

# The Osprey



## Mashpee Land Stewards Newsletter Jan/March 2016

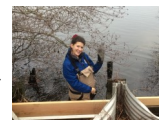


### Upcoming Events

- [Herring Count Program \(see article below\)- April](#)
- [Earth Day Week: April 18th-22nd](#)
- [Maintaining Pollinator Gardens: March/April](#)
- [New Santuit Pond Preserve Parking Lot/Trail Opening: TBD](#)
- [Building Bat/Bird Boxes: TBD](#)

### Reviving the Mashpee Land Steward Program

My name is Katelyn Cadoret, the new Assistant Conservation Agent for the Town of Mashpee. My role will be to oversee our land management and Land Stewards program. This newsletter will update you on what has been completed since October, upcoming projects and events, and relevant natural history facts. I sincerely look forward to working with the residents of Mashpee, for together we can keep this place in the best shape for ourselves and our unique wildlife. Please contact me at [kwcadoret@mashpeema.gov](mailto:kwcadoret@mashpeema.gov) or (508) 539-1400 ext. 8538. To become a land steward, please sign up on our website:



[http://www.mashpeema.gov/Pages/MashpeeMA\\_Conservation/stewards](http://www.mashpeema.gov/Pages/MashpeeMA_Conservation/stewards)

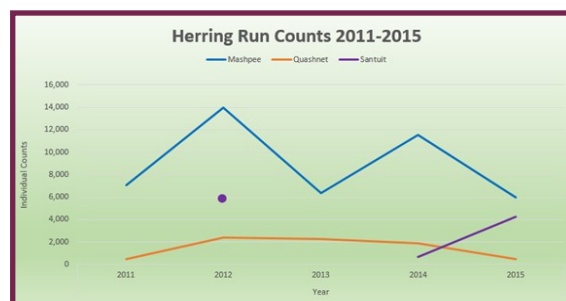


### HERRING COUNT PROGRAM:



The Mashpee Conservation Department is seeking volunteers to conduct annual Herring counts at Mashpee, Quashnet, and Santuit River fish ladders this spring. The statewide monitoring program began in 2007 by the Association to Preserve Cape Cod (APCC.org). Herring (Blueback and Alewife) are anadromous species that spawn in freshwater, and spend their adult life in saltwater (see Life Cycle on page 2). As of 2005, a moratorium has been placed on fishing or collecting this keystone species. Collecting as much count data as possible is vital to assessing their population estimates, which is indicative of our waterway's health.

The program usually begins around April, or when water temperatures average 50 degrees (F). We encourage volunteers to do as many 10-minute observations as possible while the adult herring



Mashpee's 3 Fish Ladders are located at:

- Johns Pond (Quashnet River)
- Santuit Pond (Santuit River)
- Mill Pond (Mashpee River)



