



**10th Biennial Research Conference
8:30am to 4:30pm, November 3rd, 2023**

Conference Day Program

8:30 – 9:15am: *Coffee & Refreshments*

9:15 - 9:30am: *Opening Remarks:* Seth Engelbourg: Chair, NBI

Session 1: Marine Biodiversity, 9:10 - 10:10am

9:30 – 9:50am: **DNA BARCODING OF MARINE INVERTEBRATES COLLECTED FROM MARINAS AND DOCKS ON NANTUCKET ISLAND**

Andrew A. Davinack¹

¹Wheaton College, Norton, MA

9:50 - 10:10am: **ANCIENT PEAT DEPOSITS ON THE CONTINENTAL SHELF MAY FUEL FISHERIES PRODUCTION AND ENHANCE BIODIVERSITY**

Ryan Munnely¹, Roland Smolowitz¹, James Nelson², Brian Roberts³, and Jeffrey Donnelly⁴

¹Coonamessett Farm Foundation, Inc.; ²University of Louisiana Lafayette; ³Louisiana Universities Marine Consortium; ⁴Woods Hole Oceanographic Institution

10:10-10:30am: **DNA SEQUENCING FOR MARSH CONSERVATION**

Cooper Kimball-Rhines¹, Alice Palmer¹, Brook Moyers¹.

¹ Department of Biology, University of Massachusetts Boston

10:30-11:00am: *Morning Break:* Poster Session, Coffee, & Refreshments

Session 2: Habitat Management and Restoration, 11:00am – 12:20pm

11:00 - 11:20pm: **CHALLENGES, SUCCESSES, AND RECOMMENDATIONS FOR MANAGEMENT OF COASTAL SANDPLAIN GRASSLANDS AS REGIONAL BIODIVERSITY HOTSPOTS IN THE NORTHEASTERN UNITED STATES**

Sarah Bois¹, Christopher Neill², Michael Whitemore³, Lena Champlin⁴, Karen Beattie⁵, Russell Hopping⁶, Jennifer Karberg⁵, Karen Lombard³, Kelly Omand⁶, Polly Weigand⁷, Robert Wernerehl⁸

¹Linda Loring Nature Foundation; ²Woodwell Climate Research Center; ³The Nature Conservancy; ⁴Department of Biodiversity, Earth and Environmental Sciences, Drexel University; ⁵Nantucket Conservation Foundation; ⁶The Trustees; ⁷Central Pine Barrens Joint Policy and Planning Commission; ⁸Massachusetts Natural Heritage and Endangered Species Program

11:20 - 11:40pm: **INCORPORATING ECOLOGICAL DATA INTO THE DESIGN OF A WETLAND RESTORATION PROJECT TO ENHANCE RARE SPECIES HABITAT AND BIODIVERSITY AT WINDSWEPT CRANBERRY BOG, NANTUCKET ISLAND, MA.**

Karen C. Beattie¹, Danielle I. O'Dell¹ and Kelly A. Omand¹

¹Department of Ecological Research, Stewardship and Restoration; Nantucket Conservation Foundation, Nantucket, MA

11:40 - 12:00pm: WETLAND RESTORATION AND HABITAT MANAGEMENT PRACTICES TO ESTABLISH VIABLE POPULATIONS OF THE EASTERN SPADEFOOT TOAD ON CAPE COD: A 12-YEAR CASE STUDY

Ian Ives¹ and Jay Cordeiro¹
¹Mass Audubon Cape Cod

12:00 - 12:20pm: SOUTHERN PINE BEETLE OUTBREAK ON NANTUCKET: SUPPRESSION TECHNIQUES AND LESSONS FOR PROACTIVE FOREST MANAGEMENT

Danielle O'Dell¹
¹Nantucket Conservation Foundation, Nantucket, MA

12:20 - 1:20pm: *Lunch Break & Poster Session*

Session 3: Plant Biodiversity, 1:20-2:40pm

1:20 - 1:40pm: TWO DECADES OF CHANGE IN MARTHA'S VINEYARD PLANT COMMUNITIES

Patrick Farrar¹, Christopher Neill¹, Julia Charest^{1,2}, Glenn Motzkin³
¹Woodwell Climate Research Center, Falmouth MA; ²University of Maryland Center for Environmental Science, Cambridge, MD; ³Shelbourne, MA

1:40 - 2:00pm: CITY MARSH, COUNTRY MARSH: EXPLORING DIVERSITY IN PICKLEWEEDS AND THE PICKLEWEED MICROBIOME

Alice Palmer¹, Cooper Kimball-Rhines¹, Lexi Papamechail¹, Anisa Ahmed¹, Scarlet Taveras Guzman¹, Brook Moyers¹.
¹Department of Biology, University of Massachusetts Boston

2:00 - 2:20pm: THE ROLE OF PHENOLOGY IN PLANT INVASION ON NANTUCKET ISLAND

Yingying Xie¹, Allison Turner¹, Bianca Turner¹, Sarah Bois²
¹Northern Kentucky University, Highland Heights, KY; ²Linda Loring Nature Foundation, Nantucket, MA.

