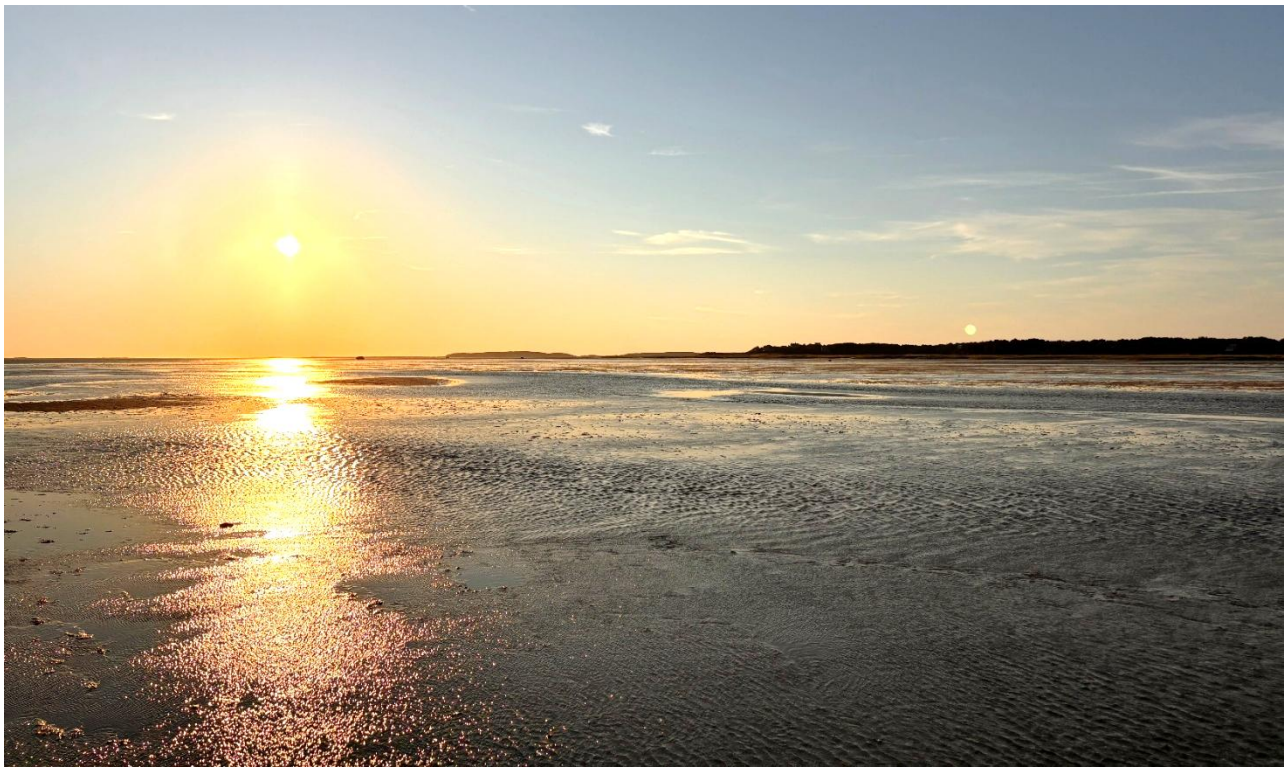
23rd Annual

State of Wellfleet Harbor Conference



Saturday, November 1, 2025

9:00 AM–12:30 PM

Wellfleet Harbor Actors Theater

WELLFLEET CONSERVATION TRUST
PO Box 84 Wellfleet MA 02667

CENTER FOR COASTAL STUDIES PROVINCETOWN

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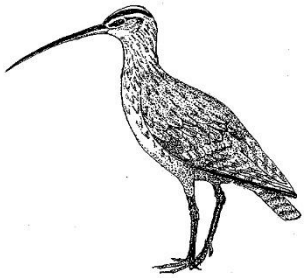
WELLFLEET HARBOR ACTORS THEATER

Mass Audubon

23rd Annual State of Wellfleet Harbor Conference **November 2025**

Our thanks to the following for their support of the Conference:

