Karina Scavo Lord

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Interests: marine ecology, marine genomics, population biology, evolutionary biology

ACADEMIC

Lecturer in Biology and Marine Biology

Present

APPOINTMENTS Boston University Marine Program & Department of Biology, Boston University

Postdoctoral Teaching Scholar

2023-2024

Boston University Marine Program & Department of Biology, Boston University

NSF Ocean Sciences (OCE) Postdoctoral Research Fellow

2021-2023

Department of Integrative Biology, University of Texas at Austin

Supervisor: Mikhail Matz, PhD

Visiting Researcher

2021-2023

Department of Biology, Boston University

Host: John R. Finnerty, PhD

EDUCATION

Boston University, PhD in Biology/Marine Biology, GPA: 4.0

Dissertation: The importance of mangroves as coral habitat in a deteriorating ocean- an ecological, demographic, and genomic research program on model mangrove corals in the genus *Porites*.

Committee: John R. Finnerty (Advisor), Peter Buston, Leslie Kaufman, Sarah Davies, Cassidy D'Aloia

Gordon College, BS in Biology, GPA: 3.75

summa cum laude

Study Abroad: Creation Cares Study Program, Kaikoura, New Zealand Began studies in Biology at The University of New England (2009-2010)

FELLOWSHIPS,

2022 - Belamarich Award for Outstanding PhD in Biology, Boston University

AWARDS & HONORS

2021 – National Science Foundation Ocean Sciences Postdoctoral Research Fellowship (Grant # 2126612)

2021 - Boston University Marine Program Director's Award

2020 - Warren Mcleod Summer Fellowship, Boston University

2019 - Poster Award- Honorable Mention, Benthic Ecology Meeting

2018 – Warren McLeod Summer Fellowship, Boston University

2017 – Graduate Research Abroad Fellowship, Boston University

- 2017 Overall Conference Best Poster Award, Student Conference for Conservation Science, American Museum of Natural History, NY
- 2016 National Science Foundation Graduate Research Fellowship (NSF-GRFP)
- 2016 Outstanding Teaching Fellow Award, Boston University Marine Program
- 2016 Warren McLeod Summer Fellowship, Boston University
- 2015 Teaching as Research Fellowship, Boston University
- 2013 Phi Alpha Chi Honors, Gordon College
- 2013 Summa Cum Laude, Gordon College
- 2013 Female Scholar Athlete of the Year, Gordon College
- 2012 Female Scholar Athlete of the Year, Gordon College

FUNDING

- 2021 National Science Foundation Ocean Sciences Postdoctoral Research Fellowship, (\$317,793)
- 2020 Warren McLeod Summer Fellowship, Boston University (\$10,500)
- 2018 Warren McLeod Summer Fellowship, Boston University (\$10,500)
- 2018 International Coral Reef Society (\$2400)
- 2017 Graduate Research Abroad Fellowship, Boston University (\$3960)
- 2017 PADI Foundation (\$2000)
- 2017 Association of Marine Labs of the Caribbean Grants in Aid (\$400)
- 2017 Sigma Xi Grants in Aid (\$600)
- 2016 National Science Foundation Graduate Research Fellowship (\$94,000 + tuition)
- 2016 National Geographic Young Explorers Grant (\$1125)
- 2016 Lerner-Gray Memorial Fund for Marine Research, American Museum of Natural History (\$1125)
- 2016 Graduate School Organization Research Grant, Boston University (\$500)
- 2016 Warren McLeod Summer Fellowship, Boston University (\$10,500)

PUBLICATIONS

∓ Undergraduate co-author; † Belizean colleague co-author

Novak AB, Gerstenbacher CM, Rotjan RD, **Scavo Lord K**, and Rotjan RD. (2024). Microplastic Abundance and Accumulation Patterns in Eelgrass (Zostera marina L.) Meadows Throughout Coastal Massachusetts. *Environmental Monitoring and Assessment*:

Scavo Lord K, Lesneski K, Buston P, Davies S, D'Aloia C, and Finnerty JR. (2023). Rampant parthenogenesis & limited dispersal in a mangrove population of the coral *Porites divaricata*. *Proceedings of the Royal Scociety B* 290: http://doi.org/10.1098/rspb.2023.1070.

