

C Mass Audubon *Protecting the Nature of Massachusetts* Connections

JULY–SEPTEMBER 2015

A NEWSLETTER FOR THE MEMBERS OF MASS AUDUBON

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Places We Love: *An Inside View*

View from Brown Hill, Wachusett Meadow Wildlife Sanctuary, Princeton



Fox Hill, Daniel Webster



Barnstable Harbor, Long Pasture



Mill River, Arcadia

Places We Love: An Inside View

With thousands of miles of trails to explore on our wildlife sanctuaries, there is no shortage of amazing locations to visit. No group knows this better than Mass Audubon’s sanctuary directors. We asked each of them to describe a spot on our properties that is near and dear to their heart. Here are their often inspirational and surprising answers. Learn more at massaudubon.org/placeswelove.

Greater Boston

Blue Hills Trailside Museum, Milton

“The top of Chickatawbut Hill. It is special to me for numerous reasons—the laughter of children at day camp, the excitement of raptor banding in the fall, and the quiet solitude of the woods in winter.” – *Norman Smith*

Boston Nature Center, Mattapan

“The main entrance with its great allée, or tree-lined walkway, of pin oak trees. You may find a roosting turkey or a red-tailed hawk perched high in the limbs. Just about every Monday through Friday, you’ll hear the laughter of BNC’s preschool children playing and exploring their surroundings.” – *Julie Brandlen*

Broadmoor, Natick

“Little Farm Pond. The loop trail takes you to a bench on a rise overlooking the pond, a great spot to view great blue herons, wood ducks, and sometimes a Virginia rail. This is a very private spot for the lover of quiet nature.” – *Elissa Landre*

Drumlin Farm, Lincoln

“The accessible Ice Pond Trail just off the main parking lot. The built world recedes and the sounds, sights, and smells of the forest take over, inviting you to pause, listen, and explore this secret place. This accessible trail also features a rope guide, audio tour, braille signs, and more.” – *Christy Foote-Smith*

Habitat Education Center, Belmont

“Turtle Pond. On a hot summer afternoon, I like to rest on the bench at the pond, quietly watching the bird activity all around. It’s a tranquil, cool, and calming landscape.” – *Roger Wrubel*

Museum of American Bird Art, Canton

“The bird garden. Bursting with color and abuzz with pollinators, it’s the perfect place for photography, nature journaling, and contemplation. Its history is also compelling: created in 1919 for the Morse family, it was a favorite of artist Mildred Morse Allen, who spent many contented hours painting there.” – *Amy Montague*



Bird Garden, Museum of American Bird Art

South Esker Trail, Ipswich River



North of Boston

Ipswich River, Topsfield

“The top of the South Esker Trail. Visitors can sit on a bench and enjoy a panoramic view of the marsh, with Pine Island and the meandering Ipswich River in the distance. The marsh wren’s melodic sounds are heard from the cattails in which it nests.” – *Carol Decker*

Rough Meadows, Rowley

“The view of the Great Marsh from the observation deck. The contrast between the forest’s dappled light and the brilliant sunlight at the edge of the ever-changing marsh is breathtaking. Before or after your visit, stop by Joppa Flats Education Center in Newburyport to learn about salt marshes.” – *Bill Gette*

Cape Cod & the Islands

Felix Neck, Edgartown

“The Old Stone Amphitheater. It speaks of mystery and magic and of history unknown. Granite rocks shaped by humans are enclosed by a buffer of trees and vines, creating a secret hideaway to listen to the wind and the birds.” – *Suzan Bellincampi*

Long Pasture, Barnstable

“The view of Barnstable Harbor and Sandy Neck Barrier Beach. The wildlife sanctuary extends more than 100 feet onto the harbor’s sandy tidal flats. When the tide is up, you can explore some of the most pristine and scenic maritime habitats in the state by boat, board, or kayak.” – *Ian Ives*

Wellfleet Bay, South Wellfleet

“The barrier beaches and salt marshes. Try Goose Pond Trail, which leads you to the salt marshes. I really appreciate the flora and fauna that live along the edge. It’s a very challenging, dynamic environment with the tide coming in, the salt, and the fresh water.” – *Bob Prescott*

South of Boston

Allens Pond, Dartmouth

“Tree Top View on our Quansett Trail. It’s a restful perch on cool stone high above a thicket of clethra, under a canopy of graceful oak where you can be still, listening to life thronging all around—frogs, birds, crickets. It’s remote without isolation.” – *Gina Purtell*

Daniel Webster, Marshfield

“The view from the top of Fox Hill. The open vista across the marsh is a bit unusual for Massachusetts, and there is always something to see: osprey on the nest, deer trotting by, harrier hovering. Similarly, I love the openness of Marshfield’s North River Wildlife Sanctuary.” – *Sue MacCallum*

Moose Hill, Sharon

“The red pine plantation along the Hobbs Hill Trail. You walk along in what appears to be typical woods and all of a sudden you enter something strikingly different. The trees are all red pines, and are perfectly aligned. The ground feels like a soft cushion underfoot. It’s a reminder that every hike might hold a surprise.” – *Karen Louise Stein*

Oak Knoll, Attleboro

“Lake Talaquega. At one time this pre-WWI, human-made lake had a bandstand in the middle. Now it is home to a great blue heron, painted turtles, wood ducks, and more. Standing at the head of the trail you are surrounded by native trees such as red maples, beaches, and musclewood.” – *Lauren Gordon*

Stony Brook, Norfolk

“The viewing platform overlooking Teal Marsh. It’s a magical place to visit as the sun is rising over the white pines, casting a beautiful hue over the water, shoreline, and surrounding forest. Red-winged blackbirds, Canada geese, and tree swallows add movement and voice as they set about their morning rituals.” – *Doug Williams*



Tree Swallow

continued on next page

Mass Audubon Photo Contest

Picture This:

Your Great Outdoors

For complete rules, visit massaudubon.org/picturethis.

