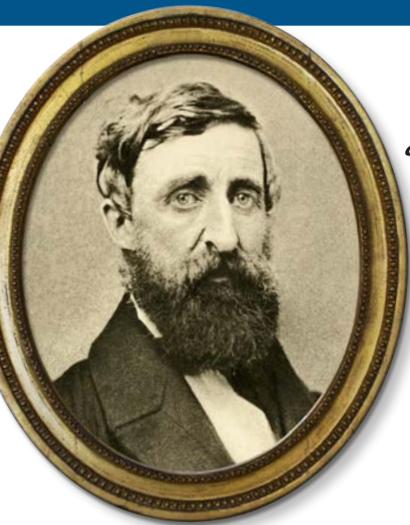


# Great Bay

**MATTERS**

*Promoting research, education  
and stewardship throughout  
the Great Bay Estuary*

# GET TO KNOW GREAT BAY



*Henry David Thoreau*

made daily observations  
about plants and animals  
every spring from  
1851-1858



BIOLOGICALLY  
SIGNIFICANT  
PHENOPHASES,  
INCLUDING BREAKING  
LEAF BUDS, LEAVES,  
INCREASING LEAF  
SIZE, COLORED  
LEAVES, AND FALLING  
LEAVES.

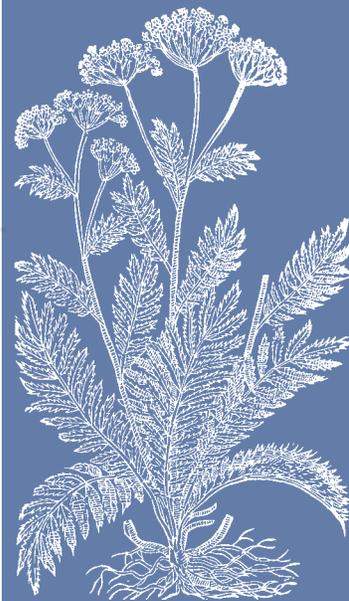
## *Phenological data*

first flowering date, timing  
of animal emergences, dates  
when BABIES ARE OBSERVED  
OR FLEDGED, arrival dates of  
migratory animals, growth  
or changes in leaves.



## *Calibration Species*

*A species with a broad distribution  
and an ecological or economic  
importance like the common lilac.*



## Phenological mismatch

partner species, such as horseshoe crabs  
and shore birds, no longer in the same place  
doing certain things at the same time.





Great Bay National Estuarine Research Reserve (GBNERR) is an estuary comprised of 7,300 acres of tidal waters and 2,935 acres of coastal land. Acquired through land purchases and conservation easements, GBNERR was designated on October 3, 1989 to be preserved for the purposes of education, research, and resource protection.

**GBNERR**

Manager: Cory Riley

**GREAT BAY DISCOVERY CENTER**

Education Coordinator:  
Kelle Loughlin

**GREAT BAY STEWARDS**

President: Jack O'Reilly



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Great Bay Matters is published cooperatively by GBNERR and the Great Bay Stewards

Editor: Kelle Loughlin  
Design: Victor Young  
Cover Photo: Bunker Creek, Durham, by Peter Wellenberger



GBNERR is funded by the National

Oceanic and Atmospheric Administration and the New Hampshire Fish and Game Department. The Reserve is supported by its non-profit friends group, the Great Bay Stewards

This publication is printed on FSC certified 50% total recycled content/ 25% post consumer content paper.

manager's corner



I have always felt lucky to live in a place that experiences four distinct seasons. It forces me to witness the changes happening around me in the natural world and pay attention to the way my habits are tied to those changes. In a few months, the ice and snow will melt. I will put away my winter coat and watch for the signs of spring: maple sap running, crocuses blooming, the return of songbirds, and that unmistakable smell of mud. This issue of Great Bay Matters dives into phenology, the study of cyclic and seasonal natural phenomena. The term phenology is derived from the Greek work "phaino," meaning to show or appear. As we study the appearance of birds and buds this spring, we will all be practicing phenology.

