



Mass Audubon
Protecting the Nature of Massachusetts

Connections

SEPTEMBER – DECEMBER 2013

A NEWSLETTER FOR THE MEMBERS OF MASS AUDUBON

Fall in Love with the Cape & Islands

see page 2



Connections is published three times each year in January, May, and September.

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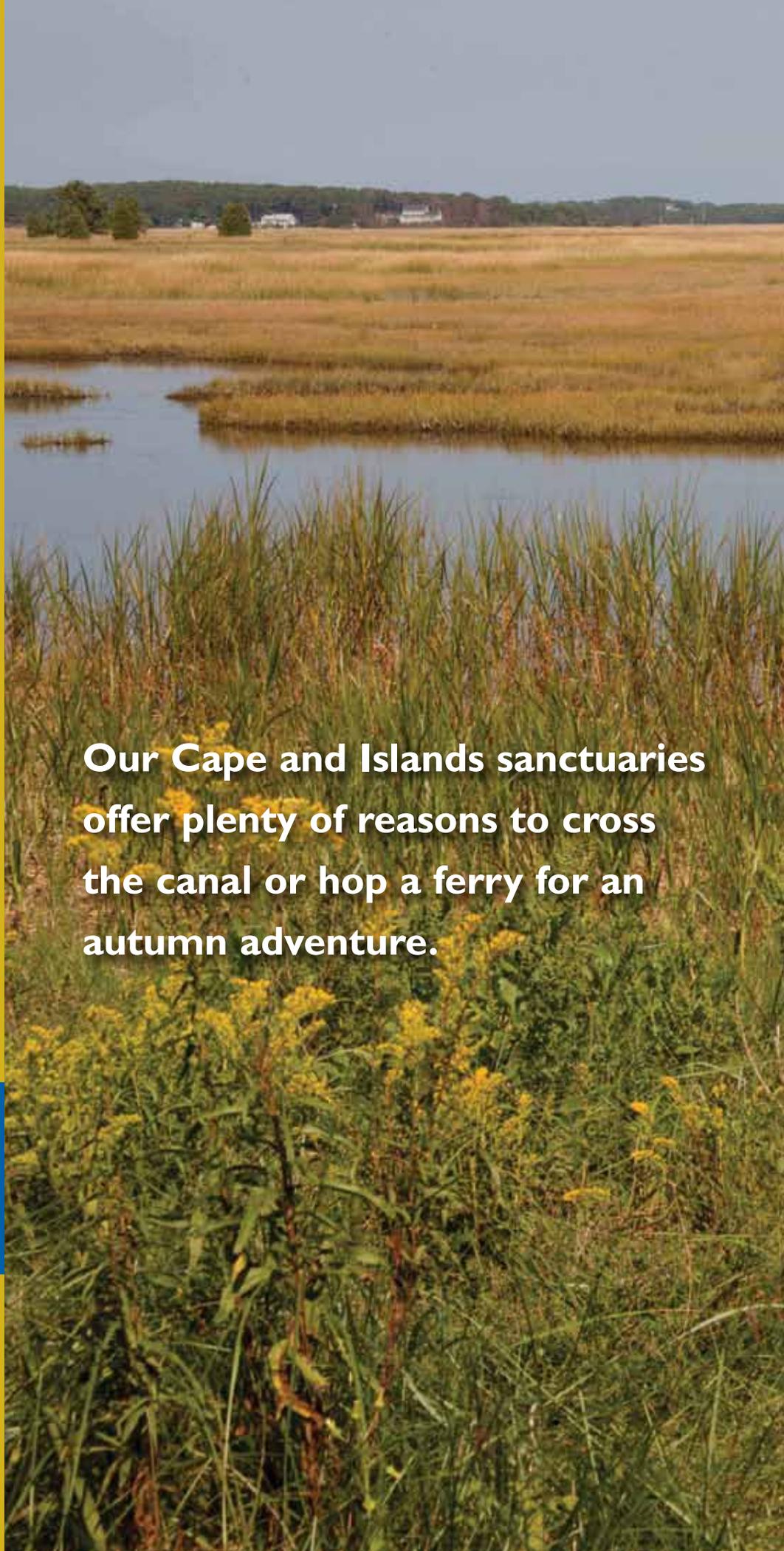
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Our Cape and Islands sanctuaries offer plenty of reasons to cross the canal or hop a ferry for an autumn adventure.



Fall in Love with the Cape and Islands

by Michael P. O'Connor

Cape Cod, Martha's Vineyard, and Nantucket are all destinations you may associate with the four S's: sand, sea, sun, and summer. But when it comes time to set down your flip-flops and sunscreen, there's all the more reason to visit. Fall beckons, with its clear skies, cooler, outdoors-friendly temperatures, and festive activities. In fact, our Cape and Islands wildlife sanctuaries offer plenty of reasons to cross the canal or hop a ferry for an autumn adventure.

Longtime Wellfleet Bay Adult Education Coordinator Melissa Lowe Cestaro realized early in her career why fall is her favorite season on the Cape: "It's a time when traffic is a bit easier and the beaches are quieter, with fewer people and more wildlife," says Cestaro. She adds that "from late September through early November, you can also glimpse birds that nested on the Cape during the summer and haven't yet begun their journey south, as well as other species you wouldn't normally see as they pass through from inland and the north."

Other creatures often spotted at Wellfleet Bay around this time include turtles, for which the sanctuary has earned a reputation of stewardship and rescue. Diamondback terrapins hatch well into September, and loggerheads and Kemp's ridleys begin to appear on bayside beaches as early as October. By the time November arrives, winter ducks, including eiders and scoters,



Start Planning Your Fall Fun

Visit these Cape and Islands wildlife sanctuaries. Each features a nature center, walking trails, seasonal activities, and trained staff to help you plan your day.

FELIX NECK, Edgartown
massaudubon.org/felixneck
508-627-4850

LONG PASTURE, Barnstable
massaudubon.org/longpasture
508-362-7475

WELLFLEET BAY, Wellfleet
massaudubon.org/wellfleetbay
508-349-2615

Or enjoy self-guided explorations off the beaten path at these other locations.