Deadline: September 30, 2015

We’re seeking photographs of people in nature and those that highlight the beauty of Massachusetts wildlife and landscapes. New this year: a Mass Audubon Travel category.

Connecticut River Valley

Arcadia, Easthampton & Northampton

“The Mill River at Arcadia. Large silver maples arch overhead, cardinal flowers adorn the banks, and rare freshwater mussels are just out of sight below the water.” – *Jonah Keane*

Central Massachusetts

Broad Meadow Brook, Worcester

“Sprague Trail Brook Crossing. The huge rocks are wonderful to walk over, the brook widens out a bit and pools, and there is a nice bench to sit on and enjoy the views. It was one of the first places where we brought people when the wildlife sanctuary was just getting established.” – *Deb Cary*

Wachusett Meadow, Princeton

“The hike up Brown Hill. It’s an easy hike with big rewards: at the top you can get 360-degree views of the sanctuary, and the rolling hills and ponds of the region.” – *Deb Cary*

Berkshires



Pike’s Pond, Pleasant Valley

Pleasant Valley, Lenox

“Pike’s Pond along the Accessible Trail. In the early morning the mist floats off the water and you can see gentle ripples—the telltale signs of aquatic life. Kids are leaning over the edge to spot fish or frogs. On a quiet night, all you can hear are the sounds of nature.” – *Becky Cushing*

FIELD NOTES

Introducing Richardson Brook Wildlife Sanctuary, a Quiet Gem

By Michael P. O’Connor

This summer, you’ll be able to add Richardson Brook Wildlife Sanctuary to your list of Mass Audubon properties to explore.

This wildlife sanctuary, located in the southwestern Massachusetts town of Tolland, consists of 110 acres of woodlands bordering the tumbling cold water stream for which the pristine property is named.

Visitors will discover healthy stands of red oak, sugar maple, and yellow birch, as well as hemlock and white pine—including some really big ones! These trees are thriving in habitats that have been protected by Mass Audubon since 1992 and are bracketed by state lands that include thousands of acres of largely unfragmented forests. The property has also supported a rich variety of animals, including deer, bears, bobcats, and even moose.

A short walking loop connected to a longer loop (which accesses the brook) comprises a trail network of a little less than two miles.

“Richardson Brook Wildlife Sanctuary may be modest in size, but this property, nestled within in a generally forested landscape, is quietly excellent,” says Tom Lautzenheiser, Regional Scientist for the Central/West Region. “It’s a place that’s had very little human activity for decades or more. It lends a certain quality to the forest, and it’s reflected in signs of long-term wildlife use of the sanctuary.”

For updates, visit massaudubon.org/richardsonbrook.

Michael P. O’Connor is Public Relations Manager.



Summers are Free for Military Families at Wildlife Sanctuaries

By Nathan Yeo

Mass Audubon is proud to offer free admission to active-duty US military personnel and their families

from Memorial Day to Labor Day through the Blue Star Museums program. All Mass Audubon wildlife sanctuaries from the Berkshires to the Cape welcome our country’s service men and women to explore nature and observe wildlife this summer.

The Blue Star Museums program is a collaboration between the National Endowment for the Arts, the Department of Defense, and Blue Star Families. Each summer it provides military families free access to over 2,000 museums, sanctuaries, and parks across the country in recognition of their service. All active-duty personnel and their families, up to five people, are eligible.

Nathan Yeo is Marketing Assistant.



Goat Encounters at Habitat

By Sandra Vorce

If you visit Habitat Education Center in Belmont on any given day from May through October, you are likely to spot a herd of Nigerian dwarf goats in one of the fields. It may not look like it, but these animals are hard at work—they’re munching on the meadows to keep them clear of invasive plants and brambles. They even eat poison ivy!

At less than two feet tall and weighing under 50 pounds, Nigerian dwarf goats are relatively easy to move from one section of the fields to another. The current herd includes six goats, and they frequently entertain visitors by prancing, butting heads, and playing “king of the mountain” on tree stumps. The many volunteers who tend the goats report that they relate to their individual personalities; volunteer Mary Horrocks notes, “Olive is a foodie and Jacob loves to cuddle.”

The goats are owned by a sheep farmer but cared for by Habitat volunteers and staff while they are on the property. Electric fencing and night huts keep them safe from predators. In the future, Habitat hopes to build a barn with all needed amenities that will enable the wildlife sanctuary to house these hardworking goats year-round. To support the goat herd at Habitat, contribute at massaudubon.org/habitatgoats.

Sandra Vorce is Habitat Education Center Property Manager.



Sesachacha Heathlands, Nantucket



Controlled Burns Conserve Rare Habitats on Nantucket

By Ernie Steinauer

Fire can be a destructive force, but it can also bring new life. The island of Nantucket is home to several special plant communities that require fire or other intense disturbance to persist, including the globally rare sandplain grasslands and coastal heathlands and regionally rare scrub oak and pitch pine barrens. That’s why Mass Audubon and its partners conduct controlled burns across the island in the spring and fall.

This program began in the 1980s with the formation of the Nantucket Heathlands Partnership (NHP) prescribed fire crew, consisting of the Nantucket Islands Land Bank, the Nantucket Conservation Foundation, and Mass Audubon staff, along with representatives from the Nantucket Land Council, the Maria Mitchell Association, and citizen volunteers. The partnership’s primary concern is always the safety of the crew, the public, and property. Participants receive extensive training and conduct each burn with a specific prescription that accounts for fuels, necessary personnel and equipment, and environmental conditions. Factors such as temperature and wind speed must stay within a narrow range to make sure a fire is safe and effective.

