

Mass Audubon *Protecting the Nature of Massachusetts* Connections

MAY – AUGUST 2012

A NEWSLETTER FOR THE MEMBERS OF MASS AUDUBON

Saving Shorebirds

Coastal Waterbird Program

Celebrates 25th Anniversary

see page 2



A piping plover patrols the beach at Allens Pond.



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

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A Message from Laura

The news may have reached you by now that I have decided to step down as Mass Audubon's President by the end of year. While change can be hard, I am confident that this great organization, with its compelling mission and wonderful staff and volunteers, will continue to thrive with new leadership.

As I reflect on the many accomplishments of these past 13 years, what stands out for me are the people I have been privileged to work with—members, staff, volunteers, partners and colleagues. Together we have achieved great things, and we have moved this organization to an even more impressive record of success and impact.

What I am most proud of during my tenure are themes captured in our strategic plan:

Connecting people and nature – Long a hallmark of Mass Audubon, our programs and sanctuaries provide fun, safe and educational—indeed transformative—opportunities for everyone to enjoy and understand nature. We have placed significant emphasis and effort on reaching new audiences, opening urban nature centers and programs, and seeking new partnerships.

Protecting and stewarding habitats – We have protected more than 6,000 additional acres during my time as President, and Mass Audubon's extraordinary sanctuary system helps safeguard the rich biodiversity of the state. We continue to aspire to the highest standard of stewardship for our land, including invasive species management and ecological restoration. Our bird conservation work, ranging from the Coastal Waterbird Program to our recently published *State of the Birds* report, has had enormous impact.

Responding to climate change – This past decade has forced us to grapple with this looming threat and decide what Mass Audubon can and should do. We have responded by reducing our own carbon footprint by more than 40 percent, by seeking to educate ourselves and others about climate change, and by advocating for public policies that move us to a renewable and clean energy future. Grappling with these issues will remain enormously challenging as we anticipate the potential disruptive effects of climate change on our economy, security, and health.

As you read this issue of *Connections*, you will see these themes captured in articles about the 25th anniversary of the Coastal Waterbird Program, and about the growth and success of new programs and facilities at Allens Pond. We are proud of our past and our rich history, but we are also committed to finding new ways and innovative strategies to be successful with our important and urgent mission. I appreciate your support over the years and I know you will continue to support the new leadership as we move forward together.

Laura Johnson, President

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Finding the Balance Between Vulnerable Species and People

by Michael P. O'Connor

The early April sun slants across shimmering Nantucket Sound as Ellen Jedrey tramps along a Cape Cod beach, not another soul in sight. This scene of peace and beauty would be a perfect setting for some quiet reflection, but Jedrey has tools in hand and work to do. The assistant director of Mass Audubon's Coastal Waterbird Program (CWP) is pounding stakes and playing out twine to serve as protective symbolic fencing that will delineate piping plover nesting habitat. "The birds have come early this year," she notes.

150 coastal nesting sites. These seaside stewards also help educate the public about coastal conservation and bring data to bear in advocating for bird and habitat protection.

And piping plovers need all the protection they can get. Except for a dark ring around the neck, the birds are the color of the sand that provides their breeding habitat; their ability to blend with their surroundings is both a blessing and a curse. Predators find them difficult to spot, but so do people: Nests have been trampled by foot and tire.



A piping plover broods two chicks.

Thus begins both a millennia-old reproduction ritual for the threatened shorebird and the 2012 monitoring season of the CWP, which is celebrating its 25th anniversary this year. Under the program's guidance, selected areas of beach and dune on the Cape and Islands, Buzzards Bay, and even Boston's coastal suburbs are made "family friendly" for piping plovers as well as least and roseate terns, which are also protected species.

Since 1987, the CWP has been an indispensable champion of the coastal environment. Today, the program—and cooperating Mass Audubon sanctuaries across the region—employ up to 30 seasonal staff and engage 70 volunteers who monitor and protect

And though neither colorful nor majestic, they are charismatic. The feisty six-inch birds have been known to harass predatory great black-backed gulls while in midair. Given their precarious status, their pluck is all the more poignant.

"They look so small and innocent, but they can be tough little birds," Jedrey says admiringly. "And to see them out in these fragile ecosystems is to know they're fragile, too. They just don't see themselves that way."

If piping plovers could talk, they would testify to the success of the CWP: Their Massachusetts population has increased almost fivefold since 1986, to 655 pairs in 2011.



Megan Nepshinsky cradles an American oystercatcher chick.

CWP Through the Years

- ▶ **1929–1960s:** Oliver Austin Sr., MD, and his son Oliver L. Austin Jr., PhD, found the Austin Ornithological Research Station in Wellfleet with a major focus on the long-term study of common terns on Cape Cod; more than 650,000 terns are banded.
- ▶ **1956:** William H. Drury, PhD, becomes the first director of Mass Audubon's Hatheway School of Conservation Education. Here he begins research on the breeding ecology of plovers and designs Mass Audubon's logo: a common tern flying in the center of a triangle.
- ▶ **1959:** Mass Audubon buys the Austin property in Wellfleet, saving it from development, and the station becomes the program base for Mass Audubon's Wellfleet Bay Wildlife Sanctuary.
- ▶ **1960s:** Following a bird-induced Lockheed Electra plane crash at Logan Airport, Mass Audubon is asked to also study gulls nesting at the airport. This expands into the first comprehensive field survey and historical overview of New England seabird colonies.
- ▶ **1986:** The Atlantic Coast population of the piping plover is listed as threatened under the federal Endangered Species Act.
- ▶ **1987:** The Mass Audubon Tern Program is reorganized and renamed the Coastal Waterbird Program (CWP) beginning a major expansion of the initiative.
- ▶ **1987:** The northeastern population of roseate terns is placed on the federal endangered species list, based partly on Mass Audubon research on Bird Island in Marion, now managed by the CWP.

Timeline continued on next page

- ▶ **1990s:** Use of off-road vehicles (ORVs) in sensitive tern and plover nesting areas on barrier beaches increases and is proven to be linked to piping plover decline. Mass Audubon and state environmental agencies move to restrict vehicle use at key sites.
- ▶ **1996:** A piping plover is killed by an ORV on Plymouth Beach, and the town of Plymouth is prosecuted in federal court in May 1998.
- ▶ **1998:** CWP cited for a decade of work resulting in piping plover nesting pairs increase from 126 in 1987 to 490 in 1997.
- ▶ **2006:** The CWP establishes its permanent headquarters at Mass Audubon's Long Pasture Wildlife Sanctuary in Barnstable.
- ▶ **2011:** The number of piping plover pairs in Massachusetts has increased to 655.