ASHUMET HOLLY, Falmouth
massaudubon.org/ashumetholly
508-362-7475

BARNSTABLE GREAT MARSH, Barnstable
massaudubon.org/barnstablegreatmarsh
508-362-7475

SESACHACHA HEATHLANDS, Nantucket
massaudubon.org/sesachacha
508-228-9208

SKUNKNETT RIVER, Barnstable
massaudubon.org/skunknettriver
508-362-7475

are making the sanctuary their temporary home.

At Long Pasture Wildlife Sanctuary overlooking Barnstable Harbor, visitors can still observe the Cape and Islands' iconic raptors—ospreys—at salt ponds and along the banks of tidal rivers before they set off for Brazil and points as far south as Argentina.

And at this time of year, the mid-Cape sanctuary conducts natural history boat trips to the Elizabeth Islands—a small chain stretching diagonally southwestward from Woods Hole. Monarch butterflies follow this pathway of giant saltwater “stones” (actually glacial moraines, formed by the retreating ice sheet). Those who climb



Autumn arts and crafts on Martha's Vineyard

eared owls—both uncommon species.

For those visitors hesitant to pass up that fall foliage trip to the Berkshires, no worries: the Cape and Islands offer their own colorful, if more subtle, natural backdrops.

Leaves of the Vineyard's black tupelo (or beetlebung) trees, viewed from Felix Neck Wildlife Sanctuary in Edgartown, turn a flashy red, but sometimes also orange, yellow, and purple. (A bit of local knowledge: In the 18th and 19th centuries, wood from tupelos was used to craft mallets [“beetles”] and stoppers [“bungs”] for barrels used to store whale oil—hence the name beetlebung.) Meanwhile, waves of deep-green cordgrass that define salt marshes begin to turn a warm gold, adding to the outdoor palette.

By Thanksgiving, the island's colors have become muted, but pumpkin-orange is back for one last blaze of glory at the Felix Neck Fall Festival, which takes place the day after the holiday.

Whether celebrating the harvest, glimpsing southbound shorebirds, or boating alongside butterflies, visitors at our Cape and Islands sanctuaries are in for memorable experiences. As Long Pasture Wildlife Sanctuary Director Ian Ives observes, “Folks ‘in the know’ make fall a time to visit the Cape.” ▲

Michael P. O'Connor is Public Relations Manager.



Father-daughter fun at the Felix Neck Fall Festival

aboard can witness the monarchs racking up miles on their long flight to Mexico.

Farther out to sea awaits Nantucket, which presents a wilder aspect after the summer crowds have departed. At Sesachacha Heathlands Wildlife Sanctuary on the far-east side of the island, visitors can explore sandplain grassland and coastal heathland, two of the state's rarest habitats. Here you can spot northern harriers and short-

Hands-on Land Conservation for the Next Generation

by Robin Stuart & Kristin Steinmetz

Here's an unconventional recipe: Combine traditional field studies with a computer game that allows youth to “play” at being land planners. The result? Young people who understand and appreciate the complexity of land use decisions.

Four years ago, educators at Mass Audubon's Drumlin Farm Wildlife Sanctuary partnered with the University of Wisconsin-Madison to develop and implement *Land Science*, a computer-based simulation with which high school students from across the country assume the role of interns at a virtual urban planning firm. While chatting online with each other and Drumlin Farm mentors, students work together to develop mock land use plans for the city of Lowell while trying to balance the various—and often competing—needs of community stakeholders.

Funded by the National Science Foundation (NSF), the game provides students with access to professional tools, such as iPlan, a custom-designed Geographic Information System (GIS) software. For a plan to be accepted, students must consider different perspectives as they weigh the economic, ecological, and cultural trade-offs associated with land use decisions. In the process, they learn the importance of negotiation and compromise.

In January 2013, Drumlin Farm teamed up with Broad Meadow Brook Wildlife Sanctuary in Worcester to offer a 15-hour program for homeschoolers that combined *Land Science* with field trips to Mass Audubon wildlife sanctuaries. This segment of the course moved students from the virtual world to the real world, allowing them to apply their new knowledge and decision-making skills to real-life scenarios. Outside,

students undertook old-fashioned, hands-on field studies—identifying species, observing behavior, and cataloging their findings.

One of the sanctuaries they visited was Rocky Hill Wildlife Sanctuary in Groton, home to a population of threatened Blanding's turtles. Thanks to their experience with *Land Science*, students were keenly aware that any action they took to promote urban development would greatly affect this sensitive species. While on-site, they got to see the turtle's habitat firsthand. They also spoke with a Mass Audubon scientist to understand how the land at Rocky Hill had been managed to protect Blanding's turtles. The group applauded some decisions, criticized others, and drew comparisons to the decisions they had made playing the online game.

By engaging in *Land Science* and participating in complementary fieldwork, the students deepened their understanding of the interconnections

Students interpret land use decisions at Rocky Hill with the help of Mass Audubon Regional Scientist Tom Lautzenheiser.



among the environment, our society, and the economy that make community land planning so complex. And they enjoyed the challenge. In the post-project survey, one amazed student from Lincoln-Sudbury Regional High School declared, “I never dreamed my passion for computers would find a place at Drumlin Farm.” Another shared that he “really enjoyed working with other people to fix problems in the real world.”

Pending additional grant funding, Drumlin Farm hopes to bring *Land Science* to schools here in Massachusetts and across the country in 2014. ▲

Robin Stuart is School and Group Programs Coordinator at Drumlin Farm Wildlife Sanctuary.

Kristin Steinmetz is Outreach Coordinator at Broad Meadow Brook Conservation Center & Wildlife Sanctuary.



School & Group Programs

Let us be your guide!
Our fun, creative programs & field trips are aligned with Massachusetts' Curriculum Frameworks.



Visit massaudubon.org/education to learn more.

massaudubon.org/drumlinfarm

New Reports Share the State of our Birds

by Joan Walsh



Eastern meadowlark

Birds are all around us, and for many of us they are a gateway into nature. The 200-plus species that breed in the Commonwealth provide a morning soundscape and link us through history to those who stood here years ago. If we want these birds to thrive, and in some cases simply survive, we must do our part.

Mass Audubon's Bird Conservation team aims to continue the conversation and provide guidance with two new groundbreaking reports: *Massachusetts Breeding Bird Atlas 2* (BBA 2) and *State of the Birds 2013*.