By working together and pooling resources, the members of NHP accomplish a task none could have done alone: harnessing the power of fire to renew some of our unique habitats.

You can discover Nantucket’s nature at Sesachacha Heathlands Wildlife Sanctuary. Learn more at massaudubon.org/sesachacha.

Ernie Steinauer is Wildlife Sanctuary Director on Nantucket.



A Naturalist’s Eden

Don Richard Eckelberry’s Birds of Trinidad & Tobago

Museum of American Bird Art

Through September 7
Tuesday-Sunday 1-5pm

massaudubon.org/maba



Teen Programs: Bridging the Gap

By Amanda Duggan

Mass Audubon is known for connecting kids to nature and helping adults explore their outdoor passions. But how do we get from point A to point B—what about the teen years?

Teens and the Environment

In junior high and high school, adolescents develop passions for causes and ideals for the greater good. As they search for self-identity and a sense of belonging in society, teens have an innate desire to contribute to meaningful causes and feel as though they are making a difference. This is a great time for young people to gain an environmental ethic that will last a lifetime.

What We're Doing

Mass Audubon's teen programs fall along a continuum of involvement. At an entry level, one-off programs are perfect for people who can't commit to a monthly club. For example, Ipswich River in Topsfield offers workshops that draw on enthusiasm for pop culture elements such as Minecraft and The Hunger Games. They enable teens to immerse themselves in the outdoors with peers for as much or as little time as they'd like.

In the middle of the spectrum, some wildlife sanctuaries offer recurring environmental programs. Teenagers can gather consistently to explore topics of interest to them, such as birding or hiking, and build a community at the same time. For example, Drumlin Farm Wildlife Sanctuary's Teen Birders set out on a new adventure each month. But the great success of the program, according to lead Becky Gilles, is showing teens "that it's OK to love nature." While many of their friends at school may not appreciate the outdoors, teens can come here to explore that passion with others who are interested.

On the other end of the spectrum, there are clubs such as BNY Melon YouthLeaders at Boston Nature Center and Teen Conservation Club at Ipswich River that not only create internal communities but also get youth involved in the wider world. Here they get to tackle problems such as climate change and pollution within their towns, and seeing their own progress strengthens their commitment to making a positive impact on the environment over the long term.

For teens looking for an immersive summer experience, Wildwood's Teen Adventure Trips allow youth aged 14 to 17 to explore beautiful New England landscapes, complete a brief service project, and learn firsthand about conservation and the natural sciences.

An Important Connection

The goal of all teen programs is to bridge the gap between childhood experiences in nature and the formation of an adult environmental ethic. As Director of Education Kris Scopinich says, "What we want the teens to get out of these programs is for them to recognize the conservation issues that exist in the place where they are and to feel empowered to do something." As these programs continue to grow, we hope to guide the next generation to become stewards of the nature of Massachusetts.

Find all our teen programs at sanctuaries across the state online at massaudubon.org/teens.

Amanda Duggan is Marketing and Development Assistant.



Return of the Osprey

By Lindall Kidd

The story of ospreys in Massachusetts is one of triumph after adversity. Fish comprise some 99 percent of these raptors' diets, and the birds' masterful angling skills have provided inspiration for many writers, including William Shakespeare and Henry David Thoreau. It's difficult to believe that such a fixture of our water bodies and coasts once became almost nonexistent in the state.

A Steep Decline

Following World War II, the use of the pesticide DDT caused osprey numbers to plummet. This chemical thinned eggshells so that they broke when the birds were incubating. Almost 90 percent of breeding pairs disappeared from Massachusetts, and there were only 11 by 1964. This decline provided key support for arguments against the use of DDT and other "persistent" pesticides—those that do not break down in the environment. A DDT ban was introduced in 1972, and ospreys soon began to recover.

A Conservation Icon

Populations have rebounded so successfully that these birds have become an icon for conservation, and Mass Audubon has played a central role in this recovery. One way to help is to create and maintain places for them to nest. Ospreys readily take to human-built nesting platforms, and staff and volunteers at Allens Pond Wildlife Sanctuary in Dartmouth and Felix Neck in Edgartown maintain and monitor over 260 of them. On Cape Cod, Wellfleet Bay Wildlife Sanctuary and Long Pasture in Barnstable coordinate a citizen science program that

monitors up to 300 nests each year. In addition, there are over 20 active nests scattered along the South Shore today, with at least 33 chicks fledged from nests monitored by South Shore Sanctuaries' staff and volunteers in 2014.

From Cape Cod to Colombia

As well as managing nesting platforms, Mass Audubon continues to research and monitor ospreys, studying their local populations and nesting success and assisting researchers with their investigations into migration. An osprey may fly more than 160,000 miles during its 15- to 20-year lifetime—the equivalent of nearly six and a half trips around the globe. Scientists track these raptors by strapping lightweight satellite transmitters to their backs. From 2009 to 2013, Allens Pond staff helped outfit eight local ospreys with GPS transmitters. Some have wintered as far afield as Cuba, Venezuela, and the Brazil/Bolivia border. Keep an eye out for these magnificent birds throughout the state and farther afield. Learn more at massaudubon.org/osprey.

Lindall Kidd is Bird Conservation Associate.



Birds migrate—
and members
can, too!



