

Mass Audubon *Protecting the Nature of Massachusetts* Connections

MAY–AUGUST 2014

A NEWSLETTER FOR THE MEMBERS OF MASS AUDUBON

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Summer Fun from A to Z





Active

Get your heart rate going on one of our short, medium, or long trails. For those interested in a challenge, try Bluff Trail at Moose Hill in Sharon or Overbrook Loop at Pleasant Valley in Lenox.



Butterflies

Spot swallowtails, fritillaries, and more at one of our many wildlife sanctuaries with butterfly gardens, such as Boston Nature Center in Mattapan. Plus, celebrate all things butterfly during the Barbara J. Walker Butterfly Festival at Broad Meadow Brook in Worcester on August 9.



Cruise

Take to the open seas with a naturalist as your guide. Joppa Flats in Newburyport, Long Pasture in Barnstable, and Wellfleet Bay in Wellfleet all offer nature cruises throughout the season.



Duck Derby

"Adopt" a toy duck for Allens Pond's Duck Derby in Dartmouth on August 16. The prize: dinner for two anywhere in the world, including airfare and two nights' lodging!



Eat Local

Indulge in heirloom tomatoes, juicy melons, robust greens, and many other delights as part of a CSA share from Drumlin Farm in Lincoln or Moose Hill in Sharon.



Gifts

Looking for the perfect gift for weddings, graduations, Mother's Day, or Father's Day? Mass Audubon memberships are now half off for new members through June 30.

Hummingbirds

Keep these jewel-like birds visiting your yard with hummingbird feeders from the Audubon Shop in Lincoln.



Ice Cream

Head to Habitat in Belmont for Insects and Ice Cream on July 30, or attend the Ice Cream and... series at Broadmoor in Natick to enjoy a tasty treat and then venture out into the meadow to find natural treasures.



Summer Fun from A to Z

By Rosemary Mosco and Hillary Truslow

Make the most of your summer by spending more time outside! Our wildlife sanctuaries around the state offer endless opportunities to enjoy the great outdoors—whether it's going for a hike, taking a program, or enjoying the scenery by boat.



Get details on all of the ideas and programs mentioned at massaudubon.org/atoz.



June 21

Celebrate the summer solstice with a hike in the highlands at Windsor State Forest or take an all-day Appalachian Trail solstice ramble at Warner Hill in Washington. Both trips are run by Arcadia Wildlife Sanctuary.

Kestrel

Our smallest falcon is showing signs of decline. Help us learn more about the American kestrel by donating, volunteering, or reporting a sighting as part of the American Kestrel Project.

Learn

With its Cape Cod Field Schools, Wellfleet Bay offers exciting and active summer field courses for adults on topics such as sea turtles and nature sketching.



Make

Build a fairy house in programs at Oak Knoll in Attleboro on May 31 and Felix Neck in Edgartown on June 7, or create a clay flower vase at the Museum of American Bird Art in Canton on June 9.

Nature Play

Swap the slide for a stump jump at one of our many nature play areas around the state. Unlike traditional playgrounds, nature play areas give children the chance to construct their surroundings through natural elements and unstructured exploration.

Overnight

Mass Audubon members can camp for the night at Ipswich River's Perkins Island in Topsfield or Wellfleet Bay in Wellfleet, or sleep in a cozy cottage at Pierpont Meadow in Dudley.

Paddle

Take in the sights and sounds of summer by canoe or kayak through scheduled programs at many wildlife sanctuaries, including Arcadia in Easthampton and Northampton and Felix Neck in Edgartown. You can even rent canoes at Wachusett Meadow in Princeton.

Quest

With our Quest scavenger hunts, kids can take their hikes to the next level while learning fun nature facts.

Research

Help us understand the status of different species of wildlife by taking part in a citizen science-based research project, such as the Big Barn Study (barn swallows and cliff swallows) or Odonate Monitoring (dragonflies and damselflies).

Senses

Immerse yourself in nature on one of our 10 multi-sensory interpretive trails, such as the one at Stony Brook in Norfolk. These universally accessible trails create a rich experience for visitors with a wide range of vision, hearing, and mobility levels, but they can be appreciated by all.

Turtles

See turtles basking in the sun on logs, rocks, and embankments at just about all of our wildlife sanctuaries (Habitat in Belmont even has a Turtle Pond Loop trail). Or join a Long Pasture program to go in search of diamondback terrapins on Barnstable's Sandy Neck beach throughout the summer.

Universe

Take a naturalist-led full moon hike on June 13 with Broad Meadow Brook in Worcester or on July 12 by canoe with Arcadia in Easthampton and Northampton. Wherever you are, watch for the Perseid meteor shower, which peaks between August 12 and 13.

Volunteer

Our wildlife sanctuaries are busy in the spring and summer, and there's plenty of need for volunteers to help with our admissions, gift shops, camps, gardening, wildlife monitoring, and more.