The Problem

As conservationists, some of our chief responsibilities include making sure birds have the landscape, food, cover, and protection they need to survive. This duty is magnified when it comes to the species that reproduce in the state (otherwise known as "breeding birds"). Without successful breeding sites, these birds dwindle and eventually disappear.

Among the many challenges faced by Massachusetts' breeding birds are habitat loss and fragmentation, toxic chemicals (such as fungicides and mercury), climate change, and nest predation.

Starting from Scratch

The first step toward meeting these challenges is to "take the pulse" of birdlife here in the state. To do this, we began by compiling a breeding bird atlas—a collection of observations from researchers and volunteer birders that shows where species breed across a particular region.

From 1974 to 1979, Mass Audubon produced the first-ever breeding bird atlas in North America. This report, which gave an accurate snapshot of birdlife at the time, was intended to be revisited with another atlas in the future to track any changes that might occur.

Gaining New Insight

In 2007, we began research efforts for a second breeding bird atlas. Since then, we've worked with more than 650 volunteers who spent 40,000 collective hours in the field gathering data. The result? *Massachusetts Breeding Bird Atlas 2* and *State of the Birds 2013*. These innovative, scientifically rigorous documents—which will be published in late September 2013—are designed to inspire our members, conservation partners, and other nature enthusiasts to engage in data-driven stewardship.

BBA 2 will be available as an e-book—a first for any breeding bird atlas. Readers will find the stories of more than 200 birds, including their historic and current status, and what we understand about any changes in their status. We'll also publish a print-on-demand traditional book that will be available in October, as well as share our findings via a dedicated website.

State of the Birds 2013 serves as a companion document for BBA 2 and includes a summary of results, as well as an intimate view of some declining species. It looks at species by habitat and presents case studies, using a single species to represent each type of breeding habitat and highlighting known factors that are driving that species' decline.

What Our Findings Tell Us

The news is good for many birds: Sixty percent of species that regularly breed in the Commonwealth are stable or increasing. And we've uncovered some especially encouraging stories such as the recovery of once-declining ospreys along the coast.

However, we've also learned that many species are facing serious challenges, including the following.

Eastern Meadowlark:

Agricultural Landscapes

A bird of agricultural landscapes and grasslands, this species is declining as farms disappear and as remaining farms shrink, leaving less uncultivated land and fewer hedgerows that these birds require to nest.

Brown Thrasher:

Shrublands and Young Forests

Formerly a common bird of young forests and old fields, the brown thrasher is a species whose breeding habitat is disappearing at an alarming rate as development increases.

Wood Thrush:

Forests

This resident of thickly vegetated forests is also known as the "Swamp Angel" because of its sweet, ethereal song. It nests low, on the forest floor,

Wood thrush



where it is vulnerable as a result of a growing population of white-tailed deer that eat the vegetation within which it hides its nest.

Cliff Swallow: *Aerial Insectivore*

Cliff swallows and other aerial insectivores (birds that catch bugs midair while flying) are declining. Though the exact cause is unknown, it's suspected that pesticides may play a role in killing off the insects these birds depend on for nourishment.



Killdeer

Killdeer: *Grassland*

A bird of open fields, the killdeer is forced to live on recreational fields as open space becomes scarce.

Saltmarsh Sparrow:

Saltwater Marsh

This species nests within inches of the high-tide line and is in danger of sea-level rise resulting from climate change.

What You Can Do

Besides offering useful data, these reports provide guidance. Here are some actions you can take to help protect our breeding birds and create a richer future for the people and wildlife of Massachusetts.

- **Keep Cats Indoors**

It is estimated that domestic cats kill at least one billion birds in North America every year. Keeping cats indoors is the easiest single action we can take to protect breeding birds.

- **Reduce or Stop Pesticide Use**

Limit or stop using pesticides in your home and on your lawn and look for natural alternatives.

- **Support Local Farms**

Shop at local farm stands, patronize farmers markets, sign up for a Community Supported Agriculture (CSA) program, and frequent farms that use sustainable growing practices.

- **Support Local Land Conservation**

Advocate for land management that promotes healthy habitats for breeding birds by getting involved with Mass Audubon's land conservation efforts, your town's Community Preservation Act (CPA), and local land trusts.

- **Spread the Word**

Young forest is our most threatened habitat, and it's possible, with shared goals, to have well-managed forests and to create good breeding bird habitat.

- **Share Your Enthusiasm**

Share the wonder of birds with family, friends, and neighbors by visiting a Mass Audubon wildlife sanctuary and taking time to build your connection to nature. ▲

Joan Walsh is Director of Bird Monitoring.

massaudubon.org/birds



Support Bird Conservation!

Help us unlock the secrets of Massachusetts' ever-changing bird populations and what they may mean for our environment.



Donate online:
massaudubon.org/birds

Or mail your contribution to:
Bird Conservation at Mass Audubon
208 South Great Road
Lincoln, MA 01773

Helping Turtles Go With the Flow

Dam Removal to Restore Diversity

by Michael P. O'Connor

Descending noisily from a Berkshires mountain pond several miles to the east and eventually flowing into the Housatonic River, Sackett Brook is mostly a muttering stream by the time it reaches Canoe Meadows Wildlife Sanctuary in Pittsfield.

Yet there is one point at the sanctuary where the crystal-clear waterway reaches a fever pitch, tumbling over a small dam built in the early 20th century by the former property owner. Originally installed to create a reservoir for fishing and swimming, the dam may seem harmless enough at first glance, but fast-flowing waters at the site have created sediment buildup and eroded the river banks over the years, negatively impacting plants and animals.

That's why Mass Audubon is working with local and state partners, including the Division of Ecological Restoration, to remove the 37-foot-wide, 7-foot-high fixture and restore this section of Sackett Brook. Biologists hope that providing unfettered upstream and downstream access to the well-shaded waterway will encourage wildlife—including wood turtles, a protected species—to flourish in the area.

Up to 10 inches long with burnt-orange-colored skin and a brown shell covered in ornate pyramid shapes, cold



Wood turtle at Canoe Meadows Wildlife Sanctuary

water-loving wood turtles have been impacted by habitat loss resulting from development—and possibly by dams on waterways such as Sackett Brook.