Time to renew your membership? Consider "migrating" to Explorer level or higher. Provide additional support for habitat and wildlife, and enjoy more benefits, such as:

- Admission for a guest—or two—at our wildlife sanctuaries.
- Complimentary outings with our expert naturalists.
- A free gift membership for a friend or neighbor.

massaudubon.org/membership



Birding and Natural History Tours

Birds of Southern Ecuador

February 11-27, 2016, with Dave Larson

Galápagos Islands Cruise

February 16-25, 2016, with Bill Gette

South Africa Birding and Wildlife

February 18-March 3, 2016, with Wayne Petersen

Find more tours at massaudubon.org/travel.
travel@massaudubon.org • 800-289-9504

Blue Hills Trailside Museum's Bridget Waldbaum



By Liz Bastable

"Time is a gift, given to you, given to give you the time you need, the time you need to have the time of your life..." Bridget Waldbaum, Blue Hills Trailside Museum Volunteer and Milton resident, is reading aloud

from Norton Juster's *The Phantom Tollbooth*. Today she is not reading to children attending a program, or to her young son, Leo. Instead, she is slowly exposing a new resident wildlife ambassador, a saw-whet owl, to people. Having amassed more than 500 hours of volunteer work, Bridget is well versed in handling the museum's native wildlife that cannot be released due to permanent injury.

When she submitted her volunteer application a couple of years back, Bridget was open to helping in a variety of ways, noting her talents in administration, photography, and sewing. She had a degree in computer science and numerous years in the field of software development. She also had a budding interest in environmental conservation, education, and advocacy—she had come to the right place!

She began to volunteer in Trailside's Education Department, undergoing a rigorous training program and learning to handle and present reptiles, birds of prey, and other wildlife to visitors in weekend auditorium programs. Soon she was helping out beyond her regular shifts, tidying program materials, preparing for events, and taking on special tasks such as helping to orient the saw-whet owl.

With Bridget's help, this bird is becoming more comfortable around groups of people, enabling her to participate in programs and teach many children and adults about the nature of Massachusetts. Just as *The Phantom Tollbooth*'s protagonist Milo learns more about our beautiful and interesting world, so too will the owl, thanks in part to Bridget Waldbaum.

For more about volunteer opportunities at Mass Audubon, visit massaudubon.org/volunteer.

Liz Bastable is Visitor Services and Volunteer Coordinator at Blue Hills Trailside Museum and the Norman Smith Environmental Education Center.



Catching Rain, Saving Money

By Christina Wiseman and E. Heidi Ricci

When it rains, most of us reach for an umbrella or run to close our windows, but we may not think about where all that water is heading. For communities facing flooding and the high costs of water-quality regulations, it is increasingly important. Polluted water from roads and parking lots gets washed into streams and ponds, fouling swimming areas and fish habitat, and municipalities on tight budgets are facing millions of dollars in stormwater improvements. As we continue to pave over forests and farmlands, which naturally filter water, the problem grows.

One area that is heavily impacted by this pollution is the ecologically important Blackstone River watershed. It spans 545 square miles from Worcester to Narragansett Bay, encompassing thousands of acres of rivers, ponds, lakes, and reservoirs. Mass Audubon is currently working with partners to find cost-effective solutions for stormwater impacts. One approach is Low Impact Development, or LID.

LID works with nature rather than against it. By minimizing impervious surfaces such as pavement, and instead preserving the land's natural capacity to filter water, LID reduces stormwater runoff. The result is highly attractive, marketable development that may cost less to maintain—for instance, there is less roadway to plow and pave. The benefits will flow throughout the Blackstone River watershed and beyond.

Visit massaudubon.org/LIDcost to learn more.

Christina Wiseman is Assistant to the Director of Public Policy. E. Heidi Ricci is Senior Policy Analyst.



Broad Meadow Brook, Worcester

ADVOCACY



Sustainable Summer Checklist

During the summer months, there are many easy steps you can take to lessen your impact on the environment. If we all take them collectively, we can make a huge difference. Here's how you can do your part. Find out more at massaudubon.org/climate.



1 One of the most important actions you can take to reduce your home's carbon footprint is to purchase electricity from local renewable sources such as wind and solar. It's easy to do through our **Make the Switch** program—600 members have already switched!



2 Taking a summer road trip? Studies have shown that 55 mph is the most fuel-efficient highway speed and can save up to 30 percent in fuel costs compared with driving 75 mph. Also, according to the U.S. Department of Energy, you can improve your gas mileage by up to 3.3 percent by keeping your tires inflated to the proper pressure.



3 Pull down your shades during the day when you are not at home. By keeping the sun's rays from entering your home, you keep the inside cooler.



4 Only use an air-conditioner when it's a must, make sure the filters are clean, and be sure to use a programmable thermostat. If you own window units and they're over five years old, it may be a good time to replace them with an energy-efficient model, which will save both energy and money!



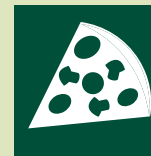
5 Reduce the temperature of your water heater to 120° F, the sweet spot for reducing energy without sacrificing hot showers.



6 Eat more veggies, especially those grown locally, and eat less beef. You'll consume fresher, more nutritious food and help support your local economy. Shop at farmers markets or join a community-supported agriculture program (CSA). Mass Audubon has two official CSAs—Drumlin Farm in Lincoln and Moose Hill Community Farm in Sharon.



7 Water your lawns or gardens in the morning, plant grass varieties that require minimal water (mostly rainfall), and concentrate on spraying plants' roots for optimal benefit. If you water at midday, the hot sun will cause rapid evaporation, wasting much of the water.



8 On hot days, your fridge and freezer are working overtime to keep things cool. Increase their efficiency by vacuuming out the vent, keep the time the doors are open to a minimum (no open-door pondering of what to eat), and fill up the freezer—the fuller it is, the less energy it uses.