Evolution has created a perfectly sequenced choreography of life cycles and feeding habits. In this dance, timing is everything, and phenology is a wonderful way to track how climate change and other stressors may lead to disruptions that have cascading consequences. Details about changing seasons have always been documented by farmers, fishermen, and anyone who's economic or spiritual well-being is tied to nature. Therefore we have rich records to mine to understand changes over time. In addition to historical information, there are several ways that citizens and volunteers around the world can add their own observations to global phenology databases. The guest writers in this issue of Great Bay Matters will explain phenology efforts here in NH and tell us how we can all be a part of an international effort to understand how life cycles may be shifting in response to climate change. We can all practice phenology as we watch what nature's magic reveals outside our kitchen window this spring.

*Cory Riley, Reserve Manager, GBNERR*

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# Wild Language

The fall colors are amazing this year. My allergies are awful now. I heard my first peepers of the year last night.

If you have ever found yourself saying any of these things, then you have observed phenology. Phenology is the study of recurring plant and animal life cycle stages. It is nature's calendar. We all have an intuitive sense of phenology, such as when our allergies are bad, when we'll need to rake the leaves, and when to plant a garden. The study of phenology is the scientific quantification of these events.

Climate scientists from the Intergovernmental Panel on Climate Change consider phenology "perhaps the simplest process in which to track changes in the ecology of species in response to climate change". Plants and animals are sensitive to seasonal changes in temperature and precipitation and, as a result, phenology is linked to many ecosystem processes and serves as a critical indicator of climate change impacts. Many organisms have intrinsic mechanisms that allow them to time key life cycle events with favorable conditions.

For example, insects often emerge when food sources are most abundant. Birds migrate northward as the spring warms and food resources are plentiful. Species can respond to changes in climate by adapting, declining or relocating. Not all species will respond to changes in weather and climate the same way. By observing phenophases, such as when a plant flowers or when an animal makes its nest, over many years scientists can get a clearer idea of the impacts of climate change.

Phenological processes not only affect plants and wildlife; phenology is intrinsic

to our daily lives. The frequency and intensity of wildfires is often determined by how much plant growth is present during a given time of the year. Seasonal timing also affects how rapidly pests and invasive species spread. Many of our cultural events and recreational pastimes also revolve around the seasons (e.g., apple picking, lilac festivals and leaf peeping). Seasonal events have broad implications for human health. The timing of the flu season and

the timing of the allergy season affect millions of people worldwide. Phenology also influences crop yields and, thus, our food supply.

We know that conditions are changing in New England. Spring is arriving earlier. Land and surface water temperatures are increasing. In fact, research from the Gulf of Maine Research Institute suggests that the temperatures in the Gulf of Maine are increasing faster than 99% of the world's remaining oceans. But what does this mean?

Phenology data provides us with examples

of how species are responding, such as with our only commercial shrimp species in NH, the northern shrimp (*Pandalus borealis*). New Hampshire Fish and Game and their counterparts in Maine and Massachusetts annually collect phenology data including shrimp size, location, time of year as well as water temperature. The current population was estimated at 3% of its average population in 1984. The low numbers observed in recent years are thought to be a result of increasing water temperatures.



© LAWRENCE WESLOWSKI JR. / DREAMSTIME.COM



Phenology data collecting on the northern shrimp may help to understand the effect of changing water temperatures on its declining population numbers.



Some marine species at the northern edge of their range, like the blue crab (left), are beginning to show up in New Hampshire's waters.

The precipitous decline resulted in the Atlantic State Marine Fisheries Commission closing the fishery the last two years. Species at the end of their range, such as the northern shrimp, are more vulnerable to climate change impacts. A similar story of decline is playing out for an iconic New England species also at the southern end of its range - the moose.

While warmer air and water temperatures may result in the decline of some species, it results in the expansion of the habitat of others. Notably in NH, the warmer, wetter weather is resulting in expansion of tick habitat and as a result, increased rates of Lyme disease and West Nile Virus. As NH sits just to the north of many species' ranges, we can expect to see new species coming our way, such as with the increased sightings of blue crabs in our waters in recent years.