Wonder

Nothing inspires wonder more than hands-on learning. Families and adults can touch, feel, and see exhibits at Blue Hills Trailside Museum in Milton, Joppa Flats in Newburyport, and North River in Marshfield.

X Marks the Spot

Want to find wildlife sanctuaries near you? Visit our recently redesigned website, massaudubon.org, for an interactive map.

Yoga

Rejuvenate body and soul in nature-inspired yoga classes and a weekend retreat at Allens Pond in Dartmouth, where sounds of the outdoors will enrich your sessions.

Zoom

Our photo classes, such as the Summer Photography Workshop at Broadmoor in Natick on August 9, will help you learn the ins and outs of your camera so that you can capture this summer's best moments. Share your images with us on Facebook, Instagram, and Twitter. Better yet, enter the 2014 Mass Audubon Picture This: Your Great Outdoors Photo Contest.

Rosemary Mosco is Marketing Coordinator and Hillary Truslow is Assistant Director of Marketing and Communications.

**Register
Online!**



massaudubon.org/programs



Celebrating Stony Brook's Semicentennial

By Heather Cooper

Once the site of an 18th-century shoddy mill (producing recycled wool material), Stony Brook Wildlife Sanctuary in Norfolk didn't always resemble the vibrant landscape it is today. The old brick and mortar mill, complete with smokestack and waterwheels, defined the property at the end of the industrial revolution.

Since inheriting the land in 1964, Mass Audubon has worked closely with the Commonwealth's Department of Conservation and Recreation to reinvigorate and preserve Stony Brook's natural landscape. Today, the woodlands, fields, and wetlands teem with native wildlife. As for the sanctuary's namesake, the brook that once powered the mill is now home to an abundance of wood ducks, river otters, beavers, great blue herons, and many other wetland creatures.

From the beginning, sanctuary staff have shared their natural history knowledge and passion with their community, engaging families, educating students, guiding scouts, inspiring campers, and encouraging all to revel in the wonders of nature.

This year Stony Brook celebrates 50 years of conservation, hands-on education, and community engagement with an interactive historical exhibit (ongoing) and events. To get the scoop on upcoming festivities, visit massaudubon.org/stonybrook and plan your visit!

Heather Cooper is Marketing Manager.



Felix Neck's Fern and Feather Day Camp Turns 50

By Heather Cooper

It was Martha's Vineyard, 1964, and conservationist Anne Hale and others felt that the Island community needed a place where kids could roam free to explore nature. They envisioned a space where youngsters would gather to watch birds and butterflies, turn over logs, spot frogs, and learn from knowledgeable naturalists.

The group founded the Martha's Vineyard Natural History Society and started Fern and Feather Day Camp at Felix Neck. Fern and Feather put kids into a living classroom and showed them nature in a way that couldn't be taught at a desk. It also cultivated an awareness and understanding of one's surroundings—two key tenets of conservation. And it continues to do so to this day.

Former camper-turned-land-surveyor Kara Shemeth Dekkers recalls her time at Fern and Feather: *"I learned so much and had such a great time. It fostered a love of the Island's natural history and the conservation efforts that take place here. It led me to where I am today and has become a part of who I am."*

In honor of Fern and Feather's 50th anniversary, the wildlife sanctuary has set a goal of raising \$50,000 to ensure that all Island families can participate in this enduring tradition. Want to join the festivities? Visit massaudubon.org/felixneck to watch a special anniversary video, see a schedule for upcoming special events, and help support the scholarship fund.

Heather Cooper is Marketing Manager.

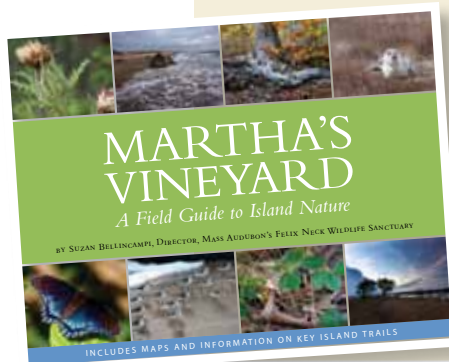
Go-to Guide for Island Nature

To commemorate the 50th anniversary of Fern and Feather Day Camp, Felix Neck Wildlife Sanctuary has made a classic Island nature book, Anne Hale's *Moraine to Marsh*, new again.

Sanctuary Director Suzan Bellincampi has rewritten and updated Hale's 1988 work, now titled *Martha's Vineyard: A Field Guide to Island Nature*, to spark a new generation's interest in outdoor exploration.

This full-color book includes new properties, detailed trail maps, professional photography, and illustrated guides to identify Island flora and fauna.

Proceeds from book sales will fund community conservation initiatives at Felix Neck. Copies will be available in June at Felix Neck, Island bookstores, the Audubon Shop in Lincoln, and online at shop.massaudubon.org.





Tara Henrichon



Christine Turnbull



René Laubach

Changing of the Guard

By Michael P. O'Connor

Mass Audubon is saying farewell to several long-time sanctuary directors and welcoming new faces to our roster.