Be Part of the Solution:
Make the Switch to Green Electricity Today. It's Easier Than You Think!

massaudubon.org/maketheswitch

How many can you check off this summer?



1

2

3

4

5

6

7

8



13 A More Accessible and Inclusive Mass Audubon

By Lucy Gertz

Mass Audubon strives to create a welcoming place for a wide range of visitors, and works to ensure that everyone can enjoy the nature of Massachusetts. This includes making our wildlife sanctuaries and nature centers more accessible to all people. One of our key projects has been the creation of cutting-edge multi-sensory interpretive resources for our accessible nature trails, thanks in part to a grant from the Institute of Museum and Library Services (IMLS).

Last fall, Mass Audubon was invited to participate throughout 2015 in the Massachusetts Cultural Council's UP (Universal Places, Universal Programs) Accessible Design Innovation and Learning Network. As part of this yearlong program, we are developing and implementing an inclusivity training program for all staff and volunteers. With additional IMLS funding, we will share what we have learned by producing a guideline manual for creation of accessible trails.



Learn more about accessibility at Mass Audubon at massaudubon.org/accessibility.

Lucy Gertz is Statewide Education Projects Manager.

Here are some facts and figures from our efforts:

11 multi-sensory interpreted accessible trails are now open at our wildlife sanctuaries. They include improvements such as wider boardwalks, rope and post guiding systems, tactile maps, and more.

4+ miles of accessible trails are available in total at our sanctuaries.

4 formats are currently offered for experiencing each accessible trail's guided interpretive tour—audio, regular print, large print, and braille.

7 volunteers on average helped develop and test each accessible trail's design, interpretive stops, and materials. These expert users brought various perspectives on accessibility needs, and their valuable input helped make the trails as user-friendly as possible.

19 of our nature centers offer some combination of specialized programs and resources for birders who need accessibility accommodations. For example, we offer birding by van, birding by ear, hands-free binoculars, indoor accessible bird-viewing areas, and outdoor accessible observation platforms and bird blinds.

3 more accessible interpreted trails are currently in the planning stage.

65 Mass Audubon educators are receiving new training each year on instruction and program design for all audiences.

A Snapshot of Seasonal Offerings

Preregistration may be required. Contact the host wildlife sanctuary for details or visit massaudubon.org/programs.

Sunset Kayak Tour

Thursdays through September 17; call ahead for times
FELIX NECK, Martha's Vineyard
508-627-4850
Relax and unwind while enjoying a breathtaking sunset paddle on Sengekontacket Pond.

Marine Life Cruise

Wednesdays and Thursdays from early July through August, 6-8 pm
Sponsored by WELLFLEET BAY, Wellfleet • 508-349-2615
Cruise from Sesuit Harbor in Dennis to Cape Cod Bay to seek creatures of the deep.

Ice Cream and...

Frogs, July 7; Fireflies, July 21; Bats, August 4; 7:30-9 pm
BROADMOOR, Natick • 508-655-2296
Look for flashing fireflies, listen for frog songs, and find our local bats.

Ode to Dragons and Damsels

July 11, 9:30 am-noon
Sponsored by NORTH RIVER, Marshfield • 781-837-9400
Visit Myles Standish State Forest in Carver and discover the secret lives of dragonflies and damselflies.

Open Hearts | Open Skies: A Weekend Wellness Retreat

July 11, 9 am-July 12, noon
ALLENS POND, Dartmouth
508-636-2437
Enjoy a warm and wonderful overnight retreat that blends nature, yoga, music, meditation, and peace.

Gardening for Wildlife Day

July 19, 1-3 pm
BLUE HILLS TRAILSIDE MUSEUM, Milton • 617-333-0690
Create a backyard paradise by learning about native plants and building habitats for wildlife.

Family Camp-Out

July 25, 6 pm-July 26, 9 am
MOOSE HILL, Sharon
781-784-5691
Spend the night under the stars; enjoy a campfire with stories, songs, and s'mores.

Wednesday Morning Birding

Wednesdays in August and September, 9:30 am-12:30 pm
JOPPA FLATS, Newburyport
978-462-9998
Enjoy great birding—especially for fall shorebirds—at the Parker River National Wildlife Refuge and the Great Marsh.

Astronomy Night

August 13, 8-10 pm
OAK KNOLL, Attleboro
508-223-3060
Watch the Perseid meteor shower and discover the night sky. Bring a telescope or use ours.

Canoeing at Eagle Lake

August 15, 9:30 am-noon
Sponsored by BROAD MEADOW BROOK, Worcester • 508-753-6087
Enjoy gentle canoeing and hiking to explore the fascinating world of wetlands.

Water Striders and Watermelon

August 15, 1-3 pm
WACHUSETT MEADOW, Princeton
978-464-2712
Discover the fascinating creatures that live in freshwater ponds, then join us for watermelon!

A Night at the Pond

August 19, 6:30-8 pm
HABITAT, Belmont • 617-489-5050
Explore the ponds in search of strange and wonderful water creatures.

Common Nighthawks and Chimney Swifts

August 21, 5-8 pm
ARCADIA, Easthampton and Northampton • 413-584-3009
Indoors and out, learn about these insect-catching birds from two distinct avian families.



Fermentasian

August 21, 7-9 pm
DRUMLIN FARM, Lincoln
781-259-2200
Learn the history and techniques of making kimchi, taste samples, and bring some home, too.

Twilight Canoe Trip

August 28, 6:30-8 pm
STONY BROOK, Norfolk
508-528-3140
Spend a lovely evening exploring the ponds and marshes as day gives way to dusk.