Local efforts are underway to better understand climate impacts on NH's coastal resources. The Coastal Research Volunteer program of NH Sea Grant/UNH Cooperative Extension has partnered with our Maine counterparts to participate in Signs of the Seasons, a citizen science phenology-monitoring program. Volunteers are trained to collect data on rockweed (*Ascophlyum nodosum*) growth and reproduction. Because rockweed reproduction is related to temperature, the data are an important indicator of long-term temperature data. Also, an upcoming pilot project out of the University of New Hampshire will engage a number of local NH schools in collecting phenology data from salt marshes. In addition to supporting science curricula, the project will yield important data regarding the health of NH's salt marshes in the face of warming and rising seas.

Many questions remain both locally and beyond about the impacts of climate change.

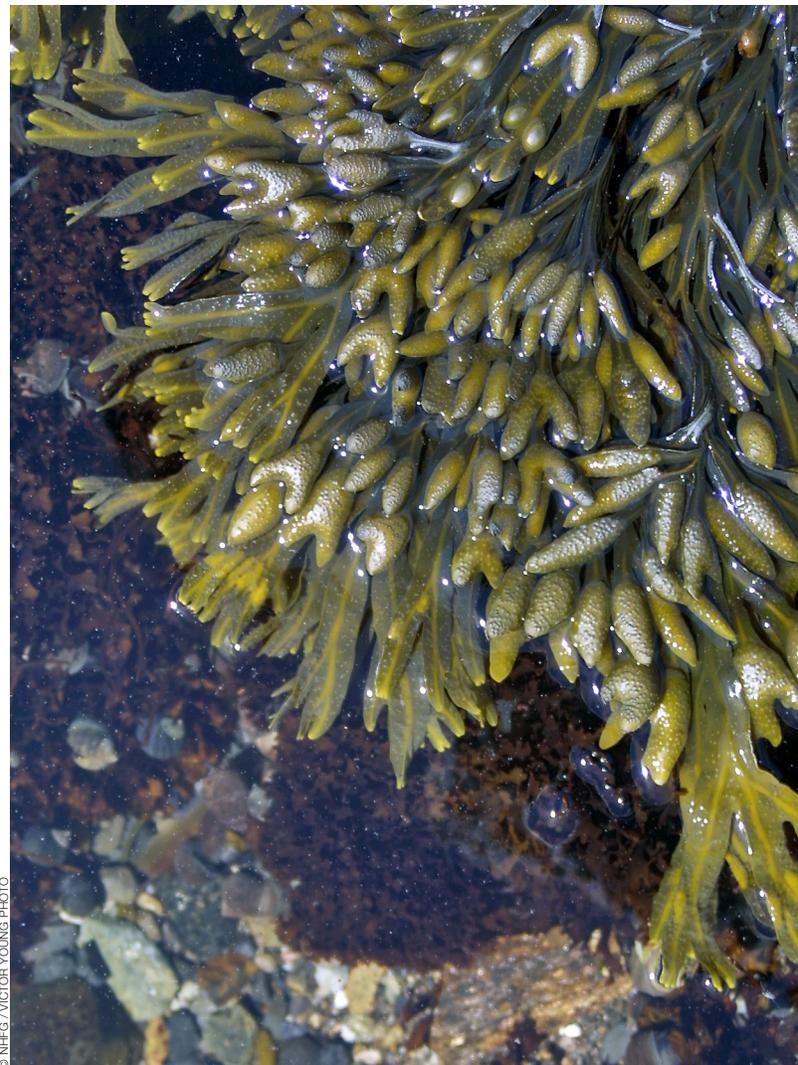
But what we know is this – the climate is changing, and different species are responding in different ways. These responses will have significant implications for plants, animals, and for people. No doubt about it, we need more information about this important issue.