From Beacon Hill to Cape Cod Beach

by Christina McDermott

The Coastal Waterbird Program's mission is guided in large part by state and federal species-protection laws. Thus, the program works closely with Mass Audubon's Advocacy Department, which monitors government and public policy initiatives that have the potential to affect the organization's mission to protect the nature of Massachusetts for people and wildlife.

Near the end of the 2011 coastal waterbird season, the Advocacy Department spent time at Mass Audubon's Race Point research site in Provincetown. Here, we witnessed firsthand the fragility of habitat for species, such as the piping plover and least tern, and learned more about the threat of rising sea levels and how protection efforts are making a real difference.

The trip provided an important opportunity for us to see Mass Audubon's species-protection goals and advocacy efforts working hand-in-hand, so that conservation science and public recreational interests can find common ground on local, state, and federal beaches.

Christina McDermott is

Assistant to the Director of Advocacy.

Katharine Parsons, PhD, who was appointed program director in 2011, recalls that one aspect of the position she found appealing was the CWP's track record of accomplishment. "One of the most compelling challenges of this job is building upon Mass Audubon's significant work and impressive results achieved over the first 25 years of the Coastal Waterbird Program."

But it was not always so.

By the dawn of the 20th century, the plume-feather trade for hats, which prompted outrage and the resultant birth of the Massachusetts Audubon Society, had eliminated almost all seabirds along the coast, and market gunners had drastically reduced populations of native and migratory sandpipers and plovers.

It was around this time that ornithologist George Mackay, who joined Mass Audubon's board at only its second meeting, took the lead in saving Massachusetts' shorebirds. Mackay's vigorous early efforts on behalf of coastal birds were concentrated in two areas that became key components of the organization's strategic tool kit. He organized a team of wardens from local communities on Cape Cod and Nantucket to defend the most important tern colonies in the region against the depredations of egg collectors and gunners. And, of equal importance, he worked tirelessly with the legislature to draft and pass meaningful bird protection laws.

Today, the birds are protected at both the state and federal levels, in large part thanks to Mackay's work. And as part of its growing mission, the CWP today coordinates with multiple agencies and groups to ensure this legacy continues well into the future.

"Our partners include the U.S. Fish and Wildlife Service as well as Cape Cod communities and their natural resources and recreation departments, state environmental agencies, and other conservation nonprofits," notes Parsons. "But our volunteers are critical."



These include individuals who are coordinated at Mass Audubon wildlife sanctuaries along the coast, and some who belong to local groups, such as the Plymouth-based Friends of Ellisville Marsh.

"Friends" President Eric Cody helps direct efforts on Ellisville Beach and thus has had ample opportunity to appreciate the commitment of those monitoring the shoreline—a group he views as the next wave of coastal conservationists.

"The young staffers I've met over these years of working closely with the CWP are amazing," says Cody. "They create confidence that a new generation is rising to the challenge of direct, environmental action. I'm convinced we can entrust the future to them."

Indeed many young biologists and other staff who benefited from early training with the CWP have gone on to influential positions with environmental agencies and organizations nationwide.

Parsons notes that sometimes the mounting scope of their work—including the potential massive impacts of climate change—can, in essence, seem like trying to stop the tide. "We're facing issues of sea-level rise and storms of greater intensity and frequency, all while dealing with a busier, built-up coastline," she says.

But these challenges only inspire them, the CWP director notes, as they monitor the shore on behalf of birds that rely so heavily on human understanding and cooperation.

"Mass Audubon's program has no peer in terms of accomplishment and aspiration," Parsons says. "In every way it's a big responsibility to ably execute this mission. And we all should be proud to be part of it." ▲

Michael P. O'Connor is Public Relations and Communications Manager.



Birds and Blooms at these Gardens

by Sylvia Charman Guthrie

As anyone who gardens for pleasure knows, watching carefully tended flowers and shrubs bloom, grow, and come back fuller, greener, and healthier year after year is extremely rewarding. Whether a garden is a small backyard plot in the heart of a city or a large cultivated landscape in the countryside, it is a shared joy. And, as many of our wildlife sanctuary visitors are learning, the rewards can be even greater when gardens are adapted to also serve as a source of food and shelter for birds.

Several Mass Audubon properties now feature a “sanctuary within a sanctuary”—an area filled with mostly native flowers and shrubs that attract and nourish neotropical migrants such as warblers and catbirds; winter residents including cardinals, goldfinches, and juncos; and summer-nesting birds such as ruby-throated hummingbirds and chipping sparrows. Other less-often-

seen species that these special gardens attract include the wood thrush, Baltimore oriole, veery, ovenbird, scarlet tanager, and rose-breasted grosbeak.

Visitors are encouraged to use the guides and binoculars we provide to observe these birds from within the comfort of our nature centers. We also offer lists of native plants so that people can take away the information they need to create their own bird habitat at home. Gardener or birder, novice or advanced, everyone takes pleasure in the beauty of our sanctuary plantings and is enthralled by the constant activity of the birds.

Thanks to an initial grant from the Hollis Declan Leverett Memorial Trust, our first bird garden was created in 2003 at the Ipswich River Wildlife Sanctuary in Topsfield. It was so successful—not only for the variety of birds it attracted but also as a way of encouraging people to take up this form of gardening—that it became the model for many others.

Last year, additional funding from the Hollis Declan Leverett Memorial Trust enabled us to install bird gardens at the Oak Knoll (Attleboro), North River (Marshfield), and Moose Hill (Sharon) wildlife sanctuaries. And, at the Visual Arts Center in Canton, we were able to restore the property's original formal garden as a bird garden, all while retaining its original early 20th-century design.

Whether these gardens provide a venue for education and engagement programs or simply exist as a special feature at our sanctuaries, we encourage visitors to observe and enjoy.

Consider introducing shrubs such as winterberry, viburnum, elderberry, and spicebush, as well as native wildflowers, to your garden and see what happens. We guarantee that birds will flock to these beautiful indigenous plantings. ▲

Sylvia Charman Guthrie is Director of Foundation and Government Support and a gardener.

Make your own Yard a Welcome Station by Kathi Gariepy



Birds are looking for specific resources when visiting your yard.

Good Food Sources

These could include seeds from purple coneflower or nectar from turtlehead. Native plants such as winterberry, spicebush, and bayberry also attract birds. Once established they need less water and care than non-native plants.

Water

Do you have a natural or artificial aquatic feature (e.g., birdbath) for birds to drink from and bathe in?