Earlier this year, Oak Knoll's Tara Henrichon and Moose Hill's Christine Turnbull stepped down from their leadership positions as sanctuary directors to pursue new opportunities beyond the organization.

At the end of May, Berkshires Sanctuary Director René Laubach will be retiring—29 years and five months after first joining Mass Audubon.

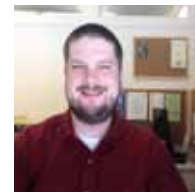
Jonah Keane picked up the reins as sanctuary director at Connecticut River Valley Sanctuaries this past winter.

And Welch Narron, former program coordinator at Wildwood, Mass Audubon's overnight camp, has filled the big shoes left by Bob Speare as camp director. Don't worry: Bob didn't go far. He is now regional director for our sanctuaries on the Cape and Islands, South of Boston, and Wildwood, of course!

Michael P. O'Connor is Public Relations Manager.



Jonah Keane



Welch Narron



Bob Speare

Missions Accomplished

Two wildlife sanctuaries recently completed major campaigns and have new buildings to show for it.

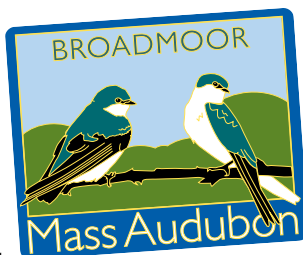
New Nature Center at Broadmoor

On November 2, 2013, Broadmoor in Natick unveiled its newly renovated state-of-the-art nature center and pavilion. The Saltonstall Nature Center, which pioneered green design at Mass Audubon 30 years ago, now features a cathedral ceiling, easy access to the trails, and expanded classroom and program space on a lower elevator-accessible level. Outside, the new 625-square-foot covered Esther Grew Parker Pavilion offers shelter, seating, and scenic views.

The new features provide the perfect setting for everything from educational programs for all ages and birthday parties to watercolor workshops and art shows. These facilities are also available as a unique setting for corporate retreats, conferences, and meetings.

The renovations build on the award-winning ecofriendly nature center, which already had photovoltaic panels, roof rainwater collectors, composting toilets, and more. New additions, such as LED lights and ceiling fans, make the center even greener.

Broadmoor is grateful to the donors who have helped make this project a reality. While the Campaign for Broadmoor was a success, additional support is needed to fully launch the nature center in its first year of operation. Visit massaudubon.org/broadmoor for more information.



A Better Workspace for Ipswich River Wildlife Sanctuary's Educators

Ipswich River in Topsfield has been bursting at the seams! Programs for children and families have been expanding dramatically, and with that growth comes the need for more space. The sanctuary's field teachers and weekend docents were certainly feeling the pinch of serving over 16,000 program participants each year.

Until recently, all program supplies were stored in a hallway at the Bradstreet House Nature Center. Imagine six field teachers trying to get ready in a narrow hall with other staff members maneuvering around them. It's a tight fit!

In response, Ipswich River is opening a new Educators' Place this spring in the footprint of an old maintenance workshop. The space will give educators plenty of room to develop and plan for top-notch school programs, nature hikes, and many more experiences that will reach even more kids and families.

These improvements follow the renovations to the visitor center and the conservation barn. Many thanks to the donors whose generous contributions enabled the creation of this space. For more information, visit massaudubon.org/ipswichriver.



The Story Behind the Photo

By Hillary Truslow

With some 2,000 photographs submitted to our 2013 Picture This: Your Great Outdoors photo contest last year, it was no easy task to select the winners, let alone the Grand Prize winner. After countless hours of deliberation, the judges, including Bob Speare, one of Mass Audubon's photography instructors, emphatically selected Paul Mozell's stunning image of Mass Audubon's Rough Meadows Wildlife Sanctuary in Rowley.



So what makes this photograph Grand Prize worthy? Speare breaks it down.

Leading lines: The left-leaning birches combined with the angles of the salt marsh funnel you into the center of the image.

Sharp focus: Note the excellent use of a long depth of field, keeping most of the image in focus. This allows for plenty of texture, from the knobs on the birch trees to the wispy clouds to the vegetation in the salt marsh.

Balanced exposure: Because he took this photo at the golden hour just before sunset, Mozell was able to use the light to his advantage: the shadows are defined without being black, and the white of the birches is defined without being blinding.

Proper framing: Often a landscape image can fall flat without something to "frame" the shot. The birches in this image provide a nice place for the eye to fall, and as the eye moves out into the saltmarsh these foreground trees help show the depth in the overall shot.

Even horizon: One of the biggest mistakes a photographer can make is having a slanting horizon line. A tripod can come in handy to keep the horizon straight.

Mass Audubon Photo Contest



Your Great Outdoors

Online Bonus! Get tips on how to take a prize-winning photo, find photo classes, and enter the 2014 photo contest at massaudubon.org/phototips.