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By *Alyson Eberhardt, Coastal Ecosystems Specialist*  
*NH Sea Grant/UNH Cooperative Extension*

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*Rockweed (below) is being studied as an indicator species that may provide important data needed to monitor long-term temperature changes.*



© NHFG/VICTOR YOUNG PHOTO



# GREAT BAY RESERVE'S PHENOLOGIST

## – *A Profile*

Jacob (Jake) Naimark, a senior at Portsmouth High School, lives in Rye, NH. He has an avid and growing interest in the human connection to the natural environment and, more importantly, its ability to meet the ever-increasing human demands we place upon it.

**W**ith the maturity of a much more seasoned ecologist, Jake has framed our separation from the ecosystem as “social” rather than actual. He believes that broader understanding of our reliance on the ecosystem just might persuade people to live more responsibly and sustainably. Next fall he hopes to be studying sustainable development at the Earth Institute of Columbia University in New York.

About two years ago, Jake came to the Reserve to volunteer some time and learn more about human-ecosystem interactions. He was excited about phenology (See Eberhardt article), an area of growing interest and concern to scientists and managers as data have convincingly identified a warming climate. Jake left with the phenology seed planted firmly in his mind and quietly went to work. Exceeding our expectations, he not only developed a well-designed phenology observation project, but implemented it as well.

Jake describes phenology as the study of the timing of animal and plant seasonal changes. He believes that estuaries are an important indicator because they are the interface between land and sea where the habitat can be naturally variable and harsh, especially with the seasonal extremes experienced in New Hampshire. If the climate is indeed warming, Jake was sure the effects might be evident in the marshes of the Great Bay NERR.

Using internet resources, like Nature’s Notebook ([usanpn.org/natures\\_notebook](http://usanpn.org/natures_notebook)), Jake selected several plant and bird species and one insect – the monarch butterfly – for his phenology project (See Table). Armed with binoculars and notepad, his weekly walks from April to November take him slowly along the Reserve boardwalk

and paths, listening and looking for his target species. He takes notes on the habitats where his species are observed, and appropriate metrics that describe the phenological response, e.g., for plants,

### JAKE’S SPECIES LIST (2014-2015)

**PLANTS:**

- Native Common Reed
- Invasive Common Reed
- Seaside Goldenrod
- Saltmarsh Hay
- Black Grass

**BIRDS:**

- Great Blue Heron
- Snowy Egret
- Belted Kingfisher
- Lesser Yellowleg
- Red-winged Blackbird
- Spotted Sandpiper
- Saltmarsh Sparrow
- Osprey (2015)

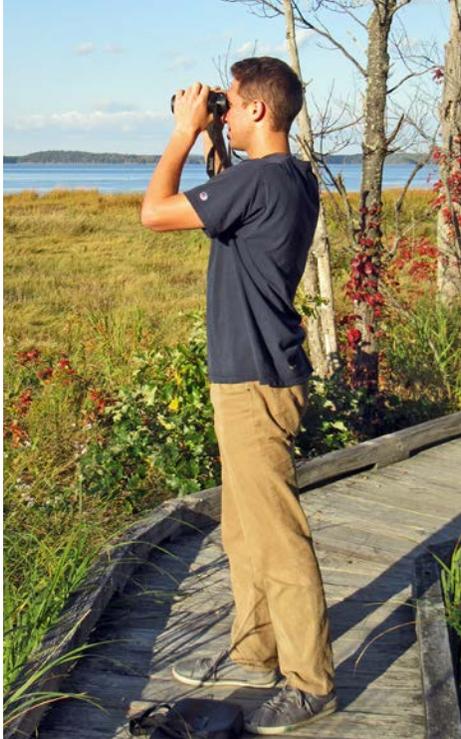
**INSECT:**

- Monarch Butterfly



first growth, flowering, seed drop, and even feeding on the plants. He also tracks meteorological data from Dover Point, especially temperature and precipitation, but also tidal stages that can affect activity. All his data are submitted to the national collaborative database at Nature's Notebook.