Shelter

Help keep birds safe from predators! Multi-stemmed shrubs such as witch-hazel and inkberry help birds hide. The same is true of dense trees such as eastern red cedar and American holly.

When planting, use compost.

Compost helps sandy soil retain water and clay soil drain more easily. It also adds much-needed organic material to the soil while providing vital nutrients.

Water your garden in the early morning.

Watering in the heat of the day causes more rapid evaporation, and cold water can shock already-warmed plants. Watering in the evening when it's cooler outside can cause fungal problems since water remains on plants longer.

Water your plants from rain barrels instead of a hose.

Not only does this alternative conserve natural resources, but the water is generally warmer than water from a hose and better for promoting growth.

Kathi Gariepy is Education Coordinator at Oak Knoll Wildlife Sanctuary in Attleboro and a Master Gardener.

Making the (Wild) Connection

by Heather Cooper and Michael P. O'Connor

It's a cloudless New England day and Annie Carter is taking in the sights and sounds at Mass Audubon's Blue Hills Trailside Museum in Milton with her daughter, Summer. The two have just come from visiting a couple of the wildlife sanctuary's most popular residents—a pair of snowy owls—when something nearby catches Summer's eye.

"Otter, otter, otter!" the toddler calls out excitedly, peering down at an in-ground wildlife enclosure near the sanctuary entrance. The object of her curiosity—a female river otter—obliges her young admirer by rollicking in the water below. Carter looks on and smiles knowingly at the wonder in her daughter's eyes: she, too, found delight at the Trailside Museum as a child.

"Coming here as a kid, it was almost like having your own backyard nature experiences," recalls Carter. "It was such an important part of our growing up."

Nestled at the foot of Great Blue Hill just minutes from Boston, Trailside has similarly inspired excitement and awe for thousands of others since its doors first opened in 1959. As the interpretive center for the state's 7,000-acre Blue Hills Reservation, it offers visitors a chance to experience wildlife up close, including snakes, turtles, red-tailed hawks, and white-tailed deer.

Both inside and outside the museum, interactive natural history exhibits abound. And Mass Audubon's expert educators frequently present live animal demonstrations, encouraging onlookers to ask questions and think critically.

Carter, who has long considered the Trailside Museum a must-see destination for city residents and those seeking to interact with nature, sees substantial value in what it has to offer. "This is a great way of connecting with the outdoors," she remarks. "Nothing can compare to seeing wild animals."

Perhaps no one understands this better than Sanctuary Director Norman Smith, whose longtime fascination with wildlife began shortly after he joined the staff as an animal care volunteer in 1966. Today, Smith regards the Trailside Museum's wildlife as vital to the organization's education mission.

"We consider the animals to be 'wildlife ambassadors'; they came to

groundhog, and an array of raptors) to engage 150,000 people, annually.

"Our main focus is to engage visitors through the life stories of how our wild animals came to live at Drumlin," Wildlife Care Coordinator Ann Pick says. "We also emphasize the importance of taking action in protecting natural habitats and the human role in caring for the future generations of each species."



Sarah Lawson handles peregrine falcon at Blue Hills Trailside Museum.

us because they are either injured or otherwise unable to live on their own in the wild, yet they have so much to offer," Smith explains. "Studying their adaptations and behaviors helps everyone to better understand the significance of preserving the nature of Massachusetts."

And Trailside staff share that insight with Mass Audubon members and the general public through more than 500 programs and events annually, both on site and in the community; from schools and scouting groups to assisted living facilities.

Drumlin Farm in Lincoln is Mass Audubon's other wildlife sanctuary that boasts an ambitious wildlife education program, working with nearly 60 animals (including a fox, skunk, and

The animals at Drumlin Farm and the Trailside Museum inspire curiosity, enthusiasm, and compassion among visitors. By continually developing new programs, the staff at these Mass Audubon wildlife sanctuaries will ensure that this legacy lives on for years to come.

"Trailside Museum is a unique education center that brings people and wildlife together," notes Smith. "We embrace the magic and wonder that so often accompany spontaneous discoveries made in this very special environment." ▲

Heather Cooper is Marketing and Communications Assistant.

▶ www.massaudubon.org/bluehills

▶ www.massaudubon.org/drumlin

Mass Audubon Camps: Unique, Memorable

by Mia Kheyfetz

Remarkable things can happen at summer camp. Hiking the hills with friends old and new, poking about in tide pools on the beach, or following the tracks of an elusive animal down a muddy trail with an enthusiastic counselor—all these experiences are magical for campers. Similarly, there's something thrilling to be found in exploring the outdoors with experienced and supportive counselor-naturalists.

Thankfully, Mass Audubon camps—accredited by the American Camp Association—aptly combine and present these opportunities. Our organization began offering camp programs in the 1940s. Today, we conduct 18 day camps from Cape Cod to the Berkshires, and Wildwood, our overnight camp in Rindge, New Hampshire.

Camps offer wonderful settings where children can enjoy transformative experiences.

Mounting evidence suggests that camp experiences of all kinds are good for kids. At camp, youngsters develop valuable personal traits and life skills, including critical thinking and problem solving, community building, independence, leadership, and connections to the natural world.

Even being away from their families helps children grow. Camp provides a sense of identity as a member of a group and encourages greater socialization for individual children or pairs of friends. Imagine the daily “morning circle” that is part of many camp programs, where the group plays games, sings together, and learns about the day's excitement.

Camp also provides opportunities for children to build relationships with counselors. These caring young adults who make up the majority of camp staff can inspire their campers to



Campers and a Mass Audubon educator share “field work.”

try new activities, go just a few steps further, share a passion for ferns or foxes, or even eat a new vegetable.

And counselors benefit from this relationship, too: We often hear from adults that their Mass Audubon camp staff experiences positively influenced the paths their lives have taken. Among former camp staff are scientists, educators, writers, and artists, many of whom have told us they valued their Mass Audubon camp experiences.

In a perfect world, every kid would play outside every day and explore at will a yard, park, or other natural outdoor space. And every child would learn to take appropriate risks and become intimately familiar with a piece of land, and its plants and animals; however, that's not the world in which most kids live.

Fortunately, camps offer wonderful settings where children can enjoy transformative experiences. And while it's true there are many great camps, Mass Audubon's feature those special outdoor spaces that children learn to call their own—in large part through nature-based education and staff guidance that guarantee they get the very most from their experience.

If we care about helping children develop strong instincts to explore

and, eventually, protect the many facets of the natural world, then why wouldn't we choose a camp that includes opportunities for outdoor exploration and play?