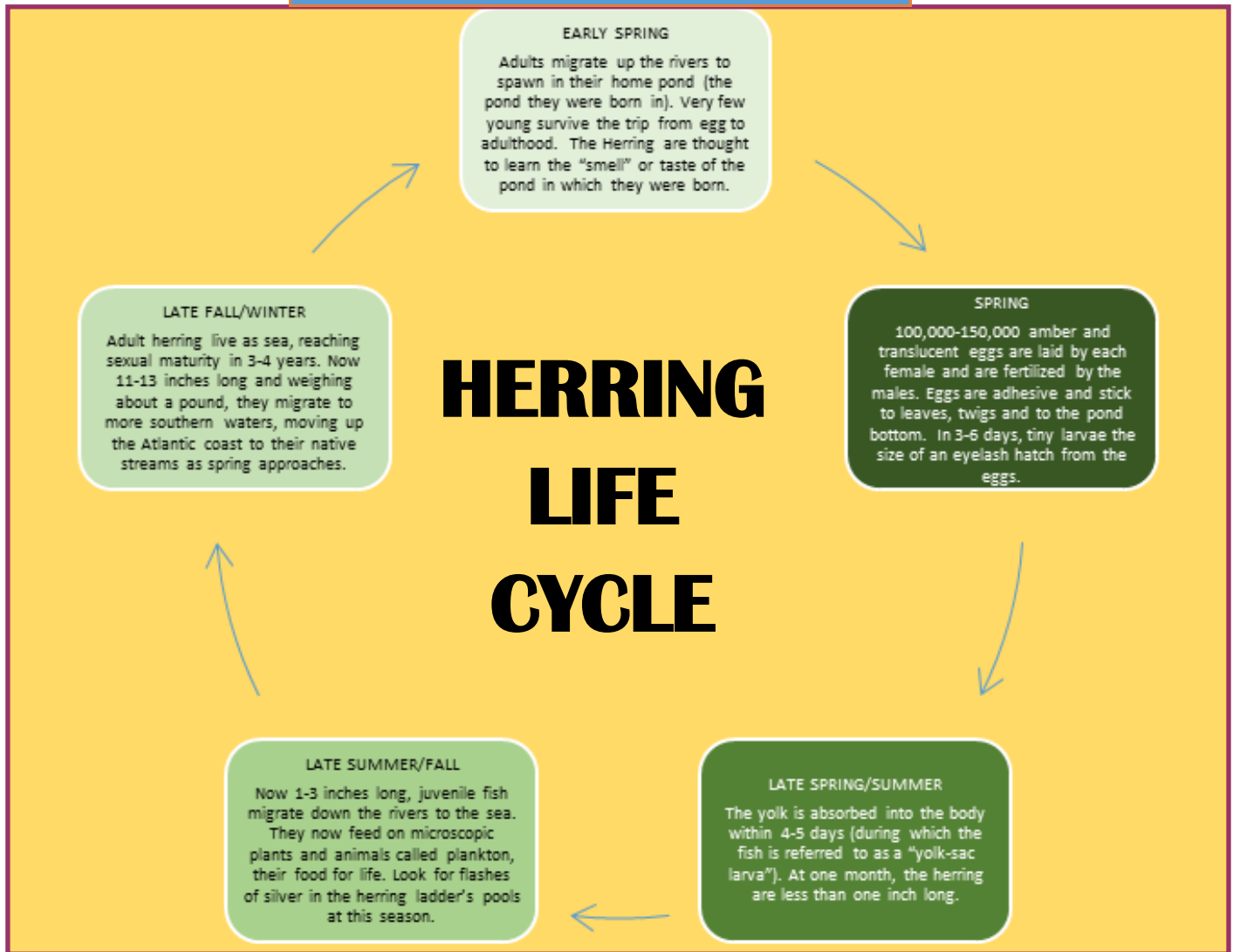
return to their spawning grounds through the spring. Training and a counting kit (thermometer, data sheets, counter, and string) will be provided.

Please contact the Conservation Department at (508) 539-1400 ext. 8538 or e-mail [kwcadoret@mashpeema.gov](mailto:kwcadoret@mashpeema.gov) if you are interested in participating.

Additional Information can be found at:

[http://www.mashpeema.gov/Pages/MashpeeMA\\_Conservation/2013%20Herring%20Run%20Volunteers.pdf](http://www.mashpeema.gov/Pages/MashpeeMA_Conservation/2013%20Herring%20Run%20Volunteers.pdf)

## HERRING COUNT PROGRAM (continued):



## EL NINO

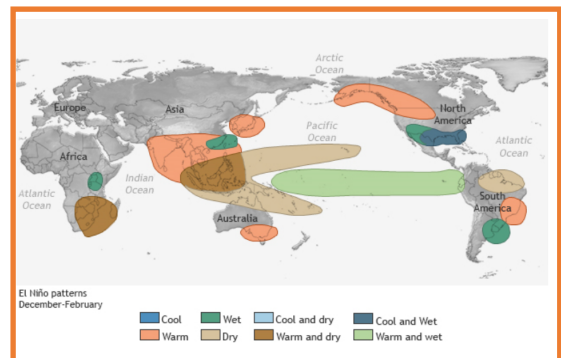


El Nino is a recurring weather phenomenon every 2 to 7 years, characterized by warmer-than-average temperatures in the eastern, equatorial Pacific Ocean. The effects of El Nino are far-reaching, changing short-term weather patterns all over the world as shifting wind directions dictate water movement. (La Nina is the counterpart to El Nino, characterized by cooler-than-average water temperatures, often causing opposite weather trends).