“Anytime you have impoundments or dams, they can raise water temperature,” notes Andrew Madden, Western District Supervisor for the Massachusetts Division of Fisheries and Wildlife. “Removing them can result in free-flowing water that’s colder, creating a supportive environment for these turtles.”

In addition to the waterway restoration, Pleasant Valley Wildlife Sanctuary, which manages Canoe Meadows, is partnering with area schools to educate children about the Housatonic watershed. Students will explore how the river has changed, how restoration works, and why it’s important.

Already, local high school students have placed a camera on-site to record before-and-after images of the project.

The project also will include planting more than one acre of trees and shrubs to help anchor the river banks, keep water temperatures cool, reduce flood threats, and improve water quality. This extra measure may draw a variety of nesting birds including warbling vireos, Louisiana waterthrushes, American redstarts, and green herons.

With the dam’s removal scheduled to be completed in October, Canoe Meadows Property Manager Jan Cullen couldn’t be more excited. As if in anticipation, a “Turtle Crossing” sign, donated by the Turtle Rescue League and painted bright yellow by students from the Learning Center for the Deaf in Framingham, has been erected in the sanctuary’s tree-shaded woods.

“That area is used not only by wood turtles to lay their eggs, but also by snapping turtles, painted turtles, and possibly spotted turtles,” Cullen notes. “We have spent quite a bit of time, including many volunteer hours, expanding this nesting area, which we now refer to as our turtle garden.” ▲

massaudubon.org/pleasantvalley

EXPLORING THE NATURE OF MASSACHUSETTS

by Rosemary Mosco

Mushrooms



Viscid Violet Cort
(*Cortinarius iodes*)

The viscid violet cort has a cap that turns slimy after the rain. As it ages, its purple color fades. Its yellow speckles have led to another common name, "spotted cort." It thrives in deciduous woodlands.



Fluted Bird's Nest (*Cyathus striatus*)

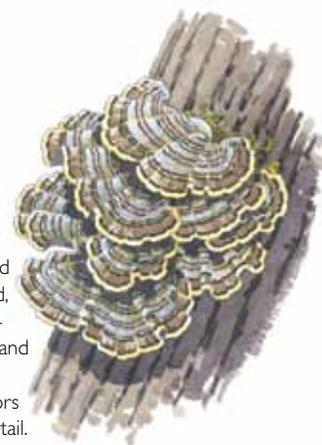
This species was named for its uncanny resemblance to a bird's nest. When a drop of rain hits it in the right way, spore-filled "eggs" hurtle into the air—hence its alias, "splash cup."

creeping through the soil below your feet. The "body" of most fungi consists of a collection of thin threads. Called a mycelium, this tangle of filaments quietly grows and waits for the right moment to reproduce. Then up pops a mushroom, ready to release spores and produce the next generation.

These and other special characteristics have led biologists to assign fungi to their own kingdom of life, like the plant and animal kingdoms. Unlike plants that undergo photosynthesis, fungi don't make food from the sun. Many of them consume dead or decaying matter, providing an invaluable recycling service to our forests. Others absorb nutrients from living things. This relationship may be mutually beneficial. For example, some

Turkey Tail

(*Trametes versicolor*)
Turkey tail is very common and is found on all sorts of wood, though mostly hardwoods such as oak and maple. Its fan shape and rainbow of colors resemble a turkey's tail.



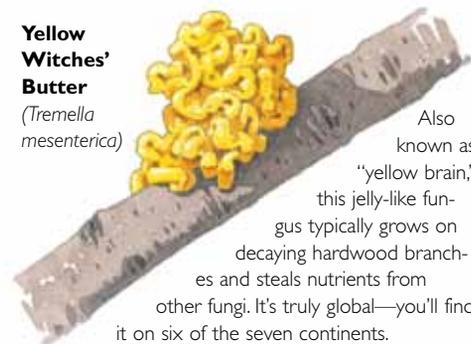
fungi that connect to tree roots and help absorb nutrients are rewarded with sugar; others simply take food from their hosts.

Our relationship with fungi is just as complicated. Many are toxic—even deadly—and you should never eat any wild mushroom without expert advice. But others are lifesavers, such as the *Penicillium* mold that gives us the antibacterial substance we use to make the antibiotic penicillin.

Fungi keep our forests thriving and add color and whimsy to our landscape. ▲

Yellow Witches' Butter

(*Tremella mesenterica*)



Also known as "yellow brain," this jelly-like fungus typically grows on decaying hardwood branches and steals nutrients from other fungi. It's truly global—you'll find it on six of the seven continents.

Rosemary Mosco is Marketing Coordinator.

Hedgehog mushrooms. Stinkhorns. Earthstars. These unusual names reflect the astonishing variety of mushrooms found in Massachusetts. You'll spot them on many surfaces: erupting from the soil, peppering fallen logs, and dangling from branches. Some persist throughout the winter. A few species are even visible at night, glowing eerily in the dark.

What we call a "mushroom" is actually only the fruiting part of a larger fungal body, often hidden from view—perhaps



Stinky Squid
(*Pseudocolus fusiformis*)

This fungus belongs to a group called the stinkhorns. A putrid slime clings to the inside of the orange "tentacles." This goo attracts insects that land on it and then spread the mushroom's spores. It's found on wood chips in gardens and along trails.

Look for Mushrooms at Our Wildlife Sanctuaries Across the State.

Viscid Violet Cort—Look for this purple gem at the bases of oak trees at **Great Neck** or along the Brown Loop and Pasture trails at **Wachusett Meadow**.

Fluted Bird's Nest—Sometimes this fungus sprouts among the wood chips in the Visitor Center Garden at Broad Meadow Brook. It may also be seen on downed branches that flank many trails at **Ipswich River**.

Turkey Tail—Check out this fan-shaped fungus on fallen trees lining the Snail Trail at **Boston Nature Center** or the Neck and Quansett trails at **Allens Pond**.

Stinky Squid—This smelly orange fungus may greet you in the parking lot at **Habitat**. Walk the Holdrege Trail at **Broad Meadow Brook** and you might also catch a glimpse.

