Search & Rescue Diver – PADI (*Current*)
- CPR and First Aid – DAN (*Current*)

### **Publications:**

- Smith, N., Burgess, K., Clements, K. R., Burgess, J. C., Lavoie, A., & Solomon, J. N. (2023). Serving conservation from reef to plate: Barriers and opportunities for invasive

lionfish consumption in restaurants. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 33(6), 566–578. <https://doi.org/10.1002/aqc.3933>

- Rickard, L. N., Deline, M. B., & Smith, N. (2024). The fish scales of justice: The influence of perceived justice on social license to operate for aquaculture development. *Journal of Risk Research*, 1–24. <https://doi.org/10.1080/13669877.2024.2315999>

### **Conference Presentations:**

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- Smith, N., & Burgess, K. (2021, June 20-24<sup>th</sup>). *Market Based Options for Controlling Invasive Lionfish in Florida* [Oral presentation]. 2021 IASNR Virtual Conference.
- Smith, N., & Burgess, K. (2021, July 20<sup>th</sup>). *Reef to Plate: Barriers and Opportunities for a Consumptive Market for Invasive Lionfish in Florida* [Twitter/social media presentation]. Society for Conservation Biology Social Science Working Group Twitter Conference.
- Gurney, G., Smith, N., & Rickard, L. (2021, July 20<sup>th</sup>). *Fish out of water: Exploring sense of place salience in community acceptance of land-based aquaculture projects* [Poster presentation]. 2022 IASNR Conference, San Pedro, Costa Rica.
- Smith, N., and Rickard, L. (2022, December 4-8<sup>th</sup>). *Site Suitability Analysis for RAS Development in Maine: Exploring the social-ecological spatial dimension of recirculating aquaculture systems* [Oral presentation]. 2022 Society for Risk Analysis Annual Meeting, Tampa, Florida, U.S.A.
- Smith, N., and Rickard, L. (2023, June 11-15<sup>th</sup>). *Restorative RAS: Exploring the spatial dimensions of adaptive reuse for recirculating aquaculture systems in Maine* [Oral presentation]. 2022 IASNR Conference, Portland, Maine, U.S.A..
- Smith, N., and Rickard, L., & Johnson, B. (2023, December 5-9<sup>th</sup>). *Community Change, Trust, Information, and Cooperation with Recirculating Aquaculture System Developments* [Oral presentation]. 2023 Society for Risk Analysis Annual Meeting, Washington, D.C., U.S.A.
- Smith, N., and Rickard, L. (2024, February 19th-21st). *From Conflict to Collaboration: Exploring the social and ecological dimensions of recirculating aquaculture system development through a mixed methods approach* [Oral presentation]. Aquaculture America 2024, San Antonio, TX, U.S.A.
- Bouchard, D., Hawkyard, M., Morefield, B., Smith, N., Tudor, M., Turner, S. (2024, February 19th-21st). *Salty Talks Live! Sustainable Aquaculture Research At UMaine's ARI* [Panel discussion]. Aquaculture America 2024, San Antonio, TX, U.S.A.
- Frederick, C., and Smith, N., (2024, February, 19th-21st) *Aquaculture Extension in Maryland: Assessing Community Knowledge, Attitudes, and Perceptions Towards Land-based Recirculating Aquaculture Systems (RAS)* [Oral presentation]. Aquaculture America 2024, San Antonio, TX, U.S.A.