2:20 - 2:50pm: *Afternoon Break & Poster Session*

Session 4: Animal Biodiversity, 3:10 – 4:30pm

2:50 - 3:10pm: VAGRANCY AND DISPERSAL BY LESSER BLACK-BACKED GULLS

¹Richard R. Veit and Lisa L. Manne
¹City University of New York, Staten Island, NY

3:10 - 3:30pm: SELECTED CASE STUDIES OF 3 STRANDED MARINE MAMMALS ON NANTUCKET
Stephen J. St. Pierre¹, DVM

¹Marine Mammal Alliance Nantucket

3:30 - 3:50pm: SANDBAR SHARK (CARCHARHINUS PLUMBEUS) PRELIMINARY DEMOGRAPHICS, HABITAT USE, AND MOVEMENTS IN NANTUCKET SOUND, MA.

Caroline Collatos^{1,2}, Jeff Kneebone¹, Greg Skomal³, Keith Dunton⁴ & Nick Whitney¹
¹Anderson Cabot Center for Ocean Life, New England Aquarium, Boston, MA
²School for the Environment, University of Massachusetts, Boston, MA,
⁴Monmouth University, NJ
³MA Division of Marine Fisheries

3:50 - 4:10pm: TICKS ON COASTAL ISLANDS: SURVEYS OF NANTUCKET, TUCKERNUCK, AND CHAPPAQUIDDICK, MASSACHUSETTS.

Allison A. Snow^{1,3,4}, Patrick Pearson^{2,4}, and Stephen Rich^{2,4}

¹Department of Biology, ²Department of Microbiology, University of Massachusetts, Amherst;

³Department of Evolution, Ecology, and Organismal Biology, Ohio State University, Columbus

⁴Laboratory of Medical Zoology, University of Massachusetts, Amherst

4:10 - 4:30pm: Closing Remarks, Door Prize, & Final Poster Session

Cocktail Reception and Mixer, 5:00 – 7:00pm at Lemon Press; 41 Main Street

Posters Presentations

SESACHACHA POND ECOLOGICAL ENHANCEMENT AND RESILIENCE STRATEGIES ON NANTUCKET, MA.

Leah Hill¹

¹Town of Nantucket Natural Resources Department¹

DESCRIPTION OF THE BLACK-CAPPED CHICKADEE SONG TYPE ON TUCKERNUCK ISLAND, MASSACHUSETTS

Skyler K. Kardell¹ and Lily C. Morello²

¹Connecticut College, New London, CT, ²Southern New Hampshire University, Manchester, NH.

BUMBLE BEES OF WINDSWEPT

Shalit, Amanda G.¹

¹Nantucket Conservation Foundation; Department of Ecological Research, Stewardship, & Restoration

HOW FRESHWATER WETLAND RESTORATION LAYS THE FOUNDATION FOR LONG-TERM COASTAL RESILIENCE

Michael Soares¹, Wetland Scientist

¹Fuss & O'Neill, Inc., Springfield, MA.

COSKATA: AT THE BROAD WOODS A GLIMPSE INTO THE NATURAL AND HUMAN HISTORY OF THE MARITIME OAK FOREST COSKATA WOODS, AND ITS COMPOSITION AND ECOLOGICAL DIVERSITY.

Morgan Sayle¹,

¹The Trustees, Coskata Coatee Wildlife Refuge, Nantucket, MA

RESTORATION AND RESILIENCY PLANNING WITH THE LINDA LORING NATURE FOUNDATION

Sarah Bois¹,

¹Linda Loring Nature Foundation, Nantucket, MA

STEAM (Science Technology Engineering Art and Math) Youth Poster Presentations

ROOTING FOR NANTUCKET

Molly Zegans¹ and the Youth Climate Committee

¹Mass Audubon

SPONGE BOB IRL PROGRAM

Zacil Nash¹, Franco Alonzo, Leighton Capizzo, Niko Coutinho, Emmett Graziadei,

Sidney Hanson, Nikol Kirilova, Julia Nogueira, Ava Perron, Sofia Sultanova

¹Dreamland Theatre, Nantucket

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