Birds are his special interest. He most commonly observes saltmarsh sparrow, red-winged blackbird and great blue heron. Ospreys in 2015 added a lot of interest to his surveys, as the birds nested and the young hatched out and the adults fished and fed their young, that eventually fledged. He was also treated to a show of flocking black bird species (mostly grackles, according to Jake) as their swooping morphologies sketched across the sky. Monarch butterflies were not observed, perhaps related to a regional decline, which was troubling to Jake. He's excited that he also gets to monitor one of the few stands of native common reed in the



*While Jake's phenology monitoring includes plant species, he takes particular interest in the birds of Great Bay.*

region, but wishes there were more of the invasive variety to compare with – most has been removed from his study area.

Jake has learned that phenology monitoring requires a long-term commitment to quantify phenological change and relate it to major drivers, like climate change. When he heads off to college next fall, Jake hopes that someone will continue the work he feels has just begun. His vision that people can and should re-invigorate their connections to Nature might benefit from participation in phenological monitoring. And he believes that investment can only lead to good things for our ecosystem, and ourselves.

We have no doubt that Jake will be successful in his chosen career, and thank him for being Great Bay NERR's phenologist, if only for a short while.

---

*By Paul Stacey, Research Coordinator, GBNERR*

## Estuary Almanac

### **Sugar Maple - (*Acer saccharum*)**

One of the most notable symbols of New England is the classic sugar maple. The brilliant reds and oranges of the tree in autumn are a reliable visual treat and tapping them in early spring for sap is a wonderful New England tradition. Of the seven different species of maple tree found in North America, the sugar maple is the most common and indeed the most widely used. Sadly, some of the families who have relied upon the sugar maple to sustain their livelihoods for generations have seen a noticeable difference in the trees over the last decade.

### **Natural history**

Maple trees have been used for centuries among Native Americans, early settlers and throughout the modern era. Not only is the sugar maple used distinctly for producing North America's prized maple syrup, its wood also has the reputation of being hard, strong and beautiful. Lumbermen in the area use maple wood for all sorts of building and manufacturing needs, as the wood is in demand around the world.

### **Unique adaptations**

The health of sugar maples greatly depends on the temperatures throughout the year. Maples require several weeks of freezing temperatures to allow for the sap in the branches to turn to ice, which then thaw come springtime. In order to pull the sweet sap from beneath its bark, spring nights must be cold with warm and sunny days. This tree is perfectly suited for the New England environment with its warm summers and cold, snowy winters!

### **Population status in New Hampshire**

Unfortunately, sugar maples are beginning to see a change, and not one for the better. Maple farmers are noticing that their sugaring season is shortening and the amount of syrup produced each spring is declining. This species is now being closely monitored by scientists at local universities, as its changes could prove disastrous to New England's economy and biodiversity. The average temperature in New England has increased steadily over several decades, which is a change this tree is not fit to



*Sugar maple*

adapt to. Predictions are being made that in another 100 years or so the sugar maple will be completely extinct from the New England area.

### **Where to see around Great Bay**

Sugar maples exist all over the Great Bay estuary, including the grounds of the Great Bay Discovery Center, Adams Point in Durham, and the Great Bay National Wildlife Refuge in Newington.

---

*Colleen McClare, Naturalist, GBNERR*



# NERRS NEWS



*Program News and Events From GBNERR*

## **GROWING ON THE WILD SIDE:** *A Phenology Garden is Part of New Backyard Wildlife Garden Demonstration Area*

Watch us “grow” as we develop a backyard wildlife gardening demonstration area on the shores of Great Bay. Owned by the New Hampshire Fish and Game Department and managed by Great Bay National Estuarine Research Reserve, the garden will showcase ideas to create a low maintenance and beautiful backyard that also provides shelter, food and water for wildlife.

A “phenology garden” is one of the center pieces to this backyard for everyone. It surrounds an arbor built the same dimensions as Thoreau’s cabin. Thoreau’s writings documented key seasonal timings of certain plant and animal events. One hundred and seventy years later, any changes can be noted. Flowers such as lilac were

planted, as their bloom date was observed by Thoreau and is also being monitored as part of the Phenology Network. A local artist blacksmith created representative windows for the “cabin” with a welded steel American robin “flying” in to perch on the sill as this species’ arrival was also noted by Thoreau.