Cuttyhunk and Elizabeth Islands Cruise

September 6, 13, 20, & 27, and October 4, 9 am-5 pm
Sponsored by LONG PASTURE, Barnstable • 508-362-7475
Experience the fabled Elizabeth Islands and learn about their unique wildlife from experts.

Wildflower Foray in Mount Washington State Forest

September 12, 9:30 am-3 pm
Sponsored by PLEASANT VALLEY, Lenox • 413-637-0320
Observe late-summer flowers at Guilder Pond on Mount Everett and another site off the beaten path.

Annisquam River Paddle

September 12, 11:30 am-4:30 pm
Sponsored by IPSWICH RIVER, Topsfield • 978-887-9264
Take a fall kayak trip in Gloucester and ride the tide in and out while looking for migrating birds.

Carnivorous Plants

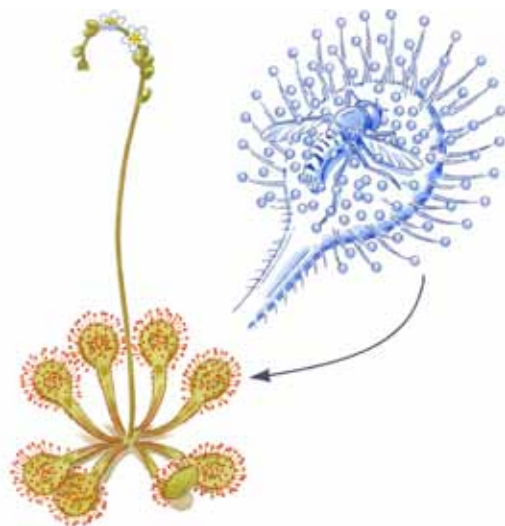
By Rosemary Mosco

In certain wetlands, insects and other small invertebrates face danger from an unusual type of predator. They may slide into a toxic pool from which there is no escape. They may become ensnared by sticky tentacles. They may find themselves sucked into a trap by a powerful vacuum. Surprisingly, these threats all come from plants. The flora of Massachusetts includes at least 16 species that digest animals, and they serve as a reminder that our vegetation is not as passive as it may seem.

As with other plants, carnivorous species use their green leaves to capture energy from sunlight. Why do they also need to eat animal prey? Plants require nutrients such as nitrogen and phosphorus in order to synthesize proteins, DNA, and other key compounds. Typically they obtain these substances by absorbing them from the soil; however, in wetlands such as fens and bogs the soil is stagnant, acidic, and nutrient poor. Some plants that evolved in these environments supplement their diet by digesting protein.

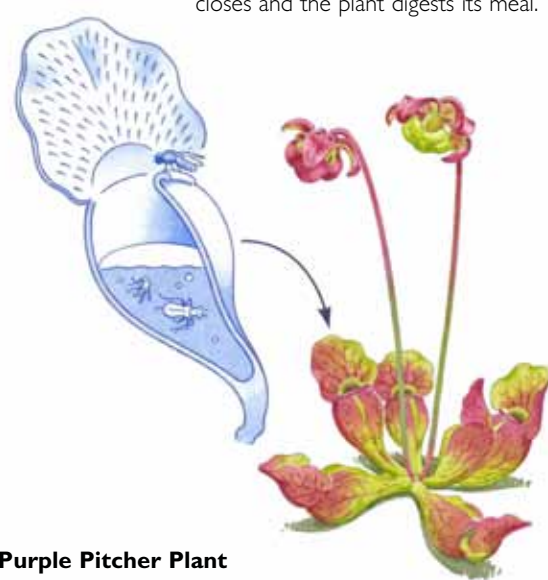
In the plant kingdom, this strategy has evolved separately a half-dozen times. The capture methods are varied. For example, the famous Venus flytrap, which inhabits the Carolinas and helped inspire the musical *Little Shop of Horrors*, uses an active trap that snaps shut when the prey trips a trigger. Pitcher plants, on the other hand, passively lure their prey with sweet-smelling nectar. Whatever their shape and strategy, carnivorous plants still need to attract pollinators and reproduce. They adorn our wetlands by producing striking, often colorful blooms.

Rosemary Mosco is Marketing Coordinator.



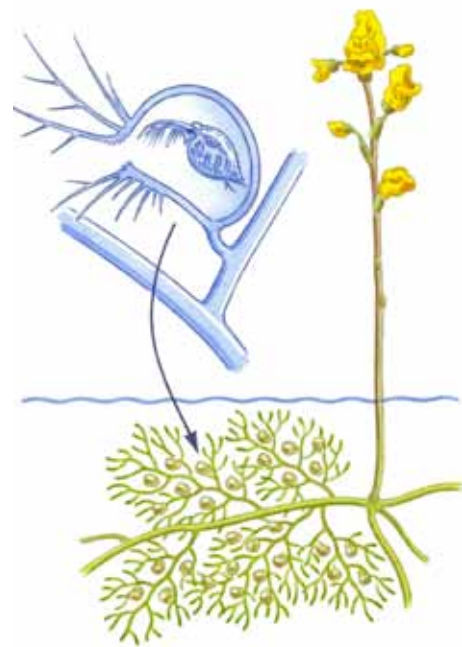
Round-leaved Sundew
(*Drosera rotundifolia*)

One of three sundew species in the state, this plant often grows abundantly along the shores of acidic water bodies as well as in peatlands. Its leaves are covered in red hairs tipped with droplets of sticky fluid. Drawn by a sweet smell and the attractive dewdrops, an insect such as the flower fly depicted will stick to the hairs. The leaves wrap around the prey and digest it. The plant's small white flowers have five petals and they emerge from a stalk at the center of a rosette of leaves.