For more information on the value of the camp experience and what ACA accreditation means, visit www.campparents.org. For information on all of Mass Audubon's camp programs, from the Berkshires to the Cape and Islands, please visit www.massaudubon.org/camp. ▲

Mia Kheyfetz is Sanctuary Marketing Manager.

▶ www.campparents.org

▶ www.massaudubon.org/camp

What Does Summer Camp Mean to You?

To us it means a summer spent outdoors, exploring, and having fun! Mass Audubon has 18 day camps plus Wildwood overnight camp. To learn more, visit www.massaudubon.org/camp.



TIDE POOLS

Twice each day, when high tide waves pound the shore, seawater flows into the nooks and crannies of shoreline rocks. When the tide recedes, some of the water stays behind, forming “tide pools.” These pools of seawater are found in the intertidal zone—the thin band of rocky coast located between the high- and low-tide lines.

Life in a Tide Pool

Tide pools are full of remarkable creatures that are well-adapted to this unique and constantly changing habitat. Tide pool inhabitants must avoid being washed away by waves, keep from drying out in the sunlight during low tide, and avoid being eaten—so they are designed to wander, swim, crawl, hang on, and hide.

Go “Tide Pooling”

Go out on the shoreline rocks during low tide and check out the tide pools. When you observe sea stars, anemones, urchins, barnacles, crabs, and seaweed in a tide pool, you are seeing some very hardy species that are marvelously adapted to live in these unique, tiny, dynamic ecosystems.

Ready, Set, Go Outside!

Parent/Teacher Note Skills Learned:

Observation and comparison: light, color, physical properties, waves, observing wildlife behavior, identification, physiological adaptations, habitat comparisons

Math: counting, measuring, mixing

Creative expression: creative writing, illustration, design, sharing, performing, food preparation and presentation

Information science: researching information, finding images

Exploration Tips:

1. Always go exploring with an adult.
2. Wear appropriate footwear. Beach rocks are covered with wet seaweed and are very slippery.
3. Protect your skin from sunburn.
4. Be aware of the tides. It is safest (and most interesting) to go at low tide, but always keep a watchful eye on the waves.
5. Bring a field guide or printed identification sheet to help identify the animals and plants you see. Our favorite is Mass Audubon's Beachcombers Guide to the North Atlantic Seashore.
6. To protect wildlife, leave plants and animals in their pools and avoid stepping on them.

Things to Look For:

- A variety of creatures—notice how some are attached to the rocks, others are moving about, and some are hiding among seaweeds.
- A range of seaweeds, including kelp, Irish moss, rockweeds, and sea lettuce. Look for the air sacs on rockweeds that keep them floating near the surface of the pool to catch oxygen and sunlight.
- A place where an animal could hide.
- An animal hunting and catching food.
- The extreme low-tide zone, where the pools are practically connected to the ocean and are exposed for only a few hours a day.
- A high-tide pool, farther away from the water and flooded only during extreme high tides.

ONLINE BONUS!

Learn more at:
www.massaudubon.org/go

- Great Times to Visit
- Post-Tide Pool Activities

Large Whirligig Beetles
.5 inches long

Commonly seen in groups, gyrating on pond surfaces; it is thought that these aquatic beetles whirl to confuse predators or trap their own prey by creating tiny waves in the surface film.

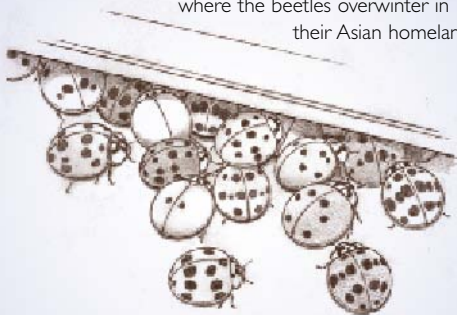
Two pairs of compound eyes enable them to watch for danger and opportunity, both above and below the water. Some adventurous observers discovered that these beetles smell like pineapples.

To say there are many different kinds of beetles is an understatement. Compared to 10,000 species of birds and 5,000 species of mammals worldwide, the variety in the beetle order, Coleoptera, is astounding. More than 400,000 beetle species have been described, and it is estimated that there may be one million species in existence!

Named from the Greek *koleos*, meaning “sheath,” and *pteron*, meaning “wing,” Coleopterans generally have forewings, hardened into dense sheaths that meet

Harlequin Lady Beetles (Ladybugs)
.25 inches round

These non-native beetles are attracted to white trim on houses and, when they manage to get inside, white ceilings; the light-colored surfaces may resemble the cracks and crevices of limestone outcroppings where the beetles overwinter in their Asian homeland.



EXPLORING THE NATURE OF MASSACHUSETTS

by Lucy Gertz

Beetlemania

Fiery Searcher
1.1 inches long

These large, metallic-green “ground beetles” frequently climb trees in search of caterpillars. This behavior has earned them the moniker “caterpillar hunter,” as well as the gratitude of arborists trying to control foliage-ravaging caterpillars.

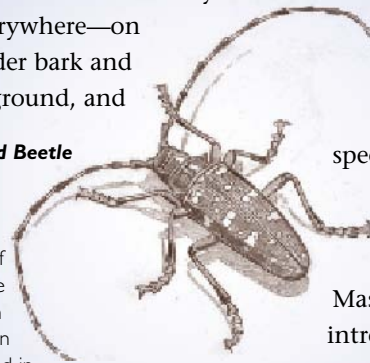


in a straight line down the back and delicate hind wings that lie underneath.

Beetles range in size from microscopic to some of the largest insects in the world. Adults and larvae, whether herbivores, carnivores, scavengers, or parasites, have mouthparts ingeniously adapted for biting and chewing their various preferred foods. They live almost everywhere—on vegetation, under bark and stones, in the ground, and

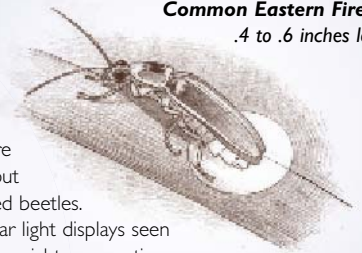
Asian Long-horned Beetle
1 to 1.5 inches, with antennae as long as 4 inches

This beetle is one of the most destructive non-native insects in the United States. An infestation discovered in Worcester in 2008 resulted in the removal of more than 30,000 trees and an unprecedented cooperative effort among landowners, landscape professionals, and conservation agencies to eradicate this pest. To find out more, visit www.massaudubon.org/alb.