We are currently experiencing a strong El Nino event, which is partially responsible for the somewhat warmer temperature trends in New England. However, it is not the only event affecting our weather. We are also at the mercy of the Arctic Oscillation, which dictates how cold air masses permeate lower latitudes.

As of now, NOAA is predicting the event should end around June, and water will go back to average temperatures.

El Nino is known to cause unusual wildlife events, such as late migration of black-tipped sharks to the southern Atlantic observed this year. According to tagging data collected through the Atlantic White Shark Conservancy, white sharks have been observed following this species, and foraging on their large numbers, up to tens of thousands. How this may or may not shark activity in our waters this summer is yet to be determined.



# LOCAL AND GLOBAL ENVIRONMENTAL INITIATIVES

## PLASTIC BAG BAN

As most of us know, plastic bags are extremely detrimental to the environment. They have become a ubiquitous part of the natural landscape (see images), wreaking havoc on wildlife and the scenery our tourist industry relies on.

The Environmental Oversight Committee (EOC) in Mashpee is starting an initiative to join the other towns on Cape Cod in banning single-use plastic bags. As of now, the following towns have passed bylaws: Provincetown, Nantucket, Falmouth, Barnstable, Harwich, Truro, and Wellfleet.



The initiative will hopefully be on the fall Town Meeting agenda. Currently, the EOC is consulting with other entities to write our bylaw.



The EOC meets the second Wednesday of every month at Mashpee Town Hall at 6:30 pm. Please e-mail [michael.t@talbotcolandcare.com](mailto:michael.t@talbotcolandcare.com) if you are interested in attending these meetings or joining the committee.

## EARTH DAY WEEK

Earth Day Week goes from April 18th to April 22nd. Stay tuned for more information on activities with the Conservation Department and the Friends of the Mashpee Wildlife Refuge!

## CAPE COD CLEAN-UP PROJECTS

Many of the environmental-based groups on Cape are looking to coordinate efforts this spring to clean up our towns. As of now, there are many initiatives that take place each year, including:

Americorp Canal Clean-up, Beautify Brewster, GreenWeek in Wellfleet, and the Coast Sweep in Barnstable

Here at the Conservation Department, we will be reaching out to the Land Stewards and any interested parties once dates and places are confirmed.

*In the meantime, if large amounts of trash are found on our conservation lands, please visit the "Mashpee Works: See-Click-Fix" page at*



[http://www.mashpeema.gov/Pages/MashpeeMA\\_Webdocs/seeclickfix](http://www.mashpeema.gov/Pages/MashpeeMA_Webdocs/seeclickfix)

OR

*Download and use the "Mashpee Works" App for smartphones. It works like the website, immediately notifying DPW, and you will be notified when the problem is rectified.*

OR

*Fill out an Observation Form on our Land Stewards page (mentioning if DPW was contacted or not) found at: [http://www.mashpeema.gov/Pages/MashpeeMA\\_Conservation/](http://www.mashpeema.gov/Pages/MashpeeMA_Conservation/)*

## SEA BIN

Two Australian surfers have invented a novel device called "Sea Bin". As most of us know, our modern world has become synonymous with "disposable", and unfortunately much of what we dispose of ends up in our vast, yet finite oceans. This technology collects debris, including oil and trash, into a catch bag. It runs on wave action, although solar and wind energy methods are being researched. Hopefully, by this summer it will be commercially



available to be used in our harbors and on our sea-going vessels in order to nip this trash in the bud! Visit [www.seabinproject.com](http://www.seabinproject.com) for more information.

## SOLAR ROADWAYS

Solar roadways are the way of the future. Intelligent, self-sufficient, and green—these tempered-glass panels can replace all existing forms of oil- and coal-based energy.

Similar technology by Colas' Wattway Solar Pavement is currently being implemented in France. They are planning to install 1,000 kilometers by 2020.

