

# Salem SoundNet

## February 2009 Newsletter

### In this newsletter.....

Did you know we have an incredible hidden treasure right here in our own backyard? Read on and learn about Salem Sound's ["underwater wonder."](#)

Our new feature, ["Ask Salem Sound Coastwatch"](#) is from a homeowner in Peabody who is concerned about flooding.

And we have lots of interesting activities coming up too, so be sure to look at the [calendar of upcoming events.](#)

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### Charles Darwin and Salem Sound's Eelgrass... Our Underwater Wonder (*Zostera marina*)

What famous person was born 200 years ago this month? Why, it's Charles Darwin, of course. (If you were thinking Abraham Lincoln you would also be right. In fact they were born on the same day.)

Among other things, Darwin was the first to observe that all species in a shared environment are interconnected. He laid the groundwork for our understanding of ecosystems.

Sometimes an ecosystem will have a "keystone" species-one that plays a critical role, larger than would be expected, in maintaining the ecosystem.

#### Eelgrass is such a species.

Eelgrass is an underwater flowering plant (not a seaweed), that provides one of the most important shallow marine habitats in Massachusetts' coastal waters.

We have the second largest eelgrass beds in the state right here off the coast of Beverly and Manchester-by-the-Sea.

#### This is a coastal treasure!

Why? For starters, the nutrient-rich eelgrass beds provide food and shelter and support a diverse abundance of marine life--from microscopic bacteria and small squiggly things that live on the sea floor to fish, lobsters, diving ducks and other waterbirds. It's also a nursery, where the young from many species can find food and be safe from predators. Here are a few examples of how eelgrass supports marine life:

- When they are only the size of a pin head, bay scallops and mussel larvae attach to eelgrass leaves where they're out of reach from predators.
- The long blades of the plant also provide protection for many marine invertebrates such as crabs and snails.



- The juveniles of two of our most important fish, winter flounder and Atlantic cod, live in the eelgrass.
- Lobsters burrow between the roots for protection from predators.
- Eelgrass is the primary source of food for the Atlantic brant, an arctic goose that winters in our coastal waters.
- Many small animals live in the sediments among the eelgrass roots finding refuge and feeding on decomposed organic matter from fallen leaves.

### **Eelgrass supports the marine ecosystem in other ways too.**

- It improves water quality by producing oxygen and absorbing nutrients and pollutants.
- The roots stabilize sediments, promote sediment deposition and minimize shoreline erosion.

And if that were not enough, leaves from the plant wash ashore in the fall forming beach wrack (that black dried stuff you see at the water line on the beach). Wrack provides habitat for insects which in turn provide food for shore birds such as the piping plover.

Wrack also reduces beach erosion in the winter by capturing and holding sand. (On a historic note--in colonial times the wrack was used as thatch for roofs.)

Eelgrass is resilient and generally recovers from natural disturbances, but human activities take their toll. Boat propellers, anchors, mooring chains, dredging, trawling, and shellfishing can degrade or destroy eelgrass beds.

Stormwater runoff carrying herbicides, fertilizers, pollutants and sediments from lawns and streets harms the eelgrass, as do failing septic systems and discharge from the wastewater treatment plant.

Once abundant, it is important to protect the remaining eelgrass beds.

**Learn more at SSCW's upcoming public session on "Eelgrass-Our Very Own Coastal Treasure" on March 30, 7:30 pm at the Beverly Library.**

Thanks to Tony Wilbur at MA Coastal Zone Management for information for this article. To learn more visit [www.mass.gov/czm](http://www.mass.gov/czm)

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## **"Ask Salem Sound Coastwatch"**

Each month we will feature at least one question that has been submitted to us about Salem Sound. This month's is on flooding in Peabody.

**Q.** I live in Peabody near a brook which floods quite regularly. A nearby business wants to fill in some wetlands to expand their parking lot and I'm concerned that this extra pavement will increase stormwater runoff which will increase my flooding problem. What can I do?

**A.** You are right--pavement as well as buildings and roofs are generally impervious surfaces. In a storm, water runs off the pavement at a rapid rate and this can exacerbate the flooding problem.