The property is located at 80 College

Road in Stratham. Learn more about the project at [facebook.com/GreatBayNerrCommunityWildlifeGarden](https://www.facebook.com/GreatBayNerrCommunityWildlifeGarden).

For more information about these events, and to sign up for upcoming workshops, visit [NHCAW.org](http://NHCAW.org).

*Rachel Stevens, Stewardship Coordinator, GBNERR*



*Installation of the phenology garden earlier this year. It was built surrounding an arbor the same dimensions as Thoreau’s cabin.*

## **AMERICORPS NATIONAL CIVILIAN COMMUNITY CORPS DISMANTLES GREAT BAY DISCOVERY CENTER BOARDWALK**

As the last leaves tumbled from the trees this fall, a hard working team from the National Civilian Community Corps (NCCC), an AmeriCorps program, helped dismantle and dispose of the 24 year old boardwalk at the Great Bay Discovery Center. For two weeks, ten AmeriCorps NCCC members resided in “The Barn” at Great Bay Discovery Center.

Supported by volunteers from the Reserve community, dinners were delivered and homes were opened up with healthy meals, warm fires and an attempt to provide the members with some



of the comforts of home. A hard working team from Urban Tree Services of Rochester, NH spent a full week cutting up the 1300 foot board walk, piece by piece. NCCC members hand-carried the

heavy wood from the outer loop in, as the chain saws cut through the aging wood. While at the Reserve, members also restored the woodland walk trail, painted walls in the Discovery Center, cleaned debris from the marsh and helped install sculptures at the Community Wildlife Garden in Stratham.

The Buffalo 2 team consists of members from around the country. AmeriCorps NCCC is a full-time, residential, national service program in which 1,100 young adults serve nationwide each year. During their 10-month term, Corps Members – all 18 to 24 years old – work on teams of eight to 12 on projects that address critical needs related to natural and other disasters, infrastructure improvement, environmental stewardship and conservation, energy conservation, and urban and rural development. To schedule a time to hear about the experiences of Buffalo 2, please send an email to [AtlanticRecruiter@cns.gov](mailto:AtlanticRecruiter@cns.gov).

*Kirk Webster, Daytona Beach, FL  
member, Buffalo 2*



# Educational Offerings



## Winter BAYVENTURES 2016

### February Vacation Days

#### Wednesday, February 24

##### Project Feederwatch

Do you like to birdwatch? Bird watching is a hobby that can be enjoyed for a lifetime. The Discovery Center has participated in Project Feederwatch for over 15 years and would like your help counting birds at our feeders. Join us for a day of bird identification, counting and tallying our feathered friends. Enjoy games and crafts too!

#### Thursday, February 25

##### Outside with Owls

Did you know that many owls nest in the winter? Join us as we explore the woods around the Discovery Center for evidence of owls. We will play owl games and make owl crafts too!



#### Friday, February 26th

##### Trekking for Tracks

Join us as we look for animals and their "autographs" in different habitats around the Discovery Center...on snowshoes! Over the last couple of years we have identified fisher tracks in the woods and otter tracks on the salt marsh. Take part in winter activities and games and make a craft to take home.

#### Friday, March 18th

##### (SAU16 Teacher Workshop Day)

##### Syrup on Snow

The ice is melting and the sap has started to flow! Join us for a day of maple sugaring, and experience how people through the ages have tapped trees. We will see and touch real tree tapping tools used by Native Americans, Colonists and people today! Try sap straight from the tree, participate in our Maple syrup taste test on pancakes for lunch, and make a craft to take home.

*Each Bayventure program* runs from 9:30am - 3pm, for ages 6-11

\$35 GBS member • \$40 N/M • \$5/sibling/program discount

Sign up for 3 or more days and get \$5 discount/program.

Pre-care and After-care available.