Yellow Witches' Butter—Bright yellow witches' butter may be seen clinging to branches at **Mass Audubon's Museum of American Bird Art**, where it practically "glows" after the rain. **Wellfleet Bay's** Silver Spring Trail offers another opportunity to spot this vivid fungus.

massaudubon.org/sanctuaries

Nature by the Numbers: Seven Marvellous Animal Migrations

by Rosemary Mosco

When temperatures drop and food becomes scarce, some creatures travel to more hospitable places. These migrations can be raucous (most of us have heard the honks of geese overhead); however, they can also be subtle, like the nighttime journeys of songbirds.

These seven species highlight the remarkable diversity of fall migrations across our state.

1 Wood Thrush

Headed for Central America, this songbird travels at night. Listen for its chirps overhead and train your binoculars on the moon to catch its silhouette. You may encounter it at many of our sanctuaries, including Oak Knoll and Attleboro Springs.



2 Common Green Darner

A large dragonfly, the common green darner migrates south during the daytime, often along the coast, and rests on windy days. Look for it across the state, from Pleasant Valley in the Berkshires to Wellfleet Bay on the Cape.



3 Tree Swallow

These birds congregate in large groups in coastal vegetation, especially bayberry, before taking off for Florida and Central America. You can see this phenomenon at Wellfleet Bay, Joppa Flats, and Long Pasture.



4 Common Loon

If you go to the beach in winter, look for loons! In the fall, this waterbird moves from inland lakes to the coast. Find it feeding near the shore in its winter plumage (see photo) on the Beach Loop Trail at Allens Pond and at Joppa Flats.

5 Broad-winged Hawk

Often shy during the breeding season, the broad-winged hawk gathers in flocks of hundreds—and sometimes thousands—during migration. Watch this spectacle from atop a rise like Wachusett Meadow's Brown Hill.



6 Monarch Butterfly

These colorful insects migrate to central Mexico. Large numbers will often be found traveling along the coast or following river valleys and ridgelines. The butterfly gardens at Drumlin Farm and the Boston Nature Center are good places to observe monarchs.



7 Roseate Tern

See this endangered seabird on Cape Cod, where parents help their chicks feed and become stronger for the journey south. At Wellfleet Bay you can spot them roosting with other terns and laughing gulls out on Goose Pond Trail.

Birds migrate—and members can, too!

When it's time to renew your membership, consider "migrating" to Supporter Level or higher to enjoy additional benefits.

Or, give the gift of membership to friends and family.



Together, we can protect wildlife and wild lands in Massachusetts!

massaudubon.org/membership

massaudubon.org/sanctuaries

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Feb 7–18, 2014

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Mass Audubon's Annual Meeting

WHEN
Thursday, October 24
at 5:30 pm

WHERE
DeCordova Museum,
Lincoln, MA

Contact:
Gerri Comeau at 781-259-2165
gcomeau@massaudubon.org



FALL PROGRAM SAMPLER

A snapshot of seasonal offerings at our wildlife sanctuaries.*

massaudubon.org/programs

Things with Wings	Aquatic Adventures	Mushrooms & More	Fall Festivities
<p>Butterfly Bon Voyage! September 8, 2-3:30 pm BOSTON NATURE CENTER, Mattapan 617-983-8500</p>	<p>Cuttyhunk & Elizabeth Islands Cruises September 8, 15 & 23, 9 am-5 pm LONG PASTURE, Barnstable 508-362-7475</p>	<p>Mushroom Walk September 21, 10-11:45 am HABITAT, Belmont 617-489-5050</p>	<p>35th Annual Fall Fair September 28, 10 am-4 pm STONY BROOK, Norfolk 508-528-3140</p>
<p>Screech-Owl Prowl September 13, 7-8:30 pm BLUE HILLS TRAILSIDE MUSEUM, Milton 617-333-0690</p>	<p>Moonrise Kayak September 18 & 19, 6:15 pm FELIX NECK, Martha's Vineyard 508-627-4850</p>	<p>Fall Fungi September 25; October 2 & 16, 1-4 pm BROAD MEADOW BROOK, Worcester 508-753-6087</p>	<p>Birds as Art Opening September 29, 1-5 pm MUSEUM OF AMERICAN BIRD ART AT MASS AUDUBON, Canton 781-821-8853</p>
<p>Hawk Watch at Mount Sugarloaf State Reservation September 14, 9 am-noon ARCADIA, Easthampton and Northampton 413-584-3009</p>	<p>Canoe Tully Lake September 22, 12:30-3 pm WACHUSETT MEADOW, Princeton 978-464-2712</p>	<p>Wild Edibles with Russ Cohen September 26, 4-6 pm NORTH RIVER, Marshfield 781-837-9400</p>	<p>Halloween Spooktacular October 19, 5-8 pm ATTLEBORO SPRINGS, Attleboro 508-223-3060</p>
<p>Breeding Birds of Massachusetts with Mass Audubon's Director of Bird Monitoring September 28, 1-2 pm WELLFLEET BAY, Wellfleet 508-349-2615</p>	<p>Canoe Expedition October 5, 10 am-4 pm DRUMLIN FARM, Lincoln 781-259-2200</p>	<p>Berkshire Fall Mushrooms September 28, 2-5 pm PLEASANT VALLEY, Lenox 413-637-0320</p>	<p>Halloween Spooktacular October 20, 2-4 pm ALLENS POND, South Dartmouth 508-636-2437</p>
<p>Wednesday Morning Birding Wednesdays, 9:30 am-12:30 pm JOPPA FLATS, Newburyport 978-462-9998</p>	<p>Fall Foliage Canoes on the Charles Weekends, October 5-20 BROADMOOR, Natick 508-655-2296</p>	<p>Mushroom Walk November 2, 1-4:30 pm MOOSE HILL, Sharon 781-784-5691</p>	<p>Halloween Happenings October 25 & 26, 6-9 pm IPSWICH RIVER, Topsfield 978-887-9264</p>
			<p>Farm Day Festival October 19, 10 am-4 pm DANIEL WEBSTER, Marshfield 781-837-9400</p>

*Pre-registration may be required. Please contact the host sanctuary for details.