Please visit [www.solarroadways.com](http://www.solarroadways.com) for more information. See table below for the benefits offered.

### SURFACE FEATURES

Flat place to walk and drive

Provides parking

Provides traction

Doesn't soften at high temperatures

Generates energy

Intelligent

LED lights for lines and signage

Remains snow/ice free

Impervious to potholes

Can protect animals

Modular for faster maintenance

Requires no paint

Aesthetic benefits

Has ROI

Facilitates energy independence

Can charge EVs with clean energy

Water can be stored, treated or moved

Provides a "home" for cables, wires

Can provide emergency warning system

Expandable Technology Package

### SOLAR ROADWAYS

### CONCRETE

### ASPHALT

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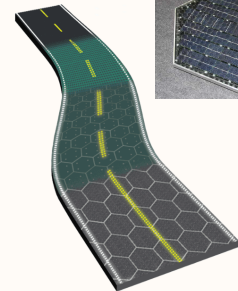
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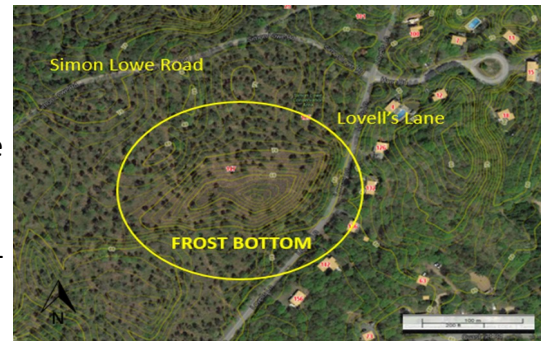
## Featured Habitat: FROST BOTTOM

Frost bottom habitats form from large depressions left by retreating glaciers, and create freezing microclimates within forested areas that inhibit growth of trees and large shrubs. Therefore, low-growing herbaceous plants are able to re-sprout and provide food during



scarce times of the year. These habitats rely on naturally-occurring forest fires that have been suppressed over time due to human development.

In Mashpee, an example of this rare habitat is located off Lovell's Road (see images and map to right). New England Cottontail, Eastern box turtles, and buckmoths are known to utilize this type of habitat, as well as the surrounding pitch pine/scrub oak uplands.



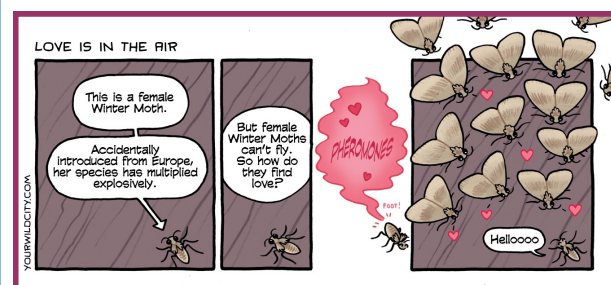
## Featured Creature: WINTER MOTHS

Introduced from Europe via Nova Scotia in the 1930s, winter moths (*Operophtera brumata*) have become a major pest in Massachusetts.

What you usually see plastered on the sides of your houses through early winter (November to January) are the emerging males, characterized by their light brownish color and elongated scales on each of their 4 wings.

What you probably won't see are the females. They are flightless (brachypterous), and are found on trunks and branches of trees. They emit a pheromone that attracts males (see comic), and subsequently lay eggs (100-200 per female) on the trunks and branches of trees under bark and lichen. After mating, the adults die.

When the eggs hatch in spring (when budding occurs in April and May), the ubiquitous inch worms emerge and start to forage on the young buds. All deciduous trees are on the menu (including oaks, maples, cherries, blueberries, apple, spruce). Each tree is estimated to have 150,000 caterpillars. Often they are observed "floating" through the air on silken strands, and their small black waste often covers outdoor surfaces. They feed until mid-June, then migrate down to the soil to pupate, emerging in November to restart the cycle.



As with all invasive species, they have no natural predators and can displace native wildlife.