Pre-care will be supervised activities in the Discovery Center

from 8:30-9:30 for an additional \$5/child. After-care will be

an extension of the Bayventure program called Let's G.O.!

(Let's Get Outside) on the grounds of the Discovery Center

from 3:00-5:00 for an additional \$10/child.

To register for all winter programs email Beth at

[Beth.Heckman@wildlife.nh.gov](mailto:Beth.Heckman@wildlife.nh.gov)

## "Once Upon a Winter Estuary"

For ages 2-5, 9:45 am - 11:00 am on select Thursdays in January, February and March

Come dressed ready for some winter wonderland fun outdoors! We'll start each program outside with activities, games and wintery walks. Following our outdoor exploration, we'll move inside to warm up with a story, craft and hot cocoa!

This series is ideal for youngsters, ages 2-5; \$2 per child participant. Pre-registration is required.

**January 7th - "Owl Moon" by Jane Yolen** • Whoooo's there? Have you ever taken a walk at night to hear who is there? It won't be at night, but we'll go for a walk and see who we can find or hear! Then we'll come inside to warm up with cocoa and a craft.

**January 21st - "Snow" by Cynthia Rylant** • Are you excited when the snow starts falling? Do you think the animals like it too? Come join us as we head outside to play and have fun in the snow! We'll warm up with a story and a craft.

**February 4th - "Grumpy Groundhog" by Maureen Wright** • Did the groundhog see his shadow? Do they really sleep all winter? Does the groundhog have any cousins that live around here? Come join us as we learn about this animal and have some fun with shadows.

**February 18th - "Snow Party" by Harriet Ziefert** • Come dressed for snow and bring your sled! Join us as we have some winter fun making snowmen and sledding down our big hill! We'll warm up with a craft and cocoa.

**March 4th - "The Animals' Winter Sleep" by Lynda Graham-Barber** • Where do the animals sleep when it gets cold outside? Bring your favorite stuffed animal and blanket to snuggle while we learn about how some animals spend the winter.

**March 17th - "That's What Leprechauns Do" by Eve Bunting** • Come take a walk with us and see what kind of mischief the leprechauns made when they visited us here at the Discovery Center! We'll have a snack and make a rainbow to take home.

### EXHIBIT ROOM TRAINING

Thursday, April 7th, 10 am - noon

### SPRING VOLUNTEER EDUCATOR TRAINING

Wednesday, April 13th, Time TBA

# A National Perspective: *Butterfly Phenology at Chesapeake Bay NERR*

Butterflies are a group of animals that have been found to be affected by climate change. At the Jug Bay Wetlands



Red admiral



Pipevine swallowtail

Sanctuary, part of the Chesapeake Bay NERR, a 10-year phenology study of butterflies is underway. Started in 2013 by research fellow Darcy Herman, the Sanctuary's butterfly garden in the Glendening Preserve, is an ideal observation site to conduct butterfly phenology research. The garden on the property is easily accessible, succinct and maintained with a high density of plants that are significant to multiple butterfly life stages.

Using the USA National Phenology Network's citizen science program, Nature's Notebook, as a starting point and guide, the study was launched using 12 different species of butterflies. Species such as the monarch, red admiral and pipevine swallowtail are a few examples. Plants such as common milkweed, New Jersey tea and woodland pinkroot are among the 18 species that are used in observation. Volunteers monitor the site in an effort to contribute valuable information to studies that are already suggesting a major shift of North American butterflies is underway, with warm adapted species shifting north and cold adapted species retreating.



Common milkweed

Throughout the nation, volunteers are becoming critical eyes and ears in phenological research as there is a little "Thoreau" in all of us.

## Volunteer for Great Bay!

- **Brown Bag Lunch Series:** Open to the public, this series is a fun way to learn something new while you eat lunch!

Bring your lunch – we provide drinks and dessert. Previous topics have included winter tick, gardening with native plants,

horseshoe crab research and more! Visit [greatbay.org/events](http://greatbay.org/events) for more information on dates and topics.