Hillary Truslow is Assistant Director of Marketing and Communications.

Climate Change: Protecting Our Natural Security

By Christina McDermott

Tackling climate change isn't just about reducing greenhouse gas emissions. We also need to start planning for the climate change impacts that we won't be able to avoid. Mass Audubon is working to help our state adapt and reduce the risks associated with these impacts—and we need your help.

Harnessing Our Natural Resources

Our strategy is to rely on our “natural security”: the unique strengths of our state's natural resources. Protecting and restoring our forests, stream corridors, and coastal wetlands can help our cities and towns remain resilient in the face of extreme storms and weather events. For example, wetlands can soak up rainfall to decrease flooding during storm events, and coastal barrier beaches can absorb wave energy before it reaches our homes.

Protection through New Legislation

Mass Audubon's Advocacy Department is guiding climate change response strategies at a statewide level by working with government partners to adopt a climate preparedness plan. As part of this work, we helped draft a new bill that would determine the location of vulnerable areas in the Commonwealth's built and natural environments and how best to protect them.

The bill (S.2028) calls for the development of a comprehensive adaptation management plan, including strengthening our electrical grid, buildings, roads, and water supplies, and recognizing the protective value of our beaches, wetlands, and forests. At a press conference announcing the bill, its lead sponsor, Senator Marc Pacheco, said, “The cost of inaction is far greater than any investment that may be necessary to protect our future. We must take these steps to defend the Commonwealth against the effects of climate change before Mother Nature intensifies her defense against all of us.”

Climate Adaptation Projects

In addition to helping craft this bill, Mass Audubon has worked on many projects over the last year to prepare for the effects of climate change. Learn more at massaudubon.org/climatechange.



The Coastal Waterbird Program protects over 60 miles of barrier beach coastline annually and works with many communities on beach renourishment projects.



Wellfleet Bay Wildlife Sanctuary is partnering with the town of Wellfleet on regional adaptation strategies such as erosion prevention through saltmarsh restoration and restoring oyster reefs.



Cape Ann students, supported by Education Coordinator Liz Duff, are assessing areas vulnerable to coastal flooding from sea level rise and sharing their findings with local community leaders.



Sackett Brook at Canoe Meadows in Pittsfield was restored by removing a dam. We are supporting similar projects and the upgrading of culverts across the state to allow fish and wildlife to find cool, shaded habitat while protecting roads from washouts.



Shaping the Future of Your Community workshops supply communities in the state's fastest developing regions with the information they need to make smart land use decisions, including climate change planning.



How You Can Help

Help make sure that Massachusetts is proactive in addressing climate change impacts by calling or emailing your legislators and telling them you support S.2028. Find out how to contact them at massaudubon.org/takeaction.

Christina McDermott is Assistant to the Director of Public Policy.



By the Numbers: Breeding Bird Atlas 2

By Joan Walsh and Mathew Kamm

There are many messages in this spring's birdsongs. These melodies are advertisements from breeding birds, announcing that they've begun to go about the important business of nesting. If you listen carefully, though, you'll hear other messages telling of the shifting fortunes of our feathered friends. From 2007 to 2011, Mass Audubon and more than 650 volunteers collected data to help us create *Massachusetts Breeding Bird Atlas 2*. Released at the end of 2013, the report enables us to figure out the best solutions to important conservation challenges. Here are some of the discoveries.

191

bird species are confirmed to breed in Massachusetts, with an additional 19 probable and 13 possible breeders.

60%

of our breeding bird species are stable or increasing.

40%

of our breeding bird species are likely or definitely declining.

79%

of the state now has breeding wild turkeys, up from less than 2% in the 1970s.

10%

of the state now has breeding eastern meadowlarks, down from 44% in the 1970s.

55%

of bird species that breed in shrublands and young forests are declining.

71%

of bird species that breed in established forests are stable or increasing.

3 out of 5

of our native swallow species are declining.

For more information about breeding birds or to purchase an eBook copy of *Massachusetts Breeding Bird Atlas 2*, visit massaudubon.org/bba2.

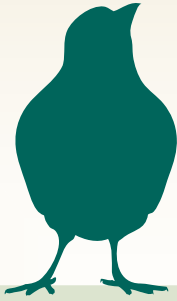
Joan Walsh is Director of Bird Monitoring and
Mathew Kamm is Bird Conservation Assistant.



May 16-17
massaudubon.org/birdathon



FOUND A BABY BIRD?



During the spring and summer, we often get calls from people who've found a baby songbird outside of the nest. Unfortunately, well-intentioned attempts to "save" a baby bird can do more harm than good. When should you take action, and what action should you take? We've created a handy chart to help you figure out what to do.

START

Is the bird visibly injured, or has a cat attacked it?

YES

Contact a licensed wildlife rehabilitator or wildlife care center. For more, visit massaudubon.org/babybirds.

NO

Are its eyes open?

YES

Is it well feathered, though with a short tail and wings, and can it walk, hop, or flutter?