- Cape Cod Cooperative Extension
- Center for Coastal Studies
- Friends of Herring River
- Mass Audubon's Wellfleet Bay Wildlife Sanctuary
- Town of Wellfleet, Natural Resources Advisory Board
- Wellfleet Conservation Trust
- Wellfleet Oyster Alliance
- Wellfleet Harbor Actors Theater
- Woods Hole Oceanographic Institution Sea Great



Conference Planning Committee:

- Abigail Franklin Archer (Committee Chair), Barnstable County Cape Cod Cooperative Extension, Woods Hole Oceanographic Institution Sea Grant
- Carli Bertrand, Wellfleet Oyster Alliance
- Barbara Brennessel, Wellfleet Conservation Commission, Friends of Herring River, Wheaton College
- Christa Drew, Friends of Herring River
- Mark Faherty, Mass Audubon's Wellfleet Bay Wildlife Sanctuary
- Kathy and Robert Hubby
- Bill Iacuessa, Wellfleet Conservation Trust
- Agnes Mittermayr, Center for Coastal Studies
- John Portnoy, Cape Cod National Seashore (retired), Friends of Herring River, Wellfleet Conservation Commission
- David Shapiro, Mass Audubon's Wellfleet Bay Wildlife Sanctuary

23rd Annual State of Wellfleet Harbor Conference **November 2025**

Conference Agenda

9:00–9:20 **Check-in, coffee and pastries, poster viewing**

9:20–9:30 **Welcome and Opening Remarks**
Christa Drew, Conference Moderator
Mike Cavanaugh, Wellfleet Harbormaster

9:30–9:50 **Science Behind the Sand**
Bryan McCormack, Coastal Processes Specialist, Barnstable County Cape Cod Cooperative Extension & Woods Hole Oceanographic Institution Sea Grant

9:50–10:10 **Stratigraphic investigation of the geologic history of Duck Harbor**
Katie Castagno, Director of Land-Sea Interaction Program, Center for Coastal Studies

10:10–10:30 **Potential Salt Marsh Revival at Mayo Creek, Forgotten West Branch of Duck Creek**
John Portnoy, Wellfleet Conservation Commission

10:30–10:40 **Herring River Restoration Project - Status**
Christa Drew, Executive Director, Friends of the Herring River

10:40-10:55 **Questions & Answers**

10:55—11:10 **Break** (poster viewing)

11:10—11:20 **Trapping Invasive Green Crabs in Wellfleet Harbor: Lessons Learned and Implications for Control Efforts**
Owen Nichols, Director of Marine Fisheries Research, Center for Coastal Studies

11:20 – 11:30 **Wellfleet Shellfish Department: Trapping Invasive Green Crabs to Protect our Shellfish Populations**
Johnny 'Clam' Mankevetch, Assistant Constable for Propagation, Town of Wellfleet Shellfish Department

11:30–11:50 **Migration ecology of Cape Cod's juvenile Whimbrel**
Liana DiNunzio, Shorebird Biologist, Manomet Conservation Sciences

11:50–12:10 **Update on the Striped Bass Population in Massachusetts & Atlantic Coast**
Ben Gahagan, Recreational Fisheries Program Leader, MA Division of Marine Fisheries

12:10–12:25 **Questions & Answers**

12:25–12:30 **Closing Remarks**

Poster Presentations

Friends of Wellfleet Ponds - Laura Hewitt, Chair of Town of Wellfleet Natural Resources Advisory Board

Salt Marsh Restoration at Wellfleet Bay and Beyond - Sara Grady, Senior Coastal Ecologist, Mass Audubon

American Lobster Initiative- Stephanie Murphy, Communications Specialist, WHOI Sea Grant

Field Trip

Elevate your conference experience with a field trip to salt marsh restoration sites at Mass Audubon's Wellfleet Bay Wildlife Sanctuary with Sara Grady, Mass Audubon's Senior Coastal Ecologist. Sign up at the check-in table during the conference to secure your spot. Please note that participation is limited to 30 individuals.

