



"Marsh Views"

Friends of Scarborough Marsh

FALL
Quarterly Newsletter

Volume 3 / Issue 1 / FOSM Fall "Marsh Views" Editor: Ann Fandel



Announcements

- Scarborough Marsh Fall Clean-Up - Saturday, October 22nd, from 9:00 AM to Noon. Meet at the Nature Center parking lot.
- Love the birds you see on the coast of Maine? Join us for the FOSM Lecture: "Maine Shorebirds" - Wednesday, October 26th, from 6:30 PM to 7:30 PM.

Inside This Issue

- Rabbits Return to the Marsh
- Meet the FOSM Board: Greg Bither
- ZOOM in for the Next FOSM Lecture: "Maine Shorebirds" October 26th; 6:30 PM
- Current Research on Scarborough Marsh



Rabbits Return to the Marsh

The New England Cottontail (NEC) is Maine's only true native rabbit and it was once very common in southern Maine. Like some other wildlife species, these cottontails have declined dramatically in

Maine, primarily due to the loss of

habitats. In 2007 the Maine Department of Inland Fisheries and Wildlife (MDIFW) listed them as State Endangered. Today the statewide population is estimated around 300 rabbits, with populations occurring in only six towns across the state: Cape Elizabeth, Scarborough, Wells, York, Kittery and Eliot.

MDIFW is working diligently with other organizations to increase the New England Cottontail population. Habitat creation is key to the restoration effort. Dense woody ground vegetation protects them from predators and this type of habitat has shrunk down to 3% of the landscape in southern Maine. New England Cottontails prefer dense deciduous growth where they can stay protected during the day. They are most active during dawn, dusk and at night.

MDIFW Small Mammal Biologist Cory Stearns, and Wildlife Biologist Sean Campbell, have been working on the restoration program with volunteers in areas around Scarborough Marsh. The program has included timber harvests, treating invasives, and planting thousands of native shrubs so that proper habitat can develop to provide food, shelter, and cover from predators. It took several years for the vegetation to grow sufficiently before New England Cottontails could be introduced to the area. In the spring of 2022, rabbits equipped with radio transmitters were released. They are being monitored to document that the new environment provides sufficient protection and nourishment so they can thrive.

The good news is that results have been positive, and offspring from the released rabbits have been documented on trail cameras. A release of rabbits born in a captive breeding program will take place this fall. The rabbits are doing well and as their numbers increase, it is hoped that their range may expand to other shrublands in and around the marsh.

Rabbits are important to the ecosystem as they are a food source for all the predators that call Southern Maine home.

New England Cottontails are an “umbrella species” and habitat management for them also benefits many other wildlife species, including at least 42 of Maine’s Species of Greatest Conservation Concern. These include the American Woodcock, Eastern Towhees, and Black Racers. Keep an eye out for the NEC while outdoors. If you want to learn more about this program, go to the MDIFW link, and discover how to report New England Cottontail sightings. <https://www.maine.gov/ifw/fish-wildlife/wildlife/species-information/mammals/cottontail-snowshoe-hare.html>



Meet Board Member

Greg Bither **Physics and Science Educator**

Greg Bither is a career educator who has been a teacher, assistant principal and principal in his 27+ years in public education. He has a B.S from Yale University in Physics and a Master's Degree in Education from USM. For the last 17 years he has been a Physics teacher at Scarborough High School where he was Department Head for the

Science department for many years. He helped develop the AP Science Program at the school and took the AP Physics Program from 12 students to 35.

Greg has also been involved with the Friends of Scarborough Marsh and the community in many projects that benefit others. His science education background enhanced his ability to take on a new initiative for the FOSM Restoration Committee. Greg partnered with Maine’s DEP Volunteer River Monitoring Program (VRMP) to monitor the water in the Scarborough Marsh. Over the last three years, Greg has enlisted volunteers to help him test water samples from various marsh locations, collecting data to observe the water quality. Learn more from Greg’s most recent Water Quality Monitoring Report at: **[Our Work - FRIENDS OF SCARBOROUGH MARSH](#)**

Greg resides in Kennebunkport and has recently retired, which allows him to enjoy playing golf and to continue his home improvement journey. FOSM congratulates Greg on a well-deserved retirement, and applauds his commitments to FOSM. We especially appreciate that in 2021 he collaborated with Scarborough High School administrators to set up an application process for students interested in the Scarborough Marsh to apply for board membership. Thanks to Greg, the FOSM Board has grown to include three new students who bring a youthful perspective to FOSM’s initiatives.