**The best way to prevent flooding is to capture and store the stormwater so it can be slowly absorbed into the ground. This is what wetlands do naturally.**

At one time Peabody had lots of wetlands, but after WWII, in the 1950's, there was a tremendous development boom. The shopping malls, industrial parks and housing developments have turned open land which used to capture the water into impervious surfaces where it flows over the pavement directly into a storm drain--carrying pollutants with it.

The first thing you can do is contact Peabody's Conservation Agent. Each town has a Conservation Commission that is responsible for protecting wetlands. If the Cons Com approves the parking lot, they will require that additional wetlands be restored or created to compensate for the loss.

Another solution is to get the developer to use porous asphalt or concrete or permeable pavers which allow water to infiltrate into the soils below the parking lot. For more information about permeable and porous paving materials check the following websites:

[UNH Stormwater Center](#)  
[Interlocking Concrete Pavement Institute](#)  
[www.pavingexpert.com](http://www.pavingexpert.com)



Please contact us with your questions or concerns. We can be reached at 978-741-7900 or [info@salemsound.org](mailto:info@salemsound.org)

## FYI --Upcoming Events

**Wednesday, March 25 - North Shore Community College Sustainability Fair;** 9 am - 1 pm; Free and open to the public. McGee Bldg gymnasium; 300 Broad St, Lynn MA.

**Saturday, March 28 - "How Does Your Garden (or Lawn!) Grow?"** Free seminar sponsored by Greenscapes North Shore and the Topsfield Fair.

*Greenscapes are environmentally-friendly lawn and yard care practices. Come prepared to learn how you can have a beautiful lawn and garden that requires very little water and chemicals to maintain. Certified organic landscapers Curtis Dragon, Bruce Wenning and Nanette Masi will share information on composting, lawn care, building your soil, rain gardens, and how to use native plants to attract birds, butterflies, or other wildlife. **Bring your questions!** 9 am-12:30 pm; Clubhouse at Topsfield Fairgrounds, 207 Boston St (Route 1), Topsfield, MA 01983 (Use River Gate entrance and park in Lot A.).*

Space is limited **so reservations are requested.** Call 978-741-7900 or email: [info@salemsound.org](mailto:info@salemsound.org)

**Monday, March 30 - "Eelgrass--Our Very Own Coastal Treasure"**

Free presentation and discussion. 7:00 pm - 8:30 pm, Beverly Library, Sohier Room, 32 Essex St, Beverly, MA 01915

*Eelgrass provides one of the most important marine habitats--and we have Massachusetts' second largest eelgrass beds right here in our own backyard! Come learn about this coastal treasure. Tay Evans, Division of Marine Fisheries; Robert Buchsbaum,*

*Mass Audubon and Barbara Warren of SSCW will present information about this remarkable resource and efforts that are being made to monitor and protect it.*

**Thursday, April 2 - Saturday April 4 - New England Estuarine Research Society (NEERS) Spring Meeting.** Salem Waterfront Hotel; jointly hosted by the Massachusetts Division of Marine Fisheries, Mass Audubon, and Salem State College.

*Thursday afternoon SPECIAL SYMPOSIUM: "The Science Behind Ocean Management." Schedule and registration information is on [www.neers.org](http://www.neers.org)*

**Monday, April 13-22 - Earth Days at Salem State College**

*All events are free and open to the public. The theme is "**Troubled Waters: Seeking Ethical and Sustainable Solutions.**" There will be films, speakers, panel discussions, environmental awards, and a poster session featuring student research on the topic. As more information becomes available, a link will be posted on the SSCW website.*

**Saturday, July 25 - Swim & Fin: Race for Salem Sound**  
**Forest River Park, 98 West Ave. Salem Harbor, Salem, MA**

*A Day of Races in Salem Harbor - paddling (Kayak and Canoe) and Swim. Start training now! Details coming soon at [swinandfin.org](http://swinandfin.org).*

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We hope to see you at the Greenscapes Seminar or the Eelgrass Presentation in March. They will both be lively and informative.

Barbara Warren, Executive Director  
Susan Yochelson, Outreach Coordinator