Abstracts

Science Behind the Sand

ABSTRACT: Coastal change is something we have come to expect from living and working on the shoreline. Despite living with it daily, the change is difficult to predict due to the dynamic processes involved. We often try to stop or resist it, which leads to unintended consequences to the natural environment. All the while, storms are growing in intensity, sea levels are rising, and the shoreline retreats closer to our homes. By understanding the science behind the sand, we can better understand changing shorelines and what they mean for the future of Wellfleet.

PRESENTER NAME & AFFILIATION: Bryan McCormack**,** Coastal Processes and Hazards Specialist | Cape Cod Cooperative Extension & Woods Hole Oceanographic Institution Sea Grant

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Stratigraphic investigation of the geologic history of Duck Harbor

ABSTRACT: In 2021, the regular overtopping of the dune at Duck Harbor ushered in dramatic ecosystem change. Along with the formation of a washover fan, the near-monthly inundation of salt water killed ~120 acres of shrubs and trees in the low-lying area behind the dune. Since the removal of the dead vegetation in 2023, salt marsh vegetation has started to spread throughout the area. Duck Harbor is part of the Herring River floodplain, and spikes in salinity associated with the overwash at Duck Harbor are regularly seen in the Herring River, one mile away. Duck Harbor is no stranger to ecosystem change; stratigraphic investigation of sediment cores taken throughout the low-lying back basin indicate a broad ecosystem history, including evidence of the 1635 Great Colonial Hurricane.

PRESENTER NAME & AFFILIATION: Katie Castagno, Director Land-Sea Interaction Program, Center for Coastal Studies

COLLABORATORS: Sarah Thieler (Smith College), Tommy Tucker (CCS), Abby Giese (CCS), Mark Borrelli (CCS)

BIOGRAPHICAL INFORMATION: Katie Castagno is the director of the Land-Sea Interaction Program at the Center for Coastal Studies in Provincetown, MA. Katie's research interests focus on the intersections among coastal resilience, salt marsh restoration, and sediment transport. Katie received a PhD in Geological Oceanography from the Massachusetts Institute of Technology/Woods Hole Oceanographic Institution Joint Program in Oceanography. Katie also holds an MA in Marine Affairs from the University of Rhode Island and a BA in Environmental Geoscience from Smith College. Katie has previously worked as an environmental educator and elementary school science teacher across Cape Cod.

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LEARN MORE: https://coastalstudies.org/our-work/marine-geology/land-sea-interaction/

Potential Salt Marsh Revival at Mayo Creek, Forgotten West Branch of Duck Creek

ABSTRACT: In 1909 the 40-ft wide bridge carrying Commercial Street (Wellfleet) across the mouth of Mayo Creek was replaced with a solid-fill dike and small culvert, disconnecting about 60 acres of salt marsh from the marine environment. A large portion of the wetland was subsequently filled to create a public recreational field, private mobile home park and other residential and commercial developments, all within the coastal flood plain. As a consequence of diking and drainage, remaining wetlands have converted from a salt marsh estuary to a drained system of shoaled creeks, stagnant surface water and non-native vegetation. In recognition of the environmental damage, the town established the Mayo Creek Restoration Committee in 2014 to study the potential for tidal restoration while protecting existing infrastructure from flooding. Over five years, the Committee researched Health Department records and information from abutters, conducted field observations of tide and groundwater levels, consulted with hydrologists and contracted observation-well installation, elevation surveys of sensitive infrastructure and hydrodynamic modeling. Through these studies the Committee found that enlargement of the culvert under Commercial Street and creek dredging could achieve 20-40 acres of habitat improvement without affecting upland properties. In its 2019 report to the Selectboard the committee recommended obtaining professional assistance to: 1) review its work; 2) further develop plans for a larger, adjustable culvert opening; 3) seek permits; and 4) plan monitoring of parameters of both environmental and social concern. To date no on-the-ground action has been taken; however, the Natural Resource Conservation Service has funding for Mayo Creek within its Cape Cod Water Resources Restoration Project and will produce a conceptual restoration plan, under agreement with the town.