Saving the Wild, Wild (Metro)West

by Bob Ford

Named for former owner Henry Warren, a philanthropist and inventor known as the “Father of the Electric Clock,” Warren Woods is a mosaic of wetlands, woods, and meadows in southwest Middlesex County. Thanks to financial support and land conservation expertise provided to the towns of Ashland and Holliston by Mass Audubon, the property is slated to grow by 22 acres, making it a 142-acre oasis for people and wildlife.

As part of the largest tract of open space in a heavily developed area of the state, Warren Woods provides a critical connection to other protected lands, including Holliston Town Forest, Ashland State Park, and Mass Audubon’s Waseeka Wildlife Sanctuary in Holliston and Hopkinton. This linkage creates one of the most substantial corridors of permanently protected “wildland” in the MetroWest (more than 1,000 acres), supporting numerous wildlife species that benefit from large, unbroken expanses of habitat.

Foxes, wild turkeys, and screech-owls all thrive in Warren Woods, and numerous trails weave through the property, providing opportunities for hiking, wildlife viewing, and exploration. ▲

Bob Ford is Land Conservation Specialist.

[▶ massaudubon.org/land](http://massaudubon.org/land)

ADVOCACY UPDATE

Merit Award for *Shaping the Future*

by Heidi Ricci

On June 22, 2013, Mass Audubon’s *Shaping the Future of Your Community* program received a prestigious Environmental Merit Award from

Mass Audubon’s Advocacy Team accepts an EPA Merit Award.



the New England Office of the U.S. Environmental Protection Agency (EPA). Presented annually, the Environmental Merit Awards recognize outstanding advocates who are leaders in preserving and protecting our natural resources.

The *Shaping* program was created in 2009 in response to sprawling land development patterns identified in Mass Audubon’s *Losing Ground* report (available at massaudubon.org/losingground). Recognizing that most land use decisions are made at the local level, the *Shaping* program provides workshops, resources, and

technical assistance to citizens and municipal officials. It helps communities preserve forests, water supplies, recreational trails, and other critical natural resources while supporting sustainable development. The program demonstrates that economic growth and conservation go hand in hand.

We are deeply honored by this award and thankful to our many partners who support the *Shaping* program. Special thanks to Mass Audubon Honorary Director Judy Samelson, whose vision and underwriting of the project have been crucial to its success. ▲

Heidi Ricci is Senior Policy Analyst.

[▶ massaudubon.org/shapingthefuture](http://massaudubon.org/shapingthefuture)

Volunteer Spotlight

by Ann Prince

Ann Gurka has been a volunteer extraordinaire for Joppa Flats in Newburyport for 14 years. The wildlife sanctuary—just a recently purchased property when she began donating her time—is now a hub of activity, featuring a green nature center at the gateway to Plum Island.

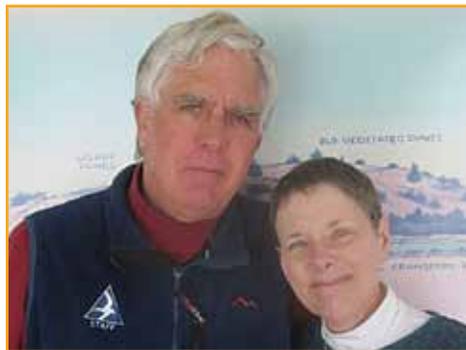
We asked Ann to answer a few questions.

Q: You live in Watertown—why do you volunteer on the North Shore?

A: People ask me that question a lot. I was interested in getting more involved with Mass Audubon and I'm primarily a birder, so I'd been going to Plum Island to see the shorebirds, waders, and other specialties. Then I met Sanctuary Director Bill Gette, and the rest is history!

Q: What were your responsibilities at the outset?

A: I attended a volunteer training workshop and then started to help out once a week, assisting Bill by co-leading



Joppa Flats volunteer Ann Gurka with Sanctuary Director Bill Gette

field trips and promoting programs. Next, Bill asked me to be the Bird-a-thon coordinator for Joppa Flats. This spring I organized my thirteenth Bird-a-thon! [Ann has raised more than \$200,000 for Bird-a-thon, Mass Audubon's longest running annual statewide fundraiser.]

Q: How did your involvement change when the Joppa Flats Education Center opened in 2003?

A: I continued to co-lead birding programs, such as Intro to Birding, and

assist staff. After I completed the first Birder's Certificate Program [Joppa's college-level course on birds], Bill asked me to join the committee to help plan and orchestrate from start to finish the first Superbowl of Birding, a winter event that attracts competitive birders from as far away as Pennsylvania. Teams seek the highest point levels based upon the likelihood that a particular bird will be around in that season; the rarer the species, the more points awarded. Over the years, two standouts have been a western tanager and a pine grosbeak.

Q: What do you like best about volunteering at Joppa Flats?

A: There is a sense of belonging to something bigger—of being part of a community. We're always welcome and appreciated. And each year Joppa Flats offers volunteers and supporters the chance to accompany staff members on a trip. So far I've gone to Belize, Costa Rica, Panama, and, this year, Yosemite. ▲

Ann Prince is Associate Editor of Sanctuary magazine.

[▶ massaudubon.org/volunteer](https://massaudubon.org/volunteer)

Staff Send-off: We'll Miss You, Mary!

by Patti Steinman



After 26 years of leadership, Connecticut River Valley Sanctuaries Director Mary Shanley-Koeber is leaving Mass Audubon at the end of September.

Mary began as a volunteer at Arcadia Wildlife Sanctuary (in Easthampton and Northampton) in 1982 and has been a fierce advocate for habitat protection from the start. In her time as sanctuary director, she has nearly *doubled* the size of Arcadia. She also has helped add two beautiful sites—Graves Farm in Williamsburg and Lynes Woods in Westhampton—to Mass Audubon's permanently protected statewide network of wildlife sanctuaries.

Under her guidance, the Arcadia preschool and volunteer programs became models for many organizations in the Valley and beyond. Mary leaves a legacy of strong citizen science, education, and land stewardship volunteer programs throughout the region.

We wish Mary all the best in her future adventures!

Mary would like to thank all of her Mass Audubon friends, colleagues, and volunteers for their support over the years. ▲

Patti Steinman is Education Coordinator at Arcadia Wildlife Sanctuary.

ACORNS: A Fall Feast

Acorns, which tumble from oak trees in the autumn, are an important food source for creatures large and small.