Common Eastern Firefly
.4 to .6 inches long

Fireflies are not flies, but soft-bodied beetles. The familiar light displays seen on summer nights are mating communications. Distinctive colors, intensities, frequencies, and patterns enable males and females of the same species to find each other in the dark. Males can sometimes be successfully lured by a female mimicking the light code of another species. She then eats the male that has unwittingly responded.



underwater, as well as in fungi, rotting vegetation, dung, and carrion.

While a few plant-feeding beetles are serious pests, other hardworking beetles are employed by horticulturists and conservationists for pest control. Lady beetles (ladybugs), which feed on aphids, are prized by gardeners and used commercially to protect orchards. In recent years, Mass Audubon has

introduced *Galerucella* beetles to control invasive purple loosestrife at several wildlife sanctuaries, helping native plant species to successfully reclaim areas.

Beetles, like all insects, make up an intricate and marvelous component of the nature of Massachusetts. While a few (mainly introduced) species are crop-and-garden pests, the vast majority may be described as beneficial, beautiful, and fascinating. ▲

Lucy Gertz is Visitor Education Coordinator.

Illustrations by Barry Van Dusen

Meet the beetles at these wildlife sanctuaries and others.

Beetles occur in great diversity and abundance at all Mass Audubon sanctuaries. Visit any wetland, meadow, or woodland this spring or summer and you will likely see beetles. Observe whirligig beetles “whirling” on the surfaces of ponds and streams. Catch a glimpse of fireflies signaling at dusk. Peek under a rotting log to see scavenger beetles at work. Find beetle engravings on sticks and stumps. And look for lady beetles in and around buildings.

Habitat, Belmont—In the meadows, look on milkweed for red milkweed beetles (elongate, red-orange with black spots) consuming the leaves and observe lady beetles (round, red or orange with black polka dots) searching for aphids to eat.

Broadmoor, Natick—From the main boardwalk, you can see purple loosestrife with leaves that look like Swiss cheese. *Galerucella* beetles are chewing away on their favorite vegetation and reducing the population of this invasive plant.

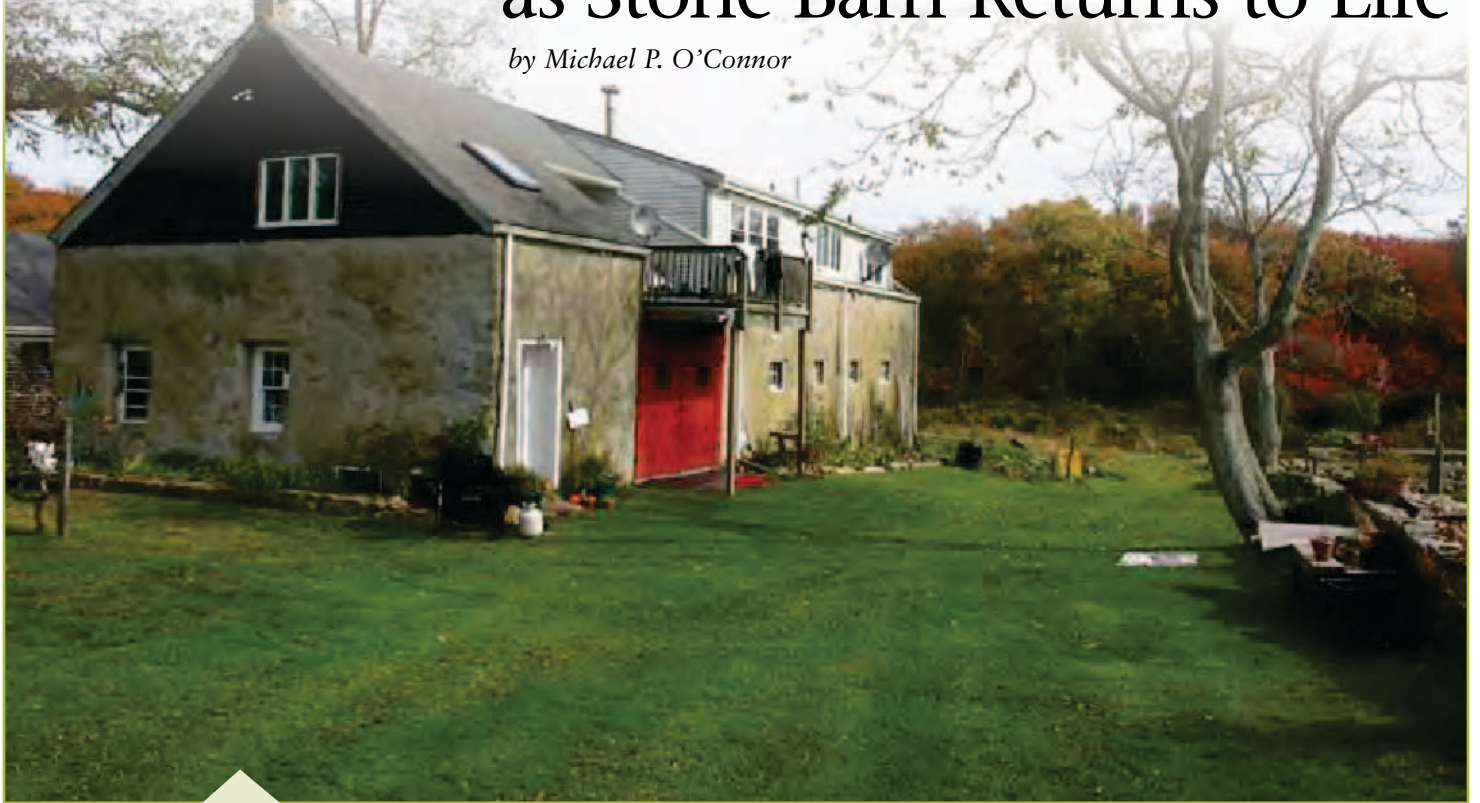
Ipswich River, Topsfield—While on a hike, stop to observe animal scat that has been deposited on sanctuary trails. If the scat appears to “wiggle,” it is likely the American carrion beetle is dining on its find.

www.massaudubon.org/sanctuaries

The Stone Barn, shown before its renovation. The barn, built in the 1870s, is set to become an important resource for Allens Pond visitors.

Bright Future for Allens Pond as Stone Barn Returns to Life

by Michael P. O'Connor



Stone Barn Grand Opening Set for May 26

The restored and renovated Stone Barn will be introduced to Mass Audubon members, friends, and the greater South Coast community at a “grand opening” to take place at Stone Barn Farm Saturday, May 26, from 2 to 5 pm.