PRESENTER NAME & AFFILIATION: John Portnoy, Wellfleet Conservation Commission

BIOGRAPHICAL INFORMATION: Dr. Portnoy is an ecologist and wetland biogeochemist. He worked on salt-marsh restoration projects for Cape Cod National Seashore from 1979 to 2008. He lives in Wellfleet where he volunteers for the Conservation Commission and Friends of Herring River.

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Herring River Restoration Project - Status

ABSTRACT: The construction phase of the work to remove impediments and build structures toward restoring tidal flow to 890 acres of a degraded salt marsh estuary officially began in March 2023 after years of planning. The coordination and progress across several construction elements and monitoring efforts is significant. This *brief* overview will focus on the current activities and status of this extraordinary project, co-owned by the Town of Wellfleet and National Park Service Cape Cod National Seashore. Friends of Herring River, a 16-year nonprofit organization, remains an essential partner advancing this work.

PRESENTER NAME & AFFILIATION: Christa Drew, Executive Director, Friends of Herring River

COLLABORATORS: Carole Ridley, Project Coordinator, Herring River Restoration Project

BIOGRAPHICAL INFORMATION: Christa Drew brings decades of transformative leadership from co-founding and leading nonprofit organizations and consulting firms which advanced systems change and justice across a variety of sectors, including equitable community development, health, food systems, and others. Earned on a full fellowship, she has a Master's in Public Policy & Administration and previously drafted state legislation, conducted field-building research, facilitated nation-wide grantmaking and coalitions, and served as a professor in conflict transformation.

CONTACT: christa@herringriver.org

LEARN MORE:
https://herringriver.org/
https://www.wellfleet-ma.gov/herring-river-executive-council/pages/herring-river-restoration-project

Trapping Invasive Green Crabs in Wellfleet Harbor: Lessons Learned and Implications for Control Efforts

Abstract: The European green crab (*Carcinus maenas*) is an invasive species that can have negative ecological and economic effects, including predation on shellfish and damage to eelgrass habitat. We conducted a 16-week experimental harvest of green crabs in Wellfleet Harbor using specially modified traps designed to prevent accidental catches of diamondback terrapins. The primary objectives of this project were to collect detailed data on green crab catch (relative abundance, size frequency, sex composition, reproductive status), implementing responsible disposal through composting, and providing this information to the Town of Wellfleet to support natural resource management. From May-September 2025, we trapped >6,500 green crabs during weekly hauls of 30 baited traps. Green crab catch peaked on July 22 (>1,000 crabs). We captured more males (55%) than females (45%), although sex ratio varied during the season. We evaluated gear performance in order to optimize future trap design. Lessons learned during this collaborative, community-based project will inform natural resource management and future green crab control efforts.

Presenter Name & Affiliation: Owen C. Nichols, Center for Coastal Studies

Collaborator/Partner: Dave Seitler, CCB11 Fisheries

Biographical Information: Owen Nichols is Director of Marine Fisheries Research at the Center for Coastal Studies, where he conducts research in collaboration with Cape Cod fishermen and shellfish farmers. His primary interests include distributional ecology, fisheries oceanography, marine mammal/fishery interactions, and ecosystem-based fishery management. Owen is a Ph.D. candidate at the University of Massachusetts - Dartmouth School for Marine Science and Technology, a guest investigator at the Woods Hole Oceanographic Institution, and adjunct faculty at the University of Massachusetts - Boston and the Shoals Marine Laboratory.

