



2017 SUMMER NEWS

# Nantucket Land Council, Inc.

PLANNING • PROTECTING • PRESERVING



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## **RESEARCH NEWS**

### **Investigating the Impact of the Invasive Green Crab**

The European green crab, *Carcinus maenas*, is native to Europe and northern Africa, but they are now found on the shores of every continent except Antarctica. First arriving to North America in the 1800's, most likely from the holds of ships, their populations have been exploding in recent years. It is speculated that this could be a result of warming waters, and now, as is often the case with invasive species, they are wreaking havoc. Green crabs feed on bivalves and other crustaceans and have had a negative impact on clam and mussel beds in coastal Massachusetts and Maine. Unfortunately there is still no viable market for them, but other communities and regional experts have begun to look for one. The State even experimented with a green crab bounty in 2014 until funding ran out.

While foraging for food or burrowing into the sediment the crabs also cause substantial damage to eelgrass beds. Research from the northeastern US and Canada has revealed drastic reductions in the density of eelgrass beds where green crab populations have exploded. This clearly gives Nantucket cause for concern.

NLC board member, Carl Sjolund has been trapping green crabs in Madaket Harbor for a number of years and is astounded at their increase in number. This summer the NLC is teaming up with the Maria Mitchell Association and the Town of Nantucket Natural Resources Department to prioritize an investigation of what's really going on with green crabs in our coastal waters. A pilot study is underway using mark-recapture techniques that will ultimately help us better understand the size of their population. Ten crab pots are being deployed in Nantucket Harbor for three separate week-long sampling periods. The data collected from this sampling effort, and the experience gained working with the crabs this summer, will help guide planning efforts for a larger scale population study in 2018.



At left: The Town of Nantucket Natural Resources Enforcement Officer, JC Johnsen, with NLC Resource Ecologist Emily Molden on board the Town's vessel during crab sampling.

Below: Maria Mitchell Association Director of Natural Science, Dr. Emily Goldstein-Murphy, with a Maria Mitchell intern measuring a captured and marked green crab.



## EDUCATION NEWS

### Exploring Vernal Pools and Sampling Water



The Nantucket Land Council provides a wide range of educational outreach and programming. Resource Ecologist Emily Molden spends time each year teaching local school groups about environmental issues affecting Nantucket such as rare habitats, erosion and ensuring the health of our water bodies. Emily led many local students into Squam Swamp this spring to explore the ecology and magic of vernal pools (pictured top). Ms. Molden also worked with Kathryn Norton's 7th and 8th grade Foundational English students from Cyrus Peirce Middle School to sample water from a number of locations around the Island. They used water quality testing kits that were purchased with one of NLC's Karen K. Borchert Educational Grants for their unit, *Access to Clean Water*.



## Creating Butterfly Habitats

Butterflies are one of many insects that go through a complete metamorphosis over the course of their lives. They are also a very important part of the pollinator collective that we rely on in many ways. Because they experience two totally different phases of life, the larval and adult stages, butterflies have a more complicated list of habitat requirements to fulfill their needs. In order to create a truly successful butterfly habitat one must provide food and shelter for the caterpillars as well as a food source for the butterfly. This requires knowing a thing or two about what butterflies eat. Different butterfly species feed on a variety of different plants during their larval stage. For example, most fritillaries feed on violets, while swallowtail larva eat trees such as cherry and magnolia. The monarch caterpillar, as most know, will only eat milkweed. Adult butterflies tend to be generalists when it comes to food and most will go for any available source of nectar from flowers that are in bloom.

By combining a few common butterfly host plants and a variety of flowers, making sure to stagger bloom times so there is always something available, it is easy to provide everything these beautiful insects need to survive. Monarch habitats, or Monarch Waystations, are becoming an essential piece of the puzzle that must be completed to preserve this species and its migration in North America. Monarch Watch, a non-profit education, conservation and research program that focuses on the monarch butterfly, has a lot of additional information on how to create monarch habitat. They will even certify your garden as an official monarch waystation if you meet certain simple criteria. <http://www.monarchwatch.org/waystations/> So why not modify an existing garden bed or create a new one keeping butterflies, especially monarchs, in mind? For more information contact NLC Resource Ecologist Emily Molden [emily@nantucketlandcouncil.org](mailto:emily@nantucketlandcouncil.org)



# WHY WE GIVE

Our support for the Land Council is simply because they are Nantucket's advocate for the Island's environmental issues and its resources. By promoting education, research, and land protection, the Land Council is a major asset for finding solutions that keep this island beautiful and special.