Rotjan RD, Ray NE, Cole I, Castro K, Kennedy BRC, Barbasch T, Lesneski K, **Scavo Lord K**, Bhardwaj A, Edens M, Karageorge I, Klawon C, Kruh-Needlemen H, McCarthy G, Perez R, Roberts C, Trumble IF, Volk A, Torres J, and Morey J. (2022). Shifts in predator behavior following climate induced disturbance. *Proceedings of the Royal Society B* 289: https://doi.org/10.1098/rspb.2022.1431

Finnerty JR, **Scavo Lord K**, Barbasch T, Laman R, Hakam L, Perez R, Jenkins H, Fortunato BJ, Lockwood C, Bianco-Caron D, and Stewart NL. (2021). Multi-year photographic record of herptofauna on Calabash Caye, Belize. First report of Southern Gulf Coast Toad, House Gecko, Schmidt's Black-Striped Snake, and Cozumel Racerunner on Turneffe Atoll. *Caribbean Herpetology* 81:1-14. Available at: http://www.caribbeanherpetology.org/pdfs/ch81.pdf

Scavo Lord K, Barcala A \mp , Aichelman H, Kriefal N, Brown C \mp , Knasin L \mp , Sector R \mp , Tone C \mp , Tsang L \mp , and Finnerty JR. (2021). Distinct phenotypes associated with mangrove and lagoon habitats in two widespread Caribbean corals, *Porites astreoides* and *Porites divaricata*. The Biological Bulletin 240: https://doi.org/10.1086/714047

Scavo Lord K and Finnerty JR. (2021). "Bleaching in mangrove corals". Frontiers in Ecology and the Environment. https://doi.org/10.1002/fee.2353

Scavo Lord K, Lesneski K, Bengtsson Z, Kuhn K, Madin J, Cheung B ∓, Ewa R ∓, Taylor J ∓, Burmester E, Morey J †, Kaufman L, & Finnerty JR. (2020). Multi-year viability of a reef coral population living on mangrove roots suggests an important role for mangroves in the broader habitat mosaic of corals. Frontiers in Marine Science 7:377. https://doi.org/10.3389/fmars.2020.00377

Scavo Lord K and Finnerty JR. (2020). "Corals in a Strange Place", NSF Data Nugget. Available at: http://datanuggets.org/2020/11/corals-in-a-strange-place/

Scavo Lord K. (2020). The importance of mangroves as habitat for corals. Reef Encounter 35: 36-40. Available at: http://coralreefs.org/wp-content/uploads/2018/12/Reef Encounter Jul 2020 lores.pdf

Bengtsson Z, Kuhn K, Battaglino AT, Li A, Talbot MN, Wafapoor M, Atta CJ, Kowalski MB, Margolis S, Rar E, Burmester E, Lesneski K, **Scavo Lord K**, L. Kaufman L, Stewart NL, and Finnerty JR. (2019). Corals of the genus Porites are a locally abundant component of the epibiont community on mangrove prop roots at Calabash Caye, Turneffe Atoll, Belize. *Caribbean Naturalist* 67:1-16. Available at:

https://www.researchgate.net/publication/336013371_Caribbean_Naturalist_Porites_divaricata_i

s a Locally Abundant Component of the Epibiont Community on Mangrove Prop Roots a t Calabash Caye Turneffe Atoll Belize

Carne L, Kaufman L, and **Scavo K**. (2016). Measuring success for Caribbean acroporid restoration: Results from ten years of work in southern Belize. *Proceedings from the 13th Annual International Coral Reef Symposium*, Session 42B, Honolulu: 352- 368. Available at: http://coralreefs.org/wp-content/uploads/2016/12/Session-42-B-2-Carne-et-al..pdf

MANUSCRIPTS IN REVIEW

MANUSCRIPTS IN REVISION

₹ Undergraduate co-author; † Belizean colleague co-author

Scavo Lord K, Martinez N †, Novelo K †, Ugarte G \mp , Guendelin S, Peterson C, Finnerty JR, and Matz M. The role of intra-clonal variation in facilitating adaptation in a predominately asexual coral population. In Revision: *Ecology and Evolution*.

Goss HA, Branconi R, Francis R, Lesneski K, **Scavo Lord K**, and Rotjan RD. Epibionts mediate mesograzer herbivory dynamics via trophodynamics, resource-partitioning, and competition. In Revision: *Journal of Ecology*.