If you are interested in becoming a volunteer, or being added to the work day email list please contact Melissa at [melissa.brogue@wildlife.nh.gov](mailto:melissa.brogue@wildlife.nh.gov).



## Fundraising, Retirement, Elections

We recently held our annual member's meeting at the Gregg Center and had a great turnout. We were fortunate to have wetlands scientist Mark West as our featured speaker, who talked about the Lamprey River watershed and wildlife. It certainly was enjoyed by all who attended. We had a very good year fundraising to support the replacement of the

Center's boardwalk. By the time you read this the new one should be under construction. Come for a visit in the spring.

Sadly, we had one of our Board members and Vice President, Bruce Addison, decide to retire. He was also the Chairman of

our Fundraising Committee where he did a great job and will be missed. One thing I have noticed is that although members may leave the Board, they continue their dedication and efforts to support Stewards' activities such as fundraising, the road race, art show and rain garden installations. Looks like once a Steward, always a Steward! That reminds me, our annual Art Show will be held April 8-10, 2016.

At our annual meeting the following officers were elected for the next year: President - Jack O'Reilly, Treasurer - Ed Caito, Deputy Treasurer - Kirstin Lawton and Secretary - Joe Stieglitz. What an awesome group! Finally, I want to thank all of the Board for all of their efforts in making the Great Bay Stewards the great organization it is.

*Jack O'Reilly, President, Great Bay Stewards*

### The Evelyn Browne Conservation Award



Congratulations to Sheila Roberge of Exeter, the winner of the 2015 Evelyn Browne Conservation Award! The award is given annually by the Great Bay National Estuarine Research Reserve to an individual(s) who has made a significant contribution towards the protection and conservation of the Great Bay Estuary.

Sheila began her "career" with the Reserve as a volunteer, joining the education community at the Great Bay Discovery Center in 2001. Shortly upon her arrival, she was hired as the Volunteer Coordinator. From there she spent over a decade growing the volunteer program into the thriving community it is today. Upon her second retirement (her first as a high school English teacher), Sheila once again remained an integral part of the Reserve, joining the Great Bay Stewards as a board member, and working at all the major fundraising events the Stewards hold.

Sheila is an active member of the Art of Great Bay Committee, volunteers at the Great Bay 5K, writes and edits press releases and other publications for the Stewards, teaches during both the spring and fall education programs at the Center and volunteers at other special events the Reserve holds. She is still the first to send a card or call when one of her fellow volunteers is ill or in need of something. Sheila exemplifies the spirit of volunteerism and service to her community, and for this reason; the Reserve was pleased to present Sheila with this special honor.

### Art of Great Bay

Mark your calendars for the annual Art of Great Bay show and sale, April 8-10, 2016. Well-known artists from throughout the Seacoast and beyond showcase fine quality art for sale.

Opening reception Friday evening, (April 8) for artists and the public. Visit [greatbaystewards.org](http://greatbaystewards.org) for more information on how to exhibit at the show or for show details.



### PLEASE JOIN US!

All interested parties are cordially invited to become Great Bay Stewards. Members receive Great Bay Matters and other pertinent mailings.

Annual dues may be paid by check made payable to the **Great Bay Stewards** and sent to: GBS Membership Committee, 89 Depot Road, Greenland, NH 03840

- Guardian \$150
- Protector \$75
- Steward/Family \$35
- Student \$20
- Other \$ \_\_\_\_\_

name \_\_\_\_\_

address \_\_\_\_\_

town \_\_\_\_\_

state \_\_\_\_\_ zip \_\_\_\_\_

email \_\_\_\_\_



# Soak UP the Rain. GREAT BAY

[www.soaknh.org](http://www.soaknh.org)



## Your Land. Your Water. Your Solution.

Join the Great Bay Stewards in soaking up the rain to protect the streams, ponds, and estuaries in our communities. Build a rain barrel, plant a rain garden, and discover other ways to soak up rain water and reduce pollution from our properties at [www.soaknh.org](http://www.soaknh.org).