NO

NO

YES



You have a hatchling, a baby that is between zero and four days old.

Are its feathers few and perhaps in tubelike sheaths?

YES



You have a nestling. It's usually three to 13 days old.



You have a fledgling, a baby that is 13–14 days old or older.

Can you see the nest?

YES

NO

Return the bird to the nest. Most birds don't have a well-developed sense of smell, so the parents won't know that the baby bird has been touched by a person.

Make a replacement nest using a shallow basket (2–5" high). Place dried grass in the bottom of the basket. Cut two 20" lengths of wire and push them through the bottom so there are four pieces of wire hanging down. Place the basket on the top of a branch in a nearby tree and use the wires to securely attach it. Put the birds inside.

Fledglings rarely need human intervention. Parent birds will continue to feed their offspring on the ground and teach them to fly. If a bird is in immediate danger (for example, if it's on a sidewalk or road), place it on top of a nearby shrub or bush and leave the area. Don't attempt to feed the baby—its parents can do a much better job!



Adapted from Rosemary Mosco's chart at birdandmoon.com.
Rosemary Mosco is Marketing Coordinator.



Your Help Needed at High Ledges

By *Charlie Wyman*

Mass Audubon's High Ledges Wildlife Sanctuary is a truly spectacular place. Spanning nearly 600 acres in Shelburne, it extends eastward from the bank of the Deerfield River above Shelburne Falls and then up the dramatic slope of Mount Massamett to the high ledges. The heart of the wildlife sanctuary, with its spectacular views and wildflowers, was a gift of love from Dutch and Mary Barnard of Amherst in 1970.

We now have an exciting opportunity to add a critical piece to this wildlife sanctuary. A developer recently acquired much of the forested west-facing slope below High Ledges. The state has classified parts of this property as among the most important for the preservation of biodiversity because of the presence of limestone, which contributes to nutrient-rich soils that support a variety of unusual species.



Fortunately, the developer has agreed to sell us the most significant 55 acres. But in order for us to take advantage of this opportunity, we must raise \$80,000 by June 1. This is an exciting chance to add land with high conservation value to an important wildlife sanctuary at a reasonable price, and we need your help to succeed.

To learn more, visit massaudubon.org/urgentland or contact Liz Albert, Development Director for Statewide Initiatives, at 781-259-2104.

Charlie Wyman is Land Protection Specialist.

Welcome to West Mountain

By *Michael P. O'Connor*

There's a new Mass Audubon wildlife sanctuary to explore! We recently put the finishing touches on the first trail at West Mountain. Situated in the Berkshire Hills community of Plainfield, West Mountain Wildlife Sanctuary encompasses more than 1,600 acres amid a much larger mosaic of protected land.

Explore the 1.3-mile East Slope Loop Trail, an easy-to-moderate route that begins at a beaver dam ("refined" nightly by its furry engineers) and meanders through wetlands and woodlands of oak and birch, maple and beech. This latter smooth-barked tree sometimes exhibits the claw marks of black bears, which along with moose, beavers, bobcats, and fishers can be found within the wildlife sanctuary.

"Only on a parcel of this size and elevation do you get such a diverse mix of habitats as well as interesting geological features," says Regional Property Manager Ron Wolanin, who prepared the sanctuary for visitation.

For example, the upper slopes of 2,125-foot West Mountain (not yet trail accessible) are blanketed with spruce and fir that provide habitat for ruffed grouse and Blackburnian warblers.

Dudley and Judy Williams also know just how special this land is: the Plainfield residents donated 400 acres of adjacent land under a conservation restriction to Mass Audubon. "We enjoy the land and wished to provide a large tract between Hawley State Forest and West Mountain that maintains a wildlife corridor and protects an existing healthy ecosystem," they said. "We support what Mass Audubon has done at West Mountain and want to see it continue the good work here."

To find out more, visit massaudubon.org/westmountain.

Michael P. O'Connor is Public Relations Manager.



Volunteer Spotlight:

Drumlin Farm's Jonathan and Marisa Marquardt

by Pam Sowizral

Like many who volunteer at Drumlin Farm Wildlife Sanctuary in Lincoln, brother and sister team Jonathan and Marisa Marquardt first visited the farm as kids. Years later, when Marisa was looking for a welcoming and engaging environment for Jonathan, who has Down syndrome, she thought of Drumlin Farm. The siblings have volunteered at the Farmstand and joined the Farm Ambassador program, helping to educate Drumlin Farm visitors about farm- and nature-related topics. This summer they'll return for their fifth year.

Teaching and Learning

Marisa says that, as Farm Ambassadors, she and Jonathan are able to "reconnect with nature and with each other." Jonathan especially loves teaching with the Birds of Prey kit, impressing children and adults alike with his knowledge of hawk feathers and skulls.