Purple Pitcher Plant
(*Sarracenia purpurea*)

The Northeast's only species of pitcher plant is generally found in acidic bogs and fens. Its name is descriptive of the juglike leaves that fill with rainwater. A sugary fluid secreted near the mouth of the pitcher attracts flies, ants, beetles, and other invertebrates. They tumble into the pool containing digestive fluid. Downward-pointing hairs inside the vessel prevent them from crawling out. In older pitchers, a community of bacteria and other small creatures thrive inside the pool, helping to break down invertebrate tissues and release nutrients. This plant's unusual nodding flowers are purple-red and look somewhat like flying saucers.



Great Bladderwort
(*Utricularia macrorhiza*)

A dozen bladderwort species grow in Massachusetts. Rootless, they float in and on the surface of ponds and lakes, their yellow or purple snapdragon-like flowers rising above the water on stalks. The leaves are lacy and covered in tiny bladders with feathery triggers. When a small swimming animal bumps against a trigger, the bladder collapses inward and vacuums up the prey. The trap closes and the plant digests its meal.

Summer 2015

By Ann Prince

JULY



2 Full moon. The Thunder Moon (Native American).

4 Pearly everlasting blooms in fallow fields and on roadsides.



10 This is blueberry season; look for them on rocky hillsides and woodland clearings.

15 Watch for nesting yellow-rumped warblers in evergreen forests.

19 On warm nights, listen for the mysterious trill of the eastern screech-owl from a tree hollow or perch.

25 White lacy meadowsweet and striking pink steppelush flower in old fields.

28 Female goldfinches fly in search of the downy fibers of thistle to incorporate in their nest building.

30 Aquatic pickerelweed blooms in shallow ponds.



31 Blue moon. The second full moon of the month.

AUGUST

2 Solomon's seal fruits hanging from the plant's curving stem have ripened to a deep blue-black.

5 Watch for flocks of migrating shorebirds along the coast.

10 Sweet pepperbush blooms on the shores of ponds and lakes at about this time; its strong spicy aroma is unmistakable.

12 Tonight the late-rising crescent moon leaves the sky dark for great viewing at the peak of the Perseids meteor shower—as many as 60 shooting stars blazing overhead per hour.

AUGUST (cont.)

21 Scarlet-colored cardinal flowers blossom along clean freshwater streams.

29 Supermoon. Watch for a big bright globe in the night sky.



31 Chimney swifts and barn swallows form premigratory flocks.

SEPTEMBER

1 Bumblebees busily search for nectar and pollen in late-season blossoms. They slow down with colder weather, sometimes resting inside the center of a flower.

9 Praying mantises are camouflaged in high grasses and garden patches.



10 Broad-winged and sharp-shinned hawks migrate at about this time of year.



12 Eastern kingbirds and olive-sided flycatchers have departed for their wintering grounds in South America.

23 Autumnal equinox; days and nights are of equal length.

25 Look for late-blooming goldenrods and New England aster in fields and on roadsides.



27 The last of the ruby-throated hummingbirds have left for Mexico and Central America.

28 Second supermoon of the year. This is even closer than last month's giant full moon, appearing larger and more brilliant.



30 Watch for green darner dragonflies over sunny meadows.

Ann Prince is Copyeditor.

Peaceful POND

Few settings are as serene and inviting as the edge of a pond. At first glance, you may see sunlight sparkling along the water's surface and hear water gently lapping against the land.

Look closer and you'll see that a pond, defined as a relatively small and shallow body of still water that typically supports plant growth throughout, is actually full of life and activity. You may spy turtles atop logs, basking in the sun, or dragonflies darting about. You may even hear bullfrogs calling *jug-o-rum*, or red-winged blackbirds singing *konk-la-ree* among the cattails.



In this scene are 25 different plants and animals commonly encountered in and around a pond. How many can you find?

For the answer key, visit massaudubon.org/go.

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The Natural Inquirer

By Robert Buchsbaum

Q. What kinds of crabs might I see on the Massachusetts coastline?

A. Our coast is home to many crabs, and some of are more welcome sights than others. Here are a few of the most frequently seen kinds.

Fiddler crabs, recognizable by the male having one claw much larger than the other; are common in salt marshes on Cape Cod and the Islands. Perhaps as a result of changing climate, they are appearing on the North Shore in places such as Plum Island. **Hermit crabs** are also often seen on our shores. They inhabit abandoned snail shells; spot them in rocky tide pools. **Rock crabs** are common on rocky coasts. They grow up to five inches long and have an oval carapace (or shell) with nine smooth toothlike projections on each side. They can be aggressive, but are slow moving. In New England, a cook making crab cakes from a local catch is likely to use this animal or the very similar **Jonah crab**.

Two non-native invasive species are found on our beaches. Native to Asia's Pacific coast, the 1- to 2-inch-long **Asian shore crab** is trapezoid shaped with banded legs and hides under rocks in large numbers. Since it arrived in New Jersey about 25 years ago, it has spread as far north as Maine and is outcompeting other crabs. The larger **green crab** has five ridges on each side of its carapace. This European species has lived in New England for over 100 years, but its population has recently skyrocketed. It alters our shoreline by eating soft-shell clams and snails, shredding eelgrass beds, and digging burrows that may cause erosion. Fortunately, recent cold winter temperatures have apparently put a damper on its numbers. Also, some innovative chefs are experimenting with green crab recipes!

Robert Buchsbaum is Southeast, Cape, and Islands Regional Scientist.

Have you seen any interesting wildlife? Share your sightings at [facebook.com/massaudubon](https://www.facebook.com/massaudubon).

