

Serena Hackerott

Coral Reef Biology | Marine Conservation | Restoration

CONTACT



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snhackerott

EDUCATION

Ph.D. Biological Sciences
Florida International University
2018-2024

M.S. Marine Sciences
University of North Carolina at Chapel Hill
2013-2014

B.S. Biology
University of North Carolina at Chapel Hill
2009-2013

PUBLICATIONS

Hackerott, S., et al. (2023) [Relationships between phenotypic plasticity and epigenetic variation in two Caribbean *Acropora* corals](#). Mol Ecol.

Beal A.P., S. Hackerott, et al. (2022) [Age group DNA methylation differences in lemon sharks](#). Ecol. Evol.

Hackerott, S., et al. (2021) [Coral environmental memory](#). Trends in Ecol. Evol.

Beal A.P., S. Hackerott, et al. (2021) [Epigenetic responses in juvenile Lemon sharks during coastal dredging](#). Ecol. Indic.

Hackerott, S., et al. (2017) [Invasive lionfish had no measurable effect on prey fish](#). PeerJ

Hackerott, S., et al. (2013) [Native predators do not influence invasion success of lionfish](#). PLoS ONE

HIGHLIGHTED AWARDS

FIU SEAS Best Dissertation Award

FIU NSF CREST Center for Aquatic Chemistry and the Environment (CACHÉ) Fellowship

FIU Women Explorers Award

Iberostar Wave of Change Rebuilding Coral Reefs Scholarship

Lerner Gray Memorial Fund for Marine Research

KEY SKILLS

Coral Reef Biology

- Strategies to enhance coral resilience
- Reef monitoring methods
- Coral restoration

Project Management

- Fundraising and budget management
- Workplan and schedule development
- Motivative leadership

Collaboration

- Partnerships with NGO and government agencies
- Multicultural teams, Caribbean and Pacific

RECENT EXPERIENCE

Postdoctoral Researcher

University of Delaware (UD) | Lewes, Delaware | May 2024– Present

- Testing novel bio-optical tools for scaling up coral restoration practices in cooperatively managed reef systems in the Pacific (CORDAP; Lead PI: Dr. Kenneth Hoadley)

Graduate Research and Teaching Assistant

Florida International University (FIU) | North Miami, Florida | Aug 2018-Apr 2024

- Lead multifaceted, collaborative research projects on strategies to increase coral resilience and improve restoration success
- Supervise and coordinate undergraduate student research interns
- Collaborate with local and international research partners

Data Analysis Consultant

Marshall Islands Marine Resources Authority (MIMRA) | Majuro, Republic of the Marshall Islands (RMI) | Apr-Aug 2018

- Led workshops to train MIMRA staff on the analysis of coral reef survey data
- Created a Microsoft Access Database and a Data Analysis Guide for data collected under the *Reimaanlok* natural resource management framework
- Served on a taskforce to improve *Reimaanlok* coral reef survey protocols

Marine Science Certificate Program Coordinator / Instructor

College of the Marshall Islands (CMI) | Majuro, RMI | Jan 2016-Dec 2017

- Created an accredited, 30-credit certificate program in Marine Science
- Coordinated Marine Science Certificate instructors, courses, and curriculum
- Organized student internships with local marine conservation agencies

Teaching and Research Assistant / Instructor

Council on International Educational Exchange (CIEE) Research Station | Bonaire, Caribbean Netherlands | Jan-Jul 2015

- Co-advised undergraduate students on independent research projects
- Co-led reef monitoring dives and project comparing assessment methods
- Assisted in marine ecology, research methods, and scientific diving courses

CERTIFICATIONS

PADI Dive Master, American Academy of Underwater Sciences (AAUS) Scientific Diver, International Yacht Training (IYT) Crew Member and Navigation Master, CRP/First Aid, Emergency Oxygen

Coral Reef Biology

2021-2023 Evaluating Coral Stress Hardening in Restoration

North Miami, Florida and Florida Keys | Dr. Jose Eirin-Lopez's lab at Florida International University and Coral Restoration Foundation

- Enhanced coral thermal tolerance through stress hardening and assessed applications to coral restoration
- Coral outplanting and monitoring methods, coral physiology (fluorometry, symbiosis, respirometry) and molecular biomarkers (oxidative stress, gene expression, and environmental epigenetics)

2018– 2022 Coral Performance and Stress Tolerance Assessments

Bonaire, Caribbean Netherlands | Dr. Jose Eirin-Lopez's lab at Florida International University and Reef Renewal Foundation Bonaire

- Coral growth (photo analysis, total linear extension), physiology (metabolism and symbiosis), and molecular biomarkers (gene expression and environmental epigenetics) in coral restoration nurseries
- Developed portable system to evaluate coral thermal stress tolerance for small island coral restoration practitioners

2016 Coral Reef Surveys

Majuro, Ujae, Lae, Wotho, RMI | Marshall Islands Marine Resources Authority and Coastal Management Advisory Council (CMAC)

- Invertebrate density (belt transects) for RMI *Reimaanlok* marine resource surveys

2015 Coral Reef Surveys

Bonaire and Curacao | Council on International Educational Exchange (CIEE) Research Station Bonaire

- Benthic community composition: Video transects, photo quadrats, rugosity (chain and transect method), Coral Point Count

2012-2014 Coral Reef Surveys

Belize, Bahamas, Mexico | Dr. John Bruno's lab at the University of North Carolina at Chapel Hill

- Species identification and size estimation of native predatory fish and invasive lionfish, modified AGRRR belt transects
- Lionfish capture, measurement, and otolith collection
- Tissue sample collection for population genetics

Project Management

Fundraising and Budget Management

- Secured 20 grants and awards to fund dissertation research on Bonaire, managed budgets and reporting requirements
- Spearheaded proposal development for NOAA Ruth Gates Coral Restoration Innovations Grant (funded 2021)
- Coordinated NSF Advanced Technological Education grant (CMI sub-awardee) for Marine Science Certificate Program

Workplan Development

- Alignment of activities and tasks to project aims and objectives (contexts of projects, curriculum, and certificate programs)
- Developed schedules, identified key milestones, and indicators of success for multifaceted, collaborative projects
- Managed multiple projects simultaneously while maintaining both timely progress and quality of outputs

Motivative Leadership

- Supervised 16 undergraduate student interns through marine science research experiences
- Positive leadership of teams including supervisors, peers, interns, volunteers, and external collaborators in field work, laboratory, and group meeting settings to maintain efficiency along with group moral

Collaboration

Partnerships with NGO and Government Agencies

- Collaborated with coral restoration NGOs for research development and implementation to increase applicability of results
- Served on taskforce with FIU and Florida Fish and Wildlife Conservation Commission members to combat coral trafficking
- Worked closely with MIMRA, Environmental Protection Authority, and Marshall Islands Conservation Society to develop Marine Science Certificate to ensure alignment of curriculum with local capacity needs and facilitate transition into workforce
- Assisted in organizing the first Marshall Islands National Oceans Symposium with government, NGO, and academic partners

Multicultural Teams

- Lived and worked in the Marshall Islands for ~2.5 years, worked with colleagues from multiple Pacific nations
- Lived and worked on Bonaire, Caribbean Netherlands for ~1 year, worked with local community group Bonaire Junior Rangers
- Worked with supervisors, colleagues, collaborators, and mentees from Pacific, Caribbean, Central America, and Europe