Drumlin Farm volunteer Jonathan Marquardt

Food for Thought

On many a summer's day, the Marquardts are kept busy at the Farmstand helping visitors purchase fruits and vegetables that are grown on the farm. They answer questions, make sales, hand out recipe cards, and provide yummy samples. Marisa says that volunteering at the Farmstand has allowed her to work with Jonathan on his money skills—"And we always end up taking home a ton of fresh produce!"

Impressions

Marisa is grateful for Drumlin Farm's "friendly and supportive" staff. "We really do appreciate all the kind words of encouragement and being included in various activities around the farm. Jonathan and I look forward to working at Drumlin Farm every summer."

Renata Pomponi, Drumlin Farm's visitor education coordinator, is deeply thankful for the siblings' contributions. "We rely on volunteers like Marisa and Jonathan who are enthusiastic, thoughtful, and reliable in sharing the best of Drumlin Farm with our visitors."

To find out more about the Farm Ambassador program and other volunteer opportunities at Drumlin Farm, visit massaudubon.org/drumlinfarm.

Pam Sowizral is Volunteer Coordinator at Drumlin Farm.

We're #1 in Volunteers!

Mass Audubon topped the list of the 25 largest not-for-profit organizations in Massachusetts in terms of the number of volunteers in 2013, according to a recent *Boston Business Journal* survey. With more than 14,000 volunteers, we rank above well-known institutions such as the Museum of Fine Arts, WGBH, and the Appalachian Mountain Club.

Our extraordinarily dedicated volunteers participate in group service projects, serve on our Board and Council, and engage in a variety of activities in support of our mission. At the core of our volunteer corps are the approximately 6,500 individuals who make an ongoing commitment to one of our wildlife sanctuaries, to conservation programs such as the Coastal Waterbird Program, or to departments such as Membership. They're involved in education, visitor services, property

maintenance, and ecological management; they participate in our annual Bird-a-thon fundraiser, where teams of birders spend 24 hours trying to spot the most species in Massachusetts; and they plan and assist with special benefit events.

These volunteers include 500 people who contributed more than 50 hours last year and 69 who contributed over 250 hours.

Become a Mass Audubon volunteer and see what fun lending a hand can be! For more information, visit massaudubon.org/volunteer.





Mass Audubon Camps

Have fun, make friends,
and connect to the
natural world!

17 Day Camps
and one Overnight Camp



Register today at
massaudubon.org/camps.

Museum of American Bird Art
at Mass Audubon



Painting Birds to Save Them:

*The Critical Role of Art in the Bird
Conservation Movement*

June 1–September 14, 2014

massaudubon.org/maba
781-821-8853

Increase the impact of your dues or donation!

Many employers will match your
donations to Mass Audubon
(which includes membership dues).
These added funds are vital to
protecting wildlife and wild lands.



Visit massaudubon.org/matchinggifts
to learn more.



Join Mass Audubon Naturalists
and Ornithologists for

Birding and Natural History Tours

Tanzania Birding with
Wayne Petersen, January 2015

Cuba with Bob Speare, February 2015

Uganda with Chris Leahy, February 2015

Southern Ecuador with
Dave Larson, February 2015

For details, call 800-289-9504, email
travel@massaudubon.org, or visit
massaudubon.org/travel.

SPRING & SUMMER PROGRAM SAMPLER

A snapshot of seasonal offerings at our wildlife sanctuaries.*

Beautiful Birds

Wednesday

Morning Birding

Every Wednesday except
in July, 9:30 am–12:30 pm
JOPPA FLATS, Newburyport
978-462-9998

Chimney Swifts

May 28, 7–9 pm
ARCADIA, Easthampton
and Northampton
413-584-3009

Celebrating Birds with Bird Art!

June 1, 1–4 pm
MUSEUM OF AMERICAN
BIRD ART, Canton
781-821-8853

Heron Rookery Excursion

June 28, 9 am–noon
IPSWICH RIVER, Topsfield
978-887-9264

Owl Prowl

August 13, 8:30–9:30 pm
MOOSE HILL, Sharon
781-784-5691

Intriguing Plants & Insects

Spring in the Hive: Swarming, Swarm Management, & Hive Splitting

May 24, 10 am–noon
BOSTON NATURE CENTER, Mattapan
617-983-8500

Open House & Native Plant Sale

June 8, 10 am–3 pm
NORTH RIVER, Marshfield
781-837-9400

Ice Cream and...Frogs, Fireflies, & Bats

July 8 & 22 and August 5, 7:30–9 pm
BROADMOOR, Natick
508-655-2296

Introduction to Moths

July 22, 8 pm–midnight
BROAD MEADOW BROOK, Worcester
508-753-6087

Evening Walk

August 24, 6–8 pm
LAUGHING BROOK, Hampden
413-584-3009

Fireflies & Frogs

August 27, 7–8 pm
OAK KNOLL, Attleboro
508-223-3060

Aquatic Adventures

Aquatic Explorations in Hyannis Harbor

Every Thursday in July and
August, boat leaves at 1:30 pm
LONG PASTURE, Barnstable
508-362-7475