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Heather Cooper, Kristin Foresto, Jennifer E. Madar, Rosemary Mosco, Rose Murphy, Michael P. O'Connor, Ann Prince, and Hillary Truslow

The Final Word

We invite your comments, photographs, and suggestions. Please send correspondence to: Mass Audubon Connections, 208 South Great Road, Lincoln, MA 01773, tel: 781-259-9500, or e-mail: connections@massaudubon.org. For questions regarding your membership, contact: Mass Audubon Member Services, 208 South Great Road, Lincoln, MA 01773, tel: 781-259-9500 or 800-AUDUBON, or e-mail: membership@massaudubon.org.

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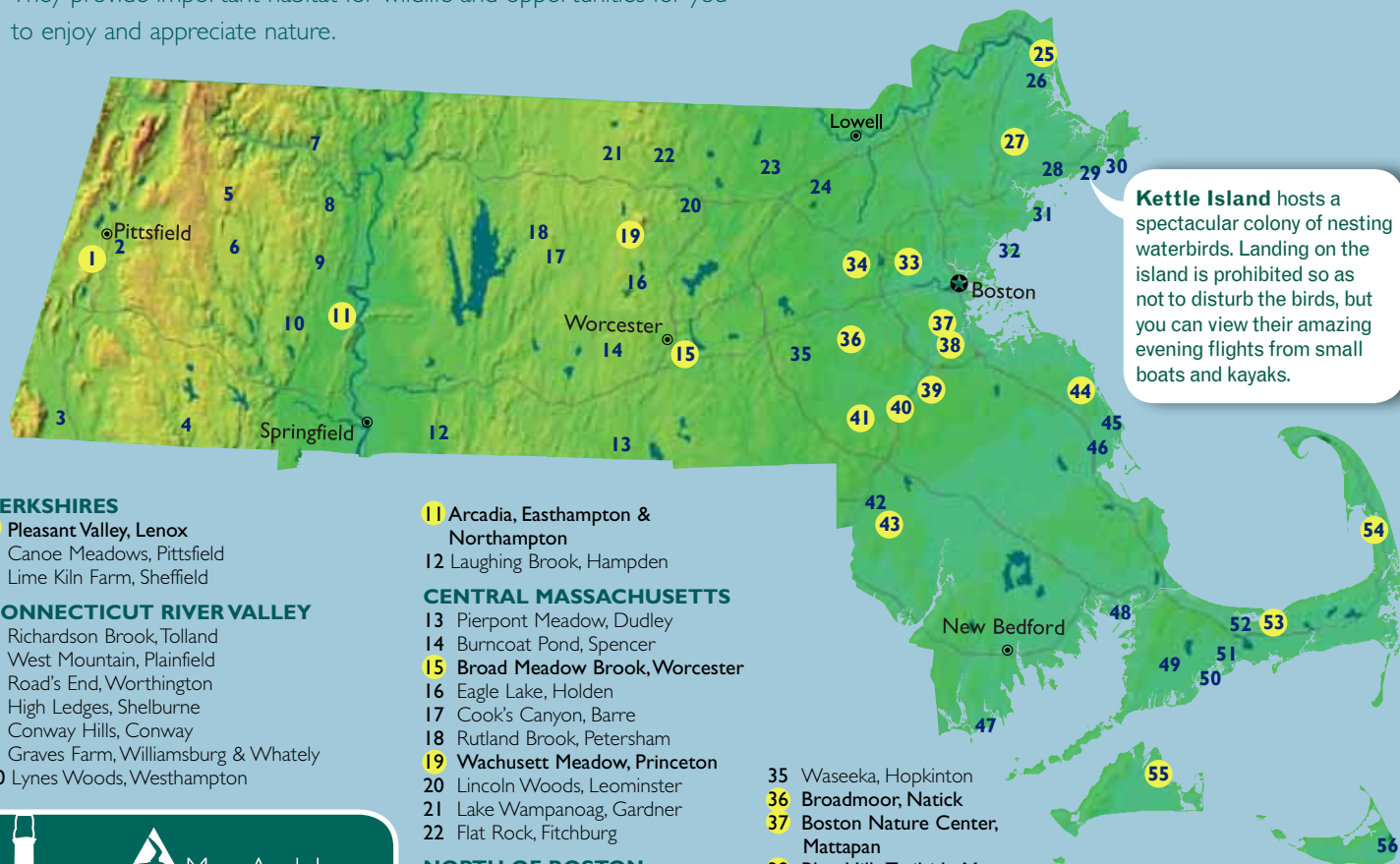
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- 15 Broad Meadow Brook, Worcester
- 16 Eagle Lake, Holden
- 17 Cook's Canyon, Barre
- 18 Rutland Brook, Petersham
- 19 Wachusett Meadow, Princeton
- 20 Lincoln Woods, Leominster
- 21 Lake Wampanoag, Gardner
- 22 Flat Rock, Fitchburg

NORTH OF BOSTON

- 23 Rocky Hill, Groton
- 24 Nashoba Brook, Westford
- 25 Joppa Flats, Newburyport
- 26 Rough Meadows, Rowley
- 27 Ipswich River, Topsfield
- 28 Endicott, Wenham
- 29 Kettle Island, Manchester-by-the-Sea
- 30 Eastern Point, Gloucester
- 31 Marblehead Neck, Marblehead
- 32 Nahant Thicket, Nahant

GREATER BOSTON

- 33 Habitat, Belmont
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- 36 Broadmoor, Natick
- 37 Boston Nature Center, Mattapan
- 38 Blue Hills Trailside Museum, Milton
- 39 Museum of American Bird Art at Mass Audubon, Canton

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- 40 Moose Hill, Sharon
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- 43 Oak Knoll, Attleboro
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