Mass Audubon President Laura Johnson will be among the guest speakers at the event, which will feature a live auction of artwork by UMass Dartmouth students that celebrates Stone Barn Farm and the sanctuary at large. Light refreshments will be provided.

A bird walk and related events are scheduled for Sunday morning, May 27. For more information, go to www.massaudubon.org/allenspond or call 508-636-2437.

In the fall of 2001, when Gina Purtell first turned her gaze from the blustery Atlantic to the sprawling South Coast mosaic of shoreline and salt pond, tidal marshes, and centuries-old farms, she may have felt like a pioneer.

In a way, she was. Purtell had just been named sanctuary director (and sole employee) at Allens Pond, then Mass Audubon’s newest wildlife sanctuary. So in exploring its beautiful and remote landscape at the southernmost tip of Dartmouth, she was feeling excited and a bit overwhelmed.

“I think I honestly didn’t know what I was getting into,” she recalls with a chuckle. “I mean, nobody knew about this spectacular place. There were no trails, no parking. I moved into the field station (now Allens Pond headquarters), and I would just look out at this remarkable, enormous...backyard.”

That first winter at her coastal outpost “was pretty bleak,” Purtell acknowledges. “That’s because I didn’t

know about summertime and how popular it got down here with the beach people”—especially at nearby Horseneck Beach State Reservation.

“Then, I remember seeing ‘butterflies’ appearing off in the fields, and I thought, ‘Oh my goodness, somebody’s finally out here.’ ”

A little more than a decade later, a lot of people are “out here.”

- Thousands of visitors have discovered the sanctuary, which has grown to encompass more than 900 acres, including Mass Audubon-owned land as well as conservation restrictions overseen by the organization, and a spectacular hundred-acre salt pond.
- Through community partnership initiatives, hundreds of students from elementary schools, high schools, and colleges in the South Coast region have come to Allens Pond to learn, engage in service projects, and otherwise connect with nature.

- Dedicated volunteer stewards help maintain a six-mile (and growing) network of trails and perform other maintenance tasks in addition to acting as docents and interpretive guides.
- And this remarkable property has reached a pair of significant mileposts in the last year, which include marking the 40th anniversary of the first land parcel protected for the sanctuary and the 25th anniversary of Mass Audubon's ownership; actions that together led to Allens Pond's creation.

Today, the sanctuary serves as an evolving community resource—one that is linking its historical and cultural roots to an exciting future as a regional center for engaging with the natural world.

"I think Allens Pond represents what we nostalgically think of as pastoral beauty and an ecologically significant working landscape, while at the same time showing great promise," Purtell says. "And this idea of land protected in perpetuity really indicates what this sanctuary can mean for our children and future generations. We want every experience to add to what's been done here for the past 360 years" when the first settlers cleared land for crops and livestock.

The ongoing Stone Barn Farm project is emblematic of this future—which may be closer than many people realize. Stone Barn itself, the centerpiece of

camp, and other special events.

The adjacent "tractor barn," of 1920s vintage, is being remodeled into a caretaker's residence, maintenance workshop, and equipment storage space. The farmhouse of original proprietor Gilbert Fernandez, whose family donated the property, is to be rehabilitated in the future and will feature a visitor center, offices, kitchen, and seasonal housing.

"Stone Barn is going to be a dynamic resource that the community at large

says Aldred, whose senior thesis focuses on the sanctuary. "The landscape itself, the habitats—they're like nothing else. This place is really special."

Sanctuary Director Purtell is determined to spread that sense of uniqueness to as many people as possible.

And this means more outreach to more communities, including the urban centers of New Bedford and Fall River. "Allens Pond can't just be a beautiful place that nobody knows about. Everybody has to



Above, an expansive salt marsh is part of the Allens Pond landscape.

will grow into," Purtell says. This will be especially true as the sanctuary's programming needs outgrow its field station. She expects that what takes place at Stone Barn Farm becomes

know about it, and we have to make it relevant to people's lives," Purtell says. "So we plan to reach out to the local population centers, where a lot of young people are, and engage them in ways that inspire them to value the sanctuary."

That sense of energy and engagement is what drew Doug Hlousek to Allens Pond. A retiree who grew up in Massachusetts but spent much of his professional life outside New England, Hlousek came home determined to participate in his community. "I was drawn to Allens Pond," acknowledges Hlousek, who also serves on the Stone Barn Farm volunteer committee. "There's just so much potential and inspiration here." ▲

"The landscape itself, the habitats—they're like nothing else. This place is really special."

the endeavor, has been updated to help the sanctuary both realize its 21st-century potential and maintain its historic integrity. The former dairy has transformed into a center for exhibits and programs, with wheelchair-accessible restrooms and space for projects in development. Programs will include school-based learning activities, Junior Bird Club meetings, evening lectures, resource management workshops, day

increasingly collaborative, with multiple users invested in its success.

UMass Dartmouth is already committed. Julie Aldred, a double major in arts and media, and a Stone Barn Farm volunteer committee member, is among a group of students who have been helping to tell Allens Pond's story through creatively designed brochures, banners, and T-shirts. "I'm drawn to the history and charm of this place,"

"The Quilted Oriole"

Flame-worked and
acid-etched glass
by *Shane Fero*



"Our Shared Planet: The Animal Kingdom Portrayed"

Lexington Arts and Crafts Society, Lexington, MA

Gallery exhibit: June 19 – July 9.

Reception: June 24

18 artists celebrating our
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SPRING/SUMMER PROGRAM SAMPLER

A snapshot of programs from among hundreds that Mass Audubon offers this season at our wildlife sanctuaries