Beach Rambles at Allens Pond

July 5 & 26, 10 am–noon
ALLENS POND, South Dartmouth
508-636-2437

Canoe Trip on Upper & Lower Goose Pond

June 29, July 26, and
August 17, 8 am–noon
PLEASANT VALLEY, Lenox
413-637-0320

A Night at the Pond

August 13, 6:30–8 pm
HABITAT, Belmont
617-489-5050

Canoe Moosehorn Pond

August 17, 1–3 pm
WACHUSETT MEADOW,
Princeton
978-464-2712

Events & Festivals

Mother's Day Brunch & Stroll

May 11, 10:30 am–12:30 pm
BLUE HILLS TRAILSIDE
MUSEUM, Milton
617-333-0690

Walk for Wildlife

May 17, 9–11:30 am
DANIEL WEBSTER, Marshfield
781-837-9400

Shark Fest

May 25, 10 am–5 pm
WELLFLEET BAY, Wellfleet
508-349-2615

Wild Edibles Ramble

May 25, 1–4 pm
FELIX NECK, Edgartown
508-627-4850

Strawberry Day

June 14, 10 am–4 pm
DRUMLIN FARM, Lincoln
781-259-2200

massaudubon.org/programs

*Preregistration may be required. Please contact the host wildlife sanctuary for details.

EXPLORING THE NATURE OF MASSACHUSETTS

by Rosemary Mosco

Secrets of Salamanders

Few people ever catch a glimpse of a salamander, but they have much to tell us about the health of our environment. Salamanders live in many of our waterways and woods, and they're sensitive; their permeable skin makes them vulnerable to toxins, and many of them have highly specific habitat needs, such as vernal pools, small water bodies that dry up in summer.

Salamanders look somewhat like lizards, but they're only distant relatives—in fact, lizards are more closely related to mammals than they are to salamanders! Whereas lizards are reptiles, salamanders are amphibians, as are frogs and toads. Lizards have scales and claws; salamanders do not. Some salamanders have no lungs and can only “breathe” through their skin. Mudpuppies and newts are also salamanders, and all belong to the order Caudata, from the Latin word *cauda*, meaning “tail.”

Salamanders come in a dizzying array of colors and patterns, and their life cycles are just as varied. Spotted and blue-spotted salamanders belong to a group called “mole salamanders” (genus *Ambystoma*) because they spend most of the year underground, often in mammal burrows. They emerge in spring to mate in vernal pools, whose temporary nature can't sustain fish that would otherwise snack on young salamanders.

Other species, like northern two-lined and spring salamanders, live in and around cool streams and attach their eggs to the undersides of rocks. The eastern red-backed salamander spends its entire life on the forest floor. How does this vulnerable amphibian protect itself? Like many salamanders, it secretes a sticky, foul-tasting slime.

Three of the 11 salamander species in Massachusetts are listed under the Massachusetts Endangered Species Act. If we work hard to protect their varied habitats and keep our waterways clean, we can create a healthy future for both people and salamanders.

Learn more about these and other creatures at massaudubon.org/nature-wildlife.



Eastern Newt

(*Notophthalmus viridescens*)

The eastern newt has three life stages: a dark brownish aquatic larval stage, a bright orange terrestrial (land-dwelling) stage (“red eft”), and an olive-colored, pond-dwelling adult stage. Keep an eye out for efts at Lake Wampanoag in Gardner and Broadmoor in Natick. You may also see hundreds near the trails at Wachusett Meadow in Princeton.



Spotted Salamander

(*Ambystoma maculatum*)

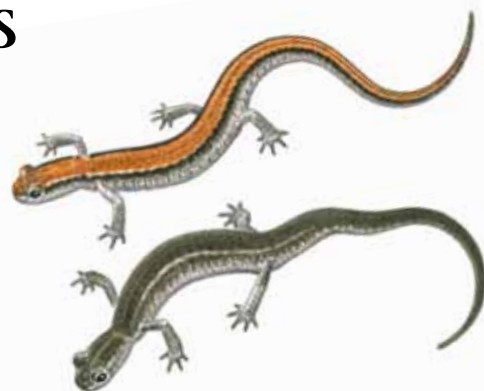
This large, stout salamander is found all across the state. On warm spring nights, members of this species travel to temporary water bodies to breed. Look for their jelly-like egg masses at many wildlife sanctuaries, including Lynes Woods in Westhampton, Moose Hill in Sharon, Broadmoor in Natick, Attleboro Springs in Attleboro, and Ipswich River in Topsfield.



Northern Two-lined Salamander

(*Eurycea bislineata*)

Sleek and speedy, this salamander eats beetles, mayflies, snails, and other small creatures. Look for it along streams at Broad Meadow Brook in Worcester, Wachusett Meadow in Princeton, and North River in Marshfield.