MANUSCRIPTS

Scavo Lord K, Lee JC, Kriefal N, Aichelman H, Chan E ∓, Gilbert E ∓, Hughes A∓, Madhav K∓, Prokopyeva N ∓, Reyes S∓, Barcala A∓ and Finnerty JR. Microbiome varies by species and environment in two widespread Caribbean corals (*Porites astreoides* and *Siderastrea siderea*) from mangrove and lagoon habitats. TARGET: Coral Reefs.

Scavo Lord K, J.C. Lee, S. Zhuoyan∓, K. Lesneski, N. Peoples∓, C. Banzon∓, N. Beebe∓, E. Bobo∓, F. Khanmohhamrhadi∓, V. Vaney∓ & JR Finnerty. Effects of inter-habitat transplantation on the physiology, morphology, and microbiome of mangrove and reef specimens of the widespread Caribbean coral *Porites porites*. In Prep. Target Journal: Marine Ecology Progress Series.

TEACHING

EXPERIENCE COURSES TAUGHT

Biology of Global Change (Boston University), Instructor of Record, Spring 2023

Marine Genomics (Boston University), Postdoctoral Teaching Scholar, Spring 2023

Marine Intertidal Ecology (Boston University), Instructor of Record, Fall 2023

Tropical Seagrass Ecology (Boston University), Postdoctoral Teaching Scholar, Fall 2023

Marine Genomics (Boston University), Teaching Fellow, Spring 2021

Tropical Marine Invertebrates (Boston University), Teaching Fellow, Fall 2020

Tropical Marine Invertebrates (Boston University), Research Assistant, Fall 2019

Tropical Marine Invertebrates (Boston University), Research Assistant, Fall 2018

Marine Genomics (Boston University), Research Assistant, Fall 2017

Tropical Marine Invertebrates (Boston University), Teaching Fellow, Fall 2017

Interdisciplinary Perspectives on Global Challenges (Kilachand Honors College, Boston University), Teaching Fellow, Fall 2017

Tropical Marine Invertebrates (Boston University), Teaching Fellow, Fall 2015

The Nature of Inquiry (Kilachand Honors College, Boston University), Teaching Fellow, Fall 2017

Principles of Biology I (Boston University), Teaching Fellow, Summer 2015

Principles of Biology II (Boston University), Teaching Fellow, Spring 2014

Marine Urban Ecology (Boston University), Teaching Fellow, Fall 2014

Estuaries and Marshes (Duke University Talent Identification Program), Teaching Assistant, Summer 2014

STEM LEADERSHIP & DEVELOPMENT TRAINING

AGU LANDInG-PRFP Fellow, October 2021- Present

Description: American Geophysical Union (AGU) Leadership Academy and Network for Diversity and Inlcusion in the Geosciences (LANDing), professional development program that provides DEI leadership training

CURRICULUM DEVELOPMENT/TEACHING RESEARCH

NSF GLACIER Global Climate Change Marine Co-leader, Summer 2016 *Description:* Tropical marine ecology program leader for the Global Change Initiative Education and Research (GLACIER) Project, assist with K-12 curriculum development

Teaching as Research Fellowship, Boston University, 2015-2016

Project Title: "Implementing cooperative learning groups in a core curriculum natural science unit: An analysis of group properties," presented at Boston University's Teaching as Research Showcase

INVITED GUEST LECTURER IN THESE COURSES:

Coral Reef Biology and Ecology (University of Belize), Function and Development of Organisms (Penn State - Florence International Studies Institute, designed and taught a lab activity based on real research), Marine Biology (Boston University, Emerson College), Theoretical Evolutionary Ecology (Boston University), Marine Genomics (Boston University)

INVITED

2022 - Northeastern University Marine Science Center | Nahant, MA

SEMINARS

2022 - Boston University Belamarich Award Seminar | Boston, MA

2018 – Boston University Department of Biology Annual Retreat | Boston, MA * selected Ecology, Behavior, Evolution/Marine Biology speaker

2016 - British International School in Boston | Boston, MA

2016 - Summer Pathways Program, Boston University | Boston, MA

2016 – Marine Science Association, Boston University | Boston, MA

OUTREACH & SERVICE

MENTORING & ADVISING

Undergraduate/M.S. Independent Research Mentees:

2023 – Ilana Koppel, University of Texas at Austin

2023 - Jessien Matteu, University of Belize

Senior Thesis: "Investigating environmental and genetic drivers of corallite morphology in the Caribbean Thin Finger Coral, Porites divarciata." Exp. May 2023

2023 - Alexander Torres, University of Belize

Senior Thesis: "Investigating environmental and genetic drivers of corallite morphology in the Caribbean Thin Finger Coral, *Porites divarciata*." Exp. May 2023

2022-Present - Zhuoyan Si (M.S. Candidate), Boston University

2021 - Annabel Hughes, Boston University

2018-2020 - Anna Barcala, Boston University

Senior Thesis: "Phenotypic and ecological variation in corals living in mangrove and reef habitats." May 2020.