Hawley Bog Visit

July 8: 10 am-noon

ARCADIA

Easthampton and Northampton, 413-584-3009

The Secret Lives of Fireflies

June 23: 8-10 pm

BLUE HILLS TRAILSIDE MUSEUM

Milton, 617-333-0690

Wetland Wonders

May 20: 2-3:30 pm

BOSTON NATURE CENTER

Mattapan, 617-983-8500

Backyard Campout

June 23-24

BROAD MEADOW BROOK

Worcester, 508-753-6087

Canoe Birding

June 9, 16, 23, 24; July 7

BROADMOOR, Natick, 508-655-2296

Friday Evening Hayride

June 15, 4:30-6 pm or 6:30-8 pm

DRUMLIN FARM, Lincoln, 781-259-2200

Tracking Coastal Waterbirds

June 9 & July 7: 9-10 am

FELIX NECK, Martha's Vineyard, 508-627-4850

Evening Aquatics

June 1: 4-5:30 pm

HABITAT, Belmont, 617-489-5050

Annual Nature Festival

June 3: 10 am-4 pm

IPSWICH RIVER, Topsfield, 978-887-9264

Wednesday Morning Birding

Wednesdays: 9:30 am-12:30 pm

JOPPA FLATS, Newburyport, 978-462-9998

Children's Wild Arts and Ecology Program

July 2-August 17

LONG PASTURE, Barnstable, 508-362-7475

Family Camp-Out

July 14: From 5:30 pm

MOOSE HILL, Sharon, 781-784-5691

Spring Open House & Native Plant Sale

June 3: 10 am-3 pm

NORTH RIVER, Marshfield, 781-837-9400

Fairies & Trolls

May 19: 10 am-noon

OAK KNOLL, Attleboro, 508-223-3060

Knee-high Naturalists

July 9-12, 16-19; July 30-August 2; August 6-9:
10 am-noon

PLEASANT VALLEY, Lenox, 413-637-0320

Hérons at the Nest

June 10: 9-11:30 am

STONY BROOK, Norfolk, 508-528-3140

Mass Audubon's Prints Collection: Behind-the-Scenes Tour

June 3: 2-3:30 pm

VISUAL ARTS CENTER, Canton, 781-821-8853

Looking for Lost Ladybugs

May 26: 1-3 pm; June 23, July 28, August 25:
10 am-noon

WACHUSETT MEADOW

Princeton, 978-464-2712

Horseshoe Crab Workshop for Educators

June 1-3

WELLFLEET BAY, Wellfleet, 508-349-2615



www.massaudubon.org/programs

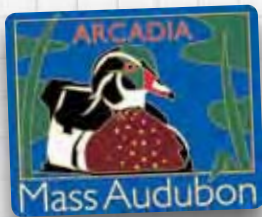
Nature for Preschoolers

Easthampton and Northampton—Imagine an outstanding, fully licensed preschool with a skilled and nurturing staff dedicated to fostering cooperation and independence. Now imagine that preschool on a wildlife sanctuary nestled at the base of the Connecticut River Valley, just a mile from downtown Northampton and only 15 minutes from Amherst.

If that sounds appealing to you, then we've got what you're looking for! Mass Audubon's Arcadia Wildlife Sanctuary has it all: central location and guaranteed fun for families!

At Arcadia, the staff strives to provide happy and rewarding childhood experiences with nature to help form a foundation for the development of creative, caring, and aware adults. What's more, there are plenty of opportunities for parents to meet other parents and build enduring friendships alongside their children.

For more information, visit www.massaudubon.org/arcadia or call 413-584-3009.



Field Notes

Creatures of the Night

Martha's Vineyard—Each spring, on the highest tides, they return to the shore: horseshoe crabs to spawn — and Felix Neck Wildlife Sanctuary volunteers to observe this timeless ritual.

Monitoring the spawning behavior of horseshoe crabs is just one of Felix Neck's "Citizen Science Projects," which relies upon community volunteers who gather essential data. Happily, this is one task that's more fun than work:

Our volunteers spend many evenings on the beach making friends while observing this remarkable species (which is more spider than crab) carry on an ancient tradition. More "Citizen Science" volunteers are needed for the 2012 season. For more information, visit www.massaudubon.org/felixneck or call 508-627-4850.



Joppa Superbowl Flies High

Newburyport—One Superbowl always ends with a very deserving winner: Mass Audubon's Joppa Flats Education Center. This year the North Shore sanctuary's ninth-annual winter birding competition, Superbowl of Birding IX, attracted 115 competitors who, collectively, recorded a remarkable 130 species. The Nikon Joppa Cup for highest point total went to the "Saw Whaat" team from Uxbridge, MA. Sanctuary Director Bill Gette expressed his gratitude to participants and sponsors, noting that the Superbowl both provides valuable bird data and promotes camaraderie.

"Strong competition coupled with a sense of cooperation makes the Superbowl of Birding a very special event," Gette said. "And we are again honored to have Nikon as our lead corporate sponsor for the second year." For more information, visit www.massaudubon.org/superbowl.



Linking Fitness and Nature

Boston—Mass Audubon's Boston Nature Center (BNC) knows that nature and health go hand in hand. And that childhood obesity nationwide has more than tripled over the last 30 years.

So this year we have teamed up with the Mattapan Food and Fitness Coalition to produce Mattapan Moving for Life—a free event designed to inspire physical activity and a healthy lifestyle through fresh food, gardening, and activities in the great outdoors.

Join us at the BNC on June 9 for fun, family friendly activities, including walks along two miles of beautiful nature trails, a live bird demonstration, and nature play activities led by BNC's Teen Ambassadors! For more information, visit www.massaudubon.org/boston or call 617-983-8500.



Wildwood's Dave Miner Remembered

by Bob Speare

Act as if what you do makes a difference. It does. —William James

Last fall I was honored to speak at the memorial service for David Miner—or “Chief,” as he was affectionately known during his 23 years as founding director of Mass Audubon’s Wildwood overnight camp.

Chief, who died last May at age 87, served at Wildwood’s first site, Cook’s Canyon, in Barre, Massachusetts. The camp later moved to several other sites before settling permanently in Rindge, New Hampshire. Through the years, Chief’s imprint on the spirit

of Wildwood has been indelible; so too has his impact on the lives of Wildwood staff and campers.

When I first met him, Chief welcomed me like an old friend and drew me into the lore of the camp. He knew that Wildwood is bigger than the land it sits on and deeper than the surrounding woods. Wildwood is about bonds of friendship, the value of tradition, and respect for others and our natural world. His approach was simple: Be fair and firm, and find goodness in

everyone. Chief helped me see how Wildwood changes lives and how I can help keep the flame burning. ▲

Wildwood Alumni: How has Wildwood influenced your life? Tell us which director, staff, or campers you remember by adding your voice to a brief history of Wildwood. Your memories will help keep the Wildwood lore alive for current campers and future generations. To read others’ stories and share your own, please visit

www.massaudubon.org/wildwoodalumblog.

Bob Speare is Wildwood Camp Director.

From Attleboro to Africa

by Ann Prince

VOLUNTEER SPOTLIGHT



Susan Bragg is all smiles at Attleboro Springs.

As Susan Bragg walks the Oak Forest Loop around Attleboro Springs Wildlife Sanctuary at the National Shrine of Our Lady of La Salette, she comments on how much visitors appreciate the property. “It’s nice that there always seem to be people here enjoying the sanctuary no matter what the time of day,” she says. “It’s a very meditative and reflective trail.”