CONTACT: nichols@coastalstudies.org

LEARN MORE: https://www.greencrab.org/

Wellfleet Shellfish Department: Trapping Invasive Green Crabs to Protect Our Shellfish Populations

Abstract: The European Green Crab (*Carcinus maenas*) poses a threat to shellfish industries due to their high rate of juvenile shellfish consumption, destruction of eel grass beds that serve as nursery habitat, ability to outcompete native species, and lack of natural predators. The Wellfleet Shellfish Department began trapping in Wellfleet Harbor for green crabs in 2024 and continued in 2025, with the primary goal of removing as many crabs from the water as possible. Between May and early October 2025, pulling between 7-14 traps twice a week resulted in a total catch of >20,000 green crabs. Late September and early October had the highest catch numbers. The Shellfish Department collaborated with the Cape Cod Cooperative Extension, the Wellfleet Shellfish Company, and the Wellfleet Transfer Station for composting and disposal of green crabs. Johnny "Clam" Mankevetch has watched the tidal flats evolve over his 20 years with the Wellfleet Shellfish Department, 9 of which he has spent as the Assistant Constable of Propagation, and he will share his experiences and observations about this program. He oversees a wide variety of shellfish operations, including green crab trapping, the cultching program, and running the town shellfish farm. He asserts that each crab he removes from Wellfleet waters doesn't get to eat our shellfish and doesn't get to breed!

Presenter Name & Affiliation: John Mankevetch, Assistant Constable for Propagation, Town of Wellfleet Shellfish Department

Migration ecology of Cape Cod's juvenile Whimbrel

ABSTRACT: There is clear evidence of a population decline in Whimbrel that utilize the Western Atlantic Flyway. In 2015, biologists from Manomet Conservation Sciences launched a study to fill key information gaps in the migration ecology of juvenile Whimbrel, an under studied age group. To accomplish this, they deployed tracking devices on juvenile Whimbrel captured on Cape Cod, a stopover region used by Whimbrel during southbound migration. They used the tracking data to connect Cape Cod to other sites along migration routes and to document movement patterns of juveniles at stopover and non-breeding sites. The study also identified nocturnal roosts on Cape Cod which can be used for long-term monitoring of adult and juvenile birds. This research will guide conservation action for Whimbrel throughout the Western Hemisphere.

PRESENTER NAME & AFFILIATION: Liana DiNunzio, Shorebird Biologist, Manomet Conservation Sciences

BIOGRAPHICAL INFORMATION: Liana is a Shorebird Biologist for Manomet Conservation Sciences. Her work focuses on improving our understanding of how shorebirds use the Massachusetts coast during migration in order to guide conservation efforts. Before joining the Manomet team, Liana was involved in many aspects of the environmental field including research, education, ecological restoration, permitting, and habitat management. She holds a bachelor's degree in zoology from the University of New Hampshire and a master's degree in environmental science and management from the University of Rhode Island.

CONTACT: ldinunzio@manomet.org

LEARN MORE: manomet.org

Update on the Striped Bass Population in Massachusetts & Atlantic Coast

ABSTRACT: Massachusetts is the summer home for most migratory striped bass on the Atlantic coast, and the fishery is an important part of the Commonwealth's history, cultural heritage, and blue economy. The magnitude of the fishery here also means that, despite having no spawning populations, Massachusetts has an outsize impact on striped bass populations coastwide. Striped bass are currently in a rebuilding regime and managers may potentially miss a 2029 deadline to reach target biomass levels. A review of recent management decisions and research findings will provide stakeholders with information on the status of striped bass and steps they can take to contribute to the conservation of the species and fishery.

PRESENTER NAME & AFFILIATION: Ben Gahagan, Recreational Fisheries Program Leader, MA Division of Marine Fisheries

COLLABORATORS: Micah Dean (MA DMF), Bill Hoffman (MA DMF), Nathalie LeBlanc (University of New Brunswick – St. John)

BIOGRAPHICAL INFORMATION: Ben Gahagan is the Recreational Fisheries Program Leader at Massachusetts Division of Marine Fisheries. In his career he has served on multi-jurisdictional technical committees, stock assessment teams, an ESA Status Review Team, and used a variety of techniques to understand the migratory movements and stock composition of fish as small as river herring and as large as Atlantic bluefin tuna. Ben holds a MSc from the University of Connecticut and is currently a PhD candidate at UMass Amherst focusing on the migratory ecology and population dynamics of striped bass.

CONTACT: ben.gahagan@mass.gov

LEARN MORE:
https://www.mass.gov/info-details/striped-bass-research
https://www.mass.gov/recreational-saltwater-fishing