2017 - Beatrice Cheng, Boston University

2016 - Jennifer Soukup, Boston University

Undergraduate Field and/or Lab Assistants:

- Summer 2022 Gabriella Ugarte, University of Belize
- Spring 2021 Eilen Chen, Boston University
- Spring 2021 Esther Gilbert, Boston University
- Spring 2021 Annabel Hughes, Boston University
- Spring 2021 Krishna Madhav, Boston University
- Spring 2021 Nadiya Prokopyeva, Boston University
- Spring 2021 Sophia Reyes, Boston University
- Fall 2019 Laura Tsang, Boston University
- Fall 2019 Riley Sector, Boston University
- Fall 2019 Cailey Tone, Boston University
- Fall 2019 Lauren Knasin, Boston University
- Fall 2018 Chloe Brown, Boston University
- Fall 2018 Anna Barcala, Boston University
- Fall 2017 Rose Ewa, Boston University
- Fall 2017 Beatrice Cheng, Boston University
- Fall 2017 Jacob Taylor, Boston University
- Summer 2016 Cher Chow, Gordon College

Graduate Student Teaching Fellow Mentees:

2019 - Daniel Wuitchik, Samantha Drinan, Frank Azorsa (Boston University)

Mentoring Programs and Panel Participation:

- 2023 New York University's "2040 Now", Chasing Coral Q/A Panelist
- 2019 Boston University Biology Department Teaching Fellow **Peer Mentor**
- 2019 Boston University NSF-GRFP Fellowship **Panelist**
- 2019 Boston University Biology Graduate Symposium Talk Session Judge
- 2018 Marine Science Association, Boston University, Graduate School Panelist
- 2018 Marine Conservation Club, Cambridge Rindge and Latin School, Chasing Coral Q/A **Panelist**
- 2017 Boston University Summer Pathways Women in STEM Program **Coordinator**
- 2016 Graduate Women in Science & Engineering 'How to Find and Win a Fellowship' **Panelist**
- 2016 8th Annual SET in the City "A Day of Career Exploration for High School Girls" **Panelist**

2015 - Gordon College Graduate School Advice and Recommendations Panelist

POSITIONS OF SERVICE

2020 – Boston University Scientific Diving Graduate Student Representative 2018-2019 – Boston University Coding Hour Organizer

REVIEWING

Grant Reviews:

National Science Foundation (Career Grants)

National Geographic

Association of Marine Labs of the Caribbean

Journal Reviews:

Coral Reefs

Biological Conservation

CONFERENCE 2019 – Benthic Ecology Meeting, St. John's, Newfoundland, **Poster**

PRESENTATIONS 2019 – Scientista Conference, Boston, MA, Poster

2019 - Student Conference for Conservation Science, New York, NY, Poster

2013 - North Shore Sigma Xi Symposium, Salem, MA, Poster

SYNERGISTIC 2015-2019 – Research Analyst, Fragments of Hope Coral Restoration, Belize RESEARCH 2018 – The Pew Charitable Trust's "Scientists Letter for Herring Management in

ACTIVITIES New England"

OTHER

INFORMATION SCUBA:

- AAUS Scientific Diver (currently compliant)
- o NAUI Rescue Diver
- o NAUI Advanced Diver
- o NAUI Nitrox Diver
- o SDI Dry Suit Diver
- o PADI Open Water Diver
- o Fii Level 1 Freediver

FIELDWORK:

o Belize

- Calabash Caye, Turneffe Atoll, Belize: 2022 (24d), 2019 (12d), 2018 (42d), 2017 (42d), 2016 (42d), 2015 (42d), 2014 (12d).
- o Placencia, Belize: 2016 (10d)
- o Bahamas: Coral Vita, Freeport: 2022 (10d)
- o Cape Ann, MA: 2022 (10d), 2023 (4mo)

SOFTWARE: R, Linux, ArcGIS

SKILLS: genome assembly, transcriptome assembly, population modeling (i.e. integral projection models), analyses of next generation sequencing data, Bayesian and linear mixed effect modeling