Bragg, who grew up in Attleboro, makes the most of her time traveling far and wide to enrich others. For four years she was an Outward Bound wilderness instructor, leading flat-water canoe excursions everywhere from the Everglades to the Hudson Valley; next she’s assigned to Morocco for the Peace Corps.

Last fall when Bragg found herself transitioning from one job to another with several months in between, she decided to help out in her hometown while spending time with her parents. Deciding where to donate her time

“It’s a very meditative and reflective trail.”

—Susan Bragg

was easy. In fact, Bragg’s family has a legacy of supporting the organization; her parents, avid hikers, have long been Mass Audubon members.

“Mass Audubon is an environmentally minded organization,” she says, “and I like to be outdoors, so I called Oak Knoll.” Bragg was immediately enlisted as a volunteer there and at sister sanctuary Attleboro Springs—clearing trails, putting up flyers, advertising activities, laying out bricks for garden paths, and helping out in any other way needed.

While the future holds a much more exotic destination for Bragg, she never passes up the chance to contribute—even when she’s come back home. ▲

Ann Prince is Copy Editor at Mass Audubon.



www.massaudubon.org/volunteer

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The Natural Inquirer

by Robert Buchsbaum

Q. Why do fish migrate up our rivers in the spring?

A. A number of fish species in Massachusetts make an annual spring migration from the ocean up our rivers to spawn. These include rainbow smelt, alewives, blue-black herring, shad, Atlantic salmon, and two species of sturgeon (although salmon and sturgeons are exceedingly rare). Striped bass are also "anadromous" (a Greek word meaning "running upward"), but those found in Massachusetts make their seasonal spawning runs in the rivers of the mid-Atlantic coast.



Illustration by Barry Van Dusen

Since these fish have been on earth for a very long time, it is safe to assume that the rewards of traveling upstream to spawn outweigh the obstacles, which include physical barriers such as dams and the physiological stress of switching from salt water to fresh water (a change that would be fatal to most organisms).

Fresh water must be a more congenial place for their eggs to develop and young fish (fry) to grow. Following spawning, adult alewives, for instance, return to the sea but the fry remain in the spawning ponds through the summer where they feed on a rich assortment of invertebrates, safe from ocean predators. And rainbow smelt attach their eggs to the well-oxygenated bottoms of gravelly streams and creeks just above the extent of tide in rivers—a zone that is relatively safe from potential fish egg predators.

After hatching, larvae drift downstream to an estuary, which is a great coastal nursery area for juvenile fish, with lots of places to hide and plentiful food.

For the citizen scientists: Many local watershed associations sponsor alewife counts at designated fish ladders, typically around this time of spring when the runs peak. This is a great activity for schools, families, and anyone else interested in this natural phenomenon.

Natural fact: Most species of fish that "run upward" are in serious trouble in Massachusetts, likely due to a combination of factors: overfishing, pollution, dams, and changes in the oceans and climate. On the positive side, government agencies and environmental organizations are working hard to clean up rivers and remove or modify dams to restore the runs.

Have a question for the Natural Inquirer? E-mail inquirer@massaudubon.org.

Robert Buchsbaum is Southeast and Islands Regional Scientist.

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 information about becoming a member, or for questions regarding your membership, contact: Member Services, Mass Audubon, 208 South Great Road, Lincoln, MA 01773 tel: 781-259-9500 or 800-AUDUBON, or e-mail: membership@massaudubon.org.

Photography:

Cover: Piping plover—John Van de Graaff©	p 6: Campers in field—Mass Audubon©
p 2: Piping plover brooding chicks—Ben Carroll© Megan Nepshinsky—by Jessica Shulz©	p 9: Stone Barn—Stu Weinreb/Mass Audubon©
p 4: Phlox, gardener Kathi Garipey— Mary Beattie/Mass Audubon©	p 10: Birders—Myer Bornstein©; Allens Pond landscape— Stu Weinreb/Mass Audubon©
p 5: Sarah Lawson—Norman Smith/ Mass Audubon©	p.13: Susan Bragg—Ann Prince/Mass Audubon©

Mass Audubon works to protect the nature of Massachusetts for people and wildlife. Together with more than 100,000 members, we care for more than 34,000 acres of conservation land, provide educational programs for 225,000 children and adults annually, and advocate for sound environmental policies at local, state, and federal levels. Mass Audubon's mission and actions have expanded since our beginning in 1896 when our founders set out to stop the slaughter of birds for use on women's fashions. Today we are the largest conservation organization in New England. Our statewide network of wildlife sanctuaries, in 90 Massachusetts communities, welcomes visitors of all ages and serves as the base for our work, to support these important efforts, call 800-AUDUBON (283-8266) or visit www.massaudubon.org



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at a Mass Audubon Sanctuary Near You



Pleasant Valley


This property currently supports 645 plant species, the most of any Mass Audubon wildlife sanctuary.

Mass Audubon has 51 wildlife sanctuaries open to the public year-round. They provide important habitat for wildlife and opportunities for you to enjoy and appreciate nature.

- 32 Boston Nature Center, Mattapan
- 33 Blue Hills Trailside Museum, Milton
- 34 Visual Arts Center, Canton

South of Boston

- 35 Moose Hill, Sharon
- 36 Stony Brook, Norfolk
- 37 Oak Knoll, Attleboro
- 38 Attleboro Springs, Attleboro
- 39 North River, Marshfield
- 40 Daniel Webster, Marshfield
- 41 North Hill Marsh, Duxbury
- 42 Allens Pond, Dartmouth and Westport
- 43 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 Road's End, Worthington
- 5 High Ledges, Shelburne
- 6 Conway Hills, Conway
- 7 Graves Farm, Williamsburg and Whately
- 8 Lynes, Westhampton
- 9 Arcadia, Easthampton and Northampton
- 10 Laughing Brook, Hampden

Central Massachusetts

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

North of Boston

- 21 Nashoba Brook, Westford
- 22 Joppa Flats, Newburyport
- 23 Ipswich River, Topsfield
- 24 Endicott, Wenham
- 25 Eastern Point, Gloucester
- 26 Marblehead Neck, Marblehead
- 27 Nahant Thicket, Nahant

Greater Boston

- 28 Habitat, Belmont
- 29 Drumlin Farm, Lincoln
- 30 Waseeka, Hopkinton
- 31 Broadmoor, Natick

Cape Cod and the Islands

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

Mass Audubon Photo Contest

Picture This:



Your Great Outdoors

We're seeking photographs of people in nature and those that highlight the beauty of Massachusetts wildlife and landscapes.

For complete rules, visit:
www.massaudubon.org/picturethis
Deadline: September 30, 2012