How many acorn-loving animals can you spot in this picture?

How many can you find outside?

1. White-breasted Nuthatch

You'll find this bird climbing down trees headfirst. It pushes acorns into bark and pecks (or "hatches") them open with its slender beak.

2. American Crow

The crow's diet is varied and includes fruit, insects, eggs, and fish. In autumn, when these foods may be scarce, it eats more nuts.

3. Blue Jay

You might hear this noisy bird squawking "jay, jay, jay!" or making a sound like a rusty gate. It even mimics the screams of hawks!

4. Northern Bobwhite

The only quail found in Massachusetts, the small but rotund bobwhite hunts for acorns and crabapples on the ground.

5. Wild Turkey

The turkey swallows acorns whole and grinds them with a muscular organ called a gizzard.

11. White-footed Mouse

You probably won't see a white-footed mouse eating out in the open; it prefers to dine in a sheltered place, such as under a log.

6. Raccoon

The raccoon is a great tree climber. It has a diverse diet, but acorns are its preferred food during cold months when its food supply is limited.

7. Tufted Titmouse

Look for a small gray bird with a pointy crest. It's often found in yards and loves to visit feeders.

8. Eastern Chipmunk

The chipmunk stores seeds and nuts in its burrow. During the winter, it wakes up every couple of weeks to eat.

9. White-tailed Deer

Not only does the white-tailed deer eat acorns, it also nibbles on oak leaves and twigs.

10. Eastern Gray Squirrel

This common squirrel often uses oak leaves to build its nest up in the tree canopy.

ready, set,
Go Outside!

massaudubon.org/go

Answer
key

A look back: In our last issue, we gave some pointers for keeping a nature journal. Those interested in learning more may also wish to check out the works of Clare Walker Leslie at clarewalkerleslie.com/books.

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The Natural Inquirer

by Robert Buchsbaum

Q. Which Massachusetts animals hibernate? And how do they do it?

A. The shorter days and cooler temperatures of fall are cues for animals to start gearing up for winter: Those animals that are neither cold-hardy nor able to avoid our cold New England winters survive by hibernating, or entering a prolonged inactive state in a relatively cozy place.

A good place for hibernation is one that is relatively stable, meaning that it provides insulation from the worst of the cold and also from the occasional warm winter day so the animals are not awakened prematurely. Examples include a burrow deep within the earth (woodchucks and salamanders), a spot in the mud at the bottom of a pond (many turtles, frogs, and aquatic insects), a hole in a tree (white-footed mice and mourning cloak butterflies), the inside of a cave (snakes), under tree bark (crickets), and cracks in the masonry in your basement (any number of insects!).

There are some amazing adaptations for hibernation. In woodchucks and other "deep-hibernating" rodents, body temperatures drop substantially and metabolism, heartbeat, and breathing rates slow down to save energy. These animals, and even others that occasionally wake up in winter, including bears, survive on the fat reserves that they accumulated by feasting on the bounty of the land in late summer and early fall. Additionally, some insects and frogs are able to produce chemicals similar to the antifreeze you use in your car, which prevents their tissues from freezing as they hibernate. ▲

Robert Buchsbaum is Regional Scientist.

Have you seen animals preparing for winter? Share your wildlife sightings with us!

facebook.com/massa Audubon



Woodchuck

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.

Photography & Illustrations

Cover: Barnstable Bay—Ruth West©

p 1-2: Wellfleet Bay tidal river—Mass Audubon©

p 3: Osprey—David Ennis©

Felix Neck Fall Festival photos—Mass Audubon©

p 4: *Land Science* students—Kristin Steinmetz/Mass Audubon©

p 5-6: Eastern meadowlark & wood thrush—John Sill©

p 7: Sackett Brook dam—Michael P. O'Connor/Mass Audubon©

Wood turtle—René Laubach/Mass Audubon©

p 8: Mushroom illustrations—Barry Van Dusen©

p 9: Broad-winged hawk & wood thrush—Shawn Carey©

Common green damer—Richard Johnson©

Common loon—Bruce deGraaf©

Monarch butterfly—Liana Jackson©

Roseate tern—Steve Schroeder©

Tree swallow—National Park Service©

p 11: Warren Woods—Mass Audubon©

EPA awards ceremony—U.S. Environmental Protection Agency©

p 12: Ann Gurka & Bill Gette—Mass Audubon©

Mary Shanley-Koeber—Steve Walker©

p 14: Hibernating woodchuck—Barry Van Dusen©



Mass Audubon works to protect the nature of Massachusetts for people and wildlife. Together with more than 100,000 members, we care for 35,000 acres of conservation land, provide school, camp, and other educational programs for 225,000 children and adults annually, and advocate for sound environmental policies at local, state, and federal levels. Founded in 1896 by two inspirational women who were committed to the protection of birds, Mass Audubon is now one of the largest and most prominent conservation organizations in New England. Today we are respected for our sound science, successful advocacy, and innovative approaches to connecting people and nature. Each year, our statewide network of wildlife sanctuaries welcomes nearly half a million visitors of all ages, abilities, and backgrounds and serves as the base for our work. To support these important efforts, call 800-AUDUBON (800-283-8266) or visit www.massaudubon.org.