Eastern Red-backed Salamander

(*Plethodon cinereus*)

This species is the most numerous backboned animal in the Northeast! It's found at wildlife sanctuaries all across the state, from Pleasant Valley in Lenox to Felix Neck in Edgartown. It comes in a number of color forms, including a “lead-back” form that is as gray as its namesake metal.



Blue-spotted Salamander

(*Ambystoma laterale*)

This species has sky-blue spots. It's listed as Special Concern under the Massachusetts Endangered Species Act, which means that its population is in danger of plummeting, and it's important not to handle or otherwise harass these salamanders. You may encounter some that seem larger and less spotted than others. Through genetic studies, scientists have found that these particular individuals belong to an all-female population that's a mix of several species, one of which is the blue-spotted salamander. Incredibly, they reproduce without fertilization, creating young that are entirely female, but they still court with males to stimulate the reproductive process (in our region, it's with male blue-spotted salamanders or larger, browner Jefferson salamanders).

Rosemary Mosco is Marketing Coordinator.

Caterpillars

Whether you're exploring the wildest forests or a city garden, keep an eye out for caterpillars!

What Are Caterpillars?

It may be hard to believe, but every moth and butterfly was once a caterpillar. After hatching from an egg, a caterpillar's job is to eat and grow until it's big enough to turn into an adult moth or butterfly. To see the connection between young and adult, count the legs: they both have six, though a caterpillar also has stubby false legs with bristly tips called prolegs near its rear.

Tips for Observing Caterpillars

Look for caterpillars on almost any plant. You may see them on leaves, twigs, bark, or flowers. Many are hard to spot because they hide from predators by camouflaging themselves, matching the color and pattern of a plant. Others are brightly colored to warn that they're poisonous. BE CAREFUL: Look but don't touch unless an expert says it's OK. Caterpillars that are spiny or hairy can hurt you.

1



As a grownup, I still have black and yellow spots and stripes.

Match the Caterpillar with the Adult Moth or Butterfly

2



Look for the white "moon" shapes on the wings of my adult form.

3



My bright colors warn predators that I'm poisonous, and when I grow up, I'll warn them with even brighter colors!

a



Cecropia Moth

b



Black Swallowtail Butterfly

c



Monarch Butterfly

Make an Egg Carton Caterpillar

Grab a cardboard egg carton and have an adult help you cut out a strip of 6 cups. Flip the cups over and paint the outside—remember, caterpillars come in many colors and often have spots or stripes, so you can be creative! When the paint is dry, draw a face on one of the end cups. Try adding pipe cleaner antennae or make construction paper leaves for your caterpillar to munch on.



ready, set,
Go Outside!

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The Natural Inquirer

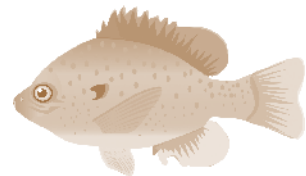
by Robert Buchsbaum

Q. When I jump into a lake in summer, why is the water just below the surface so cold?

A. Many lakes in Massachusetts are great places to swim, and they generally warm up nicely in the summer. However, those of us who like to dive below the surface, touch the bottom, or search for crayfish can be in for a chilly experience. The water can change from warm to cold surprisingly quickly.

If you've ever had this experience, it means that you've passed through a thermocline—from the Greek words for "heat" and "slope"—a region of rapidly changing water temperature that separates the relatively warm surface waters of the lake from the cooler waters down below. A thermocline forms in summer after the surface waters have had a chance to warm up. Warm water is less dense than cold water, which tends to sink, and the layers don't readily mix. The summer lake then consists of three layers: the warm surface waters, which are very pleasant for swimming; a transition zone (the thermocline); and the cold bottom waters, which are great for lake trout but not for us.

When fall cools the lake surface, the differences in density disappear and the waters become thoroughly mixed from top to bottom. The presence of a summer thermocline is one way limnologists (scientists who study lakes) distinguish between lakes and ponds. Ponds are too shallow to form these three layers, so the water temperature of a pond is uniform from top to bottom even in summer.



Pumpkinseed sunfish prefer ponds and the warmer parts of lakes.

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

Have you seen any interesting lake wildlife? Share your sightings at facebook.com/massaudubon.

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

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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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p 13: Pumpkinseed Sunfish Illustration—Kristin Foresto©

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Welcome Spring and Summer *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.

Broad Meadow Brook Wildlife Sanctuary

80 butterfly species have been recorded here, including two new ones in the past two years.



 = 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
- 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

Central Massachusetts

- 12 Pierpont Meadow, Dudley
- 13 Burncoat Pond, Spencer
- 14 Broad Meadow Brook, Worcester
- 15 Eagle Lake, Holden
- 16 Cook's Canyon, Barre
- 17 Rutland Brook, Petersham
- 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

Greater Boston

- 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

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

- 35 Boston Nature Center, Mattapan
- 36 Blue Hills Trailside Museum, Milton
- 37 Museum of American Bird Art at Mass Audubon, Canton

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

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