### Management Methods

- *Cyzenis albicans*, a parasitic fly specialized to eat only winter moths, was introduced in Falmouth via a UMASS Amherst study in 2005. Early success observed as of 2011. Treatment was used in Canada and Pacific Northwest in 1950-1970s.
- Tree wraps (placed in October, removed in February); catch females climbing up trunks
- Pesticide Spraying (Entrust)

## IMPROVEMENTS TO CONSERVATION LANDS

We have 3 Pollinator Gardens currently in Mashpee, located at:

\*Mashpee Community Gardens off Route 130

\*Pickerel Cove Garden off Route 130

\*Jehu Pond Garden off Great Oak Road

All have been entered into Xerces Society's "Million Pollinator Garden" Challenge by MaryKay Fox of the Friends of the MNWR.

Here at the Conservation Department, we are looking to create a town-wide map on our website to show all pollinator garden locations.

Please add YOUR pollinator garden to this tremendous effort at :

<http://millionpollinatorgardens.org/>



### Why Pollinators?

*Three-fourths of the world's flowering plants and one-third of all food we consume depend on pollinators. The challenges of the modern world have wrecked havoc on native pollinator populations, which rely on diverse, steady, and adjacent food sources to survive.*

## Winterizing Pollinator Gardens:

We recently winterized our pollinator gardens. Land stewards, Friends of the Mashpee Wildlife Refuge, Mashpee Garden Club, and Talbots Ecological Landscaping contributed to the work, including weeding, spraying invasive black locusts, removing and cleaning the pollinator boxes, and relocating plants to optimal locations. The gardens are still being established, as they were planted only in 2013 by AmeriCorp and the Conservation Department, with help from Talbots Ecological Landscape Design. We need your help come spring time to continue the work!



## AmeriCorp:

12/7/15- AmeriCorp assisted with clearing paths at Mashpee River Woodlands- Fitch Property and Mashpee River Woodlands- Main Property, as well as rerouting our trail at John Johansen Conservation Area to include a **certified vernal pool**.

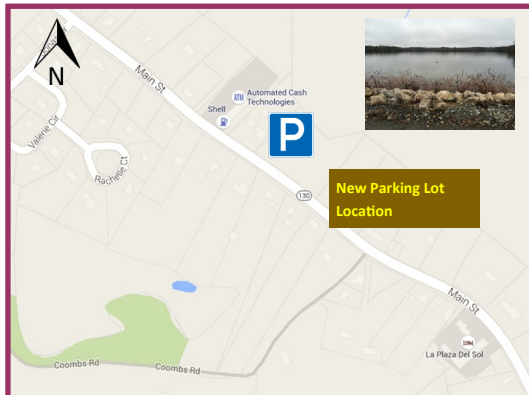
12/28/15- AmeriCorp assisted with clearing paths, adding steps, and adding two benches to Santuit Pond Conservation Area. We also blocked paths and performed more clearing at Mashpee River Woodlands- Fitch Property; and finished rerouting Johansen to include a vernal pool.



## IMPROVEMENTS TO CONSERVATION LANDS

## Abigail's Brook:

Part of an overall improvement project to Abigail's Brook for improved fish passage by US Fish and Wildlife Services (USFWS), culverts were removed and replaced by footbridges. These footbridges, constructed by DCR and WBNERR in April 2015, now link both sides of Abigail's Brook at the Jehu Pond Conservation Area off Great Oak Road, part of the Mashpee National Wildlife Refuge. Come watch as the mighty phragmites stand gets choked out by saltwater while you enjoy the beautiful stark scenery of winter. Like many wetlands on Cape, the brook abuts an abandoned cranberry bog, reflected through successional growth of willows, pines, and various grasses.



## New Parking Areas at Santuit Pond and Childs River Conservation Areas:

We are currently in the process of creating new parking lot areas, complete with informational kiosks, for Child's River and Santuit Pond Preserve conservation lands.

Recently, we installed a new “Child’s River” sign at the intersection of Brown’s Road and Old Barnstable, and the new parking lot will be directly off the road come spring. Part of this CA is within the Mashpee National Wildlife Refuge.

The parking lot for “Santuit Pond” will be directly off Route 130, in lieu of the current Tobisset Road entrance. We will be adding a new “Santuit Pond” sign in this location soon as well.