Friends of Scarborough Marsh welcomes our first high school student members to participate on the Board. All three students attend Scarborough High School and are concerned with the challenges to the environment, especially involving Scarborough Marsh. The three applicants chosen are Benjamin Davis, a Senior, Nadia Grinyuk, a Junior and Ava Carpenter, a Sophomore. We look forward to their assistance in reaching out and educating our community about the importance of the marsh. Ben Davis comments that *"being a board member helps him understand what true conservation work is like, as well as what individual organizations do to help the community."*

FOSM Fall Lecture

"Maine's Shorebirds"

*Brad Zitske, Wildlife Biologist, Bird Group at Maine
Department of Inland Fisheries and Wildlife*

Wednesday, October 26th, 6:30 to 7:30 PM

Shorebirds are a diverse group of birds that include sandpipers, plovers, turnstones, knots, curlews, dowitchers, and phalaropes. North America has the greatest diversity of shorebird species and largest numbers of shorebirds in the world. Over thirty shorebird species spend some portion of their annual life cycle in Maine, with eight species breeding here.

Shorebirds are an important group for management consideration, because large numbers of these birds concentrate in discrete areas of coastal habitat where they are highly susceptible to disturbance, development, and environmental contaminants. Scarborough Marsh supports many thousands of individuals by providing abundant feeding and roosting habitat. On the sandy beaches of Maine, the endangered Piping Plover can be seen during the summer months. In this talk, state shorebird specialist, Brad Zitske, with the Maine Department of Inland Fisheries & Wildlife will discuss some of the species found in Maine. He will also present some interesting research happening in the state and along the Atlantic coast, why it is important given widespread population declines for many species, and how you can help conserve them.

REGISTER lecture

Current Research on the Scarborough Marsh

Friends of Scarborough Marsh is proud to partner with researchers who study various aspects of the marsh.

University of Southern Maine

Research to understand the influence of the invasive plant *Phragmites australis* on above-ground biomass and diversity in a coastal salt marsh (Scarborough Marsh) ecosystem

Beginning this fall, undergraduate Samantha Hobgood (faculty advisor Dr. Joseph Staples) will conduct a study exploring how the invasive plant *Phragmites australis* (Phragmites) influences above-ground biomass and diversity in Scarborough Marsh. This study is funded in part through a grant from FOSM and through the Under-graduate Research Program (UROP) Fellowship at USM. In brief, the study will involve collecting leaf area measurements and plant canopy measurements in situ using a leaf area meter and canopy analyzer.

The study also includes plant diversity analyses and above-ground biomass estimates along transects running from upper to lower marsh stands. XRF (X-ray fluorescence) analyses of the different plant species encountered in these transects will be used to investigate how Phragmites influences nutrient flow in the surrounding ecosystem.

University of Maine

Environmental DNA (eDNA) research in the Scarborough Marsh and other coastal salt marshes to understand how hydrologic restrictions may affect the carbon storage capacity of salt marshes

Beginning in late summer 2022, University of Maine researchers are utilizing locations within Scarborough Marsh and other salt marshes in the Southern Maine and Midcoast region to better understand how hydrologic restrictions like bridges and roads impact salt marsh microbial communities and what that means for the carbon storage capacity of salt marshes.

PhD student Heather Richard, a member of the EcoEvoMatics lab at UMaine, leads this project with support from the NSF EPSCoR-funded Maine-eDNA program and the University of Maine Marine Aligned Research Innovation and Nationally recognized Education (or UMaine MARINE). She is taking sediment core samples along tidal creeks with and without restrictions in salt marshes in the study area to compare the carbon, nitrogen and other soil parameters with

the environmental DNA (eDNA) present in the soil. The eDNA will offer insight into what biological functions are happening that pertain to the release or storage of carbon in the marsh and hopefully lead to larger studies using eDNA to better understand, monitor and restore the carbon storage capacity of coastal habitats.

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