—Dane DeCarlo and Katie Hemmingway  
Nantucket, MA



## COMMUNITY NEWS

### NLC Reviewing Landfill Operation

Over the past winter and spring, the Land Council began taking a closer look at Nantucket's landfill operation. Echoing concerns brought forth by the Nantucket Board of Health, Executive Director Cormac Collier requested a thorough review and performance audit to determine if the landfill is operating in accordance with state and local regulations and the Administrative Consent Order (ACO) that the MA Department of Environmental Protection and the Town previously agreed to a couple decades ago. As part of the ACO, the Town and its landfill contractor, Waste Options, is required to monitor the groundwater, retention ponds and gas emissions throughout the site. Results of specific wells continue to show concentrations of arsenic and nitrogen that are well beyond EPA primary thresholds, as well as several metals and 1,4-Dioxane that are above secondary thresholds. Although these thresholds are formulated only for acceptable drinking water standards, it is still troubling to see these high concentrations as they may pose an environmental and health hazard to the abutting Long Pond ecosystem. The recently hired DPW director Robert McNeil has been receptive to our concerns and we anticipate a report from him to the Board of Health in the near future. We also hope to petition the Department of Environmental Protection for more consistent and improved oversight by the State.





## EDUCATION NEWS

### Fertilizer Education and Outreach

The Nantucket Land Council is putting a significant effort into educating the public, and the landscaping community, about the use of fertilizers. Beginning in April, before the height of the landscaping season, Executive Director Cormac Collier assisted the Town of Nantucket with a mandatory fertilizer training for landscapers. The Town requires all landscapers who will be applying fertilizer to attend these workshops and hold a license from the Nantucket Board of Health. As the temperatures warmed the NLC aired two local radio campaigns, with one of the spots being broadcast in Spanish. Both campaigns ran through the end of June. Beginning in mid-June and running throughout the summer we have a 30-second video that plays before movies at the Dreamland Theater. This video encourages homeowners to start a dialogue with their landscaper, and to make sure that their landscaper is doing what is right for their lawn and for Nantucket's fragile ecosystem. This spot also had a lot of traction on social media with thousands of views, shares and comments. If you have questions about the Town of Nantucket Best Management Practices, or need assistance talking to your landscaper, don't hesitate to contact us.

*Top: 2017 Town of Nantucket Fertilizer Workshop  
Above: Homeowner Russ Morash talks with landscaper Steve Collette*

### State of the Harbor Forum

On July 18th the Nantucket Land Council hosted its first ever "State of the Harbor Forum" at the Great Harbor Yacht Club. Before an audience of over 150 people, presenters from the Town of Nantucket and the Nantucket Land Council discussed the health of the eelgrass beds, water quality, and shellfish populations. They also reviewed the strategies being employed to address septic, fertilizer, stormwater, and boat use impacts. A video of the meeting will soon be available on Channel 18 and on the Land Council website. Thanks to all the individuals who helped make this happen and also to the contributions of all our sponsors:

The Nantucket Shellfish Association, Critter Cruise, The Amy and Michael McGowan Family Foundation, Bill Fisher Tackle, Brant Point Marine, Brian Sullivan of Fisher Real Estate Nantucket, Cru Nantucket, Hy-Line Cruises and Island Boat Rental.





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## **August & September**

### **2017 NLC Annual Meeting**

Tuesday, August 8, 5PM  
Bartlett's Farm, 33 Bartlett Farm Road

### **Harbor Tour and Oyster Farm Visit**

Thursday, August 10, 3:15PM  
Town Pier, 34 Washington Street

### **Free Downtown Tree Tour**

Tuesday, August 15, 10AM  
Call NLC office to register

### **NLC at the Sustainable Nantucket Farmer's Market**

Saturday, August 19, 10AM-1PM  
Downtown, Cambridge and  
N. Union Streets

### **End of Season Dinner**

Monday, September 4, 6PM  
Straight Wharf Restaurant  
6 Harbor Square

## **Nantucket Land Council, Inc.**

PLANNING • PROTECTING • PRESERVING

Established in 1974, the Nantucket Land Council is the only environmental watchdog group on Nantucket Island. The NLC works to protect Nantucket's natural resources in three major areas—planning, protecting, preserving.

**PLANNING:** The NLC monitors development proposals, offers educational programs, grants and scholarships, and makes recommendations to voters on issues which affect the environment.

**PROTECTING:** The NLC conducts scientific research to support the protection of our natural resources such as native species, wildlife habitat, and water quality.

**PRESERVING:** The NLC specializes in holding conservation restrictions. CR's allow the property to remain in the owner's hands, while ensuring that the land remains preserved.