Plan an Autumn Adventure

at a Mass Audubon Wildlife Sanctuary Near You



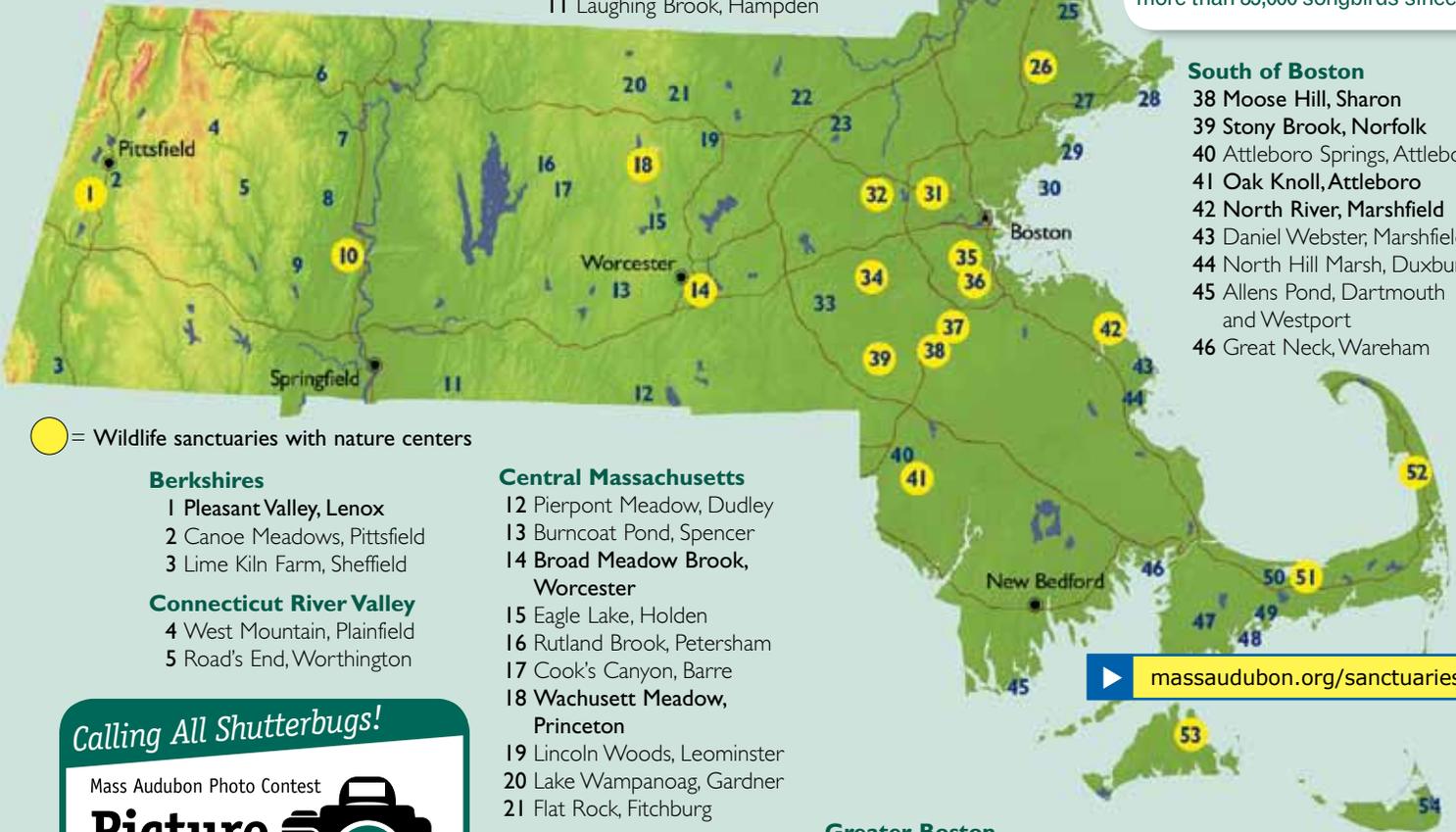
Mass Audubon has 54 wildlife sanctuaries open to the public year-round. They provide important habitat for wildlife and opportunities for you to enjoy and appreciate nature.

- 6 High Ledges, Shelburne
- 7 Conway Hills, Conway
- 8 Graves Farm, Williamsburg and Whately
- 9 Lynes Woods, Westhampton
- 10 Arcadia, Easthampton and Northampton
- 11 Laughing Brook, Hampden

Joppa Flats Education Center operates a bird banding station at Parker River National Wildlife Refuge on Plum Island. Here, they've banded more than 35,000 songbirds since 2003.

South of Boston

- 38 Moose Hill, Sharon
- 39 Stony Brook, Norfolk
- 40 Attleboro Springs, Attleboro
- 41 Oak Knoll, Attleboro
- 42 North River, Marshfield
- 43 Daniel Webster, Marshfield
- 44 North Hill Marsh, Duxbury
- 45 Allens Pond, Dartmouth and Westport
- 46 Great Neck, Wareham



 = Wildlife sanctuaries with nature centers

Berkshires

- 1 Pleasant Valley, Lenox
- 2 Canoe Meadows, Pittsfield
- 3 Lime Kiln Farm, Sheffield

Connecticut River Valley

- 4 West Mountain, Plainfield
- 5 Road's End, Worthington

Central Massachusetts

- 12 Pierpont Meadow, Dudley
- 13 Burncoat Pond, Spencer
- 14 Broad Meadow Brook, Worcester
- 15 Eagle Lake, Holden
- 16 Rutland Brook, Petersham
- 17 Cook's Canyon, Barre
- 18 Wachusett Meadow, Princeton
- 19 Lincoln Woods, Leominster
- 20 Lake Wampanoag, Gardner
- 21 Flat Rock, Fitchburg

North of Boston

- 22 Rocky Hill, Groton
- 23 Nashoba Brook, Westford
- 24 Joppa Flats, Newburyport
- 25 Rough Meadows, Rowley
- 26 Ipswich River, Topsfield
- 27 Endicott, Wenham
- 28 Eastern Point, Gloucester
- 29 Marblehead Neck, Marblehead
- 30 Nahant Thicket, Nahant

Greater Boston

- 31 Habitat, Belmont
- 32 Drumlin Farm, Lincoln
- 33 Waseeka, Hopkinton
- 34 Broadmoor, Natick
- 35 Boston Nature Center, Mattapan
- 36 Blue Hills Trailside Museum, Milton
- 37 Museum of American Bird Art at Mass Audubon, Canton

Cape Cod and the Islands

- 47 Ashumet Holly, Falmouth
- 48 Sampsons Island, Barnstable
- 49 Skunknet River, Barnstable
- 50 Barnstable Great Marsh, Barnstable
- 51 Long Pasture, Barnstable
- 52 Wellfleet Bay, Wellfleet
- 53 Felix Neck, Edgartown
- 54 Sesachacha Heathlands, Nantucket

massaudubon.org/sanctuaries

Calling All Shutterbugs!

Mass Audubon Photo Contest

Picture This: 

Your Great Outdoors

Send us your photos of people in nature, and Massachusetts wildlife and landscapes.

For complete rules, visit:
massaudubon.org/picturethis
Deadline: September 30, 2013